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Governor's Task Force on Mining and Minerals

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Recommendations for Strengthening Minnesota's Mining and Minerals Industry 1995

A Report to the Governor

April 1995

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For Mac and Tom, from your colleagues and friends

This report is dedicated to the memory of Mac Karpen and Tom Hayes, Task Force members who passed away during the past year. The Governor's Task Force on Mining and Minerals wishes to recognize the invaluable contributions each of you has made to Task Force discussions and recommendations; in so doing you have each admirably served your region and your state. It has been both a pleasure and a privilege knowing you, and may your families take solace in the fact that others miss you as well. . .



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INTRODUCTION

The economy of northeastern Minnesota is heavily dependent on the taconite mining industry. Approximately 6,000 people are directly employed by the taconite industry on the Iron Range of northeastern Minnesota. In addition, about 11,000 people are employed by suppliers and other businesses which provide products and services to the mining industry or its employees.

Altogether, the taconite mining industry and related businesses employ approximately 17,000 people -- more than 11% of the total work force of 157,000 in northeastern Minnesota. The wages paid by the mining industry to its employees are higher than those paid by any other industry in the state.

If the challenges presently facing Minnesota's mining industry are not met, the region will likely witness a massive loss of jobs in the mining industry -- comparable to the first-half of the 1980's -- and the closing of taconite-producing facilities. The vulnerability of the mining industry is demonstrated by the October 1993 idling of the National Steel Pellet Company taconite plant in Keewatin, affecting over 700 workers.

The loss of jobs by people employed by the mining industry -- and by businesses which support the mining industry -- would be a devastating setback to northeastern Minnesota. The region is slowly recovering from the social and economic upheaval caused by the permanent layoff of thousands of mine workers in the early 1980's.

The principal problem confronting the mining industry is a pending decline in the steel-making market for taconite ore. The market for taconite is likely to diminish for these reasons:

- minimills -- which produce steel from scrap utilizing electric-arc furnaces, and which produce it more cheaply and faster than firms producing steel from taconite ore -- are capturing a larger portion of the steel-making market each year. Minimills presently produce about 38% of the steel in the United States. By the year 2000, minimills are projected to increase their portion of the market to 50%. As a result, minimills have reduced the need for iron ore and taconite in the steel-making process. Overall, in 1981, for each ton of finished steel produced in the United States, 1.2 tons of iron ore were used. By 1990, only .97 of a ton was used to produce a ton of finished steel.

- companies presently using taconite ore are adopting more effective methods and means for producing steel -- resulting in the use of less iron ore per ton of steel produced. One such method is known by steel makers as "continuous casting." A measure of the amount of ore used in producing steel is the amount of scrap that is produced in the process. The change is illustrated by a reduction in the amount of scrap produced in making one ton of finished steel -- from 39% in 1981 to 11% in 1991.
- lighter weight steel is being used for products which previously used heavier weight steel, and the development of new finishing techniques has extended the life of steel products.
- depending on foreign exchange rates and on the distances involved, some producers in foreign countries can mine ore, ship it to the U.S. and sell it at a price which permits steel-producers to make steel at a lower cost than if they purchased and used taconite ore mined in Minnesota.
- manufacturers who previously bought steel to make their products are replacing some of the steel in those products with other substances such as plastic and aluminum.

In the last several years, the mining industry in Minnesota has been making efforts to cope with the decline in the market for taconite by:

- reducing the cost of taconite pellets by reducing production costs, including energy costs, and improving processing techniques.
- improving the quality of the pellet so that it is more valuable to steel producers by adding limestone so the pellet reduces more rapidly in the blast furnace, resulting in coke savings and greater furnace productivity.
- further reducing silica so there is less slag to be removed in the steel-making process. Slag is a product impurity, the removal and disposal of which is accomplished at a cost to the producer.
- identifying and developing more uses for taconite, such as the use of taconite concentrate in removing impurities from coal.
- identifying and developing more uses for the high-quality steel which normally is produced from taconite pellets (rather than the lower quality steel which generally is produced from scrap).

However, these efforts alone are expected to be insufficient to prevent further decline in the mining industry -- and a resulting loss of jobs.

On behalf of its citizens, the State of Minnesota has a stake in the survival of the mining industry. The loss of the jobs now provided by the taconite industry would result in social and economic distress of the scope experienced by the Iron Range throughout the first-half of the 1980's when thousands of jobs were eliminated due to a sharp decline in the market for taconite pellets. Loss of these jobs would also bring social and economic distress to Iron Range communities -- which receive approximately \$80 million each year in taxes paid by the mining industry.

There are steps which the State of Minnesota could take to help preserve and create jobs on the Iron Range and elsewhere in Minnesota. It could play a more active role in creating employment opportunities for all its citizens -- including workers who may ultimately be displaced by a reduction in the market for taconite pellets -- by fostering wider research which could lead to:

- the discovery of less expensive methods for processing taconite.
- the development of new uses for iron ore, including the use of iron ore in new steel-making processes.
- the identification, mining and processing of other minerals throughout the state.
- new processing methods and equipment which would simultaneously be more environmentally friendly and reduce environmental fees paid by mining companies.

In fact, however, at a time when jobs in the mining industry are in peril, the State of Minnesota has substantially diminished its support of such research. Also, at a time when the mining industry is struggling to reduce its costs to compete with prices charged by foreign producers of iron ore, the state has made changes in the nature and structure of environmental fees imposed on mining companies -- making it more costly to produce taconite pellets.

The Governor believes that the State of Minnesota should take a more active role in helping to preserve jobs in the taconite mining industry and in promoting the creation of jobs through the exploration, mining and processing of other mineral resources.

To identify measures to help the State of Minnesota achieve these goals, the Governor issued an executive order on January 4, 1993, creating a Task Force on Mining and Minerals. The Task Force is made up of 15 members appointed by the Governor. A list of the members is

included on the inside back cover of this report. The members represent a broad cross section of people from the mining and minerals industry, labor, state and local government, environmental groups, and research and educational institutions. The Commissioner of the Iron Range Resources and Rehabilitation Board (IRRRB) served as the chair of the Task Force.

The original executive order which created the Task Force charged it with making recommendations to the Governor for strengthening the mining and minerals industry of Minnesota by April of 1993. From January 8 through April 2, 1993, the Task Force held seven day-long meetings. The Task Force examined all areas in which state government affects the mining industry, including taxation, royalties, regulations, environmental issues and mineral research, and mineral policies of state agencies, including the University of Minnesota. A report to the Governor was made in May 1993. The Task Force was reconvened in December 1993 and held five day-long meetings during the winter of 1994, issuing another report in May 1994. The 1994 legislature enacted the following measures:

- Sales tax exemptions for the construction of facilities to produce value-added iron products, including fluxed taconite pellets, as well as for new mines or mineral processing facilities for any mineral subject to the net proceeds tax.
- Extension of the freeze of the escalator on the taconite production tax for taconite pellets and concentrates produced in 1994.
- Extension of the 15.4 cents investment tax credit per taxable ton of pellets for taxes paid in 1995 and 1996. These funds are rebated to Minnesota taconite companies to be invested in new equipment and facilities and to conduct research on new mining technology.
- Creation of an incentive production tax rate for direct reduced iron produced in 1994 through 1999.
- Creation of special loan authority for the Commissioner of the IRRRB to make up to a \$5 million loan to a company constructing a value-added iron facility or a new mine or mineral processing facility for any mineral subject to the net proceeds tax. Up to \$10 million from the Northeast Minnesota Economic Protection Fund (NEPF--commonly known as the 2002 Fund) was authorized to be used for this purpose.

In January 1995, the Task Force reconvened for the third consecutive year, holding four meetings during the winter of 1995. On March 10, 1995, at its final meeting, the Task Force made the recommendations that follow:

RECOMMENDATIONS OF THE TASK FORCE

The Task Force understands that mining companies may increase their sales of taconite pellets -- and thereby preserve jobs -- by selling pellets at a lower price. Taconite pellets can only be sold at a lower price if companies are able to reduce their cost of producing pellets. Such cost reductions can be achieved or encouraged by:

- promoting and investing in research which explores ways for mining companies to reduce the cost of pellets and improve their quality.
- reducing costs imposed by government, such as by
 - reducing taxes, including production and sales taxes; and
 - reducing environmental fees or structuring fees to provide incentives for companies to reduce pollutants; and
 - reducing workers' compensation costs by developing new, more efficient program delivery methods.
- providing incentives which promote the development of new facilities, facility improvements or process improvements.

The Task Force has also served as a forum for debate over the issue of value-added iron products. Many industry analysts believe that a portion of the anticipated decline in demand for taconite pellets projected to gradually occur over the next decade can be replaced by direct reduced iron (DRI) or iron carbide, should a cost-effective means to produce such products from northeastern Minnesota ores be proven. Such products must also meet the specifications of the steel industry.

Electric-arc furnace (EAF) steel producers such as the minimills, which use scrap as their main feed-stock rather than iron ore, need these products to dilute the contaminants commonly found in scrap; some of the large integrated steel companies operate EAF's as well. DRI can also be consumed in the blast furnaces (BF) operated by the integrated producers, where it helps to increase hot metal capacity and reduce coke consumption; or used as a coolant in their basic oxygen furnaces, where the steel is actually made from the BF iron. The foundry industry potentially is another sizable market for a DRI product.

Experts agree that demand for scrap substitutes is expected to grow by at least three million tons per year by 2000, and if the material is not supplied domestically, it will surely be imported. However, many observers also believe that if this "window of opportunity" is not entered quickly, that DRI facilities built elsewhere in North America will capture these new markets, making it more difficult, if not impossible, for Minnesota to capitalize on such opportunities at a later date. But some integrated producers which own taconite facilities in northeastern Minnesota view the development of DRI facilities there as aiding their minimill competitors who have already made significant incursions into their traditional markets. DRI proponents counter that this market erosion will continue regardless of whether or not DRI is produced in Minnesota, and the choice is really whether Minnesota companies or someone else will sell the DRI that the market will ultimately demand.

The state can also help develop other jobs on the Iron Range by promoting exploration for and mining of other minerals.

To accomplish the above tasks, the Task Force makes the following 21 recommendations, which fall into five general categories:

- State and local taxes
- Environmental permits and fees
- Minerals research
- Federal action
- Miscellaneous

It should be noted that this year the Task Force agreed that all its recommendations be approved by a two-thirds majority of the Task Force members present at its final meeting, rather than the simple majority it had employed to approve recommendations in 1993 and 1994. Consequently, one recommendation -- to extend the freeze on the taconite production tax escalator for pellets and concentrates produced in 1995 -- which passed 6-5, with two members abstaining, is not included below. However, the 21 recommendations which follow were all approved by at least two-thirds of the members present at the Task Force's March 10, 1995, meeting:

STATE AND LOCAL TAXES

1. Create an Interim Committee on Mining Taxation - The Task Force understands the unique nature of the Minnesota taconite industry and its historical relationship to and support of local governmental needs in the mining region through the payment of production taxes levied in lieu of local property taxes. The Task Force also recognizes the existence of the IRRRB and the

important role this agency plays in helping to meet these regional needs. Because of the critical role that mining plays in the regional economy, the IRRRB also administers programs that assist the taconite industry, itself.

At the same time, the Task Force acknowledges that taconite production taxes are a factor in the total cost of concentrates and pellets produced in Minnesota, and impact the ability of Minnesota taconite producers to remain competitive in domestic as well as global markets. The ongoing challenge is to balance the need for mining taxes against the impact of those taxes on the mining industry and devise tax policy that is acceptable to both taxpayers and tax recipients. The Task Force finds it inherently difficult to discuss appropriate levels of mining taxation without also examining why these revenues are needed and how they are used to deal with the impact of mining on northeastern Minnesota, as well as to sustain and improve the quality of life of the people who live in the mining region.

Therefore, the Task Force recommends that the IRRRB Commissioner appoint a committee of industry, labor, local governmental officials, state agencies, and Iron Range legislators to examine and discuss why taconite production taxes are needed and how they are used by local governments and the IRRRB, how these taxes impact the competitiveness of Minnesota taconite producers, and how these divergent factors should be weighed in devising mining tax policies that are acceptable to both taxpayers and tax recipients.

2. Maintain Northeastern Minnesota's Quality of Life - Northeastern Minnesota has always had an excellent quality of life. Over the years, as the mining industry has gone through its many cycles, Iron Range cities, towns and schools have continued to provide excellent services and quality education second to none. This has produced a strong spirit and pride for all Range citizens, and as a result, Range communities continue to be the envy of the entire state.

Today's new challenges threaten the Range's quality of life. Range municipalities and schools have been asked to do more with less for the past several years. Each time they have shown that they can be even more efficient and effective in providing essential services, and the next several years will be no exception. While the Iron Range economy has recently been bolstered by increased mining production and new jobs in the wood, tourism and other industries, the Range's municipalities and schools continue to face serious fiscal pressures. At the same time, local governments are acutely aware of the need to keep local property taxes at a reasonable level.

Everyone recognizes that more can be done. As the state struggles to address the ongoing need for local property tax relief, all levels of government must look to find new and creative ways to deliver services. Many area school, municipal and county services can be shared or provided

on a cooperative/collaborative basis. However, there will always be the need for each jurisdiction to provide services specific to its citizens and students.

A healthy economic environment for the mining industry will help make sure the Range's quality of life is maintained. The interrelationship between the mining industry, its labor force and the surrounding communities must be strengthened on an ongoing basis. If all stakeholders work together, northeastern Minnesota will continue to be a place where people want to live, work and raise a family.

Therefore, the Task Force recommends that as the Interim Committee on Mining Taxation, the Iron Range Delegation and the legislature study the existing and future needs of the mining industry, that the overall need for sufficient revenue sources and funding levels for Iron Range municipalities and schools be recognized and supported as well.

In addition, the Task Force recognizes and supports the Range schools in their efforts to continue to produce an educated workforce to meet the changing technological needs of the mining industry for the 21st century. The Task Force also recognizes and supports the Range municipalities in their efforts to maintain a strong municipal infrastructure to meet the needs of Iron Range communities for the 21st century.

3. Consider Various Factors in Reaching a Decision Whether to Extend the Freeze on the Taconite Production Tax Escalator - Sound tax policy requires the careful balancing of a number of different factors related to the taconite industry as well as the schools and communities which serve the mining region.

Therefore, the Task Force recommends that the Iron Range Delegation and the legislature carefully review the following factors before coming to a decision on whether to extend the freeze on the taconite production tax escalator:

- *The level of the taconite industry's commitment of capital investment*
- *The competitive position of the taconite industry in relation to other states, countries and the minimills*
- *The needs of local governments and schools*
- *The need for infrastructure investment in local communities*

- *The needs for investment in economic development, both in other types of industries as well as within the taconite industry*

4. Extend the Taconite Economic Development Fund (TEDF) to Cover the 1996 Production Year and Consider Increasing the Investment Tax Credit from 15.4 Cents Per Ton to a Maximum of 25.4 Cents Per Ton - Minnesota taconite producers pay the taconite production tax, \$2.054 per ton of taconite that they produce (* subject to the escalator as determined by the GNPIPD Index). In 1992, the Minnesota legislature created the TEDF to provide funds to help the mining companies invest in new equipment and facilities and to conduct research on new mining technology. The TEDF is managed by the IRRRB and disbursed annually to help fund eligible projects that have been approved by a joint committee made up of equal numbers of production and maintenance employees and managerial personnel. Each taconite producer has a separate account in the TEDF which is funded by setting aside 15.4 cents of the total \$2.054 per ton (*) of taconite production tax it pays. The mining companies, their employees and other stakeholders believe this program has provided critical re-investment capital for northeastern Minnesota taconite facilities, thereby enhancing their long-term viability. Under current law, this investment tax credit expires following the 1995 production year (taxes paid in February 1996).

The Task Force recommends that the Iron Range Delegation and the legislature extend the TEDF investment tax credit to cover 1996 taconite production (taxes paid in February 1997) and that the Delegation and the legislature consider increasing the amount deposited in the TEDF from 15.4 cents per ton of taconite produced to a maximum of 25.4 cents per ton of taconite produced.

5. Extend the Direct Reduced Iron (DRI) Production Tax Incentive - In 1994, the Minnesota legislature created a DRI production tax incentive to promote the development of value-added iron products in Minnesota. This incentive provided a reduced rate of taxation for the first 500,000 tons of DRI produced at a given facility in each year through 1999. Any DRI plant approved for construction in 1995 would probably not begin DRI production until 1997 or 1998, and thus, extending the production tax incentive for an additional period would make the incentive more attractive to potential investors.

Therefore, the Task Force recommends that the DRI Production Tax Incentive, which otherwise sunsets on December 31, 1999, be extended for DRI produced through December 31, 2002.

6. Clarify the DRI Production Tax Incentive to Ensure that it Includes DRI Producers that are not Producers of Taconite Concentrates & Pellets - Under current law, the special tax rate provided by the DRI production tax incentive is available only to companies in the business of "mining and quarrying taconite." Thus, a plant owned by another company, a partnership or

joint venture which purchased concentrates from a taconite producer, would not be eligible to receive the special tax rate unless the new DRI operation were somehow structured so that it was a partner in the mining and concentrating of taconite. This potentially could be an impediment to developing a DRI production facility on the Iron Range.

Therefore, the Task Force recommends that the present DRI production tax incentive language be modified to make it clear that the special tax rate provided shall apply to companies which purchase concentrates from a taconite producer, as well as taconite producers themselves.

7. Extend the IRRRB Loan Authority for the Construction of Value-Added Iron or Nonferrous Mining Facilities - In 1994, the Minnesota legislature established authority for the IRRRB to use up to \$10 million from the 2002 Fund to make up to a \$5 million loan to a company constructing a value-added iron facility or a new mine or mineral processing facility for any mineral subject to the net proceeds tax. The authority to make these loans terminates on December 31, 1995; a deadline which is quickly approaching.

The Task Force recommends that the authority to make these loans, which otherwise sunsets on December 31, 1995, be extended through December 31, 1999.

8. Expand the Taconite Chips & Fines Industry-Wide Limit - In 1993, the Minnesota legislature created an incentive to help taconite companies sell broken pellets which do not meet industry standards as sinter feed or heavy media in coal preparation plants. This incentive provides that an amount equal to 50% of the tax on chips & fines will be allocated to each company's share of the TEDF. Chips and fines are defined by statute as not exceeding 5/16 inch size. (Although the Department of Revenue has administratively exercised some flexibility in working with the producers regarding the sizing of the screens utilized to separate the broken pellets from the unbroken pellets.) The revenue allocated to each company's share of the TEDF is subject to a maximum amount of \$700,000 annually for all companies. If the total amount of tax claimed under this provision exceeds \$700,000, then each company's share will be prorated. The companies utilizing this credit have indicated that they find it very helpful in reducing costs and developing new markets for their products, and in 1994 the amount of credit totalled \$681,121, approaching the \$700,000 cap. Also, it would be helpful to clarify the law to explicitly allow chips and fines not to exceed 3/8 inch size.

The Task Force recommends increasing the industry-wide limit for the chips & fines credit from its present level of \$700,000 annually for all companies to \$900,000 annually for all companies. The Task Force also recommends that the size of the chips and fines covered by the credit be increased from the 5/16 inch size explicitly stated in the law to 3/8 inch, a change that formalizes

the Department of Revenue's administrative practices regarding the sizing of the screens that certain producers utilize to separate the broken pellets from the unbroken pellets.

9. Create a \$1 Million Annual Allocation to the Natural Resources Research Institute (NRRI) from Occupation Tax Revenues - The State Constitution provides that businesses engaged in mining in Minnesota are subject to the payment of occupation tax. Occupation tax is paid in lieu of corporate income tax and is based on the value of taconite products after beneficiation with deductions allowed for certain processing costs. In 1993, the occupation tax paid by the mining industry totalled \$1,708,731. The State Constitution also requires the occupation tax to be distributed as follows: 50% to the State General Fund, 40% to the elementary and secondary schools, and 10% to the University of Minnesota.

Legislation has been drafted for consideration during the 1995 legislative session that would allocate \$1 million from the occupation tax revenues to the NRRI, to be used as follows:

- \$475,000 for advanced technology research and development at the Coleraine Minerals Research Laboratory (CMRL) operated by NRRI; and
- \$375,000 for advanced geological studies with respect to ferrous and nonferrous minerals on the Minnesota Iron Range; and
- \$150,000 for research at the laboratory at the Vermilion Community College (VCC) in Ely, Minnesota.

Current expenditures by the NRRI for Iron Range projects total approximately \$5 million annually; this amount does not include money for support services such as computer, library or accounting services. It's anticipated that if an additional \$1 million is allocated to the NRRI in this manner that it will result in the NRRI obtaining an additional \$2 million in research grants and contracts in the next five years.

The Task Force supports enactment of legislation that annually allocates 60% of the occupation tax paid in Minnesota, to a maximum of \$1 million (which otherwise is credited to the University and the State General Fund) to the NRRI for research and development at the NRRI, CMRL and VCC. It is further recommended that an advisory group of some kind provide oversight for this research and development.

ENVIRONMENTAL PERMITS AND FEES

10. Cap Air Emission Fees for Existing Permitted Industries at 1994 Levels - The Minnesota legislature appropriates funds to the Minnesota Pollution Control Agency (MPCA) to pay for its costs in enforcing state air quality standards. At the same time, the legislature requires that these funds be paid back to the State General Fund through a fee imposed on each ton of pollutant emitted. Each year the fee is determined by dividing the total amount of dollars appropriated to the MPCA into the total number of tons of pollutants emitted in the last reported year.

In addition, the federal Clean Air Act Amendments are also administered by the MPCA. The fees required to cover the costs of enforcing the federal standards are determined according to the same basic formula.

Efforts have been made by the MPCA to contain the costs of its air quality programs, and efforts have been made by the taconite producers to reduce their air emissions. However, the formula does not provide an incentive for reducing air pollution because if the number of tons of pollutants is reduced, the amount of the fee must be increased in order to provide adequate funds to enforce the standards.

The Task Force recognizes and supports the MPCA's efforts to contain the costs of all its programs, including its air quality programs. The Task Force also recognizes and supports the efforts being made by the taconite producers to reduce their air emissions. However, despite such efforts on the part of the MPCA and the mining industry, the total cost of air emissions fees paid by the mining industry continue to rise.

Therefore, the Task Force recommends that the Minnesota legislature instruct the MPCA to work with the public and industry to establish an air quality program and fee structure which provides incentives by which reduced emissions result in reduced fees. Further, the Task Force recommends that fees for existing permitted industries not be increased above the 1994 per ton rates.

11. Create a Task Force to Address Mining Wetland Issues - Currently, Minnesota's mining companies need to secure a multitude of permits and approvals from various state and federal regulatory agencies and local governments if their mining plans intersect or impact wetlands. The permits and approvals address a number of different issues including regulation of water quality, reclamation of peatlands, and replacement of lost wetlands.

Recent federal and state legislation, rule-making and policy development that pertain to wetland protection has resulted in contradictory direction and requirements for mining companies. Because of apparent ambiguities in the regulations and uncertainties as to which agency has the final authority, this situation has resulted in enormous difficulties for companies in complying with the body of laws and rules that effect their decisions.

If these permitting and oversight authorities could reach an agreement on wetland definitions and valid reclamation and replacement policy, mining companies could more easily plan for the future.

The Task Force recommends that the Department of Natural Resources (DNR) Commissioner appoint a task force with representatives from all involved state and federal regulatory authorities, as well as representatives from industry, labor, local governments and environmental groups to address mining/wetland issues and draft a Memorandum of Agreement among the agencies that will be used to direct their decision-making and permitting for wetlands mitigation, replacement and restoration in the State of Minnesota. If this new task force cannot come to agreement on addressing these issues, it will instead prepare a report to the legislature by March of 1996 on its findings and identify roadblocks (legal, rules, law, policy) that prevent it from accomplishing its task, and describe how these roadblocks can be resolved to allow the future preparation of a Memorandum of Agreement.

As the U.S. Army Corps of Engineers, Environmental Protection Agency (EPA) and Fish and Wildlife Service are intimately involved with these issues, it's recommended that the Governor request the assistance of members of the Minnesota Congressional Delegation in gaining the cooperation of appropriate federal agencies and that matching monies be contributed by the federal participants.

12. Support Research to Study the Feasibility of In-Pit Disposal of Taconite Tailings - In-pit disposal of tailings is presently being considered by Inland Steel Mining Company and has the short-term potential to reduce the cost of tailings disposal at National Steel Pellet Company as well. In the future, in-pit tailings disposal may also be an attractive, economical alternative at Hibbing Taconite, USX-Minntac and LTV Steel Mining Company. Moreover, the implementation of in-pit disposal of taconite tailings by the industry could greatly reduce the amount of land required for mine waste disposal.

However, prior to implementing this practice, its potential effects on groundwater quality must be assessed. Effects could result from either:

- dissolution of tailings, or
- the transport of processing reagents and/or their degradation products.

The lack of reported deleterious surface water quality impacts from on-land taconite tailings disposal suggests that in-pit disposal should not adversely impact groundwater quality; however, this conjecture must be verified before taconite tailings can be disposed in open pits. If research demonstrates that this practice does not adversely affect ground water quality, its implementation will reduce the cost and energy required for tailings disposal and promote more efficient land use by the state's iron mining industry.

Therefore, the Task Force recommends that the legislature appropriate \$75,000 to the DNR to conduct a study on the effects of in-pit disposal of taconite tailings in cooperation with the MPCA and taconite industry. The appropriation should stipulate that expenditure of these monies requires a \$50,000 match from the taconite industry.

13. Support the Financial Assurance Rule-Making Process - The Minnesota DNR, in cooperation with the state's taconite industry, environmental groups, IRRRB, MPCA and the State Board of Investment, has recently completed a report on financial assurance for Minnesota's taconite mining industry. The findings outlined in the report will be used by the DNR as it initiates the rule amendment process for the Mineland Reclamation Rules for Iron Ore and Taconite.

Financial assurance is one of several areas in the rules that will be amended within the context of other changes contemplated, particularly in the areas of wetland replacement, progressive reclamation, temporary shutdowns and the reclamation of rock stockpiles.

The Task Force recognizes that the complex nature of financial assurance must be addressed in the context of the rules as a whole. Moreover, the Task Force supports the DNR's approach to financial assurance, in which the acceptability of financial assurance instruments will be determined on a site-specific basis, with the degree of liquidity of the instrument related to the environmental consequences of potential reclamation failure.

MINERALS RESEARCH

14. Support for Funding at Current or Increased Levels for Iron Ore Cooperative Research, Environmental Cooperative Research and Minerals Diversification - The Iron Ore Cooperative Research, Environmental Cooperative Research, and Minerals Diversification programs within the Minnesota DNR support research and development activities for Minnesota's mining industry. These programs support a wide range of mineral-related activities, such as mineral-processing and environmental & geological research, and are imperative to maintain the strength and vitality of Minnesota's mining industry.

The Task Force recommends that the state funding for the Iron Ore Cooperative Research, Environmental Cooperative Research and Minerals Diversification programs be continued at current or expanded levels.

15. Support the Findings of the Copper-Nickel Working Group - Fifty years ago the economy of northeastern Minnesota was reborn when a technological breakthrough allowed the processing of taconite, a low-grade iron ore. Today a similar opportunity exists with the large, low-grade copper-nickel deposits near the eastern Iron Range that were discovered in the 1950's and 1960's. They have not been developed, primarily because of the difficulty in processing the ore. There are also concerns about the potential environmental impacts of mining large low-grade sulfide deposits. The metallurgical problem is very similar to what the early researchers in taconite faced; no one can make concentrate sufficiently pure for economic conversion into metal.

The Task Force appointed a working group to evaluate the potential for this industry and make recommendations. After several meetings throughout the year, the working group concluded that now is an appropriate time to examine the impediments to copper-nickel development for the following reasons:

- The employment potential from copper-nickel development could absorb much of the job loss caused by the projected decline of the taconite industry.
- The tax and regulatory climate in Minnesota for mining has improved in recent years.
- In the 20 years since these deposits were rigorously evaluated, great advances have been made in metallurgical processing and environmental controls.

The Copper-Nickel Working Group concluded that several things must happen before these deposits can be developed. These include: a solution to the metallurgical processing problems; achievement of greater understanding of the geology and mineralogy of individual deposits; and additional research on the environmental effects of development. Also essential to the development of this industry and other nonferrous mining in the state is an efficient and timely permitting process.

The first priority, however, is research to solve the metallurgical problems. If this work is successful, it's believed that the other activities will be accelerated and development could start on these deposits before the end of the century.

Therefore, the Task Force fully endorses the final report of the Copper-Nickel Working Group and recommends that:

- *The state fund \$371,500 for metallurgical research to be conducted at the NRRI. The initial bench-scale testing will take 9 to 18 months to complete and will utilize \$171,500 of the requested state funds. This work will be followed by 6 to 12 months of pilot plant testing, which will require the remaining \$200,000 of state funds.*

This work will investigate new concentrating methods and test processes to convert the concentrate directly to high-value metal. Not only could this work be the start of a major new mining industry, but it could ensure that the value-added processing of making metal takes place in Minnesota.

The state funds for the bench-scale testing are expected to be supplemented by \$25,000 from industry and \$43,500 from Minnesota Technology, Inc. (MTI). In addition, Arimetco International, Inc., holder of the Babbitt copper-nickel deposit, is expected to provide the material to be tested at an estimated cost of \$50,000.

The Task Force also recommends that:

- *Private industry, in conjunction with MTI funding and researchers from the Minnesota Geological Society (MGS), NRRI and DNR continue to investigate the geology, mineralogy and platinum group metal distribution within individual deposits.*

- *The Minerals Coordinating Committee allot \$25,000 to investigate the possibility of high-grade deposits in the copper-nickel area. This type of deposit was identified as a possibility by the International Nickel Company and it's believed this modest investment for ore deposit modeling is a first step towards evaluation of the concept.*
- *The mine waste studies of the DNR be continued and enhanced by funding from the Legislative Commission on Minnesota Resources. Mine wastes are likely to be the key environmental issue related to copper-nickel mining.*
- *The DNR and MPCA, in a cooperative effort, begin compiling existing air, water and biological data in the area of likely development.*
- *The DNR and MPCA review their Memorandum of Understanding on mine permitting and enhance that document to include an interagency team approach for mine permitting.*

16. Utilizing the TEDF for the Testing and Installation of New Technology in Northeastern Minnesota Taconite Plants - Over the last eight years, the state and industry have sponsored many research projects that have shown at a laboratory or pilot-plant scale that cost reductions or quality improvements are likely. While these projects have been successful as research entities, their adoption by the plants has been slowed because of capital and personnel constraints. A method is needed to accelerate the adoption of promising new technologies. Also, plant trials conducted at one location do not need to be duplicated at other locations if the information can be shared. Consideration should be given to using the TEDF for this purpose.

The Task Force recommends consideration of the use of the TEDF to conduct jointly funded plant tests where common benefits to individual plants may result, and/or to install new technologies at individual plants that are based on research which has demonstrated cost reductions or quality improvements.

FEDERAL ACTION

17. Support the MPCA's work on the EPA Common Sense Initiative for Iron & Steel - The Task Force believes that efforts should be made to evaluate how better environmental protection can be afforded by the mining industry with less regulatory burden. The MPCA is currently working with the EPA on its Common Sense Initiative: Iron & Steel Sector to find innovative and practical ways to do so.

The Task Force strongly supports the MPCA in its work on the EPA Common Sense Initiative for Iron & Steel and encourages the mining industry to support and participate in this working group's efforts.

18. Support for the U.S. Bureau of Mines (USBM) and the U.S. Geological Survey (USGS)

- The federal funding to the USBM and the USGS has decreased in recent years. Further cuts, and possible elimination, are currently under consideration.

The USBM has contributed considerably to advances in

- blasting, crushing, and pelletizing processes for Minnesota's taconite industry, and
- environmentally sound mineral resource development in Minnesota.

These advances have increased the efficiency of the taconite industry and have improved pellet quality. They have also contributed to development of a scientifically based regulatory program for environmental mine waste management.

The USGS is involved in programs to develop and distribute detailed and accurate mapping data. Such data would be beneficial to mineral exploration and development in Minnesota, as well as other areas of resource management.

The Task Force recommends that the federal government continue funding for the USBM and USGS partnership programs that focus on efficient delivery of essential services to state and local governments and to the private sector.

19. Amendments to the Mining Law of 1872 - Minnesota's record in regulating mine waste disposal is one of fair, strong and effective management of environmental impacts. Minnesota was one of the first non-coal states to adopt mineland reclamation regulations and permits. Over the past ten to fifteen years, other states have also developed programs that, in most instances, provide equivalent regulatory coverage for mining. In addition, Minnesota has been an active participant in the development of federal EPA regulations for the disposal of mine wastes, both individually and as a member of the Western Governor's Association Task Force on Mining. Minnesota has also been an active trust agent in the leasing of state-owned lands for exploration and development. Because the bills being considered by Congress address many of the issues important to the long-term viability of mining, it is appropriate for the State of Minnesota to present its perspective.

Therefore, the Task Force takes the following positions as regards to potential revisions to the Mining Law of 1872:

Mineral Exploration and Development

- ***Coverage***

Congress should not apply changes in exploration and development of minerals to federal lands in Minnesota. Minnesota is excluded from the Mining Law of 1872 and is properly covered by the Mineral Leasing Act.

- ***Royalty***

Legislation should establish a reasonable net royalty to be paid in return for minerals removed from federal lands.

Environmental/Reclamation

- ***Implementation***

Federal land managers have the necessary authority to regulate mining under existing statutes. States are and should continue as the regulators of mining activity on both private and public lands. A new, duplicative, and expensive regulatory system under the Department of Interior is not needed. States utilize a combination of EPA-delegated environmental programs, additional state environmental statutes, and state reclamation authorities to regulate mining. To coordinate their efforts, state and federal agencies commonly enter into cooperative agreements spelling out the responsibilities of each party.

- ***Suitability Review***

The federal government already has authority under the Federal Land Policy and Management Act and National Forest Management Act to determine suitability for mining purposes. A duplication of this is not needed in the 1872 law. It is recommended that an advisory committee of state regulators, industry, and environmental interest groups be established to assist the federal government in identification of unsuitable lands.

- ***Abandoned Mineland Reclamation Fund***

Royalties and other fees from hardrock mining on public lands should be used, as a first priority, to clean up inactive and abandoned hardrock mines on public lands. Priority should be given to cleaning up sites with the greatest impact on human health and safety. Expenditures should be focused on problems on public lands but there should be flexibility to use the fund to clean up abandoned sites on adjacent private lands impacting or impacted by federal lands.

The reclamation of abandoned mine land is an issue best addressed at the state level using site-specific criteria. Funds collected for abandoned mined land reclamation should be allocated to the reclamation programs of the states of their origin. The federal role should be that of oversight and compliance rather than primary regulator.

MISCELLANEOUS

20. Support Legislation that Authorizes Pilot Projects to Lower the Cost of Workers' Compensation in the Taconite and other Industries - The cost of workers' compensation is a factor in the total cost of concentrates and pellets produced in Minnesota, and impacts the ability of Minnesota taconite producers to remain competitive in domestic as well as global markets. Legislation has been drafted for consideration during the 1995 legislative session that authorizes pilot projects designed to increase the efficiency and lower the cost of workers' compensation in various industries in Minnesota. One such pilot project might involve the taconite industry.

The Task Force recommends that the taconite industry and the United Steelworkers of America jointly explore the feasibility of participating in a pilot project to increase the efficiency and lower the cost of workers' compensation. Such a pilot project would allow for collective bargaining of certain obligations and procedures relating to workers' compensation.

21. Extend the Task Force - Finally, the State of Minnesota should continue to take advantage of the expertise and energy which has been assembled on the Task Force and the momentum which has been generated by extending the life of the Task Force.

Annually, the Governor should convene a Governor's Task Force on Mining and Minerals to assess the status of the Minnesota mining and minerals industry and make recommendations for action which will strengthen the existing industry and promote the development of new minerals.

Members of the Governor's Task Force on Mining and Minerals

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Carl D'Aquila, (Vice Chair) business owner and former state legislator
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Jan Green, environmentalist and former member of the Minnesota Pollution Control Agency's citizens' board
Town of Duluth

Tom Hayes, Director, Public Affairs, Cliffs Mining Services Company; former director, Hibbing Chamber of Commerce, former president, Northeastern Minnesota Development Association - Non-voting member
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