RED DOG OPERATIONS ALASKA

# Fugitive Dust Risk Management

## Worker Dust Protection Plan

Teck

October 2011

Teck Alaska Incorporated
3105 Lakeshore Drive
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# Acronyms and Abbreviations

| | |
|---|---|
| B2-M | beta-2-microglobulin |
| DEC | Alaska Department of Environmental Conservation |
| µg/dL | micrograms per deciliter |
| µg/g | micrograms per gram |
| µg/L | micrograms per liter |
| $\mu g/m^3$ | micrograms per cubic meter |
| MSHA | Mine Safety and Health Administration |
| OSHA | Occupational Safety and Health Administration |
| PEL | permissible exposure limit |
| PPE | personal protective equipment |
| RMP | Risk Management Plan |
| SOP | standard operating procedure |
| Teck | Teck Alaska |

# 1 Introduction

In August 2008, a draft Risk Management Plan (RMP) was released for public comment (Exponent 2008). The RMP is part of a process intended to minimize risks associated with fugitive dust emissions from operations at Red Dog Mine. It combines and builds upon prior and ongoing efforts by Teck Alaska (Teck) to reduce dust emissions and their effects on the environment. The RMP addresses issues identified by several different studies and programs, including the DeLong Mountain Regional Transportation System risk assessment (Exponent 2007a,b), the mine-area ecological risk evaluation conducted as part of the closure and reclamation planning process, the Memorandum of Understanding between the Alaska Department of Environmental Conservation (DEC) and Teck (DEC 2007), and the Supplemental Environmental Impact Statement for the Aqqaluk Pit Extension. The RMP also incorporates stakeholder input obtained during a 3-day Risk Management Workshop held in Kotzebue, Alaska, in March 2008 (Teck 2008).

The RMP describes seven fundamental risk management objectives that address the overall goal of minimizing risk to human health and the environment surrounding the mine, road, and port, over the life of the mine and post-closure operation. The RMP also identifies and evaluates risk management options to achieve those objectives, and describes a process for developing implementation plans to achieve the fundamental objectives. Part of that process is the development of six individual risk management implementation plans that will incorporate high priority actions identified in the RMP to more specifically describe how the fundamental objectives will be met. This document presents the Worker Dust Protection Plan.

The Worker Dust Protection Plan will specifically address issues related to dust emissions and exposure, drawing as needed from Red Dog's comprehensive existing Health and Safety Program to address these issues.

The remainder of this document is organized as follows:

- *Section 2. Goal of the Worker Dust Protection Plan*—Describes the specific goal and objective of the Worker Dust Protection Plan
- *Section 3. Review of Past and Ongoing Actions Specific to Worker Dust Protection*—Describes and evaluates prior and ongoing actions as well as actions identified as part of the risk management planning process
- *Section 4. Actions to Be Implemented*—Refines past, current, and potential future actions and integrates them into a cohesive Worker Dust Protection Plan
- *Section 5. Periodic Review and Reporting*—Describes the process for review and reporting on these actions
- *Section 6. Milestones*—Identifies important milestones for implementation of the plan
- *Section 7. Stakeholder Roles*—Describes stakeholder roles in the process.

# 2 Goal of Worker Dust Protection Plan

The Worker Dust Protection Plan follows from risk management Objective 7, “Protect worker health.” In order to achieve this objective, the Worker Dust Protection Plan was developed with the following goal:

> To minimize worker exposure to fugitive dust, provide ongoing monitoring of exposure, and ensure a comprehensive communication system.

# 3 Summary of Past and Ongoing Actions Specific to Worker Dust Protection

Teck Resources Limited considers safety a core value and is committed to providing leadership and resources for managing safety and health. Accordingly, the company has developed Environment, Health, Safety and Community Management Standards applicable to their operations worldwide (Teck 2009; Appendix A). In addition, Teck has developed a comprehensive Occupational Safety and Health Program tailored specifically to Red Dog operations to protect worker health. The program complements the corporate standards and is designed to meet all aspects of work place safety and health, including worker dust protection. The following sections review past and ongoing actions that specifically relate to dust protection, as well as potential actions identified during the risk management planning process. The purpose of this section is to identify all of the possible worker dust protection actions that may be taken to minimize worker exposures. Ongoing programs are summarized here, and detailed standard operating procedures (SOPs) are provided to employees.

The worker health programs currently in place can be categorized as follows:

- **Engineering Controls and Maintenance—**Physical controls put in place to minimize dust emissions and procedures to maintain the associated equipment
- **Work Environment Monitoring—**Work area air monitoring program
- **Medical Monitoring and Surveillance—**Comprehensive blood lead and blood and urinary cadmium monitoring programs
- **Administrative and Employee Controls—**An employee hygiene program, a respirator protection program, and employee training
- **Communication and Collaboration—**Procedures and activities that facilitate information exchange and/or increase employee participation and input into worker health programs.

Potential additional actions identified during the risk management planning process are also discussed.

## 3.1 Engineering Controls and Maintenance

### 3.1.1 Engineering Controls

Teck corporate policy dictates that operational control measures are established, maintained, and updated as necessary to minimize health and safety risks associated with the company's business function (Teck 2009). Red Dog Mine continues to research and implement improvements to reduce emissions of metal-bearing fugitive dust. Decreased emissions, in turn, reduce potential worker dust exposure. The engineering improvements put into place include the following:

- Conversion to hydraulically operated, steel covered, side-dumping trailers to transport the concentrate.
- Redesign and upgrade of the port truck unloading building and concentrate transfer facility, including the installation of a bag-house and air handling system.
- Redesign and upgrade of the concentrate handling equipment for the barge loading facilities, including the barges and their ship loaders.
- Installation of dust control bag-houses on the crushers and ore storage building.
- Implementation of new and enhanced operational procedures to minimize dust generation. Examples include: truck washing during non-freezing conditions to minimize tracking; and application of palliatives or hydromulch to the tailings beach to reduce windblown transport of fine tailings.

### 3.1.2 Maintenance

Teck corporate standards require implementation of a process for identifying critical equipment and operations where a malfunction or failure could have a significant, adverse health impact (Teck 2009). Accordingly, Red Dog Operations has programs to ensure that inspection, maintenance, testing, and calibration for all equipment is performed on a regular schedule. All equipment for which automatic monitoring is feasible has monitoring devices and controls to ensure that it functions within acceptable operating ranges. Red Dog Operations also maintains a regular schedule of testing and maintenance to ensure proper functioning of ventilation systems and other engineering controls designed to minimize dust emissions. An indoor air quality study is performed biannually by Northwest Industrial Hygiene to assess the condition of ventilation systems and indoor air quality throughout the operation.

Testing, maintenance, and both scheduled and unscheduled repair of all equipment at Red Dog are controlled through Gencid, an online information tracking and management system which also generates tasks and work-orders on a pre-arranged schedule, or in response to an incident or breakdown.

## 3.2 Work Environment Monitoring

Consistent with the Occupational Safety and Health Administration (OSHA) requirements, Teck has put in place a work area monitoring program to characterize and track the potential for employee dust exposure, and in particular lead exposure. Teck has conducted air monitoring in each work area using personal air samplers carried by representative employees over a full shift to determine which areas may have air lead concentrations that require continued monitoring. These measured air concentrations do not consider respirator usage, so should not be considered as employee exposure concentrations. However, the measured concentrations help determine the need for additional engineering controls and/or respiratory equipment requirements.

OSHA has set a permissible exposure limit (PEL) of 50 micrograms of lead per cubic meter of air (50 $\mu g/m^3$) averaged over an 8-hour workday as the highest level of air lead to which a

worker can be exposed. If a person works longer than an 8-hour shift, the PEL needs to be adjusted to account for longer exposure. This adjustment is made by dividing the number of work hours into 400.[1] Thus, for a 12-hour workday, the PEL would be calculated as 33 $\mu g/m^3$ (i.e., 400/12). Teck has set a more conservative action level of 30 $\mu g/m^3$ as a trigger for additional monitoring and training requirements.

An initial determination of work area lead concentrations determines what safety measures must be taken by Teck and employees. If a work area air lead concentration is less than 30 $\mu g/m^3$ during the initial determination, no further monitoring is necessary unless there is a production, process, or personnel change.

If a work area air lead concentration is greater than or equal to 30 $\mu g/m^3$ during the initial determination, the following actions are put into effect:

- An ongoing work area air monitoring program is put into place, with monitoring repeated every 6 months
- Respirators are required for all employees working in the area
- Blood lead testing is offered to all employees (blood lead testing is required for all employees at least annually, regardless of whether they work in an area with air lead exceeding the action level)
- A comprehensive safety and health training program is implemented that includes hygiene, housekeeping, and protective work clothing.

Work area and employee personal exposure sampling is conducted biannually by Northwestern Industrial Hygiene, a third party industrial hygiene consultant, and a report is provided to Red Dog Operations. These reports are available internally upon request for all employees to view.

[1] The product of the PEL (50 $\mu g/m^3$) and the number of hours on which the PEL time-weighted average (TWA) is based (8 hr/day) is 400 $\mu g\text{-}hr/m^3\text{-}day$. The value of 400 $\mu g/m^3$ is divided by the work shift length to give a TWA exposure limit for that work shift length. A 12-hour TWA exposure limit would, thus, be 33 $\mu g/m^3$ (i.e., 400 $\mu g\text{-}hr/m^3\text{-}day$ /12hr/day).

The Mine Safety and Health Administration (MSHA) also conducts periodic work area monitoring.

The work area air monitoring program is described in the Red Dog Employee Safety & Health Standards for Lead Exposure SOP. Applicable corporate standards are described in Teck (2009).

## 3.3 Medical Monitoring and Surveillance

All employees exposed to fugitive dust are required to be monitored by an onsite certified physician's assistant through regular blood and urine sampling. Employee samples are sent offsite to be analyzed at a certified third party laboratory. Each employee's sample results can be viewed by that employee upon request.

### 3.3.1 Blood Lead Monitoring

In order to minimize lead exposure, Teck has developed an Employee Safety & Health Standards for Lead Exposure SOP for Teck employees and contract employees at the Red Dog Mine.

The Lead Exposure SOP includes a Blood Lead Biological Monitoring Program for all employees of the mine, administered by the Red Dog Loss Control Department. This monitoring program allows Teck to:

- Continually evaluate its progress toward reduced lead exposure goals for all workers
- Quickly intervene when individual workers show an elevated lead level before their health is placed at risk
- Evaluate the effectiveness of the dust control measures and the health and safety program as a whole.

All employees receive blood lead monitoring at least once per year. Employees working in areas with air lead concentrations exceeding the action level (see the Work Environment Monitoring Program, above) receive bi-annual monitoring. If an employee has a blood lead level of 25 to 35 µg/dL, they receive quarterly blood lead monitoring. Employees with a blood lead level from 36 to 50 µg/dL receive monthly blood lead monitoring. If an employee has a blood lead level >50 µg/dL, they are removed from their normal work area to a lower lead exposure area until their blood lead level is ≤40 µg/dL.

In addition to blood lead monitoring, the Blood Lead Biological Monitoring Program includes training on lead exposure and hazards, personal hygiene, and respirator use and maintenance. Employees with elevated blood lead receive additional training and counseling to reinforce knowledge and practice of proper procedures to minimize lead exposure.

Pregnant employees are given particular attention in the blood lead monitoring program in order to protect the developing fetus. Increased blood lead monitoring is considered for pregnant workers on a case-by-case basis, depending on current work area lead conditions and historical blood lead levels for the individual. Pregnant employees working in areas meeting the air lead action level receive blood lead monitoring every 3 to 4 weeks and are removed from high exposure areas if their blood lead level exceeds 10 µg/dL.

Teck is committed to operating with the highest worker health and safety standards and continuously improving workplace conditions. To this end, Teck policies at Red Dog are more protective than applicable government health standards, as indicated in the comparison provided in the table below.

| | MSHA/OSHA Standard | Red Dog Policy |
|---|---|---|
| Monitoring every 6 months | < 40 µg/dL | < 25 µg/dL |
| Blood Lead—26 to 35 µg/dL | Monitor every 6 months | Monitor every 3 months |
| Blood Lead—36 to 40 µg/dL | Monitor every 6 months | Monitor monthly, training & counseling |
| Blood Lead—41 to 50 µg/dL | Monitor every 6 months | Monitor monthly, training & counseling |
| Blood Lead—> 50 µg/dL | Removal from job duties | Removal from job duties, training, counseling, continued medical monitoring |
| Pregnant workers | Monitor every 6 months | Monitor every 3–4 weeks |
| Pregnant workers removed from job duties | >30 µg/dL | >10 µg/dL |

As in the United States as a whole, the overall trend in Alaska and in workers at Red Dog mine during the past decade is for reduced lead exposure. From 2001 to 2009, the rate of Red Dog workers having a blood lead level of at least 25 µg/dL has decreased.

Teck regularly evaluates the effectiveness of its Lead Exposure SOP. To this end, in addition to internal assessments as required by the State of Alaska, blood lead results are shared confidentially with the Alaska Department of Health and Social Services to facilitate external assessment of the effectiveness of the program by state health officials.

### 3.3.2 Cadmium Monitoring Program

The Red Dog Loss Control Department administers a cadmium monitoring program designed to minimize employee exposure to cadmium. Similar to the lead monitoring program, the cadmium program is dependent on training in proper hygiene and use of personal protective equipment (PPE) (e.g., respirators), knowledge of cadmium health hazards, biological cadmium monitoring for all employees working in areas with air cadmium levels above the OSHA-defined action level, and follow-up for employees exceeding blood or urinary cadmium benchmarks.

OSHA has set a PEL of 5 micrograms per cubic meter of air (5 µg/$m^3$), and a regulatory action level of 2.5 micrograms of cadmium per cubic meter of air (2.5 µg/$m^3$), each calculated as an 8-hour time-weighted average. An employee assigned to a work area exceeding the action level receives cadmium biological monitoring prior to beginning work and then at least annually thereafter. An employee with urinary cadmium ≤ 3 µg/g creatinine, and urinary beta-2-microglobulin (B2-M) ≤ 300 µg/g creatinine, and blood cadmium ≤ 5 µg/L will continue to receive annual monitoring, as well as a biennial medical examination.

