

Annual Environmental Refresher Training

February 2024

Teck

Environmental Stewardship at Red Dog – A Strong Environmental Program

The framework that supports Red Dog's environmental program has three main components:

Environmental, Health, Safety and Community Policy

ISO 14001 Certified Environmental Management System (EMS) & SiteLine

Legal Requirements and Other Commitments

Red Dog Environmental, Health, Safety & Community (EHSC) Policy

You can get a copy of the EHSC policy:

- In SiteLine/Resources /Red Dog EHSC Policy
- In Qualtrax (#2012)
- From your Supervisor
- From the Environmental Department
- Also posted on various bulletin boards around site

Three Key Environmental Points of the EHSC Policy

P

Prevent pollution and reduce waste;

I

Continual improvement in the identification of environmental, health, and safety risks and eliminate, isolate, or mitigate the risks that could injure or harm people, the environment, local communities, or subsistence resources; circumstances

C

Comply with all environmental, health and safety regulations, permits, and other environmental, health, safety, and community commitments;

P= Prevent Pollution and Reduce Waste

What is Red Dog doing to prevent pollution and reduce waste?

- Managing water to meet APDES Discharge Permit Limits.
- Cleaning up spills to prevent pollution of the soil and water bodies.
- Controlling fugitive dust.
- Making sure all our wastes, hazardous and non-hazardous are disposed of properly and that recycling is a priority.



I = Continual Improvement

What is Red Dog doing to continuously improve its environmental performance?

- Streamlining waste management and promoting recycling for sustainability
- Reducing spills wherever possible.
- Water quality management improvements help cope with climate change and thawing permafrost impacts

C = Comply with all Laws, Regulations & Permit Stipulations

Red Dog stays in compliance by:

- Keeping abreast of changing regulations at the State and Federal level.
- Updating SiteLine with compliance assignments so that everyone knows their responsibilities.
- Asking each employee to complete their compliance assignments on time.

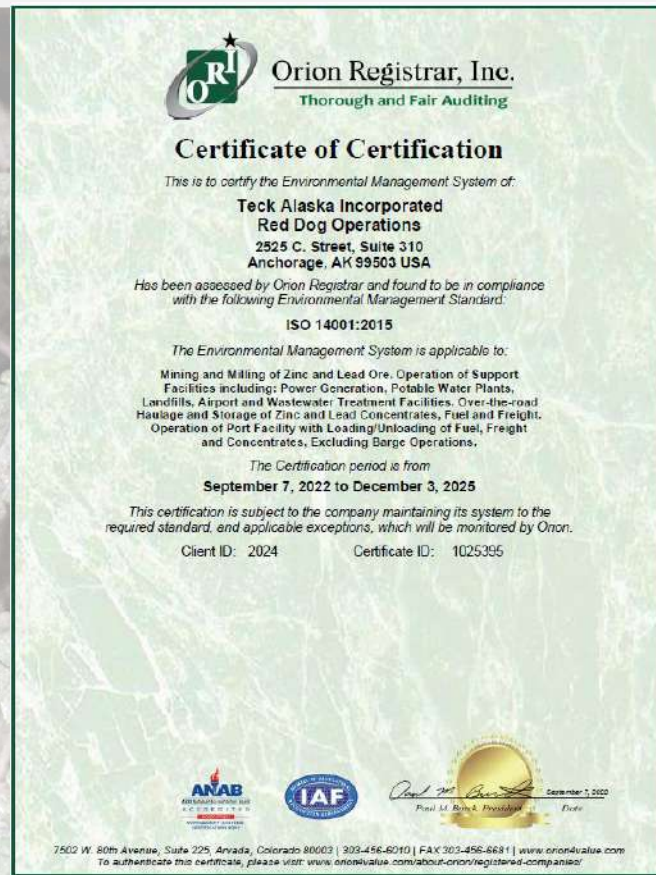
Remember P I C



ISO 14001 EMS Was Re-Certified Until 2025

Recertification Audit occurs on a 3 year cycle, the next one is in 2025.

The 2024 Surveillance audit is
August 8-12.



What is an Environmental Aspect?

