



## STANDARD PROCEDURE INSTRUCTION

Title		SPI
<b>Environmental Aspects and Impacts</b>		#35-10
Department	Supersedes SPI Dated	Effective Date
Safety, Health and Environment	New	January 17, 2018

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Environmental Aspects and Impacts

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1. PURPOSE

1.1. To ensure identification and evaluation of Environmental Aspects and Impacts is completed and reviewed in a timely manner as per Vale Global Procedure PRO-000004.

2. CONTEXT

2.1. As a part of Vale Manitoba Operations' commitment to Zero Harm, an Integrated Management System (IMS) has been implemented. A key part of the IMS implementation is the identification, evaluation and updating of the environmental aspects and impacts associated with all activities, products and services of Manitoba Operations facilities in order to determine our overall potential impact to the environment. This procedure has been established to ensure;

2.1.1 Correct identification of all environmental aspects of the activities, products and services for the Manitoba Operations, with emphasis on those environmental aspects identified as having significant impacts;

2.1.2 Definition of the appropriate Operational Controls for all environmental impacts identified, with emphasis on the monitoring of the respective key variables for each impact identified as requiring an Emergency Response Plan.

2.2. This procedure is applicable to all Manitoba Operations facilities, including closed and/or decommissioned sites, and will outline how to identify, evaluate and subsequently review environmental aspects and impacts associated with activities, products and services and also define control actions necessary for the prevention of environmental impacts.

3. DEFINITIONS



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**Abnormal condition** – A source or a condition with potential to cause damage to the environment, to people, and/or to property.

**Activity** – Includes a process, an event or task carried out that is not necessarily associated with a specific occupation that may interact with the environment.

**Environment** – The surrounding in which Vale Manitoba Operations operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation.

**Environmental Aspect** – Elements of the activities, products, or services carried out that may interact with the environment.

**Environmental Impact** – Any change to the environment, whether adverse or beneficial, wholly or partially resulting from the activities, products or services carried out.

**Facility** – A mine, plant or service group.

**Mitigation Actions** – Actions that aim to reduce the adverse significant environmental aspects considered acceptable, seeking to make them less significant or insignificant.

**Objective** – A goal to be achieved.

**Operational Controls** – A group of procedures applicable to the significant environmental aspects associated to the activities, products and services in order to keep them inside the acceptable parameters defined by regulation or Vale Standards.

**Product** – The material results of the activities of a facility. These can include intermediate products, by-products, and final market products.

**Services** – A function auxiliary to production or distribution of products, which supports the production, or distribution of products.

**Significant Environmental Aspect** – An environmental aspect that has, or may have, a significant environmental impact.

**Targets** – A series of intermediate endpoints the accomplishment of which is necessary to achieve an objective.



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**Task** – A group of actions producing a result and composing the processes.

#### 4. ACCOUNTABILITIES

##### 4.1. Head of Manitoba Operations and General Managers are accountable for;

- Providing resources to ensure effective identification of environmental aspects and impacts is conducted as outlined in this procedure,
- Demonstrating leadership by reviewing significant environmental aspects, developing objectives, targets and management plans and monitoring their implementation.

##### 4.2. Safety, Health and Environment Manager and Senior Environment Supervisor are accountable for;

- Ensuring that everyone involved with tasks associated with significant environmental aspects identified in the area know and maintain the operational control related to the aspect,
- Ensuring that the list of environmental aspect and impacts is regularly updated,
- Demonstrating leadership among the Manitoba Operations by regularly reviewing significant aspects and associated operational controls.

##### 4.3. Environmental Coordinators or Analysts are accountable for;

- Ensuring that environmental aspects and impacts are identified at the facility level and are conducted according to approved methodologies (see Section 7 for references),
- Providing subject matter expertise as necessary to facilitate the identification of environmental aspects and impacts,
- Ensuring that the list of environmental aspects and impacts is updated regularly.

##### 4.4. Facility Managers are accountable for;

- Ensuring that everyone involved with tasks associated with significant environmental aspects identified in the area know and maintain the operational control related to the aspect.
- Approval and signing off the “Preliminary Risk Analysis and Aspects Assessment” document (Annex 1: PGS-000773).



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4.5. All employees are accountable for:

- Understanding the significant environmental aspects at the worksite and the associated operational controls.

5. **SITUATIONS REQUIRING EVALUATION OF ENVIRONMENTAL ASPECTS**

- When implementing the Integrated Management System (IMS);
- In the modification of processes, products and services, such as; acquisition of new equipment, introduction of new technologies, new materials and consumables or significant change in the quantity used of raw materials and consumables, and implementation of operational routines that generate environmental impacts;
- After the implementation of new operational controls;
- When finishing, deactivating, and decommissioning the operational activities in a certain facility;
- Within 18 months from the last evaluation of aspects; the risk assessment shall be done every three (3) years or when there are significant changes such as listed in b) to d).
- Closure and start-up of production.

6. **INITIATING ENVIRONMENTAL ASPECTS AND IMPACTS IDENTIFICATION AND EVALUATION**

6.1. If any of the above situations are encountered, contact Environment Department personnel to initiate the process of identifying and evaluating environmental aspects and impacts.

7. **REFERENCES**

- PGS-000773 – Preliminary Risk Analysis and Aspects and Impacts Assessment
- PGS-003123 – Health, Safety and Environment Directives for Risk Management
- Annex 1: Preliminary Risk Analysis and Aspects Assessment document (PGS-000773)
- PGS-003287 – Management of Water Resources and Effluents



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- POL-0019-G – Sustainability Policy
- PTP-00834 – IMS Inspections and Audits Management
- Vale’s Integrated Management System Manual
- Work Instruction – Identification and Evaluation of Environmental Aspects and Impacts (SHE Department – Manitoba Operations)

Approved By	Title
	Vice-President, Vale Manitoba Operations
Date	

