Testimony of
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Introduction

Chairman Murkowski, Ranking Member Cantwell and members of the Committee, my name is Luke Russell and I am V.P External Affairs for Hecla Mining Company. Hecla Mining Company (NYSE:HL) is the oldest precious metals mining company in North America and was established in 1891 in northern Idaho's Silver Valley. We are the United States' largest primary silver producer and third largest producer of lead and zinc. We currently have US operations and projects in Alaska, Idaho, Montana, Colorado and Nevada.

My experience includes more than 30 years in mine permitting and environmental compliance in several western states including: Idaho, Alaska, Nevada, South Dakota, and now Montana. In addition, I have permitted mines internationally in Chile, Argentina, New Zealand, Mexico and Bolivia. I have served as Trustee and past-President of the American Exploration & Mining Association and also have worked inside government serving as Remediation Manager with the Idaho Department of Environmental Quality.

Infrastructure Projects Depend on Minerals

Metals and minerals are the building blocks of our nation's infrastructure – simply put, it is impossible to create infrastructure without them. The U.S. mining industry is the source of raw materials necessary to make "planes, trains and automobiles" possible, not to mention runways, bridges, rail lines, and roads. Not only are metals and minerals direct inputs into infrastructure, they are integral to the manufactured product components of such projects such as support beams, construction pipes and electrical wiring.

The focus on infrastructure projects by this committee and the administration is justified by the crumbling nature of our nation's infrastructure. Consensus among the experts is that our infrastructure is in a dangerous state of disrepair. Earlier this year, the American Society of Civil Engineers (ASCE) issued its "report card" on the condition and performance of American infrastructure.[1] The grade for U.S infrastructure: a disappointing and disturbing D+. There is no question that we cannot repair our infrastructure without key raw materials.

- **Infrastructure Minerals Associated with Hecla's Projects**

Silver, copper and zinc are just three important minerals associated with Hecla's operations. Copper and silver, similar to uses of other minerals for infrastructure, overlap and converge in the field of renewable or "green" energy. Wind turbines would not be possible without mined materials. Just one turbine

[1] ASCE, 2017 *Report Card for America's Infrastructure* available at http://www.infrastructurereportcard.org/making-the-grade.

contains 335 tons of steel and almost 5 tons of copper.[2] Similarly, solar panels cannot be made without mined materials like steel, copper, silicon, aluminum and the unique metal that we produce, silver.

Silver has unique properties, with the highest electrical and thermal conductivity of all metals, as well as being the most reflective. These physical properties make it a highly valued industrial metal, especially when used in solar cells. Silver paste is a primary ingredient in 90% of the most common solar panels. In 2016, Photovoltaic (PV) demand for silver was up 43% over the previous year, the strongest growth since 2010. It was driven by a 49% increase in global solar panel installations, fueled largely by a doubling of annual solar panel installations in China and the United States, according to the *World Silver Survey 2017*. Worldwide consumption of silver for photovoltaic reached a record 76.6 million ounces.[3]

Today silver is also invaluable to solder and brazing alloys, batteries, dentistry, glass coatings, LED chips, medicine, nuclear reactors, photography, photovoltaic (or solar) energy, RFID chips (for tracking parcels or shipments worldwide), semiconductors, touch screens, water purification, wood preservatives and many other industrial uses. It is no wonder that the Silver Institute, a Washington-based industry group, calls it "the indispensable metal."

Copper, which we hope to produce from our Montana projects in a few years, has numerous beneficial qualities. It does not rust and is a excellent conductor of electricity. The transition to battery powered cars requires 4 times the amount of copper as in an internal combustion engine[4]. It is the key to the increased speed of modern high-speed trains which use 3 to 4 tonnes of copper per train.[5] Additionally, copper is integral to construction, piping, refrigeration, air-conditioning, cookware, computers, and even some medicines.

Today, the single leading use of lead, another metal Hecla produces, is in the manufacturing of batteries but the metal is also used for some alloys and in nuclear reactors. Zinc, which is a critical component in battery technology, is likely to play a role in advancements in electric vehicles and power storage. Zinc also goes into galvanizing steel as a protection against corrosion and is an important metal when it comes to the die-casting industry and rolled zinc applications in gutters, roofing, pipes, and coinage.

The value added to America's gross domestic product (GDP) by major industries consuming mineral material is $2.78 trillion – nearly 15 percent of U.S. GDP [6]. The importance of a secure supply of raw minerals and metals to a successful infrastructure sector is indisputable. There is a very serious question, however, about where those materials will come from if we fail to pursue proactive policies that promote domestic mining. This issue was addressed, in part, by this Committee in the March 28 hearing on our nation's increasing dependence on foreign sources of minerals.

