ALASKA STATE LEGISLATURE
SENATE RESOURCES STANDING COMMITTEE
March 1, 2023
3:32 p.m.

MEMBERS PRESENT

Senator Click Bishop, Co-Chair
Senator Cathy Giessel, Co-Chair
Senator Bill Wielechowski, Vice Chair
Senator Scott Kawasaki
Senator James Kaufman
Senator Forrest Dunbar
Senator Matt Claman

MEMBERS ABSENT

All members present

COMMITTEE CALENDAR

SENATE BILL NO. 67
"An Act relating to firefighting substances; and providing for an effective date."

- HEARD & HELD

PRESENTATION(S): MINING INDUSTRY UPDATE

- HEARD

PREVIOUS COMMITTEE ACTION

BILL: SB 67
SHORT TITLE: PFAS USE FIREFIGHTING
SPONSOR(s): SENATOR(s) KIEHL

02/10/23	(S)	READ THE FIRST TIME - REFERRALS
02/10/23	(S)	RES, FIN
03/01/23	(S)	RES AT 3:30 PM BUTROVICH 205

WITNESS REGISTER

SENATOR JESSE KIEHL, District B
Alaska State Legislature
Juneau, Alaska

POSITION STATEMENT: Sponsor of SB 67.

CATHY SCHLINGHEYDE, Staff
Senator Jesse Kiehl
Alaska State Legislature
Juneau, Alaska
POSITION STATEMENT: Presented the sectional analysis for SB 67 on behalf of the sponsor.

JUSTIN MACK, Secretary/Treasurer
Alaska Professional Fire Fighters Association (AKPFFA)
Anchorage, Alaska
POSITION STATEMENT: Testified by invitation in support of SB 67.

DAVID PRUHS, Mayor
City of Fairbanks
Fairbanks, Alaska
POSITION STATEMENT: Testified by invitation in support of SB 67.

DEANTHA SKIBINSKI, Executive Director
Alaska Miners Association
Anchorage, Alaska
POSITION STATEMENT: Co-presented the Mining Industry Update.

KAREN MATTHIAS, Executive Director
Council of Alaska Producers
Anchorage, Alaska
POSITION STATEMENT: Co-presented the Mining Industry Update.

MIKE SATRE, Director
Governmental Affairs
Hecla Mining Company
Juneau, Alaska
POSITION STATEMENT: Co-presented the Mining Industry Update.

ACTION NARRATIVE

3:32:22 PM
CO-CHAIR CLICK BISHOP called the Senate Resources Standing Committee meeting to order at 3:32 p.m. Present at the call to order were Senators Kawasaki, Claman, Wielechowski, Co-Chair Giessel, and Co-Chair Bishop. Senators Dunbar and Kaufman arrived soon thereafter.

SB 67-PFAS USE FIREFIGHTING

3:33:19 PM
CO-CHAIR BISHOP announced the consideration of SENATE BILL NO. 67 "An Act relating to firefighting substances; and providing for an effective date."

3:33:36 PM
SENATOR JESSE KIEHL, District B, Alaska State Legislature, Juneau, Alaska, sponsor of SB 67, introduced the legislation speaking to the following sponsor statement:

> Per- and polyfluoroalkyl substances (PFAS) are a group of chemicals harmful to human health. They are linked to serious health conditions including low birth weight, thyroid disease, and cancer—even at extremely small concentrations.
>
> They also make excellent ingredients in firefighting foams, in part because they resist breaking down. When firefighting foams or other compounds containing PFAS seep into drinking water, the toxic "forever chemicals" linger for years.
>
> The Alaska Department of Environmental Conservation declared PFAS hazardous substances several years ago. Senate Bill 67 protects Alaskans' health and prevents future pollution by banning PFAS foams unless federal law preempts. The bill also requires the state to take back small quantities of PFAS foam to ensure it's disposed of safely.
>
> Because there is not yet an effective alternative for the intensity of fire threat oil & gas operations face at refineries or the Trans Alaska Pipeline terminal, the bill exempts those producing, transporting, or refining oil and gas until the State Fire Marshal determines an effective non-PFAS substance could do the job.

3:34:01 PM
SENATOR KAUFMAN and SENATOR DUNBAR joined the committee.

SENATOR KIEHL stated that with a few small exceptions, SB 67 says no new spraying of PFAS-containing firefighting foams into Alaska's environment. The bill acknowledges that as long as the FAA maintains its requirement, the prohibition against spraying PFAS-containing foams will be federally preempted. Fortunately, there is a congressional mandate for the FAA to lift that

requirement, and several products are in the process that meet US military specifications for fluorine-free foam.

SENATOR KIEHL said the other issue is right now there are no fluorine-free foams that will handle the volume of hydrocarbons in the oil and gas industry. Research is ongoing and products are available now that come close to putting out large oil and gas fires. SB 67 says that once those products are available, certified effective, and have gone through the full public regulatory process, the state fire marshal will mark the transition for the oil and gas industry.

SENATOR KIEHL also flagged the takeback provision. He explained that the bill requires the executive branch to take back up to 25 gallons of PFAS-containing foam from small entities to ensure that the foam is disposed of appropriately. His expectation is these small quantities will be put with the PFAS-containing foams that the State Airport System owns and disposed of together.

3:42:24 PM
CATHY SCHLINGHEYDE, Staff, Senator Jesse Kiehl, Alaska State Legislature, Juneau, Alaska, presented the sectional analysis for SB 67 on behalf of the sponsor:

> Sec. 1 of the bill creates a new section:
>
> Sec. 46.03.340(a): Everyone outside the oil & gas industry must stop using PFAS containing foams, unless federal law preempts Alaska law.
>
> Sec. 46.03.340(b): The oil & gas industry may continue using PFAS-containing foams until an alternative is approved by regulation.
>
> Sec. 46.03.340(c): The state fire marshal can determine there is a safe and effective PFAS-free foam for fighting oil or gas fires if the alternate foam is listed by an organization in OSHA's Nationally Recognized Testing Laboratory Program. The fire marshal must require the new foam by regulation, with a stated effective date.
>
> Sec. 46.03.350(d): DEC must take up to 25 gallons per year of PFAS-containing firefighting foam from Alaskans for disposal.

Sec. 2 of the bill sets an effective date of January 1, 2024.

3:43:18 PM
SENATOR WIELECHOWSKI asked if there was reason to believe that safe alternative firefighting substances were available.

SENATOR KIEHL answered yes, with the exception of the large and intense fires that might occur at oil and gas storage facilities. Nearly all of Europe has been fluorine-free for years and those foams are plenty effective for the volumes of air traffic that go through Anchorage, Fairbanks, and anywhere else that jets land in Alaska.

SENATOR WIELECHOWSKI asked if PFAS is still used at major airports in Alaska.

SENATOR KIEHL answered yes; the Federal Aviation Administration still requires DOT to use those foams. However, the testing that used to occur on runways is done in contained areas so the PFAS-containing foam does not escape into the environment. If there were a fire, the PFAS-containing foam would be used at this point.

3:44:37 PM
SENATOR GIESSEL mentioned an article that highlighted PFAS in ski wax and commented on firefighters' risk of exposure.

SENATOR KIEHL confirmed that first responders often are exposed to significant quantities of PFAS. He said it's a concern that PFAS chemicals are present in a lot of products. SB 67 focuses on the single greatest threat; PFAS in drinking water.

3:46:14 PM
SENATOR KAWASAKI asked if there was a large cost differential between the firefighting foams used in Europe and the PFAS-containing foams used in the US.

SENATOR KIEHL said he didn't have a cost comparison, but it is good news that established manufacturers throughout the world produce fluorine-free foams that work.

3:47:08 PM
SENATOR CLAMAN asked if he had a timeline for when the military will approve PFAS-free firefighting foams.

SENATOR KIEHL said the process is expected to be 60-90 days, and it's begun for some products. He said that should trigger the FAA to lift its requirement to use fluorinated foams at airports. It already is well past the congressional deadline to do so. He said there is no guarantee, but he believes that the FAA will begin the process to lift its requirement in 3-4 months.

SENATOR CLAMAN commented that it sounds as though this could all occur within the next 6-12 months.

MS. SCHLINGHEYDE responded that the FAA indicated it would remove the requirement to use fluorinated foams within 3-4 months.

CO-CHAIR BISHOP turned to invited testimony.

3:49:13 PM
JUSTIN MACK, Secretary/Treasurer, Alaska Professional Fire Fighters Association (AKPFFA), Anchorage, Alaska, testified by invitation in support of SB 67. He provided his extensive professional background, and said being a fire fighter is unique and routine until it isn't. He described going into buildings with zero visibility and responding to victims who might not see another day. He said it's clear that this career can be dangerous.

He said he learned how to keep himself safe early in his career, but what he failed to understand was that despite being careful, following standard guidelines, decontaminating himself and his equipment, and wearing the most up to date equipment he and other fire fighters were going to be exposed to some of the worst chemicals on earth. These chemicals permeate gear and seep into fire fighters' pores. The data shows that firefighters have significantly higher rates of cancer than the general population. The World Health Organization classifies the occupation as carcinogenic.

MR. MACK stated that SB 67 is an attempt to limit fire fighters' and the public's exposure to known carcinogens. He emphasized that there are alternatives to the use of PFAS-containing foam and strongly urged support for SB 67.

3:52:41 PM
DAVID PRUHS, Mayor, City of Fairbanks, Fairbanks, Alaska, testified by invitation in support of SB 67. He stated that the Interior has an extensive problem associated with the dispersal

of PFAS. The City of Fairbanks spent $5.4 million to supply water to 74 homes after PFAS from a firefighting training center migrated into a private utility's water system. The city also has an issue with concentrate discharge from its wastewater system and is seeking help from DEC on behalf of Golden Heart Utilities for a biosolids incinerator testing project. He agreed with Senator Kiehl that alleviating the problem starts with removing PFAS from the system.

3:55:00 PM
CO-CHAIR BISHOP held SB 67 in committee.

3:55:07 PM
At ease

PRESENTATION(S): MINING INDUSTRY UPDATE

3:55:55 PM
CO-CHAIR BISHOP reconvened the meeting and announced a mining industry update.

3:56:39 PM
DEANTHA SKIBINSKI, Executive Director, Alaska Miners Association, Anchorage, Alaska, introduced herself.

3:56:50 PM
KAREN MATTHIAS, Executive Director, Council of Alaska Producers, Anchorage, Alaska, introduced herself.

3:56:52 PM
MIKE SATRE, Director, Governmental Affairs, Hecla Mining Company, Juneau, Alaska, began with a safety share from Greens Creek Mine, which is how each meeting is started in the mining industry. It demonstrated that Hecla employees are well schooled in how to recognize and act in emergency medical situations. It also highlighted the importance of self-awareness and knowing when to ask for help.

3:59:27 PM
MS. MATTHIAS began by describing the three parts of the presentation.

- First, she would discuss the global outlook including:
  - the soaring demand for minerals to meet the need for more renewable technologies and energy storage;

- ~ the increasing non-partisan concern about overdependence in the US on mineral imports being a threat to national security and the economy; and
- ~ the agreement that more domestic production of minerals is needed.

- ~ Alaska embodies the principle of the USG and its mineral assets should be leveraged.

~ Next, Ms. Skibinski would discuss Alaska's environmental standards, community partnerships with local mines, and the benefits that accrue.

~ Finally, Mr. Satre would answer the question of why Alaska doesn't have more mines and how it can be positioned to be more competitive.

MS. MATTHIAS turned to slide 3, New Technologies are More Mineral Intensive. She directed attention to the image of the house on the top left that identifies the minerals that are used in daily life. It illustrates that everything that's used today is either made of minerals or it was grown or transported using metals and minerals. The image of cell phones on the lower left illustrates the mineral intensity of new technologies. The periodic table below the first generation cell phone shows it is much less mineral intensive than the current generation smart phone. The third image shows the enormous increases in the use of specific minerals to produce electric vehicles. She noted that zinc and silver are already produced in Alaska. Copper, cobalt, and graphite are also present in resources that could be developed in Alaska in projects already under development.

4:02:08 PM
MS. MATTHIAS displayed slide 4, stating that international organizations like The World Bank and The International Energy Agency have published reports about the increasing demand for minerals. There is also a growing awareness that not all countries enforce health and safety regulations or sound environmental practices. She cited cobalt as an example and noted that most of it comes from the Democratic Republic of the Congo where child labor is exploited. This points to the need for companies and countries to commit to responsibly sourced production and processing.

MS. MATTHIAS turned to slide 5, noting that some ask if recycling is the solution. She said it's important but only a

small part of the solution. She read an excerpt from The World Bank:

> …even if we scale up recycling rates for minerals like copper and aluminum by 100%, recycling and reuse would still not be enough to meet the demand for renewable energy technologies and energy storage.

4:03:49 PM
MS. MATTHIAS turned to slide 6, The US Dependency on Mineral Imports. She pointed to the chart showing the top three countries that extract critical minerals and the top three countries that process critical minerals. The US is not among those countries even though it has the potential. She noted that China dominates the supply chain in processing and that China owns 15 of the 17 industrial operations for cobalt mining in the Congo. China dominates extraction more than the slide shows.

4:04:59 PM
CO-CHAIR BISHOP stated that the US could achieve net zero carbon by 2050 faster if it mined minerals in the US instead of relying on supplies from foreign countries.

4:05:25 PM
MS. MATTHIAS continued to slide 7, stating that there is increasing recognition that America's increasing dependence on China in particular for critical materials is a threat to national security and the economy. In 2020 President Biden issued an Executive Order that addressed the threat to domestic supply chains by supporting domestic mining; in 2021 he ordered a review of US supply chains; and in 2022 he announced major investments to expand the domestic critical minerals supply chain. Senator Murkowski and Senator Sullivan agreed, pointing to Alaska's extensive resources.

4:06:35 PM
MS. MATTHIAS directed attention to the state map on slide 8 that shows the mining activity throughout Alaska. She noted that the large mines in the state were developed after the passage of the Clean Water Act, the Clean Air Act, and the National Environmental Policy Act (NEPA). These laws require federal agencies to assess the environmental impacts when considering permit applications. She noted that the handout with this map includes information about each of the mines.

4:07:20 PM

DEANTHA SKIBINSKI, Executive Director, Alaska Miners Association, stated that she would discuss the reasons that Alaska can contribute to the mineral supply chain. She said mines in the state are permitted under strict environmental policies that provide for closure and reclamation of the land. Financial assurance is required. The regulatory regime ensures that the environment is protected and often enhanced. She noted that she would provide examples later in the presentation.

4:08:11 PM
MS. SKIBINSKI advanced to slide 10, Strict Operational Oversight, and spoke to the following:

Alaska: the best mine monitoring system in the world

- Water quality monitoring
- Bottom-to-top comprehensive biomonitoring
- 3rd party audits

She described Alaska's water quality monitoring systems as one of the best in the world. Mining companies are required to monitor water quality in streams and the ground water downstream from the mine. Biomonitoring looks at the health of the downstream ecosystem, from the bottom of the food chain to the top. This will show whether juvenile fish are absorbing any metals and the algae composition at the bottom of the water bed. Third-party audits of the mine are done every five years and this information is publicly available.

4:10:01 PM
MS. SKIBINSKI directed attention to the picture on slide 11 of Red Dog Creek upstream from the mine. She said the red stain in the water and on the banks comes from natural mineralization. This resulted in little vegetation along the bank, a lot of sandbars, and poor habitat for fish. Today, there is abundant vegetation and fish populations. She pointed to the chart on the right that shows the high naturally occurring zinc levels reported to DEC and EPA before mining operations and the reduced levels after.

CO-CHAIR BISHOP noted that this water source was a tip off for the discovery of the mineral deposit at Red Dog.

MS. SKIBINSKI agreed.
MS. SKIBINSKI continued to slides 12 and 13 that provide additional examples of restoration projects at the Fort Knox

Gold Mine and Greens Creek Mine, both of which improved habitat and fish passage.

4:13:24 PM
MS. SKIBINSKI advanced to slide 14 to describe how regulatory oversight doesn't stop when a mine closes. The pictures at the top of the slide show the reclamation done at the Usibelli Coal Mine in January 2016 and July 2016. She spoke to the following:

Reclamation and Closure

- Alaska law (AS 27.19) requires that a mine site must be returned to a stable condition compatible with the post-mining land use
- Plan must be approved by DNR Commissioner before operations begin
- Financial assurance applies to all companies
- Reviewed every 5 years or earlier if necessary

CO-CHAIR BISHOP commented that Joe Usibelli senior was doing reclamation work before it was required.

CO-CHAIR GIESSEL added that the son of the man who founded the mine told her that they collect native seeds from the area that are used in reclamation.

MS. SKIBINSKI said the side by side photos are a visual illustration of how successful reclamation is at Usibelli.

4:15:45 PM
SENATOR CLAMAN referenced slide 8 and asked whether a federal permit would still be required for the six mines signified by red stars, regardless of whether the state assumed the 404 program, because of their locations relative to WOTUS.

MS. SKIBINSKI offered to follow up with the answer.

SENATOR CLAMAN said he was curious about where the producing mines fit in the rubric.

4:17:19 PM
MS. SKIBINSKI turned to the picture on slide 15 of the reclamation project that was done after the True North Mine closed. She highlighted the following:

> DNR Commissioner Corri Feige: "The developers leased state land, produced a valuable commodity to serve

global markets, employed Alaskans, and paid state taxes and royalties. When they were done, they remediated the effects of their work and returned the land to the state for its next use. The system works." October 27, 2020

4:18:09 PM
MS. SKIBINSKI directed attention to the drawing of the tree on slide 16 that shows the benefits mining brings to the people of Alaska. She noted that the 2022 data from the McKinley Group study of the economic and community benefits was forthcoming, but her message today was about the regional impacts that come from mining. She pointed to the white dots on the state map on slide 17 and conveyed that those represent the more than 90 communities throughout the state where mining employees live. She said it's often in rural Alaska where there aren't a lot of other opportunities. She noted that the pictures on the next slide illustrate that local mines support local businesses. In 2022, they spent $1 billion on goods and services from more than 450 Alaska vendors.

4:19:59 PM
MS. SKIBINSKI advanced to slide 19, Training Opportunities and Jobs for Alaskans, and discussed the following:

- $2.7 million to UA and vocational schools in 2022
- AVTEC, MAPTS, underground mine training center
- On-the-job training
- Scholarships: UA, ANSEP
- 11,400 direct, indirect & induced jobs

4:20:51 PM
SENATOR KAWASAKI shared 2019 data that shows that 37 percent of mine workers in Alaska are nonresidents. He asked what the industry was doing to increase Alaska hire.

4:21:36 PM
MS. MATTHIAS said it makes sense to hire Alaskans, and mining companies have been investing in vocational training opportunities for years through both the university and some K-12 programs. There is also an underground mine training center in Delta Junction that Pogo, Greens Creek, and Kensington utilize. The graduates from this six week program receive conditional employment offers from one or more of those three underground mines. The mining industry also reaches out to middle and high school students to make them aware of the career

options in mining. She continued that the out migration of young working age Alaskans has been a challenge for mining and all other industries. She said it will take a concerted effort from all sectors and the state to resolve that issue because the jobs are available.

CO-CHAIR BISHOP noted that he and Mr. Satre worked on the issue of nonresident miners in Alaska in 2007, and the training center in Delta was a good example of that effort.

4:25:37 PM
MS. SKIBINSKI advanced to slide 20, Benefits to Alaska Native Corporations, and spoke to the following:

- ANCSA 7(i) and 7(j) royalty sharing:
  - $94 million to Alaska Native Corporations and at-large shareholders in 2022
  - $1.7 billion since 1989
- Jobs for shareholders. Red Dog example:
  - Regular: 52% NANA shareholders
  - Seasonal/temp: 97% NANA shareholders
- Business partnerships

4:27:09 PM
MS. SKIBINSKI displayed slide 22, Mining Taxes and Royalties Depend on Land Status, and distinguished between taxes and royalties; taxes are paid to a government and royalties are paid to the landowner. Landowners could be the state, the Alaska Mental Health Trust, the federal government, or a native corporation. She said Pogo is the only metal mine located entirely on state land and the only coal mine in Alaska is on state land, which means the state receives royalties from just these two mines.

MS. SKIBINSKI stated that the data on slide 23, Mining Industry Payments to the State, 2022, came from the McKinley Research Group. She encouraged the committee to also look at the full state numbers that are published in the annual Mineral Industry report that DNR's Division of Geological and Geophysical Surveys produces. It breaks the revenue down by category, so it gives the real picture of mining revenue and all the ways that mining contributes to the state. The table at the beginning of the report has 5-6 years of revenue numbers so an average can be calculated.

4:30:50 PM

CO-CHAIR BISHOP offered his understanding that the Red Dog expansion would be on state land underground so the state will receive royalty payments from that.

MS. MATTHIAS agreed.

4:31:23 PM
SENATOR CLAMAN offered his understanding that the state collects corporate income tax from mines but, unlike oil, there is no production tax on minerals.

MS. MATTHIAS responded that, in addition to corporate tax and royalties, all mines in Alaska pay a mining license tax and the large mines pay 7 percent, which is the top tier.

SENATOR CLAMAN asked for the basis of the 7 percent.

MS. MATTHIAS replied it's based on net income.

4:32:22 PM
MS. MATTHIAS stated that the chart on slide 24, Mining Revenue vs. Costs to State, comes from the University of Alaska Anchorage Institute of Social and Economic Research. This study looked at state revenue and expenses averaged over four years. For those four years the average cumulative state and local revenue was just under $100 million. The average state expenses and capital budget funds expended to manage the mining industry were significantly lower than the average revenue, so there was a net benefit to the state from mining. She said one of the reasons for the small state expenses is because of the reimbursable services agreements that most large mines and large projects enter into with the Office of Project Management and Permitting (OPMP) under DNR. The costs for licensing and expansions that OPMP and other state agencies incur are billed back to the companies. She noted that the bottom four lines on the previous slide are agency costs that were reimbursable. She also highlighted that mines are the largest single taxpayers in the Fairbanks North Star Borough, the City and Borough of Juneau, and the Northwest Arctic Borough. It's a reliable source of revenue for local governments.

4:35:23 PM
MIKE SATRE, Director, Governmental Affairs, Hecla Mining Company, stated that he was asked to give the company perspective on things facing the mining industry in Alaska. He relayed that he has been in the mining industry for 27 years, some of which was underground, and now his role includes

external affairs. He said Hecla Mining Company started more than 100 years ago and the corporate office is in Coeur d'Alene, Idaho.

MR. SATRE spoke to the importance the mining industry has always placed on the metals and mineral space, noting that the general public and policy makers seem more aware that the future is built on minerals. Every day there are new and innovative ways to use minerals to power technologies that are used daily. It may be minerals that most people haven't heard of like Germanium (Ge) or Gallium (Ga) or the well-known mineral Silver (Ag). Hecla produces 40 percent of the US supply of silver, 30 percent of which comes from Greens Creek.

4:37:39 PM
MR. SATRE turned to slide 26 to discuss Alaska's unlimited mineral potential. He noted that the DGGS map identifies mineral occurrences and prospects throughout the state. Nearly every known mineral can be found somewhere in Alaska. He said the question now is how Alaska can go from being America's mineral warehouse to becoming America's mineral powerhouse.

MR. SATRE advanced to slide 27, Pathway to (mineral) prosperity, and asked "What can we do to turn the dots on the map into operating mines that provide the regional benefits that Deantha and Karen talked about?" He spoke to the following:

- Community support
- Infrastructure partnerships
- Stable fiscal climate
- Stable regulatory regime

He said new mines may come to Alaska if the foregoing is addressed. He noted that from 2001 to 2010, $1.8 billion was spent on exploration in the state; over that time the Pogo and Kensington mines opened. From 2011 to 2020, another $1.6 billion was spent on exploration and no new mines opened. He emphasized the importance of continuing to work to attract exploration dollars into Alaska if the state expects to produce its minerals, improve the mineral supply chain in the US, and provide the country with the minerals Americans use in their daily lives.

MR. SATRE expressed hope that the committee members would participate in the visit to Kensington in April. He opined that boots on the ground and talking to the workforce about what they do was incredibly important.

4:48:31 PM
SENATOR KAUFMAN mentioned the planning that went into the Trans Alaska Pipeline System, and asked whether adequate big-picture strategic planning was being done to identify all the interfaces and infrastructure needs for mineral production and delivery, including value-added activities. "What are the prerequisites that we need to have and what sympathetic elements do we need to have working with each other to really deliver some of this opportunity?"

MR. SATRE replied that the mining industry currently is not as vertically integrated as the petroleum industry. He said there might be opportunity for value-added products, but that probably would require port access to worldwide markets because markets in Alaska aren't large enough to support a smelter or refiner whether it's for traditional metals or rare earths. Access to power would also be critical. He cited the example of the aluminum smelter at Kitimat in Northern BC Canada that was only there because it had hydro power. He continued that for the mining industry, planning starts with both state and federal land management plans that recognize there is mineral potential throughout and identify how to extract those minerals yet preserve the high ecological value. He cited Hecla's Greens Creek mine in a national monument as an example of how that can be done. Long term, he said it's necessary to get representatives from all the industry groups in Alaska together to look at where roads are needed, where rail access is appropriate, where ports should be used, and where there is adequate power. He said these things aren't unique to the mining industry; they're needs for communities and all the other industries in Alaska.

4:53:24 PM
MS. MATTHIAS pointed out that the annual reports from the Alaska Minerals Commission list industry priorities and there are commonalities from year to year. They are an example of the mining industry identifying specifically what's missing in order for the industry to be robust. She also posited that the efforts by various administrations to bring roads to resources was a long-term vision of opening areas of Alaska to mineral resource development.

4:54:53 PM
SENATOR CLAMAN noted that she described most of the large mines in Alaska as world class and asked if there was a ready definition for "world class mine."

MR. SATRE said no, but companies have internal evaluation systems and there are general industry standards based on size. From a qualitative perspective, Red Dog is one of the largest zinc mines in the world, Greens Creek is one of the largest silver producers in the world, the Fort Knox district is world renowned for the volume of production, and Pogo is described as a Tier 1 gold asset.

SENATOR CLAMAN commented that any mine that's developed in Alaska will need to be a long-term project and probably will fit into tier 1 or be described as a world-class mine, because that's what it will take to justify the investment and expense.

MR. SATRE agreed that was a good way to look at it, because there was no question that access to roads, ports, and power were key things that allow a prospect to move forward. He posited that if Donlin were located on I-80 in Nevada it would have been in production for the last 20 years.

4:57:45 PM
CO-CHAIR GIESSEL commented that it's not always a company that identifies a resource for development. She pointed to the Manh Choh project on property the Village of Tetlin owns that has a significant amount of gold. It's under development and has brought wealth, educational opportunities, and jobs to this village that previously was lacking in all those areas.

CO-CHAIR BISHOP added that the deposit was only 12 miles off the road system. He highlighted the 2012 presentation by USGS at the University of Alaska that said Alaska was 50 years behind in knowing what it has for assets. That is how under-explored this state is.

4:59:42 PM
MR. SATRE added that USGS and other US agencies have spent over $900 million to advance the mineral opportunities in Afghanistan but very little in Alaska.

5:00:15 PM
There being no further business to come before the committee, Co-Chair Bishop adjourned the Senate Resources Standing Committee meeting at 5:00 p.m.