An employee with urinary cadmium from > 3 to < 7 µg/g creatinine, and urinary B2-M > 300 to < 750 µg/g creatinine, and blood cadmium > 5 to < 10 µg/L will receive monitoring every 6 months, and receive additional training and counseling. An employee with blood and urinary cadmium higher than these levels will receive quarterly monitoring and a twice yearly medical examination.

If an employee's B2-M level is > 750 µg/g, and if urinary cadmium is > 3 µg/g creatinine OR blood cadmium is > 5 µg/L, they will be medically removed from their normal work area to an area of lower cadmium exposure.

## 3.4 Administrative and Employee Controls

This section summarizes the specific programs and SOPs put into place by Red Dog Safety and Health that serve to minimize employee exposure through use of hygiene, PPE, education, and training. In all of these programs there are both Teck responsibilities (e.g., providing training, equipment, and formal procedures) and employee responsibilities (e.g., following procedures, proper use of PPE).

### 3.4.1 Hygiene Program

Teck provides a clear set of guidelines for employee personal and workplace hygiene in its Industrial Hygiene Program SOP, included in the Red Dog Operations Employee and Contractor Safety Handbook. The goal of the Industrial Hygiene Program is the prevention of workers'

exposure to harmful agents in the workplace. Key elements are: anticipation, recognition, evaluation, and control of workplace hazards. The program SOP serves to minimize dust exposure with the following procedures:

- Thorough and consistent washing of hands (and other exposed skin) and showering.
- Maintaining a clear separation between work areas and "clean" areas. For example, workers should not enter "clean" areas, such as the lunchroom, with equipment, work boots, hard hats, coveralls, or other clothing that may be contaminated with ore dust.
- Confining food and tobacco use to "clean" areas
- Maintaining clean respirators and ensuring proper fit and maintenance according to the Respirator Protection Program, described below.

### 3.4.2 Respirator Protection Program

Teck maintains a Respirator Protection Program consistent with OSHA and MSHA standards and the specific working conditions at Red Dog. The program, described in detail in the Respirator Protection Program SOP, provides for use of respiratory protection equipment against chemical, dust, and oxygen deficient environments. The program SOP provides:

- A summary of OSHA and MSHA requirements for a respirator protection program, all of which are met by the Teck program.
- Responsibilities for Teck and for employees under the program.
- Information on the types of respiratory protection equipment available and how to select the proper equipment based on working conditions.
- Written operating instructions for each type of available equipment.
- Written respiratory equipment fit testing procedures.

- Respiratory protection training policy, requirements, and documentation. The training specifically includes: review of the overall program, training in the respiratory hazards present, proper use of respiratory equipment, performance of qualitative fit testing, and documentation of each of these elements.

### 3.4.3 Employee Training

Each of the worker dust protection-related SOPs (Lead Exposure, Cadmium Monitoring, Respirator Protection, and Hygiene) identifies a training component.

During the initial hiring process all Red Dog Operation and contract employees receive mandatory training on respiratory protection and other PPE, personal hygiene practices, procedures and engineering in place that reduce exposure, and the safety and health standards for lead and cadmium exposures. All employees also receive mandatory annual refresher training. Employees with elevated lead or cadmium biomonitoring levels receive additional training and counseling to reinforce practices designed to minimize dust exposure.

## 3.5 Communication and Collaboration

Teck (2009) describes communication guidelines developed to ensure appropriate processes are in place for effective internal and external communication in health and safety matters. The guidelines are based on the concepts that effective communication is 1) timely, 2) delivered in a manner appropriate to the end user, 3) delivered to those with a need to know, and 4) allows for feedback, evaluation, and discussion. The following elements of worker dust protection-related programs currently in place provide opportunity for communication and collaboration:

**Standard Operating Procedures—**The four worker dust protection-related SOPs (Lead Exposure, Cadmium Monitoring, Respirator Protection, and Hygiene) serve both as the basis of the associated training programs and written documentation to which employees can refer for critical information.

**Reporting—**Each of the worker dust protection-related SOPs identifies a reporting component. Formal reporting procedures serve to document employee training, biomonitoring results, work environment monitoring, and engineering controls and maintenance. Teck analyzes biomonitoring and work environment monitoring results to evaluate the effectiveness of the worker dust protection efforts. All reports are available for employee review upon request.

**Training and Counseling—**As discussed in the previous section, all employees receive comprehensive training on dust protection programs and issues upon hiring and at least annually thereafter.

**Employee Meetings—**Updates on worker dust protection activities are provided during regularly scheduled employee meetings. There is opportunity at this time for employees to provide input and feedback. In addition to regularly scheduled meetings, the communication process includes opportunities for smaller groups, including crew meetings, team briefings, "tool box talks," and "tailgate meetings" that provide additional opportunities for two-way communication.

**Occupational Health and Safety Committee—**A cross section of Red Dog employees is represented on the Occupational Health and Safety Committee to broaden communication and collaboration and help ensure the effectiveness of the safety and health practices.

## 3.6 Potential Actions Identified in the Risk Management Planning Process

As part of the Risk Management Workshop, stakeholder groups were asked to list and discuss potential actions for each of six risk management action categories, including worker dust protection. The following suggestions relating to worker dust protection and worker health in some capacity were discussed at the Risk Management Workshop:

- Inform workers to avoid bringing home metals dust from the mine via work clothing and equipment

- Have open and ongoing dialogue and networking with miners
- Provide OSHA guidance on exposure and safe levels for workers
- Implement human biomonitoring program for local residents and mine workers.

The following issues were identified during subsequent discussions as areas of interest or potential modifications to existing programs:

- Characterize potential ambient exposures outside the normal work area. Of particular interest is potential dust tracking to offsite areas while walking from the Personnel Accommodation Complex to the bus, the bus to the terminal, and the terminal to the airplane. Although the level of exposure via this pathway is likely insignificant, it has not been characterized. As such, it may be an issue for consideration as part of the uncertainty reduction plan.
- More frequent work area monitoring. Currently, if a work area air lead or cadmium concentration exceeds the action level during the initial determination, air concentrations in the area are monitored every 6 months.

# 4 Actions to Be Implemented

In this section, a specific set of planned monitoring actions are developed from the past, ongoing, and potential future actions reviewed in Section 3. Consistent with corporate policy and regulatory standards, all necessary worker dust protection programs are well established and in place. Thus, this section focuses on 1) providing a consolidated list of the programs identified in Section 3; 2) incorporating suggested improvements; and 3) identifying additional communication tools to strengthen the overall effectiveness of the programs.

In order to achieve the goals set out for the plan, possible actions were identified and evaluated to select the most appropriate set of actions to ensure that a comprehensive worker dust protection program is in place. A summary of potential actions that were identified by stakeholders during the Risk Management Workshop is provided in Table 1. A compilation of actions or potential actions that have either been carried out as part of past or ongoing programs or were identified at the Risk Management Workshop is provided in Table 2. These potential actions were then screened, resulting in a focused list available for use in developing the plan (Table 3).

Communication and collaboration actions available at each stage of the worker dust protection program are summarized in Table 4 (adapted from the Communication Plan [Exponent 2009]). The specific actions selected to accomplish the goals of the monitoring plan are summarized in Table 5, along with planned timelines for implementation. The Worker Dust Protection Plan includes four main areas of actions to be implemented:

- Engineering and Maintenance
- Administrative and Employee Controls
- Monitoring
- Communication and Collaboration.

The following sections describe details of the Worker Dust Protection Plan implementation that is outlined in Table 5. Figure 1 illustrates important milestones in the development of the Worker Dust Protection Plan, and provides the specific communication actions to be implemented associated with this plan.

## 4.1 Engineering and Maintenance

Any worker dust protection strategy must begin at the source, with continual efforts to reduce emissions. For this reason, Teck considers operational improvements focused on reducing dust emissions to be a critical focus of their primary prevention strategy. As noted, Teck corporate policy dictates that operational control measures be established, maintained, and updated as necessary to minimize health risks. Examples of the types of engineering and operational improvements implemented at Red Dog were discussed in Section 3. Teck continues to assess the effectiveness of these programs and evaluate new technologies that can further reduce emissions. Decreased emissions, in turn, reduce the potential for worker dust exposure.

Teck will continue to conduct a regular schedule of testing and maintenance to ensure proper functioning of ventilation systems and other engineering controls designed to minimize dust emissions. The effectiveness of the maintenance schedule will be evaluated based on equipment performance, trends in air monitoring data, and results from the indoor air quality assessments performed as part of the biannual work area monitoring

Thus, the Engineering and Maintenance actions included in the plan are as follows:

- Continue to implement operational improvements to reduce emissions of metal-bearing fugitive dust
- Continue to evaluate and improve the effectiveness of preventive maintenance programs
- Continue to evaluate new technologies that may improve fugitive dust management and air quality.

## 4.2 Administrative and Employee Controls

Teck has specific programs and SOPs in place that serve to minimize employee exposure through good hygiene practices, use of PPE, education, and training. In all of these programs there are both Teck responsibilities (e.g., provision of training, equipment, and formal procedures) and employee responsibilities (e.g., following procedures, proper use of PPE). During the Risk Management Workshop, participants identified issues that are already part of existing programs (e.g., hygiene practices to avoid tracking dust to clean areas on and offsite, providing guidance on OSHA action levels). This underlines the need to continually evaluate the effectiveness of the programs and implement improvements where necessary. These improvements are addressed in the section on Communication and Collaboration actions, but will also be incorporated when implementing the following Administrative and Employee Control actions:

- Continue to evaluate and improve the hygiene program
- Continue to evaluate and improve the respirator protection program
- Continue to evaluate and improve employee training and communication.

## 4.3 Monitoring

The comprehensive air and medical monitoring programs currently in place at Red Dog exceed regulatory requirements. The overall goals are to minimize metal-bearing dust exposure, quickly identify increased exposure when it occurs, and implement an intervention strategy for exposed individuals that will reduce current body burden and minimize the possibility of excess exposure in the future. Tracking of monitoring data has shown these programs to be effective. However, Teck is committed to continual improvements to employee health programs and will continue to assess the effectiveness of those programs and implement modifications when possible. The following actions are included in the Worker Dust Protection Plan with the associated identified modifications:

- Continue to collect and evaluate work area dust level data
- Research and develop technologies to improve the program
- Recommended modifications include:
  - Re-evaluate on a yearly basis areas that did not exceed an action level upon initial determination
  - Continue to evaluate and improve lead and cadmium biomonitoring program for Red Dog employees.

In addition to tracking employee exceedances of the target blood lead level of 25 µg/dL, Teck will also evaluate the blood lead monitoring program performance relative to a lower blood lead target (e.g., 20 µg/dL or 10 µg/dL). This will provide better tracking of the effectiveness of the program over time. As dust protection controls continue to improve, there will be fewer exceedances of the target level. It will be important to track individuals with elevated blood lead relative to their co-workers, even if their blood lead does not exceed the target level.

## 4.4 Communication and Collaboration

In this section the standard communication guidelines developed in the Communication Plan (Exponent 2009) are applied to worker dust protection. As with other programs, the Worker Dust Protection Plan and associated worker dust protection activities will have planning, implementation, and reporting stages. At each stage, communication actions have been identified that address the three categories of communication-related actions identified in the Communication Plan: collaboration, communication, and education and outreach. Table 4 provides a matrix summarizing the types of actions identified for the Worker Dust Protection Plan and related activities to address the three communication categories at each stage.

The communication tools identified in Table 4 have been further developed in Table 5 to identify the specific actions expected to be necessary to accomplish the goals of the Worker Dust Protection Plan. This list of actions draws from each of the three communication-related

categories identified earlier in the plan and provides a set of actions that meet the goal of effectively communicating ongoing issues and efforts related to worker dust protection. Figure 1 illustrates important milestones in the development of the Worker Dust Protection Plan or associated programs, and provides the specific communication actions to be implemented.

The Communication and Collaboration actions identified for the Worker Dust Protection Plan were categorized as follows:

- Technical review
- Employee meetings
- Web portal and email lists
- Written communications
- Education and outreach

The actions associated with each category are discussed below.

### 4.4.1 Technical Review

As described in the communication plan, the Ikayuqtit Technical Review Team has been expanded to incorporate other existing stakeholder representatives/groups and to serve as the technical review committee for fugitive dust-related studies and reports. The expanded Ikayuqtit Team will provide technical review and input to the worker dust protection-related plans, SOPs, and reports. Following review by the team, a revised document incorporating team input will be made available for public review and comment. A public review process for the Worker Dust Protection Plan will also be implemented (illustrated in Figure 1).

### 4.4.2 Employee Meetings

Teck will continue to provide updates on worker dust protection activities during regularly scheduled employee meetings. The strategies for improving participation in community

meetings described in the Communication Plan are pertinent to employee meetings and can be adapted for use in workplace settings. Specifically, strategies may include 1) use of appropriate language and terminology; 2) providing information and opportunities for input using varied formats (e.g., formal presentations, informal discussions, small workgroups, written materials and questionnaires, etc.); and 3) providing effective, timely follow-up summarizing the input provided and how it will be incorporated and/or addressed.

The following specific actions identified at the Risk Management Workshop will be actively incorporated into employee meetings (and other venues when possible):

- Provide OSHA guidance on exposure levels. As discussed in Section 3, action levels have been set for lead and cadmium. These are based on OSHA PELs and serve as trigger levels for ongoing area monitoring.
- Train workers to avoid tracking dust home from the mine via work clothing and equipment. The existing hygiene program addresses the necessity of avoiding tracking of dust to clean areas and presents procedures to minimize dust tracking. Efforts will be made to reinforce the concepts in the Hygiene SOP during formal meetings, as well as more informal crew meetings, team briefings, "tool box talks," and "tailgate meetings" that provide other opportunities for two-way communication.

### 4.4.3 Web Portal and Email Lists

Teck has established an information-sharing portal to provide access to fugitive dust-related studies, reports, and other information. The purpose of the portal is to facilitate collaborative development, review, and reporting of studies, monitoring programs, and dust control efforts with stakeholders on the expanded Ikayuqtit Team. The web portal will also be used to facilitate and coordinate technical review of worker dust protection-related plans and reports. When documents are finalized and/or ready for full public review, they will be made available on the open access Red Dog website (www.RedDogAlaska.com). Teck will work with state and federal agencies to ensure accessibility of worker dust protection-related documents for public

access and review, and provide links from the web portal and the Red Dog website where appropriate. Associated with this effort, Teck has expanded and will continue to update email lists to notify stakeholders of additions and/or revisions to the web portal, or when review and input is needed. Overall, this approach incorporates several improved information sharing strategies that were identified as part of the RMP stakeholder workshop process.