The United States is Increasing Dependent on Foreign Minerals

The U.S. has become increasingly dependent on foreign sources of minerals and this vulnerability has serious national defense and economic consequences. The United States is now import-dependent for 50 different metals and minerals – and 100 percent import-dependent for 20.[7] That's half of the naturally-

[2] https://www.wind-watch.org/documents/metals-and-minerals-in-wind-turbines

[3] https://www.silverinstitute.org/silver-solar-technology

[4] http://copperalliance.org/wordpress/wp-content/uploads/2017/06/2017.06-E-Mobility-Factsheet-1.pdf

[5] http://copperalliance.org/wordpress/wp-content/uploads/2012/01/ICSG-Factbook-2014.pdf

[6] USGS, *Mineral Commodity Summaries 2017*, available at https://minerals.usgs.gov/minerals/pubs/mcs/2017/mcs2017.pdf

[7] Ibid.

occurring elements on the Periodic Table. According to the USGS, today we import about 34% of the copper we need and well over 65% of the silver we need. This troubling trend line is exacerbated by the decrease in U.S. exploration activities that are a prerequisite to expanded or new operations necessary to increase domestic mineral supplies. Last year marked the fourth consecutive year of globally declining exploration expenditure, with the U.S. showing the sharpest pullback in exploration last year, with its budgets falling more than 30%.[8] As a result, the U.S. attracted only approximately 7 percent of the worldwide exploration budget in 2016.

Our growing dependence on imports leaves many key domestic industries unnecessarily vulnerable to disruptions from extended, complex and fragile supply chains. The length of time it takes to secure permits in the U.S. is a key reason behind this dependency on foreign sources.

The U.S.' Inefficient and Outdated Permitting Process

The U.S. has one of the longest permitting processes in the world for mining projects. In the U.S., necessary government authorizations now take approximately seven to 10 years to secure, or even longer in some of our experience, placing the U.S. at a competitive disadvantage in attracting investment for mineral development. By comparison, permitting in Australia and Canada, which have similar environmental standards and practices as the U.S., take between two and three years.

Authorities ranging from the National Academy of Sciences to the Departments of Energy and Defense to international mining consulting firms have identified permitting delays as among the most significant risks and impediments to mining projects in the U.S.[9] Most recently, the U.S Government Accountability Office highlighted the need to streamline the mine permitting process to mitigate supply risks.[10]

These delays have real consequences. The National Mining Association (NMA) commissioned a study from SNL Metals & Minerals to demonstrate empirically the destruction of value which results from unnecessary, extended delays to project development.[11] That study found is that on average, a typical mining project loses over one-third of its economic value as a result of protracted delays in receiving the numerous permits needed to begin production. The longer the wait, the more the value of the investment is eroded, even to the extent that the project ultimately becomes an unviable investment. Even a large high-grade deposit will remain unmined if the balance between costs, revenue and timetable are not favorable.

As I previously mentioned, other countries, such as Canada manage to ensure their mining industry's competitiveness and as a result, attracted more than double the exploration dollars in 2016. Canada, a nation that shares our core principles of responsible resource development is adept at implementing an efficient permitting system that strives for completing permitting within a two-year period. Several of the best practices in place there include:

- Deadlines early in the process for determining the type and scope environmental assessments;
- Specific timelines for completing those environmental assessments;

[8] S&P Global Market Intelligence, *Worldwide Mining Exploration Trends*, March 2017
[9] *See* National Resources Council*, Hardrock Mining on Federal Lands,* National Academy Press (1999); U.S. Department of Energy, *Critical Materials Strategy* (Dec. 2010); U.S. Geological Survey USGS, *the Principal Rare Earth Elements Deposits of the United States—A Summary of Domestic Deposits and a Global Perspective*, 2010; Behre Dolbear, *Where Not to Invest* (2015).
[10] GAO Report 16-699, *Advanced Technologies: Strengthened Federal Approach Needed to Help Identify and Mitigate Supply Risks for Critical Raw Materials,* Dec. 2016
[11] SNL Metals & Mining, *Permitting, Economic Value and Mining in the United States,* June 2015.

- Legally binding deadlines for key regulatory permits;
- Enhanced coordination and consolidation of responsibilities for provincial and federal agencies reviewing projects; and
- Allowing provincial environmental assessments to substitute for federal assessments in order to eliminate duplication.

I would like to share a few examples of what I think are unreasonably long permitting processes I have been involved with.

Greens Creek – Alaska

One of the largest private employers in Southeast Alaska, Hecla's Greens Creek Mine is responsible for approximately 415 permanent, full-time jobs. The mine located near Juneau, Alaska and started production in 1989, producing almost 200 million ounces of silver since that time and still has over a 10-year mine life. The mine has provided over $.75 billion in economic contributions to the SE Alaska economy in just the last 5 years alone. It is one of the world's largest silver mines and produces gold, lead and zinc in important quantities as well. The mine has had an exemplary environmental record and is located, in part, in a national monument area with the largest concentration of brown bears in the world.

The mine was originally permitted in the late 1980's and production commenced in 1989 (some 16 years from discovery to first production) and has operated in harmony with sensitive environmental conditions for more than 28 years. With this history, one would expect that a plan for only a minor expansion to the existing tailings facility could be permitted in an expeditious manner. Unfortunately, our experience proved otherwise. In 2010, Hecla began a permitting process that would ultimately consume more than 5 years to approve for a small 10- acre expansion to the existing facility. The $60 million expansion extended the mine life by 10 years. However, based on long permitting timelines Hecla, is already preparing to start the multi-million dollar permitting process again to avoid shutting down the mine in 10 years- time due to a lack of permitted tailings storage capacity.

Kensington Mine – Alaska

Prior to working with Hecla, I worked with Coeur Mining which owns the near-by Kensington Mine in Southeast Alaska. Permitting of the Kensington mine started in 1988. In July of 1992, the USFS approved a Plan of Operations for the Kensington Gold Project. The mine did not receive all federal permits and did not proceed.

In 1994, the company submitted a revised plan of operation and in August 1997, the USFS approved a revised Plan of Operation for the Kensington Gold Project. While permitting was being completed, the price of gold decreased and the project economics were no longer favorable to commence construction.

In November 2001, however, the company submitted an amendment to its approved 1998 Plan of Operations to the USFS. In December of 2004, the USFS finalized the Supplemental Environmental Impact Statement and issued the Record of Decision for the modified Kensington project.

Permit appeals and litigation followed with the ultimate decision made by the U.S. Supreme Court ruling in favor of the agencies decision. The company then resumed construction of the estimated $400 million project and the first gold production was in 2010, some 22 years after initial project permitting had begun.

Rock Creek – Montana

Hecla recently acquired the Rock Creek project in Northwestern Montana. Rock Creek is the largest undeveloped copper -silver project in the US and contains an estimated 180 million ounces of silver and over 1.8 billion pounds of copper. The project has a long permitting history dating back to the first application for a mining permit in 1987. The Forest Service and Montana Department of Environmental Quality (DEQ) jointly completed a FEIS and Record of Decision (ROD) in 2001. This was followed by several appeals and litigation. The Fish and Wildlife Service withdrew its Biological Opinion (BO) in 2002 to settle a lawsuit causing the Forest Service to withdraw its part of the 2001 ROD. A new BO and ROD were issued in 2003. Numerous additional appeals were filed leading to a new BO in 2006 which was further supplemented in 2007. Additional litigation again followed and in 2010 the US District Court remanded the 2003 FEIS back on to the Forest Service on two NEPA procedural issues for further action and vacated the 2003 ROD.

The Kootenai National Forest then commenced a Supplemental Environmental Impact Statement (SEIS) review to respond to the U.S. District Court Decision. Now nearly 8 years later the Forest anticipates issuing its final Record of Decision and FSEIS in early 2018. That is over 30 years of permitting and litigation.

Northwest Montana has nearly double the state unemployment rate and among school age children and over 70% are on the SNAP food stamp program. These statistics illustrate the sever economic and environment emergency for the families that are affected. The poverty that exists in Northwest Montana deserves to be evaluated and acted up as an egregious Environment Justice issue. In recent polling conducted by Hecla, over 80% of those living in Northwest Montana consider the environment very important but also believe mining can be done in a manner compatible with those values. Resource production offers a chance to get out of the poverty that has resulted from the decline in forest production and the ongoing regulatory morass and litigation of overall resource production in Northwest Montana.

Mineral Permitting Delays Impact Our Readiness To Advance Infrastructure Projects

At a March 21 hearing before the House Natural Resources Energy and Mineral Resources Subcommittee that examined the importance of domestically sourced raw materials for infrastructure projects, Subcommittee Chairman Paul Gosar (R-Ariz.) correctly noted that "expedited permitting regimes for infrastructure projects will have little to no effect if the mines that supply materials to those projects do not share the same accelerated process." He further emphasized that "sourcing raw materials domestically keeps costs down, creates both direct and indirect jobs, reduces the holistic impact of mining by minimizing transportation costs, and keeps the dollars invested in American infrastructure in the United States." And sourcing those materials at home provides the added benefit of allowing the mining industry to continue to be a key economic driver.

