

## Putting the Boot to Costs

by Lee Frasl

This year Red Dog is putting a focus on how we spend money and where we can improve. Supervisor Kevin James was asked how he could decrease his costs by 10%. Kevin works as a supervisor in the mill and has a team of 13 operators. So how did he begin to look at the many costs incurred in running his crew and which ones to focus on? Often times, we find that by breaking down these costs to smaller bits, they become more manageable.

Working in the mill can be messy and the boots and coveralls make up a large part of Kevin's costs. Last year alone, Red Dog spent over \$400,000 site-wide just on boots and coveralls. Kevin worked with the Building Excellence at Red Dog group to see how many pairs of boots and sets of coveralls his crew bought last year and he was easily able to determine a way to improve. By looking at monthly consumption, he determined that if each operator on his crew bought one fewer set of coveralls per month, the crew will meet their goal of saving 10%.



This is a great example of how we can all begin to look at the items we use on a day to day basis, whether it's boots, coveralls, or tools. Can we get a little more use out of these items by taking care of them rather than abusing them and just getting new ones? In many cases, we can. If you have some ideas for cost savings in your area, contact your supervisor or a member of the BEAR Team.

## Message from the General Manager

by Henri Letient



Safety of our employees is number one. We did, however, start the year on the wrong foot! Four medical aids and three lost time incidents in the first quarter is not acceptable. We had a bit of a time-out at the end of January during which I reminded our crews of the importance to each and every one of us being committed to our core value of "Everyone Going Home Safe and Healthy

Every Day." February and March saw some improvement on safety but we can do better.

At Red Dog, we expect all employees to be leaders in safety. We remind ourselves of that expectation through Courageous Safety Leadership (CSL). CSL III training was launched in this quarter and that is a great way to keep our commitments alive. Another way we demonstrate and reinforce our safety culture is through Visual Felt Leadership (VFL) and our Safety Teams.

We are working diligently to address the challenges created by all the excess rains in 2012, aggravated by our inability to discharge due to selenium concentrations higher than permissible discharge limits. We have an action plan to address these challenges this coming season and are busy communicating our efforts to our stakeholders as we progress.

While production was good in Q1, we had a few difficult moments with power outages in early March but once again the Red Dog team pulled together and we got operations back on track. We are on track with installation of new pollution control catalyst blocks on each of our main generators in compliance with new federal air quality regulations.

As you will read in this newsletter, there is a lot of enthusiasm at Red Dog; whether it is about personal health or looking for ways to do things better as a team. I truly believe we are all committed to making Red Dog a great place to work. Let's help one another at improving our safety and ensuring that everyone does go home safe and healthy every day!

# Red Dog Takes Water Management Seriously

Protecting our environment, the local watershed, and subsistence are our key commitments.

In the spring of 2012, we noticed something different in our rainfall runoff and tailings waters. Historically, Red Dog's tailings water has had low levels of a naturally-occurring element called selenium; recently it has been observed that the levels were increasing above those historic levels. In fact, selenium in the tailings water has increased above the levels set out in Red Dog's treated water discharge permit. This is believed to be the result of processing near-surface weathered ore from the new Aqqaluk deposit at Red Dog, combined with increases in dissolved selenium from the waste rock storage facilities.

Red Dog is known for its state-of-the-art water treatment facility; however, the existing advanced treatment process was not designed to significantly reduce the levels of selenium in the treated water.

After discovering the elevated levels last spring, and with no existing method to treat for selenium, the decision was made to stop all discharge from the facility to examine water management options.

As recent as July 2012, the water balance was under control with the water volume being held steady or decreasing. However, after stopping discharge due to the selenium concentrations in June, followed by a 1,000-year rain storm event in August, the total amount of water in storage is now a concern, with an approximately 170% increase in stored water. With the upcoming 2013 spring runoff, we will need to begin discharging water to maintain a safe level.

Red Dog is working with the State of Alaska to look at opportunities to discharge treated water to ensure we can maintain safe water levels in the tailings impoundment during spring runoff while also pursuing an amendment to the existing permit for selenium limits. This discharge will be managed and monitored very closely and selenium levels in Red Dog Creek will remain far below levels that would affect human or the health of the creeks and rivers.