### 4.4.4 Written Communications

In the annual fugitive dust risk management report, Teck will include a brief summary of the prior-year worker dust protection-related results, and planned programs for the upcoming year. A simplified summary will be included at the front of the document to facilitate better understanding of the technical information. If necessary, a separate "fact sheet" summary may be developed.

### 4.4.5 Education and Outreach

Education and outreach actions include those activities that are related to, but outside the immediate scope of, monitoring activities. They are focused on providing additional opportunities for stakeholders to gain more understanding of and participation in Red Dog operations as a whole, and in health and environmental efforts in particular. The following actions have been identified as achievable for work dust protection efforts:

- Train local resident employees in worker health-related activities.
- Provide updates and information related to worker health as part of KOTZ radio updates and newsletter articles (described in the Communication Plan). This provides an opportunity to educate the non-worker community about the programs and procedures in place to protect both workers and their family members at home.

# 5 Periodic Review and Reporting

The effectiveness of the Worker Dust Protection Plan and associated programs will be evaluated and reported on an annual basis (Figure 1). All data collected from the previous year will be used to determine if the program is working to achieve the fundamental objective: "protect worker health." Public comment will be invited on an annual basis, and if modifications are requested, they will be evaluated and, if warranted, included in an updated Worker Dust Protection Plan.

Annual review of the Worker Dust Protection Plan will involve the following tasks:

- Review of the effectiveness of the plan at meeting its stated goal
- Review of the effectiveness of plan at contributing to overall worker health and safety
- Review of the effectiveness of communication, collaboration, and education efforts associated with the plan
- Revision of the plan, as appropriate.

Communication efforts associated with the periodic review process will include:

- Notice of the timing and scope of the review, along with an invitation to stakeholders for input
- Communication of the results of the review process to stakeholders.

General comments and input will be welcomed on an ongoing basis.

Annual evaluation of the overall effectiveness of the plan does not preclude the ongoing evaluation inherent in each of the programs within the plan. For example, blood lead and area monitoring data will continue to be evaluated as soon as it becomes available.

# 6 Milestones

Important milestones for the Worker Dust Protection Plan include:

- Scope and goal of plan: August 2008 (in draft RMP)
- Public review draft release: Winter 2011
- Comment period ends for public review draft: Winter 2011
- Final draft release: Spring 2011
- Annual review: Winter 2012, as part of annual fugitive dust risk management report.

# 7 Stakeholder Roles

Red Dog Operations will prepare the draft plan. Review will be invited from all stakeholders. Periodic review and input will be invited from all stakeholders.

# 8 References

DEC. 2007. Memorandum of understanding between the State of Alaska Department of Environmental Conservation and Teck Alaska Incorporated related to fugitive dust at the Red Dog Mine. Restated and amended effective January 1, 2007 through December 31, 2007. Available at: http://www.dec.state.ak.us/air/doc/RD_FD_MOU_2007.pdf. Alaska Department of Environmental Conservation, Anchorage, AK.

Exponent. 2007a. DMTS fugitive dust risk assessment. Prepared for Teck Alaska Incorporated, Anchorage, AK. Exponent, Bellevue, WA. November 2007.

Exponent. 2007b. Fact Sheet: Risk Assessment of metals in dust from Red Dog. Prepared for Teck Alaska Incorporated, Anchorage, AK. Exponent, Bellevue, WA.

Exponent. 2008. Draft fugitive dust risk management plan, Red Dog Operations, Alaska. Prepared for Teck Alaska Incorporated, Anchorage, AK. Exponent, Bellevue, WA. August 2008.

Exponent. 2009. Draft fugitive dust risk management communication plan, Red Dog Operations, Alaska. Prepared for Teck Alaska Incorporated, Anchorage, AK. Exponent, Bellevue, WA. April 2009.

Teck. 2008. Summary of the Red Dog Fugitive Dust Risk Management Workshop, March 25−27, 2008, Kotzebue, AK. CD-ROM. Teck Alaska Incorporated, Red Dog Operations Alaska, Anchorage, AK.

Teck. 2009. Environment, health, safety and community management standards. Teck Resources Limited.

## Figure

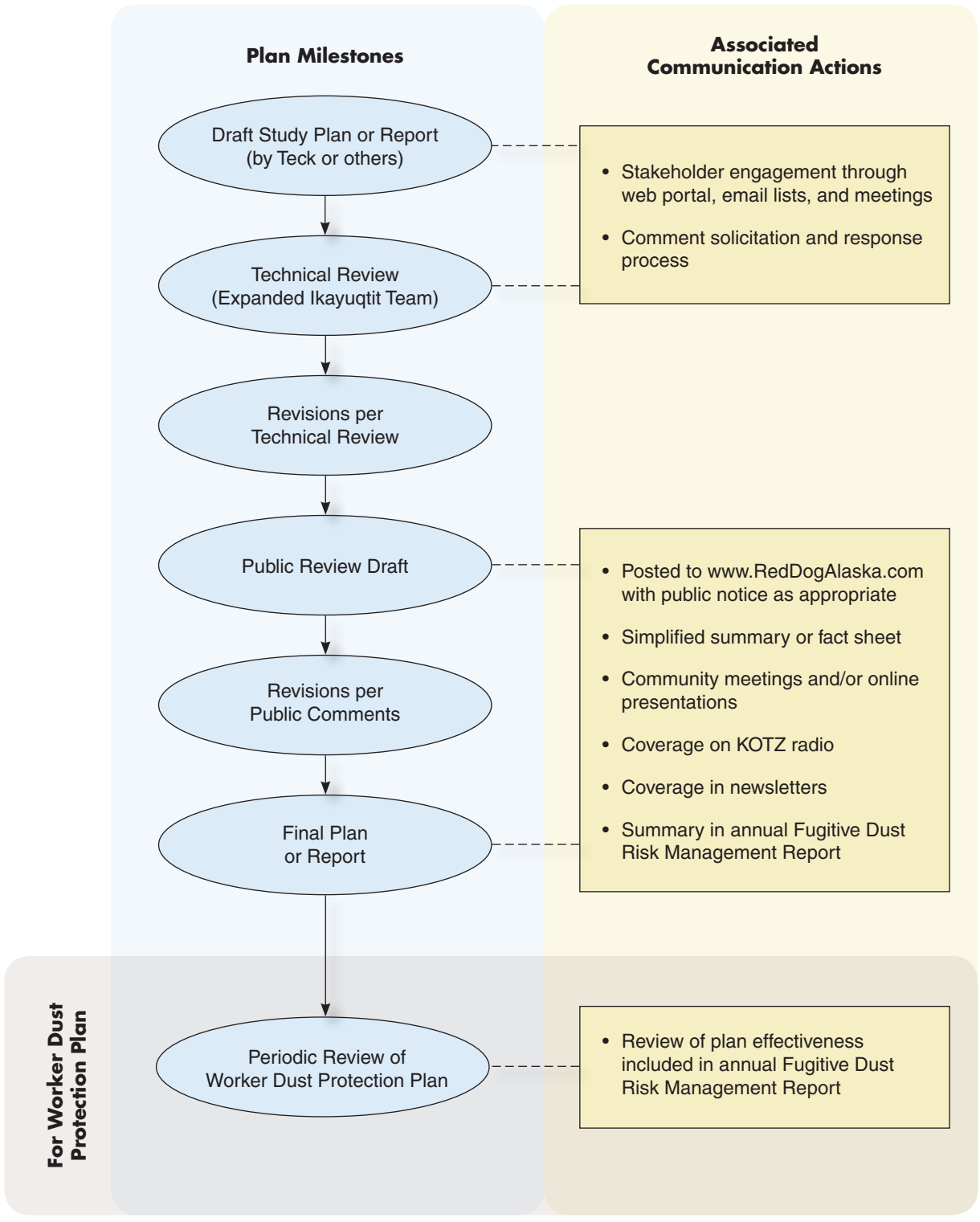


Figure 1. Worker Dust Protection Plan and report development flowchart illustrating associated communication actions

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# Tables

**Table 1. Priority ranking of potential worker dust protection actions identified in the risk management workshop**

| Potential Actions[a] | Priority Ranking |
|---|---|
| **Monitoring** | |
| Implement human biomonitoring program for local residents and mine workers | 1 |
| **Communication** | |
| Inform workers to avoid bringing home metals dust from the mine via work clothing and equipment | 1 |
| Have open and ongoing dialogue and networking with miners | 2 |
| **Institutional Controls** | |
| Provide OSHA guidance on exposure and levels for workers | 2 |

[a] Potential actions identified in the risk management workshop were scored based on effectiveness, implementability, level of effort, stakeholder preference for the action category, and stakeholder preference for the potential action. Scores for the five criteria were summed and a priority ranking between 1 and 3 was assigned based on total score.

**Table 2. Examples of potential worker dust protection actions**

| Potential Actions | Engineering Action | Employee Control Action | Monitoring Action | Communication Action | Source |
|---|---|---|---|---|---|
| Implement human biomonitoring program for local residents and mine workers | | | X | | RMP |
| Continually evaluate and improve the comprehensive blood lead monitoring program for all workers | | | X | | RDEO |
| Continually evaluate and improve the comprehensive cadmium monitoring program for all workers | | | X | | RDEO |
| Continue to collect work-area dust-level measurements regularly and evaluate progress towards reducing exposure | | | X | | RDEO |
| Continue to implement operational improvements to reduce emissions of metal bearing fugitive dust | X | | | | |
| Continue to evaluate and improve the effectiveness of preventive maintenance programs | X | | | | |
| Continue to evaluate and improve the effectiveness of hygiene and respirator protection programs | | X | | | |
| Provide OSHA guidance on exposure and levels for workers | | | | X | RMP |
| Inform workers to avoid bringing home metals dust from the mine via work clothing and equipment | | | | X | RMP |
| Have open and ongoing dialogue and networking with miners | | | | X | RMP |
| Conduct periodic dust exposure reduction training for all workers | | | | X | RDEO |
| Develop a specific and defined system for ongoing evaluation of the biomonitoring program | | | X | X | RDEO |
| Include a cross section of Red Dog employees on the Occupational Health and Safety Committee | | | | X | RDEO |

**Note:** RDEO - Red Dog Environmental Operations
RMP - Fugitive Dust Risk Management Plan

**Table 3. Screening of potential actions for the Worker Dust Protection Plan**

| Potential Actions | Retained (Y/N) | Rationale for Not Retaining the Action |
|---|---|---|
| Implement human biomonitoring program for local residents and mine workers | No | Although a worker biomonitoring program is already in place and will continue (see next 2 actions listed below), local resident monitoring is not part of the Worker Dust Protection Plan |
| Continually evaluate and improve the comprehensive blood lead monitoring program for all workers | Yes | |
| Continually evaluate and improve the comprehensive cadmium monitoring program for all workers | Yes | |
| Continue to collect work-area dust-level measurements regularly and evaluate progress towards reducing exposure | Yes | |
| Continue to implement operational improvements to reduce emissions of metal bearing fugitive dust | Yes | |
| Continue to evaluate and improve the effectiveness of preventive maintenance programs | Yes | |
| Continue to evaluate and improve the effectiveness of Hygiene and Respirator Protection programs | Yes | |
| Provide OSHA guidance on exposure and levels for workers | Yes | |
| Inform workers to avoid bringing home metals dust from the mine via work clothing and equipment | Yes | |
| Have open and ongoing dialogue and networking with miners | Yes | |
| Conduct periodic dust exposure reduction training for all workers | Yes | |
| Develop a specific and defined system for ongoing evaluation of the biomonitoring program | Yes | |
| Include a cross section of Red Dog employees on the Occupational Health and Safety Committee | Yes | |

**Table 4. Communication elements and potential actions used in worker dust protection related activities**

| | Options Available at Various Program Stages | | |
|---|---|---|---|
| | Planning | Implementation | Review and Reporting |
| **Collaboration (working together as a team)** | | | |
| Ikayuqtit technical review | X | | X |
| Employee meetings | X | | |
| Web portal and Red Dog website | X | | X |
| E-mail list | X | | X |
| Comment solicitation and response process | X | | X |
| Train local resident employees for program | X | X | X |
| **Communication (providing information)** | | | |
| Employee meetings | X | X | X |
| Web portal and Red Dog website | X | X | X |
| E-mail list | X | | X |
| Radio broadcasts and announcements | X | | X |
| Technical reports | | | X |
| Annual summary | | | X |
| Report summaries and fact sheets | | | X |
| **Education and Outreach** | | | |
| Web portal and website | X | | X |
| Train local resident employees for program | X | X | X |
| Newsletter articles | | | X |
| Radio broadcasts | | | X |

**Table 5. Worker Dust Protection Plan actions**

| Actions | Planned Timeline for Implementation | Purpose |
|---|---|---|
| **Engineering and Maintenance** | | |
| 1) Continue to implement operational improvements to reduce emissions of metal bearing fugitive dust. | Ongoing | Reduces the potential for workers' exposure to dust. |
| 2) Continue to evaluate and improve the effectiveness of preventive maintenance programs. | Ongoing | Reduces the potential for workers' exposure to dust. |
| **Administrative and Employee Controls** | | |
| 1) Continue to evaluate and improve hygiene and respirator protection programs. | Ongoing | Reduces the potential for workers' exposure to dust. |
| 2) Continue to evaluate and improve employee training. | Ongoing | Raises awareness and understanding of health and safety policies. Provides opportunity to incorporate improvements based on employee feedback (e.g., provide clear guidance on OSHA exposure limits, reinforce hygiene practices so dust is not tracked offsite). |
| **Monitoring** | | |
| 1) Continue to evaluate and improve lead and cadmium biomonitoring program for Red Dog employees. | Ongoing | Ongoing evaluation of the program (e.g., action levels, frequency of follow-up, etc) ensures it will continue to meet and exceed occupational health guidelines. Constant evaluation of biomonitoring data allows for immediate intervention to improve worker health and the opportunity to identify and reduce potential exposures. |
| 2) Continue to collect and evaluate work area dust level data. Research and develop technologies to improve program. | Ongoing | Reduces the potential for workers' exposure to dust. Provides ongoing feedback on the effectiveness of dust reduction actions and information to improve future dust reduction efforts. |
| **Communication and Collaboration** | | |
| **Technical Review** | | |
| 1) Utilize the expanded Ikayuqtit team for technical review of worker dust protection-related plans, SOPs, and reports at the planning, reporting, and review stages. | Ongoing | Creates a clear process for technical review using existing structures. Provides a means to incorporate local traditional ecological knowledge into study planning and design. |
| 2) Implement public review process for Worker Dust Protection Plan (illustrated in Figure 1) | Winter 2011 | Identifies which stakeholder group technical review is appropriate for which activities. |

