



Fugitive Dust Risk Management

Communication Plan

February 2010

Teck

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Acronyms and Abbreviations

Communication Plan	Red Dog Fugitive Dust Communication Plan
DEC	Alaska Department of Environmental Conservation
DMTS	DeLong Mountain Regional Transportation System
MOU	Memorandum of Understanding
NANA	NANA Regional Corporation
NPS	National Park Service
RMP	risk management plan

Executive Summary

In August 2008, a draft Risk Management Plan (RMP) was released as part of a process intended to minimize risks associated with fugitive dust emissions from operations at Red Dog Mine (Exponent 2008). The RMP combines and builds upon prior and ongoing efforts by Teck to reduce dust emissions and incorporates stakeholder input obtained during a 3-day risk management workshop held in Kotzebue, Alaska, in March 2008 (Teck Cominco 2008). The RMP describes seven fundamental risk management objectives that address the overall goal of minimizing risk to human health and the environment, 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 describe more specifically how the fundamental objectives will be met. This document presents the first of those implementation plans, the Red Dog Fugitive Dust Communication Plan (Communication Plan).

Preparation of a communication plan follows from risk management Objective 6, *Improve collaboration and communication among all stakeholders to increase the level of awareness and understanding of fugitive dust issues*. In order to achieve this objective, the Communication Plan was developed with the following goal:

To establish consistent methods for communication and collaboration among stakeholders regarding efforts related to dust emissions issues.

This goal is addressed in this plan through the following three steps: 1) review of past, ongoing, and potential future actions, 2) development of standard communication guidelines, and 3) identification of actions to be implemented. Each step is described below.

Review of Past, Ongoing, and Potential Future Actions—Review of past and ongoing communication actions carried out as part of Red Dog environmental operations provides an opportunity to take stock of diverse efforts already taking place, evaluate what actions work well, and identify ways to improve future efforts. The review of potential future actions includes those actions established during the RMP development process, such as additional communication actions suggested by various stakeholder groups. As part of this review, actions were grouped into the following communication categories:

- **Collaboration**—Activities focused toward diverse groups of stakeholders working together as a team to attain a goal.
- **Communication**—Activities focused on transferring information from one stakeholder to other stakeholders.
- **Education and Outreach**—Activities related to, but often outside the immediate scope of the program. Focused toward providing additional education and training and/or opportunities for stakeholders to gain more understanding and participation in Red Dog health and environmental efforts.

Development of Standard Communication Guidelines—The specific goal and objective addressed by the Communication Plan are considered overarching for all other implementation plans, and each of the other plans will include a communication component. Thus, to achieve the Communication Plan goal, this document provides a standard set of guidelines that can be used to incorporate communication and collaboration in all new plans and programs. To facilitate a consistent approach for communication, these guidelines are framed using the general categories of collaboration, communication, and education and outreach that were introduced in the previous step. Strategies are also provided for improving the effectiveness of some types of communication actions based on past experiences and feedback received.

Identification of Actions to Be Implemented—In this step, the standard communication guidelines developed in the previous step are applied to Red Dog fugitive dust-related issues to develop a set of actions designed to meet the goal of effectively communicating ongoing issues and efforts related to fugitive dust emissions. The specific actions identified as necessary to meet the communication needs for Red Dog fugitive dust-related issues include: 1) expand the Ikayuqtit Review Team to include other stakeholder representatives/groups to serve as the technical review committee for fugitive dust-related studies and reports; 2) continue to organize community meetings and distribute information regarding Red Dog environmental operations and activities on a regular schedule; 3) establish an information-sharing portal/clearinghouse providing access and/or links to all fugitive dust-related studies, reports, and other information; 4) improve written communications through addition of a simplified summary for all technical reports and by development of a brief annual summary of prior-year fugitive dust-related activities and accomplishments, and planned programs for the upcoming year; 5) carry out specific education and outreach activities identified as achievable for fugitive dust-related communication efforts.

Additional details regarding these actions are provided in this document, along with details of Communication Plan implementation, including periodic review and reporting, milestones for completion and review of the plan, and stakeholder involvement in the plan. For a quick overview of plan actions, see Table 4 and Figure 1, both provided at the end of the main text.

1 Introduction

This communication plan is an implementation plan associated with the fugitive dust risk management plan (RMP). The RMP was developed to combine and build upon prior and ongoing efforts by Teck Alaska Incorporated (Teck) to reduce dust emissions and minimize potential effects to human health and the environment. The RMP addresses issues identified by several different studies and programs, including the DeLong Mountain Regional Transportation System (DMTS) risk assessment (Exponent 2007a,b), the mine-area ecological risk evaluation conducted as part of the mine closure and reclamation planning process (Exponent 2007c), the Fugitive Dust Memorandum of Understanding (MOU) between the Alaska Department of Environmental Conservation (DEC) and Teck (DEC 2007), and the draft supplemental environmental impact statement (SEIS) for the Aqqaluk pit extension (www.reddogseis.com).

The RMP also incorporates stakeholder input obtained during a 3-day risk management workshop held in Kotzebue, Alaska, in March 2008 (Teck Cominco 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. These seven objectives are:

- Objective 1: Continue reducing fugitive metals emissions and dust emissions
- Objective 2: Conduct remediation or reclamation in selected areas
- Objective 3: Verify continued safety of caribou, other representative subsistence foods, and water
- Objective 4: Monitor conditions in various ecological environments and habitats, and implement corrective measures when action levels are triggered
- Objective 5: Conduct research or studies to reduce uncertainties in the assessment of effects to humans and the environment
- Objective 6: Improve collaboration and communication among all stakeholders to increase the level of awareness and understanding of fugitive dust issues¹
- Objective 7: Protect worker health.

