

EPA'S HARDROCK MINING FRAMEWORK
SUMMARY OF COMMENTS ON THE APRIL 1996 DRAFT
AND EPA'S RESPONSES

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U.S. Environmental Protection Agency
Hardrock Mining Workgroup



INTRODUCTION

As stated in the framework, the purpose of this document is to help EPA implement a multi-media, multi-statute approach to dealing with the environmental concerns posed by hardrock mining. Although the framework focuses on understanding and improving the use of existing EPA authorities, it does so with a clear recognition of the roles of other parties. Building effective working relationships with other mining stakeholders is a key element of EPA's efforts to improve the effectiveness of its own programs. EPA greatly appreciates the time and consideration given by all of those who participated in the development.

Following the preparation of the draft final Hardrock Mining Framework in April of 1996, EPA distributed it widely among stakeholders, including Federal agencies, States, industry, and public interest groups. Several of the stakeholders then distributed it to other parties. EPA held a number of informal meetings with various stakeholders and stakeholder groups, and received thirteen sets of written comments, some quite extensive. EPA carefully reviewed all of the comments and made extensive revisions to the framework.

Commenters are identified in the table below, and the comments themselves are summarized in the remainder of this document. Comments are summarized or paraphrased, and the commenter or commenters are identified parenthetically. EPA's response, including an indication whether changes were made to the framework, is then provided in bold-face type.

Comments and responses are presented in subsections below as follows: purpose and need for the framework, recommendations, and Appendices A through F. As described in the Executive Summary of this framework, EPA has substantially reorganized the materials that were presented the April 1996 draft final framework in order to enhance the framework's usefulness to EPA and other readers. Most of the descriptive information in the body of the draft final framework document has now been incorporated into the various appendices (for example, sections describing the industry and its operations have been incorporated into Appendix A, *Mining Industry Profile*, while section describing EPA's regulatory authorities and other tools have been incorporated into Appendix C, *Regulatory and Non-regulatory Tools Available to EPA*). As a result, comments on material that was in the body of the framework document and now is in one or another of the appendices are summarized in the subsections on the respective appendices.

EPA greatly appreciates the concern and effort that went into the review of the draft final framework and the preparation of such thoughtful comments. The Agency looks forward to working with all stakeholders as we improve the way we do business.

Commenters on the April 1996 Draft Hardrock Mining Framework	
Commenter	Description of Comment Document
1	BHP Copper , comments on EPA's April 1996 National Mining Framework, letter from Norm Greenwald, Norm Greenwald Associates to James Taft, USEPA, July 23, 1996.
2	Brush Wellman Inc. , comments on Hardrock Mining Framework, letter from Donald J. McMillan to Michael B. Cook, USEPA, June 27, 1996.
3	Coeur d'Alene Mines Corporation , comments on EPA's Draft Hardrock Mining Framework, letter from Luke J. Russell to James Taft, USEPA, July 8, 1996.
4	Idaho Geological Survey , comments on the April, 1996 draft of the Hardrock Mining Framework and Appendices, letter Dr. Virginia S. Gillerman, Economic Geologist to Michael B. Cook, USEPA.
5	National Mining Association Comments on EPA's April 1996 Draft Final Hardrock Mining Framework and Appendices , submitted with cover letter from Richard L. Lawson, President, NMA (July 17, 1996).
6	Newmont Gold Company , comments on EPA's April 1996 Draft Final Hardrock Mining Framework, letter from Michael S. Giannotto, Shea & Gardner (July 2, 1996) with attachment from Mary Beth Donnelly, Vice President Government Relations, Newmont Gold Company (July 2, 1996)
7	Oregon Independent Miners , comments on Draft Hardrock Mining Framework and Appendix, letter from Sue Hallett, Executive Director OIM to Michael B. Cook, USEPA, May 20, 1996 (fax transmittal dated 5/21/96).
8	Precious Metal Producers , comments on the April 1996 Draft Final Hardrock Mining Framework, letter (with attachment) from Steven G. Barringer for Singer and Brown Law Offices on behalf of the Precious Metal Producers, July 12, 1996.
9	US Department of the Interior Bureau of Land Management , Review of the EPA Draft Mining Framework, letter from W. Hord Tipton (with attachment), June 8, 1996.
10	US Department of the Interior Office of Environmental Policy and Compliance , comments on April 1996 Hardrock Mining Framework and appendices, letter from Willie R. Taylor, Director, Office of Environmental Policy and Compliance, DOI (6/19/96).
11	US Department of the Interior Office of Surface Mining (OSM) , Review of the EPA's Hardrock Mining Framework, letter from Robert J. Uram, Director, Office of Surface Mining Reclamation and Enforcement, June 24, 1996, 19 pages and fax transmittal to Mr. Jim Taft from Vijai N. Rai, July 1, 1996, 13 pages.
12	Colorado Mining Association (CMA) , comments on the revised Hardrock Mining Framework, letter from Stuart A. Sanderson, President to Michael Cook (7/26/96)
13	Western Mining Action Project (WMAP) , comments on Draft Final Hardrock Mining Framework, letter from Roger Flynn, Executive Director, to Nick Ceto, EPA Region 10 (10/3/96)