**Table 5. (cont.)**

| Actions | Planned Timeline for Implementation | Purpose |
|---|---|---|
| **Employee Meetings** | | |
| 1) Provide updates on worker dust protection activities during regularly scheduled employee meetings. | Ongoing | Forum for educating employees on health and safety procedures and policies, and for soliciting employee and local traditional ecological knowledge for incorporation into study planning and design.<br>Increases trust and positive working relationships. |
| **Web Portal and E-mail Lists** | | |
| 1) Utilize the newly created e-Project web portal to facilitate and coordinate technical review of worker dust protection-related plans and reports. | Ongoing | Creates a single clearinghouse for access to all Red Dog worker dust protection- and environmental-related documents, work plans, studies, and data.<br>Increases knowledge of both the existence of new information and access to that information. |
| 2) Provide access to worker dust protection-related plans and reports on the Red Dog website when they are finalized and/or ready for full public review. | Ongoing | |
| 3) Provide access to other relevant worker health information through links on the Red Dog website. | Ongoing | |
| **Written Communications** | | |
| 1) Include a summary of prior-year worker dust protection activities and those planned for the upcoming year in the annual report (described in the Communication Plan). | Winter 2012 | Summarizes in one place yearly accomplishments and activities and plans for the future. Provides sense of continuity and communicates how information gained from past activities is used to develop future actions.<br>Facilitates better understanding of technical information, and thus. more stakeholder involvement. |
| 2) Provide a simplified summary or fact sheet for all worker dust protection-related reports to facilitate better comprehension of the technical information. | Winter 2012 | |
| **Education and Outreach** | | |
| 1) Train local resident employees in worker health related activities. | Ongoing | Activities related to, but often outside the immediate scope of standard Red Dog Environmental Operations. Helps ensure collaboration between stakeholders and utilization of traditional ecological knowledge as part of worker dust protection program. |
| 2) Provide updates and information related to worker health as part of KOTZ radio updates and newsletter articles (described in Communication Plan). | Ongoing | |

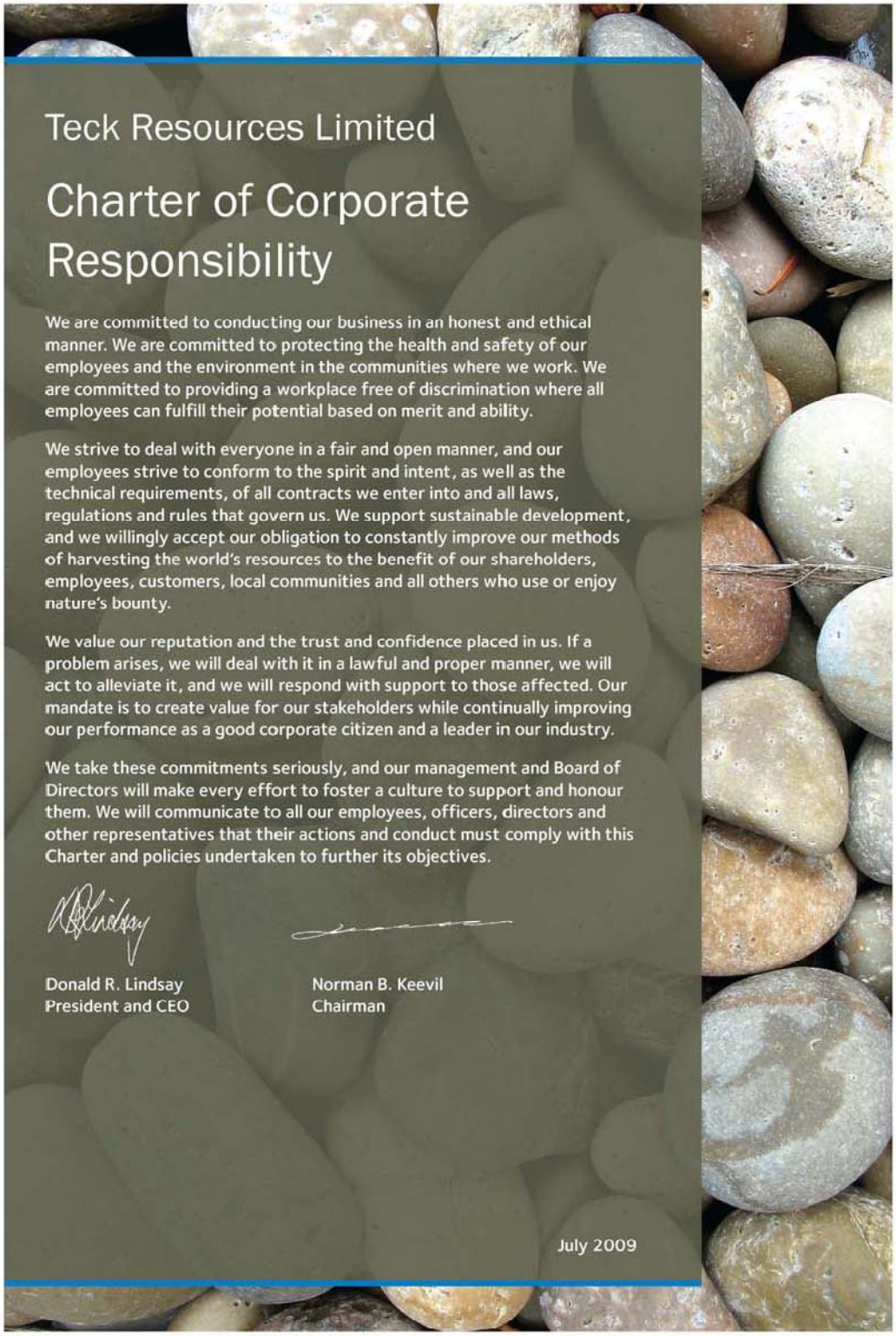
# Appendix A

# Environment, Health, Safety and Community Management Standards—Teck Resources Limited

# Environment, Health, Safety and Community Management Standards

September, 2009

Teck



Teck Resources Limited

# Charter of Corporate Responsibility

We are committed to conducting our business in an honest and ethical manner. We are committed to protecting the health and safety of our employees and the environment in the communities where we work. We are committed to providing a workplace free of discrimination where all employees can fulfill their potential based on merit and ability.

We strive to deal with everyone in a fair and open manner, and our employees strive to conform to the spirit and intent, as well as the technical requirements, of all contracts we enter into and all laws, regulations and rules that govern us. We support sustainable development, and we willingly accept our obligation to constantly improve our methods of harvesting the world's resources to the benefit of our shareholders, employees, customers, local communities and all others who use or enjoy nature's bounty.

We value our reputation and the trust and confidence placed in us. If a problem arises, we will deal with it in a lawful and proper manner, we will act to alleviate it, and we will respond with support to those affected. Our mandate is to create value for our stakeholders while continually improving our performance as a good corporate citizen and a leader in our industry.

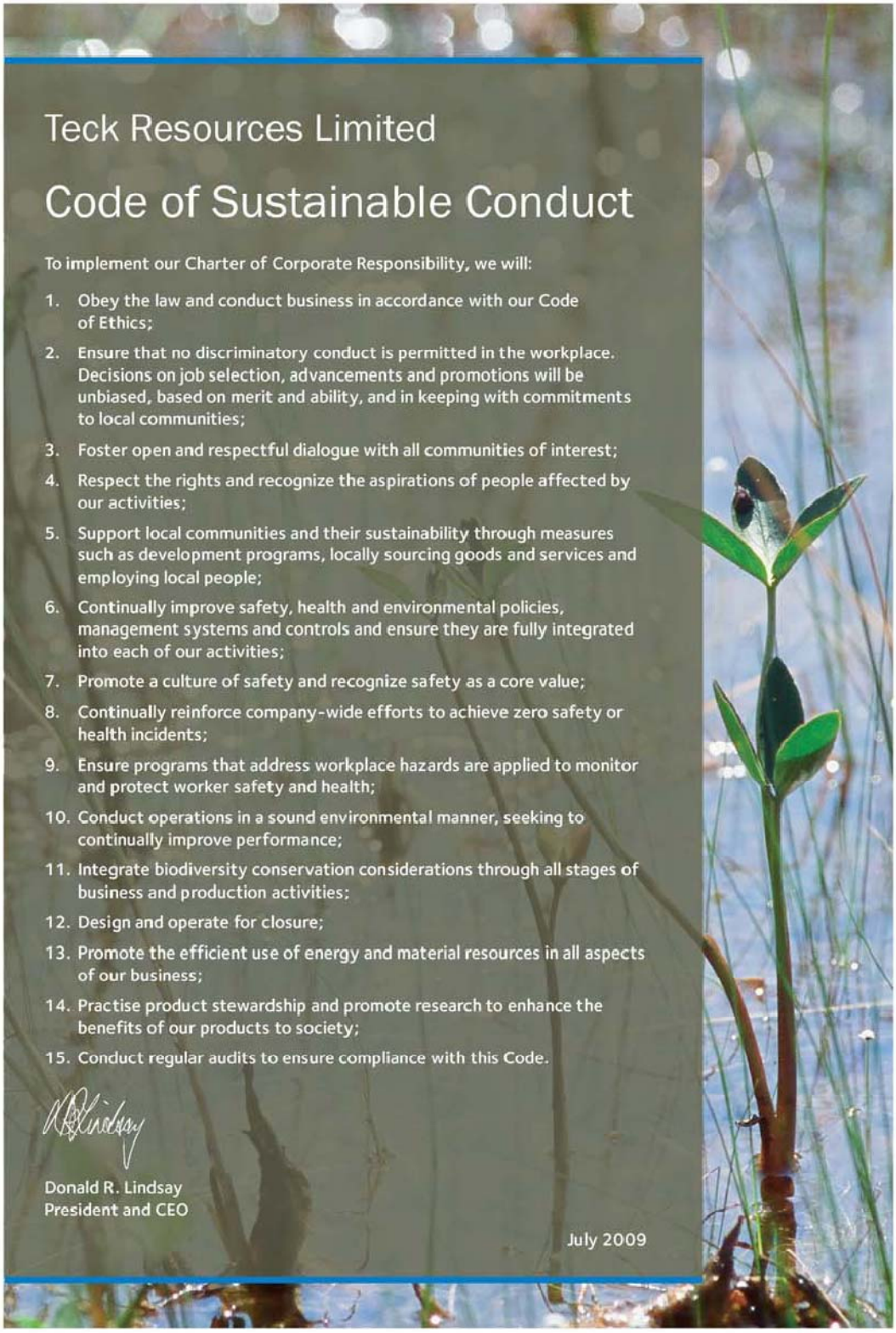
We take these commitments seriously, and our management and Board of Directors will make every effort to foster a culture to support and honour them. We will communicate to all our employees, officers, directors and other representatives that their actions and conduct must comply with this Charter and policies undertaken to further its objectives.

Donald R. Lindsay
President and CEO

Norman B. Keevil
Chairman

July 2009

Teck



Teck Resources Limited

# Code of Sustainable Conduct

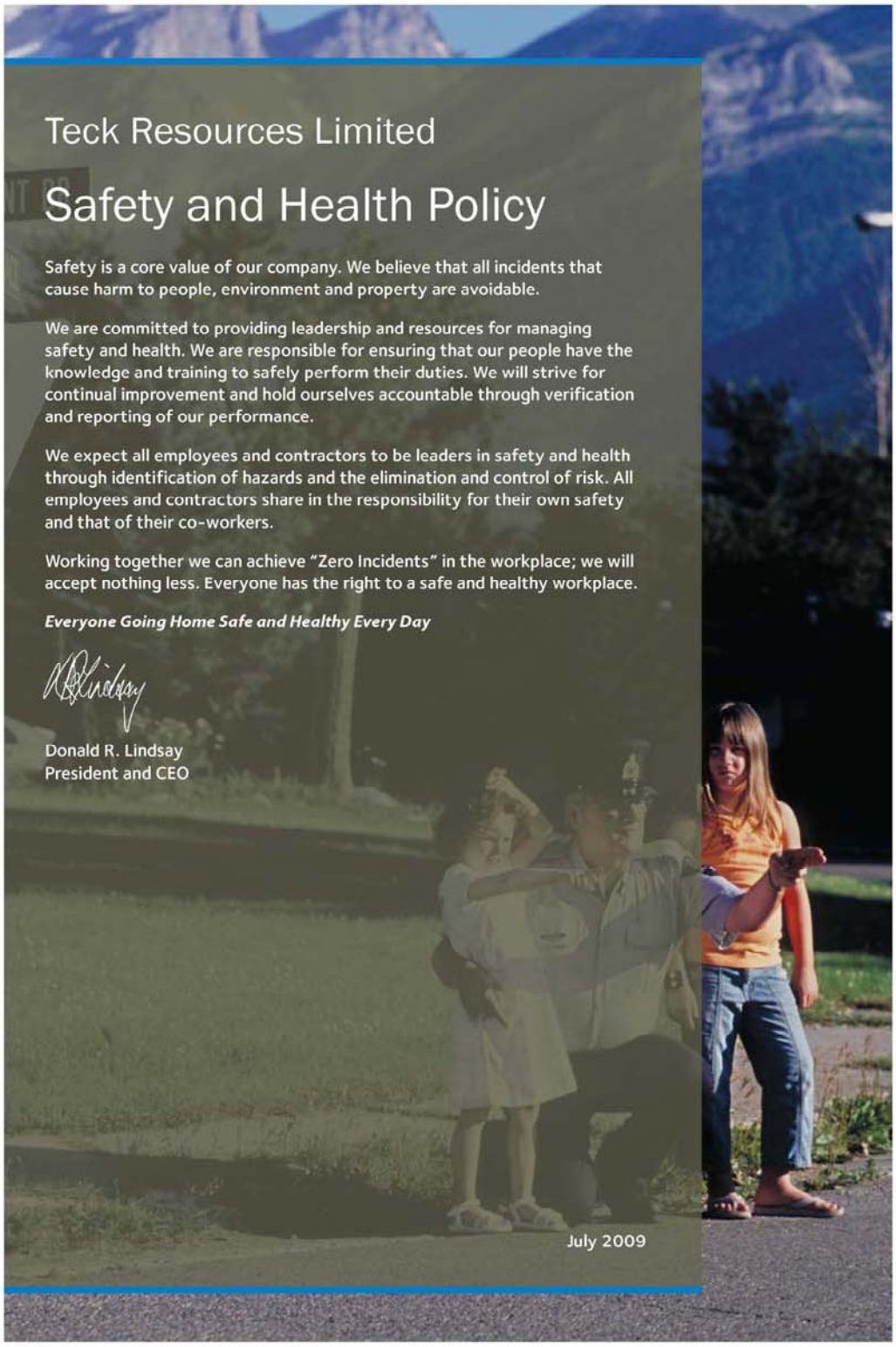
To implement our Charter of Corporate Responsibility, we will:

1. Obey the law and conduct business in accordance with our Code of Ethics;
2. Ensure that no discriminatory conduct is permitted in the workplace. Decisions on job selection, advancements and promotions will be unbiased, based on merit and ability, and in keeping with commitments to local communities;
3. Foster open and respectful dialogue with all communities of interest;
4. Respect the rights and recognize the aspirations of people affected by our activities;
5. Support local communities and their sustainability through measures such as development programs, locally sourcing goods and services and employing local people;
6. Continually improve safety, health and environmental policies, management systems and controls and ensure they are fully integrated into each of our activities;
7. Promote a culture of safety and recognize safety as a core value;
8. Continually reinforce company-wide efforts to achieve zero safety or health incidents;
9. Ensure programs that address workplace hazards are applied to monitor and protect worker safety and health;
10. Conduct operations in a sound environmental manner, seeking to continually improve performance;
11. Integrate biodiversity conservation considerations through all stages of business and production activities;
12. Design and operate for closure;
13. Promote the efficient use of energy and material resources in all aspects of our business;
14. Practise product stewardship and promote research to enhance the benefits of our products to society;
15. Conduct regular audits to ensure compliance with this Code.

Donald R. Lindsay
President and CEO

July 2009

Teck


Teck Resources Limited
Safety and Health Policy
Safety is a core value of our company. We believe that all incidents that cause harm to people, environment and property are avoidable.
We are committed to providing leadership and resources for managing safety and health. We are responsible for ensuring that our people have the knowledge and training to safely perform their duties. We will strive for continual improvement and hold ourselves accountable through verification and reporting of our performance.
We expect all employees and contractors to be leaders in safety and health through identification of hazards and the elimination and control of risk. All employees and contractors share in the responsibility for their own safety and that of their co-workers.
Working together we can achieve "Zero Incidents" in the workplace; we will accept nothing less. Everyone has the right to a safe and healthy workplace.
Everyone Going Home Safe and Healthy Every Day
Donald R. Lindsay
President and CEO
July 2009

Teck

**Table of Contents**

## Introduction

Teck Resources Limited (Teck), its subsidiaries and affiliates conduct mineral exploration, own and operate mining and metallurgical facilities and manage closed mines in diverse settings throughout the world. Teck also sells coal, metals, mineral concentrates and chemical products in regional and international markets. Many of the company's activities have the potential to affect the natural environment, the safety and health of workers and the well-being of nearby communities in positive and/or negative ways. The company is committed to managing these effects and any potential risks associated with its activities.

The Charter of Corporate Responsibility (hereafter referred to as the 'Charter'), the Code of Sustainable Conduct (hereafter referred to as the 'Code') and the Safety and Health Policy have been approved by the company's Board of Directors. The Code lists Teck's specific commitments with respect to implementing its Charter in matters related to business ethics, environment, health, safety and community consultation. The Environment, Health, Safety, and Community Management Standards (hereafter referred to as the 'Standards') provide specifics on implementing the Code and Safety and Health Policy. These Standards are approved by the Corporate Environment and Risk Management Committee (CERMC). These documents, along with the Code of Ethics (not referenced herein), together constitute **Teck's corporate policy on Environment, Health, Safety, and Community (hereafter referred to as the Policy).**

Teck communicates the Policy to all employees and contractors and makes these documents publicly available on the company's website (http://www.teck.com). Standards are broadly compatible with the ISO 14001:2004 international standard for Environmental Management Systems (EMS) and the OHSAS 18001:2007 specifications for occupational health and safety management. The Standards also incorporate additional requirements based on the Code and on elements described by the U.S. EPA's National Enforcement Investigations Center (NEIC) for compliance-focused EMS. The intent of these Standards is to:

- provide a consistent and systematic framework for identifying Environment, Health, Safety and Community (hereafter referred to as EHSC) issues;
- ensure that EHSC risks are properly and efficiently managed, and;
- ensure continuous improvement in EHSC programs and performance.

These Standards provide auditable criteria against which the performance of Teck's EHSC management systems are measured, and establish the basis for the company's audit protocols.

## Scope and Application

The Standards outlined herein cover all of the company's activities that have the potential to impact upon (positively or negatively) the environment, employee health and safety, or well-being of communities. They cover all facets of Teck's business, including: exploration, business development, project design and construction, operations, technology development, marketing and sales, and closure and rehabilitation activities.

For situations in which Teck has an equity or partnership position but does not have operating control, these Standards are made available to the operator so that compatible management systems can be implemented.

Operations are required to specify the scope of their management system documentation in terms of specific activities, facilities, and geographical boundaries at their site, and are expected to meet the Standards; these will be audited accordingly. Each operation is free to decide whether it wants to operate an integrated EHSC management system or separate systems for environment, health and safety, and community matters.

## Conformance with System Requirements

Conformance with the requirements of these Standards is verified on an on-going basis through formal assessments (audits) conducted by teams of corporate personnel or by third parties, with appropriate expertise and training, in accordance with Standard 2, (EHSC Requirements); Standard 16 (Monitoring and Inspection) and Standard 19 (Auditing). Formal Standards audits are directed under the Teck Audit Policy and Procedures Manual. Audit protocols are available at the corporate office to enable audits to be conducted under Standard 19 of this document.

## Review and Revision

These Standards are reviewed annually and as required, revised and re-issued as approved by CERMC, in accordance with Standard 11 (Documentation and Document Control).

## Definitions

| | |
|---|---|
| Area of influence: | The geographic space within which change, both real and perceived, takes place that is the direct or indirect consequence of development or operation of a project. |
| Aspects: | An element of our activities, products or services that can interact with the environment or people. |
| Audit: | A systematic and documented process for obtaining evidence and evaluating it objectively to determine the extent to which management systems and EHSC performance audit criteria, as defined by Teck, are fulfilled. |
| Biodiversity: | Biodiversity (biological diversity) refers to the variety of life on earth; the different animals, plants and microorganisms, their genes and the ecosystems of which they are a part. |
| Commitment: | Refers to a non-regulatory obligation applicable to business functions as a result of an initiative of a duly authorized representative of the company. An example is a commitment made to a community of interest (see definition below) during the project approvals process. |
| Community of Interest (COI): | Any person or group of people that may be affected positively or negatively by the financial, environmental (including health and safety) and social aspects of our operations, and those who have an interest in, or those who have an influence on our activities. See also Stakeholders. |
| Competence: | Workers are sufficiently skilled to perform a task or set of tasks on the basis of a combination of education, training and experience. |
| Compliance: | Meeting legal and regulatory requirements. |
| Conformance: | Meeting management system requirements. |
| Consultation: | A process of contact, dialog and interaction that ensures all parties of interest are informed and participating in decisions that affect their future, in a way that is satisfactory to them. |
| Continual improvement: | The iterative process of enhancing management systems to achieve improvements in overall performance in line with the EHSC Policy. |
| Control (under the): | Activities and products for which Teck has decision-making authority. |
| Document: | Information and its supporting medium (paper, electronic, photograph etc). |
| Due diligence assessment: | Assessment conducted by internal or external professionals of EHSC issues, risks and liabilities. |

| | |
|---|---|
| Evidence: | Verifiable information, records, documents or statements of fact. |
| Impact (EHSC): | Any change to the environment or to the health, safety and well-being of people, whether adverse or beneficial, wholly or partially resulting from Teck's activities or products (see Significant impact, below). |
| Incident: | Work related event(s) in which an injury or ill health (regardless of severity) or fatality occurred. |
| Inspection: | The act of examining and evaluating an activity or physical infrastructure to determine compliance with company standards or best practices (as compared to audits). |
| Internal audit: | Systematic, independent, and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria as set by the organization are fulfilled. Note that independence can be demonstrated by the freedom from responsibility in the areas being audited. |
| Liability: | Something exposing Teck to an adverse outcome, whether it be legal, financial or reputational. |
| Management System (MS): | Part of an overall management system, which is used to develop and implement EHSC policies and manage its aspects. |
| Objectives: | Overall EHSC goals that Teck and its operations set for itself as part of their management standards. These goals must be in alignment with the Code and Charter, and be quantifiable and/or verifiable, where possible. |
| Business functions: | A collective term to describe the entities within Teck to which these Standards apply. This includes exploration, business development, project design and construction, operations, technology development, marketing and sales, and closure and rehabilitation activities. |
| Preventive action: | Action to eliminate the cause of a potential non-conformity or non-compliance. |
| Procedure: | A specified (but not necessarily documented) way to carry out an activity or process. |
| Record: | A document stating results achieved or providing evidence of activities performed. |
| Regulatory requirement: | Mandatory performance, as dictated by applicable permits, legislation, and/or regulations. |
| Risk: | The likelihood of an EHSC impact and the potential consequence, or liability, associated with that impact (see Liability and Impact, above). |

Significant impact (EHSC): An impact that has the highest degree of risk of a material liability, on the basis of risk assessment.

Stakeholder: Any person or group of people that may be affected positively or negatively by the financial, environmental (including health and safety) and social aspects of our operations, and those who have an interest in, or those who have an influence on our activities. Stakeholders are also referred to as communities of interest (COI).

Social and Environmental Impact Assessment (SEIA): The Social and Environmental Impact Assessment focuses on the significant issues of a project and predicts and assesses the project's likely positive and negative impacts, in quantitative terms to the extent possible. The SEIA examines global, transboundary, and cumulative impacts, as appropriate. Impact assessment includes baseline data, alternatives analysis and management program.

Targets: Detailed performance requirements for achieving EHSC management objectives. Targets must be quantifiable or verifiable.

## Environment, Health, Safety, and Community Management Standards

Each of these Standards includes a description or intent, the numbered requirements that must be satisfied in order to conform to the associated Standards, and a list of guidance materials with related specifications and supporting documentation. Some of these Standards also include guidelines with additional information on how the Standard may be met.

## 1. EHSC Policies and Leadership

Teck's EHSC policies are established and maintained at both the corporate and operational levels. The company's directors, officers, managers and employees are committed to ensuring that the intentions of the Policy are fulfilled.

### REQUIREMENTS

A. The Board of Directors, senior management, and management at each business function shall provide leadership by incorporating the principles of the Policy into their decision-making processes.

B. Our business partners, including joint ventures with which we have substantial involvement, will be made aware of these Standards and our expectation that the intentions of these Policies are fulfilled.

C. Each operation shall establish policies for the management of EHSC consistent with the Policy and appropriate to the nature and scale of its activities and EHSC issues. EHSC policies must incorporate commitments to a positive safety and health culture, compliance with applicable regulatory requirements, continual improvement, prevention of pollution, and consultation with Communities of Interest (COIs) and will also establish a framework for setting EHSC objectives and targets, and measuring performance against them. Policies must be posted in prominent places in the workplace, signed and dated by the current, most senior local management person responsible for the operation, and shall be reviewed and updated, as appropriate.

D. All current operations and new facilities shall have management systems conformant with ISO 14001:2004 and will be certified to this ISO standard by a Registrar within 3 years of startup, unless otherwise authorized by CERMC.

E. Management of each business function shall communicate its EHSC policies to its employees and contractors and shall make them available to the public.

### GUIDELINES

The EHSC policy requirements for contractors may be communicated by distribution or inclusion in contract documentation.

Additional Guidance

- International Standard ISO 14001:2004, Environmental Management Systems — Specification with Guidance for Use. Element 4.2, Environmental Policy.
- Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, Occupational Health and Safety Management Systems — Specification. Element 4.2, OH&S Policy.
- Teck Charter of Corporate Responsibility, Code of Sustainable Conduct, and Safety and Health Policy.

## 2. EHSC Requirements

Teck establishes mechanisms by which personnel within its business functions identify, provide access to, and keep updated with applicable legislation, regulations, permits, authorizations, and other requirements. We will apply international best practices in cases where legislative requirements are not suitably stringent or are absent.

### REQUIREMENTS

A. Business functions shall assign responsibilities for determining which legislation, regulations, codes of practice, permit requirements, industry and technical standards, corporate commitments, etc., are applicable to its operations or activities and for identifying the related EHSC requirements. Such information shall integrate with the identification of hazards and risks (see Standard 3A), be reviewed periodically, and be kept up-to-date.

B. Business functions shall have processes for:
- Keeping information on EHSC requirements current and accessible;
- Communicating EHSC requirements to responsible company personnel and contractors;
- Checking the conformance of its products and activities to those requirements;
- Taking corrective action to address identified instances of non-conformance; and,
- Identifying, and responding to, changes in EHSC requirements.

C. Business functions shall ensure compliance with EHSC requirements — including: laws and regulations, permit specifications, applicable codes of practice, international and industry standards — through compliance evaluation (including measurement and verification) and compliance auditing.

D. Violations of applicable regulatory limits shall be reported promptly to the appropriate regulatory authorities (as required by law) or, in the absence of such law, at the discretion of a suitably-qualified individual within the business function.

E. The results of compliance audits (and associated follow-up action plans) shall be documented, and corrective actions shall be tracked through to completion.