Unnecessary delays and duplication in the permitting process strands capital and discourages long term investments in producing domestic minerals. Compare the exceedingly long permitting times here in the US with Chile, Canada and Australia where the average permitting time is between 2 and 3 years and incorporating essential the same environmental and engineering standards. If land managers and environmental regulatory professionals in these countries can get the job done in 2-3 years, so can the U.S.

To be clear, valid concerns about environmental protection need to be fully considered and addressed. At the same time, we should not trap mining projects in a limbo of duplicative, unpredictable and endless review without a decision point. We should not confuse the length of the process with the rigor of review.

Rock Creek Illustrates Permit Delays Due to Repetitive Endangered Species Act Consultation

In October of this year the US FWS completed its 5th Biological Opinion for the Rock Creek project, all concluding no jeopardy. The agency has drafted 5 BO's due primarily to the extended permitting and litigation period for the project, which resulted in "new information". While the project description has not changed the project has been hampered by the need to repeat ESA consultation in spite of the exemplary plan for grizzly bear mitigation proposed some 20 years ago.

In fact, in 2011, the 9th Circuit Court of Appeals reviewed the 2007 biological opinion for Rock Creek. In their unanimous decision upholding the FWS decision, the 9th Circuit stated that the mitigation plan was so robust that the Fish and Wildlife Service concluded that it "*would in fact improve conditions over the long-term over the existing conditions, ultimately promoting the recovery of the [local] grizzly bear population.*" Getting to this point; however, required decades of Agency review including numerous delays and litigation – all for a project which has not significantly changed in description since conceptually proposed in 1984 and formally proposed in 1987. Sadly, due to endless litigation and permitting delays little of this mitigation plan has been implemented on the ground. In addition, the local communities in desperate need of economic opportunity have also suffered.

Causes of Permitting Delays

In my experience, permitting delays are frequently caused by ineffective project management, unnecessary bureaucratic red tape, inefficient workforce issues with the Bureau of Land Management (BLM) and U.S. Forest Service (USFS), and multiple appeals and litigation.

Lack of firm timeframes: Permitting agencies generally have the authority to impose and enforce timeframes for various environmental analyses or interagency consultations yet fail to establish them.

Poor project management skills: The management of the multi-faceted aspects of NEPA for a mining project requires good project management skills. The ability to develop a work breakdown structure, schedule assigned responsibility and hold people accountable for deliverables. A successful project has consistency in management- a good project manager, who stays with the project.

Restriction on Proponent Involvement: In the early days of NEPA project proponents had a much higher level of contribution in the process. The permitting timeline was much more reasonable. Today, however, they are kept at an arms-length and agencies and third-party contractors are left spending excessive amounts of time coming up to speed on the technical aspects of the project, understanding viability of alternatives, etc. Getting the technical input from project proponents, who know the project best, would help streamline the process and lead to better NEPA documents

Training on minerals and mining and NEPA process: Many resource professionals are experienced in grazing, timber and recreation, but are not informed on minerals and mining development. Additional training on the NEPA process and the role of lead agency is critical to improving the federal permitting process. The lead agency must lead and in many cases I have seen it defer to cooperating agencies or other stakeholder interests, instead of taking charge and leading the permitting process.

Litigation: We often hear BLM and USFS say they must make these documents bullet proof. This makes all issues potentially significant which is counter to NEPA which clearly envisioned the lead agency following scoping would focus on those truly significant issues that could affect the environment (40 CFR 1502.2).

Many mining projects "die from a 1000 cuts" through multiple appeals and litigation. The Rock Creek example illustrates how litigation is an effective strategy to delay and string out project development. Anti-mining groups have sued multiple times and continue to litigate on ESA and NEPA issues in separate litigation efforts. This legal process grinds down both the agencies that must defend their permitting decisions and the company's in hopes the company will simply walk away from the project. While the company has millions of dollars and hundreds of high paying, family-wage jobs at risk, project opponents risk nothing with a chance to profit significantly by recovering their attorney fees through the Equal Access to Justice Act (EAJA).

Inefficient personnel system: Unfortunately, too often there are changes in management personnel during the project, changes in District Rangers, Forest Supervisors and BLM District Managers all which leads to reeducation, reevaluations and loss of time in the permitting process. For example, the Rare Earth Elements project in Wyoming required over 11 months to get an EIS project manager assigned to the project. Clearly a more efficient personnel system can be implemented to get people in place to manage projects. This factor is compounded by the fact that in the USFS performance reviews, promotions and raises do not include an employees' performance in managing mineral projects.