The RMP also identifies and evaluates risk management options to achieve these objectives, and describes a process for developing implementation plans to achieve the seven fundamental objectives. This communication plan is one of six individual risk management implementation plans that were identified in the RMP to address these objectives. The other five implementation plans are as follows:

¹ The language of this objective has been clarified from the original language in the draft RMP, which was “Improve communication and collaboration among all stakeholders.”

- Dust emissions reduction plan
- Remediation plan
- Monitoring plan
- Uncertainty reduction plan
- Worker dust protection plan.

This document presents the communication plan. The remainder of the document is organized as follows:

- *Section 2. Goal of the Communication Plan*—Describes the specific goal and objective of the Communication Plan
- *Section 3. Review of Past, Ongoing, and Potential Future Actions*—Describes a method for categorization of actions and, using that method, evaluates prior and ongoing actions as well as actions identified as part of the RMP process
- *Section 4. Standard Communication Guidelines*—Provides a standard set of guidelines for use in preparing new plans or programs related to fugitive dust issues
- *Section 5. Actions to be Implemented*—Applies the standard guidelines developed in Section 4 to Red Dog fugitive dust communication needs by defining a specific set of planned actions and priorities
- *Section 6. Periodic Review and Reporting*—Describes the process for review of and reporting on these actions
- *Section 7. Milestones*—Identifies important milestones for implementation of the plan
- *Section 8. Stakeholder Roles*—Describes stakeholder roles in the process
- *Section 9. References.*

2 Goal of the Communication Plan

The Communication Plan follows from risk management Objective 6, *Improve collaboration and communication among all stakeholders to increase the level of awareness and understanding of fugitive dust issues*. In order to achieve this objective, the Communication Plan was developed with the following goal:

To establish consistent methods for communication and collaboration among stakeholders regarding efforts related to dust emissions issues.

Although the focus of the Communication Plan is on dust-related issues, the Communication Plan is envisioned as a universally applicable tool for better communication and collaboration with stakeholders on any project or program.

3 Review of Past, Ongoing, and Potential Future Actions

Potential actions that may be taken to improve communication and collaboration can be found in reviewing prior and ongoing actions, as well as potential future actions that have been identified as part of the RMP development process. In this section, a method for categorizing communication-related actions is presented. Potential actions are then grouped into these categories for further evaluation and for use in preparing a framework for future communication and collaboration.

Communication related actions can be organized into the following categories:

- **Collaboration**—Activities focused toward diverse groups of stakeholders working together as a team to attain a goal.
- **Communication**—Activities focused on transferring information from one stakeholder to other stakeholders.
- **Education and Outreach**—Activities related to, but often outside the immediate scope of the program. Focused toward providing additional education and training and/or opportunities for stakeholders to gain more understanding and participation in Red Dog operations as a whole, and health and environmental efforts in particular.

Although most actions will have elements of more than one category, the primary goal will typically be focused toward addressing one category. Moreover, categorization in this way provides a structured method to 1) review prior and ongoing efforts for completeness of communication actions, 2) provide a “menu” of possible actions for use in developing or updating plans and programs to ensure that they include adequate and appropriate communication elements, and 3) facilitate review of the effectiveness of future actions, plans, and programs at meeting defined communication goals.

3.1 Evaluation of Past and Ongoing Actions

Many communication-related actions have been or are currently being carried out as part of Red Dog operational activities. The communication-related actions associated with the following programs: the DMTS risk assessment, the reclamation and closure planning process, overall Red Dog environmental operations, and the fugitive dust risk management process have been categorized using the approach described above to help evaluate the completeness of the programs’ communication efforts.

3.1.1 DMTS Risk Assessment

The DMTS fugitive dust risk assessment was conducted as part of the overall process in which areas of fugitive dust deposition surrounding the DMTS are being evaluated (Exponent 2007a). The purpose of the risk assessment was to estimate possible risks to human and ecological health posed by exposure to metals in soil, water, sediments, and biota in areas surrounding the DMTS, and in areas surrounding the Red Dog Mine ambient air/solid waste permit boundary. A number of communication actions were carried out as part of the planning, implementation, and reporting for the DMTS risk assessment. Those actions are summarized below.

- **Collaboration Actions**
 - Village meetings to elicit community input and traditional knowledge for inclusion in the risk assessment. Public involvement included public presentations and/or comments on the conceptual site model, work plan, sampling plans, and draft risk assessment. A chronological summary of public involvement is provided in the fact sheet for the risk assessment (Exponent 2007b).
 - A risk assessment scoping meeting in August 2002 with Teck, Exponent, and DEC staff was convened as part of the risk assessment planning process.
 - Public process associated with the DMTS risk assessment between 2002 and 2007, including verbal and written comments, responses, and modifications during each phase of the risk assessment process.
- **Communication Actions**
 - Village meetings associated with planning, conducting, status, and reporting of the DMTS risk assessment.
- **Education and Outreach Actions**
 - A risk assessment short course developed by Teck, Exponent, and NANA Regional Corporation (NANA) focused on providing education about how risk assessment works, how it is done, and its value in environmental investigations and public health protection. Elements of this course have also been included in various workshops and meetings.
 - Technical presentation sessions provided within workshop settings to raise the knowledge level of participants.