Recognizing Potential Impacts

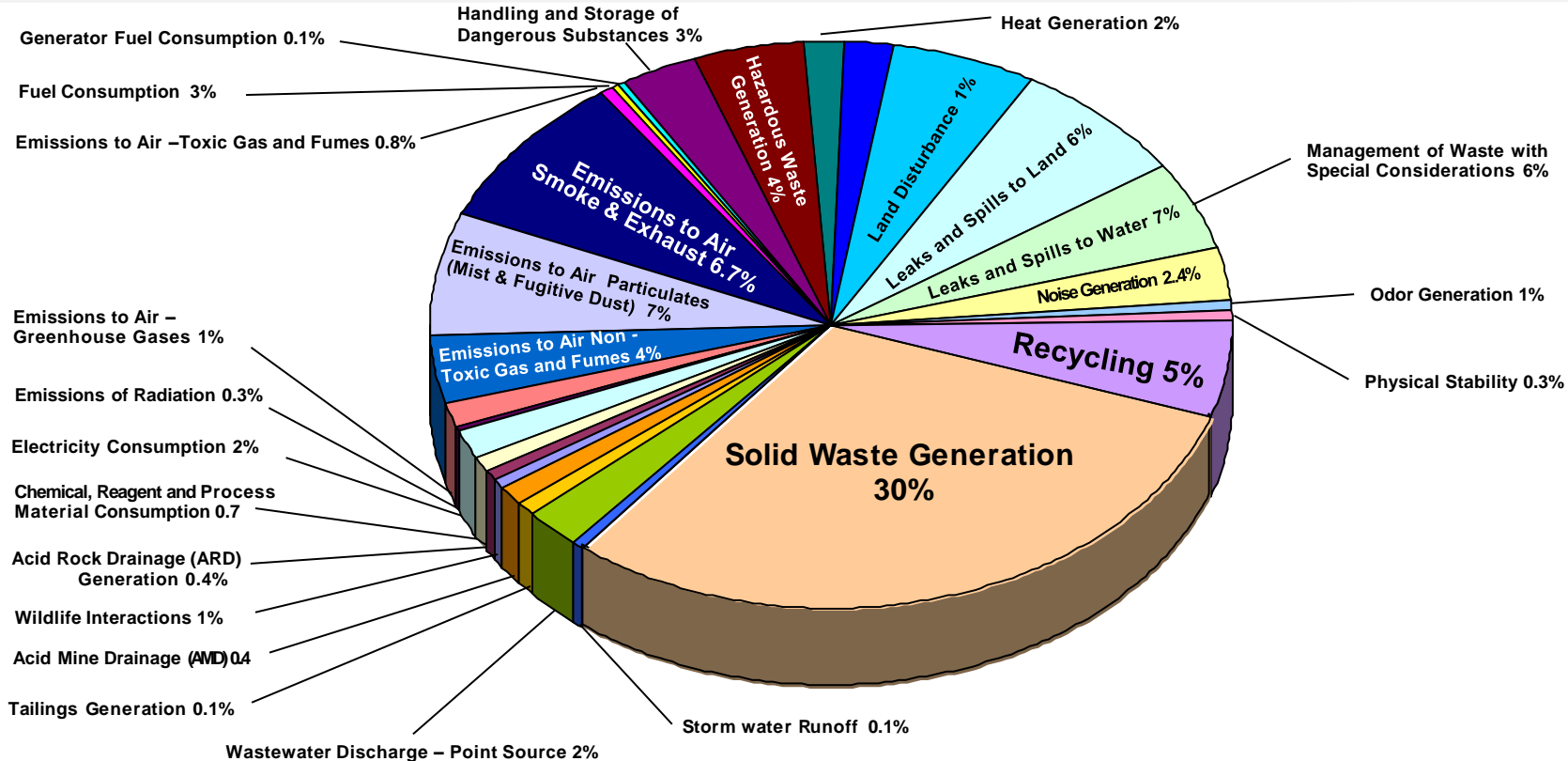
ISO 14001 Definition: “element of an organization’s activities, products or services that can interact with the environment”.

Plain English: “Something we do at Red Dog that affects the environment”.

Consider how your job relates to the Environmental Aspects – it’s a question EMS auditors are likely to ask.

What are the Environmental Aspects at Red Dog?

1483 Aspects – All Ways to Potentially Affect Our Environment



Significant Environmental Aspects of Red Dog Operations

1. Discharges to Water
2. Emissions to Air
3. Land & Wildlife Disturbance
4. Consumption of Energy & Materials
5. Product & Waste Handling

How Could Your Job Impact Red Dog's Environmental Aspects?

A question frequently asked by EMS auditors:

“If you chose not to follow the SOPs and other work procedures, what environmental consequences could occur?”

Aren't sure? Discuss it with your supervisor, ask in a safety meeting, or chat with Environmental.

