

National Energy  
Board



Office national  
de l'énergie

OF-Surv-Gen 1101  
11 August 2014

To: All Companies under National Energy Board Jurisdiction  
Canadian Energy Pipeline Association  
Provincial Pipeline Regulators

**National Energy Board Safety Advisory SA 2014-01  
Battery Maintenance and Battery Health Verification**

Please find attached Safety Advisory SA 2014-01.

The National Energy Board (NEB or Board) expects regulated companies to demonstrate a proactive commitment to continual improvement in safety, security and environmental protection, and to promote a positive safety culture as part of their management systems.

Safety Advisories are issued periodically in order to improve the oil and gas industry's awareness of an identified safety or environmental concern with the goal of preventing incidents from occurring in the first place. A Safety Advisory also serves to further highlight NEB requirements, and conveys the Board's expectation that regulated companies take appropriate action to mitigate any potential impacts to people or the environment.

The Board expects this advisory to be widely circulated to company personnel and contractors involved in the testing, maintenance, inspection, record keeping and trending analysis of batteries operating on the pipeline systems of NEB-regulated companies.

If you have any questions regarding this advisory please contact the Board at 1-800-899-1265.

Yours truly,

*Original signed by*

Sheri Young  
Secretary of the Board

Attachment

cc: Transportation Safety Board of Canada, facsimile 819-953-7876

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## **Battery Maintenance and Battery Fitness for Service Verification**

### **Background**

In 2012 and 2013, the National Energy Board (Board) investigated 11 incidents involving fire or explosion of batteries. The investigation found the batteries were not maintained adequately. That lack of maintenance eventually led to fires or explosions. The term “*maintenance free*” appeared on several batteries involved in the incidents and played a significant role in the operator having inadequate maintenance practices.

### **Preventive Actions**

All batteries, along with any other physical device, require maintenance. The Board expects companies’ practices for testing, maintenance, inspection, record keeping and trending analysis of its batteries to meet, or exceed, the *Canadian Electrical Code* (CEC) and industry best practices. The Board also expects companies to implement applicable standards from the Institute of Electrical and Electronic Engineers to ensure batteries operate safely and reliably and are fit for service.

Rule 26-546 of the CEC states that:

*Storage battery rooms or areas shall be adequately ventilated; storage batteries shall not be subjected to ambient temperatures greater than 45 °C or less than the freezing point of the electrolyte.*

Whenever batteries are held within containment boxes, companies must assure that the size of the vents on the boxes are sufficient to allow proper heat dissipation and prevent hydrogen build-up. Electrolyte levels should remain within appropriate limits and proper maintenance practices and schedules should be well-defined and performed accordingly.

CEC Rule 2-300(2) of the CEC states:

*Electrical equipment deemed for emergency service, shall be periodically inspected and tested as necessary to ensure its fitness for service.*

Documentation of the above practices should be available for auditing purposes. Companies must take corrective actions to mitigate potential safety hazards as required by the *National Energy Board Onshore Pipeline Regulations* 6.5(1)(u), if they find deficiencies in their battery maintenance program or in the operating condition of their batteries.

The Board's compliance verification activities allow it to identify potential issues with regulated companies and, if necessary, address them with appropriate measures. This non-compliance may be assessed through future targeted facility inspections or management system audits.

### **Further Information**

If you have any questions regarding this advisory please contact Integrity Management personnel at the Board through our toll free number at 1-800-899-1265.