3.1.2 Reclamation and Closure Planning

As part of the long-range planning process for eventual reclamation and closure of Red Dog mine, a focused evaluation of the potential for ecological risks posed by current and future (i.e., post-closure) exposure to metals in soil, water, sediments, and biota within the Red Dog

Mine ambient air/solid waste permit boundary was conducted. This evaluation was carried out in support of the larger effort of evaluating and selecting closure options. The following communication-related actions were carried out as part of this process:

- **Collaboration Actions**
 - Workshops in Anchorage and Kotzebue to elicit and incorporate input from all stakeholders.
- **Communication Actions**
 - Village meetings associated with reclamation and closure plan development
 - Village meetings to discuss the results of the reclamation and closure plan analysis
 - A CD summarizing the work and results of the closure planning workshop was sent to stakeholders.
- **Education and Outreach Actions**
 - Technical presentation sessions provided within workshop settings to raise the knowledge level of participants.

3.1.3 Red Dog Environmental Operations

Activities carried out by Red Dog Environmental Operations staff include the other programs described in this section. In addition, their activities encompass a broad range of other programs and efforts in support of environmental permitting, worker health and safety, and environmental stewardship. Some of the communication-related activities carried out by Red Dog Environmental Operations include the following:

- **Collaboration Actions**
 - Periodic village meetings to elicit community input and traditional knowledge for inclusion in Red Dog environmental activities
 - Consultation with subsistence committee to incorporate traditional knowledge into study design and reporting
 - Studies conducted at community or subsistence committee request
- **Communication Actions**
 - Periodic meetings and presentations to the villages in the region, which include collecting comments for Teck to provide follow-up
 - Working with state agencies to post documents on state websites for public access and review
 - Quarterly meetings with subsistence committee to review initiatives.

- **Education and Outreach Actions**
 - Tours of Red Dog facilities for various stakeholders and stakeholder groups
 - Media “short sheet briefings” developed to summarize environmental and operational issues and activities associated with the Red Dog mine
 - Copies of discharge monitoring reports provided to stakeholders.

3.1.4 Fugitive Dust Risk Management

The fugitive dust risk management process has an 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 process includes development of fundamental risk management objectives and identification and evaluation of risk management options to achieve that goal. The RMP describes the fundamental objectives and risk management options, as well as the process for developing implementation plans, including the Communication Plan, to achieve those fundamental objectives. Communication-related actions associated with the fugitive dust risk management process are summarized below.

- **Collaboration Actions**
 - Formation of the Ikayuqtit Team in 2001 to promote sharing of data related to fugitive dust, peer review and collaboration on study plans and reports, and communication between NANA, Teck, Alaska Industrial Development and Export Authority, and the National Park Service (NPS)
 - Development of an MOU with DEC in 2005, and a revised MOU in 2007, to communicate actions being taken on fugitive dust-related activities and invite agency participation in the development of the actions (DEC 2007)
 - Workshop in Kotzebue to elicit and incorporate input from all stakeholders on the fugitive dust RMP (Teck Cominco 2008).
- **Communication Actions**
 - E-mail list invitations to workshops
 - Advertisement of village meetings using e-mail lists and radio announcements
 - Village meetings to discuss results of the workshop, the draft RMP, and the path forward for implementation plans

- Development of MOU with DEC to communicate actions being taken on fugitive dust-related activities and invite agency participation in the development of the actions.
- **Education and Outreach Actions**
 - Summary of work and results from risk management workshop sent to all participants and other stakeholders on CD-ROM
 - Village meetings to discuss results of the workshop, the draft RMP, and the path forward for implementation plans.

3.2 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 communication. Communication actions were characterized as overarching for all risk management action categories, because they build trust, inform decisions, reduce confusion, and promote transparency. Participation by all stakeholders with multi-directional communication and collaboration will provide a sense of ownership and understanding throughout the risk management process. By incorporating traditional local and ecological knowledge on a regular basis, issues can potentially be resolved more effectively and efficiently. Furthermore, communication and education efforts can help to reduce the gap between perceived and actual risk. Potential limitations of communication and collaboration involve the challenges of keeping commitments on a regular basis, and the logistical considerations involved with developing communication networks that all stakeholders can access. It was stressed that communication and collaboration of ideas and results may need to be presented in several different formats so that all stakeholders can understand the implications. In addition to the complex technical nature of some reports, there exists a language barrier between some stakeholder groups. There is also a potential for lack of representation if stakeholder groups are not adequately engaged or choose not to participate.

As described in detail in the RMP, each potential action within a category was then scored based on five criteria: effectiveness, implementability, level of effort, stakeholder preference for the action category, and stakeholder preference for the potential action. The scores for the latter two criteria were calculated using input from stakeholders at the risk management workshop. The scores for the five criteria were summed to a total score and a priority ranking, between 1 and 3, was assigned based on the total score. All of the 21 potential communication-related actions identified during the workshop received a priority ranking of either 1 or 2, with 14 receiving the highest ranking of 1. Thus, all potential actions from the workshop were carried forward into Communication Plan development.