### ASSOCIATED STANDARDS

- Standard 3, Priorities and Planning
- Standard 11, Documentation and Document Control
- Standard 16, Monitoring and Inspection
- Standard 17, Corrective and Preventive Action
- Standard 19, Auditing

Additional Guidance

- International Standard ISO 14001:2004, Environmental Management Systems — Specification with Guidance for Use. Elements 4.3.2, Legal and Other Requirements; 4.5.1, Monitoring and Measurement.

- Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, Occupational Health and Safety Management Systems — Specification. Elements 4.3.2, Legal and Other Requirements; 4.5.1, Performance Measurement and Monitoring.

- Compliance-focused Environmental Management System — Enforcement Agreement Guidance. United States Environmental Protection Agency, National Enforcement Investigations Center (NEIC). EPA-330/9-97-002R, revised January 2000. Denver, CO.

## 3. Priorities and Planning

Teck identifies, assesses and manages EHSC risks throughout exploration, project development, operations and closure activities. Priority issues are identified from these assessments and form the basis for business planning, which assists in achieving Policy commitments and continual improvement of performance.

### REQUIREMENTS

A. Business functions shall identify and assess EHSC hazards and risks associated with its activities and products and this shall be integrated with an iterative process of determining applicable legislation and identification of related EHSC requirements (see Standard 2A). EHSC management priorities shall be established in accordance with the results of the risk assessment using documented criteria approved by management. EHSC risk assessments and associated control measures must be kept up-to-date to address changing circumstances (see Standard 12E). Expansions at existing operations shall require an assessment of potential social and environmental impacts and decisions made based on this review.

B. EHSC management priorities and requirements shall form part of the business planning process at all management levels of the organization. Plans shall be prepared, communicated, implemented, monitored and updated.

C. EHSC plans shall include:
- Objectives set by management;
- Specific measurable or verifiable targets related to achieving these objectives;
- Actions needed to meet objectives and targets; and,
- Provision of adequate resources to ensure that objectives and targets are met.

### ASSOCIATED STANDARDS

- Standard 12, Operational Control Measures and Change Management
- Standard 20, Management Systems Review

### GUIDELINES

Hazard identification and risk assessment should focus primarily on activities and products under the direct control of the business function, but should also consider, as appropriate, activities and products within its area of influence. Risk assessment provides a means of identifying the highest priority EHSC risks and a basis for the development of training programs, improved operational controls, programs for managing health and hygiene exposures, and emergency response plans.

High consequence events are those with adverse consequences, such as:
- Fatality and/or permanent disability to one or more persons;
- Short- or long-term health effects potentially leading to fatalities or disability;
- Significant off-property damage, leading to negative effects on the environment or nearby communities;
- Major breach of regulation with the potential for a major fine and/or investigation and prosecution by government authority;
- Significant community protest directed at a specific operation or project;
- Major damage to a facility resulting in the significant loss of production, requiring immediate corrective action; and/or,
- Significant negative public or media attention.

Additional Guidance

- International Standard ISO 14001:2004, Environmental Management Systems — Specification with Guidance for Use. Elements 4.3.1, Environmental Aspects; 4.3.3, Objectives and Targets; 4.3.4, Environmental Management Program(s)

- Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, Occupational Health and Safety Management Systems — Specification. Elements 4.3.1 and 4.3.3.

## 4. New Capital Projects and Major Business Transactions

Teck gives full consideration to EHSC issues and incorporates these into decision-making related to large capital projects such as a new operating facility, substantial expansion at an existing facility, the construction of a new process, or major modification to an existing facility or major business transactions such as the acquisition of another company or operation.

**REQUIREMENTS**

A. Teck shall carry out a Social and Environmental Impact Assessment (SEIA) for all new development projects, such as a new mine, production facility or a major expansion at an existing facility. At a minimum, project SEIA's shall conform to international and industry best practices and, in particular, IFC performance standards, and shall be consistent with the Code. Biodiversity will be assessed in an SEIA using the Teck Biodiversity Guide 2009, and plans put in place as required.

B. Large capital projects shall include a systematic assessment of EHSC risks, and measures appropriate to the results of the assessment shall be implemented.

C. Prior to acquisition, new investments in real property (e.g., land, buildings, etc.), lease holdings, and mineral tenures (specifically including Exploration and Business Development) shall be subject to EHSC due diligence assessment at a level appropriate to the scale of the acquisition.

D. Divestments of real property, lease holdings, and mineral tenures shall include full consideration of factors that may affect the post-divestment liability position of the company, prior to their divestiture.

**GUIDELINES**

The SEIA process must be based on current information, including an accurate project description and appropriate baseline data. The SEIA will consider all relevant social and environmental risks and impacts of a project, and those communities affected by such risks and impacts. Applicable laws and regulations of the jurisdictions in which the project operates that pertain to social and environmental matters, including those laws implementing host country obligations under international law, are also taken into account.

The degree of due diligence assessment should relate to the potential environmental or health and safety liabilities associated with the property respecting existing site conditions and/or liability legislation in the jurisdiction involved. Risk factors to be considered with respect to property divestments should include the nature of the acquiring party and the legislation of the jurisdiction involved.

Additional Guidance

- International Standard ISO 14015, Environmental Management — Environmental Assessment of Sites and Organizations (EASO). Reference number ISO 14015:2001(E).
- The World Bank Operational Manual, OP/BP 4.01 Environmental Assessment. See especially Annex B.
- International Council on Mining & Metals, Good Practice Guidance for Mining and Biodiversity, 2006.
- Mining Association of Canada, Framework for Biodiversity, 2007.
- International Finance Corporation, 2007. IFC Policy & Performance Standards and Guidance.
- Teck Draft Biodiversity Guide – Integrating Biodiversity Considerations into Teck Operations, 2009.

## 5. Product Development, Stewardship, and Resource Efficiency

Teck assesses and communicates potential risks of existing and new products. Teck applies technological innovation and management practices to optimize and promote the efficient use of resources in all aspects of our businesses and, promotes reuse and recycling of our products. Furthermore, we designate a Corporate Energy Leader to guide company efforts aimed at improving energy efficiency and minimizing the carbon footprint of our operations and products.

### REQUIREMENTS

A. Teck shall assess EHSC risks to its employees and the public associated with the production, distribution, packaging, use, recycling and disposal of its new and existing products. Measures shall be put in place to manage these risks.

B. Information on the EHSC risks associated with Teck's products shall be prepared and disseminated to employees, distributors and customers as appropriate. Processes shall be put in place to ensure that product information conforms to applicable regulatory requirements.

C. Teck shall support research to better understand and mitigate the potential EHSC risks of its activities and products, and incorporate the results of this research into its product development activities.

D. Teck shall measure its use of raw materials, direct and indirect energy use and greenhouse gas emissions, related to its mining and smelting processes, and retain an inventory of these for reporting purposes. Each operation shall define a target or set of targets for energy use and direct GHG emissions. These may be intensity based. Reductions or efficiencies achieved by innovative application of technology and management practices should be recorded.

E. The Mining Association of Canada's Towards Sustainable Mining performance indicators on Energy Use and Greenhouse Gas Emissions Management will be implemented at operations with a goal to achieve a minimum rating of level 3.

### GUIDELINES

Teck's product stewardship program is overseen by the Product Stewardship Committee (PSC). The PSC maintains a Master Product List containing all products approved for sale. Only products included on the Master Product List are sold for authorized uses in approved jurisdictions.

In addition to its own products, Teck uses a wide range of materials and products in its business. Many of these are recyclable, and can be diverted from the waste stream. Teck promotes the "3R's" (reduce, reuse, recycle) philosophy with respect to its products and purchased materials, both hazardous and non-hazardous.

Additional Guidance

- Mining Association of Canada, Towards Sustainable Mining performance indicators for Energy Use and Greenhouse Gas Emissions Management.
- ISO 14064-1:2006, Greenhouse Gases – Part 1, CAN/CSA April 2006.

## 6. Organization and Responsibilities

The EHSC management responsibilities of Teck directors, officers, managers, staff and employees are defined, documented, communicated and understood.

### REQUIREMENTS

A. Senior management shall provide resources appropriate to the needs of each business function in order to satisfy the requirements of these Standards, and for the implementation and maintenance of management systems.

B. At each business function, local senior management shall assign specific duties for implementation and maintenance of the EHSC management systems.

C. Teck, and each business function, shall develop and maintain organizational charts, and shall document the EHSC roles and responsibilities of directors, officers, managers, staff and employees in job descriptions. These roles and responsibilities shall be understood and kept up to date.

D. Each business function shall define the EHSC responsibilities of contractors. These roles and responsibilities shall be understood and kept up to date.

### ASSOCIATED STANDARDS

- Standard 13, Contractors and Suppliers

### GUIDELINES

The responsibility for EHSC management rests primarily with the individual business function, including responsibility for the implementation of local EHSC policies and these Standards. The management representatives responsible for implementation must have sufficient authority with respect to EHSC management activities, to make decisions, take action and direct and coordinate the actions of others.

Additional Guidance

- International Standard ISO 14001:2004, Environmental Management Systems — Specification with Guidance for Use. Element 4.4.1, Structure and Responsibility.

- Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, Occupational Health and Safety Management Systems — Specification. Element 4.4.1, Resources, Roles, Responsibility, Accountability and Authority.

## 7. Training, Education, and Disability Management

Teck ensures that its employees and contractors are competent to carry out their assigned duties and Environment, Health, Safety and Community (EHSC) management responsibilities, and are aware of the EHSC hazards and risks that pertain to their jobs.

### REQUIREMENTS

A. Teck shall ensure that all employees and contractors are competent to perform their duties on the basis of a combination of training, education and experience. The manner and frequency for determining and reviewing competency shall be determined by the individual business functions.

B. New employees and those employees transferring to new positions shall receive induction in the EHSC hazards, risks and responsibilities of the new position.

C. Training for employees shall be based on training needs assessments, which shall be con-ducted, documented and periodically reviewed and updated, as necessary. Training shall include the EHSC hazards and risks pertaining to their jobs, their EHSC management responsibilities, an explanation of the Code, their local EHSC policies and the potential consequences of departure from accepted practices and procedures. Records demonstrating competency shall be kept; this includes training and education provided to company employees and contractors.

D. Employment skills training and education programs shall consider local cultural dynamics, where relevant.

E. Disability management programs shall be implemented to manage the earliest possible return to work of employees following both non-work and work-related injury and illness.

F. Contractor induction shall include information on EHSC hazards and risks associated with the work to be conducted, and records of this training shall be retained. Contractors shall be required to provide appropriate training to their employees to ensure that they can meet their EHSC requirements, and verify that they have conducted this training.

### ASSOCIATED STANDARDS

- Standard 13, Contractors and Suppliers

### GUIDELINES

Training needs assessments determine the skills and knowledge required for employees and contractors to perform their duties, including meeting their EHSC management responsibilities. Competency areas may include: basic emergency procedures, correct materials handling procedures, community consultation and specifications for operating equipment. The need for periodic re-evaluations of competency should consider the cumulative effect of change, and/or the duration of time away from performing a particular job or task. In all cases, this information must be recorded and maintained, in order to demonstrate competency.

Additional Guidance

- International Standard ISO 14001:2004, Environmental Management Systems — Specification with Guidance for Use. Element 4.4.2, Training, Awareness and Competence.

- Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, Occupational Health and Safety Management Systems — Specification. Element 4.4.2, Competence, Training, and Awareness.

## 8. Communication and Reporting

Teck ensures that appropriate processes are in place for effective internal and external communication on EHSC matters.

### REQUIREMENTS

A. Teck shall produce an annual EHSC report for its employees, shareholders, and communities of interest (COI), which addresses EHSC performance, EHSC programs, concerns, risks and opportunities.

B. Business functions shall establish processes for internal and external communication on EHSC matters, including: incidents and emergencies, regulatory requirements and evaluation of performance in comparison with targets/benchmarks.

C. Business functions shall designate responsibilities for communication with Communities of Interest (COI). Processes shall be implemented for tracking, reporting back to communities and responding to communications from external parties, and any requests for the release of information.

D. Business functions shall report EHSC performance in a manner and at a frequency defined by Teck senior management.

### ASSOCIATED STANDARDS

- Standard 9, Community and Indigenous Peoples
- Standard 14, Emergency Preparedness

### GUIDELINES

Effective communication is (a) timely; (b) delivered in a manner appropriate to the end user; (c) delivered to those with a need to know; and, d) allows for feedback, evaluation, and discussion.

The internal communications process should consider opportunities for face-to-face discussion. Crew meetings, team briefings, ‘tool box talks’ and ‘tailgate meetings’ allow for two-way dialogue to improve communication on EHSC matters.

Additional Guidance

- International Standard ISO 14001:2004, Environmental Management Systems — Specification with Guidance for Use. Element 4.4.3, Communication.
- Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, Occupational Health and Safety Management Systems — Specification. Element 4.4.3, Communication, Participation and Consultation.
- Teck EHSC Reporting Requirements, Vancouver, B.C.

## 9. Community and Indigenous Peoples

Teck conducts its business in a manner that is respectful of communities and indigenous peoples, taking into consideration their interests, concerns and aspirations related to sustainable development. Teck identifies and engages with communities, indigenous peoples and, where appropriate, other interested parties, who may have an interest in our activities (collectively, Communities of Interest – "COIs"). Teck supports the principles and aspirations of community and human development set out in the United Nations Global Compact, the United Nations Millennium Development Goals and industry initiatives such as the International Council on Mining and Metals (ICMM) Sustainable Development Framework, the Mining Association of Canada's Towards Sustainable Mining (TSM) program, and the International Finance Corporation (IFC) Performance Standards on Social and Environmental Sustainability.

Teck recognizes that indigenous peoples and communities have unique interests and concerns related to development. We will consult with COIs, who could be impacted or have an interest in areas where we are active in exploration or mineral extraction and processing, and are committed to ensuring that our consultation fosters respect for the dignity and aspirations of indigenous peoples and communities. We are committed to transparent and open dialogue and engagement. We respect the interest of communities to pursue their social, economic, cultural and environmental well-being and shall engage with them in planning and carrying out our business activities. We shall seek to understand and support the aspirations and sustainable development priorities of COIs and shall collaborate to achieve mutual benefits, in keeping with our business activities.