Red Dog Environmental Requirements & Commitments

67 Permits
49 Regulations
21 Work Plans
15 Agreements
10 Standards
6 Approvals
1 Court Order

Nearly 3,000
Compliance
Requirements

Over
28,000
Tasks
per Year

Compliance Components That Keep Us Mining

This is how we reduce and minimize our environmental impacts:

- EMS and Siteline to Organize Schedule and Track Compliance
- Proper Operation – Following SOPs
- Monitoring and Data Collection
- Quality Control and Calibration
- Reporting
- Proper Maintenance



- **Record Keeping – inspections, calibration records, maintenance records**

Waste Management

Everyone's Job



Waste Segregation – 4 General Categories

- **Incinerator refuse:**

- Leftover food
- Food containers
- PAC and Office waste



- **Landfill Refuse (Trash):**

- Pallets (contaminated)
- Cardboard (contaminated)
- Used Air Filters

- **Special Management:**

- Chemicals
- Paints
- Solvents
- Medical



- **Recyclables:**

- Cardboard
- Paper
- Batteries (all types)
- Used oil
- Cooking oil
- Pallets
- E-Cartons
- Electronic waste
- Tires
- Aluminum cans
- Plastic bottles
- Drained and crushed metal oil filters
- Punctured aerosol cans
- Scrap metals



Waste Segregation at the Port

- **Landfill Refuse (Trash):**

- Pallets (clean & uncontaminated)
- Cardboard (clean & uncontaminated)
- No Air Filters!



Food Waste - Where Does It Go?

Food waste goes into a **Covered Dumpster** and then to the **Incinerator**.

- **All PAC trash cans go to the incinerator.**
- **All office trash from administrative & other offices goes to the incinerator.**

Food waste can be put in these trash cans, unless a sign says specifically **not** to do so (for instance in locker rooms where food and drink is already prohibited).



Some Things Don't Burn!

Read the signs, some trash containers go to **Open Dumpsters**, they are for items which are damaged or otherwise no longer useable:

- Rubber Boots
- Hardhats
- Other PPE

These go directly to the **landfill**.

Trash containers, like the one in the Men's Locker Room is clearly labeled **(No Food)**.



Some Things Cannot Go into a Dumpster!

Recycle – Recycle – Recycle!

Food Waste, Batteries, Bulbs, Medical Sharps, Oily Waste, Solvents, Other Liquids, or Hazardous Waste



NO food, NO lightbulbs, NO sharps, NO aerosols

- In the PAC and Service Complex are appropriate containers for recyclable items.



Special Waste Segregation – Medical Sharps

- Put all medical sharps (needles) in designated containers, available from medic.
- You are responsible for returning the container to the medic.
- **DO NOT PUT NEEDLES, RAZORS, OR OTHER SHARP OBJECTS IN ANY OTHER TRASH CONTAINER!**



Special Waste Segregation – Coverall Sharps

CHECK YOUR COVERALL POCKETS!



- Make sure your not sending something dangerous to the laundry.
- These things can damage people, and equipment, and have in the past.

Segregating General Refuse

Open Dumpsters



Open Dumpster

Landfill Wastes

Only clear plastic bags

NEVER put food or food containers in an open dumpster!

Covered Dumpsters



Covered Dumpster

Incinerator Wastes

Black or opaque plastic bags



Open Dumpster Issues

In particular, the dumpster outside the Bucking Room repeatedly has food waste deposited in it.

New signage was placed near the dumpster yet this issue continues to reoccur.

Please make sure you understand that food waste never goes in an open dumpster.



Improper Food Waste Management Creates Extra Work

Improper food waste disposal triggers a flood of extra work (and extra cost):

- It is an agency-reportable permit or regulatory violation requiring a noncompliance report (SIR) in SiteLine.
- Noncompliance SIR corrective actions must be completed, tracked and closed out.
- Various departments must respond to correct the noncompliant food waste disposal conditions.
- Dumpster “owner” or other departments will have to clean out a dumpster (food waste re-handling)
- Surface crew is delayed in taking dumpsters to the landfill (dumpster re-handling may be required).
- The camp landfill may require clean up.
- Nuisance wildlife may need to be hazed or trapped & relocated.
- Previously trapped & relocated nuisance wildlife which returns to site may have to be destroyed.



Ensuing Landfill Issues

If food waste is placed in an uncovered dumpsters, it will end up in the landfill and a Noncompliance SIR must be created.

RDO permits prohibit placing of *non-incinerated* food waste in either the Mine or Port landfills – such incidents are permit violations and require State reporting!

Please make sure you – and your contractors – are putting food wastes in the correct container!



No Unauthorized Access to the Landfill

- Only the Surface Crew is allowed to deposit waste into the Landfill.
- Don't drop off any miscellaneous project wastes, or clean out your pick-up truck at the Landfill.
- **Be sure any contractors are aware of this restriction.**
- Ask for a dumpster if you need one for a project cleanup.

Oily Wastes – Feed the Incinerator!

- **Definition:** Oily gloves, rags, sorbents, or anything containing oil that cannot be washed.
- For awhile, Oily Absorbs were being shipped offsite, but due to some EPA regulation changes, we can again burn absorbs in our incinerator.
- Absorbs should be in oily waste bags, and be put into covered dumpsters.



