

Research and Mineral Mapping Subcommittee
Draft Meeting Minutes
March 29, 2021
9:00 a.m.

Roll Call

Tim Eisele – present
Steve Kesler – absent
Snehamoy Chatterjee – present
Adam Wygant – absent
Sharon Schafer – absent
Mike Sweat – absent
Peter Rose – absent
John Yellich – present

Guests

Dave Behrend
Lei

The meeting began at 9:10 a.m.

We have been reviewing the document. Does everyone have access to the document?

Laboratories can look at rock chemistry. It is open to all state universities. We need to add technologies or capabilities to support the program. In the middle paragraph, add rock chemistry and potential to extract. Take out state. Add mining and reprocessing.

We as geologists are working to get more funding. The National house committee is associated with critical minerals. There is \$22 million to look at cleanup mining waste sites. We are looking at it here. Should we put that in this paragraph? Add this research is used to evaluate at the beginning.

Can we have a separate paragraph telling what chemical used for and what engineering is used for? Add new mining and mine waste for tailings. We have old waste rock and tailings from some of these. Make sure we're consistent with what was talked about in other meetings. Everyone points out acid. It is localized. We want to leave the environment in better condition. Don't want to leach acid or other things. We are looking for the basic rock chemistry. We could exclude mineral content. We want to know about sulfide or oxide. May need a list or table developed for this.

Is this the body or introduction? Don't know if we can put it together. In the previous paragraph, add at the end of the sentence that can result in a more favorable environmental chemistry of the material. Add chemical, geochemical, and physical results to the third sentence. Economic mineral is not needed. Make sure to have the ability to work on this and other things.

Could say the incentive for examining waste rock and tailings is these frequently contain critical minerals that were not noted at the time, but that have now become crucial to the US economy. After time, add extraction. The next sentence should start a new paragraph. Electric arc furnaces require metal to be melted before you can use it. Direct reduction has lots of uses. Cliffs redesigned the plant to make high grade pellet and a regular pellet to feed direct reduction furnaces.

Do we know they are looking at that at Tilden? There are electric arc furnaces in Michigan that would use pellets. Blast furnaces are sparse but arc furnaces are all over.

Do they still call it Taconite? Tilden feels their Taconite is different. We can say iron ore or Taconite pellets. Has Cleveland Cliffs gone out to private labs? They have a lab in Ishpeming and do most there, but some are contracted out.

We have to work as a team to provide potential future in Michigan. Are we saying available universities? Yes.

What appropriations are we talking about? There are none. Add from the need for here. USGS money for mapping portion. Can put USGS Department of Energy since they fund it. USGS funds money for money match. Match for DOE and DOD is not a one-to-one match. We still need cost shares just not defined amounts. Can include all federal agencies for USGS here? Add feasible and environmentally feasible at the end.

The Regulatory Policy gave me some information. We talked about funding but not MCGRRE. The eastern part of the UP was brought down. NRRI does a lot of processing and research. We aren't being contrary to anything being said. Research is managed by universities. I lived in Minnesota for two years, and they kept funding; Michigan did not. We need to look at something that comes out of extraction that is put back in. We need money to get equipment to do research. If we knew we had a market to do research, we could make a proposal to get funding.

Public Comments

Dave – What you're doing is in the right direction.

The meeting was adjourned at 10:20 a.m.