## Q&A

### 1. What is selenium?

- Selenium is a naturally occurring mineral, essential for most living organisms including algae, invertebrates, fish and people. However, at very elevated concentrations, it can have an adverse health effect.
- You can buy selenium dietary supplements at many stores, and it is contained in most dandruff shampoos.
- Dietary selenium comes from nuts, cereals, mushrooms, meats, fish, and eggs.
- It occurs naturally in rock and its release can be accelerated by mining activities.

### 2. Where is the selenium coming from?

- It is thought that the increase in selenium levels in the wastewater at Red Dog has occurred as a result of mining of near-surface oxidized (weathered) ore from the new Aqqaluk Pit, which releases more selenium than ore from the original pit.
- Selenium is released from the waste rock through interactions of oxygen, water, and microbes and leaves the storage piles in rainfall runoff.

*Continued on page 3*

## Visual Felt Leadership

*by Henri Letient*

One way to reinforce our safety culture is through Visible Felt Leadership (VFL). I'm often asked, "What is VFL?" The DuPont organization introduced the concept of Felt Leadership in the field of safety. It is essentially about the leadership of people within organizations and can be defined as "respect through action for the well-being of people". Felt leadership can be demonstrated by anyone at any level of the organization. However, managers, particularly senior managers, have a greater responsibility to demonstrate visible felt leadership.

Red Dog's senior management from the General Manager, Superintendents and General Foremen, are expected to demonstrate VFL by being in the field coaching on safety and clearly demonstrating their belief in safety and their personal commitment. So when you see me or another manager in the field, we're not there to scrutinize you, we're there to show we care.

Take advantage of the VFL opportunity to ask questions or raise any particular concerns you may have with regards to safety. We want to hear from you.

## Quyaana

*Thank you, to all who contributed to our newsletter.*

To submit topic ideas or an article about your work, a coworker spotlight, a special project or life at Red Dog, contact Verna Westlake, Managing Editor, x4189  
verna.westlake@teck.com or  
communityrelationsRDOG@teck.com

## Red Dog Takes Water Management Seriously

### 3. Is the selenium release harmful to aquatic life in Red Dog Creek or downstream?

- There is no concern for aquatic life in Red Dog Creek at the concentration levels anticipated in the water.
- The selenium discharge will remain at low levels that will not compromise drinking water quality or the health of the creeks and rivers.

### 4. What danger is there to people who rely on the water downstream for their primary drinking water?

- There is absolutely no human health concern.
- The concentration of selenium directly at the source will be well below the prescribed Environmental Protection Agency drinking water limit and concentrations will become even lower as it moves downstream.
- Selenium does not impart any color, taste or odor to water.

### 5. I thought Red Dog treated all wastewater – why aren't you removing the selenium before discharging the water?

- Red Dog operates an extensive water collection system and a state-of-the-art water treatment system to ensure the

quality of discharge water.

- However, as increased levels of selenium are a recent phenomenon connected with the new Aqqaluk pit, and storm water runoff from the waste rock stockpile, which the current system is not built to treat.
- Red Dog is researching and evaluating additional and emerging technologies and will be conducting pilot trials to evaluate treatment performance.
- Because of the 1,000-year storm event and above-average precipitation, we are working with the State of Alaska to look at opportunities to discharge treated water to ensure we can maintain safe water levels in the tailings impoundment during spring runoff while pursuing an amendment to the existing permit for selenium limits, which will require significant time to complete.

### 6. What is Red Dog doing to address the selenium challenge?

A Water Management Team was established comprised of very skilled people from throughout Red Dog. The Team leader meets with the Water Management Team weekly to evaluate potential long-term solutions and evaluate the status of the 11 priority areas the group is working on including:

- Methods to reduce water infiltration into the

waste rock storage piles,

- Maximizing the collection of water off of the waste rock storage piles for pre-treatment (before going into the tailings pond),
- Facility upgrades for increased and year-round pre-treatment of water from the storage piles,
- Developing a water balance computer model to aid in understanding water flows and properties,
- Researching multiple treatment options, and
- Developing strategies to increase water storage capacity.