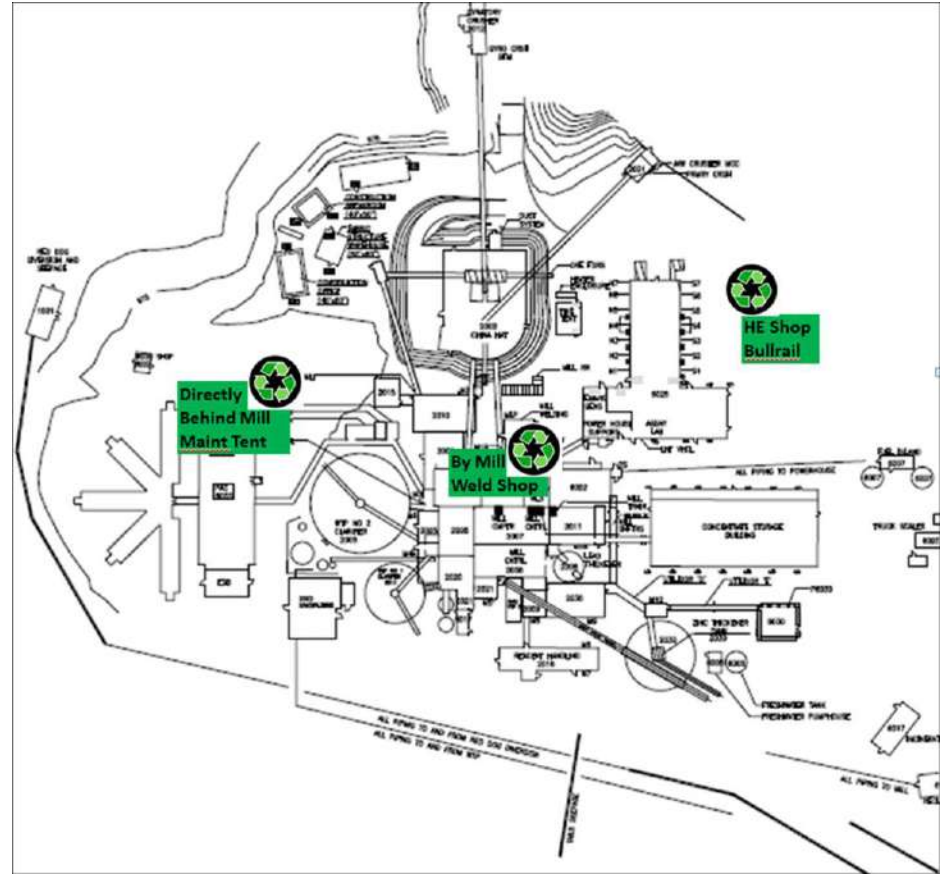
Scrap Metal Recycle

In 2020 and 2021 Red Dog diverted a total of **457 tons** of metal from the Landfill!



Any scrap metal can go in these containers!

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Scrap Metal Recycle

Four other locations for scrap metal recycle:

- In Front of the DD2 Tent Shop
 - At the Landfill Entrance
 - CC Camp Bull Rail
- Port Millwright's Shop



Scrap Metal Recycle

SPECIAL PROJECTS WITH Lots and Lots OF SCRAP METAL?

Do you have an upcoming special project that will generate a lot of scrap metal, or that will produce large amounts of high quality metals such as:

- aluminum
- stainless steel
- copper (including bronze, brass)
- exotic metals (magnesium, scandium, tungsten carbide, etc.)

Contact Environmental Department and they will help you get set up with a container dedicated your project!

Container Labeling

Proper Handling of Chemicals and
Chemical Wastes



Container Labeling – Label Everything!

- The Code of Federal of Regulations requires all hazardous products and wastes be labeled.
- The OSHA standard requires all non-hazardous chemicals and waste be labeled. MSHA defers to both standards.
- If a unlabeled container is left unattended, even for a few minutes, it is considered non-compliant.
- During inspections or audits, one of the first things checked is appropriate labeling on every container.
- Unlabeled containers are an inspector/auditor's best friend because they are usually so easy to find!



Don't Be Easy! Label Everything!

Never Mix Wastes!



- **Never mix wastes** without prior approval from the Environmental Department
 - Don't mix solids and liquids in the same container
 - Don't mix hazardous waste and non-hazardous waste in the same container
- **Segregate** (separate) different types of waste properly

Spills

“Stop The Drop”

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Spills: What to Report? - Everything!

