

PT-62

the identification and regulation of metallic mining wastes. The rules adopted to identify metallic mining wastes and to regulate the location, design, construction and operation and maintenance of the sites and facilities for the disposal of metallic mining wastes shall be adopted in accordance with any or all of the following: chs. 30, 144, and 147 and s. 107.05. The rules shall take into consideration the special requirements of metallic mining operations in the location, design, construction and operation and maintenance of sites and facilities for the disposal of metallic mining wastes as well as any special environmental concerns that will arise as a result of the disposal of metallic mining wastes. In adopting the rules, consideration shall be given to research, studies, data and recommendations of the U.S. environmental protection agency on the subject of metallic mining wastes arising from the agency's efforts to implement the resource conservation and recovery act of 1976, P.L. 94-580.

- C. Legislative history of s. 144.43(lm).
- D. The department does not now know what the best method of regulation is. Applicants do not know what is expected of them by the department. Citizens do not know what it is that the department will require. Further, the EPA has not yet made its final decision on the handling of mining wastes although it is actively considering various alternatives. Section 144.43(lm) allows the department to use any of its water regulatory statutes and/or solid waste laws to regulate metallic mining wastes. The possible need to repeal s. 147.021, Stats., should be recognized although it should also be recognized that the definition of "solid waste" in both RCRA and Chapter 377 excludes materials which are subject to water permits. What this exemption means and whether it is wise public policy will be discussed.
- E. Identification of the standards for the adoption of rules to control metallic mining wastes.
- F. The role of the Pedco study in the Council deliberations.
- G. What should be the appropriate timetable goals for the Council?

III. OVERVIEW OF POSSIBLE REGULATORY SCHEMES TO CONTROL METALLIC MINING WASTES.

- A. Will metallic mine waste containment areas and tailings ponds be regulated as solid waste under Ch. 144, Stats.?

- B. Will metallic mine tailings ponds be regulated as point sources of pollution under Ch. 147, Stats.?
- C. Will some other regulatory scheme be developed to control waste containment areas and tailings ponds?
- D. How can the department best coordinate the application of applicable laws and fulfill its obligations pursuant to the mine reclamation law to be more than a reactor to events?

IV. SHOULD MINE WASTES BE REGULATED AS SOLID WASTE UNDER CH. 144, STATS.?

A. Mine wastes from Kennecott site:

- 1. 4,120 tons of waste rock per day taken from the open pit mine will be tracked to the waste containment area.
- 2. The waste containment area will contain 4,009,000 cubic yards of waste rock and material from the open pit at the end of the project.
- 3. On the average, 840 dry tons of tailings per day will be piped as a slurry to the waste containment area from the Flambeau Mining Corporation concentrator.
- 4. Eleven years of operation of the concentrator would generate 2,617,000 dry weight tons of tailings in the waste containment area.
- 5. An additional 2,886,000 tons of tailings plus 740,000 tons of washing plant silt from a possible underground operation after the first eleven years would be placed in the waste containment area.

B. Relevant new laws:

- 1. The Resource Conservation and Recovery Act (RCRA) was passed by Congress in 1976. It completely revised the nation's solid waste laws and established a nationwide structure for the disposal of both solid and hazardous (a subcategory of "solid") wastes. RCRA encourages states to administer their own programs subject to federal minimum standards relating to the location, construction, operation, maintenance, closure and abandonment of solid waste disposal sites. Wisconsin enacted Chapter 377 to implement RCRA in this state. The EPA is to adopt rules relating to solid waste (Section 1008 and Subtitle D) and hazardous waste (Subtitle C).

2. Section 144.43(1), Stats., (Chapter 377, Laws of 1977) provides that the DNR is to adopt minimum standards for the location of solid waste disposal sites and facilities to ensure compliance and consistency with the purposes of, and standards established under, the Resource Conservation and Recovery Act of 1976, P.L. 94-580. [Section 144.43(lm), Stats., referred to previously, establishes a separate procedure through the Metallic Mining Council to develop rules relating to metallic mining wastes.]
3. Section 1004(27) of RCRA defines "solid waste" to include discarded materials, including solid, liquid, semisolid, or contained gaseous material resulting from mining operations, but does not include discharges subject to water permits.
4. Section 144.30(4), Stats., (Chapter 377) defines "solid waste" to include any refuse and any other discarded or salvageable materials, including solid, liquid, semi-solid, or contained gaseous materials resulting from mining operations, but does not include discharges subject to water permits.
5. Section 144.83(2) (b) (Chapter 421, Laws of 1977) requires disposal of all mine refuse tailings and solid waste in solid or hazardous waste land disposal facilities or otherwise in an "environmentally sound manner".
6. Section 144.85(5) (a) 1. b. (Chapter 421) requires mining operations to comply with all applicable solid waste laws.

C. Department's position:

1. On September 26, 1977, DNR Secretary Anthony S. Earl, expressing the opinion of the department, stated:

"In other words, the term 'solid waste', as defined in the Act, [P.L. 94-580] will include in Wisconsin not only municipal garbage and refuse, but also flyash, scrubber sludge, foundry wastes, papermill sludges, municipal wastewater treatment plant sludges, bark and other wood wastes, mine tailings, feedlot wastes, and other residuals resulting from human activities."
2. DNR staff would place principal, if not exclusive, emphasis on solid waste laws and rules promulgated thereunder (NR 180) to regulate metallic mine waste containment areas.

3. There is no certainty that EPA will also adopt this position. The draft Pedco report says:

"The Resource Conservation and Recovery Act strictly limits the discharge and disposal of all types of solid wastes. Its particular application to the mining industry and specific mining by-products, however, remains uncertain. These uncertainties will have to be clarified before the impact of RCRA upon the mining industry can be accurately assessed. ...

"There is now considerable controversy, however, as to whether mining overburden piles and wastewater impoundments are subject to regulation under this act."

The EPA may, therefore, propose a more comprehensive approach or it may initially classify certain wastes (such as flyash and mining wastes) as "special wastes" by permitting special waste facilities with a general rule providing for additional reporting.

- D. Is preliminary DNR staff position premature?

V. ARE TAILINGS PONDS AND OTHER MINING RELATED ACTIVITIES POINT SOURCES OF POLLUTION UNDER CHAPTER 147?

- A. Kennecott mine facts:

1. Flambeau Mining Corporation will pump 2,032 gallons per minute of industrial process water into the waste containment area.
2. The discharge and seepage of pollutants (leachate) from the waste containment area could total 360,000 gallons per day (worst case).
3. The leachate described above will enter the ground and surface waters of Wisconsin flowing into the Flambeau River.
4. The Flambeau River is a navigable body of water.
5. There may be an impact on water quality in the Flambeau River due to seepage from the waste containment area.
6. There will be contamination of groundwater near the waste containment area due to tailings leachate.

- B. DNR staff position:
1. Some metallic mining activities, although not necessarily tailings ponds, should be regulated as point sources.
 2. Waste containment areas and tailings ponds were not considered point sources by the staff in 1976. Staff is reviewing this position in light of developing law.
- C. Pedco says that the United States Environmental Protection Agency has taken the view that any concentrated, pollutant-bearing flow that is caused by man is a point source, regardless of whether the conveyance is man-made or the result of natural water flow from the point at which the operator's activities caused the water to collect and become contaminated. EPA presumes that a mining operation will have at least one point source of pollutants. (A "point source" is traditionally thought of as the end of a pipe or other "discrete conveyance". One line of argument is that this definition is too narrow and should be expanded to include more diffuse discharges.)
- D. A federal district court in Colorado has ruled that all mining activities have been statutorily exempted from regulation as point sources by Congress in Section 304(e) of the 1972 amendments to the Federal Water Pollution Control Act (FWPCA), P.L. 92-500, 86 Stat. 816. United States v. Earth Science, Inc.
- E. If the federal courts adopt the Earth Science theory in total, all mining activities in Wisconsin will be exempt from Chapter 147 regulation because of s. 147.021, Stats. Some mining activities in Wisconsin, although not tailings ponds, are currently regulated by Chapter 147 and it would be expected that the traditional "point sources" referred to previously would remain regulated.
- F. Possible application of Chapter 147 to mining wastes.
1. Pedco says that any concentrated, pollutant-bearing flow from a metallic mining operation that is caused by man is a point source, regardless of whether the conveyance is man-made or the result of natural water flow from the point at which the operator's activities caused the water to collect and become contaminated.
 2. The pipe from a concentrator to a tailings pond might, based on certain premises, be regulated as a point source.

3. The tailings ponds themselves might, based on certain premises, be point sources.
4. Fissures in the clay linings of waste containment areas might be considered to be point sources of pollution.
5. Discharges to surface water from wastewater treatment facilities are clearly point sources.

VI. SHOULD SOME OTHER REGULATORY SCHEME BE DEVELOPED TO REGULATE METALLIC MINING TAILINGS PONDS AND WASTE CONTAINMENT AREAS?

- A. What will be the role of Title C of the Resource Conservation and Recovery Act relating to metallic mining wastes? This section regulates hazardous waste. Section 144.60(3) provides that Wisconsin Hazardous Waste Management Act as it relates to mining is subject to the provisions of s. 144.43(lm), Stats. Regardless, s. 3009 of RCRA directs that no state may impose hazardous waste rules less stringent than those developed by EPA.
- B. What will be the role of the Safe Drinking Water Act in the regulation of metallic mining wastes?
- C. What will be the role of the study results of the National Academy of Sciences regarding non-coal surface mining in the United States?

The Council on Environmental Quality requested the National Research Council to undertake the study described in Section 709 of the Surface Mining and Reclamation Act of 1977 (P.L. 95-87). The Board on Mineral and Energy Resources organized the Committee on Surface Mining and Reclamation to be responsible for the study.