Federal Register Notice Delay: Substantial delays result from a BLM Instruction Memorandum (IM) issued on December 23, 2009 (IM 2010-043) requiring *all* Federal Register Notices be sent to the BLM Washington Office for review and approval prior to publication in the Federal Register. For example, the Asarco Ray Mine land transfer recently had its Notice of Availability published in the Federal register – this after 29 months of waiting for the DOI to do so. This IM also implemented a 12 to 14 step review and approval process that is taking approximately four months per Notice, prior to publication. Notices are required for intent to start the NEPA process and public scoping, for a draft EIS and the final EIS. This Federal Register notice process can add almost a year, or longer in the Ray Mine example, for a simple administrative notice filing. Prior to 2000, these routine notices were processed and published in 30 to 45 days. DOI should rescind this policy and return to the previous process where *Federal Register* notices could be submitted directly by BLM state offices without stopping at DOI for additional reviews.

Recommendations

Understanding the critical permitting issue facing domestic mining industry, Senate Energy and Natural Resources Chairman Lisa Murkowski (R-Alaska) recently introduced the Energy and Natural Resources Act of 2017 (S. 1460). This legislation would allow mining projects to be eligible for consideration as a covered project under Section 41001(6)(A) of the Fixing America's Surface Transportation Act (the FAST Act), which provides additional efficiencies in the federal permitting process for major infrastructure and other capital-intensive projects by better coordination and deadline-setting for permitting decisions. While this legislation is a step in the right direction, it's incumbent upon all the federal agencies to identify regulations and policies that needlessly delay or prevent mineral resource development from occurring, further jeopardizing the viability of downstream investments such as manufacturing and infrastructure projects.

The overarching objectives for streamlining the permitting system for mining should be:

- Minimizing delays;
- Setting and adhering to timelines and schedules for completion of the permitting process; and
- Tracking progress and providing for accountability.

To achieve these objectives, federal agencies involved in reviewing projects for permits or other authorizations should be required to clearly establish a lead agency to:

- NEPA-Equivalence: Consider adopting a NEPA-equivalence policy that allows the agency to determine the requirements of NEPA—when applicable—has been satisfied if the lead agency determines that any State or Federal agency has addressed or will address the applicable NEPA considerations.
- Avoiding duplicative reviews: the lead agency shall defer to and rely on baseline data, analyses, and reviews performed by state agencies with jurisdiction over the proposed project.
- Concurrent reviews: federal agencies should conduct any consultations or reviews concurrently rather than sequentially to expedite the process.
- Establish timelines and accountability for each major step of the process including:
    - Scoping of the analysis
    - Baseline studies required under applicable law and use of existing studies already conducted for state or federal authorizations
    - Draft EIS or similar analysis under NEPA
    - Submission and review of public and agency comments
    - Publication of any required public notices
    - Final decisions
- Directives clearly setting forth that the permitting agency is not required to consider or respond to comments received after the close of any comment period.
- Encourage use of Memorandums of Agreement between the agencies and project proponents that will set goals and timelines for each step of the process.

Many of these recommendations for using best practices in the permitting process are reflected in the regulations from the Council on Environmental Quality (CEQ) on making the National Environmental Policy Act process more efficient. CEQ's NEPA regulations encourage streamlined review, adoption of deadlines, elimination of duplicative work, eliciting suggested alternatives and other comments early through scoping, cooperation among agencies, and consultation with applicants during project planning process. See e.g., 40 CFR 1501.7 (Scoping); 1501.8 (Time limits);1502.20 (Tiering); and 1506.2 (Elimination of duplication). DOC's report should recommend that agencies treat these best practices as mandatory rather than as merely advisory. This can be accomplished easily by revising agency NEPA guidance to more clearly align with these best practices.

Conclusion

Domestic mining is an important economic driver. Mining's direct and indirect economic contribution includes nearly 2 million jobs with wage and benefits well above the state average for the industrial sector. In addition, domestic mining generates $46 billion in tax payments to federal, state and local governments.

Yet, much of our domestic mineral resources remain locked beneath our feet by an outdated and inefficient mining permitting system plagued by unnecessary delays and redundancies at the local, state and federal levels. To unlock this vast potential for the benefit of downstream infrastructure projects we urge Congress to work together on enabling policies that ensure timely and responsible access to U.S. mineral and metal resources. If we do not, and become increasingly marginalized as a supplier of these essential resources, the consequences are severe for our nation's global competitiveness.

Thank you for the opportunity to testify today.