

## Guidance for Ground Motion Monitoring and Submission

The BC Energy Regulator (Regulator or BCER) is seeking to record ground motion values within certain oil and gas development areas. As such, permit holders must ensure the presence of adequate ground motion monitoring during hydraulic fracturing activities that occur within designated ground motion monitoring areas. Furthermore, the permit holder must submit a ground motion monitoring report within 30 days of completing fracturing activities.

Ground motion monitoring areas can be found [here](#).

Monitoring and Reporting Guidance:

- **Minimum of 1 (one) ground motion monitor per common drilling pad location**
  - **Must be located within 3 km of the common drilling pad**
  - **If additional ground motion monitors are deployed within 5km of the common drilling pad, include, in the ground motion report, any ground motion data obtained from these monitors**
- **Monitoring during all injection/pumping operations during hydraulic fracturing activities. Monitoring during flowback is encouraged, but not required. If monitoring is on-going during flowback, any events of 0.008g and above or reported felt events must be included in the final report.**
- **Ground motion monitors must meet the following minimum criteria:**
  - **Dynamic range: +/- 2g**
  - **Minimum detectability of 0.005g**
- **The Regulator may, at any time, request ground motion monitoring data**
- **A ground motion monitoring report must be submitted to the Regulator in pdf format outlining deployment location and a data summary**
- **If applicable, one csv report, using the Regulator's standard format, summarizing all ground motions equal to 0.008g and greater or reported events that were felt at surface regardless of intensity and one SEED format file for each of the aforementioned ground motions**
  - **The BCER csv report template can be found [here](#)**
  - **For each event of 0.008g and above or felt event, the SEED file containing instrument response and waveform from 30 seconds before the observed event and 60 seconds after must be submitted**
- **The ground motion monitoring reports must be submitted within 30 days of the completion of hydraulic fracturing activities via email to [welldatamail@bcogc.ca](mailto:welldatamail@bcogc.ca)**
  - **File naming:  
WANUM\_GMMR\_YYYYMMDD\_OPTIONALDESCRIPTION.PDF/CSV/SEED**
- **Ground motion monitoring reports are considered to be information obtained from or about a well. As such, they will be treated as well reports and well data, as per 17 (1) of the Energy Resource Activities General Regulation**

Questions regarding the collection or submission of ground motion monitoring data should be directed to:

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Submission Guidelines:

Submit:	<ul style="list-style-type: none"><li>• one PDF, and</li><li>• one CSV (if applicable), and</li><li>• one or more SEED files (if applicable)</li></ul>
Submit to:	<a href="mailto:welldatamail@bc-er.ca">welldatamail@bc-er.ca</a>
Naming Convention:	WANUM_GMMR_YYYYMMMDD_OPTIONAL

Example:

YYYYMMMDD is the ground motion monitoring completion date. The optional portion of the naming convention may be any alphanumeric text up to forty characters in length. For example, the submission of a ground motion monitoring reports for WA11122 with a final monitoring date of October 1, 2016 would be:

11122\_GMMR\_2016OCT01\_GroundMotionReport.PDF  
11122\_GMMR\_2016OCT01\_GroundMotionReport.CSV  
11122\_GMMR\_2016OCT01\_GroundMotionReport.SEED