The purpose of the study is to assist in the establishing of effective and reasonable regulation of surface and open-pit mining and reclamation for minerals other than coal. The objectives of the study are:

- (1) to assess the degree to which the requirements of the Act can be met by current and developing technology and the costs involved;
- (2) to identify areas where the requirements of the Act cannot be met by current and developing technology;
- (3) to describe the requirements most comparable to those of the Act which could be met, the costs involved, and the

differences in reclamation results between these requirements and those of the Act; and

- (4) to discuss alternative regulatory mechanisms designed to insure the achievement of the most beneficial post-mining land use for areas affected by surface and open-pit mining.

Even though this study will relate to open-pit and surface mining, rather than to underground mining, its results will be worthy of at least consideration by the Council.

- D. What will be the role of non-point source regulations relative to metallic mining wastes?
- E. What will be the role of the revised Wisconsin Metallic Mine Reclamation Act (Chapter 421, Laws of 1977)?
- F. What will be the role of the Clean Air Act relative to metallic mining wastes?

VII. WILL METALLIC MINING WASTES BE ALLOWED IN WETLANDS?

A. Current rules:

1. NR 151.12(4) (c), (d) and (f) provides:

(4) Solid waste land disposal operations are prohibited within the following areas:

(c) Within any area from which the department finds that solid waste or leachings therefrom may have detrimental effect on surface water.

(d) Within any area from which the department finds that leaching from solid waste may have detrimental effect on groundwater quality.

(f) Within wetland area.

2. However, NR 151.12(1) (c) provides:

(1) No person shall dispose of any solid waste at any land disposal operation not licensed by the department except for the following operations which are not required to be licensed but which must be operated and maintained in a nuisance-free and aesthetic manner consistent with the intent of this chapter:

(c) Operations for the exclusive disposal of mine tailings, spoils from gravel or quarry operations, and similar earth material.

3. NR 1.95.

B. New Laws:

1. Section 144.83(2) (c) (Chapter 421) requires that mining sites, including tailings ponds, be located so as to "minimize" disturbance to wetlands.
2. On February 6, 1978, the Environmental Protection Agency proposed criteria for the classification of solid waste disposal facilities. One of the proposed standards is that new disposal sites may not be located in wetlands except in extraordinary circumstances.
3. Section 4003(2) of P.L. 94-580 requires states, who seek Environmental Protection Agency approval of state plans to comply with said law, to require all solid waste to be disposed of in sanitary landfills or otherwise disposed of in an "environmentally sound manner". Therefore, if the EPA were ultimately to absolutely prohibit the disposal of mine wastes in wetlands under any circumstances, Wisconsin would have to conform or risk losing its federal RCRA financial assistance.

C. Significance of two declaratory rulings pending within DNR staff.

D. Geological conditions of northern Wisconsin.

E. Draft NR 180 now reads:

"Solid waste land disposal operations, sanitary landfills are prohibited within the following areas: (more details later)."

F. NR 180 defines wetlands as follows:

"Wetlands" means land areas characterized by surface flooding and/or saturated soils during at least part of the growing season such that only moist soil vegetation or shallow water plants can thrive.

OUTLINE OF FUTURE POLICY DECISIONS BY THE
METALLIC MINING RECLAMATION COUNCIL AND THE
NATURAL RESOURCES BOARD REGARDING
METALLIC MINING REGULATIONS

Presented to the Interagency
Work Group on Metallic Mining

By Peter A. Peshek,
Public Intervenor

July 20, 1978

I. Thesis.

- A. From a public policy perspective, Wisconsin has not been, and is not yet ready, to issue any new permits authorizing the mining of copper and zinc. This conclusion covers Exxon's proposed mining activity in Forrest County.
- B. Two reasons to justify thesis.
 - 1) Wisconsin does not currently have in place a regulatory scheme to protect the environment from the dangers of waste containment areas and tailings ponds associated with copper and zinc mines.
 - 2) DNR is not staffed and financed today at a level to warrant confidence that it can effectively regulate Exxon. However, there is every reason to be optimistic that this problem can be overcome.

II. Overview Of Regulatory Issues.

- A. Will metallic mining waste containment areas and tailings ponds be regulated as solid waste under Ch. 144, Stats.?
- B. Will metallic mining companies be prohibited from placing waste containment areas and tailings ponds in Wisconsin wetlands?
- C. Will metallic mining tailings ponds be regulated as point sources of pollution under Ch. 147, Stats.?

III. Role Of The Metallic Mine Reclamation Council.

Section 144.43(1m), Stats. (Ch. 377) requires the department to adopt final rules for the identification and regulation of metallic mining wastes. Such rules are to be adopted pursuant to the relevant provisions of any or all of the following: Ch. 144, Stats., Ch. 147, Stats., Ch. 30, Stats. and Sec. 107.05, Stats. These rules are to be promulgated within the next two years. Such rules do not currently exist.

IV. Should Mine Wastes Be Regulated As Solid Waste Under Ch. 144, Stats.?

A. Mine wastes from Kennecott site:

1. 4,120 tons of waste rock per day taken from the open pit mine will be tracked to the waste containment area.

2. The waste containment area will contain 4,009,000 cubic yards of waste rock and material from the open pit at the end of the project.

3. On the average, 840 dry tons of tailings per day will be piped as a slurry to the waste containment area from the Flambeau Mining Corporation concentrator.

4. Eleven years of operation of the concentrator would generate 2,617,000 dry weight tons of tailings in the waste containment area.

5. An additional 2,886,000 tons of tailings plus 740,000 tons of washing plant silt from a possible underground operation after the first eleven years would be placed in the waste containment area.

B. Relevant new laws.

1. Section 144.43(1), Stats., (Chapter 377, Laws of 1977) (hereinafter Ch. 377) provides that DNR is to adopt minimum standards for the location of solid waste disposal sites and facilities to ensure compliance and consistency with the purposes of and standards established under the Resource Conservation and Recovery Act of 1976, P.L. 94-580.

2. Section 1004(27) of P.L. 94-580 defines "solid waste" to include discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from mining operations.

3. Section 144.30(4), Stats. (Ch. 377) defines "solid waste" to include any refuse and any other discarded or salvageable materials, including solid, liquid, semisolid, or contained gaseous materials resulting from mining operations.

4. Section 144.83(2)(b) (Chapter 421, Laws of 1977) (hereinafter Ch. 421) requires disposal of all mine refuse tailings and the solid waste in solid or hazardous waste land disposal facilities or otherwise in an environmentally sound manner.

5. Section 144.85(5)(a)1.b. (Ch. 421), requires mining operations to comply with all applicable solid waste laws.

6. On September 26, 1977, DNR Secretary Anthony S. Earl stated:

In other words, the term "solid waste", as defined in the Act, [P.L. 94-580] will include in Wisconsin not only municipal garbage and refuse, but also flyash, scrubber sludge, foundry wastes, papermill sludges, municipal wastewater treatment plant sludges, bark and other wood wastes, mine tailings, feedlot wastes, and other residuals resulting from human activities.

C. DNR staff position far too narrow and exclusive.

1. DNR staff would place principal if not exclusive use of solid waste laws to regulate metallic mining waste containment areas.
2. There is no certainty that EPA will also adopt this position. The draft PEDCO report says:

The Resource Conservation and Recovery Act strictly limits the discharge and disposal of all types of solid wastes. Its particular application to the mining industry and specific mining by-products, however, remains uncertain. These uncertainties will have to be clarified before the impact of RCRA upon the mining industry can be accurately assessed. ...

There is now considerable controversy, however, as to whether mining overburden piles and wastewater impoundments are subject to regulation under this act.

D. Conclusion.

Mine tailings that are deposited in Waste Containment areas are solid wastes pursuant to Section 1004(27) of P.L. 94-580 and sec. 144.30(4), Stats. and are to be regulated pursuant to Ch. 144, Stats.

V. Will Metallic Mining Wastes Be Allowed In Wetlands?

A. Current rules:

1. NR 151.12(4) (c), (d) and (f) provide:

(4) Solid waste land disposal operations are prohibited within the following areas:

(c) Within any area from which the department finds that solid waste or leachings therefrom may have detrimental effect on surface water.

(d) Within any area from which the department finds that leaching from solid waste may have a detrimental effect on groundwater quality.

(f) Within wetland areas.

2. NR 1.95.

B. New laws.

1. Section 144.83(2) (c) (Ch. 421), requires mining sites, including tailings ponds, be located so as to minimize disturbance to wetlands.

2. On February 6, 1978, the Environmental Protection Agency proposed criteria for the classification of Solid Waste Disposal facilities. One of the proposed standards is that new disposal sites may not be located in wetlands.

3. Section 4003(2) of P.L. 94-580 requires states who seek Environmental Protection Agency approval of state plans to comply with said law to require all solid waste to be disposed in sanitary landfills or otherwise disposed of in an environmentally sound manner.

C. Conclusion.

Mine tailings ponds and the waste containment areas are solid wasteland disposal operations and are subject to the locational requirements of NR 151.12(4) of the Administrative Code. No change in administrative rules will be necessary. The declaratory ruling proceeding of the Town of Grant should resolve this issue.

VI. Are Tailings Ponds And Other Mining Related Activities Point Sources Of Pollution Under Ch. 147?

A. Kennecott mine facts:

1. Flambeau Mining Corporation will pump 2,032 gallons per minute of industrial process water into the waste containment area.
2. The discharge and seepage of pollutants (leachings) from the waste containment area could total 360,000 gallons per day.
3. The leachings described above will enter the ground and surface waters of Wisconsin flowing into the Flambeau River.
4. The Flambeau River is a navigable body of water.
5. There may be degradation of water quality in the Flambeau River due to seepage from the waste containment area.
6. There will be contamination of groundwater near the waste containment area due to tailings leachate.

B. DNR staff position.

1. Some metallic mining activities should be regulated as point sources.
2. Waste containment areas and tailings ponds were not considered point sources by the staff in 1976. Staff is reviewing this position in light of developing law.

