

Environment and Sustainable Resource Development—Natural Resources Conservation Board—Confined Feeding Operations Follow-up

SUMMARY

In 2004 we audited the Natural Resources Conservation Board's processes for monitoring confined feeding operations. We recommended that NRCB rank its compliance and enforcement activities based on environmental risk and manage odour and nuisance complaints more efficiently. Our 2007 follow-up audit concluded that NRCB implemented the odour and nuisance part of the recommendation. We repeated the compliance and enforcement part of the recommendation.

Our 2011 follow-up audit concluded that NRCB still had not fully implemented the recommendation to rank its compliance and enforcement activities based on environmental risk. We also made a new recommendation that NRCB assess whether its current compliance approach is adequate to proactively manage surface water risks. Our 2013 follow-up audit found that NRCB had not fully implemented these two recommendations.

This fourth follow-up audit of NRCB's monitoring of confined feeding operations (CFOs) and their impact on groundwater and surface water concluded that the two outstanding recommendations have been implemented.

Why this is important to Albertans

Alberta has about 2,000 CFOs. Livestock manure from CFOs can contaminate groundwater and surface water. The *Agricultural Operation Practices Act*¹ and its regulations set out legislative requirements for CFOs to operate in an environmentally sustainable way. NRCB is responsible for monitoring and enforcing CFO operators' compliance with the Act, to ensure they do not harm the environment.

AUDIT OBJECTIVES AND SCOPE

Our audit objective was to determine if NRCB had implemented the two outstanding recommendations from our July 2013 report.²

We conducted our field work from June to August 2014 and substantially completed our audit on August 19, 2014. Our audit was conducted in accordance with the *Auditor General Act* and the standards for

¹ Chapter A-7, RSA 2000

² *Report of the Auditor General of Alberta—July 2013*, page 125.

Background

Confined feeding operations are enclosed areas where operators confine livestock for the purpose of growing, finishing or breeding them.

NRCB assumed responsibility for administering the Act in 2002.³ The board enforces CFOs' compliance with the Act through permits and compliance monitoring processes. NRCB follows different processes for managing groundwater⁴ and surface water⁵ risks.

While the NRCB evaluates both groundwater and surface water risks before allowing new and expanding CFOs to operate, its compliance monitoring of existing CFOs has focused on groundwater risk.

Groundwater

NRCB uses a risk-based approach to monitor conditions at CFOs that are a potential risk to groundwater. It regularly monitors groundwater conditions at these CFOs through the following programs:

- Risk based compliance monitoring—This type of monitoring applies to CFOs built before 2002 that have earthen manure storage and are in high groundwater vulnerability areas.⁶ NRCB annually inspects all CFOs with potential high risk to groundwater and inspects a sample of medium and low risk CFOs.
- Leak detection monitoring—This applies to CFOs with leak detection monitoring conditions in their permits.⁷ NRCB reviews monitoring results from groundwater samples that operators collect and submit to a lab and inspects CFOs if results indicate potential leaks into groundwater.
- Water well monitoring—Some NRCB permits require CFOs to do annual water well sampling.⁸ NRCB reviews water well analysis results operators obtain from a third party, and inspects CFOs if results indicate potential leakage into water wells.

Our 2013 audit found that NRCB had not documented its requirements for monitoring CFOs with leak detection and water well monitoring conditions in their permits. As a result, NRCB's monitoring of CFOs was not always timely and key actions and decisions were not always documented.

Surface water

NRCB relies primarily on complaints to identify surface water risks. Our 2013 audit concluded that NRCB lacked evidence that this approach is appropriately managing surface water risks.

³ Before 2002, municipalities regulated CFOs under municipal requirements. Over half of Alberta's CFOs were built before 2002. These CFOs are deemed to have a permit under the Act and do not have to upgrade their facilities to meet its requirements unless the facility poses a risk to the environment, as determined by NRCB.

⁴ Groundwater is water located beneath the earth's surface in solid pore spaces and in the fractures of rock formations.

⁵ Surface water is water collecting on the ground or in a stream, river, lake, wetland or ocean.

⁶ 170 confined feeding operations meet these criteria.

⁷ 50 confined feeding operations have leak detection requirements in their permits.

⁸ 200 operations have water well monitoring requirements in their permits.

FINDINGS

Groundwater risks: Rank compliance and enforcement activities based on risk—implemented

In May 2013, NRCB implemented an internal policy for monitoring groundwater risk at CFOs, and procedures for how staff should collect and document data and respond to complaints.

In September 2013, NRCB implemented a process to ensure its staff comply with its new policy. Our testing concluded that this process—which was carried out from September 2013 to June 2014—was effective.

Surface water risks: Demonstrate compliance approach is adequate—implemented

In May 2013, NRCB implemented a policy requiring its staff to collect surface water data during their site visits at CFOs, under the risk based compliance, leak detection and water well reporting programs. Previously, NRCB collected surface water data only when responding to a water related complaint or before issuing an operating permit. The same compliance review process NRCB used for groundwater was also used to ensure internal compliance with its surface water data collection requirements.

In May 2013, NRCB implemented processes to annually analyze the surface water data it collects at CFOs. NRCB's analysis of the 2013 data concluded that no change in the current approach to managing surface water risks is warranted. Our examination found that the data supported this conclusion.

At the conclusion of our audit, NRCB was in the process of changing to an electronic database. Once that move is complete, NRCB plans to use quarterly exception reports to monitor that its staff continue to carry out and document groundwater and surface water compliance activities in accordance with internal policies. NRCB committed to providing evidence to the auditor general that the new process has been implemented.