The potential communication actions identified in the RMP were categorized, as described above, as primarily focused on collaboration, communication, or education and outreach (see Table 1). In addition, four of the potential actions were categorized as focusing equally on communication and collaboration.

4 Standard Communication Guidelines

The categorization process described in this plan leads to the development of a standard set of guidelines for use in preparing new plans or programs related to fugitive dust issues. This will facilitate a consistent approach for collaboration and communication in future plans and programs. As with past programs, all future plans or programs will have planning, implementation, and reporting stages. At each stage, actions will be developed that address the three categories of communication-related actions identified above: collaboration, communication, and education and outreach.

Table 2 provides a matrix summarizing the types of actions available at each stage to address the three communication categories. The types of actions listed in Table 2 can be viewed as a menu from which to design the communication component of a plan. Although the specific set of actions selected for a given program will be unique to that program, the goal is to create a comprehensive set of communication actions that addresses each of the three categories at each stage of the program. As was noted above in the review of previous and ongoing actions, some actions are ongoing throughout a program and may meet certain goals throughout all three stages (e.g., regularly scheduled village meetings to communicate the planning, implementation status, and results of the DMTS risk assessment). Other actions may address all three categories of actions (e.g., workshops, such as those conducted as part of the reclamation and closure process and the risk management planning process).

4.1 Strategies for Effectiveness

Through past experiences and feedback received, a number of strategies have been identified for improving the effectiveness of some communication actions. The specific issues and the strategies to address those issues are summarized in this section.

4.1.1 Community Meetings

As shown in the communication action matrix (Table 2), community meetings are integral for collaboration and/or communication actions at all stages of a plan or program. The effectiveness of community meetings at attaining the communication goals of the program depends on adequate and representative attendance at the meeting, active participation of the attendees, and effective follow-up. The following strategies have been identified to improve the chances of success:

4.1.1.1 Adequate and Representative Attendance

The first step to a successful community meeting is to ensure that it is adequately attended by enough people that represent the range of knowledge, experience, viewpoints, and status in the community. Typically meeting dates and time are advertised through e-mails, radio announcements, and word of mouth. While some meetings are well attended and result in

valuable information sharing, some meetings have been sparsely attended. This can be the result of scheduling conflicts and/or issues with advertising the meeting adequately.

Scheduling—In some cases sparse attendance has been the result of other activities occurring at the same time or near the time of the meeting. Although avoidance of all conflicts is not possible, improved scheduling is possible by working directly with community liaisons to identify best meeting times. This is already done to some degree through communication with community leaders (e.g., subsistence committee members, local officials), but increasing the number of community liaisons that are aware of specific aspects of community life may also be useful (e.g., school teachers, clergy). Another strategy is to develop improved knowledge of weekly, monthly, and annual schedules in the villages to avoid conflicts and coordinate with other activities. To this end, use of community calendars, if they exist, can be useful.

Advertisement—Poor attendance can also result from a lack of knowledge of the timing of the event and/or learning of the event too late. The best strategy for improving knowledge of the timing and content of upcoming meetings is to improve the tools already in place. For example, meetings are typically advertised through e-mail, radio, and public notices. Increasing the number of people that receive the message firsthand through one or more of these venues will in turn broaden the range of community members who receive the information through word of mouth. Strategies to increase the number of firsthand recipients of the information include: broaden the e-mail invitation list, evaluate and remedy the limitations of VHF radio broadcast that result in a limited radio audience, investigate and test additional venues for written notices and/or announcements (e.g., churches, community bulletin boards, newsletters). Timing of the notice is also important. Providing information about dates, times, and content of meetings early enough for people to arrange their schedules will improve the chances for good attendance.

Active Participation—Once attendance is achieved, a successful meeting depends on active participation of the attendees. As discussed at the RMP workshop, communication and collaboration of ideas and results may need to be presented in several different formats so that all stakeholders can understand the implications and feel comfortable enough to provide input. Language barriers exist between some stakeholder groups, and there also exists the potential for lack of representation if some individuals or groups choose not to participate. This can be alleviated to some extent by using appropriate language and terminology, using translators, and providing information and opportunities for input using varied formats (e.g., formal presentations, informal discussions, small workgroups, written materials and questionnaires, etc.). One of the most effective ways to elicit participation is to build trust through development of a consistent long-term working relationship.

Follow-up—Attendance and participation at a community meeting will depend, to a large degree, on the experience of attendees at past meetings. In particular, if a person feels as if their participation at past meetings has been considered and accounted for, they will be more likely to feel engaged and have a sense of ownership, and more likely to fully participate in the future. The first key to fostering this sense of ownership is to explicitly address the input given during the meeting, but also to provide effective, timely follow-up. This can take the form of circulating meeting minutes that identify issues raised and actions to be taken to address the issues, revisiting the issues at the following meeting with information on how they were

addressed, and/or identifying in some venue how the input was incorporated in the program (e.g., in the review process, on a portion of the web portal dedicated to the program, through e-mail updates).

4.1.2 Reports and Information Sharing

A large amount of information is generated by the Red Dog environmental programs, including technical and monitoring reports, notices, meeting minutes, legal agreements, and schedules. Much of this information relies on the input of multiple stakeholders to ensure it is complete, effective, understandable, and scientifically sound. For example, development of a monitoring plan may require technical input from NPS scientists and other stakeholders, regulatory input from DEC, and traditional knowledge input from community members. Improved methods are needed to share this information, and even to improve the awareness that the information exists. One idea discussed at the RMP workshop was to develop a web portal serving as a repository and access point for all documents related to Red Dog environmental activities, including reports, schedules, plans, and links to other relevant information. Implementation of such a portal would likely include improved e-mail distribution lists and establishment of e-mail groups in order to effectively alert people when content is added, or when review and input is needed. The portal would also need to provide a simple interface which would assist the user to search for and find desired documents and information.