C. The United States Environmental Protection Agency has taken the view that any concentrated, pollutant-bearing flow that is caused by man is a point source, regardless of whether the conveyance is man-made or the result of natural water flow from the point at which the operator's activities caused the water to collect and become contaminated. EPA presumes that a mining operation will have at least one point source of pollutants.

D. A federal district court in Colorado has ruled that all mining activities have been statutorily exempted from regulation as point sources by Congress in Section 304(e) of the 1972 amendments to the Federal Water Pollution Control Act (FWPCA), P.L. 92-500, 86 Stat. 816. United States v. Earth Sciences, Inc.

E. If the Federal Courts adopt the Earth Science theory, all mining activities in Wisconsin will be exempt from Chapter 147 regulation because of sec. 147.021, Stats. Some mining activities in Wisconsin are currently regulated by Ch. 147.

F. Conclusion

1) Wisconsin needs to develop an intergrated regulatory scheme. Regulatory options to protect our waters should be maximized.

2) All metallic mining activities are potentially within the regulatory scheme of FWPCA (and sec. 147.021, Stats.) as "point sources," and;

3) Wisconsin Pollutant Discharge Elimination System Permits (WPDES) under Chapter 147, Wis. Stats., should be required for the operation of waste containment areas and tailings ponds.

4) Any concentrated, pollutant-bearing flow from a metallic mining operation that is caused by man is a point source, regardless of whether the conveyance is man-made or the result of natural water flow from the point at which the operator's activities caused the

water to collect and become contaminated.

5) The pipe from the concentrator plants to the tailings ponds should be regulated as point sources.

6) The tailings ponds themselves are point sources.

7) Fissures in the clay linings to waste containment areas are point sources of pollution.

TESTIMONY OF PETER A. PESHEK BEFORE THE METALLIC
MINING RECLAMATION ACT REVIEW COMMITTEE JULY 13, 1977

Thank you for the opportunity to appear before your committee today. Because I have made several similar appearances in the past, I will not provide you with a broad conceptual overview of the problem under study. Instead, I wish to emphasize four points:

(1) The State of Wisconsin lacks legislative standards upon which to make judgments regarding the approval or disapproval of metallic mining operations;

(2) There is a need for improvement in the process by which we conduct hearings relative to the aforementioned decision-making process;

(3) The Wisconsin Environmental Protection Act must be made to work effectively in relation to the metallic mining industry; and

(4) The Department of Natural Resources must be provided adequate resources if our environment is to be protected.

STANDARDS

The legislature is charged with establishing public policy for the State of Wisconsin and the Department of Natural Resources is charged with implementing that public policy as it affects the environment. After the legislature establishes public policy, it remains for DNR to implement that public policy on a case-by-case basis. Therefore, it is incumbent upon the legislature to insure that there is the appropriate public policy direction and strict

due process of law procedures established so that correct public policy decisions are made by DNR.

The current Mine Reclamation Act lacks appropriate standards upon which DNR can make public policy decisions in permitting a mine to operate or not operate.

I support the recommendations of the NRDC study found on page 24 of the June, 1977 report. I would add the following observations.

The phrase "ancillary facilities" as used in new sec. 144.85 (5)(e) should be defined. This phrase should include all tailings ponds, waste disposal areas, concentrators, smelters, refineries, and transportation corridors associated therewith. In addition, I believe that this section must be further developed so as to provide the Department greater direction relative to when ancillary facilities should not be located immediately adjacent to or in the vicinity of the ore body.

In addition, I believe that the legislature should specifically prohibit metallic mining tailings ponds and waste containment areas in the following places: within 1,000 feet of any navigable lake, pond or flowage; within 300 feet of a navigable river or stream, or to the landward side of the flood plain, whichever is greater; within areas which DNR finds that solid waste or leachings may have a detrimental effect on surface waters; and within areas which DNR finds that leaching from solid waste may have a detrimental effect on ground water quality. These are the same standards that are currently applicable to solid waste generated in the private

or municipal sector.

The legislature has two routes to go in implementing this policy objective. It can either write the specific prohibitions into the statutes or it can amend the provisions of sec. 144.30(4), (7) and (8) and 144.44(1) to reflect that metallic mining tailings ponds and solid waste disposal areas will require a license pursuant to the provisions of sec. 144.44, Wis. Stats. I would prefer the first alternative.

One cannot discuss standards without discussing the provisions of sec. 107.05, Wis. Stats. My original recommendations regarding this statute are found in WLCS:189/1. A copy of my proposal is attached to this testimony. Upon further reflection, if WLCS:189/1 is to be introduced, I would recommend that the phrase "navigable water" found on line 67 of the proposal be changed to "surface stream or lake and related environment." I would change line 74 to reflect the phrase "surface stream or lake" rather than the phrase "navigable water." I would also rewrite the sentence beginning on line 73 as follows: If the public benefits which will result from the proposed operation outweigh the public rights in the surface stream or lake and related environment which will be impaired or eliminated and the direct and indirect social and economic costs of the proposed operation, the permit shall issue.

The addition of these standards for decisions relative to the issuing of a permit will improve sec. 107.05, Stats. This proposal also makes it clear that sec. 107.05 applies to all metallic mining operations, and not simply iron ore mining.

There is some justification for recommending the repeal of sec. 107.05, Stats. However, sec. 30.18 of the Wisconsin Statutes dealing with diversion of surface waters would need to be amended so as to cover the problems attempted to be regulated in the existing statute.

Finally, I recommend that sec. 144.83(3), Stats., be repealed. This statute is inconsistent with the recommendations in the NRDC report.

PROCEDURES

There are two significant due process failures associated with the current procedure of DNR in issuing metallic mining reclamation permits. First, DNR has never adopted pre-hearing discovery rules pursuant to the 1974 directive of the legislature in sec. 144.83(1)(a) of the statutes. This deprives citizens and local units of government of the opportunity to gather the facts necessary to be an intelligent litigator. The only parties who have the facts are the regulated and the regulator. For the citizen intervenor without discovery rules, the proceeding will be one of "trial by ambush". I am pleased to report that DNR Secretary Anthony Earl has advised me that the DNR Board will consider this matter at its August, 1977, meeting.

The second due process shortcoming is found in sec. 144.85(5) (a) which provides that a public hearing must be held within 60

days after the filing of the metallic reclamation plan. Citizens and local units of government who wish to participate in such a proceeding cannot possibly be adequately prepared in that 60-day period. I support the recommendations of the NRDC report that are outlined on page 11 of the June report.

ENVIRONMENTAL IMPACT STATEMENT PROCESS

The state's implementation of the Wisconsin Environmental Policy Act concerning Kennecott Copper Corporation's Rusk County Copper mine is inadequate, both as a matter of public policy and law. Three specific failings are worthy of note.

First, citizens of this state were denied the opportunity to have a contested case hearing as to the adequacy of the environmental impact statement. In addition, the hearing on the environmental impact statement was held in such a manner, and at such a time, as to minimize the potential effectiveness of local citizens and local units of government.

Second, the environmental impact statement essentially represented the work product of the applicant who wished to alter the human and physical environment of Rusk County. There was very little, if any, original work done by the State of Wisconsin relative to this proposal.

Third, there was and remains substantial doubt as to the evidentiary value of that environmental impact statement. This has frustrated all of the parties to the action and has further minimized the sound policy objectives of WEPA.

I am pleased to report that there has been progress made in resolving certain of these issues. The DNR staff and the Public Intervenor have agreed that the citizens of this state have a right to a contested case hearing regarding the adequacy or inadequacy of the environmental impact statement. We also have agreed that there needs to be a more definitive delineation of the evidentiary value of the environmental impact statement at a contested case permit hearing. However, the Public Intervenor and the DNR staff cannot agree as to when the contested hearing on the adequacy of the EIS should be held, nor can we agree as to the evidentiary value of the environmental impact statement. I am providing committee staff with copies of the Public Intervenor proposal and the DNR response to it so that you may review this issue. In addition, you should be aware that the DNR Board will consider this item at its September meeting.

DNR RESOURCES

This committee is probably not the appropriate group to review DNR staffing patterns for the Metallic Mining Reclamation Act. However, I would be derelict in my responsibility if I did not advise you that in my opinion, DNR resources and staffing patterns are inadequate to protect Wisconsin's environment in the face of the proposal by EXXON Corporation and others to mine metallic minerals in northern Wisconsin.

CONCLUSION

The State of Wisconsin is not yet prepared to issue mining permits for major metallic mining projects in Wisconsin. We have made substantial progress since the Kennecott hearings were held in November of 1976. This Committee and its work can go a long way towards preparing the State to make many of the major public policy decisions which must be made if we are not to injure the human and physical environments of this State.



**MINERALS
EXPLORATION
COALITION**

Minerals Advocate
In Public Policy

Address:
1019 8th Street
Golden, Colorado 80401
Phone (303)277-1155
Fax (303)277-1212
e-mail: mec@henge.com
Home Page: <http://www.henge.com/~mec>

September 23, 1997

Paul C. Jones
Executive Director

OFFICERS AND DIRECTORS

Lois J. Brooks
President, Chairman
of the Board and Director
Echo Bay Mines Ltd.

C. Stewart Wallis
Past President,
Past Chairman and Director
Sundance Ventures

Charles Burton
Treasurer
Burton Bookkeeping

Sandra J. Schoenebeck
Corporate Secretary

DIRECTORS

Charles V. Baltzer
Environmental Support
Services

Robert W. Barker
Newcrest Resources Inc.

C. Victor Chevillon
Placer Dome U.S. Inc.

Cynthia Benson Gee
Environmental Consultant

Stanley K. Hamilton
Consulting Geologist

Robert F. Hemming
USMX, Inc.

James M. Kelly
Viceroy Resource
Corporation

Mark T. Nesbitt
Attorney at Law

Ronald L. Parratt
Santa Fe Pacific Gold
Corporation

Robert W. Schafer
Kinross Gold Corporation

The Honorable Mark Duff
Chairman, House Committee on Environment
Wisconsin State Legislature
P. O. Box 8952
Madison, Wisconsin 53708

**Re: MINERAL EXPLORATION COALITION PERMITTING
DIRECTORY**

Dear Chairman Duff:

Thank you for your telephone call today requesting information on environmental permitting of mining operations in the United States.

Please find enclosed a copy of *Mineral Exploration Coalition's* Permitting Directory for Hard Rock Mineral Exploration. This Directory provides the requirements and statutory references for hard rock (non-coal or fuel related) exploration in 21 states in which there is mineral exploration activity. In addition to state requirements we have also included a section listing Bureau of Land Management and U.S. Forest Service requirements.

While our Directory does not 'rank' states by levels of regulation, the table in Section 5 indicates general requirements on a state by state basis for comparison.

MEC first published this Directory in 1992 and completely revised it in the spring of 1997. It is currently complete to the best of our knowledge. On a state by state basis we provide the regulating agency, specific agency contacts, regulatory authority, permitting requirements such as reclamation standards, drill hole plugging requirements, and surety requirements, and other state agency contacts relevant to exploration.

MEC's Directory does not address specific mine permitting requirements but the agencies involved in exploration permitting are the same agencies which permit the environmental aspects of mining operations in each state. As we discussed requirements for mine permitting vary from state to state, but all states listed in our Directory have specific requirements covering the environmental and reclamation aspects mining.

In most, if not all cases, the state agency regulates exploration and mining on private as well as public lands. In some states, the BLM and U.S. Forest Service act independently of the state agency if activities are on BLM or Forest Service lands. Each state agency should be consulted regarding whether a cooperative agreement has been signed between the state and BLM or Forest Service in that state.

Enclosed also is a new brochure published by *The Gold Institute* on the use of gold in America's economy. In the back of the brochure I have highlighted a section which applies to 'Environmental Responsibility' of America's mining industry. While this is written about gold mining, it equally applies to the very sensitive manner in which the modern mining industry addresses the environment in its day to day operations.

I have ask that the *National Mining Association* send you a copy of a recent study they issued on the direct and indirect benefits of the mining industry to our nation's economy. This report indicated the total impact on our nation's economy of mining in 1995 totaled **\$524 billion**. The study indicated that Wisconsin's direct and indirect gain in revenue from the mining industry for 1995 totaled \$9.7 billion, a figure you will agree is significant.

The *Minerals Exploration Coalition* is an advocate on public policy issues involving the access to, and the use of, public lands of the United States for mineral exploration and development. Our membership, including over 30 corporations, represents a diverse group of individuals and companies engaged in mineral exploration on the public lands.

Please do not hesitate to contact me if *MEC* can provide additional information about permitting requirements in any state on which we have information.

