De : Perron, Francis
Envoyé : 10 septembre 2014 16:26
À : Leblanc, Rita (BAPE)
Cc : Côté, Marthe
Objet : Document à déposer BAPE-Uranium

Bonjour Mme Leblanc,

Tel que requis par la commission, voici le lien internet pour le document qu'on m'a demandé de déposer à la commission lors de la séance du 9 septembre 2014.

http://www.environment.gov.sk.ca/mineralexploration

Bonne journée.

Francis Perron, ing. M. Sc.
Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques
Direction générale des politiques de l'eau
Direction des eaux industrielles
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Mineral Exploration Guidelines

For

Saskatchewan

2012

Table of Contents

INTRODUCTION

The Saskatchewan Mineral Exploration and Government Advisory Committee (SMEGAC) has developed the *Mineral Exploration Guidelines for Saskatchewan* to assist government and industry in the application and approval process for activities on land administered by the Ministry of Environment.

This guide provides information to assist in the planning, initiation and completion of a mineral exploration program in a fashion that will help minimize environmental impacts and meet relevant legislative requirements.

SMEGAC consists of representatives from the Ministry of Environment, Ministry of Energy and Resources, Ministry of First Nations and Métis Relations, Fisheries and Oceans Canada, and various mineral exploration companies active in the province. This guideline was circulated and reviewed by various provincial and federal government agencies and the mineral exploration industry during the course of its development.

The *Mineral Exploration Guidelines for Saskatchewan* is a living document and will be revised to reflect improvements and changes to new field procedures or legislation requirements. SMEGAC will be the lead in gathering and evaluating revisions to this document.

We encourage stakeholders to provide suggestions for improving these guidelines. Comments and suggestions may be addressed to any SMEGAC representative or to:

Ministry of Environment
ATTN: SMEGAC Representative
#1-101 Railway Place
Meadow Lake, Saskatchewan S9X 1X6
Phone (306) 236-7685
Fax (306) 236-7677

MINISTRY OF ENVIRONMENT CONTACTS

LA RONGE
Box 3003, 800 Central Avenue
Prince Albert, SK S6V 6G1
Fax 306/953-2502
Phone: 306/953-2423
Email: LaRongeExploration@gov.sk.ca

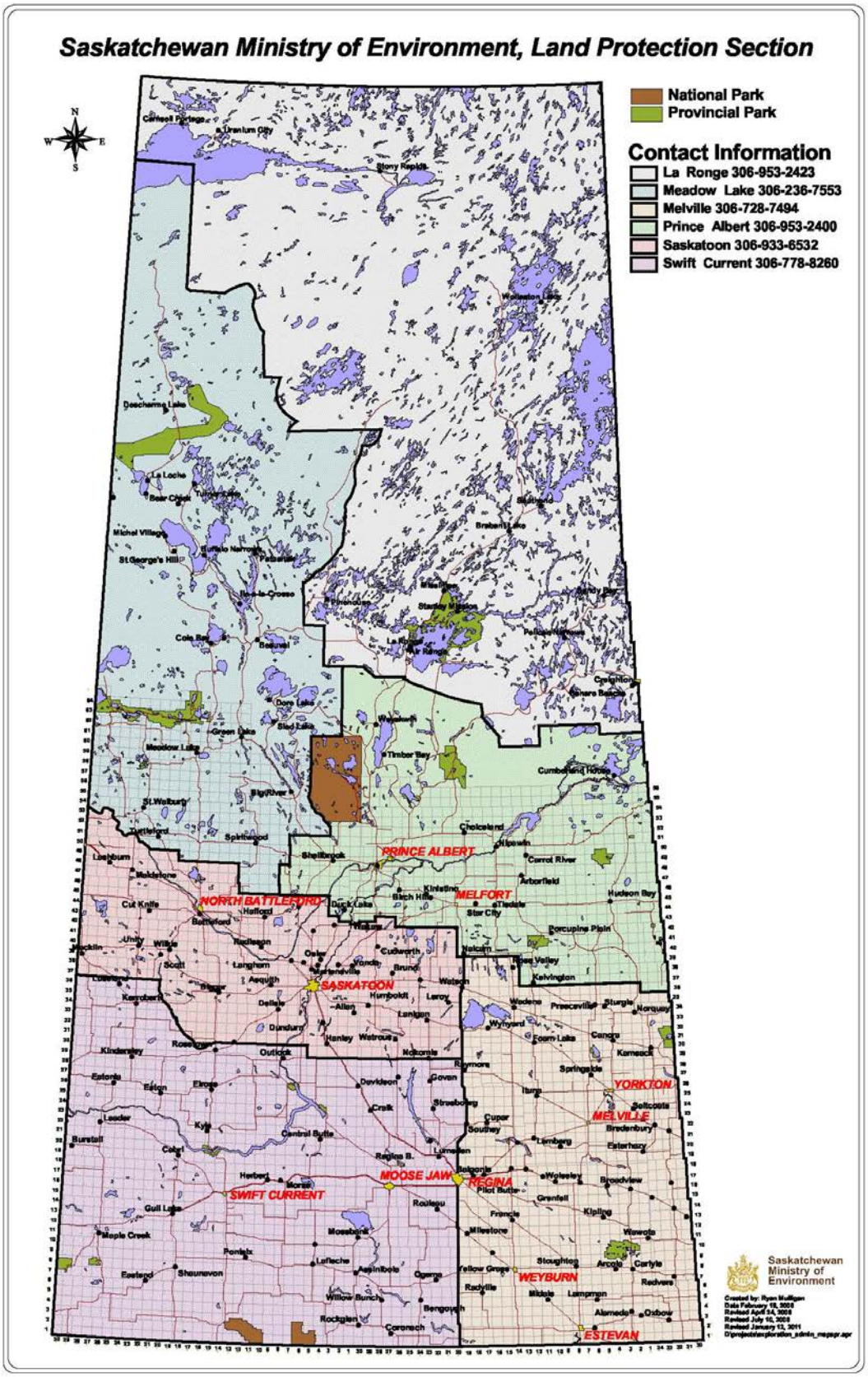
MEADOW LAKE
Unit 1
101 Railway Place
Meadow Lake SK S9X 1X6
Fax: 306/236-7677
Phone: 306/236-7553
Email: MeadowLakeExploration@gov.sk.ca

MELVILLE
256-2nd Avenue West
Melville SK S0A 2P0
Fax: 306/728-7447
Phone: 306/728-7494
Email: MelvilleOil&Gas@gov.sk.ca

PRINCE ALBERT
Box 3003, 800 Central Avenue
Prince Albert, SK S6V 6G1
Fax 306/953-2502
Phone: 306/953-2400
Email: princealbert.exploration@gov.sk.ca

SASKATOON
112 Research Drive
Saskatoon SK S7K 2H6
Fax: 306/933-8442
Phone: 306/933-6532
Email: SaskatoonOil&Gas@gov.sk.ca

SWIFT CURRENT
Box 5000
350 Cheadle Street West
Swift Current SK S9H 4G3
Fax: 306/778-8212
Phone: 306/778-8260
Email: SwiftCurrentOil&Gas@gov.sk.ca


Saskatchewan Ministry of Environment, Land Protection Section
National Park
Provincial Park
Contact Information
La Ronge 306-953-2423
Meadow Lake 306-236-7553
Melville 306-728-7494
Prince Albert 306-953-2400
Saskatoon 306-933-6532
Swift Current 306-778-8260
PRINCE ALBERT
NORTH BATTLEFORD
MELFORT
SASKATOON
YORKTON
MELVILLE
MOOSE JAW
REGINA
SWIFT CURRENT
WEYBURN
ESTEVAN
Saskatchewan Ministry of Environment

OTHER IMPORTANT CONTACTS

BizPal
-information on obtaining and the requirements for business permits and licences in the province of Saskatchewan: www.bizpal.gov.sk.ca

Firewatch Line 1-800-667-9660
-contact for reporting a wildfire.
- daily wildfire information www.environment.gov.sk.ca/wildfire info
Regional Health Authority
-information on services and procedures while operating in remote locations:
www.health.gov.sk.ca

Spill Report Line 1-800-667-7525
-contact for reportable spills under The Environmental Spill Control Regulations.

TIP (Turn in Poachers) 1-800-667-7561
-contact for reporting hunting, fishing, and other environment related violations.

APPLICATION GUIDELINES

In order to conduct mineral exploration activities on Crown land within Saskatchewan, surface disturbance permits are required from the Ministry of Environment before any work can be started. The permits vary depending on the program may include, but are not limited to: Forest Product, Aquatic Habitat Protection, Work Authorization and/or Temporary Work Camp permits.

In order to obtain the appropriate permits an application must be submitted to a Ministry of Environment's Ecological Protection Specialist. Verification from the Heritage Resources Branch and a map from the Conservation Data Centre must accompany the application.

Drilling programs will normally also require Term Right to Use Water licences obtained through the Saskatchewan Watershed Authority and a Notification Form may be required to be completed and submitted to the Department of Fisheries and Oceans Canada.

Listed below are general guidelines for the information that should be included on the application. For more detail regarding the content of each section the proponent should refer to the applicable Best Management Practice (BMP) found in this document.

The Ecological Protection Specialists administration boundaries and contact phone numbers are outlined on the map located in those guidelines.

Please keep in mind that the application may be sent to outside agencies for the purpose of application review. If there is information included in this application that is proprietary, please ensure that you advise the Ecological Protection Specialist and that you submit a separate proposal that can be sent to outside agencies.

Required Application Information

Any application submitted need only address those information elements in the program application outline, which are pertinent to the actual mineral exploration program.

Contact Information

- List the applicant's name and full mailing address. If the applicant is a corporation please include a recent copy of the *Corporate Profile Report* to show that the corporation is registered in Saskatchewan. This report can be obtained by contacting the Corporate Registry at 1-306-787-2962 or:
  www.isc.ca/CorporateRegistry

- Provide a list of all of the main contacts for this project. This should include any companies and contractors associated with this exploration program.
- During an emergency (forest fire, etc.) the exploration field staff may have to be contacted, so please ensure that field staff contact information is included in this section.
- It is recommended that companies submit an emergency response plan if they have one.

Program Description

- Give a brief description of the activity to occur.
- Include the mineral (uranium or not uranium) commodity being explored.
- Outline the duration of the operation, complete with start and stop dates.
- Give approximate UTM locations of all drill sites, if known, and camp location.

Maps

- Include maps that show approximate drill collar locations, camp location, stream crossings and existing and new access locations.
- Electronic applications complete with maps are preferred.
- 1:50,000(for details) and 1:250,000(for overview) NTS maps should be used.
- Indicate on a map or maps, what existing trails/roads will be used as well as any trails/roads that will be improved or proposed new trails/roads.

Clearing Operations – BMP-003

- Outline any clearing which may be required including: new trails/roads, work camps, sumps, drill pads, etc., or widening of existing trails.
- Indicate what will be done with any merchantable timber that may be harvested.

Temporary Work Camps – BMP-004

- Must indicate where the staff will be staying, i.e. private accommodations or a work camp on Crown Land.
- If a camp will be established on Crown Land a Temporary Work Camp Permit will be required.

Fuel and Hazardous Materials Storage – BMP-005

- Describe how all fuels, oils and lubricants will be stored and the amounts on site.
- All fuel, oils and lubricants must be stored in secondary containment.

Fire Prevention – BMP-006

- If the exploration activities occur from April 1 to October 31, fire prevention measures must be outlined in the proposal.
- A list of all fire fighting equipment and its location must be provided on the form in Appendix “F”, Fire Control Plan.
- A list of required fire fighting equipment is provided in BMP-006.

Access – BMP-007

- Outline how the work camps and drill sites will be accessed.
- Indicate how many kilometers of existing trail will be used and how many kilometers of new trail will be constructed. If required, indicate how many kilometers of ice trails/roads will be used.

Water Crossing – BMP-008

- Must indicate on a map all of the water crossings.
- Must outline how each crossing will be established and reclaimed.

Trenching and Hydraulic Stripping – BMP-009

- Any trenching or sites for stripping must be identified.
- Trenches should be sketched to show as close as possible the locations of each and the dimension.

Drilling on Land and Ice– BMP-010 and BMP-011

- All drill hole locations must be indicated on a map, preferably a 1:250,000 or 1:50,000 NTS topographic map.
- Size of each drill pad and total number of pads must be outlined in the proposal.
- A water license will have to be obtained from the Saskatchewan Watershed Authority. Refer to the back of the Mineral Exploration Guidelines for Saskatchewan for contact information.

Drill Mud Management

- How do you propose to deal with your drill muds?
- If sumps are required for the project where will they be located and how will they be constructed/fenced?

Restoration/Reclamation – BMP-013

- Outline how all newly disturbed locations (roads, trails, drill pads, sumps and camp sites) will be restored.

First Nation and Métis Community Engagement – BMP-014

- The Duty to Consult with First Nations and Métis peoples is the responsibility of the provincial government.
- List any contact that may have already been made with the First Nation or Métis communities that may be impacted by this application.
- Provide dates and a list of individuals that were contacted and any concerns expressed by the First Nations or Métis persons.

Stakeholder Contacts

- Upon submission of a completed application and depending on the area of operations, the Ministry of Environment may provide a list of impacted stakeholders to contact.

- If the proposed project is within an existing Forest Management Agreement (FMA) area or a Timber Supply License Area (TSL), the proponent will have to contact the FMA holder and make satisfactory arrangements for road user agreements, use of merchantable timber and compensation (relevant details must be included in the application).
- Also, list any contacts with other stakeholders, which may include, but is not limited to: outfitters, trappers, towns, and rural municipalities, etc if any.

Rare and Endangered Species

- A check with the Conservation Data Center (CDC) needs to be completed in order to identify sites where rare or endangered species may be found.
- The CDC contact information is as follows; phone (306) 787-7196 and fax (306) 787-3913. The CDC will have to be contacted to obtain a password to access the website:

  http://gisweb1.serm.gov.sk.ca/wildlifelogin/form.asp

- A copy of the map must accompany the application.
- You must outline your CDC findings in the application even if there will be no impact on any rare and endangered species.
- If rare or endangered species with a rating of S1 or S2 will be impacted, the proponent must provide mitigating measures that will be implemented to ensure that the impact will be minimized.
- If the species impacted is rated as a S1 (or some S2s) this will trigger section 2(d) of The Environmental Assessment Act and the project would be considered a "development". The proponent of a development must conduct an environmental impact assessment and submit an environmental impact statement to the Ministry of Environment's Environmental Assessment Branch.

Archeological Considerations

- The proponent must indicate in the proposal that the application has been submitted to the Heritage Branch of the Ministry of Tourism, Parks, Culture and Sports.
- Further details are available in BMP-015 (Mineral Exploration in Southern Saskatchewan); note that sections of this BMP are also relevant for northern Saskatchewan

- The contact information for the Heritage Branch is as follows; http://www.tpcs.gov.sk.ca/SensitiveLocations or phone (306) 787-8157, fax (306) 787-0069.

Other Regulatory Requirements

- List any contacts with other agencies such as the Saskatchewan Watershed Authority, and the Department of Fisheries and Oceans Canada.
- The contact information for most other agencies is listed at the back of this publication.

BEST MANAGEMENT PRACTICE (BMP-001)
STAKING

GENERAL INTRODUCTION

Staking by itself is not viewed as having a significant impact on the environment however, associated activities such as the establishment of temporary camps requires permits; see BMP 004 (Temporary Work Camps).

Note: The Minister of Energy and Resources is in the process of converting the current ground staking process in the north and map staking process in the south to a web-based system. With the exception of the on-line land selection process, the rest of the new system will operate along principles fairly similar to those of the present regulations. The Mineral Acquisition Registry System (MARS) is under development and is expected to be completed and operational by June, 2011. Further information may be obtained from the Mines Branch, (306) 787-2139.

BACKGROUND

Depending on the location, mineral lands can be acquired in three ways in Saskatchewan: mineral permits, staking on the ground and map staking. The acquiring of rights to explore for minerals is highly confidential in nature. The staker is responsible for ensuring that the area in question is open for staking. Applicants may obtain current claim maps at the Ministry of Energy and Resources offices or on the Ministry web site to ensure that the area is open for staking. The information on staking can be found at the Ministry of Energy and Resources website as list in Appendix "E", attached hereto. The following is a summary of the staking procedures, but does not replace the existing Mineral Disposition Regulations, 1986.

Please Note

Although most of the BMPs included in the Mineral Exploration Guidelines for Saskatchewan are general in nature and may be used in relation to various types of dispositions, the "BMP-001 Staking" is only applicable to permits, claims and leases under The Mineral Disposition Regulations, 1986. Please refer to The Coal Disposition Regulations 1988, The Quarrying Regulations 1957 and The Alkali Mining Regulation for these specific commodities.

Permits:

The holder has exclusive rights to prospect for the minerals in the permit area and to convert any or all of the permit area into a claim or claims. A permit may be held for two years and it cannot be renewed. A permit is available to give exclusive prospecting rights to a large area: minimum 10,000 hectares and

maximum 50,000 hectares. However, if an area is subject to a high level of exploration and development activity, a permit may not be granted in that area.

Claims:
Subject to existing legislation, a claim holder has the exclusive rights to explore and prospect for the minerals in the claim area and to convert any portion or the entire claim into a lease or leases. A claim may be held for two years, initially, and thereafter from year to year subject to the holder expending the required amounts in exploration operations on the claim lands. The definition of surveyed and unsurveyed is found in The Mineral Disposition Regulations, 1986.

1. A claim in a surveyed area must be at least one legal subdivision in area, being not less than 16 hectares, but no more than 6,000 hectares.

In a surveyed area, a claim is acquired by *map staking*. An application to record a claim in a surveyed area is made to the ministry by stating the full legal description in accordance with The Land Surveys Act for each claim and submitting the required fee.

2. In an unsurveyed area, a claim shall be comprised of not less than 16, but not more than 6,000 hectares. The claim must be rectangular in shape and the length of the claim may not exceed six times its width.

In an unsurveyed area, a claim is acquired by *ground staking*. To stake a claim in an unsurveyed area, a post is erected at each corner, blazing trees, cutting underbrush, placing pickets or other appropriate methods delineate the outer boundaries, and the posts are marked with the required information. Metal tags, available from the Ministry of Energy and Resources must be affixed to the posts at the time of staking or within one year of the date of recording.

A squared corner post shall be erected at each of the four corners of the claim. The most northeasterly corner post shall be designated as "No. 1" and the claim is staked in a clockwise direction so that the most northwesterly corner post is designated as "No. 4". All boundary posts must be cut to the same dimensions as described below.

The process requires an individual to determine a compass bearing starting at the "No. 1" post. As the staker follows the compass bearing, he/she establishes the presence of the "claim line" by blazing larger trees on both sides of the tree in the direction of the claim line and places flags or cuts brush or bushes.

At every 500 meters, the staker must cut a boundary post. A tree may be cut off 1.2 meters above the ground to make a boundary post. The upper part of the post must be squared off so that the squared faces are perpendicular and parallel to the boundaries of the claim area. These posts must be large enough so that the squared face of the post is approximately 10 centimeters wide.

Boundary posts will be inscribed on the side of the post facing the next corner post in a clockwise direction from post "No. 1". The inscription must include the letters BP, the number from the tags located on the corner posts, the staker's name, and the name of the company the claim is being staked for and the date and time the post was erected. The corner posts are identified with metals tags.

a. The application is made to the Ministry of Energy and Resources on an approved form that is accompanied by the required fee and a plan, at 1:50,000 scale showing the position of the claim and the claim posts and the distance along the boundaries between posts and between posts and any bodies of water.

An application to record a claim that is ground staked in an unsurveyed area must be submitted to the mining recorder, along with recording fees, within 30 days of completing staking in order to be recorded. It is the staker's responsibility to register the claims with the Ministries mining recorder in either Regina or La Ronge.

Leases:
One or more leases may be obtained for the entire area covered by a claim, provided that each parcel of lease land is rectangular and its length does not exceed six times its width. A lease grants the exclusive rights to explore for, dig, work, mine, recover, procure and carry away the minerals within the lease area subject to the payment of royalties. A lease is issued for a term not exceeding ten years, and is renewable for further terms of ten years, provided regulatory requirements are met. The requirements for staking out a lease are the same as for staking out a claim.

Note: The Mineral Disposition Regulations, 1986 also regulate placer mining and, therefore, a mineral claim or lease must also be applied for under these regulations when placer mining is being undertaken.

AUTHORITY

The Crown Minerals Act
The Mineral Disposition Regulations, 1986
The Forest Resources Management Act and Regulations

REQUIREMENTS

1. For ground-staked claims, posts define the boundaries of a staker's mineral lands. The actual location of the claim on the ground maybe somewhat different than as represented on the maps. The posts are critical to ownership. Damaging, moving or altering a claim post is an offence under

the regulations unless permission is received from the Ministry of Energy and Resources.

2. Prior written consent of the Minister (Ministry of Energy and Resources) must be obtained in order to apply for, or stake out, a disposition area upon lands reserved by the Crown as a town site or laid out on a registered plan as a city, town or village lots.

3. Stakers are required to follow the staking process outlined in the background information as required under The Mineral Disposition Regulations, 1986.

4. For ground-staked claims, a forest product permit is no longer required from the Ministry of Environment on Crown Resource Lands.

CONTACTS

Mines Branch (Regina), Ministry of Energy and Resources
Mines Branch (La Ronge), Ministry of Energy and Resources
Ministry of Environment

BEST MANAGEMENT PRACTICE (BMP-002)
GRASSROOTS EXPLORATION

GENERAL INTRODUCTION

Many types of exploration activities carried out by mineral exploration companies require permits. The company should contact the Ministry of Environment to see if any permits are required to carry out their requested activity.

BACKGROUND

1. Airborne Geophysical Surveys

Many rocks or types of mineralization have physical properties such as radioactivity that can be sensed by instruments. The airborne surveys typically measure magnetism, electrical conductivity and radioactivity over broad areas. Typically an instrument package is housed in the aircraft itself or in a "bird" trailed behind the aircraft on a cable. The aircraft can fly at elevations of a hundred meters to several thousands of meters depending on the type of survey being conducted.

2. Property Evaluations or Prospecting

Grassroots prospecting includes activities such as examining core storage areas, conducting regional geological mapping, or surface prospecting. These activities are conducted to help plan further exploration programs.

3. Line Cutting

Lines are cut to provide a grid reference for a variety of surveys including: lease boundaries, geochemical, geological and geophysical surveys.

4. Geological, Geochemical and Geophysical Surveys

Geological mapping generally involves stripping small areas of moss or lichen and taking small hand-sized samples in order to determine the rock types present, mineralization and structural features.

Geochemical surveys can be done on several levels of intensity, from taking samples of leaf debris to digging trenches. Impacts on the environment vary depending on the level of sampling done.

Geophysical surveys test the physical properties of the rocks. These tests can include magnetism, electrical conductivity or resistivity and radioactivity. In the majority of cases this involves taking readings with instruments in a non-destructive manner. A seismic survey, although rarely done, uses explosives or

vibration generating equipment to create seismic waves. Geo-phones detect the seismic waves that respond to subsurface geologic structures.

AUTHORITY

Seismic Regulations
The Engineering and Geoscience Professions Act
The Provincial Lands Act
The Forest Resources Management Act

REQUIREMENTS

1. Airborne Survey

    a. Airborne Geophysical Surveys with no surface land use do not require a permit. However, it is advised that persons undertaking airborne survey activity get in touch with the Ministry of Environment contact to discuss potential program issues (e.g. colonial bird nesting periods, calving periods, fires, outfitters, trappers, other forest users, etc.).

    b. It is the responsibility of the applicant to ensure that there are no flight restrictions in the areas intended to be surveyed. Contact Transport Canada for any potential restrictions.