5 Actions to Be Implemented

The overall goal of the RMP is to minimize risks associated with fugitive dust emissions from Red Dog Mine operations. Communication and collaboration efforts are essential to achieve this overall goal, and thus should be integral to all fugitive dust related efforts. In this section, specific actions are defined to accomplish the goal of this communication plan, which is “To establish consistent methods for communication and collaboration among stakeholders regarding efforts related to dust emissions issues.”

In this section the standard communication guidelines discussed in the previous section are applied to Red Dog fugitive dust-related issues by defining a specific set of planned actions and priorities. Table 3 summarizes examples of communication actions available for use in developing a communication plan. The specific actions selected to accomplish the goals of the communication plan are summarized in Table 4, along with planned timelines for implementation. This list of actions draws from each of the three communication-related categories identified earlier in the plan and outlined in Table 2 (i.e., communication, collaboration, and education/outreach).

The current plan provides a set of actions that meet the goal of effectively communicating ongoing issues and efforts related to fugitive dust emissions. In addition, the specific actions developed in this section and in Table 4 can be viewed as an example or template for development of other future plans. Figure 1 illustrates important milestones in the development of a fugitive dust-related implementation or study plan, and provides the specific actions to be implemented associated with this communication plan.

The following sections describe details of the communication plan implementation that is outlined in Table 4.

5.1 Technical Review Workgroup

The Ikayuqtit Review Team will be expanded to incorporate other existing stakeholder representatives/groups and serve as the technical review committee for fugitive dust-related studies and reports. The mission for the Ikayuqtit Team will be clearly defined along with a framework for deciding what will be reviewed and how that input will be acted upon. This creates a clear process for technical review using an existing organizational structure. The expanded Ikayuqtit Team will initially be composed of representatives of the stakeholder groups that participated in the RMP workshop.

5.2 Community Meetings

Teck will continue to organize community meetings and distribute information regarding Red Dog environmental operations and activities on a regular schedule. Face-to-face meetings foster positive working relationships and increase trust. In addition, they provide a forum for soliciting local traditional ecological knowledge for incorporation into study planning and

design. The strategies for improving adequate and representative participation in community meetings described in the previous section, *Strategies for Effectiveness*, will be incorporated (i.e., scheduling, active participation, and follow-up).

5.3 Web Portal and E-mail Lists

Teck will establish an information-sharing portal/clearinghouse providing access and/or links to fugitive dust-related studies, reports, and other information. The purpose of the portal will be to facilitate collaborative development, review, and reporting of studies, monitoring programs and dust control efforts with stakeholders in the expanded Ikayuqtit Team. When documents are finalized and/or ready for public review, they will be made available on the open access Red Dog website (www.RedDogAlaska.com). Teck will work with state agencies to ensure accessibility of documents for public access and review, and provide links from the web portal and Red Dog website where appropriate. Associated with this effort, Teck will update and expand e-mail lists and use them to notify stakeholders of additions and/or revisions to the web portal, or when review and input is needed, thereby increasing knowledge of new information, access to that information, and input on it. Overall, this approach incorporates several improved information sharing strategies that were identified as part of the RMP stakeholder workshop process.

5.4 Written Technical Communications

During the RMP workshop, it was identified that technical reports and other written communications are often difficult for the layperson to understand. To improve stakeholders' understanding of technical information, a simplified summary will be prepared for all technical reports. In some cases this will consist of a short summary at the beginning of the document. The need for a separate Fact Sheet, similar to the one developed for the DMTS Fugitive Dust Risk Assessment, will be considered on a case-by-case basis. In addition, Teck will develop a brief annual summary of prior-year fugitive dust-related activities and accomplishments, and planned programs for the upcoming year. The annual summary will provide a sense of continuity and communicate how information gained from past activities will be used to develop future actions.

5.5 Education and Outreach

Education and outreach actions include those activities that are related to, but outside the immediate scope of, activities associated with Red Dog dust issues. They are focused toward providing additional opportunities for stakeholders to gain more understanding and participation in Red Dog operations as a whole, and health and environmental efforts in particular. Several education and outreach actions were proposed by stakeholders during the RMP process. The following actions have been identified as achievable for the dust-related communication efforts:

- Provide periodic (e.g., quarterly) radio updates on KOTZ
- Publish newsletter articles in either external (e.g., NANA Hunter or NANA's new lands focused newsletter) or internal (e.g., Dog Patch) publications that provide information about Red Dog dust-related issues or related information
- Improve signage and other institutional controls, and increase awareness through community meetings
- Offer tours of mine operations and dust control efforts at Red Dog facilities for stakeholders.

Additional education and outreach activities will be considered as time and resources allow. For example, some stakeholders identified their desire for various types of environmental or technical training opportunities. Although not explicitly included in this plan, the opportunity to provide education and training, perhaps through the Ikayuqtit Team, will be evaluated. As another example, it is anticipated that press releases may be developed for significant events or study findings to reach a wider audience beyond the immediate stakeholders.