- Chemicals
- Concentrate and Slurries
- Oils and Glycols
- Processed/Treated Water
- Sewage and Hazardous Wastes
- Oil Spills >55 Gallons to Secondary Containment
- Any chemicals spilled to Secondary Containment (except when inside mill building)

ALWAYS

**report any spill to
tundra or water
promptly! It
requires immediate
regulatory
notifications.**

Spills: What Does Not Have to be Reported?

- Unprocessed Bons Creek water is the **only** spill that does not have to be reported to the State.
- Small petroleum and glycol spills into a **containment** (less than 55 gallons spilled) are not reported to the State.
- Small petroleum or glycol spills of less than a gallon do **not** have to be reported to the State, but even a teaspoon of hazardous substances **does** have to be reported.
- Spill reporting laws are complex, so **keep it simple**, just report everything to your supervisor, no matter how small, and the Environmental Department will sort out who has to be notified.



Spills: How Do I Report a Spill?

- Report Spills **IMMEDIATELY** – **not** reporting is against the law!
- Tell Your Supervisor
- Call Spill Reporting Line at 45367
- If there is no answer, call Mill Control Room at 45222 or 911– they will contact Spill Chief/Officer.
- If you are not by a phone, radio Mill Control Room on channel 4 – they will contact Spill Chief/Officer.
- On the Port Road radio channel 3.



There are no penalties from the State of Alaska for reporting a spill, only for the lack of reporting.

Spill Response

Small Spills:

Report immediately to your supervisor and help with the spill clean up, don't leave it for someone else to take care of.

- Locate nearest spill kit: absorbent pads, PPE, bags in which to dispose of used absorbent, and used PPE –Call Environmental if you need help.
- You are required to report even small spills, to help Teck determine whether there is a pattern or other root cause of the spill, that could be eliminated in the future.

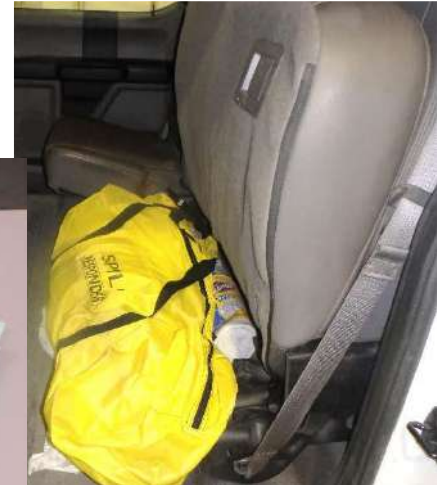


Spill Kits

- Some Departments have started building, inspecting and maintaining their own Spill Kits.
 - Mobile spill kits for vehicles and equipment.
 - Stationary spill kits at strategic locations.

“Stop the Drop” Mobile Spill Kits

1. Duffle bag – **S/C: 243407**
2. 1x Duck Pond with 28-gallon capacity – **S/C: 234137** a. Duck Ponds can only be “in service” for 5-years as part of a kit
3. 10x Oil absorbent pads – **S/C: 13265**
4. 10x Coolant absorbent pads – **S/C: 107658**
5. 2x “Oily Waste” bags – **S/C: 134226**



Fueling and Spill Prevention

- Fueling is a very common cause of spills/leaks at Red Dog.
- Overfilling contributes to many spills.
 - You are required to remain with your equipment the entire time it's fueling.
 - Observe the entire process. Please pay attention!
 - Stop fueling in event of leak, spill or unusual occurrence.
- Try and empty the fuel hose before removing the nozzle.
- Immediately report and clean up any spills or leaks.

