Donlin Advisory Technical Review and Oversight Committee (DATROC) Subsistence Community Advisory Committee (SCAC) May 2024 Meeting Summary

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Meeting Details

When:	Meeting Days	Wednesday, May 1st & Thursday, May 2nd, 2024
Where:	In Person	Arviiq Regional Economic Development & Training Center in Aniak
Purpose:		• Continue to build SCAC purpose, membership, and process. • Build a shared understanding and provide input on the status of project permitting and community outreach, and barging/transportation plans. • Share local/traditional knowledge and perspective.

Meeting Summary

Action Items and Key Takeaways

Key Takeaways

Day 1

- The revised Subsistence Community Advisory Committee (SCAC) Charter was reviewed, and further revisions and clarifications were recommended. A final version will be shared with the SCAC once it is completed.
- The SCAC discussed the process for making recommendations to the Donlin Advisory Technical Review and Oversight Committee (DATROC) and ensuring timely responses.
- The importance of communication and knowledge-sharing between meetings and community members was discussed.
- A robust dialogue about the various permits required to operate the mine allowed SCAC members to voice concerns, hear about the permit process, learn about the monitoring and safety measures in place, and have their questions answered.

Day 2

- The Donlin Gold project has a long history and timeline, with permitting taking over a decade and construction potentially 7-8 years away if approvals are received.
- Community engagement and input from groups like the SCAC are important parts of the project development and permitting process. Related, adaptive management practices are emphasized to allow plans to evolve based on new data and ensure regulatory compliance over the long project timelines.
- Barges will transport large volumes of supplies to support mine construction and operations. Concerns about impacts to subsistence and fish populations were raised and discussed.

- Studies found salmon would avoid barge impacts, but rainbow smelt spawning areas could see minor scouring in some locations at average flows. Monitoring will continue.
- A barge communication plan was presented but needs more development and local input. Erosion monitoring also needs to be expanded.

- Transportation, management, and use of cyanide and mercury was also discussed as length. Both exist naturally in the ore and will be captured, not imported. Strict handling, transporting, and disposal protocols will be followed.
- A natural gas pipeline will be constructed and will help to reduce fuel barge traffic. Engineering firms that are working on the pipeline have extensive experience in Alaska and more specifically on the Slope. Facilities will be erected along the gas line and will mostly be small pump stations and maintenance stations.
- **Don't have future meetings during breakup**😊.

Action Items

Administrative

1. Develop contact information sheet for SCAC members to provide their preferred methods of communication.
2. Schedule next SCAC meeting for Q4 2024 to cover tailings and the dam (other related topics include: discharge, cyanide and mercury management, testing, vetting, and understanding different types of dams); target date between AFN and Thanksgiving.
3. Schedule meeting between SCAC and Red Dog Mine subsistence committee representatives in Anchorage in Q1 2025 (potentially 2 days).
4. Provide SCAC members with summary of discussion points from December 2023.
5. Incorporate edits to the charter and recirculate final version.
6. Post meeting summary to Let's Talk Donlin on the project site. More broadly – think this is more about deciding how to update and reactivate the Let's Talk Donlin site, but this was the specific "to do" voiced in the meetings.
7. Establish system to take in and respond to hardcopy comments from villages and SCAC member networks.
8. Change number of seats for Crooked Creek (2 seats), making a total of four seats for TKC communities.
9. Add term limits for SCAC seats to the charter.
10. Discuss SCAC roster and potential recruitment for open seats.

DATROC Follow-Up

11. Develop a more detailed barge communication plan with more input from local communities, including determining how conflicts will be resolved.
12. Follow up about additional erosion monitoring stations.
13. Coordinate with local communities on spill response equipment and procedures, as well as a process to identify and flag environmentally and culturally sensitive sites that may require special protection measures.
14. Follow up with a more thorough answer about barge propeller impacts on salmon:
    - Specifics to be addressed: the question was about adult salmon returning to the river, the presentation covered juvenile salmon; it is also important to note that the barges being used for the Donlin site sit lower in the river than the barges that are currently operating on the river and there is concern that the salmon will have nowhere to escape to and will not then return to the river.
    - Additional information about how much stress the added barge traffic will inflict on the resource and their ability to make it to their spawning grounds.

15. Follow up to request a data sharing process be implemented, especially about salmon and rainbow smelt data, erosion monitoring data, and other environmental / subsistence impacts.

Meeting Notes

Day 1: Wednesday, May 1, 2024

Welcome and Connecting

- Day one opened with introductions around the table which included updates from each person's community. The meeting took place during breakup season and Committee members held space for the spring activities picking up pace back home. Committee members who were unable to attend were also acknowledged.
- The primary purposes for the SCAC meeting were reiterated and are summarized below:
    - To continue building understanding of the SCAC's purpose and role in providing local and traditional knowledge and input on the Donlin Gold project.
    - To review and get input from SCAC members on revisions made to the SCAC charter based on previous feedback.
    - To understand how recommendations and actions from past SCAC meetings have been considered and addressed by the DATROC.
    - To set the stage for SCAC members to provide their perspectives on upcoming topics like the permitting process and project timeline.
- Changes in membership:
    - Darren Cleveland (Kwinhagak, Seat F) and Rex Nick (Pilot Station, Seat I) have decided to step down.
    - Julie Zukar (Crooked Creek, Seat C) was approved to join SCAC and will attend the next meeting.

