Saskatchewan Ministry of Environment Update

Saskatchewan Mining Association Environmental Forum 2016

Wes Kotyk – Acting ADM EP Division

October 20, 2016



Overview

- Organizational Update
- Code
- EA
- Environmental Protection
- Wildfire Management

- Exploration
- Monitoring
- Climate Change
- Species at Risk
- Air Quality
- Compliance



Organizational Changes

- Environmental Protection Division
 - $\circ~$ Compliance Audit becomes part of EPB
 - EPB Director Mining, Industry and Audit
 - $\,\circ\,$ Waste Stewardship moves to EA
 - EA Renamed to EASB
- Resource Management and Compliance Division
 - Formation of Landscape Integrity Unit (LIU)
 - $\,\circ\,$ Some staff move to renamed Fish, Wildlife and Lands Branch
 - $\circ~$ Other staff take on other roles



Mining, Industry and Audit



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Compliance Audit Program Summary

- ENV compliance auditing commenced in 2014
- Over 45 audits completed to-date
 - 2014-15 16 audits completed
 - 2015-16 20 audits completed
 - 2016-17 10 audits completed YTD; 17 to go
- Over 5000 protocol line items have been evaluated



- Audit locations ★
- Field audits have included mines, mills, steel making, farm equipment manufacturing, forestry ops, landfills, heavy oil upgrader, fish farms,, sewage and water treatment facilities,
- **Desk audits** have included hydrostatic testing, sensitive species detection, CAP accepted solutions submissions, CAP and Closure plans submissions.



Non-compliance findings

- Top 10 non-compliance finding themes:
 - Lack of Permittee awareness / full understanding / adherence to a variety of permit conditions
 - Construction / alteration / decommissioning of storage facilities without permits being in place
 - Wastewater pond level management issues
 - Discharges with potential to cause adverse effects
 - Tailings slope stability monitoring and management issues
 - Compliance to the HSWDG Regulations / Code Chapters
 - Compliance to the Halocarbon Control Regulations/ Code Chapters
 - Compliance to the Clean Air Act and Regulations
 - Compliance with requirements for emergency preparedness and response, and contingency plans

Environmental Compliance Management System (ECMS)

- ECMS have been implemented for the potash and coal mining sectors and are currently being developed for other high risk industrial activities including hard rock mining, manufacturing, power generation, and chemical manufacturing.
- ECMS intended to complement the Audit function and satisfy the Provincial Auditor.

FACILITY NAME:	Reviev	v Date:	18-Fe	eb-15
Environmental Performance Overview	Items	Complian	Non-comp	% Complia
Compliance with Legislation	25	0	25	0%
Compliance with Permit Requirements	110	0	106	0%
Compliance with Upcoming Code Requirements	3	0	3	0%
Implemenation of Best Practices Listed	58	0	58	0%
Total Compliance with Requirements (Leg, Code, Permit)	138	0	134	0%
Total % BP's Implemented	58	0	58	0%
Compliance Performance (Legislation/Code/Permit)	Items	Complian	Non-Comp	% Complia
MIEPR	3	0	3	0%
Annual Report	54	0	54	0%
General Guidelines	16	0	16	0%
Air Quality Monitoring	12	0	12	0%
Surface and Groundwater Monitoring	12	0	12	0%
Soild Waste Management	13	0	12	0%
ТМА	23	0	22	0%
Potable Water & Domestic Waste	13	0	12	0%
HSWDG Storage	30	0	29	0%
Discharge and Discovery & ERP	16	0	16	0%
Best Practice Performance		Items	# Meeting	% BPs Met
Annual Report	35	0	35	0%
General Guidelines	17	0	17	0%
Air Quality Monitoring	9	0	9	0%
Surface and Groundwater Monitoring	9	0	9	0%
Soild Waste Management	7	0	7	0%
TMA	5	0	5	0%
Potable Water & Domestic Waste	3	0	3	0%
HSWDG Storage	3	0	3	0%
Discharge and Discovery & ERP	5	0	5	0%

Environmental Code Next Steps

- Code Advisory Committee (CAC) meet in November to discuss and recommend potential code chapters to be developed for the second edition of the code
- ENV/WSA will consider the CAC's recommendation and respond to the CAC
- Establish content committees and develop code chapter(s) using a similar process used for development of the first edition of the code

Advisory Committee Members

Sector/Entity	Member
Mining Industry	Kevin Nagy Director, Cameco
Oil and Gas Industry	Trevor Carlson Director, Federated Co-operatives Limited
Forest Industry	Tom Lewis Chief Operating Officer, Jemi Fibre Corp.
Chamber of Commerce/Industry	Bob Schutzman Director, Evraz Inc.
Environmental NGO	Robert Halliday President, Halliday & Associates

Advisory Committee Members

Sector/Entity	Member
Environmental NGO	David Pezderic Advisor, Prairie Pride Natural Foods
SARM	Ray Orb President, SARM
SUMA	Ben Buhler Director, Northwest Region, SUMA
Agriculture Industry	Todd Lewis Vice President, Agriculture Producers of Saskatchewan
First Nations	Rose Roberts
Métis	Vacant

