

**Comments on Public Registry 6135.00 North Solution Gas Gathering Flowline Project  
Tundra Oil & Gas Limited  
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on Behalf of What the Frack Manitoba  
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The EAP for Tundra Oil and Gas for the 46 km flow line from five existing Tundra battery facilities near Kola Manitoba to the Steel Reef Infrastructure Corp. compressor terminal, northwest of Sinclair, Manitoba does not contain any information on the sour gas content of the solution gas to be transported. From Sinclair the gas will be transported and refined at a processing facility in Saskatchewan. The Tundra Daly Oil Field and the Tundra oil fields near Tilston are documented to contain high levels of H<sub>2</sub>S a deadly toxic gas.<sup>1,2,3</sup> The Greenhouse Gas Reporting Program data search gives the CO<sub>2</sub> emissions from the Tundra Oil and Gas Battery Daly 12-24-010-29 W1M as 22,822 tonnes of CO<sub>2</sub> equivalent for 2019.<sup>4</sup> The SO<sub>2</sub> release from flaring of H<sub>2</sub>S is not given. However the Battery Application from Tundra Oil for Daly 8-28-9-29 W1M states;<sup>1</sup>

*“It is anticipated that this Battery will be classified as a Class 3 battery due to the volume of the worst case 1.8% H<sub>2</sub>S.”*

Appendix A\_1 of the EAP has a photograph of Tundra Daly Battery site 12-24-010-29 W1M reproduced in Figure 1 showing the flaring of sour gas. The information provided here conclusively proves the Tundra flowline will carry H<sub>2</sub>S.



11. Looking east toward Tundra Daly 12-24-010-29 W1M battery site.

**Figure 1.** Tundra Daly Oil Battery with up to 1.8% H<sub>2</sub>S in solution gas flared

No entries were found in the NPRI Canada data base for toxic sulphur dioxide (SO<sub>2</sub>) emissions from any oil batteries in Manitoba even though the above documentation shows that SO<sub>2</sub> would be emitted from batteries flaring sour gas in Manitoba and in particular from the Tundra Daly Battery. Tundra only reported to the national data bases the CO<sub>2</sub> equivalent emissions for this battery and other facilities totalling 23 entries and 464 kilotonnes CO<sub>2</sub>e for 2019. The SO<sub>2</sub> emissions were not reported to the NPRI data base.

Tundra has not revealed the sour gas content of the solution gas to be transported in the flowline. A sour gas flowline would require evacuation procedures, notifications, air monitoring equipment and evacuation plans in the event of a sour gas leak. Local residents along the line would have to be consulted and informed of the evacuation plans and the leakage potential.

There is no information as to the fate of H<sub>2</sub>S in the gas at the processing plant in Saskatchewan. H<sub>2</sub>S in the solution gas would have to be removed and disposed of. Disposal of the removed H<sub>2</sub>S would have potential environmental consequences that have not been accounted for. Flaring of the H<sub>2</sub>S removed from the solution gas would result in an increase in sulphur dioxide air emissions that would require reporting and monitoring. Added precautions might be required such as higher emissions stacks or restrictions on the amount of emissions. It is recognized that flaring of H<sub>2</sub>S is not an acceptable environmental practice and should be curtailed.<sup>6</sup> One option is deep underground injection of acid gas that is currently being done in Alberta.<sup>7</sup> Another alternative that is arguably more environmentally responsible is to recover the sulphur from the H<sub>2</sub>S and sell it in the form of sulphuric acid as is reportedly being done in the Boundary Dam Carbon Capture Power Plant in Saskatchewan.<sup>8</sup>

Tundra has deliberately avoided revealing that the flowline will carry sour gas. The EAP should clearly state the concentration of H<sub>2</sub>S in the solution gas and comprehensively describe the mitigation measures regarding leaks and ultimate disposal of the H<sub>2</sub>S in the solution gas.

## References

1. Tundra Oil and Gas Partnership, Battery Application for Daly 8-28-9-29 Sept. 3, 2020 [https://www.gov.mb.ca/iem/petroleum/applications/tundra\\_08\\_28\\_09\\_29/08\\_28\\_09\\_29\\_battery.pdf](https://www.gov.mb.ca/iem/petroleum/applications/tundra_08_28_09_29/08_28_09_29_battery.pdf)
2. Health Assessment of Residents Residing Near Oil Batteries in the Tilston, Manitoba Area Allen Kraut, MD, FRCPC Associate Professor Departments of Community Health Sciences and Internal Medicine University of Manitoba Initial draft June 30, 2000 Final report November 20, 2000 <https://www.gov.mb.ca/health/publichealth/docs/tilston.pdf>
3. Informational Notices: Informational Bulletin - Tilston Air Quality Manitoba Conservation, September 2000 <https://www.gov.mb.ca/iem/petroleum/infonotes/tilsbule.html>
4. Environment and Natural resources Canada The Greenhouse Gas Reporting Program data, 2018 <https://climate-change.canada.ca/facility-emissions/GHGRP-G11735-2018.html>
5. National Pollutant Release Inventory Data Search, Sulphur Dioxide, Manitoba 2017 [https://pollution-waste.canada.ca/national-release-inventory/archives/index.cfm?do=results&process=true&lang=en&opt\\_report\\_year=2017&opt\\_facility\\_name=&opt\\_npri\\_id=&opt\\_cas\\_name=7446-09-5&opt\\_cas\\_num=&opt\\_province=MB&opt\\_postal\\_code=&opt\\_urban\\_center=&opt\\_province\\_comm=&opt\\_naics6=&opt\\_naics3=&opt\\_naics4=&opt\\_nai6code=&opt\\_csic=&opt\\_media=all&submit=Submit](https://pollution-waste.canada.ca/national-release-inventory/archives/index.cfm?do=results&process=true&lang=en&opt_report_year=2017&opt_facility_name=&opt_npri_id=&opt_cas_name=7446-09-5&opt_cas_num=&opt_province=MB&opt_postal_code=&opt_urban_center=&opt_province_comm=&opt_naics6=&opt_naics3=&opt_naics4=&opt_nai6code=&opt_csic=&opt_media=all&submit=Submit)
6. Informational Notice 02-1 Interim Guidelines for Implementing Regulatory Changes Relating to the Permitting and Operation of Batteries, Manitoba Industry Trade and Mines, Feb. 15, 2002 <https://www.gov.mb.ca/iem/petroleum/infonotes/02-1.pdf>
7. Acid-gas injection in the Alberta basin, Canada: a CO<sub>2</sub>-storage experience Stefan Bachu and William D. Gunter, Geological Society, London, Special Publications, 233, 225-234, 1 January 2004, <https://doi.org/10.1144/GSL.SP.2004.233.01.15> <https://sp.lyellcollection.org/content/233/1/225>
8. Saskatchewan public deserves better answers on \$1.5 billion Boundary Dam carbon capture project, Murray Mandryk, Jan 08, 2016 <https://leaderpost.com/opinion/columnists/saskatchewan-public-deserves-better-answers-on-1-5-billion-boundary-dam-carbon-capture-project>