Yours very truly,
Minerals Exploration Coalition



Paul C. Jones
Executive Director



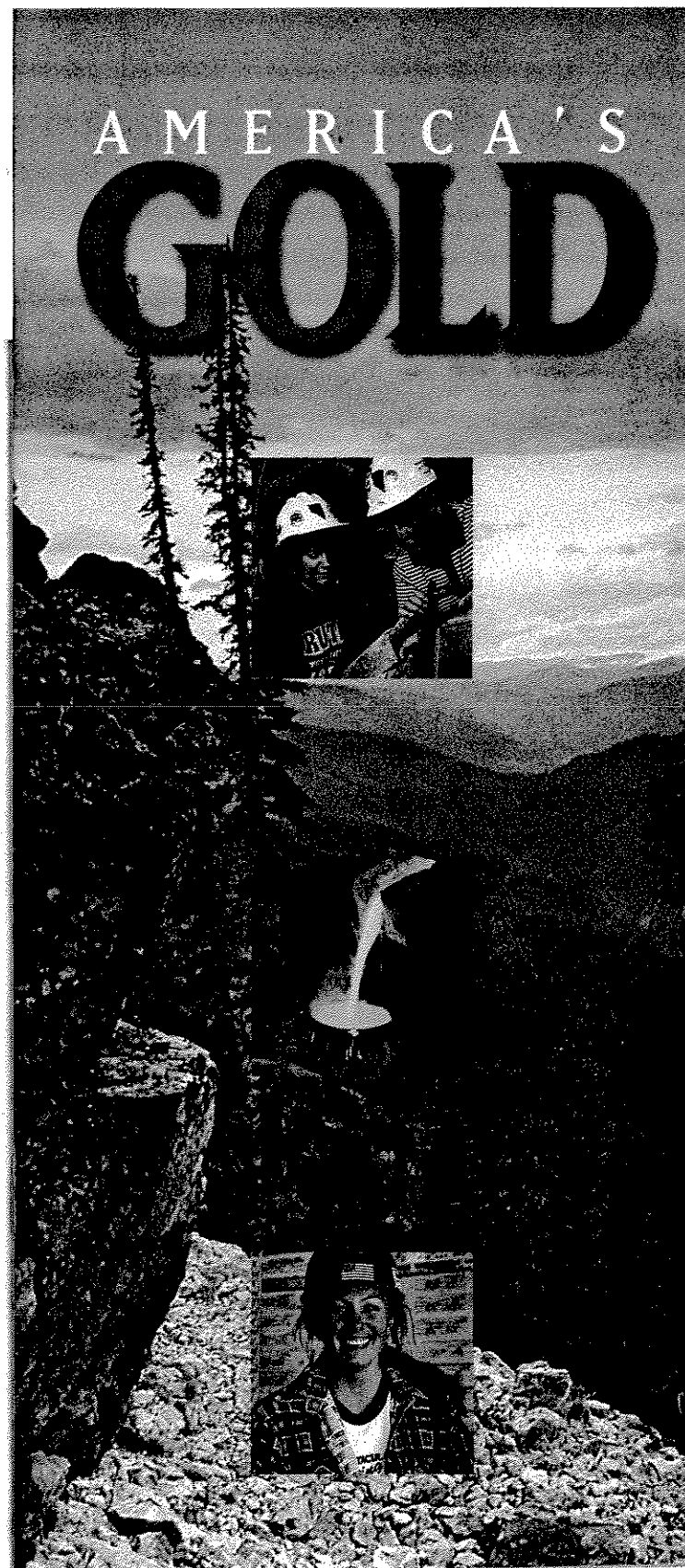
**MINERALS
EXPLORATION
COALITION**

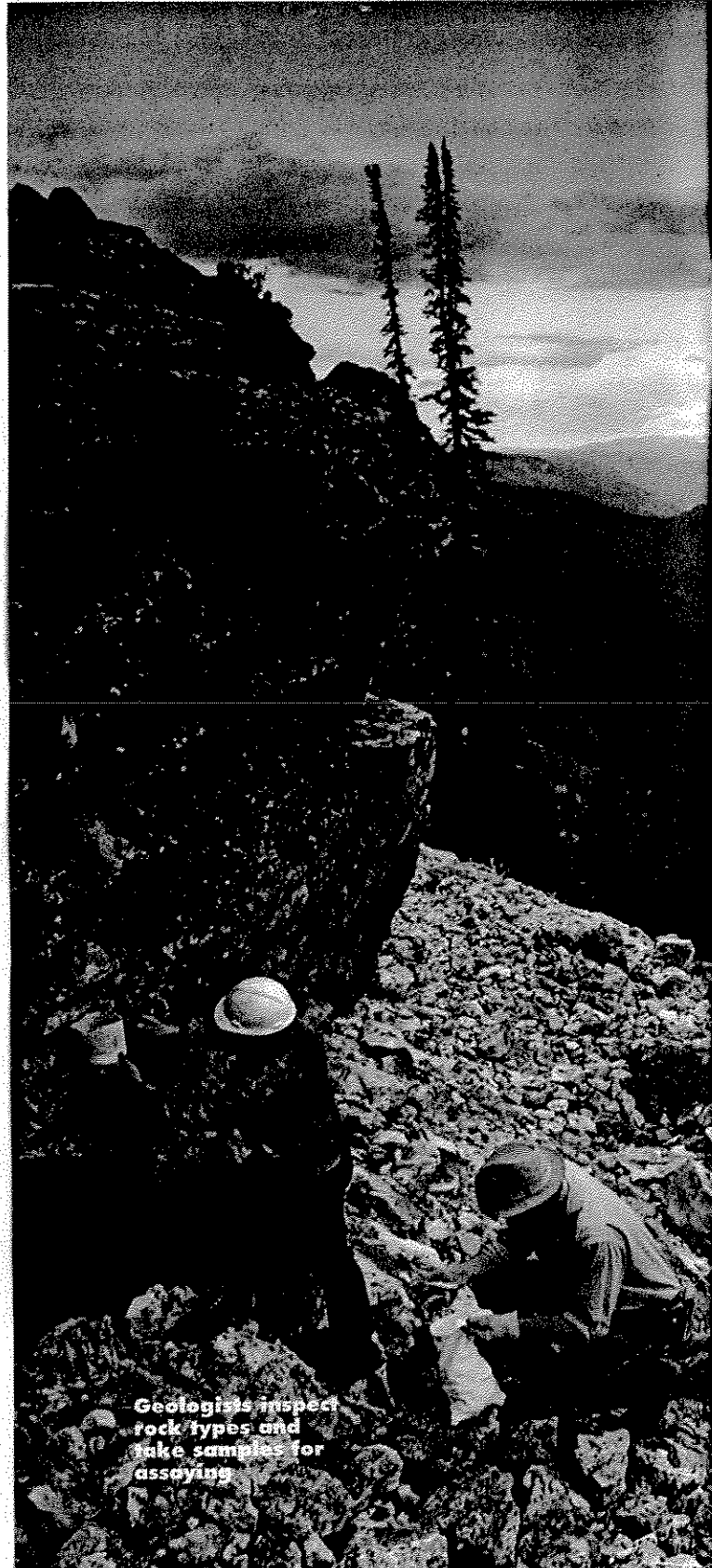
*Minerals Advocate
In Public Policy*

PAUL C. JONES
Executive Director

1019 8th Street
Golden, Colorado 80401

MEC Office: (303) 277-1155
Office Fax: (303) 277-1212
Home: (303) 278-9179



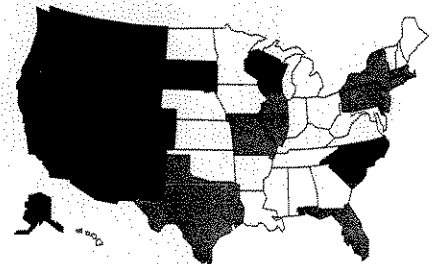


Geologists inspect rock types and take samples for assaying

AMERICA'S GOLD WORKING FOR YOU

TODAY'S GOLD INDUSTRY represents a rare industrial success story. Since 1980, the industry has grown from just five major mines — two of which were copper mines — producing under one million ounces of gold a year, to operations in 13 states mining more than 10 million ounces annually. ■ **AT THE HEART** of this growth is the process for extracting microscopic gold from the earth and transforming it into a product that is essential to today's technologically sophisticated industries, and which remains the only universally accepted medium of exchange. ■ **STATE-OF-THE-ART SYSTEMS** that maximize a mine's resources while carefully monitoring its natural habitat have long replaced the picks and shovels of the California Gold Rush. Today's gold producers use sophisticated computer systems to plan a mine from exploration drilling to final reclamation.

AMERICA'S GOLD STATES



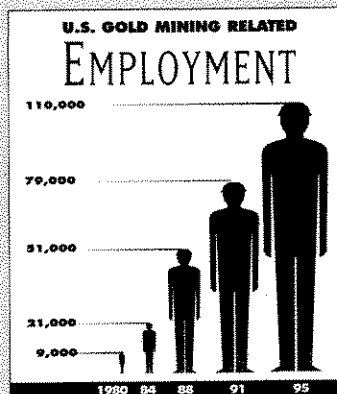
■ GOLD MINING ■ EXPLORATION
▨ REFINING, FABRICATION & TRADING

EMPLOYMENT

THE LIVELIHOODS of thousands of Americans depend on gold. From

Nevada to Idaho, Alaska, South Carolina and South Dakota, employees of gold mining companies use the latest technology to study a mine's geological structure and plan every hour of extraction.

These employees are among the highest paid industrial workers in the nation, earning upwards of \$47,000 annually. ■ **THE GOLD INDUSTRY'S IMPACT** on employment extends throughout the country as businesses put people to work developing products used to mine gold. For example, the Western precious metals industry created an additional 6,000 jobs in Illinois alone where two major heavy equipment manufacturers are located. Thousands of other jobs are created throughout the United States from orders placed by gold producers for a wide array of industrial products.



Source: Natural Resource Industry Institute



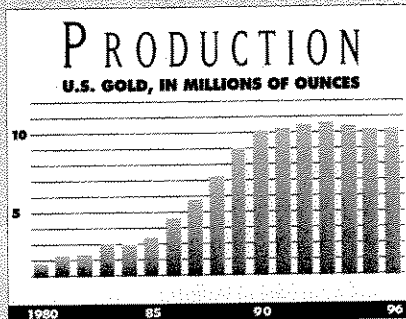
PRODUCTION

U.S. GOLD PRODUCTION in 1996 totaled more than 10 million ounces, nearly 15 percent of world production, with an estimated value of almost

\$4 billion.

Since 1991, the United States has out-ranked every

country but South Africa in gold production. This is in stark contrast to 1980 when the United States produced less than 3 percent of the world's gold.



Source: Natural Resource Industry Institute, The Gold Institute

TAXES

TAXES PAID BY THE MINING INDUSTRY produce the highest return to the U.S. Treasury on a per-acre basis of any federal land use. The government has the equivalent of a 20-35 percent net profit interest in every mine in the country from the taxes paid by companies and employees.

■ **IN 1995**, the 18 largest gold producers in the United States paid \$108 million in federal income taxes. In Nevada alone, producers paid more

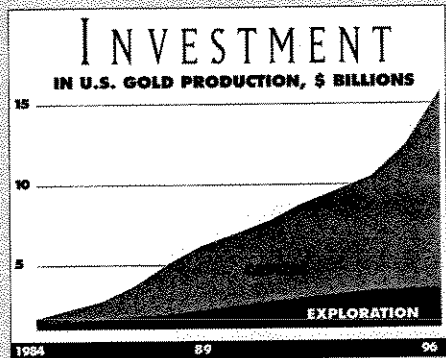
than \$140 million in state and local business taxes. An estimated \$354 million in individual income tax revenues was also generated from direct and indirect jobs attributable to the industry.

INVESTMENT

SINCE 1980, nearly \$3 billion has been spent on U.S. exploration alone, and \$13 billion has been invested in gold mine development. ■ **FRONTIER EXPLORATION** is undertaken when a company examines a land area far from an existing mine. Through satellite photography and remote sensing, certain geographic elements that typically surround a gold deposit are located. Surface samples are then collected and analyzed. If the area appears promising, crews will begin exploratory drilling to obtain subsur-



face samples of the potentially gold-bearing rock. ■ **HEADFRAME EXPLORATION** focuses on drilling in and around working mines to find new reserves which could extend the life of an existing mine. ■ **COST STUDIES**, environmental planning and mine



Source: The Gold Institute

design can begin once an orebody has been defined. A company must then draw up a reclamation plan and apply for a variety of permits from local, state and federal governments. Once these permits are obtained, construction at the mine site begins. ■ **DEVELOPING A MINE** in the United States now takes several years and is an investment made long before the first ounce of gold is mined.

Exploring for gold in Nevada, a geologist enters data into his laptop computer



design can begin once an orebody has been defined. A company must then draw up a

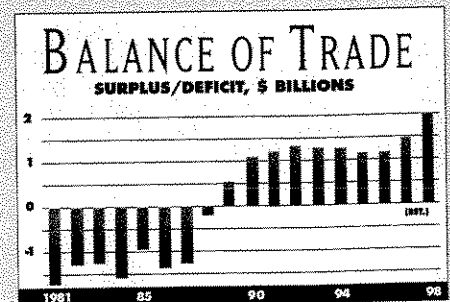
INTERNATIONAL TRADE

THE SWEEPING CHANGE in the U.S. gold industry over the past 17 years has



had an enormous impact on international trade. As recently as 1980, the United States imported 75 percent of the gold needed for its manu-

facturing industries. ■ **TODAY, U.S. PRODUCTION** exceeds domestic use, which in 1996 enabled the United States to export gold totaling \$1.2 billion. U.S. gold can be purchased and sold in all the principal world financial markets, from Wall Street to London, Zurich and Hong Kong.



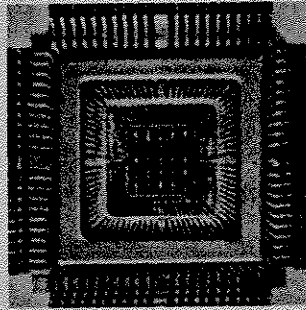
Source: The Gold Institute

GOLD'S USES

GOLD'S USES ARE DIVERSE.

From medicine to telecommunications, gold's unique properties make it an essential part of daily life. Gold lies at the heart of the computer industry.

Infinitesimal gold circuits make possible the transmission of complex information through the most



sophisticated computer technology.

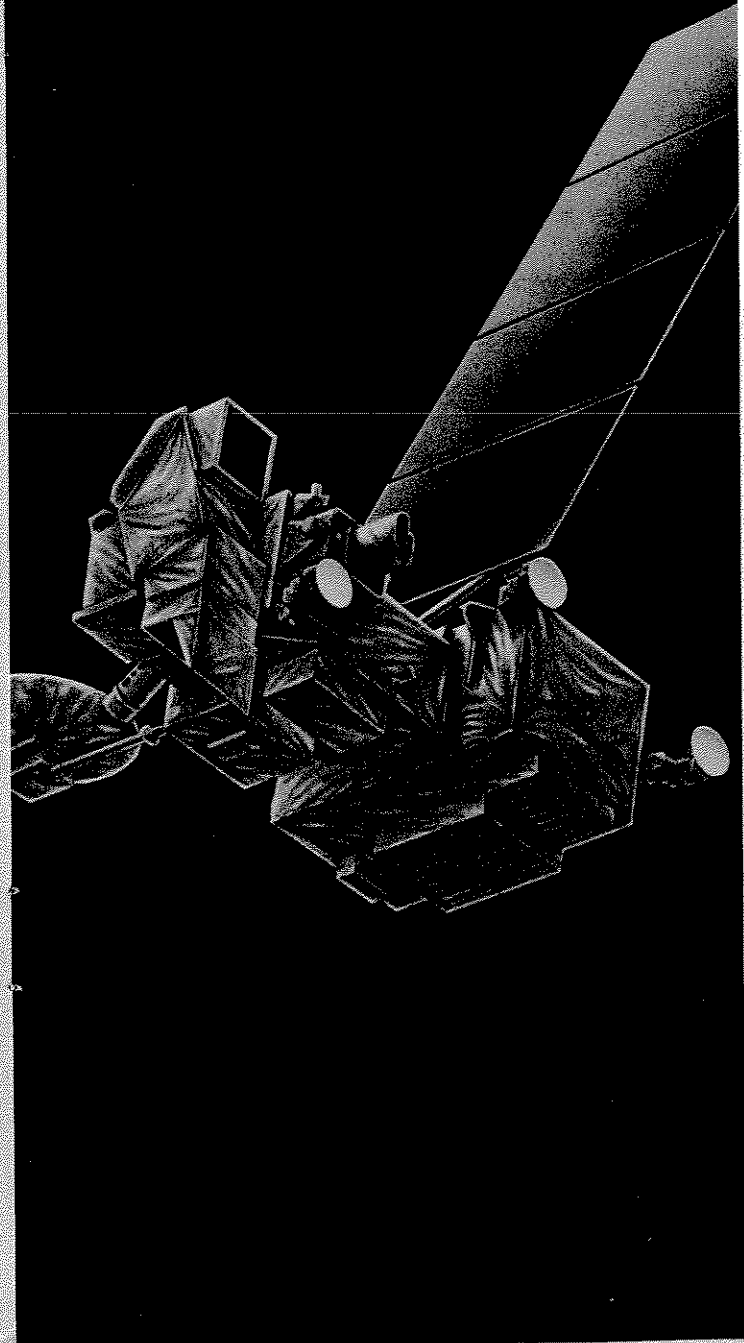
■ **VIRTUALLY ALL RELIABLE**

electronic components depend on gold to guarantee consistent performance.

Gold is used in telephones, computers, videocassette recorders and televisions because it does not tarnish or corrode and is an exceptionally good conductor of electricity and heat. ■ **GOLD'S**

PROPERTIES make it indispensable to the development of lasers now used in a myriad of medical and surgical procedures. And gold plays a significant role in automobile safety, as air bags rely on gold circuitry to ensure that the bags inflate at the proper time.

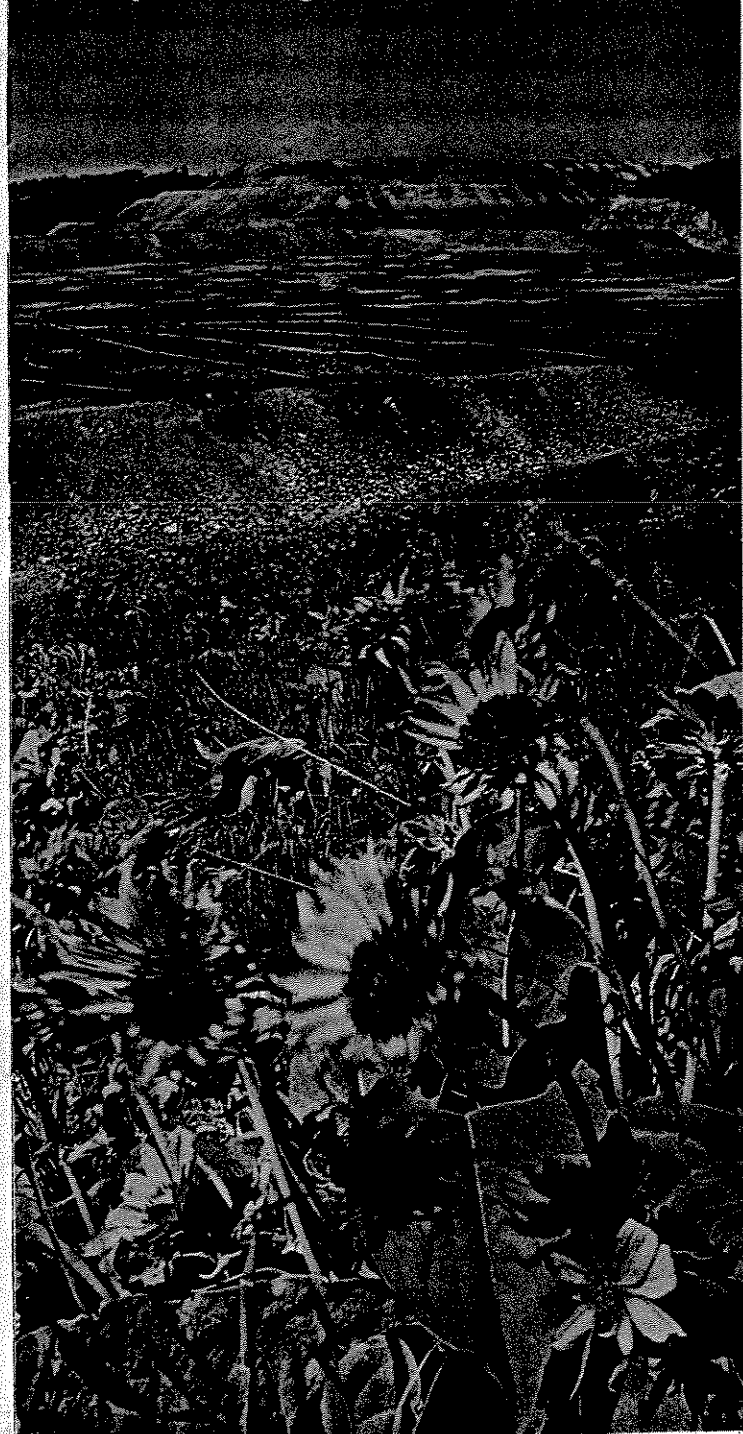
Gold protects sophisticated instruments from intense solar heat



ENVIRONMENTAL RESPONSIBILITY

U.S. GOLD PRODUCERS are strongly committed to protecting the air, land and water, and have achieved many environmental successes. Using the latest technology, today's gold mining companies plan, operate and reclaim all their facilities with an eye toward maintaining the highest standards of environmental quality. In many cases, companies have gone beyond legal requirements in reclaiming mined land and abandoned mine sites, preventing acid rock drainage, protecting wildlife and safely managing industrial chemicals used in mining. ■ **LONG BEFORE** mining begins, comprehensive studies of the environment are undertaken, and a plan is developed to limit the mine's impact on the area and preserve its natural resources. During the extraction process, the area is constantly monitored to ensure that all environmental laws and regulations are being met. ■ **RECLAMATION BEGINS** even before mining has concluded. The land is recontoured, the ground revegetated and wildlife reintroduced. In many cases, the surrounding environment is

Today progressive reclamation begins before mining is completed. At this site, mine operations are underway with a reclaimed slope in the foreground.



actually enhanced, as companies launch erosion-control plans, create wetlands and implement wildlife protection programs. Some sites, which previously were almost deserts, have been transformed into wildlife sanctuaries or recreational parks. ■ **RECLAMATION** is a long-term investment made by every gold mining company, and can cost anywhere from \$2,000 to \$10,000 per acre. It is the cornerstone of every mine plan and is considered the first and last step of the mining process.

■ **EMPLOYEE HEALTH AND SAFETY** is also a high priority for the industry. Advances in modern engineering technology have helped to reduce the risks of mining and have significantly improved the safety conditions at gold mines.



A regimented water sampling program is a critical part of modern mining

School children gain hands-on reclamation experience by planting indigenous tree seedlings at a mine in Montana



Photography courtesy of:
Comstock, Echo Bay Mines Ltd.,
Lockheed Martin Astro Space,
Pegasus Gold Corporation,
Placer Dome, Inc., Santa Fe Pacific
Gold Corporation

THE GOLD INSTITUTE
1112 16th Street, NW
Suite 240
Washington, DC 20036
(202) 835-0185
fax (202) 835-0155

www.goldinstitute.com



PRINTED ON RECYCLED PAPER

© 1997 The Gold Institute



**MINERALS
EXPLORATION
COALITION**

*Minerals Advocate
In Public Policy*

**PERMITTING DIRECTORY
FOR
HARD ROCK MINERAL EXPLORATION**

1997

Second Edition



MINERALS EXPLORATION
COALITION

PERMITTING DIRECTORY
FOR
HARD ROCK
MINERAL EXPLORATION

PREFACE

1

INTRODUCTION

2

FEDERAL
LAND USE
PERMITTING
REQUIREMENTS

3

STATE
PERMITTING
REQUIREMENTS

4

APPENDIX

5

**PERMITTING DIRECTORY
FOR
HARD ROCK MINERAL EXPLORATION**

TABLE OF CONTENTS

	<i>Page</i>
PREFACE	i
THE MINERALS EXPLORATION COALITION	ii
ACKNOWLEDGMENTS	iii
INTRODUCTION	iv
FEDERAL LAND USE PERMITTING REQUIREMENTS	
U.S. Forest Service	1
Bureau of Land Management	5
STATE PERMITTING REQUIREMENTS	
Alaska	11
Arizona	16
California	21
Colorado	25
Idaho	29
Michigan	32
Minnesota	34
Missouri	41
Montana	43
Nevada	47
New Mexico	51
North Carolina	54
North Dakota	60
South Carolina	65
South Dakota	70
Tennessee	75
Utah	79
Washington	84
Wisconsin	87
Wyoming	90
APPENDIX	
State Permitting Requirements Summary	

PREFACE

In 1992, the Minerals Exploration Coalition (MEC) compiled the original edition of the *Permitting Directory for Hard Rock Mineral Exploration*. The Directory covers state and federal regulations related to permitting non-fuel exploration in the United States. This Directory has been updated annually since that time. To MEC's knowledge, there is no other publication of this type available in the United States.

Since the publication of the original edition of the Directory, many changes have occurred in state laws and state and federal regulations related to mineral exploration. Major revisions have been made to the reclamation requirements of several states, and additional reporting and bonding requirements have been established at the federal level. Because of these changes, MEC revised the 1997 Second Edition of the *Permitting Directory for Hard Rock Mineral Exploration* in its entirety.

This Directory indicates the basic regulatory framework for hard rock mineral exploration existing in 21 states and on U.S. Forest Service (USFS) and Bureau of Land Management (BLM) lands. It has been compiled to assist the mineral explorationist in making an initial determination of the accessibility of each state for exploration and identifying particular agencies and individuals in those agencies to contact in each state for further information. Where possible, application forms have been included.

Because laws and regulations are constantly changing, annual updates of this directory will continue to be undertaken. This particular update to the second edition reflects only minor changes such as agency contacts in several states, as well as some revised forms in various states.

We have made every effort to ensure the completeness and accuracy of the information presented in this publication. The appropriate agency or agencies in each state were requested to review and comment on the contents of the Directory. We appreciate their cooperation in making the edition as current as possible. This publication is, however, presented with the understanding that MEC is not engaged in rendering legal, accounting, or other professional services. In no event, including negligence on the part of MEC, will MEC be liable for any direct, indirect, or consequential damages resulting from the use of this publication.

THE MINERALS EXPLORATION COALITION

The Minerals Exploration Coalition is an advocate on public policy issues involving the access to, and the use of, public lands of the United States for mineral exploration and development. Our membership, including over 30 corporations, represents a diverse group of individuals and companies engaged in mineral exploration on the public lands.

MEC was formed in 1979 to provide a means for professionals in mineral exploration to influence decision makers and policies dealing with access to federal lands for mineral exploration. The Coalition is supported by many individuals, mining companies, contractors, and suppliers involved in mineral exploration across the United States.

Good public policy can be made only if appropriate and accurate information is available to policy makers. MEC believes that mineral explorationists and related professionals, such as landmen and mineral attorneys, have unique knowledge and experience which, when effectively communicated to legislators and regulators, can positively influence laws and regulations impacting our industry. Over the years, MEC has worked hard to effectively communicate technical data, opinions, and concerns to legislators and regulators in an attempt to maintain access to federal lands for mineral exploration. These communications, taking the form of written and verbal testimony at committee and regulatory hearings, letters to legislators and regulators, and several publications dealing with issues concerning mineral exploration, are ongoing.

As a part of this exercise, this Directory has been compiled for use in demonstrating to legislators, Congressmen, and regulators that the mineral exploration and development industry is heavily regulated. Despite perceptions to the contrary, no one can simply go on public or private lands whenever and wherever they choose, do any type exploration work they may choose, and leave the land unreclaimed.

In spite of our efforts, more and more federal lands have been closed to mineral exploration, and regulations governing our activities on federal, state, and private lands which are open to exploration have become more numerous, far-reaching, and complex. We urge each of you engaged in exploration, whether on public or private lands, to join with MEC in our continuing effort to maintain the availability of lands for economical, environmentally sensitive exploration and development.

In addition to the Permitting Directory, MEC publishes other periodicals to inform our membership, legislators and regulators, and the general public about current activities affecting our industry. These include our monthly newsletter *The Minerals Advocate*, periodic *Action Alerts* related to timely issues affecting mineral exploration, and a *Permitting Chart* indicating the requirements to permit a mineral project on Federal lands. We also publish *Current Congressional Issues Related to Mineral Exploration* periodically when Congress is in session. Each of these documents may be obtained by contacting the MEC office at (303) 277-1155 in Golden, Colorado.

We urge you to support this effort by becoming an active member of the Minerals Exploration Coalition.

ACKNOWLEDGMENTS

The Board of Directors and Staff of MEC wish to acknowledge the many hours of work devoted to the preparation of this Directory, both initially and in the annual updates. Particular acknowledgment is given to Jerry Danni, who was primarily responsible for the compilation of the initial 1992 Directory; Mary Fleming, who initially contacted many of the agencies to obtain the information presented in the original document; and the Homestake Mining Company, which, along with several of its employees, provided the time and facilities of the initial preparation of the document.

More recently, Echo Bay Mines and its employee Lois Brooks have contributed time, facilities, and funding for updates of the Directory. Lastly, one of MEC's Directors, Cynthia Benson Gee, an environmental consultant, is responsible for making the revisions to the 1997 and 1998 issues of the Directory and Eva Miller very generously typed the entire manuscript. MEC acknowledges each of the contributions to make this Directory a complete, concise and useful document.

INTRODUCTION

This is a directory of the regulatory requirements, on a state-by-state basis, for mineral exploration in 21 states. The Directory is intended to provide an overview of the initial regulatory requirements for mineral exploration in each state. It is not intended to supplant statutes or regulations, and MEC emphasizes the need for the explorationist to contact federal, state, or local regulatory authorities before commencing work.

The format for each state is similar and includes: the responsible agency; the regulatory authority; permitting requirements, both general and specific; reclamation requirements; drill hole plugging requirements; reclamation surety (i.e., bonding) requirements; and other agency contacts. As mineral exploration programs in the western states commonly involve public lands, U.S. Forest Service and Bureau of Land Management permitting requirements are also included in this directory. The information provided herein should be sufficient to allow the reader to initiate the permitting process for an exploration program. However, there are many other regulatory aspects of mineral exploration that may come into play that are not discussed here. Examples of the foregoing include, but are not limited to, the following:

- U.S. Army Corp of Engineers — Permits may be required for “dredge and fill” activities in “waters of the United States,” i.e., “404” Permits.
- Environmental Protection Agency — If the property to be explored includes prior mining activity or surface disturbance related to mining, a storm water discharge permit and/or Discharge Permit (NPDES) may be required. In some states, EPA has delegated its NPDES authority to the state level. Additionally, in some states (e.g., Arizona), EPA has the authority to regulate mining activities on Indian Reservations.
- Federal and State Wildlife Agencies — U.S. Forest Service and Bureau of Land Management operating plans may be intimately tied to wildlife management regulations. These regulations can have a far-reaching and significant impact on exploration activity requiring the adherence to “windows of operation” judged to have the minimal impact of factors such as “deer winter ranges” or “raptor nesting and fledgling habitats.” These regulations are in addition to any requirements resulting from the endangered or threatened species determination. Also, many states defer their reclamation and bonding requirements to be consistent with USFS or BLM requirements, or require cooperative agreements between agencies.
- Historical and Archaeological — Historical and archaeological factors may be a discretionary wildcard in the permitting process and have jurisdiction at local, state, and federal levels. In many cases, a determination of historical significance or a previous classification of an area as a historical site may create significant delays in exploration activity as other parties are drawn into the permitting process. Archaeological factors usually relate to the presence of Native American artifacts and sites or other items of historical interest on public lands requiring an examination and report by an “approved” archaeologist which is usually paid for by the company in order to expedite the permitting process.

U.S. FOREST SERVICE

RESPONSIBLE AGENCY

U.S. Department of Agriculture
U.S. Forest Service

Contact: U.S. Forest Service—District Office (in area of exploration interest)

REGULATORY AUTHORITY

1. Forest Service Organic Act of 1987 (16 U.S.C. §§ 475, 551)
2. 36 CFR, Part 228

PERMITTING REQUIREMENTS

◆ General Requirements

These requirements set forth the procedures through which the surface of National Forest System lands are managed in connection with hard rock mineral exploration. It is not the purpose of these requirements to provide management of the mineral resources. The requirements apply to the conduct of mining operations, defined as "all functions, work, and activities in connection with prospecting, exploration, development, mining or processing of mineral resources and all uses reasonably incident thereto, including roads and other means of access on lands subject to the regulations in this part, regardless of whether said operations take place on or off mining claims."

A notice of intent to operate is required to conduct operations which might cause disturbance of surface resources. A notice of intent need not be filed for operations which will not involve the use of mechanized earthmoving equipment such as bulldozers or backhoes and will not involve the cutting of trees. The notice is to be submitted to the District Ranger having jurisdiction over the area in which the operations will be conducted. If the District Ranger determines that the operations will likely cause significant disturbance of surface resources, the operator shall be required to submit a plan of operations.

A plan of operations shall not apply to operations which will be limited to the use of vehicles on existing public roads or roads used and maintained for National Forest purposes; to individuals desiring to search for and occasionally remove small mineral samples or specimens; to prospecting and sampling which will not cause significant surface resource disturbance and will not involve removal of more than a reasonable amount of mineral deposit for analysis and study; to the marking and monumenting of mining claims; and to subsurface

operations which will not cause significant surface resource disturbance. A notice of intent need not be filed where a plan of operations is submitted. No special form is required for filing a notice or a plan of operations.

The information submitted for the plan of operations shall be available to the general public at the office of the District Ranger. Specifically identified information and data submitted by the operator as confidential concerning trade secrets or privileged commercial or financial information will not be available for public examination.

All operations are to be conducted so as, where feasible, to minimize adverse environmental impacts on National Forest resources. Any operator required to file a plan of operations shall furnish reclamation surety.

◆ **Specific Requirements**

1. File a notice of intent (if proposed operation will not cause significant disturbance of surface resources) for which a plan of operations is required.

Information required:

- a. Name, address and telephone of operator;
- b. Identification of area involved;
- c. Nature of proposed operations; and
- d. Route of access and method of transport.

2. The District Ranger will, within 15 days of receipt of a notice of intent, approve the notice or notify the operator that a plan of operations is required.

3. Submit a plan of operations (if the proposed operation is expected to cause a significant disturbance of surface resources, or as required by the District Ranger following the submittal of a notice of intent).

Information required:

- a. The name and legal mailing address of the operators (and claimants if they are not the operators) and their lessees, assigns, or designees;
- b. A map or sketch showing information sufficient to locate the proposed area of operations on the ground, existing and/or proposed roads or access routes to be used in connection with the operations and the approximate location and size of areas where surface resources will be disturbed;
- c. Information sufficient to describe or identify the type of operations proposed and how they would be conducted, the type and standard of existing and proposed roads or access routes, and the means of transportation used;
- d. The period during which the proposed activity will take place; and
- e. Measures to be taken to meet the requirements for environmental protection.

4. The plan of operations shall cover the entire operation for the full estimated period of activity. However, supplemental plans can be submitted whenever it is proposed to undertake any significant surface disturbance not covered by the initial plan.
5. A plan of operations shall be submitted to the District Ranger, who shall promptly acknowledge receipt. The authorized officer shall, within 30 days of receipt of a plan of operations, analyze the proposal and notify the operator that the plan has been approved; or that additional review time is necessary (not to exceed 60 days); or that the plan cannot be approved until a final environmental impact statement has been prepared.
6. A plan of operations cannot be approved until section 106 of the National Historic Preservation Act (cultural survey), and section 7 of the Endangered Species Act have been complied with. The operator is not required to do the inventory but may hire an archaeologist approved by the U.S. Forest Service in order to complete the inventory more expeditiously.