Charter Review

- The charter is meant to be a guiding document that talks about the purpose of the SCAC, but also the structure and process related to the SCAC.
- The committee reviewed the changes that were made to the membership composition and representation based on previous SCAC input and collected additional feedback from SCAC members, including:
    - Clarify the number of seats for communities like Crooked Creek (2 seats) and The Kuskokwim Corporation (TKC) villages (4 seats).
    - Consider rotational representation from different villages over time.
    - Consider term limits and staggered terms for members for continuity.
    - Recognize more formally the alternate seats in case of unexpected absences.
    - Agree with the revised process for sharing recommendations and questions with DATROC including the action tracker.

December 2023 Meeting Action Items

- The committee agreed in December that there was a need to protect traditional, ecological knowledge and stories shared so they don't mistakenly get used where they shouldn't. A draft Traditional Ecological Knowledge Release Form was reviewed.
- Suggested edits to the Release Form include:
    - Modify checkboxes to allow members to opt out of having their information used or published in certain ways.
    - Create space for members to note any restrictions on use of their knowledge directly on the form
    - Change "my interview" to "my meeting participation".
    - Suggested edit to the first bullet to read "I will be given the opportunity to review any product".
- The committee reviewed the process to share recommendations and questions with the DATROC, there were no edits suggested.
- SCAC then reviewed and discussed the record tracker spreadsheet that supports the DATROC process chart.
- Communications items were the last few follow ups from the December meeting, and the group discussed adding information to and improving the Let's Talk Donlin page on the website. Items to consider adding or improving:
    - Post-meeting summaries with relevant decisions and outcomes
    - A comment form and contact email for anyone with questions
- Hardcopy comment forms to be shared in SCAC member home communities and their networks were requested in December and DATROC agreed. The SCAC needs to come up with a process and mechanism to capture and respond to those comment forms.
- The SCAC's request to meet with the Red Dog subsistence committee was pursued. Red Dog prefers not to send just one person to the other's meeting but would rather meet committee to committee in Anchorage.
- The final request from December was to break down the Environmental Impact Statement (EIS) and discuss and review each portion in manageable portions. This request is being enacted at the meeting over the next two days, starting with Barging.

Project Deep Dive: Permitting & Community Outreach Timeline

- This session started with a project overview, including the following site profile:
    - The mine is situated 10 miles north of the village of Crooked Creek, on Calista and TKC land.
    - Power for the mine comes from natural gas piped in along a buried gas line 316 miles long.
    - Supplies will be barged in from West Coast ports to Bethel, transferred to river barges, 200 miles upriver to new port at Jungjuk, and then delivered to the site via a 30-mile road from this port.
    - A runway 5000 feet long will be used to bring some supplies and most personnel to the site.

Permits

- Mining is a highly regulated industry. The purpose of mining permits is to ensure regulatory compliance, environmental protection, risk management, and public health protection.

- The project requires numerous permits from various regulatory agencies like the National Environmental Protection Agency (NEPA), Army Corps of Engineers, Department of Natural Resources (DNR), and the Department of Environmental Conservation (DEC) to comply with environmental regulations.
    - Wetlands permits require mitigation like restoration of degraded wetlands elsewhere to offset project impacts. Finding suitable mitigation sites in Alaska is challenging.
    - Water rights permits are needed to collect and use surface water and groundwater at different project facilities.
    - Air quality permits mandate use of best available control technology to limit dust and emissions from sources like roads and equipment.
    - Fish habitat permits are required for any work impacting streams and conditions must be met to not impede fish.
    - Cultural resources are considered under NEPA and historic properties permits may be required.
- Permits are required at different stages of the project for exploration, mining operations, and transportation infrastructure, like the pipeline, road, water usage, and wastewater discharge.
    - Dam safety permitting involves extensive engineering design review and approval in phases before construction and operation can begin.
    - Emergency response, spill prevention plans, and hazardous waste management are regulated through various permits.
- The permitting process is lengthy and involves public input, technical reviews, environmental reviews, and conditions that must be met for approval. Some permits take a long time to secure, like the NEPA permit which took 6 years.
    - Environmental Impact Statements are drafted as part of this process and are subject to a public review and comment period.
    - For the Donlin project, 14 scoping meetings were held and broadcasted in villages around the Yukon-Kuskokwim Delta, thousands of newsletters were mailed, a website was created, radio programs were broadcast, and 34 informational panels were held.
    - After this scoping process, the draft EIS was written and distributed for comment. During this stage, 17 meetings were held and more than 1,000 people participated and 204 of them shared comments on the draft. The comment period was extended to ensure reach and opportunity to share feedback.
    - Once the public's input has been collected and addressed, the final EIS is issued. The permit is issued on the basis of the EIS.
    - It was noted that public outreach and input process did not close at the point of the EIS and permits being issued, the door is still open. It was also noted that the SCAC was convened because of a recommendation from the EIS public input process to be sure the input and concerns from the public had a pathway into the process.
- Permits have time limits and need to be renewed, which involves re-application and a technical review. They also require ongoing monitoring, record-keeping, and reporting to maintain compliance with permit conditions.