**Comments and Responses to Comments
on the Purpose and Need for a Hardrock Mining Framework**

A number of commenters questioned the need for a new national strategy (3, 5, 6, 8, 12). Others welcomed the effort (9, 10, 13). **EPA has described the purpose of and need for the framework in the Executive Summary. As stated there, EPA developed the framework to help it implement a multi-media multi-statute approach to dealing with the environmental concerns posed by hardrock mining. There are three major goals of the framework: to protect human health and the environment through appropriate and timely pollution prevention, control, and remediation; to foster efficient use of resources and authorities on the highest priority concerns; and to promote fiscal responsibility in managing environmental concerns at mine sites.**

Several commenters were concerned that the mining industry was being singled out for special attention. **As noted throughout the framework, EPA intends to improve the way in which it addresses mining. EPA has not “singled out” mining, but notes that many other industries have been the recipient of various types of attention (for example, the “sector notebooks” on various industries prepared by the Office of Enforcement and Compliance Assurance or the industries selected for the Common Sense Initiative).**

Two commenters objected to what they saw as increased oversight and review by EPA of hardrock mining permits and approvals issued by the States and federal land management agencies. They feared that this could lead to longer delays and more paperwork in securing permits and approvals, more agency decision making in Washington, D.C. rather than locally where site conditions are better known, more "national" performance standards emanating from EPA rather than site-specific requirements, and a greater chance that operators will be subject to duplicative, and inconsistent, regulatory obligations (5, 6). Some suspected the framework is a ruse intended to expand EPA's role (5, 12) One objected to the “top down command-and-control” approach they perceived in the framework (5), and another stated that the site-specific approach needed for mining regulation is not within the scope of a national framework (3) but supports the view that regulation is better left to states (5). **EPA has clearly described the reasons this framework is necessary. Rather than leading to “increased oversight and review” or more “command-and-control,” EPA intends that its current oversight and review authorities be implemented more effectively and efficiently. Also, the framework emphasizes the need to make site-specific decisions wherever possible.**

One commenter was suspicious of the framework's emphasis on interagency coordination, believing the “thinly veiled” purpose was to change the 1872 Mining Law (12). Another stated the belief that EPA neither understood nor appreciated the roles of federal land managers or of state and local authorities (5). Other commenters commended the framework's observation that Federal agencies with responsibilities for mining need close and consistent coordination (9, 10, 13) One of these suggested that State NPDES permitting be better integrated with EPA (13). **EPA recognizes that many other Federal, State, and local agencies have separate responsibilities related to mining and its environmental impacts. EPA in no way intends to redefine the roles of these and other stakeholders, or to set their agendas. In developing the recommendations in this framework, the workgroup focused primarily on how to fulfill its own responsibilities more effectively, with full recognition that EPA must work in partnership with others. The Agency now welcomes the opportunity to work with stakeholders as we move ahead to implement the framework's principles and recommendations.**

One commenter suggested that, since one of the goals of the framework is to increase coordination and reduce duplicative regulations, EPA should involve States, local authorities, and industry in developing the framework (5). **EPA has provided drafts of the framework to, and has met with, representatives of the industry, public interest groups, States, and other Federal agencies. EPA is very appreciative of all comments and emphasizes that all comments were carefully considered.**

Two commenters agreed that there are numerous instances of conflicting and overlapping authority, but noted that all agencies must recognize that there are a number of instances where the existing legislation and legal precedent preclude the total merging of authority, requirements and objectives. The commenter stated that these instances create areas of conflict that can not be fully resolved except by new legislation, and that EPA should acknowledge this fact in the Framework and structure the discussion around (a) how the various agencies can work to avoid unnecessary conflict, (b) how to achieve goals of mutual interest within the existing constraints, and © how to accommodate those areas where conflicting authorities cannot be resolved. (9,10) **EPA does not disagree with the commenter, but notes that the framework is intended to improve the way that EPA does business, primarily internally but also including coordinating with other agencies. Although it is overly ambitious for the framework to attempt to resolve these issues, one purpose of the framework is to establish mechanisms by which they could be addressed. EPA appreciates the efforts of the Western Governors' Association and the Department of the Interior in the formation of the Interagency Watershed Cleanup Work Group and the Western Mine Restoration Partnership. EPA supports these efforts and is willing to be an active participant.**

Several commenters recommended that, instead of developing a new strategy, EPA focus its efforts on evaluating whether there are in fact any significant gaps in existing regulation at the State and federal land management agency level, and then seeking to address only those gaps. (6) **EPA emphasizes that identifying “gaps” was one of the purposes of the framework. The framework emphasizes the need to improve the way EPA does business rather than adding new programs and authorities.**

One commenter stated a belief that the framework clearly foreshadowed a significant increase in EPA authority, “despite its repeated claims that EPA seeks no new legislative or regulatory authority.” As examples, the commenter pointed to “the enhanced agency role in NEPA,” the “revisiting of the Beville Amendment regulatory determinations,” providing “vision for improved legislation”, and the framework’s recommendation of an evaluation of how existing statutes and programs “impede the accomplishment of the goals of federally administered environmental statutes.” (5) **EPA notes that the initiatives identified by the commenter have not been undertaken under the auspices of this framework. Rather, they are described to ensure that all Agency efforts are more widely known and adequately coordinated. EPA does not mean that refinements of its authorities or programs are not appropriate, but rather that wholesale changes to its authorities are not believed necessary.**

Commenters asked that EPA define the role that States would play as “partners” (3,8). **EPA does not believe it proper to define States’ roles except for those programs where EPA has clearly defined requirements to do so (as with the NPDES program, for example). The framework is intended to define and improve the way that EPA does business.**

One commenter encouraged EPA to continue to provide sufficient consideration to voluntary, consensus-driven, non-regulatory approaches to environmental cleanups of areas affected by hardrock mining. They were concerned that the Framework might have shown an unnecessary preference for regulatory, adversarial approaches. They were concerned that the framework might negatively affect such voluntary approaches to abandoned mine cleanups as the Department of the Interior’s activities in the Upper Animas Basin in Colorado (10). **Wherever possible, EPA favors nonregulatory approaches to addressing past**

and present environmental issues associated with hardrock mining. EPA in no way intends the framework to impede such initiatives wherever they are making progress toward environmental cleanup.

One commenter was concerned about the extensive use of “bureaucratic and planning jargon” in the framework. The commenter also asked for clarification of other terms (“place-based”, for example). (8) **The new structure of the framework should resolve the jargon issue: much of the relatively complex regulatory discussions now appears only in the appendices. EPA also has added explanatory language for many terms that may be unfamiliar to readers. Specifically, “place-based” means designing environmental protection processes which consider, and are appropriate for, the geographic places and the people who live in them rather than program-based efforts solely on a national scale.**

One commenter noted that the Framework did not discuss and analyze the emergence of environmental management systems (EMS) and ISO 14000 (9, 10). **EPA endorses the concept of EMS and ISO 14000, and welcomes the shift toward economic and environmental compatibility.**

The Office of Surface Mining Reclamation and Enforcement pointed out its considerable expertise and experience in abandoned mine lands and questioned its exclusion from the framework (11). **EPA did not mean to “exclude” OSM from the framework and has corrected the oversight by which OSM was not mentioned. EPA welcomes the opportunity to cooperate with OSM in addressing abandoned mine lands.**

Two commenters suggested that the recommendations include the discussion of their justification. The recommendations in the draft final framework were said to stand on their own without any supporting context or justification from the needs or issues. They believed that readers, even those who focus only on the recommendations, should be convinced of the need for the recommendations (9, 10). **While sympathetic to these concerns, EPA also does not want readers to be faced with pages and pages of data and justification, but rather to have a succinct document that presents EPA’s intended course of action. EPA believes the framework’s new structure, with most descriptive information placed in appendices, accomplishes much of the commenters’ concerns.**

Two commenters recommended that recommendations be numbered (9,10). **The recommendations have been reorganized and numbered.**

Many commenters made editorial and organizational suggestions and corrections. **EPA is appreciative of commenters’ efforts and has responded wherever possible.**

Two commenters recommended that the previous section 1.2 (Why Develop an EPA National Mining Framework Now) include a reference to acid drainage, the “most significant environmental impact from abandoned mines” and, “for modern mines, (acid drainage) ... is probably the most intractable environmental problem.” (9, 10). **EPA agrees with the commenters’ characterization of acid drainage as a significant environmental problem; however, it is not the only problem that needs to be addressed, as described in Appendix B.**

One commenter asked whether EPA meant to suggest, in the section on “Roles and Responsibilities” in the draft framework, that Federal agencies should be regulated differently or subjected to different standards than private parties? (8) **On the contrary, the paragraph was intended to ensure that EPA remained cognizant of potential precedent-setting as it applied standards to Federal agencies.**

One commenter asked whether EPA intended to review active mine plans to evaluate compliance with environmental standards which it promulgated and which it enforces, or does it intend to monitor and evaluate the environmental standards for which state and other Federal agencies have responsibility. (8) **EPA is concerned with the standards for which it is responsible and, in its review capacity under NEPA, with standards that are described as being applicable. The framework does not advocate expansion of EPA's statutory obligations.**

A commenter asked how (as stated under Regulated Community in section 2.3 of the April 1996 draft) "mine siting issues" and "alternatives in mine design" would reduce regulatory burdens (8). Another commenter suggested that these issues were better addressed by State and other Federal agencies, not EPA. This commenter also suggested that mine siting is limited in terms of locations (3). **Not considering and accounting for some potential environmental issues (for example, acid generation potential) at the time mine facilities are sited and designed can lead to more costly problems and more intrusive regulation. By properly accounting for future performance early in the planning process, future regulatory burdens can be avoided, and that was the purpose of the statement at issue. Finally, EPA is aware that mines have to be located where ore occurs. However, there is some control over the location of specific mine facilities, and this was the intent of the statement.**

COMMENTS AND RESPONSES TO COMMENTS ON RECOMMENDATIONS

One commenter recommended that Natural Resource Trustees be among those with who EPA will coordinate and that there be a mechanism to achieve this. (10) **EPA appreciates the comment and will coordinate with natural resource trustees whenever appropriate.**

Two commenters emphasized that EPA's NEPA review of mining projects should not be either its principal, or initial, input to the NEPA process. The commenter's concern was that delaying meaningful involvement (until the review of a draft EIS) increases prospects for project delays, increases Federal and industry costs, and diminishes prospects for effective collaboration with sister agencies. The commenters suggested more frequent and routine cooperating agency status. (9,10) **EPA agrees that delayed involvement can reduce effectiveness and increase costs. EPA also believes that its review role can often better be achieved by active coordination with responsible agencies much earlier in the process. Accordingly, Implementation Action #9 in section 4.1 of the final framework states EPA's intent to be actively involved in all major EISs for mining projects, participating as cooperating agency where appropriate.**

One commenter recommended that EPA use its knowledge of water treatment methods and water protection requirements in its NEPA 309 reviews. The commenter noted that feasible alternatives have to be considered in EISs and suggested that EPA expertise (for example, with liners) be used in decisions regarding alternatives. (13) **EPA currently does review water treatment and protection issues and intends to continue to do so. EPA notes that it frequently suggests additional alternatives in its comments on EISs. The framework's recommendations (for example, #1 and #3) reflect this consideration.**

One commenter made a number of specific suggestions regarding EPA's review of mining-related EISs (for example, the use of specific guidelines for predicting acid drainage). (13) **EPA believes that this level of detail goes beyond the purpose of this framework but notes that Recommendation #1 encourages further development of predictive tools. In its review of EISs, EPA often examines the extent to which the analyses support conclusions regarding acid generation.**

One commenter was concerned that the framework's discussion of EPA's NEPA role appeared to encourage EPA to duplicate existing regulatory functions of other agencies, particularly federal land management agencies responsible for implementing the NEPA process for new mines, and state bonding authorities. (4) **EPA's goal is not to duplicate other agencies functions but to improve the way it does business, including its function of substantive review of environmental impact statements.**

A number of commenters were concerned with the proposal that EPA, in its review function under section 309 of the Clean Air Act, will review financial assurance and closure standards for hardrock mines (1,3,4,5). This was said to be beyond EPA's "advisory role" in implementing that statute (3) and/or to unnecessarily duplicate state and Federal bonding authorities (2,4,5). Another commenter thought that EPA should take a more active role in the NEPA process, particularly regarding bonding and financial assurance. (13) Two other commenters noted that bonding is a separate process with its own set of requirements and constraints that are independent of the NEPA process. For that reason, they questioned the recommendation that EPA evaluate the role of NEPA in developing information on bonding adequacy. They suggested that EPA might evaluate NEPA documents to evaluate how impact and other information may have assisted decisionmaking on bonding levels or to "assess the potential for developing environmental consequence components germane to bonding determinations." They expressed a belief that

cost and financial data that directly supports bonding decisions may not be appropriate for NEPA documents. (9,10) **As described in recommendations 11 in section 3.2 of the final framework, EPA believes it is important to evaluate the adequacy of EISs in predicting long-term environmental impacts of mining operations in the review of EISs under section 309 of the Clean Air Act. EPA also believes that financial assurance mechanisms should be assessed to ensure funding is available for required long-term environmental controls. This review is in no way duplicative of other agencies' authorities.**

One commenter expressed a concern that EPA's proposed increased review of bonding and financial assurance issues might extend to the scope, coverage, amount and even specific reclamation measures, and stated a belief that EPA has no legitimate basis for such a role in State decision making. (1) **EPA has no intention to prescribe, or proscribe, reclamation measures. EPA notes, however, that since the "scope, coverage, amount," and specific reclamation measures affect the long-term environmental performance of mines, EPA reviews those measures to assess that performance.**

One commenter thought that EPA would use the MOA process to incorporate in permits issued by states and federal land management agencies national standards and criteria that EPA believes are most appropriate. The commenter noted that the purpose of IAs and MOAs is for EPA to coordinate actions with other federal or state agencies, where both EPA and the other agency possess concurrent jurisdiction over the same matter, and that EPA could not use MOAs as vehicles to gain jurisdiction to establish general siting, design, operating, reclamation, or bonding standards or criteria for mines, since the Congress has entrusted jurisdiction over such matters to others. (6) **As stated in the framework, EPA is not seeking to expand its jurisdiction, merely to improve the way in goes about accomplishing its duly delegated authorities. To accomplish this, EPA believes that it needs to work closely with its Federal partners to eliminate duplication and inconsistencies in approaches to many issues.**

Two commenters indicated that it may not often be possible (or appropriate) to use NEPA as a basis for integrating the decisions of several agencies, nor to rely on EISs as documents upon which all permitting is based. They note that NEPA is intended as a full disclosure document of the decisionmaking process, though information from it may be used for regulatory and other purposes. Further, they note that integration of NEPA with permitting procedures may not be feasible because of confidentiality and other statutory, regulatory, and informational constraints. (9,10) **EPA believes that NEPA can better be used to integrate intra- and inter-Agency decisionmaking. Assessments of potential environmental effects of proposed actions and analyses of feasible alternatives, as required under NEPA, are crucial to informed decisionmaking and effective permitting or approvals. When multiple agencies are involved, as cooperating agencies or otherwise, EPA believes these agencies should coordinate analyses and decisionmaking in order to minimize inconsistencies and conflicts.**

One commenter noted that EPA's NEPA involvement on public lands is through the Federal land management agencies that are tasked with administering public lands and that, in contrast, state agencies deal primarily with private lands where the interests of the government must be balanced with those of private land owners. The commenter concluded that, in such cases, EPA has no basis in law or regulation to involve itself with State decisions regarding post-mining land use and the degree of productivity established on private lands, since the issues are solely within the purview of the owner of private lands, pursuant to state and/or local land use requirements. (1) **EPA notes the comment.**

One commenter noted a reference in the draft final framework to a preliminary review of bonding/financial assurance conducted by EPA's Office of Solid Waste and asked if it was available for review. (8) **The participating agencies in the Interagency Agreement on Mining have held several discussions on**

whether the group should create a subcommittee to evaluate how each agency implements its financial assurance regulations. It was decided not to proceed in this area until the Bureau of Land Management had completed its bonding rulemaking. It was agreed that each Agency would collect its regulations and guidance on bonding and share it with each member. No preliminary review of bonding was undertaken under this Agreement. It is unclear whether the participating agencies will again discuss this issue in the future.

One commenter commended the idea of a nationally consistent format for scoping letters associated with new mine proposals and mine expansions. They thought that this may offer a significant opportunity to assure better use of NEPA in the federal decisionmaking process, provided the idea extends to standardization regarding proponents' up-front data requirements sufficient to initiate and support scoping. Too frequently, according to the commenter, the NEPA process has been initiated with insufficient proponent information and data to meet environmental analysis and documentation requirements of the involved federal agencies. (10) **EPA appreciates the comment and agrees with the observations.**

In response to recommendations regarding bonding, two commenters noted that most agencies, whether state or federal, do not have the authority to require "contingency" bonds, and that most agencies require bonds for the monies necessary to perform the reclamation plan as identified in the plan of operations. The commenters asked if EPA has staff who are technically qualified to review bond calculations. (9) **EPA recognizes that most agencies have authority to require reclamation bonds and that they are not explicitly "contingency" bonds within the meaning of the comment. EPA believes that in some or most cases, available authority is sufficiently broad to allow "full-cost" or "contingency" bonding, again within the meaning of the comment. EPA does indeed have staff who are experienced in estimating the costs of remediating sites.**

One commenter recommended that the Office of Surface Mining Reclamation and Enforcement (OSM) be a party to any agreements related to reclamation of abandoned mines. (11) **EPA recognizes OSM's expertise and appreciates the interest. EPA will consider including OSM into any appropriate agreement.**

One commenter agreed with EPA regarding the advantages of having a workgroup to discuss CERCLA issues related to state and tribal lands and to mixed ownership. They noted that there is considerable confusion in this area, just as there is regarding situations where a viable operator still exists for operations on federal lands. Further, they noted that the issues are extremely complex and difficult to address, and was the reason why inactive mining and CERCLA *per se* were excluded by consensus of all agencies from the current interagency agreement on mining. (10) **EPA acknowledges and appreciates the comment.**

Two commenters noted that two recommendations dealt with, respectively, having a "consistent Federal position" on a range of issues and "standard methods" for characterizing and analyzing mine sites. They suggested that "the regulatory emphasis should rather be on good science" since, as noted in the framework, "the most significant environmental threats posed by mine sites are often complex and highly dependent on site-specific factors". (9, 10) **EPA does not believe that consistency and good science are mutually exclusive. EPA emphasizes that it is recommending more or less uniform approaches and methods, not uniform solutions.**

One commenter noted a reference in the draft final framework to an EPA work plan for implementing the mining interagency agreement and asked if it was available for review. (8) **The Agency signed an Interagency Agreement on Mining with the Bureau of Land Management, the U.S. Forest Service and the National Park Service in 1995. The Agreement called for the development of a biennial**

operating plan. At subsequent meetings with the participating agencies it was decided that it was unnecessary to develop such a plan.

One commenter asked for clarification of the relationship between the interagency agreement and the hardrock mining framework. (8) **The framework is intended to help EPA improve the way in which it uses its regulatory and nonregulatory tools applicable to mining and to enhance the effectiveness of Agency coordination and cooperation with other agencies. The interagency agreement is intended “to establish policies, administrative procedures, and practices for the coordination of actions ... that achieve objectives, interests, and statutory requirements common to all parties.... Coordination among the agencies will advance environmental and resource management goals and enhance working relationships. The relationships established and actions taken as a result of this agreement will strengthen coordination, improve environmental compliance, minimize duplication of activities, conserve scarce resources, and provide for greater efficiencies. This agreement establishes a multi-media framework within which more specific program or operational agreements may be developed to address specific objectives, issues, and activities among the parties as may be necessary.”** (Language taken from section I of the interagency agreement.)

One commenter stated that the purpose of the interagency agreement is to address potential sources of conflict, often resulting from the statutory authority and intent of Congress, and to resolve or mitigate them to the extent practicable. (10) **EPA agrees that this is one of the important goals of the agreement, but notes the language from the agreement that is given in response to the previous comment.**

One commenter was concerned that EPA was blurring the jurisdictional limits of existing laws governing federal versus non-federal lands. As an example, the commenter noted that the framework discussed a work plan developed by EPA in conjunction with other federal agencies to develop a "consensual position" on such issues as siting criteria, environmental performance standards, operating criteria, reclamation/closure performance standards and approaches for financial assurance mechanisms and noted that many of those issues are not currently within EPA's jurisdiction. (5) Another commenter simply expressed a concern about the development of such a "consensual position." (1) **The work plan referred to by the commenter is in internal EPA work plan and was not developed “in conjunction with other federal agencies.” As noted in the framework, the work plan is intended to provide for a process by which the agencies can “develop positions....” EPA acknowledges that while all of the issues are not directly within EPA’s jurisdiction, each of them influences the extent to which operations can comply with standards and with permits/programs that are within the Agency’s jurisdiction.**

One commenter stated that the proposed development of an area-wide and site-level ranking method which would have the effect of injecting EPA into currently non-EPA jurisdictional areas and would infringe on historically state issues. (5) **EPA is not clear what the commenter’s concern is, since the framework clear emphasizes working toward a consensus of parties, not a unilateral method imposed on others. Similarly, EPA is not clear how this could be considered a “non-EPA jurisdictional area” and an “historically state issue.”**

One commenter thought the proposed interagency review of existing statutory programs might lead to a tremendous amount of regulatory duplication and overlapping jurisdiction, and that for EPA to review every BLM and USFS bonding decision would be unwarranted. (7) Another saw a thinly veiled reference to how the Mining Law of 1872 might "impede" environmental "goals", and thus require modification. This commenter objected that there was no recognition of the legitimacy of any goals other than those of "federally administered environmental statutes." (5) **As stated in the framework, evaluation would form the basis for discussion among EPA and other agencies regarding improvements in interagency**

coordination to help minimize any impediments that might exist to accomplishing the goals of the nation's environmental statutes. Also, EPA does not propose to review every bonding decision, only to review NEPA documents to assess bonding and financial assurance. Finally, EPA's acknowledges that there are legitimate goals other than those within its jurisdiction but emphasizes that the Agency can only fulfill its own mandate, not those of other agencies and entities.

One commenter requested that EPA clarify what it means by developing siting and operating criteria. (8) **As noted above, EPA is not seeking consistency in results (i.e., that mines be located only in one or another kind of location or that they operate the same way) but rather in processes or methods (for example, in the way that EPA evaluates the effects of mine location on environmental performance)**

One commenter objected to the notion that EPA might impose its own "siting criteria." (1) **EPA emphasizes that it does not intend to impose any such criteria.**

One commenter questioned whether EPA's proposed agreements with Federal land management agencies regarding environmental performance standards will result in modifications to these agencies' existing MOUs with various states. The commenter noted that the MOUs typically allow the federal land manager to defer to State rules and permits for imposition of environmental performance standards. The commenter was concerned that a different set of environmental performance standards on public lands than those applicable to all other land within a given State would be confusing and inappropriate, and would seriously undermine the credibility of a state's environmental program. (1) **EPA has no intention of upsetting any pre-existing agreement or, even absent such agreements, of applying different standards to lands under different jurisdictions. EPA merely wishes to ensure that environmental performance standards meet statutory and regulatory requirements and are sufficiently protective of human health and the environment.**

One commenter was concerned with the notion of a consistent set of "operating criteria." The commenter stated that land management agencies (pursuant to a "consensual position" developed with EPA) should "refrain from imposing a federally mandated design or other such operating criteria." (1) **EPA has no intention of imposing specific design or operating criteria, but does believe that there should be some consistent procedures to evaluate designs and operations.**

One commenter suggested that any recommendation that EPA work with regulatory partners and members of the regulated on priority-setting should recognize work already underway by USGS for Colorado and Montana. The commenter noted that USGS has produced two maps that assess the geographic-environmental risks of the State's geology and historic mining districts. (10) **EPA is aware of this work and commends the impressive interagency coordination and cooperation that led to the effort.**

One commenter asked about EPA's authority to undertake a "major new ranking of mines for regulatory action" and asked about the basis of the ranking system. (8) **The commenter needs to recognize that EPA's interest in prioritization and remediation is not necessarily tied to "authorities," and neither does there have to be any "regulatory action" involved. The basis of the ranking system would be as discussed in the framework and as developed by the individuals and organizations responsible.**

One commenter supported the recommendation that, as part of or even separate from the priority setting process, interested agencies and members of industry attempt to develop a realistic hazard ranking system that can fairly gauge whether a particular mine site poses a significant health or environmental danger, and therefore needs to be addressed. The commenter expressed the view that the current CERCLA hazard ranking system (HRS) overstates the risks from mining facilities as compared to, for example, chemical

manufacturing facilities. (6) **While EPA does not entirely agree with the commenters' view regarding the HRS, the Agency emphasizes that it has used the HRS very flexibly in assessing mining sites. EPA welcomes constructive suggestions for, and participation in, efforts to rank or prioritize sites.**

One commenter was concerned that, since mining is so site-specific, designation of EPA regional coordinators would simply add more administrative personnel "to the top of the program," with consequent negative effects on "on the ground" surveillance. The commenter noted that BLM and the Forest Service could do a "more than adequate job" given adequate money in their mineral programs. (7) **EPA's purpose in this recommendation is not to add administrative layers, but rather to coordinate efforts within EPA Regions. This should enhance "on-the-ground" efforts. EPA does not question the ability of BLM and the Forest Service to do a "more than adequate job."**

One commenter expressed a wish for "sufficient funding and administration of the [programs] we have", not additional programs and regional coordinators. (7) **EPA agrees that there should be sufficient funding and administration of programs, and emphasizes that the framework is not calling for new programs, only more efficient and cost-effective efforts under existing ones.**

One commenter supported the idea of identifying a network of technical experts within EPA, stating that it would be beneficial to Federal and State agencies, and the general public. The commenter noted that making such information available on-line via the World Wide Web would facilitate communication among technical experts, and would assist those seeking technical information. (10) **EPA appreciates this comment. Region VIII has put together such a list of experts, and this is available from the Region. Other Regions may do the same.**

One commenter suggested that, instead of providing "training on identifying and preventing the disposal of non-Bevill waste at mine sites," EPA should not "prevent disposal of non-Bevill waste at mine sites," since non-Bevill wastes are not necessarily hazardous wastes. (2) **EPA agrees that not all non-Bevill wastes are hazardous wastes, and notes that the framework's recommendation has been changed. In the final framework, