

Whale of a Story

By Nicole Shellabarger



Dragging the whale away from the shores of Kivalina

The Environmental and Community Relations departments merged in April of 2016. We have always worked closely together; the merge solidified the groups as well as clarified some of the tasks that we had previously shared.

I started working for Teck in 2010 as a mill operator and had the opportunity to move over to the Environmental group in 2013. The position of Environmental Technician seemed exciting and adventurous. We go about our routine, tedious and regulatory-driven tasks and occasionally we are asked to do very non-routine assignments. Depending on what they are, we sometimes have to come up with solutions to get the job done — safely and timely.

The morning of July 10, 2018, I received a call from the Port Supervisor, John Tobin. John asked me if I could utilize the helicopter to fly to Kivalina, where a deceased whale had beached in the front of the town. At that time, the helicopter was currently at the port hazing bears and ensuring personnel safety.

I headed out straight away with two Foss mariners tug and barge guys, thinking that would be enough expertise to assess the whale situation. Sure enough, there was a nearly 30-foot long whale beached right in the middle of town. I snapped a few photos and we flew back to the port. John had been working closely with the people of Kivalina, as well as Fritz Westlake, Community Relations Coordinator Robert Napier, Team Leader Environmental and the Foss team to come up with a solution to help the people of Kivalina by removing the decaying whale, as the stench was increasing daily.

Continued on page 2

Message from the General Manager

By Les Yesnik

Greetings Everyone! This is my first opportunity to contribute to the Suvisi Newsletter as the new General Manager of Red Dog Operations.



Being new to Teck, my first few weeks were spent learning about the Operations and getting to know many of the employees at site. I've worked in the mining industry for over 27 years in the coal, oil sands, potash, and uranium mining industries and I'm excited to learn more about the zinc and lead mining and milling process. Over the past 15 years I was very fortunate to work closely with local indigenous communities surrounding uranium mines and mills in Northern Saskatchewan. I am looking forward to building close working relationships with the team at Red Dog, the NANA shareholders in the local communities and with the people in the numerous NANA companies that provide services to our operations.

My first impression in coming to Red Dog is that Teck is building a strong culture of safety. Safety is a core value at Teck and nothing is more important than the health and safety of employees and contractors. Much work is done to safely plan work and ensure hazards are identified and addressed before work begins. While the safety program at Red Dog is strong, it is only through active participation in all elements of the program that we will eliminate injury. Remember that our goal is "Everyone going home safe and healthy every day".

There are many great stories in this newsletter and one is focused on explaining if fish in the Wulik River are safe to eat. Families in nearby communities who rely on this river were curious to know if there were concerns with mercury concentrations in the fish caught. Jeanne Dellinger of Kiana, who works in our Mine Department, used fish data specifically collected by Alaska Department of Fish & Game in the Wulik River along with information available in published literature to find the answer to this question.

It has been a very busy summer season at site with projects like the personnel accommodations (PAC) expansion advancing. All room modules were assembled and now interior work is being completed.

Continued on page 2

Continued from page 1

Message from the General Manager

Work to modify the kitchen and cafeteria areas will advance in October and the entire camp project is expected to be completed by the end of November. Your ongoing patience with the personnel completing this important project is appreciated.

On November 4, voters will have a chance to join Teck Alaska and NANA to support the "Stand for Alaska" campaign by voting NO on Ballot Measure 1. Please educate yourself on this ballot measure and vote either in the advanced polls or on Election Day.

At the end of the third quarter, production is right on plan. This is a remarkable achievement given that snow storms in February and March caused a setback on metal production by 24,000 tonnes. Following the setback, the Red Dog team developed a plan to get back on track by the end of 2018. I was very pleased to see how everyone pulled together to recover early from lost production. As of September 11, metal production is back on plan. Well done, everyone! Let's work together to have a safe finish to 2018.

Continued from page 1

Whale of a Story

The next morning, after our regular duties, James Mills and I were asked to go back to the port and assist in the removal of the Kivalina whale. The plan was to remove the whale and take it 30 miles out from the village. We sat down, created a procedure and went over the Job Safety Analysis. The 17-mile boat ride with Captain Jimmy Larkin, was a bit rough, as the weather was choppy, but my large Mustang Suit had me feeling like the Michelin Man, warm and buoyant.

Upon arrival to Kivalina, the whale was easy to spot. A small group of people had started to gather and we got assistance in hooking up and towing the whale by strapping the tail with the biggest sling I had ever seen. The whale was not fully beached and was bobbing a bit in the water, which made it difficult to strap up. The waves crashing into the beach and onto the whale and everyone's reluctance to touch it made the task a bit more difficult.

Once it was all strapped up and the line was secured to the boat, we started the long trip out to sea. The people of Kivalina waved and smiled in relief that the nuisance a decaying beached whale was now removed. The trip out to sea was slow, but the sun came out and made for a nice ride.

I was thankful for the opportunity to help, and looking back, better understand the dynamics of the Environmental and Community Relations merger and how it makes unplanned tasks like this easier. I look forward to what the future holds with regard to adventurous, but well planned, non-routine tasks.



Kivalina's beach with the nearly 30-foot long beached whale.

Red Dog Funds Kivalina Basketball Camp

COMMUNITY INVESTMENT

This summer, the Kivalina Boys basketball team put in the work in preparation for the upcoming 2018-2019 school basketball season.

Seven boys, from 14-17 years old, traveled to Seattle, Washington to participate in a basketball camp held at Bastyr University. For most of the boys it was their first time traveling outside of Alaska, and for some it was their first time leaving the Northwest region. "It is always enjoyable to see firsts with young people," says Fritz Westlake, the team's head coach and Community Relations Coordinator at Red Dog. "Some of the students experienced their first flight on a jet airliner, while others marveled at the size of the trees in Seattle," Fritz said, as there are no trees in the coastal tundra community of Kivalina. Other firsts for the students ranged from riding on a train at the SeaTac airport to experiencing temperatures of 90 plus degrees Fahrenheit.

The camp was a great experience for the boys as they got to compete against other players from the greater Seattle area. Coach Westlake remarked, "A camp like this gives our players the opportunity to experience a different level of play than they might be used to. A great way to realize that you need to put in tremendous amounts of work to improve is by witnessing first-hand, that others are already out there doing the same."

Teck Red Dog Community Investment was the sole contributor to this program. One its goals is to support youth development in the villages surrounding Red Dog. Basketball and sports in general, give coaches unique teachable moments to promote the development of each individual student. Coaches stress personal responsibility and accountability for each player and allow the youth to develop important characteristics for success in life. Characteristics like teamwork, punctuality, hard work, and conflict resolution. These traits will help these students transition and grow into confident, productive young adults for their village and region.

Teck Red Dog Operations' (RDO) Community Investment partnered with the Sisaulik hunters and community members of Noatak, the Noatak School, and regional and local Kotzebue entities to provide support and funding for the Sisaulik Safety and Environmental Assessment.

Sisaulik, a traditional coastal summer camp north of Kotzebue, is used for subsistence activities by the people of the region. For years, trash was discarded at an unofficial and unregulated dump site outside of Sisaulik, causing a huge pile of garbage nearly as tall as the houses in the camp area.

RDO has supported this project since Phase 1 in 2016. In summer 2017, Phase 2 was conducted and included a safety and waste assessment provided by Teck. Mornings were spent moving the garbage to boats,



which were brought to and unloaded at the Kotzebue landfill. Following the hard work, the afternoons were filled with cultural activities such as berry picking and story-telling.

Sisaulik Hunters, Robbie and Tanya Kirk of Noatak, have led the project since its inception in 2016. Tanya commented, "It is our duty to be good stewards of the land which provides so much to us; and also that we teach the youth how to be the future teachers, leaders and role models. The hope is that they will take on large community-led projects with youth and the community. We recognize all 17 of the Iñupiat Ilitqusait values and see that they are still practiced today."

Phase 2 in 2017 made room and prepared the Sisaulik work team for Phase 3 of the cleanup in August of this year. As in prior years, the students of Noatak wanted to take Teck's safety message of "Everyone Going Home Safe and Healthy Every Day" to heart. Working with Red Dog's Community Relations team, Noatak requested support from Red Dog's Safety & Health, Environmental, and Survey departments.

Community Relations Coordinator, Sami Schaeffer, participated in phases 2 and 3 of the cleanup. "It is amazing to see how dedicated the students are to the project and to see the trash pile get smaller as the day progressed."

Bob Chandler of Safety & Health led the students to create their safety message. Based on what they had learned in previous phases, the group had conducted a hazard awareness assessment prior to Red Dog employee's arrival.

Aidan Vasquez of Waste Management Sustainability Services represented Red Dog's Environmental department. Aidan helped the students understand the proper segregation of landfill waste so it could be readily identified when it arrived in Kotzebue.



Not only were the two large trash piles cleared during Phase 3, a survey component was added as part of the student's science,

technology, engineering, and mathematics (STEM) coursework. Red Dog Surveyor, Clay Nordlum, conducted a survey on a section of the beach at Sisaulik. The goal was to record the existing coastline to evaluate coastal erosion over time. Clay showed students how the survey was conducted and give basic training of the equipment.



Eliminating a trash pile in one day shows just how dedicated the students are to taking care of their ancestral lands. Teachers shared that the students journal a lot about their experience and how they genuinely enjoyed their time on this project. Tanya remarked, "The students have talked about the cleanup week during their graduation speeches, how it was some of their best memories."



Continued on page 4

Continued from page 3

Robbie also commented, "Returning the land back to its natural state is so amazing to see, it's wonderful to see musk ox walk the land where a mountain of trash once piled high. To see geese land where once they could not. The work is not complete, but we will continue the work, and are very thankful for Teck's support".

"I would like to thank Teck Red Dog for the opportunity to participate in the clean-up of Sisaulik. This is a learning occasion for students and staff alike to experience the subsistence life in Sisaulik. We were able to clean the dumpsite at Sisaulik and haul approximately 200 bags of trash and two boats full of scrap metal. We learned cultural history, subsistence methods, and various skills necessary to live at camp. This trip would not be possible without the support of Teck Red Dog. The expense involved in the logistics of getting 20 students, 7 chaperones, and 5 boats from Noatak to Sisaulik is an extensive undertaking. Sisaulik has been a traditional subsistence camp for thousands of years. It has had a dump



"The trip to Sisaulik was a synthesis of learning, problem solving, teamwork, culture, and adventure. Students were involved with everything from identifying edible plants in the field, surveying coastal erosion, making meals, contemplating new and improved ways to deal with waste in a remote setting, gathering berries, netting salmon, and taking care of camp chores. I like that the trip presented so many different challenges and opportunities for growth. As an estuary, Kotzebue Sound is a great laboratory for learning. Sisaulik also presents a strong cultural learning opportunity. Local students embrace what they learn more readily in an environment filled with tradition and fond memories."

- Lori Moore, Teacher



site collecting non-biodegradable trash for less than 200 years. Our goal is to return that land to the way that it was intended. It starts with educating younger generations."

- Brett Pietila, Teacher



Value of Partnership, Community and Culture

By Verna Westlake

COMMUNITY INVESTMENT

Teck Red Dog Community Investment provided funding to Kiana's Katyaak Elders & Youth Cultural Camp in mid-July. Red Dog recognizes the importance of tradition and culture of our Iñupiat in the NANA region. Youth ranging in ages from 10 to 17 from Kiana, Noorvik and as far as Anchorage attended. The School District also partnered with the Native Village of Kiana, sending 27 teachers to one of the week-long sessions. Many of the teachers were new to Alaska.

As a representative of Red Dog Community Relations, I had the privilege of participating for a day in the first of the three sessions.

Upon arrival, the Camp Director led introductions under the tarp awning around the open barrel drum campfire. I asked the youth if

anyone had plans to work at Red Dog someday. Several hands shot up immediately! I shared that at Red Dog, we start every day with a safety message. I asked what activities were scheduled for the day.

They responded: boating, seining, fish scaling and cleaning, native Olympic games, braiding yarn strings for hats, mukluks, mittens and gathering and chopping firewood. We discussed how to do each task safely.



Hauling in the fish.

Continued on page 11



Loading up the seine into the boat.

USCG RADM Bell Visits Red Dog

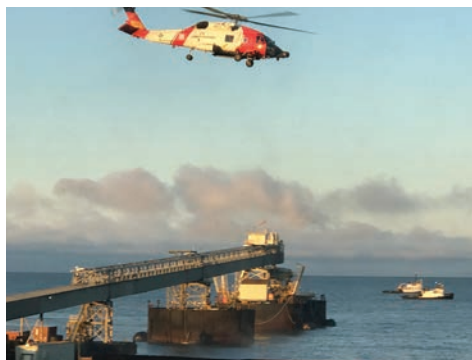
By Marcus Munro

On September 6, Red Dog Operations (RDO) Port welcomed special guests from the United States Coast Guard (USCG), Rear Admiral (RADM) Matthew Bell and Lieutenant Commander (LCDR) Mason Wilcox.

RADM Bell assumed the duties of Commander, 17th Coast Guard District in May, 2018. Headquartered in Juneau, RADM Bell is responsible for all USCG operations throughout Alaska, the North Pacific Ocean, Arctic Ocean and the Bering Sea. Since assuming command, he has toured throughout his area of responsibility to gain a better understanding of the diverse regions he oversees.

As one of the largest economic drivers in the state and a place where USCG personnel visit regularly during the summer shipping season, RDO was on the list of places he wanted to visit. While here, RADM Bell and LCDR Wilcox toured the Port, Mill, Mine and met with the RDO senior management team.

RADM Bell and LCDR Wilcox were very appreciative of the opportunity to learn more about our operation and our people first hand and to continue to cultivate the supportive working relationship that exists between the USCG and RDO.



USG helicopter touring over Port site

A big "Thank You" goes out to all who assisted in making their tour of RDO a huge success.

Be Prepared for Flu Season

The Center for Disease Control and Prevention (CDC) say that the flu typically circulates each year in the United States, most commonly from late fall through early spring.

What is the flu?

Influenza, commonly known as “the flu,” is an infectious disease caused by an influenza virus. Symptoms can be mild to severe. The most common symptoms include high fever, runny nose, sore throat, muscle pains, headache, coughing, sneezing and feeling tired. These symptoms typically begin two days after exposure to the virus and most last less than a week.

How is the flu spread?

Most experts think that flu viruses spread mainly by droplets made when people with flu cough, sneeze or talk. These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs. Less often, a person might get flu by touching a surface or object that has flu virus on it and then touching their own mouth, nose, or eyes.

Who should get the flu vaccine?

The World Health Organization recommends that everyone receive the Influenza Vaccine or “flu vaccine” yearly.

Can I get the flu by getting a flu vaccine?

NO! The vaccine is made from an inactivated virus that can't transmit infection.

Where do I get the flu vaccine?

The best place to get the flu vaccine is the first place it is available such as at Teck's clinic or your local clinic or pharmacy, often at little to no cost to you.

If I have the flu, what can I do to get better?

People with the flu are advised to get plenty of rest, drink plenty of liquids, avoid using alcohol and tobacco and, if necessary, take medications such as acetaminophen (paracetamol) to relieve fever and muscle aches associated with the flu.

For more information on the flu, visit the CDC website at www.cdc.gov/flu



The Benefits of Red Dog's NBA Program

COMMUNITY INVESTMENT

Red Dog National Basketball Association (NBA) Program Alum and former Kivalina Boys High School Basketball player, Jason Norton, along with former Kivalina Boys High School Basketball player, Kirk Koenig, are now full-time college students at Alaska Christian College (ACC) in Soldotna, Alaska.

Both young men are studying for their Associate Degrees in General Studies. Jason participated in the Teck NBA Program in 2015 with a trip to Orlando, Florida.

The Red Dog NBA program is a student incentive program that uses the NBA as a reward for outstanding performance in school and the community. Fritz Westlake, Red Dog Community Relations Coordinator and the Kivalina basketball coach, coached both Jason and Kirk in High School. “I am extremely proud of these two young men who are pursuing higher education and becoming role models for other young students in the community of Kivalina who

are dreaming of attending college,” says Coach Westlake. “It goes to show, if you work hard and are dedicated, you can accomplish anything, no matter what your circumstances are or where you are from.”



Jason Norton (left) and Kirk Koenig attend the Alaska Christian College in Soldotna

Suvisi (Sü-vĩ-see) in the Iñupiaq language means:

“What are the many people doing?”

The Summer of Freight

By David Marshall

As we embarked upon the journey that we affectionately call 2018, we had no idea how unprepared we were for the impact of the upcoming projects would have on the Materials Management group.

There were a handful of significant projects combined with a multitude of other smaller projects happening this year that contributed to the overall increase in the amount of freight we were bringing north every week.

When the year started, Northern Air Cargo (NAC) was contracted to provide Red Dog with twice-weekly air cargo flights on Tuesdays and Saturdays. Extrapolate that over a 12-month period we've got a total of 104 flights for the year.

Then reality walked in the door and slapped us in the face! During the months of May, June, July and August alone we received 80 NAC flights, an average of 20 per month totaling over 1.8 million pounds of freight. Compare those numbers to the same time period in 2017 when we received 42 NAC flights and 1 million pounds of freight. That my friends is an 85% increase from 2017 to 2018.

Congratulations and kudos to the folks who work in the warehouse. These dedicated individuals unloaded this unprecedented amount of freight with zero injuries, ensuring "Everyone Going Home Safe and Healthy Every Day."



The Matrix

By Bill Willis

Do you have trouble purchasing the correct personal protective equipment (PPE)?

Red Dog Operations now has a new tool to help you identify and purchase the correct PPE. The Safety and Health Team has dedicated a great deal of time to the development of a PPE Matrix. This matrix includes every common type of PPE that is required for the working conditions here at Red Dog Operations. Everything from: Gloves, boots, traction devices, head protection, hearing protection, safety glasses, respirators, welding safety equipment, rain gear/coveralls and fall protection has been included in this matrix.

A photo of each item is included in the matrix, helping make selection easier. We have included the manufacturer's name and model numbers, a detailed product description, specific safety ratings, such as American National Standards Institute (ANSI), American Society for Testing and Materials (ASTM), Occupational Safety and Health Administration (OSHA) and the Gencid Supply codes. Even items that are direct charge and are not stocked in warehouse inventory have been included in this matrix. To make it easy for everyone to access the matrix, it has been placed on the Teck Rover web page under Safety & Health—RDO PPE Matrix.

RDO Eye Protection PPE Matrix						Red Dog	Teck
RDO Warehouse Stocked Item Photo	Name and Model	Hazard Protection	Standards / ANSI	Gencid Description	Product Details	RDO Warehouse Stock Supply Code #	
	JACKSON SAFETY V80 30-88	Clear Lenses	ANSI Z87.1	CLASS 1 SAFETY GLASSES CLEAR LENS CLEAR POLY-CARBONATE	JACKSON SAFETY V80 30-88-88 Safety Glasses are designed for minor abrasions and eye protection while you work. These "Impact" style safety glasses have 1/4" diameter lens with safety coating, nylon black nylon frame with soft adjusting web rubber nose pads for comfort, and clear, scratch-resistant, polycarbonate lenses that provide 99.9% UVB UVA/UV-C protection.	SC-183777	
	Concord Model 88710 Anti-Fog, Scratch-Resistant, Antistatic, Chemical-Splash-Resistant, Nonconductive, Clear Lenses	Chemical Splash/Impact	ANSI Z87.1 2015	CONCORD CLEAR LENS ANTI-FOG, ANTI-STATIC, RESISTANT & IMPACT	Designed for general lab and shop applications, these impact-resistant goggles can easily be worn with most half-mask respirators. The scratch-resistant, fogging-free polycarbonate lens offers 99.9% UV protection. The goggles also feature perforated ventilation.	SC-156481	
	Concord Clear Plastic Side-Gate Mountable	Safety Eyewear, Tested Safety and Protection Spectacles	ANSI	SIDE SHIELD CLEAR POLY-CARBONATE FRAME	Concord Model 88710 fits most styles of prescription prescription glasses. Anti-Condensing. These side shields clip on to most plain style prescription eyeglasses. They provide 99.9% UV protection.	SC-174287	
	EVEREIGHT 016 Anti-Fog, Scratch-Resistant, Antistatic, Clear Lenses Over The Glasses Style	Clear Lenses Over The Glasses Style	ANSI Z87.1, CSA Z94.3	CONCORD CLEAR LENS OVER GLASSES	EVEREIGHT 016 goggles are available from a built-in, flexible strap to give you a customized fit by conforming and holding to a wide variety of facial contours. Impact-resistant polycarbonate lens and clear polycarbonate side shields with anti-condensing lenses are built-in. They are built-in replacement systems in quick and easy.	SC-182005	

RDO Hand Protection PPE Matrix						Red Dog	Teck
RDO Warehouse Stocked Item Photo	Name and Model	Hazard Protection	ANSI / Cut Level	Gencid Description	Weight	Product Description	RDO Warehouse Stock Supply Code #
	White Glove Premium Nitrile Examination Glove	Prevents contamination from emergency medical operations	Not Rated	GLDVE 42 71 LATEX FREE	8.90 Lb/Box	For Medical Examination use. Products from Pathogen, Disinfectant, Single use only. Non-sterile, comfortable, non-irritating, disposable in some areas. Made in USA, 95% nitrile. Do not reuse these gloves.	SC-12395 Small SC-12396 Medium SC-12397 Large SC-16953 2X Large
	WorkPro Clear Plastic Medical Protection Free Exam Glove	Prevents contamination from emergency medical operations	Not Rated	GLDVE 42 15 NITRILE NITRILE FREE POWDER FREE	5.90	These gloves should be worn for all activities involving chemotherapy drugs, including chemotherapy administration, handling of waste. These nitrile coated gloves. Products from Pathogen, Disinfectant, Single use only. Non-sterile. These gloves do have an expiration date.	SC-16178 Large SC-16179 Large SC-16180 Large
	WorkPro ME 100 Cut Resistant Polyurethane	Cut resistance	A3 Light/Medium CUT LEVEL	GLDVE 42 71 CUT RESISTANT POLYURETHANE CLASSED POLYURETHANE	1.90	WorkPro ME 100 (One Hand, Gray Polyurethane Palm, ANI Cut Level 3, 17 length, lightweight) from 100% ME 100 polyurethane palm and nitrile back with polyurethane side panels and nitrile reinforced back coating. WorkPro ME 100 provides protection from cuts and abrasions.	SC-18885 Small SC-18886 Medium SC-18887 Large SC-18888 X Large



RDO Hearing Protection PPE Matrix						Red Dog	Teck
RDO Warehouse Stocked Item Photo	Name and Model	Hazard Protection	ANSI / Noise Reduction	Gencid Description	Product Description	RDO Warehouse Stock Supply Code #	
	3M XE100 Earplugs	ANSI S3.71	22dB	3M XE100 Earplugs	3M XE100 Earplugs	SC-183777	
	3M XE100 Earplugs	ANSI S3.71	22dB	3M XE100 Earplugs	3M XE100 Earplugs	SC-183777	
	3M XE100 Earplugs	ANSI S3.71	22dB	3M XE100 Earplugs	3M XE100 Earplugs	SC-183777	
	3M XE100 Earplugs	ANSI S3.71	22dB	3M XE100 Earplugs	3M XE100 Earplugs	SC-183777	
	3M XE100 Earplugs	ANSI S3.71	22dB	3M XE100 Earplugs	3M XE100 Earplugs	SC-183777	
	3M XE100 Earplugs	ANSI S3.71	22dB	3M XE100 Earplugs	3M XE100 Earplugs	SC-183777	

Upgrading the Dog House

The east end of the personnel accommodations (PAC) at Red Dog has been growing this past summer. Teck Alaska contracted with NANA Construction LLC out of Big Lake, Alaska, to design and construct the 133-module expansion. This expansion will add 160 additional personnel rooms to the existing PAC.

The Red Dog PAC was due for an upgrade, the existing ConPAC facility was at the end of its operational life, and camp capacity was required to house the workers to execute the Value Improvement Project #2, along with other critical Red Dog capital and sustaining projects.

In addition to the personnel rooms, significant infrastructure to current NMS kitchen operation, including additional kitchen equipment and floor space, new dishwashing areas, commercial laundry, internal freezer storage, additional internal dry storage, an 80-person dry facility and mudroom have been added. This project is due to be completed by the end of November 2018.



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 Managing Editor, Verna Westlake at verna.westlake@teck.com or communityrelationsRDOG@teck.com

Wulik River Fish Are Safe to Eat!

By Johanna Salatas

Red Dog's Environmental Technicians have one of the most important jobs related to our PIC motto: Prevent, Improve, Comply. They spend most time collecting valuable samples (water, sediment, air, soil/dust, etc.) that allow us to comply with multiple federal, state, and local laws, permits and agreements. The Environmental Department also coordinates closely with researchers from agencies such as the Alaska Department of Fish and Game (ADFG) and U.S. Fish and Wildlife Service to assist with their sample collections, also used in our compliance evaluations.

Recently, Jeanne Dellinger from our Mine Department had a question about mercury in local fish that she consumes from the region and wondered if we could answer some questions for her. Using fish data specifically collected by ADFG in the Wulik River, along with information available in published literature, it was possible for us to answer Jeanne's questions.

Jeanne wanted to know if she should be concerned about consuming fish from Kivalina and Noatak due to mercury content. The short answer is that fish from local areas are low in mercury content and safe to consume. The information to support that answer is presented below, and is excerpted from a memo prepared for Jeanne. If anyone would like to see the memo in its entirety with data included, please contact Johanna Salatas in the Environmental Department.

Should I eat the fish?

Fish and other seafood are important components of a healthy diet, providing many essential nutrients. Fish provide high-quality protein, vitamins, and minerals and are a rich source of Omega-3 fats, which are not easily obtained from other foods. There is evidence that eating fish reduces people's risk of certain diseases, including cardiovascular

disease. Eating fish during pregnancy, while breastfeeding, and during childhood is particularly important because it contributes to healthy growth and development, including brain development, for children. You can view mercury levels of commercial fish and shell fish here <https://www.fda.gov/Food/FoodborneIllnessContaminants/Metals/ucm115644.htm>

How much fish should I eat generally?

The Alaska Department of Public Health (ADPH) Section of Epidemiology recommends that because of the health and cultural benefits of eating fish, most people should eat as much of any type of fish from Alaskan waters as possible, with the exception a shark known as salmon shark. View the Salmon Shark here <http://www.adfg.alaska.gov/index.cfm?adfg=salmonshark.main>

ADPH recommends limiting consumption of certain for children under 18 years of age, women who are or may become pregnant, and nursing mothers. For these groups, ADPH still recommends unlimited consumption of any fish that are low in mercury. Refer to the State of Alaska Epidemiology Bulletin here http://dhss.alaska.gov/dph/Epi/eph/Documents/bulletins/docs/b2014_13.pdf

What fish are low in mercury?

Fish low in mercury include the following:

- **Dolly Varden**
- **Grayling**
- **Salmon**
- **Whitefish**
- **Most rockfish**
- **Many other fish from Alaskan waters.**

Continued on page 10



Dolly Varden out of Kivalina

How do mercury levels in Wulik River fish compare to fish elsewhere?

National studies show that nearly all fish contain mercury in varying concentrations, depending on the species of fish, location, age and size, dietary habits, and other factors. Mercury levels in Dolly Varden are lower than mercury levels in most fish consumed in the United States.

Between 2003 to 2017, the average mercury concentration in muscle tissue from Dolly Varden from the Wulik River was about 0.02 milligrams per kilogram (mg/kg) of fish muscle tissue. In 2017, the average mercury level was about 0.009 mg/kg. By comparison, FDA reported average mercury levels tested in commercial fish in the United States between 2002 and 2012:



Drying Dolly Varden in Kivalina

- **Salmon (0.02 mg/kg)**
- **Pollock (0.03 mg/kg)**
- **Whiting (0.05 mg/kg)**
- **Freshwater trout (0.07 mg/kg)**
- **Whitefish (0.09 mg/kg)**
- **Ocean perch (0.1 mg/kg)**

These data indicate that mercury concentrations in Wulik River Dolly Varden are lower than concentrations in most commercial fish and seafood.

How much fish should I eat from the Wulik River?

EPA and the World Health Organization (WHO) have each established tolerable intake limits for mercury in fish and shellfish designed to protect even the most vulnerable individuals, such as the developing

fetus or small children. Less sensitive groups such as women who are not pregnant or nursing and men, could safely consume higher levels of methylmercury in fish.

For Wulik River Dolly Varden, a woman with a typical 60-kilogram (132-pound) body weight would need to eat 0.7 kilograms (1.5 pounds) of Wulik River Dolly Varden every day to exceed the EPA intake limit and 1.5 kilograms (3.4 pounds) every day to exceed the WHO limit (using the average mercury level measured in 2016 (0.009 mg/kg). The amount of fish that could be eaten by a small child would be less because they are smaller. For example, a 30-kg (66-pound) child could eat as much as 0.8 to 1.7 pounds of Wulik River Dolly Varden every day before exceeding the EPA or WHO limits.

It is easiest to understand that ADPH concluded it is safe to eat any amount of Dolly Varden and most other fish caught in Alaskan waters, even for children, women who may become pregnant, and nursing mothers. Refer to the State of Alaska Epidemiology Bulletin here http://dhss.alaska.gov/dph/Epi/eph/Documents/bulletins/docs/b2014_13.pdf

What does this all mean?

Wulik River Dolly Varden can be consumed safely, and the intake amounts are similar to or greater than what would be recommended for commercial fish or shellfish. This is because mercury concentration in Wulik River Dolly Varden is lower compared with commercial fish and seafood sold in stores.

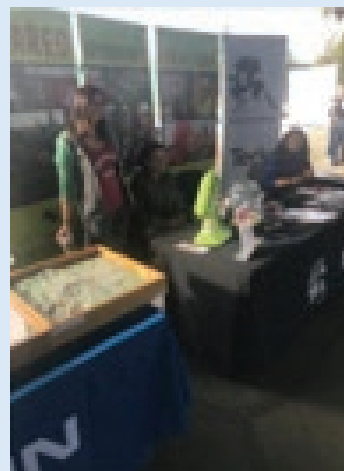
These risk assessment results show that consuming subsistence foods from this region are safe and continues to be safe! If you have any questions or concerns about subsistence foods in the Red Dog Operations areas, please contact Johanna Salatas in the Environmental Department. And finally, Taikuu Jeanne Dellinger for your question!

Mining Day at the Alaska State Fair

Teck employees volunteered their time and expertise representing Red Dog Mine and Teck Alaska during Mining Day at the Fair on Saturday, September 1st. Fair attendees visited the booth to chat, grab a Red Dog Mine buff and enter to win a lime green KitchenAid Mixer!



Volunteers Aaron Tooyak (Community Relations intern), Bob Chandler (Response Chief) and Peter Lambert (Port Site Mechanic) greet fair attendees.



Sami Schaeffer (Community Relations), Catherine Dunleavy (Tailings and Water) and Allyson Stoll (Mill Technical) start off the day with coffee and smiles.

Continued from page 4

Value of Partnership, Community and Culture

By Verna Westlake

After a delicious salmon lunch, we donned our life jackets, boarded the boat and headed downriver a short distance around the bend to set the seine and haul in the fish. It was great to witness the youth have so much fun while working to get the task right. They not only learned a food gathering skill, but it was apparent they felt a sense of pride in the work achieved. It was great seeing the work of community from all ages.

Before departing for the day, we sat around the campfire stove and shared stories and played games. The time spent was a great refresher of culture and community and of the benefits that Red Dog provides for our region.



Hanging and smudging fish on the rack



Campers gathered for group photo



Scaling whitefish

Aglagiagnaqsiruuq! (It's time to go to school!)

COMMUNITY INVESTMENT

Welcome back to school students and teachers!

Teck Red Dog Community Investment contributes to the annual Back to School Community Potlucks in the NANA region. In partnership with regional organizations, Community Relations works with NANA's Shareholder Relations Coordinators to provide hot dogs, hamburgers, buns, and condiments to all the villages.

This annual event brought the communities together to kick-off another fantastic school year with friends and family.

Paġlagipsigiñ (we welcome you) to the new incoming teachers and staff!



Noorvik youth fill their plates during the annual Back to School Potluck on September 12.



Buckland had an excellent turnout for their potluck on September 16. Taikuu (thank you) to everyone that volunteered!



Kivalina community kicks off the school year together.



Have you “liked” us on facebook?

Follow @TeckResourcesLtd to get the latest information on Teck and Red Dog Operations!

- Current Red Dog employment opportunities
- Community activities
- Global Teck news



For Current Job Vacancies (or opportunities)

Please go to www.teck.com and/or www.nana.com and apply on-line. (Paper applications or letters of interest are no longer accepted.)

Red Dog Newsletter

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



Message and data rates may apply.

Join our mailing list.

Online www.reddogalaska.com/subscribe

Red Dog Operations | Teck Alaska Incorporated
3105 Lakeshore Drive - Building A, Suite 101 - Anchorage, AK 99517 - Phone: 907-754-5168 | Email: reddog.info@teck.com
Website: www.reddogalaska.com