Topics of Concern

- Discussion around **waste management permits and protocols** prompted a question about mitigation and response when tailings fail and contamination happens. The highly toxic nature of the chemicals involved are an acute threat to subsistence lifestyles and resources.
    - Waste management and disposal permits and protocols are required for the chemicals needed to operate the mine and the waste materials that are filtered from the wastewater process. These are detailed and include protocols on how they are packaged, shipped, and handled.
    - Chain of custody requirements are also in place.
- Discussion about the **emergency response and contingency plans** for the Donlin dam included the following points:
    - The project requires emergency response personnel trained and equipped to respond quickly to any hazards like fires or other dam issues.
    - Emergency action plans would need to be developed describing procedures to follow in various emergency scenarios like a dam failure.
    - Communities would likely be involved in reviewing and providing input on emergency plans to ensure their needs and concerns are addressed.
    - Plans need to address rapidly containing any spill or breach to minimize downstream impacts, with equipment and supplies strategically pre-staged for emergency response.
    - Coordination and information sharing with local response agencies like fire departments would be important for effective emergency management.
    - Ongoing monitoring, inspections, and maintenance of the dams is important to identify any issues promptly and take corrective actions before emergencies occur.
- **Wetlands mitigation** was discussed at length in an effort to understand how the project will address impacts to key waterways. The permits and related regulations require projects to offset their impacts by restoring or rehabilitating an area of similar size to the site impacted by the project, which is 2,000 acres for this project. These are at the mine site, along the transportation corridor, and along the pipeline.
    - Wetlands mitigation is required under the Clean Water Act to offset impacts from projects approved to fill wetlands. Mitigation options include restoration of degraded wetlands, creation of new wetlands, or preservation of high-quality wetlands.
    - For Donlin, they looked first within the impacted drainage (Crooked Creek and Chulitna) for mitigation projects and found some degraded wetlands from past placer mining to restore. They also contacted Tribes to ask for wetland restoration projects.
    - Ongoing monitoring is required to demonstrate the mitigation projects are successfully replacing the lost wetland functions and habitat.
    - Finding suitable large-scale mitigation projects is challenging in Alaska which has vast areas of undisturbed wetlands. Other potential projects discussed were rejected.
    - The Army Corps of Engineers provides guidance but also flexibility on mitigation locations based on the specific project and what is feasible in the region.
    - Projects that were rejected as mitigation sites were discussed, and a success story from the Nyak Mine restoration effort was shared. Nyak Mine is partnering with Alaska Department of Fish and Game (ADF&G) to create and restore fish habitat and silvers, reds, and kings are starting to come back.

- **Air quality concerns** were raised as threats to fish populations as well. The fallout from mining operation emissions lands in the waters and impacts the fish in ways that drive them from their habitats. Tribal communities have been noting these impacts for a long time and are seeking answers and solutions.
    - The Clean Air Act and Alaska air quality regulations require any industrial facilities like mines to obtain air quality permits from DEC.
    - Permits mandate the use of "best available control technology" to limit emissions from all sources at the facility, like dust from roads, smokestacks, vehicles etc.
    - Emissions are regulated for pollutants like particulate matter, nitrogen oxides, carbon monoxide, sulfur dioxide, and volatile organic compounds.
    - Extensive compliance monitoring and record-keeping is required, including biannual reporting to DEC to ensure permit limits are met.
    - Road dust will be controlled through methods like water trucks, dust suppressants, and enforcing speed limits to minimize particulate matter emissions.
    - Mercury emissions will be reduced by 99.9% through scrubbers installed on smokestacks to capture mercury before release.
- **Wildfire prevention and response** is an important safety consideration for mine operations due to dry conditions in the region. Land use permits from DNR and Bureau of Land Management (BLM) include stipulations for minimizing wildfire risks from activities like equipment use.
    - Facilities like the mine site would have detailed fire prevention and response plans as part of health and safety protocols.
    - Rapid response capabilities would be required with trained emergency personnel and equipment pre-staged near the site.
    - Coordination with local fire departments and agencies is in place for effective wildfire management in the region.
    - Ongoing monitoring, inspections, and compliance with safety measures are in place to reduce wildfire ignition risks from industrial activities.
- **Dams and reservoirs** will be used on the site for various reasons:
    - To collect and store contact water from operations, including water pumped from the open pit mine and water that comes into contact with waste rock or other mine materials. This water would be stored in reservoirs.
    - To manage water volumes at the tailings storage facility, with temporary dams built initially and then a larger permanent embankment dam as the facility expands over the life of the mine.
    - To supply fresh water for operations, as some reservoirs would store water to be used at the mine site for purposes like dust suppression, drinking/sanitation, firefighting, etc.
    - To control water levels and flows, as the dams and reservoirs allow for regulated discharge of treated water back to Crooked Creek during summer months when flows are higher.
- The **dam permitting process** is rigorous and involves extensive engineering review by DNR's Dam Safety program.
    - Permits are required for construction of each dam raise/lift, not just the initial dam. More review is needed for subsequent raises.
    - Technical reports on geology, hydrology, geotechnical properties are required to characterize dam foundations and support designs.
    - Designs use a downstream construction method for stability, as seen in large existing Alaska dams that withstood major earthquakes.
    - Ongoing monitoring, inspections and maintenance is important for dam safety compliance.

    - Emergency action plans and community involvement will likely be required to address any unlikely failure scenarios.
    - Fish habitat permits are also required from ADF&G for work impacting streams to not impede fish passage and habitat.
- A question about the **chemicals used in the mining process** was raised to better understand mitigation and treatment protocols to prevent contamination of waterways.
    - Cyanide is used in the gold recovery process to extract gold from ore, but is then detoxified through a chemical process before tailings are discharged.
    - International standards and best practices require detoxification to reduce cyanide to trace amounts that are non-toxic.
    - Stringent transportation, storage and disposal requirements exist for handling cyanide and other chemicals used at the mine site.
- **Wastewater management, discharge, and filtration processes** were discussed to understand what safety protocols and standards are in place to protect against contamination of waterways.
    - All contact water from the mine site operations is captured and stored in reservoirs before treatment and discharge.
    - Wastewater is treated through a filtration process at a water treatment plant to remove pollutants before being discharged to Crooked Creek. After treatment, discharged water is required to meet water quality standards protective of the health of humans and fish.
    - Ongoing monitoring of wastewater and groundwater around facilities housing chemicals is necessary to ensure no contamination occurs.
- **Water discharge will happen during the summer months** when flows are higher for a few key reasons:
    - Summer has increased flows that can dilute and assimilate treated wastewater discharge better than lower winter flows.
    - Higher flows help the creek maintain water quality standards downstream of the discharge point more easily.
    - Winter presents challenges like ice cover that make monitoring and ensuring proper mixing more difficult if discharging at that time.
    - Salmon are less likely to be present in the creek during summer versus spawning or rearing periods in other seasons, reducing potential impacts.
    - Independent water sample testing was brought up for consideration as a way to build trust in the process.
- **Waste rock** is rock that is mined for gold but does not have gold or sufficient gold to mine further. There are different levels of waste rock – non-acid generating (NAG) rock and various levels of potentially acid generating (PAG) rock. Depending on the level of acid-generation, there are different treatment protocols:
    - Levels below 5% can be blended with non-acid generating rock to neutralize the reactivity.
    - The next level, PAG 6, is segregated from other rock types and placed in isolated cells.
    - The higher levels, PAG 7, are segregated and placed in low-grade stockpile area and stored until the material can be re-located to the bottom of the ACMA pit.
    - Ongoing monitoring plans for the waste rock are part of the Integrated Waste Management Permit (IWMP).

Day 2: Thursday, May 2, 2024

Project Timeline

- Day 2 kicked off with some history about mining on the Donlin site and an overview of the project in general.

Timeline and History

- The project has a long history dating back to the early 1900s when mining first began in the area. In 1989, geologists discovered the Belden Creek deposit. Exploration began in 1995 and permitting started in 2012. The NEPA process concluded in 2018 with the Final EIS.
- The project's status is advancing permitting and technical work to refine the project design and costs. In 2019, efforts to better understand the deposit and how to mine it kicked off and drilling began. Engineering studies are optimizing the metallurgical process and project design.
- If permitting and decisions go accordingly, construction could begin in approximately 7-8 years. Operations would last 27 years, followed by closure and long-term water treatment. The timeline emphasizes careful planning and engagement over many decades due to the project's large scale and long-term impacts.

Project Overview

- The Donlin Gold project involves developing an open-pit gold mine located near Crooked Creek, AK, approximately 300 miles northwest of Anchorage.
- The deposit contains approximately 39 million ounces of gold in proven and probable reserves. This is expected to sustain production for about three decades. Additional exploration at the site is possible.
- If developed, it would be one of the largest gold mining operations in Alaska's history. Operations would last 27 years followed by closure activities.
- This site uses hard rock mining techniques, not placer mining techniques. The basics of this process are as follows:
    - Exploration to locate gold deposit and determine its size and quality.
    - Site preparation by clearing vegetation and building infrastructure like roads.
    - Heavy equipment is used for drilling and blasting to break up ore-bearing rock.
    - Gold ore is transported from the mine site to a processing facility.
    - Milling uses crushing, grinding, and separation techniques like flotation to extract the gold.
    - Gold is further refined with techniques like cyanidation to produce bars of gold-silver alloy for sale to refineries.
    - Reclamation involves reshaping disturbed areas and revegetation after mining is complete, and ongoing monitoring and water treatment may be needed long-term.
- More questions about the dam and the tailings came up, and an example of a dam failure was shared to highlight how the dams at Donlin would be designed and constructed to avoid failure. It was shared that Donlin will be using the highest standards and practices in the dams on site. The group was reminded that tailings and dam safety is a topic due for a deep dive at a future meeting.

Continued from Day 1

Waste Management Permit

- The waste management plan includes the water resources management plan and the IWMP, which includes tailings management plan, waste rock management plan, and a monitoring plan. Key takeaways about the overall IWMP include:
    - Tailings are deposited into the engineered tailings storage facility. Water is managed to prevent buildup near the dam.
    - The plan aims to minimize water contact with tailings and ensure water is treated before discharge, in line with water quality permit conditions.
    - Because Crooked Creek is categorized with two uses, drinking water and aquatic life, the discharge standards are held to both sets of standards. It needs to comply with the more restrictive of the two.
    - Water and sediment quality, as well as solids, will be monitored regularly.
    - Stormwater management is also part of the plan.
    - Monitoring plans include inspecting the dam, pipelines, reclaimed water system, seepage collection, and temporary reservoirs during construction.
    - Operator roles, responsibilities, and required training programs are outlined. Inspections of the facility occur weekly, monthly, and annually.
    - Long-term monitoring and maintenance of the tailings facility is part of closure planning to ensure public and environmental safety after operations.

Aquatic Resources Monitoring Plan

- ADF&G regulates wildlife and fish habitat permits and since the project includes seven dams on and near fish habitat, the project requires these permits.
    - Aquatic resources monitoring is required as part of the project and includes annual reports during operations for ADF&G review. These reports are required to begin once operations commence.
    - Donlin has been monitoring the aquatic resources for a few years already because there is a learning curve involved and because a wildfire went through the site recently. This is also allowing them to establish an expected baseline of metal concentrations in the fish before mining activity commences.
- Aquatic resource monitoring includes the following steps:
    - Measuring water quality parameters like metals, sediment, and flow at multiple stations throughout the drainage basin.
    - Monitoring fish populations by identifying species presence and abundance at different locations.
    - Collecting fish tissue samples to analyze concentrations of mercury, arsenic, cadmium, and other metals. Young fish that don't migrate are typically sampled.
    - Assessing macroinvertebrate (insect) diversity and composition as an indicator of water quality changes.
    - Conducting aerial salmon surveys to estimate return numbers and distribution across reaches of the river system.
    - Compiling all data in an annual report submitted to the Alaska Department of Fish and Game for review. The goal is to track any changes that could be related to mine development activities.
- The project is governed by an adaptive management plan, where results from the monitoring efforts inform how the project evolves. Decisions and changes are based on the results of the monitoring results.
- There was a robust conversation about the opportunity to share data about the information that Donlin is collecting about the fish. Where and when fish are picking up these metals is unknown, though they are born

with some level of mercury and other metals in their systems. The SCAC members would like to be recipients of data collected from the site so they can be more informed and share knowledge with their constituents.

- The effects of mercury and other metals are already present in the fish of the area, and the project has not started. A partnership with Donlin opens opportunities to combine their monitoring and sampling capabilities and obligations with the knowledge from the communities and residents to better understand the changes happening in fish populations.

Mine Closure and Reclamation Plan

- The first day's topics were wrapped up with the mine closure and reclamation plan overview. This involves developing a plan for reclaiming all disturbed areas and facilities over the life of the mine, not just at closure. It includes concurrent reclamation efforts. It also includes:
  - Estimating closure costs that must be financially assured through bonding or another approved mechanism. Costs are re-evaluated every 5 years.
  - Outlining how infrastructure will be decommissioned and removed, waste rock and tailings will be capped and contoured, and water managed.
  - Revegetation efforts to stabilize and restore disturbed areas. Monitoring is required to ensure reclamation success.
  - Long-term water treatment is anticipated to meet discharge standards, potentially in perpetuity, with costs factored into financial assurance.
  - Adaptive management and permit renewal every 5 years allows plans to evolve based on new information and technology.
- Natural gas pipeline and fiber optic cable lines will serve the site as well.
  - The natural gas pipeline has leak detection sensors, shut off valves, protective coatings that prevent corrosion, annual cleaning and inspection operations, emergency response planning, and safety training are all in place.
  - It was also mentioned that communities could potentially connect into the pipeline, if they pay for the connection infrastructure, and access the natural gas pipeline.

Notice to Proceed

- This notice to proceed must be obtained from state permitting agencies before beginning pipeline construction. To get this notice, Donlin Gold will need to submit detailed construction plans to the state for review, including plans for quality management, erosion control, facilities siting, road building, stream crossings, waste management, and more.
- Once the state reviews all the submitted plans and is satisfied, it will issue the notice to proceed, which authorizes Donlin Gold to begin pipeline construction activities according to the approved plans. The notice only covers a certain section or time period, so the process may need to be repeated for different phases of work.
- Pipeline construction will take place over two years and will be completed in five sections proceeding from both ends. The decision to start construction will be a joint one between the project owners and the engineers, who will review and refine the plans before construction starts.

Barging and Transportation

- Key barging topics covered in this session included why barging needs to happen, what went into the planning, what the fleet will look like, environmental safety (e.g., spill response, transport of dangerous goods), mitigation and monitoring efforts, barge communication plan, impacts to fish and subsistence practices, and erosion concerns.
- Barging is a key part of the Donlin project supply chain – the rivers are the best way to get heavy equipment into the site.
    - Approximately 115,000 tons of cargo will need to be transported annually, including things like construction materials, reagents for the milling process, fuel, food, and other consumables.
    - While some things like personnel and food can be transported by plane, the bulk of materials must be transported by barge due to the large volumes needed.
- The route from ports in the Pacific Northwest is as follows:
    - Ocean barges will carry goods from the Pacific Northwest to Bethel via the Bering Sea where cargo will be transferred to smaller river barges.
    - The river barges will then transport the cargo up the Kuskokwim River from Bethel to a new port being constructed in Aniak where cargo will be loaded to trucks and transported by road for the remaining 30 miles to the mine site.
    - Fuel barges will come into Jungjuk Port and offload fuel into a 40-million-gallon fuel storage tank, or they will be able to connect right into the pipeline.
- Donlin will use its own barges because of the volume of cargo that needs to get to the site. The number and frequency of the barges will vary throughout the project and depend on activity at the site. The construction phase will look different than ongoing operations, for example.
    - During construction, there will be an additional 69-89 river barges (20 barges are needed for pipe and equipment only in the first two years).
    - During operations, there will be an additional 122 river barges.
- Barge days are planned on an annual basis and conservative estimates are used because breakup and freeze up are not precisely predictable. The planning window used is June 1-September 30 (110 days).
- They also studied river pinch points – points in the river where the water is shallow and limits barging.
- There was lengthy discussion about the number of trips and the draft created for each tow because the turbidity created from this increased traffic and displacement impacts fish.
- Barging specifics were requested to better understand frequency and potential for impacts.
    - 80 hours on average needed for one round trip, it's a 24/7 operation.
    - On average, 3 barges passing in a 24-hour period.
    - Barges will be loaded according to river flow rates (CFS), based off the USGS flow station at Crooked Creek. Weather conditions will also impact decisions about cargo loads.
    - The better the flow, the fewer the trips. Flow determines how much cargo can be placed on the barge, not the speed at which the vessel travels. They will endeavor to keep the speed at roughly 4.6 mph.
- The adaptive management model was mentioned again to highlight that the barge speeds can be altered to limit impacts as information is shared into the project.
    - Concerns were shared that camps along that river have not had success getting barges to slow down on the river and it's a major safety issue.
    - The barging communication plan is meant to serve as the process for sharing information back and forth between Donlin barge operators and local communities.

- SCAC members called on Donlin to lead by example and slow down when passing fish camps.

Barge Communication Plan

- Intent of the barge communications plan is to make sure there is good communication between the operator and subsistence communities / individuals. The Donlin project included input from barge operators, community engagement efforts (including conversations in Bethel and Aniak), and other input. They were asked for idea and suggestions to enhance communication and minimize effects.
- Objectives of the plan:
  - Communicate about barging plans
  - Making sure barging and subsistence can occur safely
  - Establish a process for conflicts
  - It is also meant to be an adaptive management plan – able to be adjusted as needed.
- The barging communication plan includes the following:
  - Two annual meetings: one in March before barging season to talk about the season's barging plans, what changes have been made since last season, how did communication go, etc., and then a second meeting in November after barging season to hear how things went and what needs to change for the following season.
  - Communication tools and platforms include VHF radio, cell phone numbers, and interactive maps. These can all be used to share location of barges and to contact barge operators.
  - A pilot vessel will be deployed ahead of the barge to scout the river, observe river conditions, and offer a chance to communicate ahead of the barge's passing in real time. Yup'ik speakers will operate the pilot vessel when available.

Effects of Barge Propellers

- Concerns were raised about potential impacts of barge propellers on salmon and rainbow smelt.
  - **Salmon**: Studies during the EIS process looked at where young salmon were located in the river and they were found mainly in shallow shoreline areas rather than the deeper main channel used by barges. It was determined salmon fry were strong enough to move away from any effects of propeller forces. Adult salmon were also found to mainly use the river for migration and move to tributaries for spawning, rather than spawning in the main Kuskokwim River channel.
  - **Rainbow smelt:** Rainbow smelt spawn in a 27 mile stretch of the Kuskokwim River from late May to early June, laying their eggs on gravel near shorelines. Initial EIS studies found one location where propeller forces from a barge could potentially disturb gravel and affect eggs, but not across the entire spawning area.
- More recent modeling studies at average river flows found very little potential effect on gravels from propeller forces across most of the rainbow smelt spawning grounds. Some minor scouring was possible in limited areas.
- Additional studies would continue to be done during operations to monitor any potential impacts on fish like rainbow smelt and salmon from barge operations and propellers. Adaptive management would be used if any effects were identified.

Erosion

- Concerns have been raised about potential increases in erosion along the river from increased barge traffic.
    - Erosion monitoring is currently taking place at three locations along the Kuskokwim River below Aniak using cross-sectional measurements twice per year. One location showed nearly 5 feet of change in one year, while others changed little, demonstrating variability between sites.
    - Factors like high spring flows, breakup, and frost action were identified as the main drivers of erosion on the river, not expected barge traffic impacts.
    - Commitments were made to expand erosion monitoring and adapt monitoring as needed if changes in erosion rates were observed due to project activities.
- It was mentioned again that data that is being collected during erosion monitoring should be shared with the local communities, and specifically with those who are monitoring climate change and environmental impacts.

Spill Prevention and Response

- Questions have been raised about what the barges have in place to prevent spills from happening.
    - All barges carrying fuel will be double-hulled, with an inner and outer hull, to provide redundancy in case of damage to one hull.
    - Crews will be trained in spill prevention and response procedures.
    - Fuel transfer operations will utilize secondary containment like berms or catch pans to capture any spills.
    - Barges carrying hazardous materials like cyanide and mercury will meet all Department of Transportation packaging and transport regulations designed to prevent leaks and spills even in the event of accidents or damage.
    - Liquid mercury would be transported in specialized sealed containers designed to withstand impacts from transport. Granular mercury-laden carbon would be sealed in drums for disposal.
    - Donlin Gold committed to becoming signatories to the International Cyanide Management Code to ensure cyanide is handled responsibly by all companies involved in the supply chain.
- Questions and concerns about spills and spill response protocols were also raised, and these were discussed in detail.
    - Spill response plans will be developed and approved by regulatory agencies outlining prevention protocols and the equipment and response times needed to address any spills that do occur. Specifically, a Marine Transportation Facility Response Plan will be submitted to the US Coast Guard, as well as Barge Discharge Prevention and Response Plans (BDRPs).
    - Crews will be trained in spill prevention and response procedures. Local spill response training would also be provided to communities along the middle Kuskokwim.
    - Fuel barges would carry spill response equipment like oil spill booms and absorbent materials to contain any spills.
    - All plans will identify sensitive areas along the river, equipment staging locations, training requirements, and protocols for containing and cleaning up spills within required timeframes (usually 24 hours for initial response).
    - Local spill response contractors like Alaska Chadux Corporation will provide equipment and personnel to assist in an emergency response under these plans. Response equipment is already deployed at key points along the river. These points were determined through scenario testing that includes the ability to respond to a spill within 24 hours.

- The project is still developing specific plans and identifying local considerations (many of the data and information to date has been related to coastal communities). Ongoing work and next steps include:
    - Finalizing spill response plans and getting approval from regulatory agencies like the Coast Guard and Alaska Department of Environmental Conservation.
    - Ensuring adequate spill response equipment is staged along the transportation corridor in locations identified by planning scenarios.
    - Coordinating equipment and personnel training with local spill response contractors to prepare for responding to spills in remote areas of the river.
- It was pointed out that the meetings about spill response have been lightly attended, and that local communities have been under-engaged. Suggestions for follow up and further engagement include:
    - Continuing consultation with local and tribal governments on spill prevention and making any necessary adjustments to plans based on community input and feedback.
    - Engaging with communities to identify environmentally or culturally sensitive sites that may require special protection measures in spill contingency plans.
    - Establishing communication protocols for alerting river users in the event of a spill and coordinating protection of subsistence resources.

Cyanide Management

- Questions and concerns about transporting cyanide are often raised. Safety measures and precautions that are in place are as follows:
    - Cyanide will be transported in solid briquette form, which is safer and more stable than liquid or powdered forms.
    - Briquettes will be sealed in specialized ISO containers meeting DOT packaging standards for hazardous materials transport.
    - Donlin Gold committed to becoming a signatory to the International Cyanide Management Code to ensure all companies involved in supply chain operations meet best practices.
    - Transport containers are designed to withstand impacts and inspected regularly to prevent leaks or exposure during transport.
    - Emergency response plans and spill containment equipment will accompany all cyanide shipments as required by regulations.
    - Extensive employee training on safe cyanide handling and emergency procedures will be conducted to prevent and respond to any incidents during transport.
- A few other points about cyanide use and management were discussed:
    - Cyanide will be used at the mine site to extract gold from ore through a process where it dissolves the gold similar to how water dissolves sugar.
    - There are four points in the milling process where cyanide may be emitted - pressure oxidation, carbon stripping, electrowinning, and the gold furnace. Controls like condensers and carbon beds will capture over 99% of any cyanide emissions.

Mercury Management

- Questions and concerns about mercury transport and management are often raised, especially its potential to impact subsistence resources. The following safety measures and precautions are in place:
    - Liquid mercury will be transported in sealed 3-liter bottles or ton containers designed for hazardous materials transport.

- Containers will be made of corrosion-resistant materials like carbon steel and carefully inspected.
- Shipments will follow all EPA and ADEC regulations for manifesting, storage time limits, and disposal of hazardous waste.
- Granular mercury-laden carbon will be sealed in 55-gallon drums for off-site disposal at a permitted facility.
- Strict handling and disposal protocols are followed due to mercury being a toxic substance that can bioaccumulate in the environment and food chain if not properly managed. Extensive safety training and protocols will be followed by employees when handling any mercury materials.

- Other points about mercury use and management were discussed:
  - Mercury is a naturally occurring metal found in cinnabar deposits in the project area and will be captured and removed through the milling process rather than imported.
  - Mercury was previously used at some mines to extract gold via an amalgamation process, but cyanide extraction is now the standard industry method.
  - Monitoring of mercury levels in water, air, and fish tissue will be conducted as part of the mine's environmental monitoring program.
  - Spent carbon laden with absorbed mercury will be sealed in drums for off-site disposal at a permitted hazardous waste facility, following all EPA and ADEC regulations for storage and manifesting of shipments.
  - Adaptive management practices would be followed, with plans to adjust operations if mercury levels in the environment increased due to mining activities.

Questions from SCAC Members

- Q: What would it cost for the communities along the pipeline to connect into it?
  - A: The cost to connect when the EIS was produced was estimated at $3 million because it would require building a tie-in facility as well as the pipeline connection lines.
- Q: What is the life of the source of the natural gas (e.g., the natural gas pockets in Kenai are empty)?
  - A: The answer is complicated, but the preparations for the site included research into the supply being sufficient for the project. It's more a question of whether there is enough incentive for the operators to develop the site fully. There needs to be enough market demand, and uneven seasonal demand in Alaska is a disincentive for these operators.
- Q: What and how many facilities will be in place along the pipeline?
  - A: Pump stations, above-ground pipeline sections, check valve stations, and other small fenced facilities for maintenance access will be located along the pipeline.
    - A pump station at milepost zero near Beluga, where the pipeline connects to the existing Beluga pipeline. This will be a small facility within a fenced area.
    - A pump station at approximately milepost 157, located near the Devil's Elbow area. Again, this will be a small fenced facility.
    - Above-ground pipeline sections totaling approximately 300 feet where the line crosses the Castle Mountain fault zone.
    - Check valves installed approximately every 20 miles along the pipeline. These will be small fenced areas containing manifolds.
    - Potential small fenced areas where "pigs" can be inserted or extracted from the pipeline for maintenance.

        - Secondary containment and equipment at Aniak to facilitate gas delivery from the pipeline to the mine site via a short connecting pipeline.
- Q: How many PSI is the natural gas pipeline going to be?
    - A: It's a low pressure pipeline, 25,000 cubic feet of gas per day.
- Follow up Q: Did the project consult with anyone on the Slope about pipe engineering?
    - A: Michael Baker International and CH2M Hill were consulted, Michael Baker International has extensive experience in Alaska and on the Slope.
- Q: What opportunities exist for training and local hire? Can we recommend to Donlin that training and certification programs be offered before the mine is constructed and operating? Specific examples included barge captain licenses, CDLs, cooks, airplane pilots, mechanic certificates, etc.
    - A: Local hire information is available, and workforce development outreach and plans are in development. This is could be a topic for a future SCAC meeting, a jobs and trainings deep dive that would include what and how many jobs will be needed at the site and what the training / education requirements are.
    - Follow up / clarification: Maybe there's a way that a committee member or Donlin Gold can put out job announcements that are future focused and give enough notice for locals to get the necessary training and certifications.
- Q: Has Donlin been checking the narrow portions of the river?
    - A: Yes, there has been thorough study of the narrow points and shallow portions. Safe navigation commitment have include bathymetric surveys almost annually to understand the depths and map the bottom of the river.

Wrap-up and Next Steps

- Meeting summary to be provided to SCAC members
- Follow up steps to plan for fall meeting will be discussed in the interim: dams, tailings, workforce development and trainings, impacts and considerations related to subsistence fishing, Red Dog meeting in Anchorage
- Closing thoughts:
    - Glad everyone is here together working, thinking, and trying to help ourselves and others. We're here together doing this work for everyone.
    - Enjoyed the meeting, but still worried about the work required back home because of break up. Worried about what's happening back home while working here, but sacrifices are needed for this kind of work. Teaching our people and improving on our subsistence way of life for the future requires this kind of sacrifice.
    - Gratitude for the Aniak community for welcoming the SCAC.
    - A better schedule is needed for next spring – well before breakup – and build more reflection time into the meeting schedule.
    - Learned a lot from all the input. Grateful for the collaboration and ability to create a safe space and consensus around "agree to disagree."
    - Worried about breakup but grateful to be present.
    - Requests for better audio (speak up) and printouts need to be larger print (slide decks printed too small). Write questions down as they come up so they don't get missed or addressed thoroughly.
    - A couple people requested better chairs!

- Presenting the information and putting it on paper is one thing, would like to see what happens when it's put in practice.
- Appreciation for the patience working through the dense and technical information, and for the chance to get to know everyone around the table. And it would be great to have some social time built in as well as the quiet reflection time.
- Gratitude for the sense of humor that comes through in the meetings.
- Gratitude for the committee members for taking the time away from home and commitment to be here. The investment is important to the process.
- Gratitude to the presenters, organizers, and committee members. It was great to watch and be part of the process of absorbing the information and working with the information.
- It was meaningful for TKC to see the space used for learning and sharing and stewardship conversations happen, it was why the building was purchased.
- It's not our job to tell anyone what they should feel about any of this work – it's our job to make sure information and knowledge is shared, and to use our authority as landowners to ensure the work is done responsibly and with sustainability in mind because we are borrowing this land from future generations.
- Gratitude for the group's commitment to the process – dense and highly technical information and the group kept it engaging and interactive. We were able to learn a lot from each other.
- Appreciate the honesty and directness of the questions, feedback, and additions to the conversation, and the patience when answers weren't readily available or when questions were missed.
- Gratitude for Carrie and the meals that were shared!
- Gratitude for the Donlin team and Enrik for pulling all the information together for the presentations and materials.

Appendix: Invited Participants

*****DATROC Members

- SCAC Members (see roster at end of this document)
- The Kuskokwim Corporation
  - Andrea Gusty, President & CEO*
  - Rachel Klein, Land Consultant*
  - Jonathan Samuelson, VP Shareholder Services
- Calista Corporation
  - Tisha Kuhns, VP of Land and Natural Resources*
  - Thom Leonard, VP of Corporate Affairs*
  - Elizabeth Cannon, Corporate Affairs Manager
- Donlin Gold:
  - Enric Fernandez, General Manager*
  - Kristina Woolston, External Affairs Manager*
  - Rebecca Wilmarth, Community Relations Supervisor*
  - Colleen Laraux, Community Relations Coordinator

Donlin Advisory Technical Review and Oversight Committee Members

Subsistence Community Advisory Committee, as of April 7, 2024

Seat*	First	Last	Community
A: TKC Villages	Phyllis	Evan	Lower Kalskag
A: TKC Villages	Nicholas	Kameroff	Aniak
A: TKC Villages	William	Hunter	Chuathbaluk
B: TKC Villages	Mark	Leary	Napaimute
B: TKC Villages	Joe	Kameroff	Aniak
C: Crooked Creek	Denny	Thomas	Crooked Creek
D: Upper Kuskokwim	Dan	Esai	Nikolai
E: Lower Kuskokwim (Akiachak to Tuluksak)	Fritz	Charles	Bethel
E: Lower Kuskokwim (Akiachak to Tuluksak)	Samuel	Berlin	Bethel
F: Lower Kuskokwim (Atmautluak to Platinum)	Darren	Cleveland	Kwinhagak
G: Coastal	Ralph	Kiunya	Kongiganak
H: Coastal	Nathan	Lake	Hooper Bay
I: Upper Yukon, Lower Yukon, and GASH	Rex	Nick	Pilot Station
J: Upper Yukon, Lower Yukon, and GASH	Wassily	Alexie	Russian Mission
K: Elder	Nels	Alexie	Bethel
K: Elder	Vicki	Otte	McGrath

*A = charter has one seat; current roster includes three individuals

*B = charter has one seat; current roster includes two individuals

*E = charter has one seat; current roster includes two individuals

*K = charter has one seat; current roster includes two individuals