The remaining sections of this document describe details of the Communication Plan implementation, including periodic review and reporting, milestones for completion and review of the plan, and stakeholder involvement in the plan.

6 Periodic Review and Reporting

The effectiveness of the Fugitive Dust Communication Plan will be evaluated both on its effectiveness at meeting the communication goals for the actions to be implemented as part of this plan, and on the effectiveness of communication efforts for other related plans and programs that are developed based on the framework presented in this plan. Therefore, review of the Communication Plan is necessarily tied to review of other plans and programs. To that end, annual review of the Communication Plan will involve the following tasks:

1. Review of the effectiveness of communication efforts associated with general Red Dog environmental and fugitive dust efforts (as outlined in Section 5)
2. Review of the degree to which each category of communication actions have been incorporated in other plans and programs implemented during the year
3. Review of the communication effectiveness evaluations conducted as part of the review of those other plans and programs
4. Identification of necessary modifications and additions to the standard communication guidelines (in Section 4 of this plan) to improve effectiveness of communication efforts for general Red Dog environmental and fugitive dust efforts and for other plans and programs
5. Revision of the Communication Plan, as appropriate
6. Communication efforts associated with the review process will include:
 - a. Notice of the timing and scope of the review, along with an invitation to stakeholders for input
 - b. Communication of the results of the review process to stakeholders
 - c. If substantial revisions are made to the Communication Plan, a formal external review process will be considered, including release of a draft revised Communication Plan. In most years the degree of modification needed is expected to be limited, and thus a formal external review process will not typically be warranted.
 - d. General comments and input will be welcomed on an ongoing basis.

7 Milestones

Important milestones for the Communication Plan include:

- Scope and goal of plan: August 2008 (in draft RMP)
- Stakeholder/public review: April 2–May 2, 2009
- Final draft release: February 2010
- Annual report and review: January 2011 as part of the annual fugitive dust risk management report.

8 Stakeholder Roles

Review of the draft remediation plan will be invited from all stakeholders and from the public as outlined in Section 7, *Milestones*, and in the flowchart shown in Figure 1. After the plan has been completed, future periodic review and input will also be welcomed, as indicated in Figure 1.

9 References

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Figure

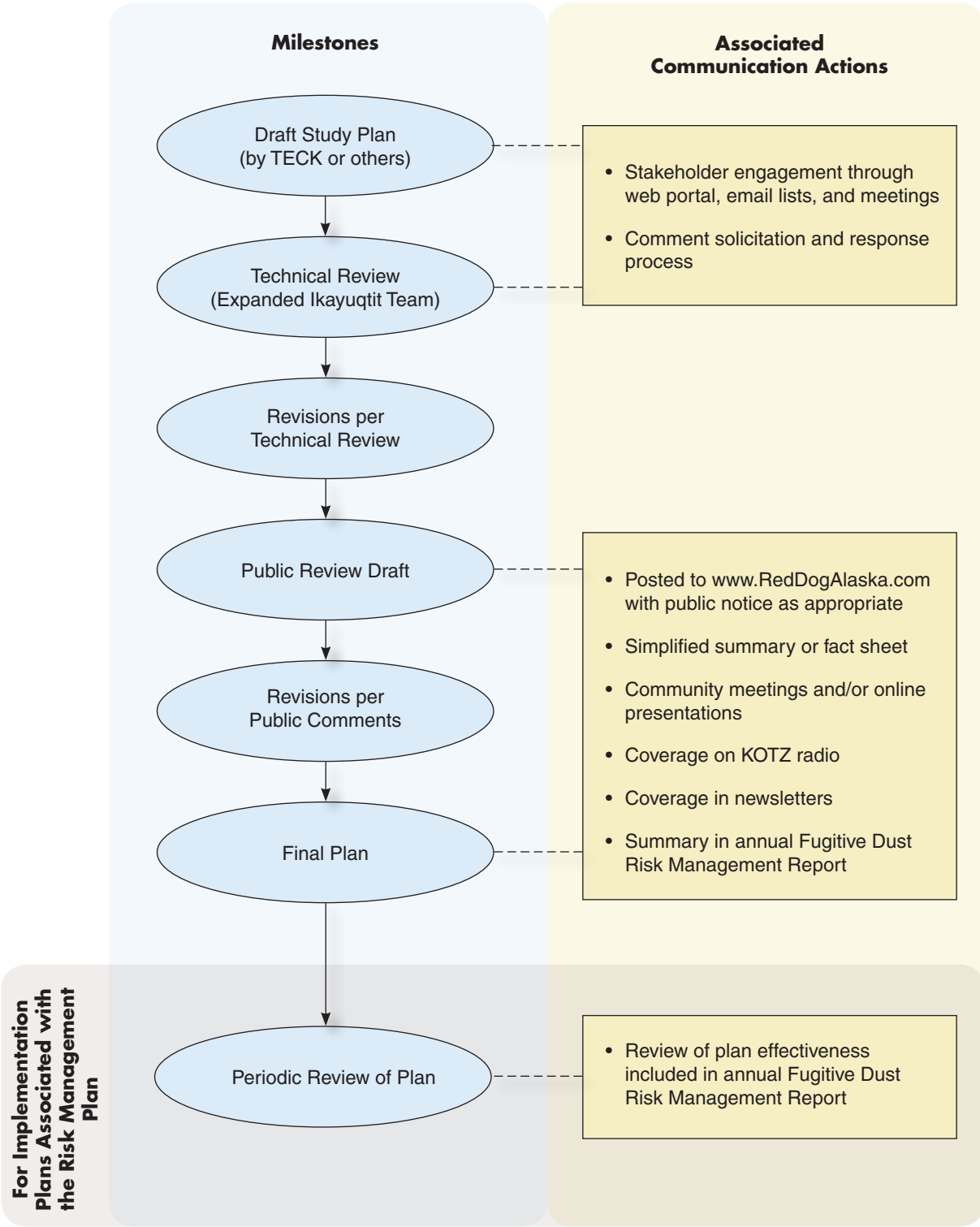


Figure 1. Plan development flowchart illustrating associated communication actions