Draft Timeline

Establish Advisory Committee Call for, establish, train Content Committees

Develop code chapters

Public consultation

Chapter revisions

Implementation

Q3 Q4

Recommendation for Code Chapter Development Develop code chapters

Public Consultation

Chapter revisions

SK Environmental Code – Air Quality

- Code became effective June 1, 2015.
- The Environmental Management Protection Act (EMPA) 2002, The Clean Air Act and The Clean Air Regulations, The Potash Refining Air Emissions Regulations were all repealed.
- The *Industrial Air Quality Source Chapter* came into place regulates large and high risk emitters. The Chapter captures mines or solution mines, and associated facilities.
- Clean air permits are no longer issued. Instead, industrial "air" sources large emitters / high risk sites will be required to submit Environmental Protection Plans (EPPs).
- Existing clean air permits are being transitioned to EPPs while new industrial sources are submitting EPPs.

Industrial Source (Air Quality) (ISAQ)

- Existing operations require EPP prior to 5 year transition or potentially at time of permit expiration
- New facilities or alterations code applies immediately
- QP to develop EPP

Approvals expire by December 31, 2019

• ISAQ EPP to be developed for Industrial Air Source portions of operation

 Approval conditions need to be amended to reflect the approved EPP and any other special conditions

What needs to be in an EPP?

- The EPP needs to describe the methods that will be employed to satisfy the results based objective (RBO) of limiting the probability of unacceptable adverse effects.
- It requires a QP to certify that the methods described within the EPP will achieve the RBO if employed.

WHY QUALIFIED PERSONS

- Critical to the success of RBR implementation
- Help ensure code outcomes are achieved
- Protect public safety and environment

Adoption of Standards Chapter

- The purpose of this chapter is to adopt the standards referenced in the chapters of the code to make them legally enforceable.
- Section 1-2(1) speaks to the ministry being required to post the standards on its website.
- Notice of standard changes are provided through the <u>Saskatchewan Gazette Part I Notices</u> under the authority of the Queens Printer.
- Ministry may implement Code Bulletin notices for Standard change notices.

Air Quality Program

• SK Environmental Code – Air Quality

- SK Ambient Air Quality Standards
- Air Zone Management in SK
- Multi-Sector Air Pollutants Regulations

Saskatchewan's Ambient Air Quality Standards

- Saskatchewan Ambient Air Quality Standards (SAAQS) were brought up-to-date on June 1, 2015 and are now similar to other western provinces.
- Saskatchewan Environmental Quality Standards (SEQS) house SAAQS.
- Work to establish CAAQS for SO₂ and NO₂ have been underway over the last two years.
- Environment Ministers endorsed new SO₂ CAAQS on October 3, 2016.
- The ministry won't change the SO₂ and NO₂ SAAQS until it engages with impacted stakeholders.

Air Zone Management

- The ministry created the first air zone in 2005 with the intent of having up to six air zones to encompass the entire province, pending the effectiveness of the first one in the South East area.
- An air zone can be characterized as a geographic region within any province or territory in Canada that has comparative air quality challenges and emission characteristics.
- A non-profit organization (air zone) is formed with representation from industry, government, non-government agencies and the public.
- The ministry provides start-up money.
- The air zone management approach is a successful voluntary program built on consensus-based decision-making and partnerships that are over 90 per cent funded by industry.

EA Decisions on Mining

- Yancoal Canada Resources Limited (Yancoal) received EA approval on August 9, 2016 to develop a new solution potash mine 60 km north of Regina in the RM of Longlaketon near Southey, SK.
- Yancoal can now seek to obtain the necessary permits and approvals for the mine and initiate work to fulfill conditions of the ministerial approval.

Other EA Decisions of Interest

- Wind Energy
 - Proposed 177 MW wind power facility near Chaplin, SK received a decision on September 19, 2016 to not approve the project.
 - Primary concern related to migratory bird activity in the area close to the site.
 - Siting guidelines released to support future wind projects.
- Peat Harvesting
 - Woodland Caribou Habitat Offset plan a condition of Premier Peat Pasquia Bog EA approval issued September 13, 2016.

Environmental Assessments Underway September 2016

Federal Review of Canada's EA Processes

Scope of the Review:

- 1. Restore robust oversight and thorough EAs of areas under federal jurisdiction, while avoid duplication with provinces/territories.
- 2. Ensure decisions are based on science, facts and evidence.
- 3. Provide meaningfully participation.
- 4. Project advocates must choose the best technologies available to reduce environmental impacts.
- 5. Enhance the consultation, engagement and participatory capacity of Indigenous groups.

Review led by federal Expert Panel with recommendations to Federal Minister by January 31, 2017.