**REQUIREMENTS**

A. Business functions shall designate personnel (such as community or indigenous relations and development personnel) with a responsibility to identify COIs and engage to understand their interests, concerns, and information requirements and shall make available timely and appropriate information about our business activities to enable informed consultation, participation and decision-making. Personnel responsible for identification and engagement of COIs shall ensure that engagement is culturally appropriate, and that traditional indigenous representatives, such as elders or village councils, have opportunities to be engaged and that sufficient time is given for traditional decision making processes to take place. All sites shall develop a COI engagement plan appropriate to their level of activity and the local context and shall review the plan annually.

B. COI interests and concerns shall be sought and recorded and be considered by business functions in their planning and decision-making and shall inform the development of EHSC management priorities and plans, including, but not limited to, public consultation and disclosure plans, sustainable community development plans, and where appropriate, environmental management plans, resettlement plans and indigenous peoples plans.

C. Personnel responsible for community and indigenous relations shall implement a grievance mechanism system and maintain a written record of community and indigenous interests and concerns and shall provide timely advice to project management and responses back to COIs to facilitate informed decision-making. This information shall be reported to project managers and senior management through the business units and Corporate Environment and Risk Management Committee.

D. Business functions shall, in collaboration with COIs, foster community and sustainable development. This includes giving preference to locally-sourced goods and services and employ local people when such goods and services can be provided at reasonably competitive cost. A community investment strategy, appropriate to the level of activity and local context, shall be implemented. The strategy shall be transparent, inclusive, based on defined criteria and evaluated on an on-going basis. Community investment programs shall have documented objectives, plans and key performance indicators which will be publically reported on and reviewed annually.

E. The potential positive and negative impacts of projects on COIs shall be assessed and communicated by business functions on an on-going basis by undertaking appropriate social, health and environmental baseline studies and a social and environmental impact assessment, which complies with local requirements and meets international best practice including IFC Performance Standards. Such impact assessments shall recognize and account for indigenous peoples' unique traditional land uses and cultural heritage and, in conjunction with indigenous peoples, protect and determine the appropriate manner in which local and indigenous knowledge may be utilized. Impact assessments shall be conducted or updated prior to project execution, major project expansion and closure. Business function activities shall be planned in advance to avoid, mitigate, or offset potential negative impacts on COI's. Business function personnel shall conduct, or participate in, related regulatory public consultation and other appropriate engagement activities with COIs at an appropriate time in advance of start-up, during operations and in anticipation of closure.

F. Teck subscribes to the objectives and Guiding Principles of the Mining Association of Canada's Towards Sustainable Mining (TSM), which includes the External Outreach performance indicators. Each operation shall implement the TSM performance assessment, reporting and verification system.

**ASSOCIATED STANDARDS**

- Standard 8, Communication and Reporting
- Standard 10, Human Rights

**GUIDELINES**

Teck provides guidance on our community and indigenous engagement and development commitments, and best practices and techniques that can be used with COIs. Business functions, with the assistance of the Sustainability and External Affairs (SEA) Group, should adapt these to the local context and assess the capacity of COIs to effectively engage with the company and to respond to company plans. In cases where COIs lack this capacity, Teck may assist by providing technical guidance/expertise through consultation with an independent third party.

In jurisdictions where public and/or indigenous peoples consultation is limited or not undertaken as part of the regulatory project review process, business functions are required to conduct independent consultation with key COIs early on in the project planning phase. It is not always possible to meet the expectations and requests of all COIs. Teck's objective is that the project review and approvals process will be viewed as being fair and balanced, even by those parties whose expectations cannot be met.

Additional Guidance

- Teck Code of Sustainable Conduct
- United Nations Universal Declaration of Human Rights
- United Nations Global Compact
- IFC Performance Standards on Social and Environmental Sustainability
- United Nations Millennium Development Goals
- ICMM, Sustainable Development Framework
- Mining Association of Canada, TSM performance indicators for External Outreach

## 10. Human Rights

Teck conducts its business activities in an ethical manner and supports the fundamental principles of human rights as set out in our Code of Ethics and Code of Sustainable Conduct. We support the protection of human rights in all our business activities and adhere to the principles set out in the United Nations Universal Declaration of Human Rights, the Voluntary Principles on Security and Human Rights, the United Nations Global Compact, and the Teck Code of Ethics.

Teck shall support and respect the protection of internationally proclaimed human rights in the workplace and within its sphere of influence and will ensure that the company is not complicit in human rights abuses.

**REQUIREMENTS**

A. A systematic management approach towards human rights shall be implemented for each business function through policies, staff training, human rights assessments, management plans and monitoring for compliance.

B. Business functions shall support and promote an environment within which all individuals are treated with respect and kept free of all forms of discrimination through its engagement with employees and members of the public and indigenous peoples.

C. Business functions shall support and respect human rights in the workplace by:
- Providing an open and communicative work environment for employees and contractors
- Providing safe and healthy working conditions,
- Respecting the right of employees to freely associate and their individual right to choose to join a trade union,
- Ensuring non-discrimination in personnel practices and creating opportunities for career advancement based on merit and individual performance,
- Ensuring that Teck does not knowingly use or condone directly or indirectly forced labour or child labour, and
- Providing to employees, contractors and visitors access to basic services (access to clean water, sanitation and medical aid).

D. Business functions shall support and respect human rights in the community by:
- Pursuing meaningful dialogue and engagement with COIs affected by our activities through disclosure of information, consultation, informed participation and grievance mechanisms at all projects,
- Respecting traditional resource use and practices and working with local and indigenous communities to identify and accommodate their participation in traditional and cultural activities, subject to safety and operational requirements,
- Protecting the environment and supporting and protecting community access to natural resources including culturally and economically significant sites and sources of drinking water. Unavoidable project impacts shall be mitigated through access to new resources established in collaboration with project affected people and local governments,
- Collaborating with local and indigenous communities to foster economic opportunities, and
- Avoiding the forcible displacement of individuals, groups or communities. Where involuntary resettlement does take place, Teck shall apply practices consistent with the World Bank Operating Procedure 4.12- Involuntary Resettlement and IFC Performance Standard 5, Land Acquisition and Involuntary Resettlement in addition to local laws. Additionally, where resettlement involves indigenous communities, Teck shall be guided by IFC Performance Standard 7 - Indigenous Peoples. Activities shall be carried out in collaboration with affected individuals and communities, and to the extent practical, their concerns, needs and interests will be solicited and considered in developing and carrying out the resettlement plan. Where any resettlement is contemplated, the Business Unit head and VP of Sustainability will be advised in writing by the project sponsor.

E. Business functions shall promote good practice and internal processes to manage its supply chain and the selection of business partners committed to the protection of human rights.

F. In circumstances where security personnel are required, business functions shall establish internal processes to ensure that the Voluntary Principles on Security and Human Rights are followed and that documented procedures and processes are in place to provide appropriate training in accordance with these principles.

G. Teck shall promote transparency in reporting and public disclosure on matters related to this standard and shall not be a party to bribery, extortion and other forms of corruption.

**ASSOCIATED STANDARDS**

- Standard 8, Communication and Reporting
- Standard 9, Community and Indigenous Peoples

**GUIDELINES**

In entering into written agreements with goods and service providers, contractors and sub-contractors, we will make appropriate efforts to ascertain the compliance of those parties to the human rights principles set out in this standard and will factor their responses into our purchasing decisions. We will ensure that joint ventures and other entities that we control adhere to these standards. In joint ventures that we do not control, participating parties will be made aware of these Management Standards and our commitment to human rights.

Capacity building programs and processes will be established to create opportunities for free prior and informed consultation and the gainful participation of communities in our activities, where practicable. We establish systems and commit to do what is reasonable in the circumstances to engage local people in the employment opportunities our operations offer and to help them find alternate employment opportunities where our operations have affected pre-existing employment or livelihoods or land that was once used for livelihoods, and is no longer available.

Additional Guidance

- Teck Code of Ethics and Code of Sustainable Conduct
- Voluntary Principles on Security and Human Rights
- United Nations Universal Declaration of Human Rights
- International Finance Corporation Performance Standards on Social and Environmental Sustainability
- United Nations Global Compact
- International Labour Organization Declaration on Fundamental Principles and Rights at Work
- Extractive Industries Transparency Initiative

## 11. Documentation and Document Control

Documentation and document control processes support effective implementation of EHSC management by ensuring that employees have access to current information for the execution of their duties and EHSC responsibilities, as well as ensuring continuity and consistency over time.

### REQUIREMENTS

A. EHSC management activities shall be documented to demonstrate conformance with these Standards. These documents shall be made available to employees who require access, in hard copy or electronic format.

B. Documentation related to EHSC management shall be controlled where material effects on performance could result from not using the correct version of a document.

C. Document control processes shall ensure that:
- Current versions of EHSC documents are available to those who need them;
- Documents are periodically reviewed, revised as necessary, and approved by authorized personnel; and,
- Documents are removed from use when obsolete, with superseded versions being retained as stipulated by the operation.

### GUIDELINES

Controlled documents in the EHSC management system typically adhere to a standard format, and usually include: document title, issue date, revision date, expiry date and issuing authority. In many business functions, systems for controlling documentation are available; wherever possible, these should be used for controlling EHSC documentation to avoid duplication of effort.

Although sufficient documentation needs to be available to support sustainable development, and to demonstrate conformance to these Standards in an audit, it is important that documentation be commensurate with the needs of an organization and be kept to the minimum necessary for effectiveness and efficiency.

Documents and records are different. Generally speaking, a document refers to the present or future and can be changed (e.g., EHSC policies, work instructions, training manuals). A record refers to the past and cannot be changed (e.g., agency correspondence, incident reports, monitoring data).

### ASSOCIATED STANDARDS

- Standard 18, Record-keeping

<u>Additional Guidance</u>

- International Standard ISO 14001:2004, Environmental Management Systems — Specification with Guidance for Use. Elements 4.4.4, Documentation; 4.4.5, Document Control.

- Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, Occupational Health and Safety Management Systems — Specification. Elements 4.4.4, Documentation; 4.4.5, Control of Documents.

## 12. Operational Control Measures and Change Management

Control measures are established, maintained and updated, as necessary, to minimize EHSC risks associated with the company's business functions. While changes occur for many reasons, it is essential that these changes do not compromise EHSC performance, are under proper control, and do not inadvertently replace one risk with another of equal or greater magnitude.

**REQUIREMENTS**

A. Business functions shall ensure that standards for design, operation and maintenance are consistent with applicable legislation, codes of practices, relevant recognized standards, and sound engineering practice.

B. Control measures for business functions shall be established and maintained for those activities associated with high-priority EHSC risks identified during risk assessments, to ensure that these activities are properly controlled and managed.

C. Tailings and Water Management facilities are integral components of Teck's mining operations. These will be managed for the long term to ensure that safe and environmentally-responsible stewardship is achieved. Mining Association of Canada's Towards Sustainable Mining performance indicators on Tailings Management will be implemented at operations with a goal to achieve a minimum rating of level 3.

D. The preparation of closure and reclamation plans shall form an integral part of all mine development projects and major expansions. Biodiversity considerations will be integrated into all phases of the mining process with the use of tools provided in the Teck Biodiversity Guide. Progressive reclamation shall be undertaken to ensure long-term environmental protection, meet biodiversity goals, and reduce any associated liabilities. Closure planning shall include the estimation of closure and post-closure costs, and provision of funding to cover these associated costs, in accordance with jurisdictional requirements.

E. A process shall be established for identifying critical equipment and operations where a malfunction or failure could have a significant, adverse impact. Preventive maintenance programs that address inspection, maintenance, testing and calibration shall be in place for all such identified equipment, and this equipment shall have monitoring devices and controls to ensure that it functions within acceptable operating ranges.

E. Business functions shall establish processes to identify changes (including capital projects, decommissioning etc.) with the potential to result in non-compliance with regulatory requirements or have material, adverse effects on EHSC performance. The risks of such changes shall be assessed and risk management controls shall be implemented, as required.

F. Changes shall be approved by authorized personnel, and where appropriate in consultation with relevant stakeholders, and shall be communicated to those who may be affected. Documentation (e.g., drawings, plans, procedures, etc.) reflecting changes made shall be kept current.

G. Where required, regulatory approval shall be sought and obtained prior to implementing a proposed change. The appropriate regulatory authority shall be informed of any changes, as required.

**ASSOCIATED STANDARDS**

- Standard 3, Priorities and Planning
- Standard 7, Training, Education and Disability Management
- Standard 11, Documentation and Document Control

## GUIDELINES

The overall accountability for tailings management lies with the Business Unit Vice-Presidents, who review tailings management and performance and report to CERMC annually.

Examples of changes that may be covered under this standard include those involving design and construction, processes and process reagents, standard operating and maintenance procedures, organizational structures, a change in operating conditions, training requirements and demands on communities and their infrastructure.

Additional Guidance

- Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, Occupational Health and Safety Management Systems — Specification. Element 4.4.6, Operational Control.
- A Guide to the Management of Tailings Facilities (1998), and Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities (2003), Mining Association of Canada.
- Teck Draft Biodiversity Guide – Integrating Biodiversity Considerations into Teck Operations, 2009.
- Mining Association of Canada, Towards Sustainable Mining performance indicators for Tailings Management.

## 13. Contractors and Suppliers

Suppliers of goods, equipment and services conduct their business activities with Teck in a manner consistent with these Standards.

### REQUIREMENTS

A. As appropriate to the risks associated with the service or product to be provided, the evaluation and selection process for suppliers and contractors shall consider:
- The adequacy of their EHSC management practices;
- Their safety and environment performance record; and,
- Their ability to perform work in a responsible manner, consistent with the local EHSC management systems.

B. Where there is a potential for adverse effects to EHSC performance or to the public, Teck shall define and communicate contractor and supplier performance requirements, including the need for:
- Compliance with all applicable laws, regulations and Teck's commitments;
- Provision of personnel who are competent on the basis of training, education and experience to perform specified duties, consistent with their EHSC requirements; and,
- Verification that their EHSC responsibilities, including required training, education and experience, are being met.

C. Business functions shall establish processes to verify that contractors and suppliers meet their EHSC responsibilities in a manner compatible with the site's EHSC management system.

D. Consistent with all applicable regulatory requirements, business functions shall provide to contractors, and shall require contractors to provide to them, current and complete information on the hazards and risks associated with their products and services. In addition, all contractors will inform site personnel if any of their products or activities involved in the operation may have an adverse effect on EHSC performance of any Teck operation.

### ASSOCIATED STANDARDS

- Standard 9, Community and Indigenous Peoples
- Standard 10, Human Rights
- Standard 19, Auditing

### GUIDELINES

In many cases, the communication of EHSC expectations may best be included as part of contractual obligations, based on the Teck Charter and Code, and/or specific EHSC risks and practices required for certain tasks.

Additional Guidance

- International Standard ISO 14001:2004, Environmental Management Systems — Specification with Guidance for Use. Element 4.4.6, Operational Control.

- Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, Occupational Health and Safety Management Systems — Specification. Element 4.4.6, Operational Control.

## 14. Emergency Preparedness

Teck maintains procedures and allocates resources required to respond to emergency situations commensurate with their risk.

### REQUIREMENTS

A. Teck shall maintain a documented corporate Crisis Management Plan (CMP). The CMP shall be tested annually and amended as required.

B. Business functions shall establish, maintain and communicate documented Emergency Response Plans (ERPs) appropriate to the scope, complexity and associated EHSC risks of their facilities and activities. ERPs shall be consistent with the Teck CMP.

C. ERPs shall clearly define responsibilities with respect to emergency response. Personnel shall be trained and have appropriate resources to carry out their duties in the event of an emergency.

D. Response equipment shall be appropriate to EHSC risks, shall conform to applicable regulatory requirements and shall be maintained in good working order at all times.

E. ERPs shall be reviewed regularly and updated, as required, in order to maintain appropriate response capabilities. Plans shall be tested routinely or at a chosen frequency to verify the effectiveness of the plan and the adequacy of resources and communications systems and capabilities of personnel.

F. Aspects of ERPs that relate to local communities shall be coordinated with local emergency response agencies and communicated appropriately to those communities and other parties, as appropriate. Responsibility shall be assigned for community liaison on emergency response issues.

G. Mining Association of Canada's Towards Sustainable Mining (TSM) performance indicators on Crisis Management Planning will be implemented at the corporate office and operations with a goal to achieve full compliance on all indicators.

### ASSOCIATED STANDARDS

- Standard 7, Training, Education and Disability Management
- Standard 8, Communication and Reporting

### GUIDELINES

The four components of an emergency response system are:

- prevention/mitigation;
- preparedness;
- response/mitigation; and,
- recovery.

The emergency response system should be appropriate for the risk profile of the location and based on a complete range of credible incident scenarios including the transportation of people, goods and materials to and from sites. These scenarios should consider the size, nature and severity of the potential incident, and the relative likelihood of its occurrence.

Communication with the public concerning the emergency response system is the joint responsibility of regulatory authorities and the business function. During an emergency, it is critical that communication be based on facts and not speculation.

Additional Guidance

- International Standard ISO 14001:2004, Environmental Management Systems — Specification with Guidance for Use. Element 4.4.7, Emergency Preparedness and Response.
- Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, Occupational Health and Safety Management Systems — Specification. Element 4.4.7, Emergency Preparedness and Response.
- Teck, Crisis Management Plan. Vancouver, B.C.
- Teck, Risk Group Directives, Risk Group Website. Vancouver, B.C.
- Mining Association of Canada, Towards Sustainable Mining performance indicators for Crisis Management Planning.

## 15. Incident Response and Investigation

Teck establishes processes to respond to and investigate unplanned events that have had or could foreseeably have an impact on people, equipment, the environment, health and safety of nearby communities or cause a business interruption.

### REQUIREMENTS

A. Business functions shall establish and maintain practices and procedures for responding to unplanned events, including processes for identification, internal communication and notification to external agencies and communities.

B. Business functions shall define which incidents require formal investigation and shall establish a process for investigating such incidents. At a minimum, incident reporting, investigation and record-keeping shall comply with all applicable legislative requirements.

C. Investigations shall identify the contributing factors and root causes of the incident. The scope of, and resources applied to, the investigation and any follow-up activities shall be appropriate to the consequences, actual or reasonable potential, of the event.

D. Procedures shall be in place to ensure external notification of incidents that could pose a threat to community health and safety. As appropriate, lessons learned from investigations shall be shared across the location, from other business functions and the mining industry.

### ASSOCIATED STANDARDS

- Standard 14, Emergency Preparedness
- Standard 16, Corrective and Preventive Action

### GUIDELINES

Incidents to be reported and investigated include: fatalities, lost-time injuries, medical aids, high-potential incidents, damage to vehicles, equipment or property, fires, spills and explosions or uncontrolled releases, including those which occur in conjunction with work carried out by contractors.

It is essential to determine the underlying root cause(s) in a chain of events leading to an incident, and not to limit the investigation to determining the apparent cause(s). Where ‘human error’ is involved, the cause should not simply be recorded as such. Rather, investigators should determine exactly what factors may have contributed to any incident involving human error. Consideration should be given to elements such as lack of knowledge (training, education), lack of capability (e.g., inadequate procedures or supervision, poor ergonomic design, poor system/technology design, communications problems, inappropriate goals, etc.) and lack of motivation (e.g., boredom, stress, overwork, etc., leading to a conscious decision not to follow procedures).

Where incident investigation establishes that clear and conscious contravention of a requirement or standard caused or contributed to an incident, disciplinary action should be considered, appropriate to the consequences of the event.

<u>Additional Guidance</u>

- International Standard ISO 14001:2004, Environmental Management Systems — Specification with Guidance for Use. Element 4.5.2, Non-conformance and Corrective and Preventive Action.

- Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, Occupational Health and Safety Management Systems — Specification. Element 4.5.3, Incident Investigation, Nonconformity, Corrective Action and Preventive Action.

## 16. Monitoring and Inspection

Teck's EHSC performance is measured through monitoring and inspection to confirm that there is continuous improvement, to identify existing or emerging trends, and to track progress in attaining EHSC management goals.

### REQUIREMENTS

A. Teck and its business functions shall conduct measurements of EHSC performance, as necessary, to demonstrate: conformance with regulatory requirements and Teck's commitments, effectiveness of management systems, and for the purposes of operational control. Such measurements shall be made in accordance with practices that meet the relevant regulatory and/or industry standards, and utilizing appropriate methods and techniques.

B. Monitoring equipment shall meet up to date standards for the test being conducted and shall be calibrated and maintained at a frequency at the manufacturer's recommendation. Calibration records shall be maintained.

C. Business functions shall conduct regular, formal inspections to ensure that acceptable work practices are being followed, workplace conditions are satisfactory and regulatory requirements are met. These inspections shall be documented. Deviations noted during inspections shall be reported to management and corrective action shall be taken to address these.

### ASSOCIATED STANDARDS

- Standard 2, EHSC Requirements;
- Standard 12, Operational Control Measures and Change Management.

### GUIDELINES

These Standards do not explicitly require that all inspections be documented, as many of them are part of the regular job routine, however, all formal work site inspections will be documented.

Inspections should cover critical environmental monitoring devices, housekeeping and physical conditions, fire prevention and control equipment. Other items for consideration are the frequency of the inspections, responsibility for carrying out the inspection, reports required, and the timeliness of the follow-up.

Inspections should be conducted by a cross-section of personnel involved at an business function's location, in consideration of the inspection scope and frequency. Various formalized programs (such as STOP and the Field Level Risk Assessment) lend themselves to a planned inspection system.

Additional Guidance

- International Standard ISO 14001:2004, Environmental Management Systems — Specification with Guidance for Use. Element 4.5.1, Monitoring and Measurement.

- Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, Occupational Health and Safety Management Systems — Specification. Element 4.5.1, Performance Measurement and Monitoring.

## 17. Corrective and Preventive Action

Teck takes corrective and preventive action to address non-conformances related to EHSC requirements, accidents and incidents, audits and inspections.

### REQUIREMENTS

A. Business functions shall take corrective and preventive action, as necessary, to address the findings of audits and inspections, and to prevent recurrences of:
- Incidents;
- Regulatory non-compliance; and,
- Non-conformance with EHSC requirements, including these Standards.

B. Corrective or preventive actions taken to eliminate the root causes of actual or potential non-conformances shall be appropriate to the consequences arising from the non-conformance and shall be recorded in order to review the effectiveness of any follow-up actions.

C. Changes to established procedures, if any, resulting from the implementation of corrective and preventive action shall be recorded and communicated.

D. Business functions shall establish and maintain processes to track the completion and effectiveness of corrective and preventive actions, including person(s) responsible and timeline for completion.

### ASSOCIATED STANDARDS

- Standard 19, Auditing

### GUIDELINES

Effective corrective and preventive action can be demonstrated by providing evidence that:

- The actions relate to the root cause of a non-conformance;
- The actions were actually implemented; and,
- The actions were effective in preventing a recurrence of the non-conformance.

Additional Guidance

- International Standard ISO 14001:2004, Environmental Management Systems — Specification with Guidance for Use. Element 4.5.2, Nonconformance and Corrective and Preventive Action.

- Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, Occupational Health and Safety Management Systems — Specification. Element 4.5.3, Incident Investigation, Nonconformity, Corrective Action and Preventive Action.

## 18. Record-keeping

Teck maintains records to track and demonstrate due diligence regarding effective EHSC management.

### REQUIREMENTS

A. Business functions shall identify and retain records required to demonstrate compliance with EHSC requirements, and the effectiveness of management activities.

B. Records (hard copy and/or electronic format) shall be maintained and protected against damage, deterioration and loss. Records shall be maintained indefinitely unless specific retention times have been established for a particular purpose (e.g., for legal purposes).

C. Collection and storage of EHSC records shall comply with regulatory requirements, if any.

### GUIDELINES

Record-keeping is an important aspect of demonstrating conformance to these Standards and this document refers to some key records that should be maintained at all operations. These include monitoring data associated with permits, communications with regulatory agencies and incidents of legal non-compliance and incident investigations and action.

Additional Guidance

- International Standard ISO 14001:2004, Environmental Management Systems — Specification with Guidance for Use. Element 4.5.3, Records.
- Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, Occupational Health and Safety Management Systems — Specification. Element 4.5.4, Control of Records.

## 19. Auditing

Teck's audit program contributes to the company's objective for continual improvement in EHSC performance by evaluating conformance with EHSC requirements and these Standards.

### REQUIREMENTS

A. Teck maintains an audit program to determine the degree of conformance with EHSC requirements and these Standards. Audit scope and schedule shall be established annually on the basis of risk and approved by the Corporate Environment and Risk Management Committee (CERMC).

B. Teck shall audit its business functions on a regular basis, following documented audit protocols. Audit teams shall be comprised of personnel that are qualified on the basis of training, education, and experience. Audit findings shall be documented and communicated to the management of the audited business function, and to CERMC, and the Safety and Sustainability Committee of the Board.

C. Audited parties shall develop documented action plans to address the accepted audit findings and shall track and report on the progress of completed actions to CERMC. Audit action plans shall be completed within 2 years of the date of the generation of a final action plan.

D. Business functions shall also conduct internal audits to assess compliance with regulatory requirements (i.e., compliance audits) and effectiveness of their EHSC management systems (i.e., management system audits). Audit scope and schedule shall be based on the degree of risk present. The results of these internal audits, and follow-up action plans, shall be documented.

E. Business functions shall audit contractors and suppliers on the basis of EHSC risks associated with the goods or services provided.

### ASSOCIATED STANDARDS

- Standard 2, EHSC Requirements
- Standard 13, Contractors and Suppliers
- Standard 17, Corrective and Preventive Action

### GUIDELINES

The corporate audit program guidelines include specifications for audit objectives and scope, staff responsibilities, legal audit information management, annual audit planning, personnel competencies, planning methodology, audit field work, reporting requirements, and audit follow-up.

Verification processes also exist under the Mining Association of Canada's Towards Sustainable Mining (TSM) performance indicators. Third-party verification is completed on self assessments completed by certain Canadian sites regarding Tailings Management, Energy Use and GHG Emissions Management, Crisis Management Planning and External Outreach.

Additional Guidance

- International Standard ISO 14001:2004, Environmental Management Systems — Specification with Guidance for Use. Element 4.5.1, Monitoring and Measurement; Element 4.5.4, Environmental Management System Audit.
- Occupational Health and Safety Assessment Series (OHSAS) 18001:2004, Occupational Health and Safety Management Systems — Specification. Element 4.5.1, Performance Measurement and Monitoring; Element 4.5.5, Internal Audit.
- International Standard ISO 14010, 14011 and 14012 - Guidelines for Environmental Auditing and Auditors
- Teck Environment, Health and Safety Audit Program Policy and Procedures Manual. Teck, Vancouver, B.C.
- Mining Association of Canada, Towards Sustainable Mining performance indicators (www.mining.ca).

## 20. Management Systems Review

Teck's EHSC management systems are evaluated regularly as to suitability and effectiveness in achieving EHSC policy goals and commitments.

### REQUIREMENTS

A. Annually, CERMC shall review and, as necessary, revise the Code of Sustainable Conduct and these Standards as to their continuing suitability with respect to changing circumstances. Revisions to the Code shall be approved by the Safety and Sustainability Committee of the Board of Directors. Revisions to the Standards shall be approved by CERMC.

B. At least annually, CERMC, and all business functions shall conduct an EHSC management review. This review shall include:

- EHSC performance of the facility and any priority issues;
- Status of corrective and preventive actions and follow-up actions from previous management reviews;
- Degree of success in meeting EHSC goals;
- Suitability of the organization's Code of Sustainable Conduct;
- Suitability of local EHSC policies and management systems with respect to performance and changing circumstances, including changes in legal requirements;
- Results of audits;
- Concerns of interested parties; and,
- Recommendations for improvement.

C. Results of management reviews shall be documented; this will include recommendations, action plans and decisions related to changes to Environment or Safety policies, objectives, targets and other elements of the EHSC management system, consistent with the commitment to continual improvement.

### ASSOCIATED STANDARDS

- Standard 1, EHSC Policies and Leadership
- Standard 12, Operational Control Measures and Change Management

Additional Guidance

- International Standard ISO 14001:2004, Environmental Management Systems — Specification with Guidance for Use. Element 4.6, Management Review.

- Occupational Health and Safety Assessment Series (OHSAS) 18001, Occupational Health and Safety Management Systems — Specification. Element 4.6, Management Review.