



PACIFIC

Passive seismic techniques for environmentally friendly and cost efficient mineral exploration

D5.3 – Annual Risk Management Report 1

Grant agreement number	776622	Due date of Deliverable	31/05/2019
Start date of the project	01/06/2018	Actual submission date	05/06/2019
Duration	36 months	Lead Beneficiary	BEOW

Description

The ESMC will report on the implementation of mitigation actions defined in the risk register for the first year.

Dissemination Level

PU	Public	X
CO	Confidential, only for members of the consortium (including the Commission Services)	

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Executive Summary

This document provides an assessment of the effectiveness of D5.2 – Environmental and Safety Risk Database adopted in 2018.

The first “live” utilisation of the Risk Assessments and Safe Systems previously submitted was carried out at Stillwater Canada Inc. (SCI)’ s Marathon PGU-Cu Project (“Marathon”).

The overriding purpose of this document is to ensure that D5.2 remains ‘fit for purpose’, and in so doing:

- To specifically eliminate where possible and minimise where not, the potential to cause harm to any stakeholders involved and similarly eliminate or minimise the potential for environmental issues, including care of indigenous populations, wildlife and flora.
- To ensure that:
 - an appropriate risk assessment evaluation is performed whenever:
 - a safety concern is identified through analysis of safety data or other means, or
 - a project or new/revised policy, procedure or work practice is being considered that could potentially affect the safety of employees, the operation, the public, or the environment.
 - a risk assessment evaluation is performed as soon as practicable after identification of the safety concern and prior to initiation of the project and implementation of the change.

1 Introduction

The Marathon PGM-Cu deposit, owned by Stillwater Canada Inc. (hereafter referred to as SCI or SIBSTIL), is one of the two project sites for testing the mineral exploration techniques developed within PACIFIC.

SIBSTIL is a partner in the research initiative with the PACIFIC group to conduct surveys using “passive seismic techniques for environmentally friendly and cost-efficient mineral exploration”.

SIBSTIL provides access to the Marathon PGM-CU project site to test the passive seismic technique as well as obtain all the required permits and regulations.

Experiment layout/location:

- Deployment of a total of 1025 nodes
- 425 as an array (for 3D reflection imaging) and 600 as a profile (for 2D reflective imaging)
- 2D array will have a spacing of 150m and cover an area from the Pic River in the east, to the powerline in the north, to Hare Lake in the west and to the Airport in the south.
- While the 2D profile line will have a spacing of 50m and overlay the 2D array. The line will have a length of 6000m and extend from the Pic River to Hare Lake.

The workplan for the passive seismic project can be divided into four parts:

1. Pre-inspection and site preparation
2. Sensor Deployment
3. Data acquisition
4. Sensor Retrieval.

Although part of the workplan took place along a trail system (with access), the overall project was considered a ‘remote access’ project because the majority of the work site was accessed by either helicopter or an All-Terrain Vehicle (ATV) trail access only. This determined the use of ‘remote access’ procedures.

SCI has studied an assessment of the potential hazards that could be encountered during operations. The Risk Assessments listed below were selected by SCI to cover the activities and these were deemed to be adequate.

2 Risk assessments

The selected SCI Risk Assessments have been compared to the original Risk Assessments prepared in D5.2 – Environmental and Safety Risk Database, both for nomenclature and content, see below:

SCI Risk Assessment (RA) Number	Equivalent Document in D5.2	RA Title in Document D5.2	RA Title in Document D5.3
RA001	Para 2.1	Site Access	Travelling/Vehicle Travel/ATV/Helicopter/ Traversing (modifications)
RA002	Para 5.1	Lone Working	Working in the Field (modifications)
RA003	Para 7.1	Safe Use of Hand Tools	Safe use of Hand Tools (minor modifications)
RA004	Para 9.1	Manual Handling	Manual handling (minor modifications)

The adherence/compliance to the Risk Assessments can be assessed by checking:

- Workplace Inspection Form
- Supervisors reports
- Any Incident Reports
- Contents of the Accident Recording Book
- Records of any Complaints
- Any modifications which were implemented during the activity.

The additional documents used alongside the Risk Assessment (Work Inspection Form and Safety Data Sheet (Control of Substances Hazardous to Health (COSHH Assessment))) have been included in this document for reference.

2.1 Work Inspection Form

 STILLWATER CANADA INC.	Workplace Inspection Form
Work Plan #	PACIFIC Passive Seismic techniques for environmentally friendly and cost efficient mineral exploration

Inspector: (Print Name)

1.

Signature:

1.

2.

2.

3.

3.

Date:

Location(s):

Activities:

Contractor:

Supervisor:

Signature:

Comments:

2.2 Working with Hazardous Materials - Safety Data Sheets (Full document available)



Safety Data Sheet (SDS)

ZLand® Lithium-ion 1C Battery Pack

Part Number	221.7702.0002	May be used to comply with OSHA's HAZCOM Standard; 29 CFR 1910.1200 must be consulted for specific requirements.
SDS Revision	-	
Date	06-24-2015	
Approved by	FairfieldNodal HSE Department	

NOTE →	<p>Important Note: As a solid, manufactured article per 29 CFR 1910.1200 (b)(6)(v) and (c), user exposure to potentially hazardous battery cell ingredients is not anticipated or expected with normal prescribed use under normal prescribed conditions.</p> <p>The information contained in this Safety Data Sheet (SDS) contains valuable recommendations for the safe handling and proper use of the ZLand® product. This SDS should be retained and made readily available for employees and other users of this product.</p>
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Section 1 – Chemical and Company Identification

Commercial Product Name:	Unit, Assy, ZL2, BATTERY PACK
Use of Product:	Unit, Assy, ZL2
Manufacturer:	FairfieldNodal
	Division: Systems
	Part Number: 221.7702.0002
Company Identification	FairfieldNodal 1111 Gillingham Lane Sugar Land, TX 77478, USA 281-275-7500 www.FairfieldNodal.com
Emergency Contact:	CHEMTREC 800-424-9300 (US and Canada) +1 (703) 527-3887 International and Maritime Telephone Number

3 Conclusion

This document demonstrates that D5.2 – Environmental and Safety Risk Database adopted in 2018 has been effective.

However, some modifications to generic Risk Assessments may be needed to account for prevailing health, safety and environment (HSE) laws, individual company HSE policies, local conditions and HSE matters arising before and during operations.