We want to ensure that stakeholders are informed about the selenium challenge and have engaged and communicated with all of our local communities, state regulators and employees and will continue to do so on a regular basis.

Red Dog is committed to the highest environmental standards and the continuous improvement of our environmental performance.

## Career Awareness



High School students of Kivalina and Noatak with Matt Line, Mine Engineer during Career Awareness visit.

## Red Dog Visit Lottery Winner



Red Dog visit lottery winner Murphy Custer (center) and his wife, touring the Mill with Evans Ballot, Mill Ops Trainer.

## Joe's New Lifestyle

by Joe Neumann

In mid-January, I went skiing with a buddy at home who had never skied with me before. He told me that I was a great skier, but he was pretty disappointed. He said if I would just lose even 30 pounds, I would be able to out-ski him!

I got on the scale back at Red Dog on January 30th and wondered what I could do. I realized if I just did a little bit, it would start getting easier. I looked around at my coworkers and saw that several had lost weight since Chris Newans, Red Dog's health and wellness consultant, arrived onsite.

On February 13, I played full court basketball for the second time in 5 years. To my surprise, I played over 48 minutes with minimal stopping. I stepped on the scale afterward and I had already lost 13 pounds in two weeks!

I reflected on the last week. I had played 6 or 7 games of dodge ball on Saturday for over an hour; Monday I played 3 games of floor hockey and got to play goalie for the first time in my life! It was one of the best experiences I've had on the Red Dog basketball court since I started here. I must have left all that weight out there in the gym. I hadn't played basketball before because I didn't think I'd be able to keep up with the guys out there. I hadn't turned on the TV in 48 hours, the longest time I have gone without TV at Red Dog in 5 years!

I had met with Chris in November about weight loss; he asked me how I planned to do it. I said, "Drink more water than sodas and not eat so many desserts". Whenever I see Chris, I remember what I said



Joe (Operating Engineer, Mill) and his friend Charlie skiing at Beaver Creek in Colorado in January.

and I skip the sodas and dessert and have a glass of water. When I see him walk by my office during the day, it reminds me to stay away from the pastry box.

Chris is a nice guy and good friend. He gives advice and encouragement and you want to follow through for your "buddy." You don't want to let your friends down by not doing what they ask of you. It's great to have a buddy that is watching out for you and helping to make your life healthier while you're having fun!

## Black Out

by Randy Lewellen

On March 2nd at 2:46:39 p.m., there was a 'blackout' at Red Dog. It's not a common thing, but most people with a few years experience at Red Dog have a story or two about the last time the lights went off. Each time there is a power outage, Red Dog loses an opportunity to process zinc, and there are risks of spills and injuries, so many systems exist to prevent these outages. Root cause analysis teams investigate every power outage. A root cause analysis is a way to come up with all the small holes in our practices and designs that allow unplanned events to happen. Even before the powerhouse operators and electricians had the generators back to normal operation; information gathering for the investigation had begun.

It takes 6 generators to meet power demand at Red Dog. In this blackout, a computer froze, and the normally unmanned 6030 powerhouse wasn't able to send a signal to the powerhouse operators to tell them there was trouble with the fuel. As the two unmanned generators ran out of fuel, they slowed down, and the power output dropped off. One of the other four generators tried to support the demand, but hit its safety limits and shut off. A few seconds later, the unmanned generators ran out of fuel completely, and shut off as well.

The system was designed to handle a generator shutting off unexpectedly, but three at once overwhelmed its ability to respond, and all the remaining generators were shut down by internal protection systems. Once all the generators disconnected, the lights went

out, and everyone started collecting new blackout stories.

All totaled there are 15 tasks created just to avoid recurrence. The current plan includes modifying our programs that monitor the generators, and if the output is too low, don't count it as a running generator. This will help reduce the demand quicker. We also plan to have regular checks of the screens in the powerhouse to make sure they are working properly. There are plans to review the 6030 powerhouse fuel delivery, to see if we can improve the reliability of the equipment. Until then, the powerhouse operators will spend more time in the "unmanned" powerhouse.

