

Bulletin Update #2

The NRCB has received numerous complaints regarding odours in High River over the past 18 months. This bulletin has been created to help answer the most frequent questions that the NRCB receives about this file and to summarize the NRCB's actions to date. The NRCB continues to work closely with the people of High River and with Rimrock Feeders to monitor the odours, collect air quality data, and to look for correlations between odour emissions and feedlot management practices during complaint events.

NRCB inspections and on-site monitoring

- NRCB inspectors have been onsite at the Rimrock feedlot and in the town of High River many times over the past year.
 - Inspections have occurred at all times of the day and night (including many visits that were not announced to the operators or the public) to monitor odours, speak to residents, and consult with the Rimrock operators on management options.
 - NRCB inspectors have frequently been in the town during odour events and at times when the NRCB receives many complaints, allowing inspectors to assess the odour themselves.
- During on-site inspections NRCB inspectors have investigated:
 - the total number of animals on site
 - the type of feed and feed additives used
 - manure management practices including:
 - pen cleaning
 - manure stockpiling
 - manure spreading
- To date, NRCB inspectors have found during these visits that Rimrock Feeders is meeting the technical requirements of the *Agricultural Operation Practices Act* (AOPA) and are operating similarly to other feedlots in southern Alberta, including other feedlots that also have pens lined with roller compacted concrete.
- NRCB inspectors are also reviewing all manure spreading and handling activities at Rimrock and at other feedlots in the community to determine the possibility of detected odours being sourced from manure transported off-site.

Air monitoring

The NRCB is conducting air quality monitoring work in the High River area with the first goal of identifying the odour sources surrounding the community. The second goal is to then determine whether any management practices at the Rimrock feedlot can be linked to spikes in the odour parameters being measured in the community.

- The air quality monitoring work to date has included purchasing and installing two air quality monitoring units (Scentroid CTairs); a third unit has been ordered and is being manufactured.
 - The first unit was procured and installed in the town of High River in May 2023. The objective of this installation was to assess the direction and magnitude of odour parameters measured in the community to inform source locations.

- This unit was re-deployed to a downwind (i.e., east) fenceline position on September 20, 2023. The objective of this deployment is to conduct a mass balance of odour parameters leaving the Rimrock facility toward the town of High River.
- The second unit was procured and deployed on September 13, 2023, in the middle of the Rimrock feedlot to measure the timing and magnitude of odour parameter emissions within the feedlot.
- On October 18, this unit was moved to an upwind position (i.e., west) from the feedlot and co-located with a wind monitoring station. The objective of this deployment is to measure background emission to conduct a mass balance assessment of odour emissions from Rimrock. The unit experienced weather-related damage and is currently undergoing warranty repairs.
- The third CTair unit will be deployed in the town of High River once received and will be co-located with a weather monitoring station to assess community-level impacts while the other units are being used to conduct site-specific assessments at target odour sources.
- In addition, the NRCB deployed 12 passive ammonia samplers to measure regional hotspots for ammonia across an area approximately 15 km by 20 km. The area included the Town of High River community, the Rimrock feedlot, other candidate odour sources and regional baseline positions.
 - The samplers only provide a quantitative value of the total ammonia deposition occurring during the 14-day deployment. They do not provide any type of time factor indicating when the ammonia was released.
 - The passive samplers were a pilot project to try to identify any other possible ammonia sources in the large area surrounding the town and the Rimrock feedlot.
 - One of the samplers targeting an ammonia source was damaged from grazing cattle activity. The loss of this sampler was deemed to materially affect the results. The NRCB is not confident in the validity or representation of the data that sampler collected and the subsequent analysis, but has posted the data in order to be transparent.
 - The NRCB is considering purchasing and redeploying more of the passive samplers, for both ammonia and reduced sulphur, with a modified experimental design with the lessons learned from the first deployment.
- Analysis of the collected odour monitoring data has demonstrated that odours detected in High River are strongly associated with wind speeds and direction indicative of the Rimrock facility. However, odours appear to also be sourced in part from other facilities and/or land practices in the broader region.
- Site-specific assessments that are actively being conducted at Rimrock are intended to enable two things:
 - a robust comparison of odour emissions from the Rimrock facility relative to other regional odour sources and feedlots of similar size (following equivalent site-specific assessment and mass-balance calculations at these facilities); and,
 - an evaluation of the effect of management practices being conducted at Rimrock on odour emission rates. Going forward the NRCB may have the feedlot alter or halt certain activities for a period of time to confirm management practice effects on odour emissions.

- Data from the NRCB air quality monitoring collected in the town of High River is uploaded onto the NRCB website approximately monthly. To date, review of this data has found no exceedances of Alberta's air quality objectives (many of which are health-based), except for particulate matter associated with wildfire smoke events.

NRCB complaint process

- All complaints received continue to be entered into the NRCB CFO Database. The logged complaints are being used in the analysis of odour monitoring data to better understand air quality and weather conditions occurring during complaint events relative to periods where the community is not being impacted by odours. Due to the volume of complaints received, NRCB staff cannot respond to every complaint. The NRCB has zero tolerance for abusive behaviour or language toward any of our staff or staff operating the 24-hour response line.

Rimrock/Tidewater Renewables

- The NRCB has no regulatory authority over the proposed biodigester and is not responsible for reviewing the impact assessments on air quality and odour for the proposed biodigester facility. Alberta Environment and Protected Areas (EPA) will be responsible for permitting the biodigester facility and any questions should be directed to them.