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Provincial Involvement in the Review

- Presented to the Panel on September 19, 2016 in Saskatoon at the public meetings
 - Advocating for 'One Project, One Assessment'
- Provide technical briefing to the Panel in November
- Submit written comments to the Panel through online portal
- Engage our stakeholders and participants to ensure provincial interests are reflected

Wildfire Management Branch (WFM)

Wildfire Management

Protection Priorities

- 1. Human life
- 2. Communities
- 3. Major public and industrial infrastructure
- 4. Commercial timber resource
- 5. Structures, natural resources, & other commercial/industrial operations

WILDFIRE MANAGEMENT

Education Components

- Develops information for protecting industrial and commercial operations including best practices and legal obligations
- Delivers presentations at Saskatchewan Mineral Exploration Government Advisory Committee meetings
- Advice provided to mine sites wanting to put in fire guards

What you need to know about wildfire

Fire is Part of Nature

Forest fire is nature's engine of renewal. Fire removes sick, diseased and over-mature trees. It renews wildlife habitat and restarts the cycle of plant and animal growth in the forest. Our forests need fire to stay healthy and vibrant.

Living with Wildfire

Historical and pre-historical information shows that fire burns through any given part of Saskatchewan's forest every 50 years or so. Wildline can threaten communities, homes, cottages and businesses. Sometimes people are forced from their homes and buildings and valuable timber is destroyed.

Fortunately there are several things that can be done to reduce the threat from fire,

saskatchewan.ca/fire | 1-800-667-9660 | 911 emergenc

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WILDFIRE MANAGEMENT

Prevention Components

- Prevention and Mitigation Plans for all commercial operations are a *Wildfire Act* requirement
- WFM offers a BMP document for industrial and commercial operators (saskatchewan.ca/fire)

Wildfire Management Branch Best Management Practice

Wildfire Prevention and Preparedness for Industrial and Commercial Operations

saskatchewan.ca/fire

Government

Wildfire Management

Risk Management Components

- FireSmart Assessments for industry
- Wildfire Risk Assessment and recommendations for mine sites
- Examples: Fission Uranium, Shore Gold, McClean Lake

Woodland Caribou Range Assessment & Range Planning Program Update

- Designated as threatened under the federal Species at Risk Act (SARA)
- Initiated and currently undertaking range assessment work, research and analyses (population, habitat mapping, TEK, disturbance mapping, burn residuals, cumulative effects)
- Initiated range planning activities in the boreal plain
- Anticipate submitting first range plan in October 2017 (boreal plain – Central, base range plan) saskatchewan.ca

Boreal Watershed Initiative

Purpose: Assess the ecological integrity of Saskatchewan's northern watersheds so as to inform regulations and decisions related to northern development.

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Fieldwork completed 2011-2015 Wind-up volume currently being compiled

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- 45 technical papers & 10 abstracts
- ~ 100GB in data
- Windup volume available to public Fall 2016
- Condensed, less technical version on-line
- Full access to reports and data upon request

Sumps and Drilling Waste Management

 Recent discussion between ENV and industry on how to better manage drilling waste

Barge Drilling

- The last couple years as more companies have been proposing to drill on water.
- Further research as to what requirements and mitigation measures must be met in order to drill on water

Abandoned Underground Coal Mines

Current Program Activities

- MOE and Ministry of Economy coordinate management of high risk sites.
- Work with Ministries or agencies to manage development in areas of abandoned mines (e.g. Government Relations)
- Developing data bases and interactive mapping tools to manage and share information.
- New Section created to work on Abandoned sites including AUCM.

UAV

- Unmanned Areal Vehicles (UAV) is a remote sensing technique being evaluated.
- Assess larger areas and provides prospective.
- View areas that are not accessible or may contain safety issues.
- Imagery may be used for monitoring, change detection or sinkhole delineation.

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SK's GHG Emissions by Economic Sector (2014)

SK Large Facilities' GHG Emissions by NAICS Sectors (2014)

Elements of Climate Change Strategy

- Market Oriented Solutions
- Technology and Innovation
- Measurement | Transparency | Accountability
 - Emission reductions from land-use initiatives (no till farming) needs improved measurement, increased transparency and additional recognition to ensure contributions are measured and recognized
- Acknowledgement of Results
 - SK reduction strategy is solving a global problem through development and export of transformational technologies: CCS | Agricultural technologies

Evolving Federal Regulatory Environment...1

- The previous federal government announced a 30% cut in GHG emissions below 2005 levels by 2030.
 - Prior to COP21 (Paris), the federal government stated that the 30% cut "will be the floor, but certainly we want to try to do better".
- On Oct 3rd the GoC proposed its approach to pricing carbon.
- Provinces and Territories will have flexibility in deciding how they implement carbon pricing based on two choices:
 - $\circ~$ a direct price on carbon; or
 - o a cap-and-trade system.

Evolving Federal Regulatory Environment...2

- Carbon price will start at \$10 per tonne in 2018 and rise by \$10 per year to \$50 per tonne in 2022.
- Overall approach will be reviewed by 2022 to confirm path forward
- Revenues from carbon pricing will remain with jurisdiction of origin and used as they see fit.
- The federal government intends to impose a carbon price on provinces and territories that do not have one by 2018.

Saskatchewan's Approach

- SK has taken a technological approach to addressing climate change.
- The province has made significant investments in CCS technology that has the potential to make world-wide contributions to reducing emissions.
- There is a need for flexibility in approaching climate change in Canada.
- The recently announced federal carbon pricing policy will be taken into consideration as the SK climate strategy is developed.

Ministry of Environment

www.environment.gov.sk.ca

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