Most important of all, everyone was safe.

# Reducing Water Infiltration

by Hui Li

Red Dog Mine has initiated a priority project in the Water Management Strategy to reduce water infiltration into the Main Waste Dump (MWD) due to elevated concentrations of Selenium and Total Dissolved Solids (TDS) in the Acid Rock Drainage (ARD). This over \$6M project started in September 2012 and will be completed in October 2013.

The project will re-grade and compact the existing MWD material, and then cover MWD with a three-foot lift of a fine-grained cover material. This will decrease the infiltration of precipitation and ultimately decrease the volume of impacted ARD water. The cover material will also reduce the entry of oxygen into the waste rock. This reduces the oxidation of sulfide minerals, a process that leads to the production of ARD. Diversion ditches will also be constructed to divert all possible runoff away from the MWD area.

The project will include the following steps to reduce water infiltration and oxygen ingress.

1. The dump surface will be re-contoured to provide positive drainage into ditches.
2. The top 8 to 10 inches of MWD material will be compacted with sheepsfoot and smooth drum compactors to provide a seal with a targeted reduction of infiltration of 30-40%.
3. After spring thaw 2013, the material will be re-compacted to further increase seal effectiveness.
4. A three-foot lift of a fine-grained cover material will be placed over the top and flat portions of contoured surface to become a moisture store and release surface layer, further reducing the net infiltration of moisture and air. The targeted total reduction of infiltration is 70-80%.
5. Diversion ditches (14,920 ft) will be constructed to divert all possible runoff away from the MWD area



# Safety Stand Down

by Scott Leighton

On January 31, we had a Safety Stand Down which involved meeting with all onsite crews. Three meetings were held, two at the mine site and one at the port site. Some of you may have asked yourself, what's this about and why am I required to attend?

During the month of January we had 17 reported incidents, 10 occurred in the week previous, 2 of which were MSHA reportable and 1 High Potential Incident involving a fall from a high wall. We were not sending folks home in the same condition as when they arrived.

We reminded our workforce that we are all committed to "Every One Going Home Safe and Healthy Every Day." That is our right and responsibility. We all need to take this to heart and not only look after ourselves but each other and our families. We had

some good, frank discussions. During and after the meeting, some great suggestions were provided. Here is a brief summary of what you had to say:

- Each person should commit to watch out for at risk behavior and complacency and speak up when they see it happen.
- We need to do better at communicating our safety standards to visitors and small, short-term contractors.
- Reinforce safety as Priority One. Some supervisors still drive the message that "it's all about job completion." It's actually about getting the job done safely.
- Front line supervisors should be included in conducting safety orientation with new hires.
- We should positively reinforce the value of safety with more safety rewards for individuals, exempt and non-exempt.
- We should consider sanctions against

individuals, exempt and non-exempt, who don't respect the safety culture as priority one.

- We need to be more respectful of one another and not pass our stress onto others. For example, be respectful of the people serving you food. If you're stressed out, chill out... Don't stress someone else by being rude.
- Consider individual crew performance and reward high safety performance of specific crews as opposed to putting everyone in the same lot (Sivulisqi).

These are great suggestions that certainly make us think about what we are doing. There is great commitment to safety from these comments and other conversations had with some of you afterwards. Thank you for your commitment. Together we will achieve our goal of "Every One Going Home Safe and Healthy Every Day."

# Can We Do Better?

by Sean Forrester

If I asked you, "What do you remember from your very first Courageous Safety Leadership (CSL) session?" Would it be, Everyone Going Home Safe and Healthy Every Day? Right on! That pretty much sums it up. It's a very simple vision statement with so much meaning. It is very important at this stage in our safety journey that everyone sees and understands the same vision before we can continue.

Are we sending everyone home safe and healthy every day? No, we are not. People are still being sent home injured. Individuals are bypassing safety practices for various reasons, others are looking for that "thrill of the risk" and yet others believe safety starts with management or the safety department.

Let's remind ourselves of who is responsible for safety, EACH ONE OF US ARE!

One of the challenges we face is changing the mindset and behaviors of workers to one in which people believe that accidents don't need to happen. To change this

mindset it will take everyone believing in this vision, everyone being responsible for safety, and everyone committing to being a leader.

The greatest value in all of this is that no one gets hurt, no ripple can be made that could bring undue hurt to coworkers, friends, and family. Besides owing it to ourselves, don't you think we owe it to them as well?

Can we do better? Without a doubt we can! Let's not lose site of the success we have achieved; over a million hours worked LTI free, twice (the best being 1.5 million man hours), having had the best safety performance in operating history in 2011, multiple individuals and departments nominated and receiving Corporate Excellence Awards in safety and over 1500 employees and contractors exposed to CSL.

Our success with CSL has been recognized at the corporate level as well. Red Dog Operations was asked to be involved with CSI III: The Next Steps. Tom Farr (Mine General Foreman) and Sean Forrester (Loss Control) along with



Red Dog employees in CSL training

25 other individuals from around the organization were tasked with developing a session that would help identify the challenges we faced in continuing our journey and providing the tools to overcome those challenges.

We've proven as an organization and as a property that CSL has been no "flavor of the month" but a philosophy and a commitment by the organization and individuals that has grown stronger over the years and one that will see everyone home safe and healthy at the end of each day.

## Courageous Safety Leadership (CSL) – Our Journey

by Sean Forrester

Our CSL journey is one that has been years in the making and one that we have all committed to take. With each passing season, we continue to make big strides in reaching the summit but we are also encountering new challenges.

Through every step of this journey we have addressed those challenges. As a property we have been proactively moving forward. Our property safety video titled "From Here to Home" encompassed the importance of safety not only while at work but also the importance of bringing these values home to those who depend on us to do the right thing. At the same time, we understood

the need for sustaining CSL and developing a session that addressed site specific issues (CSL II). We introduced working together as a team, having a safety conversation and the importance of leadership. CSL III is a session designed to test your commitment and leadership, not only to yourself but also to your coworkers.

Our Journey is far from over. Once we start sending everyone home safe & healthy every day we will start the next leg of our journey, sustaining the culture that supports our vision.

Beginning right now, what is your commitment to our journey going to be?

- 2009 CSL Introduced to Red Dog
- 2010 Teck Corporate monthly CSL topics sent out to each property
- 2011 Red Dog developed a CSL video safety message titled "From Here to Home"
- 2011 Red Dog developed a Day 2 CSL session that focused on property specific challenges and how we could work as a team to reach a common goal
- 2012 Development of CSL III
- 2013 CSL III: The Next Steps introduced to Red Dog

# Courageous Safety Leadership III

by Sean Forrester



A true safety culture is defined as; the attitudes, beliefs, perceptions and values that employees share in relation to safety. One thing that is not mentioned but may be the biggest part of whether or not a safety culture succeeds is the COMMITMENT made by you and those around you.

CSL III introduces you to the concepts of: Why I work safe; looking at our current culture; identifying challenges; and having and using the correct tools to overcome challenges we face.

If we do not all start taking responsibility for our own safety we will ultimately have an unsafe act that can ripple, affecting those around us.

Let's all live up to our commitments in safety and ensure that we all go home safe and healthy every day.

*Mike Harvie, Chief Engineer, Mine Department conducting a CSL III class.*

# Random Acts of Kindness at Red Dog

by Sam (Shiloh) MacCabe

"We think too much and feel too little. More than machinery, we need humanity. More than cleverness, we need kindness and gentleness."- Charlie Chaplin, Comedic Actor, Filmmaker, Writer.

Red Doggers:

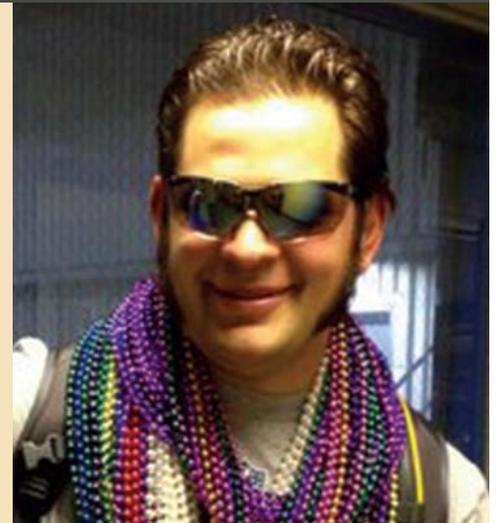
- Do you remember the last time you held the door for a coworker on your way over to the mill?
- Have you ever noticed the person waiting patiently behind you in the chow line and asked them to go ahead of you because you were building a masterpiece instead of a salad?
- Do you remember the last time you saw a stack of kitchen cups left in the Dog House and you took the time to pick it up and carry it to the kitchen for the dishwashers?
- Do you remember the last time you saw Otto Kraus standing in the hall handing out beads on Mardi Gras? (Okay that one was over the top awesome. Way to go Otto!)

"There is overwhelming evidence that the higher the level of self-esteem, the more likely one will be to treat others with respect, kindness, and generosity."-Nathaniel Branden- Canadian Psychotherapist and Writer

There is opportunity all around us, every day. The simplest act of kindness can change the recipient's entire mood and make their rotation at work better! Some people call it 'paying it forward'. Some people call it 'random acts of kindness.' Whatever you call it, thanks to those of you who go out of your way to show kindness to the rest of us.

I have challenged myself to do at least one nice thing for someone else at Red Dog every day of every rotation. I challenge each of you to do the same.

You are probably familiar with the paraphrased version of Mahatma Gandhi's quote: "We but mirror the world. All the tendencies present in the outer world are to be found in the world of our body. If we could change ourselves, the tendencies in the world would also change. As a man changes his own nature, so does



*Otto Kraus standing in hallway handing out beads to employees at shift change on Mardi Gras*

the attitude of the world change towards him. This is the divine mystery supreme. A wonderful thing it is and the source of our happiness. We need not wait to see what others do."

-Mahatma Gandhi ("Be the change you want to see in the world").

# Digging Deeper

by Curtiss Ehrsam



Andrew Merritt, Operating Engineer, Mill

The first quarter of the year is nearly complete and as an organization, we have identified many new opportunities to improve our systems and processes. The 2013 business improvement target of \$7.7 Million in productivity improvements requires each of us to dig deep for the courage to make sustainable changes in our workplace behaviors. To achieve the target, focus is on completing key ideas that are already being implemented. As these ideas are completed, we will replace them with new ideas.

Kevin James, with the support of operations, completed idea #2003, which tracks the direction of the Mill floor sumps to avoid unintentional loss of valuable minerals to tails. The third phase of the Microcel idea #2016 has been analyzed by Andrew Merritt and will lock-in (the fourth and final stage) later this month. There is a new sealing device installed on zinc column 12 Microcel pump that has recently

moved to cash flowing (the third stage) and will likely lock-in in the next quarter. A rapid turnaround event was completed on the ISA Mills enabling reduced downtime and more standardization to our PM process for the two mills.

New ideas are being reviewed and drafted to replenish the pipeline as we complete ideas. Reliability is in full stride and tracking a series of improvements that will deliver fewer break-ins to our maintenance schedule. There are also 17 new concepts that are being managed to deliver cost reductions targeted at \$4.4 Million for this year. The root cause analysis completed on the recent blackouts provides significant opportunities that will enable us to deliver, and likely surpass, our plan for this year. Yes, like all good miners, we dig deeper and the riches we extract make our life that much more rewarding.



Kevin James, Mill Shift Supervisor

## Red Dog Community Investment, Q1 2013

Deering School	Student Activities Account	\$600
Shungnak School	Student Activities Account	\$600
Kiana School	Student Activities Account	\$600
Selawik School	Student Activities Account	\$600
Kivalina School	Student Activities Account	\$600
Noorvik School	Student Activities Account	\$600
Noatak School	Student Activities Account	\$600
Kotzebue School	Student Activities Account	\$600
Kiana- Friend's Church Annual Meeting	Building Material for Church	\$4,100
Kobuk 440 Racing Association	Sponsorship	\$7,000
Anchorage Museum	Science exhibit for kids during the NANA Annual Meeting in Kiana	\$500

Suvisi (Sü-vĩ-see) in the Iñupiaq language means: "What are the many people doing?"

# Bringing Housekeeping to Special Tooling

by Rusell Brandon

The hydraulic and special tooling area received some early spring cleaning. After finishing February's safety theme of topics covering "Housekeeping", one area in the heavy equipment (HE) shop was selected to be focused on.

The area had accumulated a lot of tooling that was outdated and beyond serviceability. It was mentioned during toolbox meetings and inspections that the area was cluttered and tooling was difficult to access. It was also identified as a Safety Team idea.

Thanks to John Reneau and Eugene Monroe for their work in this area it's much safer now. Tools and equipment are easier to retrieve.

Thanks also to HE crews 35 and 37 for keeping the equipment rolling working around the cleanup effort.



## CREW 35

Jason Lee, Supervisor

Dave Anderson

Ron Bagely

Joshua Bowden

Herbert Cleveland

Sidney Cleveland

Robert Davidson

Brian Donnelly

Mickey Lajoie

Sikopa Pouomalo

Shawn Rangitsch

Kudralook Rood

Adam Turner

Frank Sheldon Sr.

Brandon Walker

## CREW 37

Russell Brandon, Supervisor

Francis Bertling

Phillip Booth

William Harbuck

Pete Lambert

Dorian Skin

Carter Meng

Eugene Monroe

Melvin Morena

Stan Moseley

John Reneau

Ron Sweet

Tom Tollefson

# Grace Christian Students



Grace Christian students reading rocks with a magnifier in the Aqqaluk Pit.



Grace Christian High School students of the Applied Science and Chemistry class along with chaperones and Geologists Frankie Pillifant, Red Dog and Andrew Shannon, Vancouver Exploration team.

Students were asked what the most meaningful part of their visit to Red Dog was:

"...seeing how vast the operation is. I've never seen a mine before, and I never imagined that so many people were able to work together towards one huge goal... These past couple days, I got to see what 'teamwork' really meant... I just want to thank everyone who took care of us and made sure our stay was enjoyable and awesome!"

"...learning more about different parts of Alaska as well as more about different applications of science that we are learning about in school. I had never been in this remote of a place before and it was interesting to see the costs as well as the rewards of working in such a remote region. It has taught me a lot because of these people's hard work and the pride that they take in their work. This hard work has taught me what man can accomplish. The sciences that are put into harvest the minerals is extensive and impressive. Your environmentalism is great and noble and it is good to see that mines do not have to be harmful to their environments."

"P.S. – the food was awesome!"

# New Federal Air Quality Regulations - What's New in the Powerhouse?

by Janet Deisley



*Tim Hilton, Millwright and Relief Supervisor field fitting HAPS flanges for installation.*



*DualOx Converter*

On March 3, 2010, the U. S. Environmental Protection Agency (EPA) published the National Emissions Standards for Hazardous Air Pollutants (HAPs) for stationary reciprocating internal combustion engines. HAPs are byproducts of fuel combustion in engines. Nationwide, stationary engines generate electricity and power equipment at industrial, agricultural, oil and gas production, power generation and other facilities. EPA estimates there are over one million of these engines in the U.S.

## **Why Did the EPA Propose New Standards?**

In general, HAPs emitted from diesel engines are suspected of causing cancer and other serious health effects. Therefore, by reducing emissions of HAPs significant health benefits are expected nationwide, including fewer premature deaths, cases of chronic and acute bronchitis, heart attacks, hospital and emergency room visits, and days when people miss work.

## **How is Red Dog Complying With the Standards?**

The deadline for compliance with these new standards is May 3, 2013, so after this date Red Dog cannot operate any engine that does not meet the standards. The new federal rule applies to all stationary engines at the Red Dog Mine and Port; however, it only requires pollution controls to be installed on the eight main generators at

the Mine. All of the other stationary engines at the Mine and the Port will comply with the new rule by continuing to follow good operational and maintenance practices. The rule does not apply to portable or mobile engines.