2. Typical line cutting conditions unless otherwise approved.

    a. The proponent is responsible for receiving authorization from the Ministry of Environment before proceeding with work.

    b. All lines are to be hand cut (e.g. hand tools and chain saws).

    c. Low impact/avoidance cutting techniques shall be used. This would include removing branches from trees rather than cutting the tree, avoiding the cutting of merchantable trees where possible, etc.

    d. When not accessing by foot, low impact equipment (e.g. all terrain vehicles or snow machines) shall be used and identified in the application.

    e. Baselines and lease boundaries shall not exceed 2.0 meters in width and cross lines shall not exceed 1.0 meter in width. Line width and land surface disturbance shall be minimized.

    f. Line widths should not exceed 1.0 meter within 100 meters of any canoe route, trail, road, cutblock, water body or water course (refer to BMP-008 Water Crossing). Natural features should be used to conceal visual sight of the line where possible.

g. No damage should occur to the standing timber.

h. All leaning trees are to be removed from standing timber.

i. Slash is to be laid flat.

j. There should be minimal vegetation disturbance at those locations where any line cutting enters or exits any lake or stream.

k. Felling and yarding of trees should be away from any water body. No cut brush or trees should be left on any water body during a project.

3. Seismic Survey

a. Conducting a seismic survey also requires additional permits from the Ministry of Energy and Resources. It is recommended that the proponent contact the Ministry of Energy and Resources to determine the regulatory requirements for the survey.

CONTACTS

Ministry of Energy and Resources
Ministry of Environment

BEST MANAGEMENT PRACTICES (BMP-003)
FOREST CLEARING / HARVESTING OPERATIONS

GENERAL INTRODUCTION

To ensure sustainable use and development of the provincial forest, care must be taken in the harvest and handling of the forest products during mineral exploration activities. Assistance in planning exploration harvest activities can be provided by contacting the Ministry of Environment.

Examples of typical forest clearing activities include line cutting for geophysical surveys, development of trails/roads, work camps, and pads for drill holes and helicopters.

BACKGROUND

Legislation requires forest users to practice sustainable forest management. This requires proper planning to minimize potential impacts on forest ecosystems, ensuring that forest users comply with desired forest management practices, and ensuring optimum forest resource utilization for all forest users to reduce the impact on productive forest land. Section 13(1) of The Forest Resources Management Regulations requires a Forest Product Permit for any mineral exploration activity where the removal or disturbance of forest products is incidental to that activity.

Definition:

"Merchantable Timber" Typically refers to all trees capable of making at least one 5 meter piece to an 8 centimeter top diameter, inside bark. For the purposes of calculating dues and fees, merchantable timber is categorized as:

S1 - Softwood (spruce, pine, etc.) greater than or equal to 14 centimeters in diameter;
S2 - Softwood less than 14 centimeters in diameter;
H1 - All ash, birch, elm and maple greater than or equal to 14 centimeters in diameter;
H2 - All ash, birch, elm and maple less than 14 centimeters in diameter;
H3 - All other hardwoods (aspen, etc.) greater than or equal to 22 centimeters. in diameter;
H4 - All other hardwoods less than 22 centimeters in diameter.

The following salvage practices and standards apply under The Forest Resources Management Regulations:

1. SCALING OF TIMBER

A licensed scaler is only required where there is greater than 250 m^3 of timber harvested. This is equivalent to 1000 - 2000 trees from the shield area, or 5 tandem truckloads.

Where applicable, an estimate of timber harvested will be required, as dues (royalties) and fees are payable. The Ministry of Environment will provide a formula to assist in calculating an estimate of the volume of harvested timber.

2. SALVAGING OF TIMBER

FMA & TRUST FUND AREAS: An exploration company must contact the appropriate forest company to discuss operations and wood salvage.

NON-FMA & TRUST FUND AREAS:

- Timber will only be required to be salvaged if there is an available purchaser, and if a certain amount of wood is harvested. A suggested benchmark is 60 m^3, which would be equivalent to 25 - 30 cords of wood in a 100 m x 100 m area.
- If above a minimum harvest level, the licensee (exploration company) with the assistance from the Ministry of Environment shall determine if a market for the wood is available. If a market is not present, salvage requirements may be waived.
- Methods of disposing of non-salvaged wood will be identified in the permit.
- It is the permittee's responsibility to complete, date and sign the Forest Product Permit and return it to the Ministry of Environment at the completion of the program or within 30 days expiry date of the permit. This may be attached to the Program Closure Report submitted to the ministry.
- The Ministry of Environment is to be advised of the quantity and locations of salvaged timber as soon as timber harvesting is complete.

3. DUES AND FEES

- Dues are equivalent to royalties; also referred to as stumpage fees.
- Fees include permit fees and forest management fees (reforestation, planning related).
- Dues and fees are paid on "merchantable timber."
- Dues and Forest Management Fees must be paid on merchantable timber that is cut, damaged or destroyed as a result of the mineral exploration operation. Dues may be waived for certain circumstances at the discretion of the Forest Service Branch, Ministry of Environment; forest management fees cannot be waived.

(A) Royalties/Dues

FMA & TRUST FUND AREAS: Dues are paid to the Crown in the amount defined in the regulations.

NON-FMA & TRUST FUND AREAS: Dues are paid to the Crown in the amount defined in the regulations.

The regulations provide for two practical instances where royalties can be waived or reduced:

- Timber that is burned, dry, dead, down, diseased or otherwise damaged. *This wood may have a salvage value in the first few years after a burn or infestation*.
- Where the licensee is prepared to conduct renewal/reforestation activities beyond what is required in the license/permit.
- Section 76.1 of The Forest Resources Management Regulations states that the Minister may waive dues and fees if:
  - The licensee harvests the forest products outside a licence area for which a forest management trust agreement has been established; and
  - The manufacturing of the harvested forest products is not possible or economical.

Where a licensee conducts renewal practices to a higher standard than is required pursuant to the terms of the license, timber dues may be reduced or waived.

(B) Fees:
FMA & TRUST FUND AREAS: Forest management fees are set out in the FMA Agreement. The fees are submitted to the Crown (Ministry of Environment) and deposited into a Trust Fund.

NON-FMA & TRUST FUND AREAS: The forest management fee is set out by regulation. The regulations currently provide no exceptions to paying the forest management fee. Fees are submitted to the Crown (Ministry of Environment).

AUTHORITY

The Forest Resources Management Act and Regulations

REQUIREMENTS

1. Line cutting exploration requirements are captured in BMP-002 (Grassroots Exploration).

2. Unless other methods are otherwise approved, hand clearing must be done:

    a) within 100 meters of a water body, unless it is a licensed facility;
    b) through steep or unstable terrain;
    c) within 30 meters of the shore of any water body and the trails must be doglegged and be no wider than approved by the Ministry of Environment; or
    d) areas as directed by the contact (e.g. through protected areas, specially designated areas, etc.

General Clearing Requirements:

1. Any clearing of vegetation should be kept to a minimum.

2. To minimize soil disturbance, clearing with heavy machinery should be limited to frozen or dry and stable ground conditions unless low impact equipment is utilized as authorized by the Ministry of Environment.

3. When clearing, the organic mat should be preserved where possible. Mineral soils should not be exposed if stripping is not required for the program.

4. To limit the number of trees cut, utilize existing roads, trails and cut lines. Where possible, avoid areas covered by standing timber, and regeneration areas.

5. Leaning trees should be cut and removed.

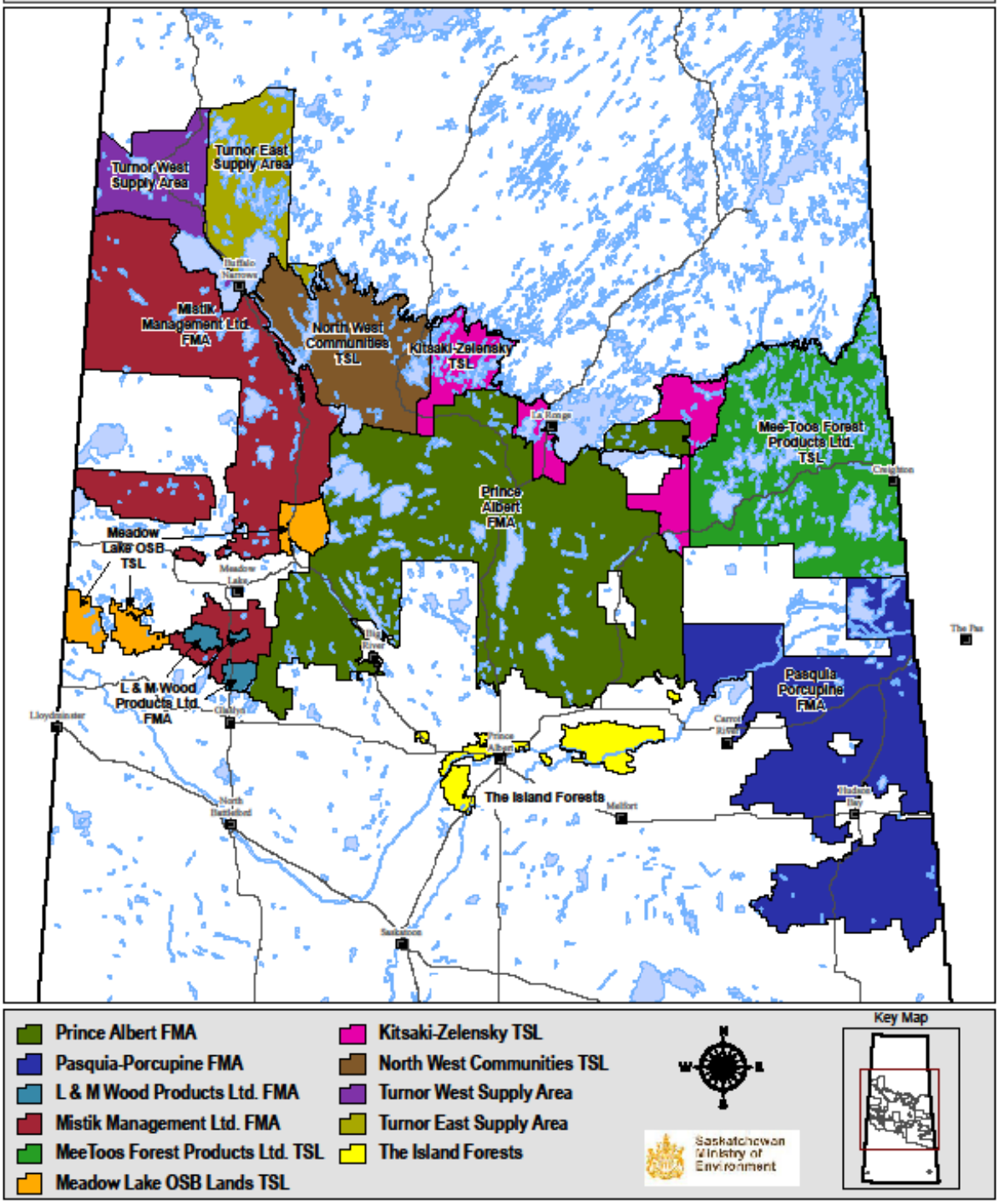
6. Existing trails are not to be blocked.

7. If required for future reclamation purposes, slash and unsalvaged timber is to be properly managed. See BMP-007 (Reclamation).

CONTACT

Ministry of Environment

Saskatchewan Timber Supply Zones



Saskatchewan Crown Forest Areas
Contact Information

Company Name	**Contact Name**	**Phone Number**	
Supply Area*			
Mistik	**Al Balisky**	**306-236-9708**	**FMA**
Meadow Lake OSB	**Travis Kiel**	**306-236-6565**	**TSL**
L & M	**Zane Delainey**	**306-342-2080**	**FMA**
North West Communities	**Bobby Woods**	**306-235-7644**	**TSL**
Sakâw Askiy Management Inc. (PA FMA)	**Dave Knight**	**306-953-2020**	**FMA**
Kitsaki-Zelensky	**Brian Zelensky**	**306-425-2239**	**TSL**
Weyerhaeuser/Edgewood (Pasquia Porcupine FMA)	**Mel Cadrain** **Ron Litton**	**306-865-1726** **306-768-3030**	**FMA**
Mee-Toos	**Trevor Ives**	**306-953-4410**	**TSL**

***Supply Area – FMA – Forest Management Agreement**
TSL – Term Supply License

BEST MANAGEMENT PRACTICES (BMP-004)
TEMPORARY WORK CAMPS

GENERAL INTRODUCTION

Temporary work camps are a necessary part of mineral exploration. Camps are to be established in an environmentally friendly manner with consideration given to the protection of natural resources.

BACKGROUND

Temporary work camps should utilize previously cleared areas or natural openings, in order to limit the amount of new clearing.

At the immediate access point to the camp, a sign must be erected showing the company name and giving a contact number. Size, additional information and design of the sign are left up to the company, but it should be easily visible to people accessing the camp.

Typically, temporary work camps *will not be authorized* in the following locations:

a. archeological, historical, vertebrate paleontological or other heritage property sites as defined in The Heritage Property Act except by approval of the ministry responsible for the administration of the Act;
b. areas of scientific concern or potential environmentally sensitive areas, such as nesting sites of endangered species or locations supporting unique vegetation;
c. locations on ice covered waters, and
d. areas that are restricted under other ministry policies, land use plans or municipal zoning.

To minimize land-use conflicts, the Ministry of Environment will need to provide additional approval for camps located within the following areas:

a. 1.6 kilometers from the center line of designated canoe routes;
b. 1.6 kilometers from any settlement, surface dispositions or titled property;
c. 1.6 kilometers from waterfalls, rapids or other designated areas;
d. 1.6 kilometers from sandy beaches over 20 meters long with public development potential; and
e. 100 meters from the centerline of an existing public road or the high water mark of any water body or water course.

Class A camp is a camp with in excess of 500 person days

Class B camp is a camp with from 100 to 500 person days
Class C camp is a camp with up to 100 person days

Person-days are those days accumulated in one fiscal year from April1 to March 31.

Temporary work camps that have been in place for three years, and will continue to operate, may be switched to industrial permits or leases. The rates per hectare are reduced, but the permits are open to municipal taxation.

AUTHORITY

Provincial Lands Act and Regulations
Forest Resources Management Act and Regulations
Public Health Act and Regulations
Heritage Property Act
The Hazardous Substances and Waste Dangerous Goods Regulations
The Mineral Industry Environmental Protection Regulations
The Prairie and Forest Fire Act, 1982
The Clean Air Act and Regulations
Provincial Itinerant Use Accommodation Standards
Health Hazard Regulations
Occupational Health and Safety Act & Regulations
Public Eating Establishment Standards
Public Eating Establishment Regulations
Plumbing and Drainage Regulations
Shoreland Pollution Control Regulation, 1976
Private Sewage Disposal Guidelines
National Fire Code of Canada

REQUIREMENTS

1. General Camp Requirements

a. A temporary work camp cannot be established without authorization from the Ministry of Environment.

b. Unless otherwise approved, the temporary work camp is to be situated no closer than 100 meters from a water body or water course.

c. A site plan indicating location of buildings, water source and sewage disposal should be submitted to the Regional Health Authority (Public Health).

d. The application must include the location of the camp, area to be used, number of occupants, and length of camp life and details of intended facilities.

e. The method used to service the camp must be included in the application (see BMP-007 Access). Permits from the Ministry of Environment are required for docks. Dock designs that involve infilling below the high water mark (e.g., crib docks) or that harmfully alter the shoreline or lakebed must be sent to Fisheries and Oceans Canada for their review.

f. A temporary work camp shall at all times be kept in a safe, neat, and sanitary condition.

g. For the storage and handling of hazardous substances see BMP-005 (Storage and Handling of Hazardous Substances).

h. Temporary Work Camp Permit holders are responsible for the actions of their contractors, subcontractors, agents and employees.

i. The establishment and operation of a temporary work camp shall minimize surface disturbance and environmental impacts (see BMP-003 Clearing Operations).

j. All camp buildings must have chemical fire extinguishers.

k. A temporary work camp shall be so situated and operated that it will not pollute surface water or groundwater.

l. When camps are being decommissioned, all structures/improvements must be removed from the site, including septic systems and latrines. All pits are to be filled in at the completion of the program.

m. All water supply sources and methods of withdrawal must be identified in the application.

n. All water wells must be approved, capped and decommissioned on the authority of the Saskatchewan Watershed Authority.

o. The campsite must be reclaimed according to the BMP-013 (Restoration).

p. Burning of paper, cardboard, wood products and food wastes in a burning barrel in camp may be approved under special permission from the Ministry of Environment (Burning Permit is required during the fire season. See BMP-006).

2. Domestic Waste Disposal Requirements

If utilizing existing solid waste or liquid waste licensed facilities, authorization should be obtained from the local jurisdiction.

Liquid Waste

a. Disposal of liquid waste arising from food preparation, laundry, bath and latrines must not pollute groundwater or surface water. Disposal methods will depend on:
   i. type of waste;
   ii. volume of waste;
   iii. soil characteristics;
   iv. water table depth;
   v. distance from water wells, water bodies or watercourses, and other dwellings or facilities;
   vi. remoteness of the work camp; and
   vii. seasonal considerations (i.e. frozen ground).

b. The preferred method of disposal is to dispose of liquid waste utilizing the services of a licensed septic waste hauler to an approved septic/sewage disposal site. For camps in remote areas or small, short-term camps, pit latrines and sewage pits/sumps may be used for disposal of liquid waste. The disposal method must be identified in the application.

c. Liquid waste storage must be in accordance with Ministry of Health requirements.

d. Unless otherwise approved, any sump or pit used for storing liquid waste must be a minimum of 30 meters back from the high water mark of any water body or watercourse; 7.5 meters away from occupied buildings; and 15 meters away from drilled wells

e. Larger camps (Class A and B) and those with continual operating life of more than one season must dispose of all liquid wastes, including sanitary sewage and waste water from showers, laundry kitchens and cafeterias, in a disposal system acceptable to the Regional Health Authority.

f. Any liquid waste containing heavy metals, toxic materials, flammable, explosive or radioactive substances must not be discharged to domestic liquid waste systems. Such wastes must comply with the applicable regulations, including The Hazardous Substances and Waste Dangerous Goods Regulations and The Mineral Industry Environmental Protection Regulations, 1996.

Solid Waste

a. The proponent is responsible to remove all solid wastes, from the camp to

an approved waste disposal site.

b. No burying or burning of wastes is permitted.

c. In remote or isolated areas only, the burning of wood, paper products and food wastes may be approved by the Ministry of Environment contact. All burning must be done in a controlled manner and supervised (see BMP-006 Fire Prevention and Control). Burning of some materials such as plastic, used oil, etc. will not be allowed.

d. Large non-combustible objects, including discarded equipment and empty fuel containers must be removed to an authorized disposal site.

e. For storage, locate solid waste in covered, leak proof containers.

f. Food waste should be kept in covered, fly/animal proof (e.g. bear proof garbage can) containers until removed to an approved waste disposal site.

Requirements under The Occupational Health and Safety Regulations, 1996.

a. Companies operating in remote areas of Saskatchewan must contact the nearest Regional Health Authority. The authority will assist the company with information in respect to emergency medical procedures and services in the operating area.

b. Section 61 of the regulations deals with the transportation of injured workers. Industry representatives should be familiar with the requirements under this section of the legislation.

Dealing with Wildlife on Site

Wildlife is attracted to camps by food and chemical smells associated with cooking, industrial activity and garbage dumps. They may also be attracted by an abundance of prey, and by suitable denning or nesting habitat. They become habituated to humans occupying their territories. Conflict between humans and habituated wildlife may arise when sensitive habitat, food sources, or when humans or wildlife are threatened, injured or destroyed. Every attempt should be made to prevent wildlife from becoming habituated to humans on site.

1) Food Storage/ Waste Disposal

All waste disposal containers must be wildlife proof. Waste bins and cans must be able to keep bears, wolves and ravens, etc. out even where people are not present to scare them away.

Food waste should be removed to an acceptable dump as quickly as possible. Lingering food sources on site will greatly increase the chance of some kinds of wildlife breaching containers, reinforcing the habituation process.

Surplus food supplies should be stored in wildlife proof buildings or containers, for the shortest time necessary.

2) Interacting with Wildlife

No wild animal should be fed. All species quickly learn to associate people with food.

No wild animal should be allowed to interfere with routine human activity at camp. Wildlife that disrupt traffic flow, approach or chase people at any time, and approach or enter vehicles and buildings on a regular basis (once a week or more, etc.) should be subjected to controlled harassment by designated staff. Part of conditioning wildlife to avoid sites is to make them feel uncomfortable around people no matter what the activity. Scare Permits are required to undertake controlled harassment activities.

No wild animal should be allowed to threaten people on and adjacent to camp. Animals such as bears, wolves and coyotes that threaten and are capable of harming people and other wildlife exhibiting symptoms of a contagious disease (e.g. rabies, west Nile virus, etc.) may need to be dispatched under permit from the Ministry of Environment, **after** investigation by a Conservation Officer. If an emergency arises that requires the dispatch of wildlife, a Conservation Officer is to be notified of the circumstances immediately after the occurrence.

People must not attract, chase, harass or otherwise harm wildlife. Interaction between people and wildlife at camp should be kept to a minimum.

Consideration must be given when bringing domestic animals into camp. It should be noted that dogs may actually attract wolves into the camp. Each company will need to assess the liabilities associated with such an activity.

3) Scare Permits/ Disposal Authorization

No wild animal should be allowed to feed peacefully on site or at garbage dumps. Controlled harassment by approved means (Scare Permits issued by the Ministry of Environment) will help to prevent wildlife from becoming habituated to humans on site.

Designated staff at camp should be the only people carrying out controlled harassment (under a Scare Permit issued by the Ministry of Environment).

4) Risk Assessment/ Training

People visiting, working or residing at the camp should be given training and education about local wildlife. It is important to become aware of what wildlife species might be encountered, what kind of behavior to expect from each, and the level of risk to people. It is also important to understand the kinds of human actions and activities that can place wildlife at risk on and adjacent to site. Finally, it is important for people to be aware what is being done to reduce or eliminate conflict between people and wildlife.

5) Monitoring & Reporting

Camp management should establish a reporting protocol. The Ministry of Environment and camp management should collectively establish a process for determining when, and under what circumstances wildlife problems would be reported to the Ministry of Environment.

For further information there are pamphlets on dealing with bears, cougars and wolves available at Ministry of Environment offices, through the Ecological Protection Specialist or on the Ministry of Environment's website as listed in Appendix "E", attached hereto.

CONTACTS

Ministry of Environment
Department of Fisheries and Oceans Canada
Regional Health Authorities

BEST MANAGEMENT PRACTICE (BMP-005)
HAZARDOUS SUBSTANCES AND WASTE DANGEROUS GOODS

GENERAL INTRODUCTION

Planning the proper storage and handling of Hazardous Substances and Waste Dangerous Goods (HSWDG) products and spill mitigation plans will assist the applicant in avoiding potential environmental issues that may occur during the program.

BACKGROUND

This BMP does not include the handling of solid and liquid domestic waste. For handling of these materials, please see BMP-004 (Temporary Work Camps). Radioactive materials are regulated pursuant to The Nuclear Safety and Control Act (Canada).

The following are examples of materials as characterized under different headings in the HSWDG Regulations.

Non-hazardous Substances	Tires, culverts, core boxes, untreated wood, Portland cement, biodegradable drill muds.
Industrial Hazardous Substances	Petroleum products, petroleum containers and filters, pesticides, paint, acids and bases, inorganic substances such as ammonia and fertilizers, metals such as lead, copper sulfate, sodium chlorite
Acute Hazardous Substances	Chlorine, fluorine, and potassium.
Environmentally Persistent or Chronic Hazardous Substances	Substances such as mercury, some drilling additives, lead, arsenic and cyanide.
Waste Dangerous Goods	Used oil, used oil filters, and waste antifreeze

Storage tanks– are receptacles of greater than 205 liters capacity
Containers – are receptacles of 205 liters or less capacity

For locations of recycling and disposal depots, the proponent may contact the Ministry of Environment or check the Saskatchewan Waste Reduction Website located in Appendix “E”, attached hereto.