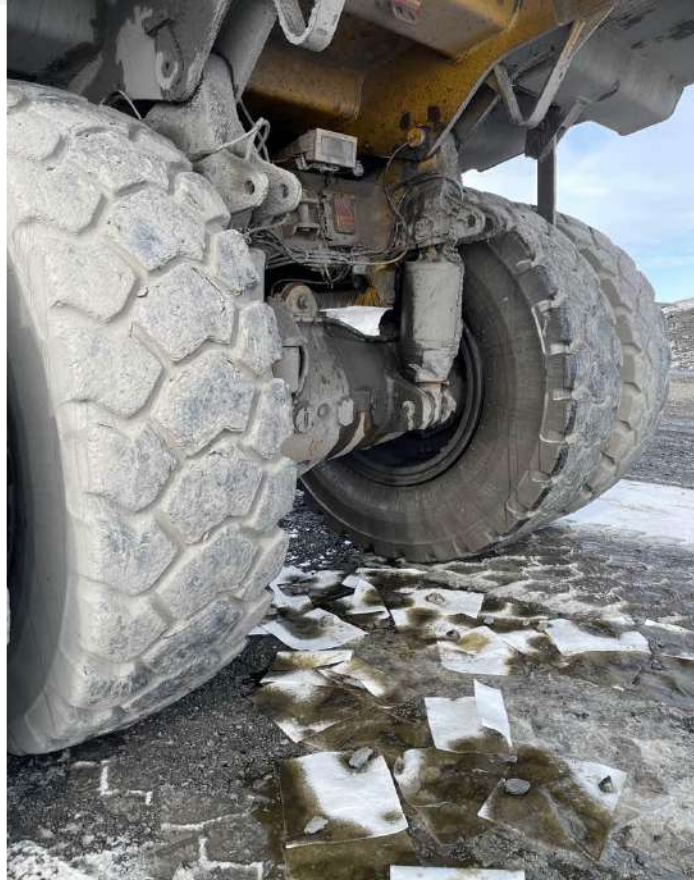


Don't put Red Dog at risk of noncompliance with careless fueling practices.

2023 Spills in Review

57 Reportable Spills of Petroleum “Oil” Products at Year End.

- Three largest oil spills in 2023 were related to transporting used oil and hydraulic oil stored in drums and totes: 110 gallons, 100, and 225 gallons were spilled.



- The next two largest spills were due to failed hoses on equipment, 40 and 55 gallons were spilled.

Who Needs Special Spill Prevention Training?



Oil Handlers: Job duties directly involving inspection, maintenance, or operation of oil storage and oil transfer equipment.



Contractors: Training may be required.

For Example:

- Checking or testing overfill prevention devices.
- Maintaining or repairing secondary containment, tanks, piping.
- Re-fuelers.
- NANA/Lynden truck drivers.
- Barge fuel transfer team.
- Inspectors of secondary containment, storage tanks, equipment and/or piping.

Other Permit Requirements

Air Quality, Storm Water,
Cultural Resources, & Wildlife



Management of Mine Road Dust

Air Quality Permit Stipulations for the Surface Crew



- Permit requires some sort of dust suppression be applied to Red Dog roads before July 10 of every year.
- Usually dust suppression, either road watering or calcium chloride application, starts in May, depending on weather conditions.
- Application of water or calcium chloride is effective at reducing fugitive dust below the permit limit.

Management of Mine Road and Stockpile Dust

The 2-Minute Rule

If anyone observes clouds of dust for more than 2 minutes, they are supposed to notify Environmental, who then calls the Surface Crew for help. This rule applies to:

- Any unpaved roads
- In-pit benches access
- Oxide haul road
- Ore haul road
- East haul road



- Concentrate haul road
- Ore stockpile roads
- Waste dumps
- Overburden dumps
- Any exposed stockpile

Management of Mine Road and Stockpile Dust

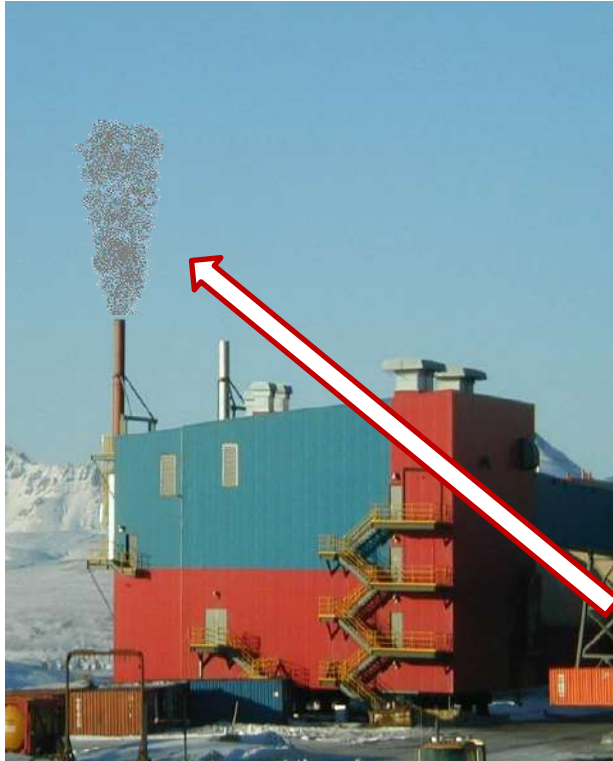
Note: The air permit requires mine road and stockpile watering, dust suppressants, and Visible Emission Observations by the Environmental Technicians within the mine ambient air quality boundary, which extends to Material Site 13 (MS-13).

Management of Mine Dust

Environmental Technicians have a lot of monitoring requirements, as required by the Air Quality Permit, to help control fugitive dust.