Tables

Table 1. Priority ranking of communication actions identified in risk management workshop

Potential Actions ^a	Priority Ranking
Collaboration (Working together as a team)	
Facilitate state agency involvement with studies for third-party review and oversight	1
Incorporate local traditional ecological knowledge into study planning and study designs	1
Develop sampling program for food currently in freezers	2
Communication (Providing information)	
Simplify technical reports and facilitate better comprehension of technical information for all stakeholders	1
Provide reports on prior-year programs and planned programs for upcoming year	1
Improve communication between local contacts and appropriate agencies	1
Provide agency guidance on exposure levels for children and adults	2
Provide information on funding commitments and financial assurances for long-term studies and monitoring, given uncertainty of long-term effects	1
Improve signage and other institutional controls, and increase awareness of institutional controls through community meetings	2
Communication and Collaboration	
Establish e-mail group for all stakeholders for information sharing	1
Develop an information-sharing portal/clearinghouse for regular reporting of studies, monitoring programs, and dust control efforts	1
Organize community meetings and distribute information on a regular schedule (versus only regionwide)	1
Provide presentations of study plan design, study progress, and results by all stakeholders (e.g., through web-based presentations, in-person workshops, conferences, etc.)	2
Education and Outreach	
Facilitate education on language and cultural differences	1
Employ local residents in Kivalina, Noatak, and Kotzebue as a village/mine liaison	1
Employ local residents to assist with sampling programs	1
Identify local person responsible for collection and submittal of unusual or abnormal subsistence foods	1
Offer public tours of mine operations and dust control efforts	1
Provide monthly or quarterly KOTZ radio updates	2
Provide environmental education at schools and community groups	2
Provide technical training for environmental jobs in the region (capacity-building)	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. Details are provided in the Risk Management Plan and the text of the Communication Plan.

Table 2. Communication elements and potential actions available to all plans and programs

	Options Available at Various Program Stages		
	Planning	Implementation	Review and Reporting
Collaboration (Working together as a team)			
Technical review workgroups	X		X
Comment solicitation and response process	X		X
Training and/or education for local residents		X	
Community meetings	X		
Workshops	X		
Web portal	X		X
Communication (Providing information)			
Community meetings	X	X	X
Workshops	X		
Radio broadcasts	X		X
Technical reports			X
Backgrounders and fact sheets			X
Web portal	X	X	X
E-mail list	X		X
Education and Outreach			
Training and/or education for local residents	X	X	X
Facility tours		X	
Backgrounders and fact sheets			X
Radio broadcasts			X
Web portal	X		X

Table 3. Examples of environmental communication actions

	Examples of Actions	Source
Collaboration (Working together as a team)		
Technical review workgroups	Facilitate state agency involvement with studies for third-party review and oversight	RMP
	Formation of the Ikayuqtit Team to promote fugitive dust data exchange and communication between NANA, Teck Cominco, AIDEA, and NPS	RMP
	Development of Memorandum of Understanding with DEC to communicate actions being taken on fugitive dust-related activities and invite agency participation in the development of the actions	RMP
Comment solicitation and response process	Simplify technical reports to facilitate better comprehension of technical information for all stakeholders	RMP
Training and/or education for local residents Community meetings	Employ local residents to assist with sampling programs	RMP
	Organize community meetings and distribute information on regular schedule (versus only regionwide)	RMP
	Incorporate local traditional ecological knowledge into study planning and study designs	RMP
Workshops	Village meetings to elicit community input and traditional knowledge for inclusion in the DMTS risk assessment	RA
	Workshops in Anchorage and Kotzebue to elicit and incorporate input from all stakeholders into reclamation and closure plan	RCP
Web portal	Workshop in Anchorage to elicit and incorporate input from all stakeholders into RMP	RMP
	Develop an information-sharing portal/clearinghouse for regular reporting of studies, monitoring programs and dust control efforts	RMP
Other	Provide presentations of study plan design, study progress, and results to all stakeholders (e.g., through web-based presentations, in-person workshops, conferences, etc.)	RMP
	Develop sampling program for food currently in freezers	RMP

Table 3. (cont.)