The applicant should be familiar with the requirements under the Transportation of Dangerous Goods Act. For information sheets on hazardous materials, check the MSDS website located in Appendix “E”, attached hereto.

AUTHORITY

Transportation of Dangerous Goods Act-federal
Hazardous Substances and Waste Dangerous Goods Regulations
Environmental Spill Control Regulations
Environmental Management Protection Act, 2002
Environmental Emergency Regulations-federal
National Fire Code of Canada

REQUIREMENTS

1. HSWDG Management

1. The applicant must indicate:
   a. all HSWDG receptacles stored on site;
   b. the type of product stored;
   c. the volume of each; and
   d. the location of each storage site.

2. The applicant must indicate whether the tanks are portable (skids, trailer, etc.) or fixed.

3. There may be requirements under HSWDG regulations to register and approve the storage facility based on the volumes, products and storage receptacles.

4. Applicants should follow the storage and handling procedures listed below for all volumes to minimize environmental risks and meet HSWDG regulation requirements.
   a. The soil type, terrain, ground water table, surface water and water wells in the storage area(s) must be identified and assessed prior to site selection in order to limit the extent of contamination from any possible spills;
   b. Locate all tanks (including slip tanks, mobile, and permanent tanks) away from traffic-congested areas. HSWDG storage must be located a minimum of 100 meters from any water body or watercourse, unless otherwise approved. Occupational Health & Safety (OH&S) legislation requires that fuel must be stored a minimum of 6 meters from any building and there must be a 30-meter minimum clearance from the fuel dock to sleeping accommodations. The Fire Commissioners Office and National Fire Code requires at least two 2A-10BC fire extinguishers to be on site at fueling areas;
   c. Inspect and maintain all storage tanks. There should be no signs of corrosion and tanks must be painted, if applicable;

d. Each fuel storage tank should have two shut-off valves, one of which may be the handle;
e. Unless otherwise approved, secondary containment of all HSWDG materials is required (e.g. an enviro-tank, a dike lined with an impermeable membrane resistant to the product being stored, and spill containment trays). Construction requirements for secondary containment are available from the Ministry of Environment contacts;
f. For each storage area, secondary containment is required. For a storage area containing a single drum, containment must consist of 110 per cent of the volume. For a storage area containing multiple drums, containment must consist of 10 per cent of the cumulative volume plus 100 per cent of the volume of the largest container;
g. Use drip pans and/or nozzle holders to contain drips or spills. Nozzles should be mounted above the drip catchments;
h. Ensure slip tanks (tidy tanks) are secured into the vehicle. The intent is that in the event of a roll over, a full slip tank will stay secured in the truck;
i. Inspect fuel pumps and other equipment for worn hoses and leaks. Repair equipment when required;
j. Companies are required to have spill kits on site (number depends on the program, i.e. work camp, drill site, pump shacks). A large spill kit has an absorbent capacity of approximately 120 liters and a small spill kit has an absorbent capacity of approximately 20 liters;
k. Any water intake equipment must have secondary containment/spill kits for both the pump and pump fuel supply;
l. Refueling on ice or water, or within 100 meters of water, is permitted provided secondary containment of the tank and spill kits are used. HSWDGs are to be stored 100 meters from a water body or watercourse when not required for fueling equipment;
m. Toxic chemicals must be stored securely;
n. Neutralizing materials must be stored adjacent to acids; and
o. Lubricants and oily substances should be removed and properly disposed of, prior to sump water disposal.

5. New oil containers must be taken to a receiver and not discarded in landfills.

6. Oil filters are a waste dangerous good and must not be discarded in landfills. Place in a drum and transport to an approved receiving site. Used oil consignees will generally also take filters and oil containers.

7. Batteries and any waste dangerous goods other than waste oil or antifreeze may be stored on site up to 100 kilograms combined aggregate.

8. Used oil or waste antifreeze may be stored on site in containers (up to aggregate capacity of 500 liters). Disposal must be to an approved receiver.

9. Any use of, storage of, or transportation of explosives requires a provincial permit and may also require Federal approval.

2. Spill Contingency Planning

1. The applicant is required to have appropriate equipment/absorbent material on hand for the cleanup, containment and storage of contaminated materials and this equipment/absorbent material shall be readily available in areas where spills could potentially occur.

2. The Ministry of Environment requires all spills of HWSDG products greater than 5 liters or any spills within 100 meters of a water body or watercourse are reported to the appropriate Ministry of Environment contact within 24 hours and included in the Closure Report. If you are operating on a land disposition issued by the Ministry of Environment, the reporting requirements specified in The Environmental Spill Control Regulations take precedence.

3. According to The Environmental Spill Control Regulations, all reportable spills must be reported to the Ministry of Environment as soon as possible. The applicant must follow any clean up instructions received. Within seven days of being reported to the spill line, a written report must be submitted to the Ministry of Environment containing information about the spill and remedial action taken. *The 24-hour emergency telephone number is:* ***1-800-667-7525.*** This system automatically notifies Environment Canada if the spill has occurred in a waterbody or watercourse or spills that trigger the Environmental Emergency Regulations.

3. A reportable spill under The Environmental Spill Control Regulations is defined as:

Product	**Volume**
Gasoline, Diesel Fuel, Bunker Oil, Kerosene, Aviation Fuel, Stove Oil	100 litres or more
Lubricating Oils, Other (grease)	50 litres or more
Domestic liquid waste	300 litres or more

Information on Environmental Emergency Regulations, can be found in Appendix "E", attached hereto:

4. If a spill occurs, company personnel must take the following steps when safe to do so:
   a. prevent further spillage;
   b. contain the spilled materials;
   c. minimize the effects of the spill; and
   d. restore the area affected as near as possible to its previous condition.

5. The Ministry of Environment may request soil samples from the contaminated site and analysis of the samples following clean up activities.

6. HSWDG contaminated soils and clean up materials must be properly stored on site and then sent to an appropriate or approved disposal facility.

7. All spills of any quantity are to be documented in the Closure Report by recording the date, location, type of spill, reason for spill, and cleanup action taken.

8. It is important to note that in all instances of spills or in the discharge of pollutants The Environmental Spill Control Regulations and/or The Environmental Management and Protection Act, 2002 are the applicable legislation, whether or not HSWDG regulations apply.

CONTACTS

Ministry of Environment
Ministry of Labour Relations and Workplace Safety
Transport Canada
Environment Canada

BEST MANAGEMENT PRACTICE (BMP-006)
FIRE PREVENTION AND CONTROL

GENERAL INTRODUCTION

Mineral exploration, as with any activity in the bush, has the potential to start a forest fire or have program operations affected by a forest fire or fire suppression activities. To reduce potential liability concerns, the mineral industry must take every precaution to prevent a forest fire or to suppress a fire if one originates from their activities.

BACKGROUND

The boreal forest is a fire prone environment and it is important to consider this fact when developing and equipping exploration camps. Managing potential ignition sources, having the required training and equipment to deal with a wildfire and following some basic FireSmart principles can significantly reduce wildfire risks.

For safety and fire suppression reasons the Ministry of Environment may need to contact the applicant without delay to know where the field crews and equipment are located. In extreme cases the Ministry of Environment may recommend the evacuation of a site because of the potential threat from wildfire.

Operators should be aware that under provincial legislation anyone who causes a fire may be responsible for the costs associated with suppression activities.

AUTHORITY:

The Prairie and Forest Fires Act
The Forest Resources Management Act and Regulations
The Clean Air Regulations

REQUIREMENTS

1. Any burning in or within 4.5 kilometers of the Provincial Forest (as defined under Section 12 of The Forest Resources Management Act) during the fire season, normally April 1st – October 31st unless dates are extended, requires a Burning Permit. Contact the local Ministry of Environment office to determine if a permit is required.

2. An exemption is made to allow for fires for the cooking of food and for warmth provided it is kept in a controlled manner as per section 18 of The Prairie and Forest Fires Act.

   As per section 21(3) of The Prairie and Forest Fires Act, all operations require fire fighting equipment to be on site in a readily accessible area and serviceable during the fire season. All water packs and pails to be kept full of water during the fire season. This equipment is to only be used for fire fighting.

Tools	**Up to 5 people**	**6 to 10 people**	**11-20 people**
Axes	1	1	2
Pulaski tool (axe/grub hoe combination)	2	4	8
Pails	2	4	8
Shovels	2	4	8
Water Packs & Pumps	1	2	4

3. The following information is to be submitted as part of the program application for mineral exploration activities on Crown lands. This information will be used to assist the Ministry of Environment in fire suppression activities.
   - general program schedule;
   - identify any staff with fire fighting training, their training levels and who is in charge;
   - supply radio frequencies, contact phone list, and other communication information for contacting program staff;
   - inventory list of fire fighting equipment on site (e.g. aircraft, dozers, skidders, power units, chain saws, etc.) other than the required fire fighting equipment noted above;
   - emergency response plan in case of a forest fire:
     i. program staff assignments and contacts;
     ii. steps to be taken for initial suppression; and
     iii. steps to be taken to contact the Ministry of Environment.
   - identify any known nearby industries, residences, cabins/lodges etc.

4. Additional site and equipment requirements:
   - all heavy equipment and fueling sites must have approved and fully charged fire extinguishers installed;
   - all equipment on site must be kept in good operating condition and clean ensuring there is no buildup of combustible materials near manifolds, exhaust systems and mufflers;
   - all fueling sites should be designated and no smoking allowed near fueling sites or while operating equipment; and
   - the ministry contact may require additional safety precautions specific to any given program.

5. The Ministry of Environment must approve the burning of any slash. It is recommended that slash material be used during the reclamation phase of an exploration program. If burning of slash were approved for a specific situation**,** the following conditions would typically apply:
   - burning shall be restricted to between November 1 and February 28 to take advantage of favourable ground conditions;
   - minimum snowfall of 12 centimeters is required before burning;
   - slash piles must be located a minimum of 20 meters from standing timber and burning must be done in a manner that does not cause damage to any live timber;
   - burning should occur on mineral soil/rock to avoid the risk of ground fires.
   - to allow for as clean a burn as possible, all reasonable efforts will be made to keep soil out of the piles;
   - only woody material may be burnt;
   - all burning is subject to the requirements of The Clean Air Act*;*
   - the company shall ensure that all piles are completely extinguished by March 31; and
   - documentation indicating:
     i. date(s) of ignition;
     ii. date(s) of verification of extinguished piles; and
     iii. maps with GPS locations illustrating all areas of piles burnt and piles not yet ignited shall be submitted to the Ministry of Environment in the Closure Report.

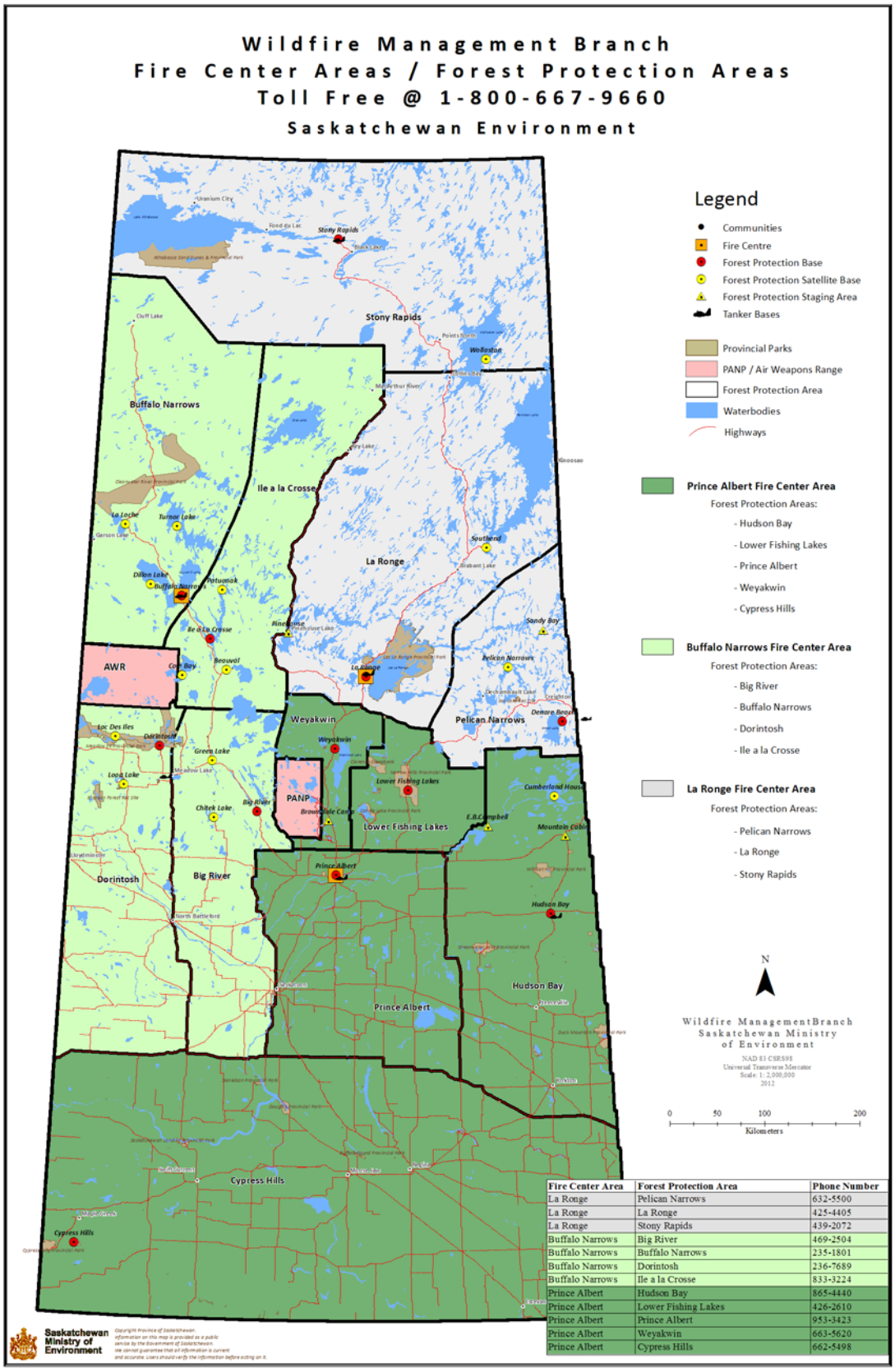
6. Camp burning barrels:
   - All burning must be done in a controlled manner; that is in a burning barrel equipped with an eight to16-millimeter grated top to help prevent the escape of burning embers;
   - The burning barrel should be placed on a cement pad or mineral soil, be surrounded by a meter wide strip of mineral soil and be at least 3 meters from any flammable material;
   - Fires must always be attended until they are completely out; and
   - The burning location must be equipped with fire fighting tools, such as a shovel, a chemical fire extinguisher and a full water pack.

7. Under section 21(1) of The Prairie and Forest Fires Act, industrial/commercial operations are required to submit a Fire Control Plan for approval. A blank template of the plan can be found in Appendix F of this document.

8. For a complete set of FireSmart considerations, please refer to the Ministry of Environment website located in Appendix “E” for more information.

CONTACTS:

Ministry of Environment
Toll Free Firewatch Line 1-800-667-9660 - to report a forest fire.
Ministry of Corrections, Public Safety and Policing – Office of the Fire Commissioner



Fire Center Area	Forest Protection Area	Phone Number
La Ronge	Pelican Narrows	632-5500
La Ronge	La Ronge	425-4405
La Ronge	Stony Rapids	439-2072
Buffalo Narrows	Big River	469-2504
Buffalo Narrows	Buffalo Narrows	235-1801
Buffalo Narrows	Dorintosh	236-7689
Buffalo Narrows	Ile a la Crosse	833-3224
Prince Albert	Hudson Bay	865-4440
Prince Albert	Lower Fishing Lakes	426-2610
Prince Albert	Prince Albert	953-3423
Prince Albert	Weyakwin	663-5620
Prince Albert	Cypress Hills	662-5498

BEST MANAGEMENT PRACTICE (BMP-007)
ACCESS

GENERAL INTRODUCTION

Roads and trails are one of the most visible impacts of exploration activities. They open up areas to other resource users that may not have been accessible previously.

BACKGROUND

Trails and roads create more controversy than other mineral exploration activities. Exploration companies must be allowed to access their claim areas. It is the Ministry of Environment's responsibility to ensure that the creation of the access is done in an environmentally sound manner.

All potential routes are to be considered and proposed during route selection. Each route will be assessed according to its ability to meet the goals and objectives of both the applicant and the Ministry of Environment. Applicants should review options and consider future operations to avoid development of a network of access trails.

The applicant should consider the impact on wildlife populations from access into an area (program timing to protect critical wildlife breeding, nesting or survival periods, the destruction or fragmentation of wildlife habitat, etc.).

New access development may be prohibited where reasonable access already exists.

Where applicable, the applicant should consider access utilizing frozen water bodies or courses in order to minimize the impacts on terrestrial environments.

Discretion in development of the road or trail may be allowed as long as the development addresses the concerns of the sensitive nature for the area.

Areas to be avoided if possible:

- areas of critical or sensitive wildlife habitat (e.g. riparian zones, etc.);
- areas where activities will result in unstable soil or erosion problems;
- sites of religious, archeological, historic, aesthetic, paleontological, natural or cultural significance; and
- legislated protected areas (game preserves, Provincial Parks and protected areas, Representative Area Network lands, land use planning areas, wildlife lands, ecological reserves, etc.).

AUTHORITY

Provincial Lands Act
Forest Resources Management Act and Regulations

REQUIREMENTS

1. For clearing operations, refer to BMP-003 (Clearing Operations).

2. The applicant will identify potential constraints to trail development, such as: construction practices, land use planning, seasonal timing, community issues, etc.

3. Areas requiring access restrictions will require specific mitigation actions such as: gates, berms, barricades, roll back, etc.

4. Closure or reclamation of roads and trails must be part of the reclamation plan. See BMP-013 (Restoration).

5. The construction schedule must be provided prior to route selection. Seasonal restrictions may apply.

6. The applicant must identify other known resource users who may be accessing the trail or are impacted by trail development.

7. Life expectancy of all access routes should be identified in the application to allow for better access management for the area.

8. Fills and cuts resulting in damage to the ground surface should be kept to a minimum.

9. For winter access, the applicant should consider snow/ice in lieu of soil for cuts and fills.

10. If fill materials (sand, gravel, till, etc.) are required for trail improvement, a separate authorization is required from the Ministry of Environment.

11. Vehicles and equipment must be confined to the identified access right of way unless otherwise approved.

12. Trail centerlines should be flagged prior to trail construction to avoid unforeseen problems.

13. Activities should occur on dry, stable, or frozen ground conditions. While using undeveloped access routes during wet conditions, all efforts must be

made to minimize rutting of the ground surface. Rutting is defined as an area 5 meters in length and 10 centimeters in depth.

14. For access using water bodies or watercourses, see BMP-009 (Water Crossings).

15. When crossing bogs, muskegs or possible wet areas, the ground must be frozen sufficiently to support equipment. If frozen ground conditions do not exist, alternate and approved methods, by the Ministry of Environment contact, must be used to prevent rutting of the ground surface (e.g. matting, corduroy, planks, etc.).

16. Access trail routes and widths must be identified in the application and will be limited to:
    a. the equipment size;
    b. method of construction;
    c. the intended purpose of the trail; and
    d. Ministry of Environment approval.

17. Unless otherwise approved, clearing of vegetation within 100 meters of any watercourse or water body must be hand cleared. Within 30 meters of the shore of any water body or watercourse, the trails must be hand cut, doglegged and be no wider than approved by the Ministry of Environment.

18. An easement application or lease application must be submitted and approved for any long-term development of a roadway. Exclusive use dispositions will not be granted for mineral exploration activities.

19. When sand or gravel is required for upgrades to a road or trail, a permit will be required. The mineral exploration coordinator can deal with small quantities permits.

20. When access onto a Provincial Road or Highway is required, construction of an approach must be approved by the Ministry of Highways and Infrastructure.

21. Any roads/trails that were re-opened to access the proposed work area(s) must be closed in the same manner at the conclusion of the program unless otherwise authorized.

CONTACTS

Ministry of Environment
Ministry of Highways and Infrastructure

BEST MANAGEMENT PRACTICE (BMP-008)
WATER CROSSINGS

GENERAL INTRODUCTION

The constructions of water crossings and of water body access points are activities that may have significant impacts on aquatic environments. Water crossings are commonly used by the mineral exploration industry to efficiently access program work sites. Temporary water crossings are employed for short term access and are not intended for prolonged use. The impacts associated with water crossing construction will depend on the type of structure used at the crossing, timing of the proposed work and on how the crossings are constructed, maintained and operated.

The Department of Fisheries and Oceans Canada (DFO) is responsible for protecting fish and fish habitat in all water bodies and watercourses across Canada. As per The Fisheries Act, 1985, no one may carry out work that will cause or has the potential to cause the harmful alteration, disruption or destruction to fish habitat without prior approval from DFO. The impacts associated with the construction of access points will depend on the access location selected (i.e. type and amount of shoreline/bank vegetation, shoreline/bank slope at the land/water interface, degree of disturbance required to construct the access point, soil type, type/amount of aquatic vegetation, etc.), timing of construction, type of heavy equipment used, required width of access, etc.

The program impacts may include:

- The harmful alteration, disruption or destruction of fish or aquatic habitat through the infilling of watercourses or water bodies or the alteration of shoreline areas;
- The blockage of fish movements;
- Dewatering of small streams during water withdrawal activities;
- The entrainment or impingement of small fish into water intakes; and
- The introduction of deleterious substances, such as fine sediments, into a water body or watercourse.

The potential impacts on fish habitat and the surrounding land may be minimized through careful planning of the routes of the access trails and roads and the selection of appropriate crossing sites, crossing structures and water body access points that will have minimal impacts on the aquatic environment.

Definitions:

"Water body" includes a lake, slough, marsh, wetland or muskeg in which the water exists permanently or intermittently (Definition is under The Environmental Management Protection Act, 2002*)*.

"Watercourse" includes a stream, creek, river, gully, valley floor, drainage ditch or any other channel, including any artificial channel, in which water flows either permanently or intermittently (Definition from The Water Regulations, 2002).

"Wetland" is a low lying area where water is present often enough to support a change of vegetation to species such as: reeds, sedge, cattails, willows and/or aquatic plants that provide habitat supportive of migratory birds, aquatic mammals, etc. Wetlands include associated riparian habitat and the area between the basin and the adjacent upland.

"Fish Bearing Waters" refers to any water body or watercourse that has the potential to support fish or fish habitat (Definition from the Fish Habitat Protection Guidelines).

"Fish" includes parts of fish, shellfish, crustaceans, marine animals, and the eggs, sperm, spawn, spat, larvae and juvenile stages of fish, shellfish, crustaceans and marine animals (Definition from The Fisheries Act).

"Fish Habitat" refers to the spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes (Definition from the Fish Habitat Protection Guidelines).

"High Water Mark" refers to the location on the bank that visibly marks the end of terrestrial vegetation and the beginning of effects due to high flows or aquatic vegetation (Definition from the Fish Habitat Protection Guidelines).

BACKGROUND

Impacts to the bed, bank, and boundary of any water body or watercourse should be minimized. All mineral exploration activities should be planned and conducted in a manner that minimizes the disturbance to fish and fish habitat.

In spawning areas, extra precautions may be required. The eggs of fall spawning species will be present on the spawning grounds until they hatch in the spring. Larvae are present in these areas for awhile after hatching. Care must be taken to ensure eggs and larvae are not killed or destroyed.

For all species, the preferred spawning areas are generally shallower portions of water bodies, river mouths, gravel bars and bays.

Properly planned water crossings and use of frozen water bodies for travel can reduce potential impacts on terrestrial and aquatic ecosystems. Types of structures used to cross waters may include steel or wooden bridges, culverts, ice/snow bridges or ramps.

If practical, water crossings should be located:

- near the headwaters of watercourses;
- away from water body inlets and outlets;
- upstream from natural, permanent barriers to fish passage, such as waterfalls and steep gradients;
- away from important fish habitat (such as riffle area, rapids, and areas with gravel/cobble substrates);
- where the approaches to the crossing are on a flat, stable slope;
- in areas with minimal or no floodplain habitat adjacent to the active channel;
- perpendicular to the watercourse;
- at the location where the watercourse is narrowest (these areas may have fast moving water, thin ice, and may not be the best place to create a crossing); or
- where they will accommodate peak flows.

For open water crossings, clear span structures that do not involve any infilling of the watercourse below the high water mark are the preferred type of structure. Infilling of the watercourse below the high water mark is considered a loss of habitat and may require formal authorization from DFO under Section 35(2) of The Fisheries Act and acceptable compensation to meet DFO's No-Net–Loss of Fish Habitat Policy.

Ice/snow bridges are the preferred type of crossing for winter exploration programs.

AUTHORITY

The Environmental Management and Protection Act, 2002
The Water Regulations, 2002
Fisheries Act (Federal)
Navigable Waters Protection Act
The Watershed Authority Act

REQUIREMENTS

1. If alterations are required to any bed, bank or boundary of a watercourse or water body, the Ministry of Environment is to be contacted prior to work commencing.

2. Applicants must send their project proposals to DFO if the project has the potential to negatively impact fish or fish habitat. The exception is when the only components of the project that involve fish or fish habitat are covered by one of DFO's Saskatchewan's Operational Statements (e.g., Operational Statements for clear-span bridges or ice bridges). To facilitate review by DFO, only submit relevant information that pertains to potential impacts to fish and fish habitat.

3. Applications to the Navigable Waters Protection Program which is administered by Transport Canada are only required for programs that have the potential to impact navigable waters (e.g., permanent or temporary bridges) at water crossings that are determined to be navigable by NWPP. Temporary ice and snow bridges will NOT require an application to NWPP.

4. Any program requiring water from a different source for building a crossing requires approval from the Saskatchewan Watershed Authority, the Ministry of Environment, and DFO.

5. Crossing construction details required in the application should include at minimum the following information:

Note Additional information may be necessary for any work where culverts are proposed.

a) the locations (UTM Co-ordinates and Datum) of any water crossing and/or water body access point that will be utilized during the exploration program;
b) the type of crossing structure that will be used at each of the locations;
c) the type of equipment, that will be used for the construction, placement, and decommissioning of the crossings;
d) the timeframe for the construction and removal of the crossing;
e) the length and width of any crossing structures (outside of snow or ice bridges) that will be utilized. If required to facilitate the placement of any crossing structures, the area that will be covered by fill material (i.e. floodplain and below top of bank), along with the type and source of fill material, needs to be identified;
f) any modifications of the bed, banks, or boundary at the water crossings or access points;

g) if constructing ice bridges and/or ice roads, the approximate volume of the pump per minute and the source of the water need to be identified;
h) a brief description of the riparian zone and watercourse or water body is to be provided. This description should include the following information:

- the area (km^2) of the watershed up stream from the crossing,
- the bankfull width and depth of the watercourse at each crossing site,
- the types of vegetation (grass, shrubs) that are present on the bank and boundary at each water crossing or access point,
- a description of the slope and stability of the bank at each water crossing or access point,
- the presence and associated width of any floodplain habitat at the proposed crossing sites,
- photographs of the bank and boundary of the water body or watercourse and upstream and downstream views of the watercourse at each of the crossings locations.

Note For crossings involving the construction of clear span bridges, ice/snow bridges, or water body access points using ice and snow, habitat information may be collected in the field, as the crossings are being constructed and included in the closure report. However, for projects that will involve the installation of structures or materials (i.e. fill) below the high water mark (including active floodplain areas), the information will have to be provided and the work approved prior to construction. Photographs (including something to show scale) of the channel banks and upstream and downstream views of the streams at each of the crossings are essential for reviewing the project.

i) the mitigation measures that will be employed to stabilize, re-vegetate and reclaim any disturbed areas resulting from planned crossing activities (see BMP-013 Restoration);

6. During unfrozen conditions, the applicant needs to take steps to reduce surface impacts for crossings over bogs, muskegs, wetlands, etc. As part of the application, specialized low impact equipment, corduroy bridging, or other acceptable and approved methods may be required.

7. Unless otherwise directed, any vegetation cleared to facilitate the crossing is to be removed away from the water body or watercourse and stored above the high water mark (See BMP-003 Forest Clearing/Harvesting Operations).

8. Crossings that require installation of culverts in watercourses with large bodied, migratory fish species and that will remain in place during the Spring

and/or fall spawning seasons will have to be designed to allow for fish passage. These crossings will also need to be designed by a qualified engineer. All culvert installations/replacements in fish habitat require formal review by DFO prior to installation.

9. Ice/snow bridging is permitted provided all material is clean and free of debris. Once the ice/snow bridge is no longer required, it shall be breached for at least 10 per cent of the bank full width to allow the watercourse to flow naturally during spring thaw.

10. Equipment operating near any waters shall be properly maintained, in sound mechanical condition and free of any fuel, oil, hydraulic fluid, or coolant leaks.

11. No cleaning or servicing of equipment is permitted within 100 meters of a water body or watercourse. Fueling may take place within this buffer area provided secondary containment of the tank and spill kits are on site (see BMP-005 HSWDG).

12. If required, flooding is permitted to build up ice to a desired thickness provided the intake for the pump is screened, the water source is the same, and the fuel source for the pump has secondary containment (see BMP-005 HSWDG).

13. Any water intake used in fish bearing waters is to have a fish screen that meets DFO's 1995 "Freshwater End-of-Pipe Fish Screen Guideline" to prevent the impingement or entrainment of fish during pumping activities. Information on these guidelines can be found in Appendix "E".

14. The screening material used for water intakes in fish bearing waters is to have a maximum design opening of 2.5 millimeters. The approach velocity at the face of the fish screen(s) should not exceed 3.8 cm/s (0.038 m/s) if any anguilliform species are present (e.g. northern pike, burbot) or 11 cm/s (0.11m/s) if only subcarangiform species are present (e.g. sucker, walleye).

Note: To determine the size of the screen to be placed around the water intake, the formula is as follows (taken from Page 6 of the Freshwater Intake End-of-Pipe Fish screen Guideline.):

Effective Screen Area = Open Screen Area / (Per Cent Open Area/100).

The Effective Screen Area is the total size (area) of the screen placed around the water intake.

The Open Screen Area is the area of all open spaces on the screen available for the free flow of water. The open screen area required is based on the

maximum pump capacity and the type of swimming mode of the fish found in the waterbody where the pumping is to take place. This open screen area can be determined by referring to Table 2 of the Freshwater Intake End-of-Pipe Fish Screen Guideline.

Open Screen area is the area of all open spaces on the screen available for the free flow of water.

The Per Cent Open Area is determined by the size and type of material used to construct the screen and can be found in Table 3 of the Freshwater Intake End-of-Pipe Fish Screen Guideline.

15. The screen and water intake are to be placed a minimum of 12 inches off the bottom of the water body so that they do not disturb the sediments.

16. Applicants that plan on constructing clear span bridges or ice bridges and can follow DFO's Operational Statements for Clear Span Bridges or Ice Bridges are asked to submit a completed Notification Form to DFO preferably 10 days prior to starting these components of the program. No additional information other than the Notification Form needs to be submitted to DFO for these types of projects.

17. All in-water and shoreline works are to take place outside of DFO's Saskatchewan In-Water Closed Construction Timing Windows unless otherwise approved by DFO. The time of year that a particular water body may be closed to in-water or shoreline work will depend on the fish species present in that water body. DFO should be consulted if there is a need to undertake any in-water or shoreline works during the Saskatchewan In-Water Closed Construction Timing Window prior to undertaking the activity.

18. Whenever possible, large water bodies rather than small creeks should be used for water sources to avoid potentially dewatering the small creeks and impacting fish and fish habitat during the water withdrawal process. No more than 10 per cent of the instantaneous flow may be cumulatively removed from any water body during water withdrawal activities.

CONTACT

Department of Fisheries and Oceans Canada
Ministry of Environment
Navigable Waters Protection Program (Coast Guard – Transport Canada)
Saskatchewan Watershed Authority

BEST MANAGEMENT PRACTICE (BMP-009)
EXPLORATION TRENCHING AND HYDRAULIC STRIPPING

GENERAL INTRODUCTION

Trenching and hydraulic stripping are the most definitive methods for surface exploration, but can cause significant environmental disturbances, with the potential for contamination of soil and water through exposure of mineral substances.

BACKGROUND

Environmental impacts can be reduced or avoided with the proper safeguards.

Hydraulic stripping is rarely used as a primary exploration tool, but could be used in conjunction with other exploration activities (e.g. trenching, diamond drilling).

There are two types of trenches.

1) *Overburden trenches* are made to check and map the type of bedrock below the overburden. These are very common if heavy equipment (i.e. back hoe) is available.

2) *Bedrock trenches* are made to follow up on bedrock mineralization. These require blasting with dynamite and are far less common. While the former are usually backfilled immediately, the latter are usually left open.

The Ministry of Energy and Resources accepts trenches (by volume removed) as evidence of assessment work, which is one of the reasons they are not backfilled. Most of the overburden trenches are dug where the ongoing operations require them and the location is not something known in advance.

AUTHORITY

Mineral Industry Environmental Protection Regulations
Forest Resources Management Act and Regulations
Provincial Lands Act and Regulations

REQUIREMENTS

1. Exploration Trenching

a. The Ministry of Environment must approve all trenching activities. Details of the trenching activities must include the dimensions of the trenches and the method of construction. If clearing of forest vegetation is required, see BMP-003 (Clearing).

b. Unless authorized, a minimum 100-meter buffer of undisturbed vegetation must be maintained between the trenches and all water bodies and watercourses.

c. Unless otherwise approved, all areas stripped of topsoil must be back filled and restored to as near the original contour as possible.

d. The development of an exploration trench must take into consideration the safety risks associated with entrapment. Trenches must be dug in a manner that allows for easy escape, for both humans and wildlife.

e. For the use of explosives, see BMP-005 (Hazardous Substances and Waste Dangerous Goods).

f. Topsoil, if present, and material removed from trenches must be stockpiled separately and utilized for site restoration unless otherwise approved.

g. Material excavated from overburden trenching must be backfilled with the topsoil replaced last.

h. In the case of uranium exploration, following backfilling, a radiometric survey must be conducted to ensure that the gamma levels (measured at 1 meter from the surface) are reduced to less than 1.0μSv. When material is found to exceed background levels, then the Ministry of Environment must be contacted for review and approval of the handling procedures.

i. Applicant liabilities, future reclamation costs and future planning should be considered by the applicant when requesting trenches be left open. Note BMP-013 (Restoration).

j. Trenches are required to be backfilled to the point where there is no safety risk. With adequate justification to the Ministry of Environment (safety, scientific, reclamation, etc.), exploration trenches may be allowed to remain in an excavated form once exploration has been completed.

k. Applicants are to supply GPS co-ordinates for all trenches in their Closure Report or identified in a figure which clearly shows the location of the trench and has a suitable scale.

2. Hydraulic Stripping

a. All hydraulic stripping operations must be approved prior to initiation. Contact the Ministry of Environment contact regarding projects using hydraulic stripping. Restoration options should be discussed with the mineral exploration contact - refer to BMP-013 (Restoration). If clearing of forest vegetation is required see BMP-003 (Clearing).

b. All hydraulic stripping operations must be approved prior to initiation. Details of the stripping activities must include the dimensions of the area to be affected. If clearing of forest vegetation is required, see BMP-003 (Clearing).

c. Unless otherwise authorized, a minimum 100-meter buffer of undisturbed vegetation must be maintained between stripping operations and any water body or watercourse.

d. Restoration options should be discussed with the mineral exploration contact - refer to BMP-013 (Restoration).

CONTACTS

Ministry of Environment
Ministry of Labour
Transport Canada
Natural Resources Canada

BEST MANAGEMENT PRACTICE (BMP-010)
DRILLING ON LAND

GENERAL INTRODUCTION

Drilling is one of the most definitive and common methods for surface exploration.

BACKGROUND

A properly planned and managed drilling program reduces the risk of impacting the environment.

The following requirements apply to shield areas of the province. Drilling in the Western Sedimentary Basin requires additional precautions because of the potential of encountering oil and gas concentrations.

Clearing for drilling is dependent on the size and type of drill rig used.

AUTHORIZATION:

Mineral Industry Environmental Protection Regulations
Forest Resources Management Act and Regulations
The Oil and Gas Conservation Regulations, 1985

Note: Before drilling in Saskatchewan, companies need to contact the Ministry of Labour Relations and Workplace Safety, Chief Mines Inspector, to ensure the drilling equipment used is legal for use in Saskatchewan as some equipment is banned for occupational health and safety reasons.

REQUIREMENTS:

1. If drilling is required on ice-covered waters, see BMP-011 (Drilling on Ice).

2. The number of drill holes, locations, and drilling program details must be identified in the application.

3. Applicants wishing to conduct activities within 100 meters of a water body or watercourse must also contact the Department of Fisheries and Oceans Canada for their review if the activities have the potential to negatively impact fish or fish habitat.

4. Any program requiring water for drilling activities (except water from municipal or private sources) requires approval from the Saskatchewan Watershed Authority and Ministry of Environment. See BMP-008 (Water Crossings).

5. Clearing should be kept to a minimum size and constructed to facilitate drilling operations. A standard drill pad should not exceed 20 meters by 20 meters (or 400 square meters) unless otherwise approved. See BMP-003 (Clearing) for further clearing requirements.

6. A minimum of 100 meters must be maintained between the drill pad and any water body or watercourse unless previously authorized by the Ministry of Environment. For drilling activities within 100 meters of a water body or watercourse the applicant may have to follow additional procedures outlined in BMP-011 (Drilling on Ice).

7. For drill sites that are not level, the first consideration should be given to leveling methods other than soil stripping (blocking, ice pads, etc.) and site relocation. If not possible, soil stripping should be minimized.

8. If soil stripping is required, soil horizons are to be removed and stored separately at the edge of the clearing.

9. Slash material is to be stockpiled at the edge of the clearing and utilized for reclamation of the site. See BMP-013 (Restoration).

10. For HQ (<2.5 inches or <63.5 millimeters) and smaller diameter drill holes in remote locations drilling effluent shall be contained, in sumps, containers, or natural depressions located as close to the drill site as possible, unless otherwise approved.

11. For larger diameter holes (> 2.5 inches or > 63.5millimeters) or areas of road access the Ministry of Environment may require sumps or tanks.

12. Where possible all efforts shall be used to prevent drill mud, return water, and cuttings (sludge) from running uncontrolled from the site or to within 100 meters of a water body or watercourse. Appropriate sediment and erosion control measures may need to be implemented to prevent deleterious substances from entering fish habitat.

13. The applicant must identify in the application any drilling additives that will be used in the program.

14. Wherever possible biodegradable mud and non-toxic additives should be used.

15. An adequate closed circuit system must be utilized for potentially harmful drilling mud and other additives.

16. Drill mud solids or cuttings with a uranium concentration greater than 0.05 per cent are to be collected and then disposed of down the drill hole and sealed.

17. Noise abatement devices including mufflers and shrouding are to be used near populated areas.

18. Upon completion of the program, exposed drill casings are to be removed or cut off at or below the surface of the ground, unless otherwise approved.

19. Any drill hole that encounters mineralization with a uranium content greater than 1.0 per cent over a length > 1 meter, and with a meter-percent concentration > 5.0, will be sealed by grouting over the entire length of the mineralization zone and not less than 10 meters above and below each mineralization zone.

20. All artesian drill holes must be reported to the Ministry of Environment contact within 30 days of its discovery. All artesian drill holes must be sealed to prevent discharge to the environment.

21. Reclamation of the drill site must follow procedures outlined in BMP-013 (Restoration).

22. Appropriate precautions are to be undertaken to ensure that deleterious substances do not enter any watercourse.

23. The proponent is responsible for effective sediment and erosion control:

    a. All spoil materials should be disposed of above the high water level, and located and stabilized so that they do not re-enter any watercourse;
    b. The proponent is responsible for erosion control on the approaches to ice/snow bridge watercourse crossings all year round. This includes sediment from winter roads entering watercourses during the ice-free seasons;
    c. During construction and until re-vegetation is sufficient to control sediment erosion, the proponent should ensure that effective sediment and erosion control measures are in place and that they are functioning properly and are maintained and/or upgraded as required to prevent sediment from entering fish habitat.

24. Companies wishing to drill in the Western Canada Sedimentary Basin are required to contact the Mines Branch of the Ministry of Energy and Resources prior to drilling. That ministry will advise on any precautions that are required.

CONTACTS:

Ministry of Environment
Department of Fisheries and Oceans Canada
Saskatchewan Watershed Authority
Mines Branch, Ministry of Energy and Resources
Ministry of Labour Relations and Workplace Safety

BEST MANAGEMENT PRACTICE (BMP-011)
DRILLING ON ICE

GENERAL INTRODUCTION:

Many exploration programs involve drilling on ice in the search for mineral deposits. Because potential risks increase from drilling on ice, special attention is given to all drilling phases to prevent or minimize adverse impacts to the environment. Operations may vary between drill rigs or even between holes as situations demand; however, decisions must reflect the requirements outlined in this guideline to reduce potential impacts to the aquatic ecosystem. Some aspects of this Best Management Practice may apply to land-based drilling programs if drilling within 100 meters of a water body or water course (see BMP-010).

BACKGROUND:

The following information is provided to describe the various precautionary steps taken to protect the environment when drilling on ice.

Description of a Diamond Drill

Diamond drills come in a variety of shapes and sizes. Although there are a number of different sizes, manufacturers, and types of drills they generally adhere to a few simple rules. Diamond drills are almost always primarily powered by a diesel engine. All drills have at least some secondary drive mechanisms that are hydraulic. Typically drill rigs are small, about the size of a small recreational vehicle. The drill is transported to the site on a low bed tractor-trailer and is moved around the site using a dozer/skidder. The drill pipe or “rod” will have a diameter of anywhere from five inches to as small as two inches. Drills are capable of drilling to 300 meters or more, depending on the size of the drill and drill rod string used.

Drilling on ice goes through three basic phases: setting up, drilling, and tearing down.

All three of these operations are outlined in detail below:

Setting Up

There must be sufficient ice to support the weight of the drill rig and associated equipment during transportation to the drilling location and when operating on the drill site. If insufficient ice is present, the ice is commonly built up with a series of local floods. Flooding is generally approved by the Ministry of Environment as long as all proper screening is in place as set out in BMP-008 (Water Crossings).

The drill is supported on untreated timbers to distribute its weight over the ice and to help level the rig. Some drills are relatively light and need to be stabilized by using ice screws or freezing in anchors. Associated drilling equipment, which includes: drill rods, pumps, mixing tanks, and mechanical support equipment, is brought to the site and usually stored on sleds. Fuel and petroleum products necessary for maintenance and operation are temporarily brought to the drill site when required.

Drilling

The first step in drilling is "casing" the hole. This means sealing the hole from bedrock to surface using a large diameter pipe or "rod". This is a necessary step to ensure that the hole can be located again if any subsequent drill rods need to be removed during the operation. When casing the hole, one factor to contend with may be the depth of the water, or the distance between the drill and something solid. If the water is deep, the drillers will drop their largest rods first (rod size referred to as HW in *Figure 1*). The HW rod will be pushed and turned as far as it will go into the lake bottom manually and then anchored to the drill. Some disturbance of lake bottom sediments will result from this initial stage, however it is minimal and localized. If the lake bottom is bedrock there will be virtually no disturbance at all. If however consolidated sediments exist then some disturbance to organic matter at the bottom of the lake should be expected.

If the HW encounters bedrock then the next smallest size casing referred to as NW will be lowered inside the HW. The NW rod will be drilled into the rock to form a seal between the rock at the bottom of the lake and the drill at the surface. Once the NW rod is in place the next smaller "NQ" rods can be lowered into the hole.

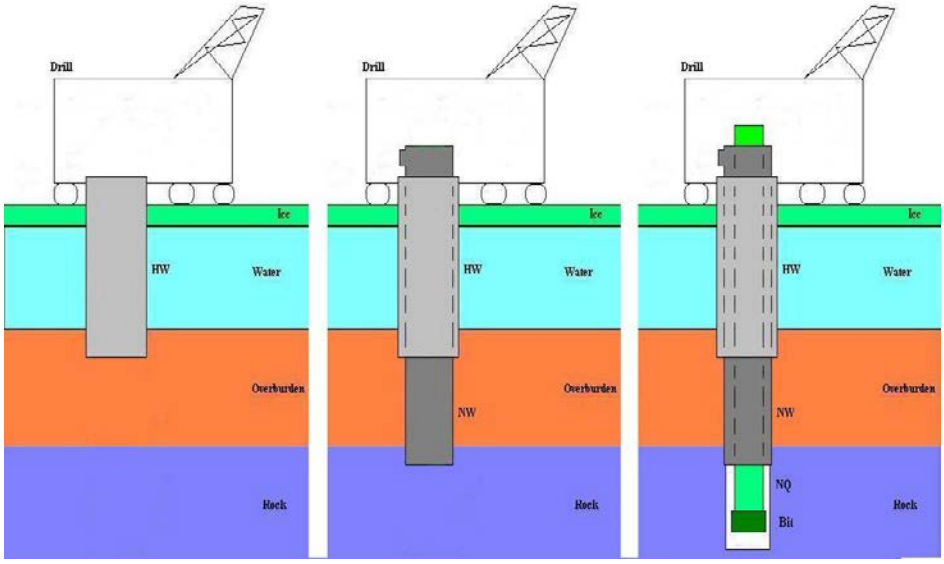
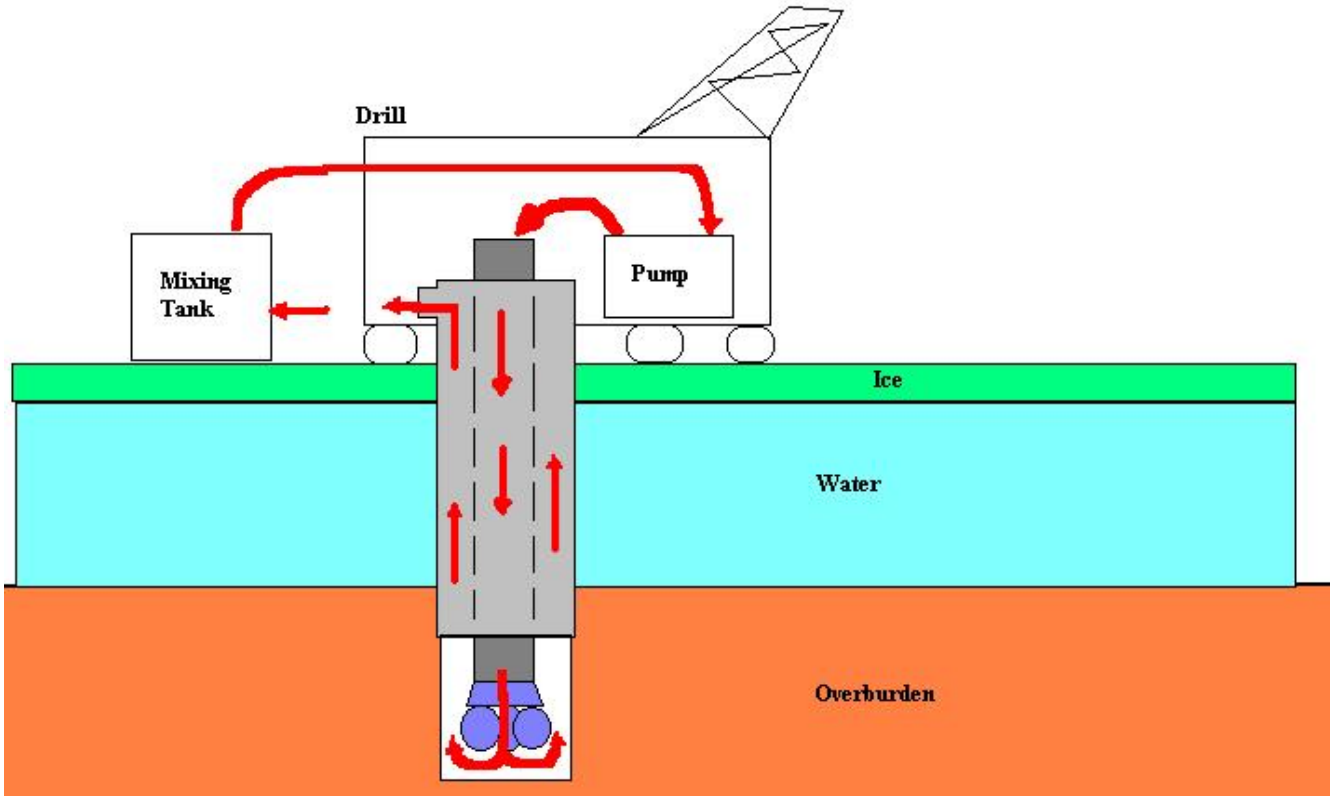


Figure 1. Setting Casing

If the NW rod doesn't hit bedrock when it is initially lowered into the hole, it will commence hollow core drilling through the lake sediment or "overburden". If the overburden is deep, or the drilling is difficult, then the drillers will probably switch to a type of drill bit called a tricone. Tricones do not hollow core drill; instead they simply grind their way through everything they encounter. Triconing produces a lot of sand and silt and this abrasive material must be removed from the bottom of the hole or it will plug up the tricone and stop the drilling. Because this material is very coarse and heavy, drillers will commonly add a substance called bentonite to the drilling water to float the coarse sand away from the tricone and out the top of the hole. Mixing bentonite with water forms thick slurry that is able to float out the coarse sand produced by the tricone, when pumped down with enough pressure. This drilling mixture is pumped down through the rods, out through the tricone, back up the outside of the hole into the HW rod, and thus back to the surface. When the bentonite reaches the surface it is contained in a large mixing tank, likely the same tank that was used to mix it in the first place, where the coarse sand can settle. The bentonite is then reused or re-circulated back down through the hole (*see Figure 2*). After the NW rods are sealed with the bedrock, the hole is considered "cased". Once the hole is cased the next step is the actual drilling. For this process, the drillers use the next smaller size rods called NQ.

Figure 2 Re-circulation During Triconing



"Coring" is the process by which rock is extracted using a hollow bit drill (s*ee*

Figure 3). Coring is achieved by the drill supplying a great deal of pressure and a high-speed rotation. This process generates heat so drilling fluid must be circulated through the bit to keep it from melting. In most cases water will suffice as a drill fluid, but in some cases additives must be used for additional reduction in friction and/or better cooling. If water is used it will be pumped directly from the lake down the hole. If additives are necessary, they are mixed and contained in tanks before pumping the mixture down the hole.

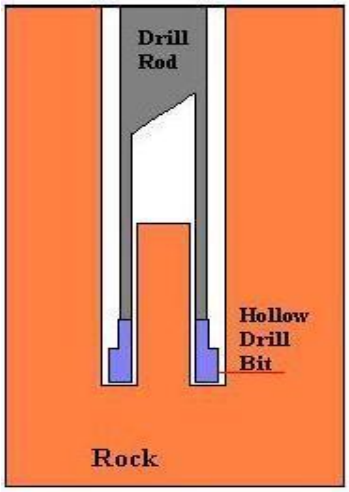


Figure 3. **Coring**

Water or drill fluid is pumped down the hole, through the bit, and back up the outside of the NQ rod, but because the hole is sealed it returns to the surface inside the NW casing (*see Figure 4*). While coring, the drill fluids are under pressure forcing the "cuttings" (a gritty mud from the bit cutting the rock) away from the bit and out the top of the casing. This drill fluid full of cuttings coming out the top of the hole is called the "return". When this return fluid reaches the surface it is run through a filter called a Polydrill filter. This filter separates out the cuttings and packs them in a cylindrical bag for disposal. The drill fluids are then pumped back down the hole or re-circulated (*see Figure 5*). In some cases, the rock is very porous and the return dissipates before reaching the surface.

Figure 4. Circulation of Drill Fluids

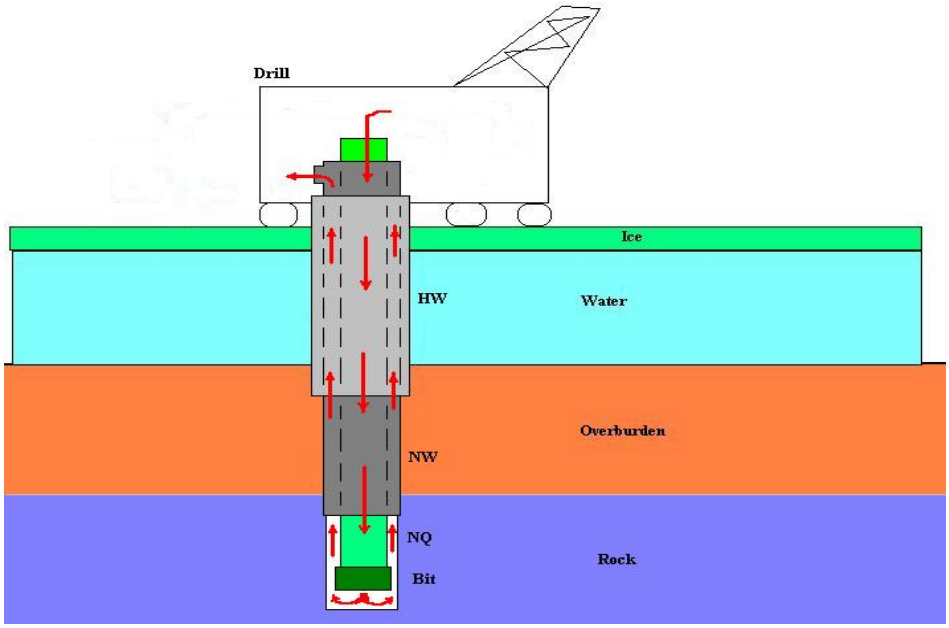
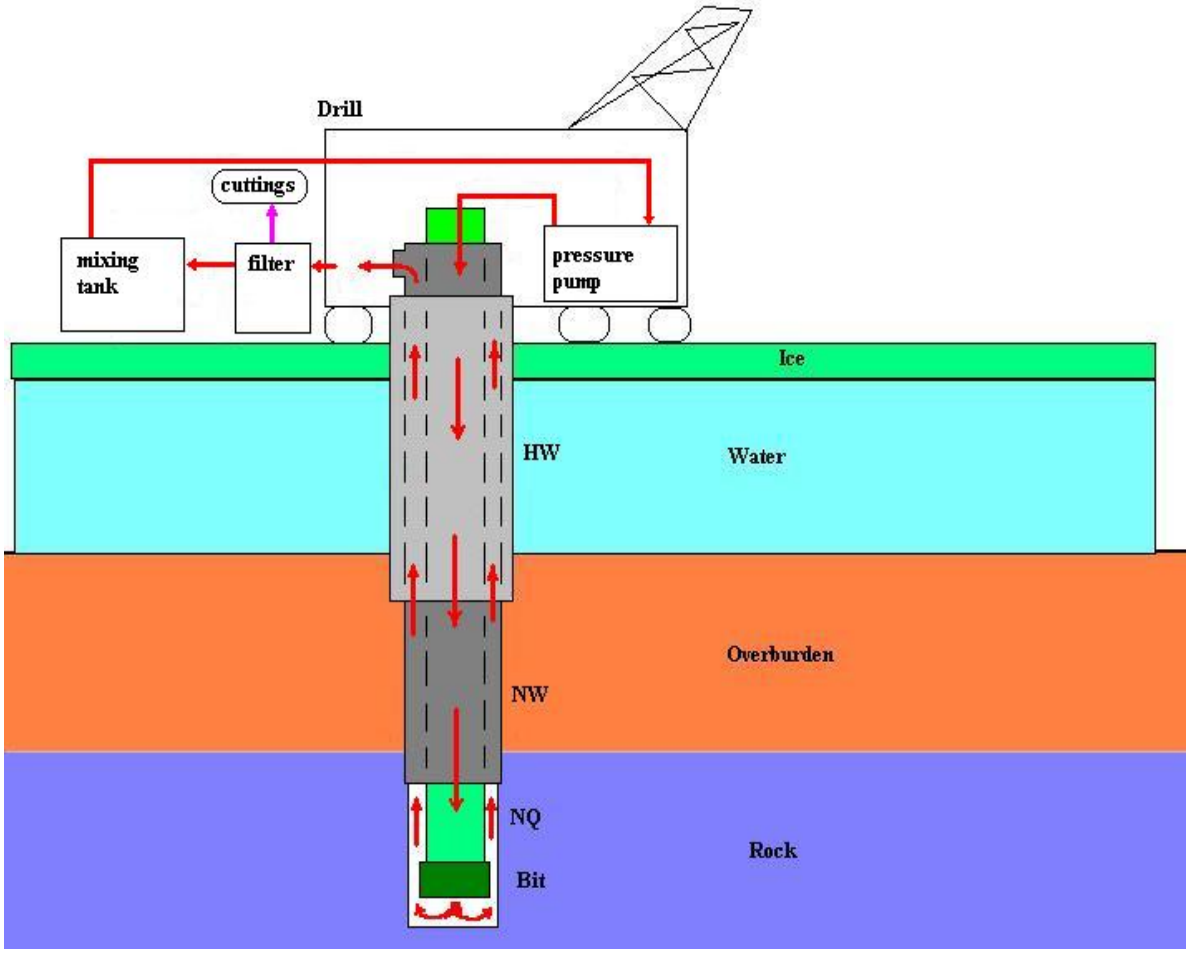


Figure 5. Recirculating Drill Fluids



Tearing Down

Once drilling has been completed, clean water is circulated through the hole to remove any drill additives and remaining cuttings. The hole is then sealed as per requirements to prevent any of the lake water from being inadvertently drained into any aquifer or mine workings (past or future) and to prevent any impure water (salty, mineralized) from entering the lake through underground sources. The hole is sealed for cementing by pumping down a properly sized safety plug and regular Portland cement is pumped down the hole to form a watertight seal.

As the hole is being cemented, all the rods are extracted from the hole in the reverse order they went in. As they are withdrawn any remaining cement will settle to the bottom of the hole. The amount of cement deposited on the lake bottom will be minor as the drillers follow a formula to determine the exact amount of cement they will require to seal a hole. All drill and support equipment is then removed from the lake. The goal is to leave the ice surface in the same condition as it was prior to moving onto the site.

AUTHORITY:

Fisheries Act
Mineral Industry Environmental Protection Regulations
The Oil and Gas Conservation Regulations, 1985

REQUIREMENTS:

1. Applicants conducting activities on or near a water body or watercourse must also contact Fisheries and Oceans Canada for their review if there is the possibility that fish or fish habitat will be negatively impacted.

2. Any program requiring water for drilling activities (except water from municipal or private sources) requires approval from the Saskatchewan Watershed Authority and the Ministry of Environment, which must be identified in the original application. See BMP-010 (Drilling on Land).

3. All access routes onto the water body must follow the requirements outlined in BMP-008 (Water Crossings).

4. The ice needs to be of sufficient thickness to support the drill and associated equipment both during transportation and drill setup.

5. Flooding is permitted to build the ice up to sufficient thickness if required. If the water body is fish bearing the intake for the pump must be screened to meet DFO's Freshwater Intake End-of-Pipe Fish Screen Guideline and the fuel source for the pump must have secondary containment. See BMP-008 (Water Crossings).

6. Unless otherwise approved, drilling shall occur in water depth greater than 2 meters, including ice thickness. Additional site assessment and mitigation information will be required if the applicant plans to drill in a water depth less than 2 meters, in fish-bearing water bodies. Contact DFO and the Ministry of Environment for information requirements.

7. Untreated timber or local cut timber can be used to support the drill. If local timber is used, a Forest Products permit authorizing this use is required before any timber harvesting is permitted. All timbers must be removed away from the water body upon completion of drilling operations.

8. The use of ice screws or freezing in anchors is permitted but must be removed once the drilling operation is completed.

9. Fuel shall be stored at a shore cache a minimum 100 meters from the high water mark, unless otherwise approved. A limited supply of fuel can be temporarily brought to the site to support the drill. Fuel stored on site must be

stored in a secondary containment system; either a large tray or an ice/snow bermed containment area lined with an impervious liner to the product being stored.

10. Absorbent matting or drip trays must be used where accidental spills may occur during fueling. Contaminated material is to be removed from the site for proper disposal immediately after cleanup has been completed. Refer to BMP-005 (HSWDG) for further requirements regarding fuel handling, storage and spills.

11. The drilling crew is to be trained to respond to a spill should the need arise. All drill rigs must be equipped with a spill kit.

12. External pumps or motorized equipment used in the drill operation and sitting on the ice shall have secondary containment (e.g. impermeable liner resistant to the product being used, plastic drip trays, etc).

13. Any water intake used in fish bearing waters is to have a fish screen that meets DFO's 1995 Freshwater End-of-Pipe Fish Screen Guideline to prevent the impingement or entrainment of fish during pumping activities. See BMP-008 (Water Crossings).

14. Noise abatement devices including mufflers and shrouding are to be used near populated areas.

15. The applicant must identify in the application any drilling additives that will be used down the hole during drilling. All drilling additives must be biodegradable, where available, and accompanied by an MSDS sheet. Drill additives should only be used if required and in minimal amounts.

16. If mixing tanks for drill muds are being used, they must be placed on an impervious liner and any spills are to be cleaned up with absorbent material and contained.

17. All drilling operations shall use a "closed loop" recycling system with no discharge to the water or ice. In some cases, approval may be given to allow the return fluid to be pumped back to shore and into a natural or constructed sump located 100 meters or greater from the water (in these cases re-circulating drill fluids would not be required).

18. Drill cuttings must be collected through a filter system and disposed of in a Ministry of Environment approved landfill or alternatively the drill mud, return fluid and cuttings can be disposed of in a land-based sump placed 100 meters above the high water mark. Any requirements in BMP-010 (Drilling) addressing operation and handling of the land-based sump must be followed.

19. The drill area is to be kept orderly and any garbage is to be removed daily from the area to an approved disposal site. The ice surface is to be kept clean at all times. Once drilling is complete, all material is to be removed from the ice and the site left in a safe and clean state.

20. Once drilling is completed, clean water must be circulated through the hole to remove any remaining drill fluids and cuttings.

21. Drill holes must have all rods and casing removed prior to abandoning the hole.

22. Drill mud solids or cuttings with a uranium concentration greater than 0.05 % are to be disposed of down the drill hole and sealed.

23. Any drill hole that encounters uranium mineralization with a content greater than 1.0 per cent over a length of more than 1 meter with a meter-percent concentration greater than 5.0 will be sealed by cementing (grouting) over the entire length of the mineralization zone and not less than 10 meters above or below each mineralization zone.

24. Drill holes are to be sealed by cementing (grouting) the upper 30 meters of bedrock or the entire depth of the hole, whichever is less.

25. Companies wishing to drill in the Western Canada Sedimentary Basin are required to contact the Mines Branch of the Ministry of Energy and Resources prior to drilling. The Ministry of Energy and Resources will advise of any precautions that are required.

26. The Closure Report must provide site assessment, drilling operation, and abandonment information for each drill hole. See the “Closure Report” document for further information.

CONTACTS:

Ministry of Environment
Department of Fisheries and Oceans Canada
Saskatchewan Watershed Authority
Ministry of Energy and Resources, Mines Branch

BEST MANAGEMENT PRACTICE (BMP-012)
CORE STORAGE

GENERAL INTRODUCTION:

Exploration companies use drilling to test for mineral commodities or geological structures. Commodity prices or geological models change with time and as a result, core is commonly re-sampled and re-logged. Utilization of core drilled in the past is a prospecting tool that is a cost-effective means of re-exploring the site. When core is properly boxed and stored, the potential usefulness of core will be maintained for 25 years or more. The mineral industry and the Ministry of Energy and Resources utilize core for geological mapping, research and special studies. The Ministry of Energy and Resources is the regulating agency

BACKGROUND:

Diamond drilling is one of the most widely used tools in mineral exploration. Core is a cylindrical section of rock usually 1.4 to 3.4 inches (35 millimeters to 85 millimeters) in diameter and up to many meters in length and is brought to the surface for geological examination or laboratory analysis. It is commonly stored in wooden boxes. The study of drill cores assists in the three-dimensional reconstruction and interpretation of bedrock geology and is normally environmentally safe and non-hazardous.

AUTHORITY:

Mineral Industry Environmental Protection Regulations

REQUIREMENTS:

1. Distance from water bodies: Unless otherwise approved, storage areas must be located a minimum of 100 meters from the high waterline of all water bodies.

2. Long Term Storage on the site: Before an applicant is “released” from their responsibility associated with *all applicable permits*, all core remaining on site must be stored in standard core boxes. Each box will be identified with aluminum labels securely attached, indicating the hole number and core interval represented.

There are three acceptable ways to store the core, which can be used individually or in combination.

a. Cross Stacking

- The core boxes could be cross-stacked on top of one another (each layer should be stacked perpendicular to the layer above and below it), with at least one inch between individual boxes in a layer (to enhance ventilation), on a well-drained site.

- The bottom layer of boxes should be approximately 15-45 centimeters off the ground and supported by solid footings.

- The stacked boxes should be stable.

- Each box on the top layer of the stack should be sealed with a standard core box lid.

- Each stack should have a simple covering to provide shelter from the elements.

- Suggestions include, but are not limited to: well ventilated tarpaulin covers; another layer of empty core boxes attached perpendicular to the top layer; a layer of plywood that extends beyond the edge of the core boxes.

b. Core Racks

- The permit holder may be allowed to leave the core in core storage racks that are provided with a simple covering, which extends beyond the end of the core boxes. More elaborate structures that have an element of permanence are not prohibited, but may be subject to additional permitting.

c. Transportation to Ministry of Energy and Resources Storage Facility

- Approval can be granted, if the applicant agrees, to transport either all core or representative sections of core to the Saskatchewan Energy and Resources core storage facility in La Ronge.

3. Long Term Storage Off-Site: The applicant may be released from permit obligations if the operator stores the core in a long-term storage facility not located on the property, with the permission of the Ministry of Energy and Resources (Director of the Northern Geological Survey).

4. Time of Assuming Responsibility: The operator is responsible for all core drilled on a property from the date they acquired the property. If the property is sold or reassigned the new operator is responsible for all core.

5. Salvage of Core: An applicant working on a claim is encouraged to take all reasonable actions to salvage (if possible) or upgrade any core racks that pre-date their involvement.

6. Location of Core: The applicant should note the location of core with their work permit applications and assessment reports submitted to Ministry of Energy and Resources. Any subsequent change in location shall be communicated to the Ministry of Energy and Resources. Core locations shall also be documented in the Closure Report submitted to the Ministry of Environment.

7. Radiation in long term Storage: Gamma radiation levels of a core storage area must meet the decommissioning requirements outlined by the Ministry of Environment. That is, average gamma levels measured at 1 meter from surface of a storage area should be reduced to 1.0 µSv/h. At the discretion of the claim holder, a radioactive warning sign may be posted on the perimeter of the core storage area. Mineralized core with radioactivity exceeding 1 Bq/g (approximately 80 ppm U) is considered a dangerous good, the transportation of which must be compliant with the Packaging and Transport of Nuclear Substances Regulations. Laboratories receiving radioactive materials must be authorized by the Canadian Nuclear Safety Commission through the issuance of a license. The average radiation level (at 1 meter from surface of the storage area) of any core left on site that has gamma radiation levels that exceed background, shall be reported on the relevant assessment file along with the core storage location.

CONTACT:

Chief Geologist, Saskatchewan Geological Survey, (306) 787-1160
Saskatchewan Environment Mineral Exploration Contact
Department of Fisheries and Oceans Canada, Prince Albert
Canadian Nuclear Safety Commission, Saskatoon

BEST MANAGEMENT PRACTICE (BMP-013)
RESTORATION

GENERAL INTRODUCTION

Reclamation must be recognized as an integral part of exploration, and therefore must be included in the pre-exploration planning. Proper planning will assist the applicant in returning disturbed areas to an acceptable natural and productive state.

It is impossible to define every situation because exploration activities and environmental conditions are variable, so flexibility must be built into the permitting process.

BACKGROUND

Reclamation - Planning should include minimizing impacts and avoiding surface disturbance to assist in reducing reclamation requirements and costs for the program.

Re-vegetation - The purpose in rehabilitating disturbed areas is to encourage the progressive establishment of natural vegetation consistent with pre-exploration conditions.

The need to actively re-vegetate a site depends on the nature of the area and the disturbances created by the work. If proper planning is done to minimize surface disturbance, natural regeneration of the site should take place without the need for additional reclamation work. If surface disturbance is created, the site may need to be actively stabilized and re-vegetated. Actively re-vegetating a site as soon as possible following re-contouring is the best way to stabilize slopes, control weeds and exotic plants, minimize erosion, and encourage the establishment of native plant communities. The Ministry of Environment must approve the proposed re-vegetation prior to work commencing.

Interim Reclamation - It may be beneficial to conduct interim reclamation on a site where future exploration plans include returning to the site in subsequent years to do more work. This is typical of sites used for access and core drilling where soil stripping may occur. To avoid soil mixing and reduced soil quality from continuous soil handling practices, the Ministry of Environment may approve interim reclamation. Financial assurances may be requested to ensure future site reclamation.

Abandonment - The work area should undergo a final inspection performed by the Ministry of Environment contact. Permit expiry does not exempt the applicant from future liability.

AUTHORITY

Forest Resources Management Act and Regulations
Provincial Lands Act and Regulations
Mineral Industry Environmental Protection Regulations, 1996
The Seeds Act (Canada)
The Noxious Weeds Act

REQUIREMENTS

1. Reclamation

    a. As part of the exploration application, reclamation measures must be indicated.
    b. The Ministry of Environment must approve all reclamation measures and trail/road closures.
    c. All infrastructure and waste must be removed from the site at conclusion of the program.
    d. Approval from the Ministry of Environment is required for the long term storage on Crown resource land managed by the Ministry of Environment, except for core storage as covered under BMP-012.
    e. Water works, intakes, culverts, docks, bridges (includes snow/ice bridges) and any other structures installed in conjunction with waters are to be removed, unless otherwise authorized by the Ministry of Environment. Fisheries and Oceans Canada and/or Transport Canada may be involved in any permitting and decommissioning.
    f. Unless otherwise approved, surface disturbances are to be re-contoured as close as possible to their original state.
    g. Soil horizons are to be replaced over the disturbed site in the same manner they were stripped and stored.
    h. In a location where there is a reasonable chance that erosion will occur due to soil type or grade, slash material is to be spread evenly over the disturbed area and worked into the surface. If slash is not available, other approved sediment and erosion control options may be considered.

2. Re-vegetation

    a. If active re-vegetation is required by the Ministry of Environment (e.g. large cleared areas, creek crossings, access points on to lakes, steep slopes) the following guidelines will apply:

i. Suitable native plant species are to be encouraged so the eventual plant community will comprise only native species. Seeding of a native plant species or use of plant materials in reclamation are to be approved by the Ministry of Environment.
ii. All native seeds require a certificate of seed analysis to be submitted to the Ministry of Environment for approval. Contact the Ministry of Environment representative for potential seed or seed mixtures and appropriate seeding rates, or reference the relevant documents listed in Appendix "D" at the end of this document (Native Species Recommended for Site Restoration within the Mid-Boreal Upland, Mid-Boreal Lowland and Boreal Transition Eco-regions of Saskatchewan).
iii. For best results, seeding of native species should occur in early spring or dormant seeded in late fall.
iv. Other plant species used for cover crops or soil stability may be considered on a site-by-site basis.
v. Applicants must ensure that any plant material used for reclamation is free of noxious weeds as specified under The Seeds Act (Canada) and The Noxious Weeds Act (Saskatchewan).

b. Soil quality in a reclaimed area must be capable of sustaining a native plant community.

c. The Ministry of Environment may approve the use of mulches, soil stabilizers, and fertilizers to establish plant growth and reduce erosion. Such assistance should not be carried to the extent that the vegetation would depend on these inputs for their survival or that these inputs allowed non-native species to dominate and exclude native species from the area.

d. In Forest Management Agreement (FMA) areas where forest management fees are collected, the establishment of tree species is the responsibility of the FMA holder. The applicant is responsible only for the establishment of the ground cover. If required by the Ministry of Environment, the applicant may be responsible for the establishment of trees outside the FMA areas.

e. Reclamation sites located within active grazing areas should be fenced unless otherwise approved.

3. Interim Reclamation

a. Disturbed areas (temporary work camps, etc.) not reclaimed at the time of the program closure must continue to be covered by a valid permit or surface disposition.

b. All soils must be stabilized to prevent erosion (e.g. wind, water, etc.).

c. Topsoil storage piles must not exceed one meter in depth and may require seeding of an approved plant species.

4. Abandonment

a. All required restoration work and road closures must be completed prior to abandonment.

b. The applicant must notify the Ministry of Environment contact of the estimated completion date of the program.

c. Notification must be done as soon as the applicant is aware of the completion date, preferably a minimum of two weeks prior to the date.

d. For sites not accessible by road, applicants must arrange transportation to the site for the inspecting Ministry of Environment contact.

5. Reclamation works in or near fish habitat

Silt and other fine sediments are considered a deleterious substance under the federal Fisheries Act if they enter fish habitat at any time during a project. Therefore, it is the responsibility of the proponent to implement appropriate sediment and erosion control measures as required to prevent silt and other deleterious substances from entering fish habitat.

a. All spoil materials should be disposed of above the high water level and located and stabilized so that they do not re-enter any watercourse or water body.
b. The proponent is responsible for year round erosion control on all approaches leading to any water crossings (e.g. clear span bridges, ice/snow bridges, culvert crossings, etc.) or access trails/roads onto lakes, even during the ice-free seasons.
c. During construction and until re-vegetation is sufficient to control sediment erosion, the proponent should ensure that effective sediment and erosion control measures are in place and that they are functioning properly and are maintained and upgraded as required to prevent sediment from entering fish habitat.

CONTACTS

Ministry of Environment
Department of Fisheries and Oceans Canada
Transport Canada

BEST MANAGEMENT PRACTICE (BMP – 014)
FIRST NATIONS AND MÉTIS COMMUNITY ENGAGEMENT

GENERAL INTRODUCTION

This Best Management Practice (BMP) is intended as a practical guide for companies undertaking mineral exploration in Saskatchewan on how to foster and sustain effective working relations with First Nations and Métis communities. This document also outlines surface permitting requirements in relation to First Nations and Métis consultation. The community engagement process described in this BMP should be applied well in advance of an exploration company's request for a permit to conduct work on Crown lands.

Effective community engagement is essential to the development of positive and long-term relationships and has the potential to expedite the project development process and enhance benefits for both local communities and industry. The guidance provided in this document is not meant to be all encompassing or prescriptive. The nature and extent of community engagement activities are shaped by many factors including the type, scope and location of an exploration program and the magnitude of impacts it generates.

This BMP is based on the practical experience of mineral exploration and development companies and is designed for use on Crown lands in northern Saskatchewan. However, the principles provided herein can also apply in southern Saskatchewan where an exploration or development program may impact a First Nations or Métis community.

This document is not intended to have any legal effect, nor should it be viewed as fully reflecting the legal obligations of government or government's expectations of industry with respect to First Nations and Métis consultation.

The government is responsible and ultimately accountable for managing and implementing the duty to consult. The government however, may assign procedural aspects of the consultation process to proponents. Early contact and ongoing coordination with the regulating government ministry followed by early community engagement will contribute to the timely and effective fulfillment of the legal duty, and the government approval process.

BACKGROUND

What is community engagement?

Community engagement is an ongoing and multi-faceted process undertaken between the exploration project proponent and the communities affected by these activities. It may include:

- providing information about planned exploration activities;
- listening and responding to community concerns;
- considering the advice of communities in relevant exploration permitting processes;
- developing goodwill and a better understanding of community objectives and priorities leading to confidence in decisions; and
- jointly establishing a realistic understanding of potential outcomes.

Purpose of Engagement with First Nations and Métis Communities

There are many reasons for engaging First Nations and Métis communities that could be affected by exploration programs. These include:

- ensuring that First Nations and Métis communities are aware of the nature and scope of exploration project, including opportunities for local benefits;
- communicating an exploration company's needs in order to allow for the successful and timely completion of the project;
- sharing information, identifying issues and resolving concerns using a co-operative approach;
- managing expectations by ensuring that communities fully understand the nature of exploration projects and the potential effects and benefits that may be derived from project operations;
- promoting community confidence in project management by ensuring open and transparent discussion of exploration project processes, health and safety policies, technical studies, effects, and risk management processes;
- ensuring operational efficiency and continuity within a supportive local community environment, not only for existing operations but also to sustain the development of future projects; and
- enabling companies to recognize and respond to community concerns early.

The Business Rationale for Engagement

Early and effective engagement with communities is often essential to both the successful and timely completion of an exploration program. Over 87 per cent of northern Saskatchewan residents are of First Nations or Métis ancestry. First Nations and Métis communities are in close proximity to existing mines as well as Crown lands subject to mineral exploration and development.

These Crown lands are being used by First Nations and Métis people for traditional activities such as hunting, fishing, trapping and gathering and include many locations of high cultural value. These geographic and demographic realities mean that a strong business case exists for community engagement.

Community engagement confers a number of benefits to exploration companies, both small and large. These benefits can be divided into two categories:

1. *Reduced project risk*:

Ongoing community engagement practices promote greater business certainty by reducing the likelihood of unforeseen community concerns or unexpected land use conflicts. This, in turn, may reduce the risk of delays and added costs during the surface permitting process. Furthermore, ongoing community engagement promotes and strengthens working relationships while providing exploration companies with a social license to operate in an area traditionally used by First Nations and Métis people.

2. *Improved project outcomes*:

Establishing and maintaining relationships with First Nations and Métis communities contributes positively to project outcomes through:

- more effective use of company resources;
- access to local labour supplies and services; and
- information about the local environment including traditional knowledge.

Principles of Effective Engagement

Successful engagement is based on simple, practical principles that represent a mix of common sense, good business practice, and ethical considerations. Companies operating in Saskatchewan should consider the following key principles of effective community engagement:

- *Integrity*: Community engagement should be conducted in a manner that fosters mutual respect and trust. Do not create unrealistic expectations and only promise what you are able to deliver.
- *Communication*: Open and effective engagement is a two-way process that involves both listening and talking. Information relayed to communities during the engagement process should be clear, accurate and understandable to the audience.
- *Transparency*: Communication and engagement with communities should be based on clear and agreed-upon information and feedback processes.
- *Collaboration*: Where feasible, companies undertaking exploration programs should work cooperatively with affected communities to seek mutually beneficial outcomes.
- *Inclusiveness*: Industry should recognize, understand and involve communities.

While these principles are intended to guide individual companies, it is also in the best interest of the industry as a whole that a consistent set of

principles be adopted to guide its dealings with First Nations and Métis communities. This will create a more level playing field among companies that are actively engaged in mineral exploration and development. The failure of only a few companies to respect these principles may be detrimental to the entire industry and the overall investment climate within the province.

Issues and Concerns Respecting Mineral Exploration

Although First Nations and Métis communities are unique and diverse, with needs and desires that vary with local circumstances, industry can expect that, with respect to mineral exploration, concerns of communities generally center on two issues:

- the effects of project operations on traditional land use activities and the environment; and
- the contribution of mineral exploration and development to community economic development.

Accordingly, companies undertaking exploration on Crown lands must ensure they understand and address concerns related to the impact of mineral exploration on traditional pursuits such as hunting, fishing and trapping. Further, industry should provide communities with a realistic picture of the benefits (training, employment and business development opportunities) that could accrue to communities as a result of a particular exploration program. The relative importance placed on traditional land use and community economic development can vary among communities and the residents of a single community. Companies should not assume that one is more important than the other or that addressing one issue will satisfy the community at large.

The Community Engagement Process

Effective community engagement at the earliest possible stage of exploration activity will pay dividends if exploration identifies an economic deposit and the project proceeds to the development phase. For small exploration companies wishing to sell properties to large resource developers, good community relations will enhance the value of an exploration property.

In most cases, an exploration company is the mineral industry's first contact with a local community. The company's approach to community engagement will shape a community's perception of the industry as a whole as well as its response to exploration activities occurring within its traditional territories.

Many factors, including the type, scope, and location of an exploration program will dictate the level of community engagement required. Community

engagement is different from community to community and will greatly depend on site-specific factors and conditions.

There is a number of best management practices related to community engagement that a company should follow to ensure that their exploration programs proceed in a timely fashion.

The Authorities and References listed at the end of this BMP are important sources of information on the community engagement process. In general terms, the process involves four steps:

1. *Preparation*:

This generally includes the identification of the First Nations and Métis communities that could be affected by project operations and the development of a broad understanding of the profile of the community. This includes:

- identifying key community contacts and leaders who can provide advice on how best to engage their community;
- building an understanding of local government structures and regional organizations including tribal councils and Métis locals;
- assembling information on local issues or concerns that could influence a community's response to your exploration program; and
- contacting other companies operating in the area, including established mine operators, for information and advice on the appropriate approach and protocols for working with local First Nations and Métis communities.

Prior to engaging First Nations and /or Métis communities, it is highly recommended that you notify the Ministry of Environment of your intent and plans respecting community engagement. Alerting the ministry to your community engagement activities as far in advance as possible will allow the company to understand the procedural aspects of government's duty to consult that are being assigned to them and will assist with expediting the permitting process once an application for a permit is submitted. It is also recommended that companies keep the Ministry of Environment informed of their activities throughout the community engagement process.

There are a number of provincial government departments that can assist you in preparing to engage communities to discuss your project. The Ministry of First Nations and Métis Relations and the Ministry of Environment, for example, have substantial experience working with First Nations and Métis communities in northern Saskatchewan. Generally, they should be able to provide information on the location of First Nations and Métis communities, community structure and dynamics, linguistic profile, key community contacts including local economic

development agencies, land use activities undertaken within or proximate to the proposed exploration property and the locations of culturally significant sites.

Information garnered from government departments and outside sources should be verified with elected First Nations or Métis officials once initial contact has made. It is important to remember that elected officials are in the best position to provide exploration companies with a thorough understanding of local issues. Exploration companies are also encouraged to research, and to have some basic appreciation of key federal and provincial programs designed to encourage the participation of First Nations and Métis peoples in such proposed exploration activities.

Companies should also be aware that it is not uncommon for an exploration program to cover the traditional territories of more than one First Nations and Métis community. Companies should, therefore, identify from the outset if more than one community might be affected or interested in the proposed exploration activity. The provincial government can assist you in such determinations. If more than one First Nations and/or Métis community has interests in the region, the complexity of the engagement process increases. Accordingly, you must make allowances for additional costs associated with multiple community engagement processes. Exploration companies should also make allowances for the additional time required to engage multiple communities.

2. ***Engagement***:

Once you have identified the communities with potential interest and developed profiles of the communities, it is recommended that you contact community leaders or officials to apprise them of your exploration plans and provide them with information about:

- your company and its staff;
- the location(s) of your exploration activities;
- the schedule for the proposed project;
- the types of activities your company may be engaging in; and
- the potential outcomes and benefits of the activities being undertaken for the local community.

It is important to remember that community engagement is a two-way process. Therefore, you are encouraged to use your initial contact as an opportunity to ask community representatives about their issues, concerns and expectations related to your proposed mineral exploration program. Direct personal contact by senior officials of the exploration company, especially at the earliest stages of an exploration program, is often integral to the success of the engagement process. Written notices of a proposed exploration program with little face-to-face follow up does not foster a strong working relationship with community leaders. Delegating the entire engagement process to consultants or staff with limited on-

the-ground decision making authority can also erode the effectiveness of the overall process.

Although an initial exploration program might result in only minor surface disturbances or none at all, appropriate community engagement must be viewed as an investment in the long-term potential of the property. While communities might not have any specific concerns about a minor exploration program, they remain interested in building effective relationships with companies operating within their traditional territories. Accordingly, the level of effort expended in relation to community engagement should not necessarily be proportional to the scale of a particular program.

Companies also need to be cautious about focusing all their attention on economic development opportunities related to employment and business development. Many First Nations and Métis communities have businesses and staff dedicated to economic development. These groups often do not speak for traditional land users and their objectives may be at odds with the broader community. It is therefore important to build and maintain effective working relationships with both the community's leadership and its economic development staff and enterprises.

3. *Response*:

Exploration companies need to be prepared to adjust their exploration programs to address the concerns raised by the First Nations and Métis community during the engagement process. For this reason, it is recommended that companies be proactive and initiate community engagement as early as possible. Some level of flexibility and advanced planning should be built into exploration programs so that needed adjustments do not result in undue delays or additional costs.

4. *Follow-up*:

Effective community engagement is an ongoing process. Following initial contact with the affected community, it is recommended that companies maintain continued contact and inform First Nations and Métis communities of any new developments that could require you to deviate from the original exploration program communicated to the community. Companies may wish to schedule regular meetings with communities to update them on the progress of an exploration program or address emerging community concerns. As with the initial engagement step, it is often essential that community leaders have ready access to senior decision-makers within the exploration company. Community-level issues stemming from an exploration program can arise quickly and require immediate attention by senior management.

Recording of Community Engagement Activities

It is important that industry record its engagement efforts with First Nations and Métis communities. Recording community engagement activities is not only useful for internal purposes but will also position the project proponent to meet potential reporting requirements of federal and provincial agencies.

It is recommended that industry focus the recording of its engagement efforts on the following:

- dates and locations of communications throughout the engagement process;
- method of engagement (i.e. letters, meetings, forums, committees);
- list of individuals and groups that were contacted;
- summary of the results of the engagement process with communities, including a description of community issues and concerns;
- an account of how community concerns were addressed or mitigated; and
- any follow-up that was conducted.

Relationship between Community Engagement and Surface Permitting

The community engagement process described in this BMP complements and supports the government approval processes for the permitting of new exploration programs on Crown lands in northern Saskatchewan.

In June 2010, the Government of Saskatchewan published the *Government of Saskatchewan First Nation and Métis Consultation Policy Framework* (the "Consultation Policy Framework"). This document establishes the decision-making framework to be followed by provincial departments when issuing dispositions, or other interests in land, which could impact on Treaty or Aboriginal rights. Individual ministries will also have operational procedures to address consultation obligations as they relate to their specific mandates.

It is recommended that companies undertaking exploration activities in Saskatchewan review this framework in order to familiarize themselves with the province's approach to First Nations and Métis consultation. The framework is available at www.fnmr.gov.sk.ca or can be obtained from any of the provincial departments listed in the contacts section of this BMP. Companies should contact the regulating ministry to review and discuss the affect of their operational procedures.

Lastly, it is important to recognize that the Consultation Policy Framework primarily reflects the legal requirements of the Government of Saskatchewan and does not describe the full scope of government policies and programs related to

First Nations and Métis people. The provincial government is committed to ensuring that Aboriginal people benefit from mineral exploration and development. Mitigating potential impacts on Treaty and Aboriginal rights is only one aspect of a decision making process that, in many cases, must consider broader community concerns.

AUTHORITIES/REFERENCES

Apart from standard regulatory requirements for surface permitting, exploration companies should familiarize themselves with the following documents:

1. *A Framework for Responsible Exploration,* Prospectors and Developers Association of Canada (PDAC). The E3 Plus website (http://www.pdac.ca/e3plus) provides comprehensive guidelines on a number of mineral exploration issues including effective community engagement.

2. *Government of Saskatchewan First Nation and Métis Consultation Policy Framework*, Government of Saskatchewan, June, 2010. This framework sets out the approach that provincial government departments are to follow in fulfilling the Crown's legal obligations to First Nations and Métis people.

3. *Mining Information Kit for Aboriginal Communities,* Government of Canada, 2006. This information kit can be of assistance in explaining a proposed exploration program to First Nations and Métis community members. It can be obtained from the Natural Resources Canada website at located in Appendix "E".

4. *Towards Sustainable Mining Guiding Principles: Draft Framework for Mining and Aboriginal Peoples*, Mining Association of Canada, December 18, 2006. Although geared to development companies, this document represents the first phase of an industry-wide effort to establish principles to guide mine development. Community engagement at the exploration stage needs to complement this Framework. The framework can be downloaded using the Mining link located in Appendix "E".

CONTACTS

- Regional economic development

- Key community contacts
  Northern Affairs Division
  P.O. Box 5000
  La Ronge, SK S0J 1L0
  (306) 425-4207

• Treaty and Aboriginal rights

First Nations and Métis organizations and governments [in some cases info contrary to gov't policy may come from these sources]

First Nations and Métis Relations
Lands and Resources Branch
7th Floor, 1855 Victoria Avenue
Regina, SK S4P 3T2
(306) 787-9706

First Nations and Métis Relations
Consultation Branch
2nd Floor, 1855 Victoria Avenue
Regina, SK S4P 3T2
Toll free 1-877-879-7099

Economic development programs applicable to mineral exploration
Ministry of Enterprise and Innovation
Mineral Lands Branch
200-2101 Scarth Street
Regina, SK S4P 2H9
(306) 787-2588

Surface Permitting Requirements on Northern Crown Lands

1. Exploration companies will be required to provide the Ministry of Environment with a project proposal that meets the information requirements outlined on page 6 of *The Mineral Exploration Guidelines*. This information will be used by government to assess whether and to what extent First Nations and Métis consultation is required. Additionally, companies applying for a permit to undertake exploration activities may be required to provide the Ministry of Environment with information respecting community engagement activities undertaken with First Nations and Métis communities in relation to a proposed activity or program.

   Specifically, companies may be required to the following provide information:
   - a list of the communities contacted;
   - the type and level of community engagement;
   - summary of the types of concerns expressed by the community in relation to the activity or program; and
   - any measures undertaken to address community issues and concerns.

To the extent possible, companies should submit permit applications for all activities comprising its exploration program at the same time. In order to conduct a proper assessment of effects and the need for potential measures to address them, government would prefer to review permit applications in an integrated fashion rather than on a piecemeal basis. Ideally, companies will have initiated engagement with potentially affected First Nations and Métis communities in accordance with BMP-014 in advance of the permitting process. Early community engagement will assist in expediting permitting and approval processes.

2. Once the Ministry of Environment is satisfied that the information is complete, it will notify the community of the proposed permitting decision to solicit their comments on the activity. This process helps fulfill the government's legal duty to consult. The notification period, and the nature of the notification process, will be determined based on the scale of the project and its anticipated impacts, in accordance with the *First Nations and Métis Consultation Policy Framework*. In some cases, the applicant may be required to participate in community-level meetings to discuss the project and respond to any questions concerning the application.

3. The responses of First Nations and Métis communities to the permit application need to be carefully considered by the Government of Saskatchewan. In order to minimize or avoid potential impacts of a proposed activity on Treaty or Aboriginal rights, the Ministry of Environment may require adjustments to the proposed exploration program before permits necessary to carry out exploration activities are approved by the Minister. There may also be a requirement for additional discussions with First Nations and Métis communities and data collection as part of the permitting process. The risk of these types of delays is reduced if the applicant undertakes community engagement activities in advance of the permitting process.

4. Companies will be required to complete a project closure report once the exploration program has been concluded (see page 63). Information provided in this report may be communicated to First Nations and Métis communities by government as part of its consultation process.

BEST MANAGEMENT PRACTICE (BMP-015)
MINERAL EXPLORATION IN SOUTHERN SASKATCHEWAN

GENERAL INTRODUCTION:

Conducting mineral exploration in southern Saskatchewan is more complex than northern Saskatchewan, due to the larger number of competing land users, the higher percentage of privately owned lands and the administration of rural municipalities. The following is modified from a series of documents prepared for oil and gas development. It should also be noted that conditions and terms applied in the north in BMP 1 to 15 will also apply in the south.

Note: "Mineral" does not include oil and gas.

Obtaining Mineral Rights – Saskatchewan Ministry of Energy and Resources:

In Saskatchewan, Crown mineral rights are administered by the Ministry of Energy and Resources under The Crown Minerals Act. Regulations under the Act have been established by government for specific commodities or groups of commodities.

Mineral Disposition Regulations, 1986, (see BMP-01).
The Alkali Mining Regulations, (primarily sodium sulphate)
The Coal Disposition Regulations, 1988
The Subsurface Mineral Regulations, 1960 (Potash/Salt)
The Quarrying Regulations, 1957, (Silica Sand, Dimension Stone)

Land south of the Northern Administrative District is obtained via map based processes. See individual regulations for details. Unlike northern Saskatchewan, there are a high percentage of both private surface and mineral rights owners in southern Saskatchewan. Access to private mineral rights must be negotiated with the owner of the mineral rights. In all cases, it is important that the party interested in the mineral rights be aware of any surface restrictions. Treaty Land Entitlement and Indian land claims may also be a factor in obtaining both surface and mineral rights.

RESTRICTIONS AND THE ADMINISTRATING AGENCIES:

Ministry of Tourism, Parks, Culture and Sport (TPCS)

Archaeological, paleontological and historic resources in Saskatchewan are protected under The Heritage Property Act (1980). A 'Heritage Property' (more commonly referred to as a 'heritage resource') is defined in the act as "property

that is of interest for its architectural, historical, cultural, environmental, archaeological, paleontological, aesthetic, or scientific values."

To ensure that development does not negatively impact heritage resources, developers are required to submit locations and development details to the Ministry of Tourism, Parks, Culture and Sport. The Ministry of Tourism, Parks, Culture and Sport reviews this information to determine the potential impact to heritage resources.

Impact is assessed based on:

1) the presence of previously recorded heritage sites;
2) the area's overall heritage resource potential, the extent of previous land disturbance; and
3) the scope of proposed new land development.

The review generally takes up to 20 business days to complete. Where the potential is low for heritage resources, developers are notified that there are no heritage concerns. Where the potential for heritage resources is higher, a heritage resource impact assessment (HRIA) may be required. To complete an HRIA, the proponent is required to hire a qualified archaeologist to do a field assessment, under an investigation permit issued by the Ministry of Tourism, Parks, Culture and Sport. There is no fee for the investigation permit, but the proponent is responsible for the cost of hiring the qualified archaeologist.

The Ministry of Tourism, Parks, Culture and Sport have also pre-screened a portion of the province in the southeast and along the Alberta border. The Land Developers' Screening Tool is an online self-screening tool where developers can check for heritage restrictions on the pre-screened areas. For further information on this tool, please check the website located in Appendix "E", attached hereto.

Where heritage resources are in conflict with the proposed development, there are several courses of action, generally referred to as mitigation. The preferred course of action for mitigation is always avoidance of the site. Where avoidance is not possible, the proponent may be responsible for further conservation, protection, or emergency salvage work that may be deemed appropriate.