◆ **Reclamation Standards**

Operators shall comply with all applicable requirements of the Clean Air Act, the Federal Water Pollution Control Act, and the federal and state requirements for disposal and treatment of solid wastes. All tailings, dumps, deleterious materials, or substances and other waste produced shall be deployed, arranged, disposed of or treated so as to minimize adverse impact upon the environment.

To the extent practicable, operators shall harmonize operations with scenic values through such measures as the design and location of operating facilities, including roads and other means of access, vegetative screening of operations, and construction of structures and improvements which blend with the landscape.

Measures will be taken to protect fisheries and wildlife habitat which may be affected by the operations.

Roads will be constructed and maintained so as to assure adequate drainage and to maintain or, where practicable, eliminate damage to soil, water, and other resource values.

Upon the earliest practicable time during operations, or within one year of the conclusion of operations, unless a longer time is allowed by the authorized officer, the operator shall reclaim the surface disturbed in operations. Reclamation measures shall include: control of erosion and water runoff; isolation, removal or control of toxic materials; reshaping and revegetating of disturbed areas; and rehabilitation of fisheries and wildlife habitat.

◆ **Drill Hole Plugging Requirements**

There are no specific drill hole plugging requirements for lands administered by the U.S. Forest Service. General environmental protection requirements apply. In addition, most states have drill hole plugging requirements that also apply to U.S. Forest Service managed lands.

◆ **Reclamation Surety Requirements**

Any operator required to file a plan of operations shall, when required by the authorized officer, furnish a bond prior to approval of the plan of operations. Release of the bond is conditioned upon satisfactory completion of reclamation. In lieu of a bond, an operator may deposit cash in an amount equal to the required dollar amount of the bond. A blanket bond covering nationwide or statewide operations may be furnished if the terms and conditions are sufficient. In addition, memorandums of understanding with several states exist, which allows for the posting of a single bond with the state.

In determining the amount of the bond, consideration will be given to the estimated cost of stabilizing, rehabilitating, and reclaiming the area of operations.

BUREAU OF LAND MANAGEMENT

RESPONSIBLE AGENCY

U.S. Department of Interior
Bureau of Land Management

Contact: Bureau of Land Management — District Office (in area of exploration interest)

REGULATORY AUTHORITY

1. Revised Statutes, 30 U.S.C. 22 and 43 U.S.C. 1201
2. Federal Land Policy Management Act of 1976, 43 U.S.C. 1701 *et seq.*
3. 43 CFR, Part 3715, and 43 CFR, Part 3809, as amended effective March 31, 1997

PERMITTING REQUIREMENTS

◆ General Requirements

These requirements set forth the procedures through which the surface of Bureau of Land Management lands are managed in connection with hard rock mineral exploration. These requirements apply to the conduct of mining operations, defined as ". . . all functions, work, facilities, and activities in connection with prospecting, discovery, and assessment work, development, extraction, and processing of mineral deposits locatable under the mining laws and other uses reasonably incident thereto, whether on a mining claim or not, including but not limited to the construction of roads, transmission lines, pipelines, and other means of access to support facilities across federal lands"

No notification to or approval by the authorized officer is required for casual use operations, defined as ". . . activities ordinarily resulting in only negligible disturbance of the Federal lands and resources." For example, activities are generally considered casual use if they do not involve the use of mechanized earth moving equipment or explosives or do not involve the use of motorized vehicles in areas designated as closed to off-road vehicles. All operators on project areas whose operations, including access across federal lands to the project area, cause a cumulative surface disturbance of five acres or less during any calendar year shall notify the authorized officer in the District Office. A plan of operations is required prior to commencing operations which exceed the disturbance level of five acres. No special form is required for the filing of a notice or plan of operations. If the exploration area encompasses land not previously covered by an approved plan, the authorized officer shall make an environmental assessment or a supplement thereto to identify the impacts of the proposed

operations on the lands and to determine whether an environmental impact statement is required.

Information and data submitted and specifically identified by the operator as containing trade secrets or confidential or privileged commercial or financial information shall not be available for public examination.

All operations, including casual use and operations under either notice or a plan of operations, shall be conducted to prevent unnecessary or undue degradation of the federal lands and shall comply with all pertinent federal and state laws. No bond is required for operations that constitute casual use. Effective March 31, 1997, bonding is a prerequisite to activities on an unpatented mining claim under BLM notice or plan of operations. Minimum bonding amounts are \$1,000 per acre (or portion thereof) for notice-level activities, and \$2,000 per acre for plan-level activities.

In addition to giving notice and/or filing a plan of operation, the extent of the planned exploration program must be reviewed as to authorized occupancy and use for mining related purposes **before** exploration activities commence (43 CFR 3715.0-5, 3715.2). "Occupancy is defined as full or part time residence on the public lands including temporary or permanent structures for use of a watchman or caretaker. Residence or structures may include barriers to access, fences, motor homes, trailers, cabins, houses, buildings and storage of equipment or supplies.

◆ **Specific Requirements**

1. File a notice (if the cumulative surface disturbance is five acres or less).

Information required:

- a. Name and mailing address of the mining claimant and operator, if other than the claimant;
- b. When applicable, the name of the mining claim(s), and serial number(s) assigned to the mining claim(s) on which disturbance will likely take place as a result of the operations;
- c. A statement describing the activities proposed and their location in sufficient detail to locate the activities on the ground;
- d. The approximate date when operations will start;
- e. A description and location of access routes to be constructed and the type of equipment to be used in their construction; and
- f. A statement that reclamation of all areas disturbed will be completed to required standards, and that reasonable measures will be taken to prevent unnecessary or undue degradation of the federal lands during operations.

- g. Certification of financial guarantee that covers 100% of the estimated costs of reclamation with the minimum acceptable amount being \$1,000 for each acre or fraction thereof disturbed.

Note: This bonding requirement is effective March 31, 1997. For existing notices on file with BLM that cover active ongoing operations predating the effective date of the rule (including operations suspended due to weather), no certification is required until a new notice is filed. For existing notices on file with BLM but with no prior activity, certification is required before initiating operations.

- 2. A notice shall be filed at least 15 calendar days before commencing operations.
- 3. File a plan of operations (if the cumulative surface disturbance exceeds five acres).

Information required:

- a. The name and mailing address of the operator (and claimant if not the operator);
 - b. A map, preferably a topographic map, or sketch showing existing and/or proposed routes of access, aircraft landing areas, or other means of access, and size of each area where surface disturbance will occur;
 - c. When applicable, the name of the mining claim(s) and mining claim serial number(s) assigned to the mining claim(s);
 - d. Information sufficient to describe or identify the type of operations proposed, how they will be conducted;
 - e. Period in which the proposed activity will take place;
 - f. Measures to be taken to prevent unnecessary or undue degradation and measures to reclaim disturbed areas resulting from the proposed operations; and
 - g. Measures to be taken during extended periods of non-operation to maintain the area in a safe and clean manner and to reclaim the land to avoid erosion and other adverse impacts.
 - h. A financial guarantee in a minimum amount of \$2,000 per acre to cover 100% of the estimated cost of reclamation. A certified engineer in the affected state must verify the estimated reclamation costs, and costs must assume reclamation by a third-party contractor using equipment from off-site. Mortgages on mining property and first liens on equipment are not acceptable financial instruments. There is a provision for phased release of bond as reclamation phases are successfully completed.
- 4. A proposed plan of operations shall be submitted to the authorized officer in the District Office, who shall promptly acknowledge receipt. The authorized officer shall, within 30 days of receipt, analyze the proposal in the context of the requirement to prevent unnecessary and undue degradation. The authorized officer shall notify the operator that the plan is approved; or that changes are necessary before plan approval;

or that additional time is required (not to exceed 60 days); or that the plan cannot be approved until 30 days after a final environmental impact statement has been prepared.

5. A plan of operations cannot be approved until section 106 of the National Historic Preservation Act (cultural survey) and section 7 of the Endangered Species Act have been complied with. The Bureau of Land Management shall undertake the cultural resource inventory within the time allowed by the regulations for approval of the plan of operations. The operator is not required to do the inventory but may hire an archaeologist approved by the Bureau of Land Management in order to complete the inventory more expeditiously.
6. File a notice of use and occupancy (if temporary occupancy is more than 14 days in a 90-day period within a 25-mile radius of the initial occupied site). Occupancy is not to begin until the BLM has completed its review. The BLM concurrence to the occupancy must be received in writing before the activity is to begin.

Information required:

- a. The location of the occupancy by quarter section, township, range, meridian, county, and state, including a detailed map which identifies the site and placement of temporary or permanent structures, location of enclosures, fences, gates and signs intended to exclude the general public, and location of reasonable public passage or access routes through or around the area to adjacent public lands;
- b. Description of the proposed occupancy that includes how the proposed occupancy is reasonably incident to the exploration activity, how the proposed occupancy meets the conditions specified in sections 3715.2, 3715.2-1 and 3715.5 of 43 CFR, and a description of the structures, enclosures, fences, gates and signs identified on the map;
- c. Identify the notice or plan of operation number, date filed and date approved;
- d. Identify if fee simple title is claimed to the lands on which the occupancy is located;
- e. Name, address and telephone number of the individual or company filing the notice.

◆ **Reclamation Standards**

The Bureau of Land Management shall make an environmental assessment to identify the impacts of the proposed operations on the lands and to determine whether an environmental impact statement is required. The environmental assessment shall be used to determine the adequacy of mitigating measures and reclamation procedures included in the plan of operations.