The powerhouse, along with the help of personnel from several other departments, is in the process of installing new pollution control equipment on each of the eight main generators. The Johnson Matthey DualOx catalytic converters (see photo) will reduce HAPs emitted from Red Dog's engines.

The purpose of these oxidation catalysts is to reduce concentrations of HAPs by converting them into environmentally safe carbon dioxide and water, similar to the catalytic converter in your car. It is interesting to note that Johnson Matthey was instrumental in the development of the automotive catalytic converter, which helped to launch the U.S. Clean Air Act of 1970.

The cost to install this equipment on our engines is significant at approximately \$800,000, but we are committed to doing the right thing and complying with the new air quality regulations. Four of the eight units have already been installed, with the remaining units scheduled to be installed and commissioned well before the May deadline.

## Visiting With Vera



*Vera Douglas, Shungnak Elder spent time with Red Dog employees, many of whom were her relatives and hosts Hannah Loon, NANA Shareholder Relations and Verna Westlake, Teck Community Relations.*



*Josh Luther, Mine Operator and Vera share a good laugh during her visit. Josh's wife Michelle is also a relative to Vera.*



*Tom Farr, Mine General Foreman with Hannah Loon, Wanda Custer and Vera.*

## Do You Really Care About Safety?



Before: Deck plate above conveyor prior to access door.

After: Deck plate with access door installed.

Surface Crew members noted the steps on the passenger buses become slippery when ice, snow, or water get on the steps, creating a hazard that could cause an injury. The idea for a solution was to install non-slip tape on the passenger bus steps, reducing the slipping hazard. The idea was generated by Richard Thomas and completed using a two man Safety Team of Richard Thomas and Matt Avery.

The first Safety Team idea from the Port was a safety concern with the P1 conveyor belt. The concern consisted of the belt being staged 20 feet above the P1 belt when being changed out, producing a high potential for the roll to unspool and runaway which could injure workers, create property and equipment damage as well as lost production time. The safety idea was to add an opening large enough to lower the roll closer to the conveyor for safety and ease of installation. The idea was generated by Matt Shelton and completed using a two man Safety Team of Matt as lead and Murphy Moo.

**“In safety teams, YOU identify a safety risk that YOU are willing to work on”**

Anyone can point out a safety risk to someone and walk away or complain about how long it takes for an issue to be resolved, but, is this Courageous Leadership?

Courageous Leadership reminds us that it's important to speak up so that EVERYONE can go home safe and healthy every day. But

speaking up is just the start! There are risks that we and our co-workers are exposed to everyday that we could eliminate with the skills and tools we already have. We have adopted the Safety Team concept, used successfully by other companies, to reduce injuries but it requires your active participation!

In Safety Teams, YOU identify a safety risk that YOU are willing to work on to prevent an injury at Red Dog. Then depending on the size of the risk to be eliminated, a team of 1-4 is gathered to solve and build the solution. The idea is not to wait for someone else to solve it, but active hands-on activity on company time, to make our work area safer.

While there is a place for larger, multi-skilled teams to tackle larger problems that take weeks or months to solve, Red Dog will become safer faster when we start reducing risks we are exposed to everyday. With more than 400 people on site we could collectively eliminate a few risks every day.

At the end of the day it could be that your action prevented an injury to a close-friend or co-worker, and demonstrated that we care about safety and that we are truly Courageous Leaders.

The Safety Team participants' names will be entered into a draw which will be held at the end of the 2013 operating season for the opportunity to win Alaska Airlines tickets for two anywhere Alaska Airlines flies. Keep the Safety Team ideas coming!

## For Current Job Vacancies (or opportunities)

Please go to [www.teck.com](http://www.teck.com) and/or [www.nana.com](http://www.nana.com) and apply on-line.

(paper applications or letters of interest are no longer accepted)

### Text-to-Join

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**REDDOGMINE**  
to **22828** to get started.



Message and data rates may apply.

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# "Just Doing What Guys Do."

*Unofficially dubbed the Red Dog Yacht Club, Chris Graupe, Randy Lewellen, Chris Eckert, and Brian Hall share great times and adventure with former Red Dog electrician Jimmy Stewart sailing around the Hawaiian islands in March.*