The heritage resource impact assessment process should be completed with the Ministry of Tourism, Parks, Culture and Sport prior to applying for a well drilling license from the Ministry of Energy and Resources and prior to any surface alterations.

More information, forms and a list of qualified archaeologists may be found in the Ministry of Tourism, Parks, Culture and Sport website located in Appendix "E".

Ministry of Highways and Infrastructure (HI)

Winter Road Restrictions:

If the Minister considers it necessary to protect a public highway, the Minister may issue an order restricting vehicle weight during the winter weight season for specific highways and for specific periods of time. The winter weight season is defined as commencing on November 16 each year and ending March 14 of the following year.

Spring Road Restrictions:

Spring road restrictions are dependent on weather. Typically restrictions start in the second week of March and remain in place for up to six weeks. Restrictions may change with 48 hours notice. If a prolonged cold spell occurs during the restriction season, the restriction may be removed until conditions warrant their implementation again. Over weight permits can be obtained in some circumstances. For more information, visit the Ministry of Highways website located in Appendix "E".

The Rural Municipality is responsible for all municipal roads in the municipality, and issue over weight permits within their own boundaries. Some do not participate in the spring weight restriction programs, while others may also set weight restrictions lower than those published for Saskatchewan highways.

Ministry of Municipal Affairs (MA)

The Ministry of Municipal Affairs works in partnership with communities to support local governance provide financial and professional support and develop legislation, regulations, and other policies to assist municipalities in fulfilling their obligation to their residents. Key legislation includes The Municipalities Act, 2005, The Cities Act, 2004, and The Planning and Development Act, 1983.

Zoning:

In Saskatchewan, the primary responsibility for managing community planning, local development issues, land use and municipal services rests with the local municipalities. To manage these interests, municipalities have the authority through The Planning and Development Act, 1983 to carry out planning, establish zoning controls, require development permits, require servicing agreements and other such authorities to manage land use and development issues.

In both urban and rural municipalities, where a zoning bylaw exists, any proposed development will likely be required to obtain a local development

permit from the municipality and comply with development standards or conditions established within the bylaws.

To expedite consideration of any local municipal requirements and to avoid conflict with other land uses in the vicinity, early contact with the appropriate municipal office should be undertaken. Incorporating municipal contact into a company's standard operating and planning procedures is recommended.

For additional information on municipal planning bylaws, please see Appendix "E" for the Ministry of Municipal Affairs Planning Bylaws.

Subdivision:

Subdivision as defined by The Planning and Development Act, 1983, "means a division of land, and includes a division of a quarter section into legal subdivisions as described in the regulations made pursuant to The Land Surveys Act, 2000.

The Ministry of Municipal Affairs is responsible for the subdivision process. In order for a subdivision to take place, the developer must submit an application to subdivide to the Community Planning Branch. For more information, contact the Community Planning Branch or check The Ministry of Municipal Affairs website located in Appendix "E".

Municipal Taxation:

In certain circumstances, some property, such as temporary buildings including trailers that are on site for longer than 30 days, may be taxable under The Rural Municipality Act, 1989. This applies to facilities on private or Crown land. It is also possible for the rural municipalities to pass an exemption or negotiate separate agreements. For more information, contact the Municipal Relations Division by email: muninfo@gr.gov.sk.ca.

Ministry of Energy and Resources

The Ministry of Energy and Resources is responsible for managing the province's mineral resources. The ministry also regulates the drilling, completion, production, and abandonment of subsurface (*e.g.,* potash, salt) exploration wells through:

The Oil and Gas Conservation Act*;* and
The Oil and Gas conservation Regulations,1985.

Note: These regulations currently do not extend to other mineral commodities such as diamonds or gold. The original application to potash originates in the drilling of wells through petroleum bearing strata.

In accordance with The Oil and Gas Conservation Regulations, 1985, a company wishing to drill a well must, prior to the commencement of those operations, submit to the Petroleum Development Branch of the Ministry of Energy and Resources, two copies each of the application for a well licence, the certified survey plan, and all consents required under the regulations.

The survey plan must show the exact location of the proposed drill site in relation to the boundaries of the section, water covered areas, mines, existing wells, roadways, road allowances, railways, pipelines, power lines, aircraft runways, and structures of any kind. The issuance of a well licence by the Ministry of Energy and Resources does not grant right of entry to the surface of the land. Prior to commencing drilling operations, the company must negotiate surface access with the individual private landowner(s) or in the case of Crown lands, obtain a surface lease agreement from the agency responsible for managing the lands [Saskatchewan Ministry of Agriculture or Saskatchewan Ministry of Environment]. Structural test holes (to be discussed further).

It should be noted that the company should locate any pipelines or other subsurface assets prior to drilling and notify the operator.

Ministry of Environment

Screening Process (applies to all Crown land and may apply to some privately owned land):

The Ministry of Environment is responsible for administering The Environmental Assessment Act. Under the act, any project considered a "development" must be formally reviewed by the Ministry of Environment and approved by the Minister. The Minister may attach any terms and conditions deemed necessary to protect the environment. The act is of general application, applying to any type of project on any type of land and to any proponent, including the Crown.

The Environmental Assessment Act defines "development" as "…any project or activity, or any alteration, or expansion of any project, operation, or activity, which is likely to:

- have an effect on any unique, rare or endangered feature or the environment;
- substantially use any provincial resource and in doing so, pre-empt the use, or potential use, of that resource for any other purpose;
- cause the emission of any pollutants or create by-products, residual, or waste products which require handling and disposal in a manner that is not regulated by any other act or regulation;
- cause widespread public concern because of potential environmental changes;

- involve a new technology that is concerned with resource use and that may induce significant environmental change; or
- have a significant impact on the environment or necessitate a further development which is likely to have a significant impact on the environment."

Any project that is "likely" to meet one of more of these criteria must undergo a full Environmental Impact Assessment (EIA) and receive Ministerial approval before it may proceed. The environmental assessment and screening process described below provides an opportunity for the developer to demonstrate an awareness of environmental concerns and to present plans demonstrating that the conflicts have been resolved, thereby avoiding the need for more extensive environmental review and ministerial approval.

The Ministry also reviews mineral projects under the following acts:

- The Wildlife Habitat Protection Act;
- The Fisheries Act;
- The Forest Resources Management Act;
- The Provincial Lands Act;
- The Environmental Management and Protection *Act*; and
- The Wildlife Act.

The environmental assessment screening and approval process begins when the company submits a Project Proposal. This simplifies the ministries' review process and provides a "local window" for the company. The Project Proposal is used to determine if the project is, or is not, a "development." Another objective of the proposal is to determine if there are any site-specific environmental concerns with the project and whether plans to deal with those concerns are acceptable.

Note: The Ministry of Environment requests a Project Proposal for all development projects on Crown land, and may require one for projects on private land where there is some likelihood of an environmental conflict, (*e.g.,* where the project is close to a water body, endangered species or some other public resource*.)* See the section on *Accessing Private Land* and Appendix "A".

If a project is deemed not to be a "development", the project may proceed when all other regulatory permits and licenses have been obtained.

If the Ministry of Environment office determines that the project has significant environmental concerns, it will be referred to the Environmental Assessment Branch (EAB) in Regina. Projects with significant concerns will proceed to a more comprehensive formal review [Environmental Protection Plan (EPP) or for a very significant impact, an EIA], under The Environmental Assessment Act.

Note: Areas where EPPs or EIA's are required are usually high-profile areas of well-known environmental sensitivity where there is a significant public concern regarding industrial development (*e.g.,* Great Sand Hills, Cypress Hills, northern forest). Projects in these areas can readily meet a number of potential triggers in The Environmental Assessment Act.

The Ministry of Environment has prepared revised Guidelines for Preparation of an EPP for Oil and Gas Projects. This guideline details the review process and describes the types of information to be included in an EPP, which can be found in the Ministry of Environments website located in Appendix "E".

At the minimum, a Project Proposal submitted to the ministry office should include a:

1. Project Description:
   Describes the physical characteristics of the project such as access roads, well sites, and other key features of the project. The project description should include:
   - three copies of maps/photographs that detail locations of project components (*e.g.,* access roads, power lines, temporary work camps, and extra working space requirements);
   - the rational for choosing the proposed route/site selection;
   - pre-development plans for well sites; and
   - description of proposed and alternate access (if applicable).

2. Legal survey of well sites.

3. Project evaluation that describes how the development may impact any environmental consideration in the area (*e.g.,* wildlife habitat).

4. A development and restoration plan comprising:
   - a site assessment with a description on the general landscape, soil type, and vegetation cover; and
   - proposed measures to minimize surface disturbance, to safeguard any unique landscape features, and to reclaim the land when the lease expires.

5. A waste management plan for this project if waste management plans are not consistent with guidelines.

6. The company's environmental monitoring commitment (what will be monitored, who will do the monitoring, and the frequency of monitoring).

The Project Proposal Guidelines can be found on the Ministry of Environment's website, more specifically set out in Appendix "E".

Note: The Project Proposal must incorporate the requirements of the Ministry of Agriculture's restoration guidelines and should also be provided to the Ministry of Agriculture's regional office when agriculture managed lands are involved.

If the Ministry of Environment determines that some crucial information is lacking from the Project Proposal, it will request that information be provided before making any decision. Developers should include information on the socio-economic characteristics of the area(s) which will be affected by the project, where applicable (*e.g.,* distance to nearest residences or communities).

Accessing Ministry of Environment administered land:

The Ministry of Environment is responsible for the administration of the surface of lands held by the Crown in most of northern Saskatchewan and various other "islands" of Crown surface lands in southern Saskatchewan (*e.g.,* provincial parks, Wildlife Development Fund Land, and recreational sites).

The Ministry does not generally administer lands under The Wildlife Habitat Protection Act (WHPA), with a few exceptions. WHPA lands are almost all Crown lands administered by the Ministry of Agriculture. WHPA provides some restrictions of the use of those lands so as to protect habitat and provides the Minister of Environment with authority to require restoration of habitat if damages occur in the course of other land uses. The Ministries approach is to work with land users to prevent damage rather than attempt the much more difficult and costly process of restoring damage after it has occurred.

In order to access Ministry of Environment administered land for drilling, the company must:

- obtain survey authorization;
- prepare the site subject to the conditions listed in the approval (conditions on the approval reflect concerns and the developer's environmental protection commitments identified in the project proposal information previously provided to the Ministry of Environment– see above).

This process is followed except where the Ministry of Environment office identifies environmental concerns that require that project to proceed to a more formal review process (e.g*.,* EPP or EIA).

The process of gaining access to the Ministry of Environment administered land requires that outstanding environmental concerns be resolved to the ministry's satisfaction prior to work beginning. The same process is used in all cases – the difference is the degree to which concerns exist with the project and the level of

planning and commitment by the proponents to ensure that the project proceeds with an acceptable level of impact. If an EPP or EIA is required, right-of-entry will be withheld until the concerns that formed the basis for the requirement are resolved.

Accessing Private Land:

Drilling and other development activity do not require approval from Ministry of Environment unless there is a direct conflict with a public resource (*e.g.,* a rare species, a stream or water body). The Ministry of Environment has developed a Private Land Checklist (Appendix "A"), for companies to self-screen their development projects on privately owned land and to determine in they require review.

If there is conflict with a public resource, a company must provide information to the Ministry of Environment on the specific conflict and how the company plans to resolve it, using the Project Proposal process described above. If a significant environmental concern is identified, a company may be required to submit an EPP, following the same process as it would for a well drilled on Crown land.

To view the environmental checklist for development projects on private land see Appendix "A", attached hereto.

Saskatchewan Ministry of Agriculture (AG):

The petroleum and gas surface lease policy reflects the ministry's support for the development of petroleum and gas deposits lying under agricultural Crown land by using a simple procedural framework.

The impact of petroleum and gas development on agricultural lessees is recognized through one-time cash payments when a new surface lease is issued or additional wells are drilled on an existing surface lease. Agricultural lessees receive an annual rent reduction for as long as the surface lease is active.

Protection of the environment and the productivity of the land are of paramount importance. Partnerships with other governmental ministries and agencies are used to safeguard the land. All those involved with petroleum and gas development on agricultural Crown lands are expected to respect the land and those who make their living from it.

The Ministry of Agriculture has jurisdiction over Crown agriculture surface lands by the authority under The Provincial Lands Act. In order for a company to conduct any mineral drilling on Crown agriculture lands, it must obtain a Surface Lease from the Ministry of Agriculture. The surface lease grants approval for the company to enter onto the land on which it wishes to conduct the drilling. The lease agreement provides tenure for twenty-one years.

Accessing Crown Agriculture Land Administered by the Ministry of Agriculture:

In order for a company to access these lands, it must:

- contact the regional office of the Ministry of Agriculture's Lands Branch to determine if there are any restrictions on the land and to determine whether or not it is leased or vacant;

- contact the lessee (if the land is under lease) to discuss the proposed sites and to get the lessee's permission to enter the property. If the lessee refuses to grant entry to the company, the ministry will identify any legitimate concerns of the lessee and mediate with the company to resolve these concerns;

- contact the Ministry of Agriculture district land agrologist if the land is vacant;

- the company must have written authorization from the Ministry of Agriculture before entering the property and is responsible for determining other registered interests in or on the lands and remains liable for damages;

- prepare a survey plan, which identifies the lands under lease, as well as, the intended location of all drilling, construction, roadways, and other development activities to be carried out pursuant to the lease;

- submit a Project Proposal/Restoration Plan to the Ministry of Agriculture and the Ministry of Environment offices as per assessment/screening and approval process. The company must send one copy of the above information to Agriculture, and two copies to the environment office; and

- have addressed restoration issues with other provincial ministries such as the Ministry of Environment and the Ministry of Tourism, Parks, Culture and Sport.

Note: The Restoration Plan incorporates the same information as the Project Proposal to be provided to the Ministry of Environment office. A single planning report satisfies both ministries' requirements.

The Ministry of Agriculture and the Ministry of Environment's Role in the Approval Process:

- the Ministry of Environment offices have twenty working days from reviewing the initial application to:

- complete their screening process and provide clearance under The Environment Assessment Act;
- decide if the new project requires any further review; and
- advise the Ministry of Agriculture of any environmental concerns that they may have and provide the Ministry of Agriculture with specific environmental terms and conditions that will form part of the ministry's surface lease.

- The Ministry of Agriculture's Lands Branch conducts a review to establish its own management and environmental conditions. The Ministry will issue a "right-of-entry", or a surface lease, which incorporates the specific terms and conditions within ten working days of receiving the Ministry of Environment's conditions.

Note: The ministry reviews are done in parallel (using the same documentation); however, the Ministry of Agriculture will not issue the surface lease before reviewing the Ministry of Environment clearance and list of conditions.

- Lease preparation or other construction/drilling cannot begin until all necessary permits have been received.

Ministry of Labour:

Workplace safety in Saskatchewan is regulated under The Occupational Health and Safety Act, 1993. Copies of the act and its associated regulations may be found in the Ministry of Labours website located in Appendix "E".

Oil exploration sites are inspected by the Workplace Safety Unit of the Occupational Health and Safety Division of the Ministry of Labour and Workplace Safety.

Exploration for other minerals is regulated by the Mines Safety Unit.

Either group can be contacted at 1-800-567-7233.

AUTHORITIES AND ADDITIONAL INFORMATION:

The Saskatchewan Petroleum Industry Government Environmental Committee (SPIGEC) has been active in the last six years producing a number of guides for the petroleum industry. Although developed for the petroleum industry, they have application to mineral exploration. Copies of these materials are available on the Ministry of Agriculture's website found in Appendix "E".

Documents of particular interest to the mineral industry include:

- Petroleum and Gas Surface Lease Policy
- Crown Land conditions: seismic exploration;
- Crown Land conditions: surface leases;
- EIA process;
- seismic activity on agricultural land;
- restoration of well sites and associated facilities on cultivated land;
- petroleum and gas development on agricultural Crown land;
- restoration of Saskatchewan's agricultural Crown land;
- Oil and Gas Exploration and Development on Saskatchewan Agricultural Crown Lands Fact Sheet
- The Environmental Assessment Act.

Ministry of Energy and Resources:

Surface Rights Board of Arbitration (SRB)
Box 1597, 113-2nd Ave. E.
KINDERSLEY SK S0L 1S0
Phone: (306) 463-5447 Fax: (306) 463-5449

The Surface Rights Board is governed by *The Surface Rights Acquisition and Compensation Act.* It is an arbitration board used as a last resort when a landowner or occupant and an oil/gas or potash operator are unable to reach an agreement.

Note: SRB only applies to petroleum and potash operations and does not apply to other mineral commodities.

Seismic Exploration:

Seismic exploration is a surface activity that requires the land owner's approval (whether on Crown or freehold land) before any work can begin. However, provincial approval guidelines must be followed regardless of who owns the land.

Saskatchewan Ministry of Energy and Resources:

The ministry is responsible for the following legislation and regulation, which apply to seismic exploration:

The Mineral Resources Act, 1985; and
The Seismic Exploration Regulations, 1999.

The Seismic Exploration Regulations, 1999, define seismic exploration as "…the use of artificially generated seismic waves for any of the following purposes:

- searching for minerals, oil or gas;
- defining geological formations; and

- conducting engineering studies for the purpose of obtaining geological data."

- A company wanting to conduct seismic exploration should obtain a copy of The Seismic Exploration Regulations, 1999 and a copy of the Guidelines for Conducting Seismic Programs in Saskatchewan. See Appendix "B" for details.

GENERAL GUIDELINES FOR MINERAL EXPLORATION IN SOUTHERN SASKATCHEWAN:

1. Mineral Rights
   - Crown mineral rights are obtained through The Crown Minerals Act and associated regulations.
   - Private mineral rights must be negotiated directly with the holder of those rights.

2. Surface Rights
   - The ownership of the surface rights should be determined. This information can be determined through the Information Services Corporation Land Titles system.
   - If the land is determined to be Crown land, the Ministry of Agriculture website can be used to determine who the agricultural lessee is and other land restrictions.

3. Access Processes
   The access process is determined by the ownership of the surface rights.
   - Private surface access must be negotiated with the holder of those surface rights.
   - In the case of potash rights, if no agreement can be reached, the Surface Rights Board of Arbitration can mediate an agreement.
   - The Ministry of Environment controlled Crown lands require a surface permit.
   - The Ministry of Agriculture controlled Crown lands require a surface permit.
   - If the Ministry of Agriculture has issued other permits, the applicant will be required to negotiate with the other permit holders.
   - If the lands are under Treaty Land Entitlement a Band Council Resolution (BCR) is required.

4. Environmental Reviews
   - A review of the impacts of the project must be conducted for all Crown lands by the Ministry of Environment.
   - In some cases, an environmental review is required on privately owned lands.

5. Permits and Reviews
    - For drilling a potash test hole, a well license is required.
    - For operating in a Rural Municipality that is operating under The Rural Municipality Planning Act, a development permit is required.
    - A review and permit is required by TPCS to ensure the protection of heritage resources.
    - A permit may be required at some times of the year during weight restrictions to use overweight vehicles on some Saskatchewan roads.
    - Seismic programs require a permit from the Ministry of Energy and Resources.
    - For operating in a municipality, a development permit may be required pursuant to a municipal zoning bylaw.
    - Where the land is required to be subdivided, subdivision review and approval should be obtained from the Ministry of Municipal Affairs.

6. Other Advice
    - Contact rural municipalities to provide notification of company's activity in an area.
    - If on Crown land for which no permits are active, the explorationist is advised to contact nearby Aboriginal communities who may use the land for hunting and trapping.
    - For drill programs, the explorationist is advised to take appropriate precautions to deal with natural gas or over pressured aquifers.

APPENDIX A

ENVIRONMENTAL EVALUATION CHECKLIST FOR PROJECTS ON PRIVATE LAND IN SASKATCHEWAN

This guideline outlines the Ministry of Environment's environmental evaluation requirements for all projects, except seismic exploration, on privately owned land. The guidelines apply to drilling, pipelines (including flowlines) and all other facilities (e.g., batteries, compressor stations) which occupy PRIVATE land.

The guideline provides a self-screening mechanism for industry to determine if their development projects on privately owned land require review by the Ministry of Environment. Only those projects which trigger one or more of the environmental issues identified on this list require clearance from the Ministry of Environment before starting.

ALL PROJECTS ON CROWN LAND ARE SUBJECT TO ENVIRONMENTAL SCREENING.

COMPANIES ARE TO SCREEN ALL NON-SEISMIC PROJECTS ON PRIVATE LAND BY ANSWERING THE QUESTIONS ON PAGE 2.

If **ALL** responses are **NO,** then the checklist is to be forwarded to the appropriate Ministry of Environment office, but you do not need to wait for the Ministry of Environment to respond. Work may start once you have all required approvals.

If you answer **YES** to one or more of the questions on the checklist, follow these procedures:

- Forward the checklist to the appropriate Ministry of Environment office.
- Provide a brief description of the project and information pertaining to the item(s) marked **YES**.
- Describe how you will mitigate any problems / issues associated with the checked item(s). Information is NOT required in relation to items that were not checked. Refer to **The Saskatchewan Environmental Assessment Act Guide to Proposal Development – Oil and Natural Gas Projects** when preparing your information.
- WAIT for a clearance response from the Ministry of Environment before starting work.

We recommend that you contact the Ministry of Environment's Ecological Protection Specialist with any questions. They can help you identify concerns and advise on an appropriate level of information requirements.

The Ministry of Environment will be doing random checks to verify the accuracy of submitted checklists and information and to check whether or not any of the trigger items have been noted as a "yes."

Note: Proponents are responsible for ensuring projects are cleared by the Heritage Resource Branch of the Ministry of Tourism, Parks, Culture and Sport prior to beginning construction. For additional information and project review, contact the Heritage Resources Branch at:
http://www.tpcs.gov.sk.ca/SensitiveLocations

OIL AND GAS ACTIVITY ON NATIVE GRASSLAND

The grassland ecosystem is the most altered ecosystem in North America. The area of native grassland is declining, and what remains is often affected adversely by land use practices.

Besides being a valuable resource in its own right, the remaining native grassland often supports more rare and endangered species than other ecosystems. These species include both plants and those wildlife species for which native prairie is a key habitat at some point in their life cycle.

Even where rare and endangered species are not present, protecting native grassland areas is critical if we are to maintain biodiversity in agricultural areas of Saskatchewan. Protecting remaining areas of native grassland, whether Crown or privately owned, is therefore of key interest to the Ministry of Environment.

If your project encroaches on native grassland on private land, whether or not any of the items on the checklist are triggered, the Ministry of Environment recommends the following measures to help reduce the impact of your project on this valuable resource:

- Avoid topsoil stripping wherever possible by locating the lease in the most level location available. Stripping can often be reduced or eliminated where terrain is nearly level by using hydraulic jacks and planking.
- Where stripping is essential, strip only what is required for safety, not the entire lease.
- Re-seed disturbed native prairie using a seed mix of native species common in the project

THE MINISTRY OF ENVIRONMENT
CHECKLIST FOR DEVELOPMENTS ON *PRIVATE* LAND

NOTE - *All* seismic programs must be submitted to the appropriate Ministry of Environment office. All development projects on CROWN land are subject to environmental screening by the Ministry of Environment.

Company Name and Address

_____

_____

_____

_____

Contact Name: _____ Phone: _____

FAX: _____

Project Type (well, battery, compressor, access, flow/pipeline, etc.):

_____

Land Location: _____

Approx. construction date(s):

_____

1) Will you be burning woody debris within 4.5 km (3 miles) of a Provincial Forest or park?

YES **NO**

2) Did your Conservation Data Centre check report any Ministry of Environment "species of special concern"? Contact the CDC directly at (306) 787-7196 or FAX at (306) 787-9544 or at their website at: http://www.biodiversity.sk.ca. (Information on species of concern can be obtained from the Ministry of Environment's Ecological Protection Specialist).

YES **NO**

3) Did your pre-site assessment identify any species of concern in the area (refer to the Ministry of Environment's species list and restrictions and contacts in the previous question)?

YES **NO**

4) Will your project cause either: a) surface disturbance within 45 m of any watercourse or water body or 90 m of any fish bearing or potentially fish bearing watercourse or water body, **OR** b) surface disturbance on a slope leading directly to a watercourse or water body, even if that disturbance will occur at a distance greater than the buffer distances listed above?

YES **NO**

5) Will your project require crossing of any watercourse or water body, other than by directional drilling that begins and terminates beyond the buffers referenced in Question 4?

YES **NO**

6) Will your project affect provincial Crown agricultural or Crown Resource land in any way, or any land with a special designation (Fish and Wildlife Development Fund, Conservation Easement, Game Preserve, Provincial Park, Recreation Site, Regional Park, Ecological Reserve, Qu'Appelle Implementation, Rafferty or Alameda Mitigation Land) or any other land with a special designation?

YES **NO**

7) Will any aspect of your waste management program be inconsistent with SPIGEC's *Waste Management Guidelines for the Saskatchewan Upstream Oil and Gas Industry* or produce wastes that will not be disposed of at a facility approved to handle that waste?

YES **NO**

8) Does this project involve drilling more than 8 wells per quarter section or installation of pipe >168.3 mm in diameter on **CULTIVATED** land (including improved or tame pasture).

YES **NO**

9) Does this project involve drilling more than 4 wells per quarter section or installation of pipe >168.3 mm in diameter in **NATIVE** vegetation (grassland or woodland)?

YES **NO**

10) Does this project require development of a road on an undeveloped road allowance?

☐ **YES** **NO** ☐

11) Does this project use surface or ground water for steam injection or water flood?

☐ **YES** **NO** ☐

12) Does this project involve release of hydrostatic test water?

☐ **YES** **NO** ☐

REMINDER: *All* projects where any YES box is checked MUST be reported to the Ministry of Environment Ecological Protection Specialist along with the information described above and awaits clearance from that office before proceeding.

Name of individual completing the checklist: _____

Date: _____

Position with the company: _____

Signature_____

APPENDIX B

REQUIREMENTS FOR SEISMIC EXPLORATION UNDER *The Seismic Exploration Regulations, 1999:*

Once every five years, a seismic company must submit for approval to the Petroleum Development Branch of the Ministry of Energy and Resources a "Licence Application to Conduct Seismic Exploration" and for each employee who will handle, load, or detonate explosives in the course of their field operations an "Application for an Explosive Permit".

The Seismic Exploration Regulations, 1999, defines "Field Operations" as "…any or all of the following activities carried out for the purposes of seismic exploration: surveying, drilling, blasting, operating vibrator equipment, and recording results."

Prior to commencing field operations, the holder of a seismic exploration licence must:

- Submit for approval to the Sedimentary Geodata Unit of the Ministry of Energy and Resources a "Preliminary Plan" form, along with the original copy of a 1:50,000 scale map, for the proposed program. The preliminary plan must be submitted two weeks before commencing field operations and must include:

    - the name of the licence holder submitting the preliminary plan;
    - the licence holder's exploration licence number;
    - the name and telephone number of the office contact;
    - the program name;
    - the expected number of line kilometers; the location of the program with references to sections, townships, ranges, and meridians;
    - the method of seismic exploration and the location and the justification of any shot holes; and
    - the location and justification for any charge to be placed more than 30 meters deep, or on or above the surface.

- Notify, in writing, the Ministry of Energy and Resources and the applicable rural municipality of the seismic field contractor, their exploration licence number, office contact, and telephone number (if not on the original plan submission).

- If the preliminary plans are denied, address issues pointed out by the Ministry of Energy and Resources and re-submit the plans.

- If the preliminary plans have been approved, submit a "Notice of Intent", along with a copy of a 1:50,000 scale map, to all the agencies* that the Ministry of Energy and Resources identifies on the preliminary plans for their signature.

The map must clearly indicate the location of the proposed seismic exploration, the proposed survey lines, the program name, and the location of any shot holes. The company must also negotiate with private landowners for the right to access their land.

*These agencies include: SaskTel; TransGas Ltd.; TransCanada PipeLines; Foothills PipeLines; SaskEnergy; SaskPower; the Ministries of Highways and Infrastructure, Environment and Agriculture; applicable rural/urban municipalities; the Prairie Farm Rehabilitation Administration (PFRA); and First Nations.

- After the agency has signed the "Notice of Intent", the exploration licence holder must send one copy to the Ministry of Energy and Resources to be placed on the program file.

- Field operations cannot commence until all notices have been signed and copies submitted to the Ministry of Energy and Resources. However, these agencies may have placed restrictions on the seismic program, and could direct the company to contact additional agencies at their discretion.

- Deal with any land restrictions, and resolve any conflicts with the above agencies. The other three provincial regulators for seismic exploration (Ministries of Municipal Affairs, Environment and Agriculture) have their own conditions, which companies wishing to conduct seismic exploration must follow. These are explained next.

Ministry of Tourism, Parks, Culture, and Sport

The ministry is responsible for administering The Heritage Property Act, and in so doing, reviews seismic projects to determine their potential effects on heritage sties. The Ministry of Tourism, Parks, Culture and Sport may require a heritage resource impact assessment to assess a project's potential impact, and may require a proponent to carry our any further conservation, protection, or emergency salvage work that may be deemed appropriate.

The studies must be carried out by qualified heritage contractors under an investigation permit issued by the ministry. There is no fee for this permit. Once the Ministry of Tourism, Parks, Culture and Sport is satisfied with the result of the assessment, they will advise the company, in writing, that there are no further heritage issues, and that the company may proceed with the exploration project.

The seismic company must submit a 1:50,000 National Topographic Series (NTS) series map and a "Notice of Intent" to the RM. The company can be required to pay for any damage to a road or to pay for any clean-up after the operation. A bond may also be required of the company by the RM to ensure that any remedial work will be done.

Ministry of Environment and Ministry of Agriculture:

Notices of Intent for all seismic projects are submitted to the Ministry of Environment offices. All seismic programs should be submitted to the Ministry of Agriculture's regional offices who will determine if Crown lands are involved.

The Ministry of Environment will review the proposal under:

- The Environmental Assessment Act;
- The Wildlife Habitat Protection Act;
- The Fisheries Act;
- The Forest Resources Management Act;
- The Provincial Lands Act;
- The Environmental Management and Protection Act; and
- The Wildlife Act.

If the project falls on land administered by the Ministry of Agriculture, it is reviewed under The Provincial Lands Act.

The offices of the Ministry of Environment and where applicable, the Ministry of Agriculture, review the "Notice of Intent." If the work is proposed within a sensitive area or is extensive, or otherwise raises significant environmental concerns, the Ministry of Environment may request additional information such as a Project Proposal or an EPP.

The Ministry of Environment conducts an environmental review of the Notice of Intent. If more detailed review is not required, the ministry follows one of three processes:

- On Ministry of Environment administered land, a permit for seismic exploration with appropriate conditions is issued.
- On private land, the Ministry of Environment issues a letter outlining their environmental concerns (if any).
- On Ministry of Agriculture administered land, the Ministry of Environment provides the Ministry of Agriculture with a list of conditions to be included in the authorization of the project.

The Ministry of Environment's turnaround time for a permit (Environment administered land), a letter (private land), or notification to the appropriate Ministry of Agriculture regional office, is twenty working days; however, the average is less than five working days.

If the proposal involves the Ministry of Agriculture administered land, the company must get approval from the Ministry of Agriculture to proceed. Ministerial reviews happen simultaneously and the Ministry of Agriculture's approval includes the Ministry of Environment's conditions regarding wildlife habitat and other environmental issues.

If the Crown land administered by the Ministry of Agriculture is under a lease or sale agreement, companies conducting seismic work must also negotiate compensation for right of entry, adverse affects, nuisance, and productivity loss with the lessee.

If the land is not under lease or sale agreement, companies conducting seismic work must obtain approval from the Ministry of Agriculture prior to entry.

Once the company has dealt with all the agencies and the program has been approved, the company may:

- Cancel the seismic program and submit a “Notice of Cancellation” to the rural municipalities and the Ministry of Energy and Resources. The notice will inform of the cancellation date, the program number, and name, the seismic contractor, and the exploration licence number.

- Make revisions to the seismic program. Any revisions which occur after the program has been approved must be submitted along with a new program map to Ministry of Energy and Resources for approval. The company must show the revision number, the approved program name and number, and the new or deleted lines highlighted on the map.

    - If the revisions are approved, the company must also notify all the agencies previously listed on the approved Preliminary Plan of the revisions. The company must also inform private land owner or Crown lessees, as well as any additional agencies which may be identified as a result of the revisions.
    - If the revisions are denied, the company may address any issues identified by the Ministry of Energy and Resources and re-submit its revisions to Ministry of Energy and Resources for approval.

- Commence field operations.

Once the company has completed its field operations it submits:

- A “Notice of Completion of Seismic Operations” must be submitted to the rural municipality within 72 hours of completion of field operations. The form has to be signed by the administrator of the municipality. The exploration licence holder will forward a copy to the Ministry of Energy and Resources to place on the program file.

- A “Final Report of Seismic Exploration” must be submitted, along with one copy of the final shot point map and ground elevations, to Ministry of Energy and Resources within 60 days of completion of field operations. The seismic contractor who performed the field operations is responsible

for submitting the final report. If the Ministry of Energy and Resources has not received a final report by April 1 of the year following the one in which the program was approved, no further plans will be approved under that exploration licence until the delinquent “Final Plans” have been received and approved.

- A final report is also submitted to the Ministry of Agriculture or the Ministry of Environment (depending on who manages the land) within 60 days of competition of the project.

APPENDIX C

Closure Report

The Ministry of Environment may require a Closure Report at the conclusion of a permitted mineral exploration program. This information is an invaluable tool for historical and potential future site uses by the Ministry of Environment and related departments.

A Closure Report identifies any exceptions or deviations from the proposed plans. The Closure Report should contain sufficient detail so as to give department staff an understanding of actual and potential environmental and surface impacts that occurred during the permitted mineral exploration program.

Format for the Closure Report is up to the applicant, but should include the following information:

1. A general summary of the operational activities that have occurred.
2. Photographs of the activities (i.e. Temporary Work Camps, reclaimed drill pads, etc.);
3. Maps of activities and the locations;
4. Issues and their remedies, during the exploration program.
    a. identify implemented changes in the program.
    b. identify authorization for changes.
5. Public interactions, concerns and resolutions.
6. Report on special requirements identified in the permit.
    a. wildlife sightings of significant concern; and
    b. potential heritage sites identified.
7. Reclamation and remediation activities and their status at program completion.
8. Outstanding issues pertinent to the program or site.
9. Sites of all core storage and improvements. It must be noted that any radioactive core storage sites must be discussed with the Ministry of Environment.
10. Future program improvement recommendations.
11. Schedule of future site activities if known.

The Closure Report must be sent to the Ministry of Environment within 30 days of the expiry of the permit or as specified in the applicable permit. When the Closure Report is sent to the Ministry of Environment, a final inspection may be scheduled with the applicant.

For programs that require water withdrawal (i.e. drilling), the proponent must submit the water usage information to the Saskatchewan Watershed Authority.

APPENDIX D

Related Ministry of Environment Legislation and Guidelines for Surface Mineral Exploration

Legislation:

Copies of the various acts and regulations can be obtained on the Internet at the following address- www.qp.gov.sk.ca/

The Clean Air Act and Regulations

The Environmental Assessment Act
The Environmental Management and Protection Act, 2002
- The Environmental Spill Control Regulations
- The Hazardous Substances and Waste Dangerous Goods Regulations
- The Mineral Industry Environmental Protection Regulations

Municipal Refuse Management Regulations

Used Oil Collection Regulations

The Fisheries Act and Regulations
The Forest Resources Management Act and Regulations
The Government Organization Act
- The Department of Environment Regulations

The Heritage Property Act
The Litter Control Act
The Parks Act and Regulations
The Prairie and Forest Fire Act, 1982
The Provincial Lands Act
- The Resource Lands Regulations, 1989

The Wildlife Act and Regulations
The Wildlife Habitat Protection Act
- The Wildlife Habitat Lands Disposition and Alteration Regulations

The Conservation Easement Act and Regulations
The Ecological Reserves Act
- The Provincial Ecological Reserves Regulations
- The Representative Area Ecological Reserves Regulations

The Public Health Act

The Occupational Health and Safety Regulations, 1996

Guidelines and Reference Material:

Native Species Recommended for Site Restoration within the Mid-Boreal Upland, Mid-Boreal Lowland and Boreal Transition Ecoregions of Saskatchewan

Species of Concern List. Ministry of Environment

Freshwater Intake End-of-Pipe Fish Screen Guideline. Communications Directorate. DFO. 1995. A copy of this document may be obtained online at: freshwater_intake.pdf

Location Conversion site www.mapquest.ca/

APPENDIX E

OTHER REGULATORY REQUIREMENTS & WEBLINKS

This document contains a comprehensive list of regulatory agencies that may need to be contacted for program approvals.

Ministry of Environment: www.environment.gov.sk.ca/

- Conservation Data Centre:
  http://www.biodiversity.sk.ca/ftp.htm
  To access the logon page for the CDC check:
  http://gisweb1.serm.gov.sk.ca/wildlifelogin/form.asp
- Locations of recycling and disposal depots:
  http://www.saskwastereduction.ca/
- List of FireSmart Resources:
  http://www.environment.gov.sk.ca/firesmart
- Active forest fire daily information:
  www.environment.gov.sk.ca/wildfire management or
  http://activefiremaps.fs.fed.us/?sensor=modis&extent=canada
- Guidelines for Preparation of an EPP for Oil and Gas Projects:
  http://www.environment.gov.sk.ca/EPP Guidelines

Ministry of Energy and Resources: www.er.gov.sk.ca/

- Northern Mining Recorder (La Ronge) contact information:
  Phone: (306) 425-4600
- Assessment Geologist (For drilling in the Western Canada Sedimentary Basin) (Regina) contact information:
  Phone: (306) 787-2564
- A list of Publications:
  http://www.publications.gov.sk.ca/Energy and Resources

Ministry of Tourism, Parks, Culture and Sport: www.tpcs.gov.sk.ca/

- Provincial Heritage Resources Branch contact information:
  Phone: (306) 787-8157
  Fax: (306) 787- 0069

- The Land Developers Screening Tool:
  http://www.tpcs.gov.sk.ca/SensitiveLocations
- List of Archaeological Consultants:
  http://www.tpcs.gov.sk.ca/consultantslist

Ministry of Labour Relations and Workplace Safety:
www.lrws.gov.sk.ca/

- Main contact information:
  Phone: 1-800-667-5023
- Deals with on site storage of explosives and worker health and safety through occupational health and safety legislation:
  http://www.lrws.gov.sk.ca/ohs

Ministry of Agriculture: www.agriculture.gov.sk.ca/

- Petroleum and Gas Development on Agriculture Crown Land:
http://www.agriculture.gov.sk.ca/Oil-Gas

Ministry of Health: www.health.gov.sk.ca/

- Contact the Public Health Inspector for any work camp requirements or approvals.

La Ronge	(306) 425-8523
Meadow Lake	(306) 236-1576
Buffalo Narrows	(306) 235-5811
Prince Albert	(306) 765-6605

Ministry of Municipal Affairs: www.municipal.gov.sk.ca/

- Municipal Planning Bylaws:
  http://www.municipal.gov.sk.ca/Programs-Services/Community-Planning/bylaws-forms
- Subdivision Process:
  http://www.municipal.gov.sk.ca/Programs-Services/Community-Planning/Subdivision

Ministry of Highways and Infrastructure: www.highways.gov.sk.ca/

- Main Contact Information:
  Phone: (306) 787-5307
- Deals with requirements related to the transportation of hazardous substances

and waste dangerous goods. For online information sheets on hazardous materials:
http://www.msdssearch.com/DBLinksN.htm

Ministry of Justice and Attorney General: www.justice.gov.sk.ca/

- Main Contact Information:
  Phone: (306) 787-2962

Information Services Corporation – Corporate Registry

https://www.isc.ca/cobraweb/cobralogin.asp

Saskatchewan Watershed Authority: www.swa.ca/

- Northeast Water Resource Office (Nipawin) contact information:
  Phone: (306) 862-1750
  Fax: (306) 862-1771
- Northwest Water Resource Office (North Battleford) contact information:
  Phone: (306) 446-7450
  Fax: (306) 446-7461
- Regulatory Forms:
  http://www.swa.ca/WaterManagement/RegulatoryForms.asp

Fisheries and Oceans Canada: www.dfo-mpo.gc.ca

- *Fish Habitat Protection Program*–Prince Albert District Office contact information:
  Phone: (306) 953-8777
  Fax: (306) 953-8792
- DFO's Operational Statements:
  http://www.dfo-mpo.gc.ca/regions/central/habitat/os-eo/provinces-territories-territoires/index-eng.htm
- Freshwater Intake End-of-Pipe Fish Screen Guidelines:
  http://www.dfo-mpo.gc.ca/habitat/role/141/1415/14155/pipe/index-eng.asp

Environment Canada: www.ec.gc.ca/

- Deals with the *Species at Risk Act:*
  http://www.sararegistry.gc.ca/default_e.cfm
- Deals with spills in water bodies, watercourses on federal lands, or with interprovincial implications.
- *Environmental Emergency Regulations* can be found at:
  http://canadagazette.gc.ca
  or http://www.ec.gc.ca/lcpe-cepa/

Natural Resources Canada: www.nrcan.gc.ca/

-Main contact information:
Phone: (403) 292-4766
- Administers The Explosives Act and Regulations. They issue licences, certificates and permits to ensure the safety of the public and workers associated with the explosives industry:
  http://www.nrcan.gc.ca/acts and regulations
- Mining Information Kit for Aboriginal Communities:
  http://www.nrcan-rncan.gc.ca/mms-smm/abor-auto/htm/kit-toc/kit-res-eng.htm

Transport Canada: www.tc.gc.ca

- Transport Canada/Natural Resources Canada jointly control and enforce Transportation of Dangerous Goods Acts and Regulations, which is federal legislation.

APPENDIX F

FIRE CONTROL PLAN

Fire Season April 1 to October 31 of each year
(Attach additional sheets if needed)

Company Name: _____

Company Contact: _____Phone Number: _____

Field Contact: _____Camp Phone Number: _____

Camp Name: _____

Camp Location (Provide lat. & long. in DD mm.mmm)

_____

_____

Camp Structures: _____

_____

Permanent Camp ☐ or Temporary Camp ☐

Camp Occupancy

From: ___ / ___ / ___ To: ___ / ___ / ___
dd mm year dd mm year

Maximum number of people in camp at one time: _____

Access to Camp: Quad ☐, Truck ☐, Plane ☐, Helicopter ☐

Explain: _____

Hazardous Materials Stored on Site:

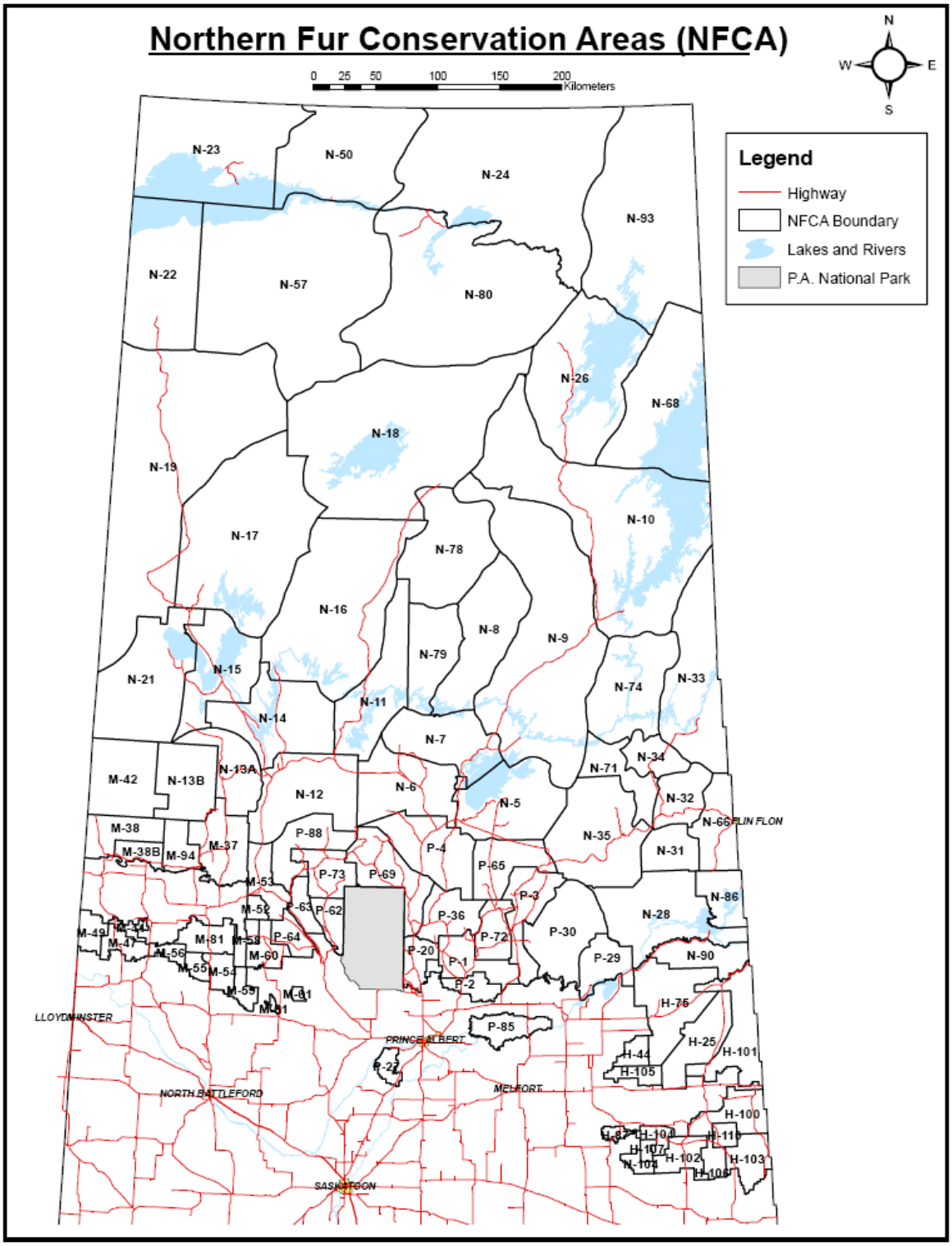
_____

_____

Fire Fighting Equipment on Site:

_____

APPENDIX G


Northern Fur Conservation Areas (NFCA)
0 25 50 100 150 200 Kilometers
N
W
E
S
Legend
Highway
NFCA Boundary
Lakes and Rivers
P.A. National Park
N-23
N-50
N-24
N-93
N-22
N-57
N-80
N-26
N-68
N-18
N-19
N-10
N-17
N-78
N-16
N-8
N-9
N-79
N-21
N-15
N-74
N-33
N-11
N-14
N-7
N-34
M-42
N-13B
N-13A
N-71
N-12
N-6
N-5
N-32
N-66
FLIN FLON
M-38
P-88
N-35
M-38B
M-94
M-37
P-4
N-31
P-65
M-53
P-73
P-69
P-3
N-86
M-52
P-63
P-62
P-36
N-28
M-49
M-44
M-47
M-81
M-58
P-64
P-72
P-30
M-56
M-60
P-20
P-29
N-90
M-55
M-54
P-1
M-59
M-61
P-2
H-75
LLOYDMINSTER
M-51
P-85
PRINCE ALBERT
H-25
H-101
H-44
P-27
H-105
NORTH BATTLEFORD
MELFORT
H-100
H-102
H-103
SASKATOON