Teck Alaska Incorporated, Red Dog Mine AQ0290TVP03, Rev 1	
M22 Requirements Chart	
Stockpiles	Roads
Defined As:	Defined As:
Any exposed stockpile located within the Mine ambient air quality boundary.	DMTS road beginning at the ambient air quality boundary (MS-13) and north, also including the following roads within the mine: any unpaved road, in-pit bench access, oxide haul road, main
When	When
Year Round	<ul style="list-style-type: none"> ● Begin observations once the temperature remains above freezing or no later than July 10th of each year. ● End observations once the temperature remains below freezing.
Frequency	Frequency
At least month per month on all stockpiles	Daily If there is visible moisture on the road surface, the daily M22 is not required. Documentation that the road surface has visible moisture is required.
If Particulate Matter is Observed Leaving the Property*	If Particulate Matter is Observed for More than 2 Minutes
<ul style="list-style-type: none"> ● Notify Environmental Technical Supervisor ●● Notify the Air Quality Coordinator 	<ul style="list-style-type: none"> ● Notify Environmental Technical Supervisor ●● Notify the Air Quality Coordinator
The Env Tech Supr or Coord will coordinate with Surface Crew to have dust suppressant applied	The Env Tech Supr or Coord will coordinate with Surface Crew to have dust suppressant applied
After Dust Suppressant is Applied	After Dust Suppressant is Applied
Conduct a follow up M22 to ensure dust is not leaving the property	Conduct a follow up M22 to ensure dust is not observed for more than 2 minutes.
If dust is still leaving the property, notify the Air Quality Coordinator. The Coord will assess and provide additional corrective actions/guidance.	If dust is still observed for more than 2 minutes, notify the Air Quality Coordinator. The Coord will assess and provide additional corrective actions/guidance.
Recordkeeping	
If using FastField - At the end of each shift upload the M22 observations to Sharepoint. If using a paper form - At the end of each shift scan the M22 observation and save in the VEE folder.	
• There is no minimum M22 observation time that triggers follow up observations. Only if dust is seen leaving the property. If an M22 observation is not required because the roads are visibly wet due to precipitation, please fill out a form indicating that.	

Air Quality – Point Source Emissions



Point sources include: generators, boilers, bag houses, scrubbers, heaters, and vents.

Prevent AQ issues by:

- Properly maintain and operate sources to ensure there are no high emissions.
- Inspect sources to ensure there are no problems.
- If you see a lot of visible smoke or dust, notify your supervisor or the Environmental Department.

Storm Water Permit Requirements

- Keep sediments or muddy water from flowing into creeks, other water bodies and wetlands.
- Keep engine fluids and other chemicals out of water and wetlands.
- Good housekeeping and spill clean up are essential for pollution prevention in storm water.



Silt fences and splash boards are installed every summer along bridges to stop sediments from entering creeks and interfering with fish habitat.

Cultural Resource Sites



Cultural resource site near the Mine



- Over 350 sites have been identified in the Red Dog area over the past few decades.
- Contents belong to NANA, the US Government, or the State of Alaska.
- Looting is a criminal offense.
- If you find a site, immediately stop work and tell your Supervisor (this includes spill response/clean-up work) and call Environmental.
- Do not touch or disturb anything in the area, and do not move equipment.

Red Dog Mine Wildlife Policy

- Never feed any wildlife, food related garbage must be properly disposed of.
- Never harass or intentionally harm wildlife.
- No hunting, trapping, or fishing.

Red Dog Mine Wildlife Policy

Tailing Storage Facility Wildlife Watch

- Red Dog Mine is required to keep wildlife from entering its tailings storage & untreated water sites such as the:
 - TSF
 - DD2 Tailing Storage Area
 - Main Pit Reservoir
- If you see wildlife in or approaching a tailings storage or untreated water site, immediately report it to Environmental.



Incident Reporting



Reportable Environmental Incidents

- Spill or Release
- Geotechnical
- Wildlife
- Non Compliance
- EMS Non-conformance



Why Report Incidents?

- Helps us identify and fix problems, improving our performance
- Red Dog is **required** by our Agreements and Permits to document and report these incidents.
- Some incidents require immediate notification to agencies.



How Do I Report an Environmental Incident?

**NOTIFY YOUR
SUPERVISOR ASAP
OR
CONTACT
ENVIRONMENTAL**



End of Presentation

Environmental Annual Refresher Quiz

		Date:	
Printed Name	Signature	PIN#	

1. The EHSC policy is not a component of the Red Dog Environmental Program... ☐ TRUE ☐ FALSE
2. **P I C** represents the 3 key environmental points of the EHSC Policy..... ☐ TRUE ☐ FALSE
3. **P** stands for ... _____
4. **I** stands for ... _____
5. **C** stands for ... _____

6. How are some of the ways your job might impact Red Dog's Environmental Aspects?

	7. HOW IS EACH WASTE DISPOSED OF?	
	1 = Incinerator 2 = Landfill 3 = Special Handling 4 = Recycled	Disposal
A	Chemicals and solvents	
B	Leftover food and food containers	
C	Batteries	
D	Medical Waste –needles, razor blades	
E	Aerosol cans	
F	Cooking oil	
G	Scrap metal	
H	Office waste, paper, PAC waste	
I	Plastic bottles, aluminum cans, clean cardboard	

	7. HOW IS EACH WASTE DISPOSED OF?	
	1 = Incinerator 2 = Landfill 3 = Special Handling 4 = Recycled	Disposal
J	Oily wastes and absorbents	
K	Electronic Waste	
L	Light bulbs	
M	Covered Dumpster	
N	Uncovered Dumpster	

8. **WIS** stand for... _____.

9. Mixing different types of wastes are OK, as long as you know what they are.....

☐ TRUE ☐ FALSE

10. What containers need to be labeled?

☐ A. Hazardous ☐ B. Non-hazardous ☐ C. All Containers

11. Spills should be reported as soon as you can get around to it..... ☐ TRUE ☐ FALSE

12. The Spill Reporting Hotline number is.....

13. When spill kits have been used, where do you get the supplies to refill them...?

14. When fueling, it OK to walk off and let the nozzle shut off automatically..... ☐ TRUE ☐ FALSE

15. If you see dark smoke from a stack, or excessive dust around the crushers or on the road, notify your supervisor or Environmental..... ☐ TRUE ☐ FALSE

16. The Storm Water Permit require us to keep what out of waterways and wetlands?

A. Sediments B. Rainwater C. Petroleum Products D. Answers A & C

17. It is illegal to disturb any archeological or culture resources sites..... ☐ TRUE ☐ FALSE

18. Improper disposal of food-related garbage causes wildlife problems..... ☐ TRUE ☐ FALSE

19. You can ignore wildlife on the TSF, DD@ Tailing Storage Area, or Main Pit Reservoir... ☐ TRUE ☐ FALSE

20. A spill, a wildlife incident, or exceeding a permit limit during operations needs to be reported immediately to _____.

Quiz Review

Getting it Right

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Quiz Review

1 The EHSC policy is not a component of the Red Dog Environmental Program.

False

2 **P I C** represents the 3 key environmental points of the EHSC Policy.

True

3 **P** stands for_____.

Pollution
Prevention

Quiz Review

4

I stands for_____.

Improve
Continually

5

C stands for_____.

Comply

6

How can your job impact Red
Dog's Environmental Aspects?

Think about
Spill Prevention,
Waste Management,
Land Disturbance,
Water Use,
Reagent Use

Quiz Review

7

HOW IS EACH WASTE DISPOSED OF?

1 = Incinerator 2 = Landfill 3 = Special Handling 4 = Recycled				Disposal Method
A	Chemicals and Solvents			3
B	Leftover Food and Food Containers			1
C	Batteries			4
D	Medical Waste – needles, razor blades			3
E	Aerosol cans			3
F	Cooking Oil			4
G	Scrap Metal			4
H	Office Waste, paper, PAC waste			1

Quiz Review

7

HOW IS EACH WASTE DISPOSED OF?				
1 = Incinerator	2 = Landfill	3 = Special Handling	4 = Recycled	Disposal Method
I	Plastic bottles, aluminum cans, clean cardboard			4
J	Oily wastes and absorbents			1
K	Electronic Waste			4
L	Light Bulbs			4
M	Covered Dumpster			1
N	Uncovered Dumpster			2

Quiz Review

8

WIS stand for:_____.

Waste
Information
System

9

Mixing different types of wastes are OK, as long as you know what they are...

False

10

What containers need to be labeled?

C. All Containers

Quiz Review

11 Spills should be reported as soon as you can get around to it.

False

12 The Spill Reporting Hotline number is...

45367

13 When spill kits have been used, where do you get the supplies to refill them...

The Warehouse

Quiz Review

14

When fueling, it OK to walk off and let the nozzle shut off automatically.

False

15

If you see dark smoke from a stack, or excessive dust around the crushers or on the road, notify your supervisor or Environmental.

True

16

The Storm Water Permit require us to keep what out of waterways and wetlands?

D. Answers A & C,
Sediments and
Petroleum
Products

Quiz Review

17

It is illegal to disturb any archeological or culture resources sites.

True

18

Improper disposal of food-related garbage causes wildlife problems.

True

19

You can ignore wildlife on the Tailing Storage Facility, DD2 Tailing Storage Area or Main Pit Reservoir.

False

Quiz Review

20

A spill, a wildlife incident, or exceeding a permit limit during operations needs to be reported immediately to_____.

Your
Supervisor
and/or
Environmental

Questions?

Call or email
Environmental

Environmental.reddog@teck.com