	Examples of Actions	Source
Communication (Providing information)		
Community meetings	Organize community meetings and distribute information on regular schedule (versus only regionwide)	RMP
	Village meetings associated with planning, conducting, status, and reporting of the DMTS risk assessment	RA
	Village meetings associated with reclamation and closure plan development and analysis	RCP
	Periodic meetings and presentations to the villages in the region regarding Red Dog environmental operations and activities	RDEO
	Village meetings to discuss results of risk management workshop, draft plan, and the path forward for implementation plans	RMP
Workshops	Workshops in Anchorage and Kotzebue to elicit and incorporate input from all stakeholders into reclamation and closure plan	RCP
	Workshop in Anchorage to elicit and incorporate input from all stakeholders into RMP	RMP
Radio broadcasts	Provide monthly or quarterly KOTZ radio updates	RMP
	Advertisement of village meetings using radio announcements	RMP
Technical reports	Provide reports on prior-year programs and planned programs for upcoming year	RMP
	Provide agency guidance on exposure levels for children and adults	RMP
	Development of Memorandum of Understanding with DEC to communicate actions being taken on fugitive dust-related activities and invite agency participation in the development of the actions	RMP
Backgrounders and fact sheets	Simplify technical reports to facilitate better comprehension of technical information for all stakeholders	RMP
Web portal	Develop an information-sharing portal/clearinghouse for regular reporting of studies, monitoring programs, and dust control efforts	RMP
E-mail list	Working with state agencies to post documents on state websites for public access and review	RDEO
	Establish e-mail group for all stakeholders for information sharing	RMP
	Advertisement of village meetings using e-mail lists	RMP
Other	E-mail list invitations to workshops	RMP/RCP
	Improve communication between local contacts and appropriate agencies	RMP
	Provide information on funding commitments and financial assurances for long-term studies and monitoring, given uncertainty of long-term effects	RMP
	Improve signage and other institutional controls, and increase awareness of institutional controls through community meetings	RMP

Table 3. (cont.)

	Examples of Actions	Source
Education and Outreach		
Training and/or education for local residents	Employ local residents in Kivalina, Noatak, and Kotzebue as a village/mine liaison	RMP
	Identify local person responsible for collection and submittal of unusual or abnormal subsistence foods	RMP
Facility tours	Provide environmental education at schools and community groups	RMP
	Provide technical training for environmental jobs in the region (capacity-building)	RMP
	Offer public tours of mine operations and dust control efforts	RMP
	Tours of Red Dog facilities	RDEO
Backgrounders and fact sheets	Simplify technical reports to facilitate better comprehension of technical information for all stakeholders	RMP
	Media short sheet briefings	RDEO
Radio broadcasts	Risk assessment fact sheet and press release	RA
	Provide monthly or quarterly KOTZ radio updates	RMP
Web portal	Develop an information-sharing portal/clearinghouse for regular reporting of studies, monitoring programs, and dust control efforts	RMP
Other	Facilitate education on language and cultural differences	RMP

Note: RA - DMTS Fugitive Dust Risk Assessment
RCP - Reclamation and Closure Planning
RDEO - Red Dog Environmental Operations
RMP - Fugitive Dust Risk Management Plan

Table 4. Fugitive dust communication plan actions

Actions	Planned Timeline for Implementation	Purpose
Technical Review Workgroup		
1) Expand Ikayuqtit technical review team to incorporate other existing stakeholder representatives/groups	Winter 2009	Creates a clear process for technical review using existing structures.
2) Define clear goals for the Ikayuqtit Team (e.g., a framework for deciding what will be reviewed and how that input will be acted upon)	Winter 2009	Identifies which stakeholder group technical review is appropriate for which activities.
Community Meetings		
1) Continue to organize community meetings and distribute information regarding Red Dog environmental operations and activities on a regular schedule	Monthly, Quarterly, Annually (coordinated)	Creates a predictable schedule for meetings. Increases trust and positive working relationships.
2) Advertise community meetings using radio announcements		Forum for soliciting local traditional ecological knowledge for incorporation into study planning and design.
Web Portal and E-mail Lists		
1) Develop an information-sharing portal/clearinghouse for regular reporting of fugitive dust studies, monitoring programs, and dust control efforts to stakeholders within the expanded Ikayuqtit Team	Winter 2009	Creates a single clearinghouse for access to all fugitive dust related documents, work plans, studies, and data. Increases knowledge of both the existence of new information and access to that information.
2) Work with state agencies to ensure accessibility of fugitive dust related documents for public access and review, and provide links from web portal	Winter 2009	
3) Update and expand e-mail lists and use them to notify stakeholders of additions and/or revisions to web portal, or when review and input is needed	Winter 2009	
Written Technical Communications		
1) Develop an annual report that summarizes prior-year activities and accomplishments and planned programs for the upcoming year	Winter 2010	Summarizes in one place yearly accomplishments and activities and plans for the future.
2) Provide a simplified summary or fact sheet for all technical reports to facilitate better comprehension of technical information for all stakeholders	Ongoing	Provides sense of continuity and communicates how information gained from past activities is used to develop future actions.
Education and Outreach		
1) Provide periodic (e.g., quarterly) radio updates on KOTZ.	Spring 2009	Activities related to, but often outside the immediate scope of standard Red Dog Environmental Operations. Focused toward providing additional education and training and/or opportunities for stakeholders to gain more understanding and participation in Red Dog operations as a whole, and health and environmental efforts in particular.
2) Publish newsletter articles in either external (e.g., NANA Hunter or new lands focused newsletter) or internal (e.g., Dog Patch) publications that provide information about Red Dog dust-related issues or related information	Quarterly, beginning Summer 2009	
3) Improve signage and other institutional controls, and increase awareness through community meetings	Summer 2009	
4) Offer tours of mine operations and dust control efforts at Red Dog facilities for stakeholders	TBD	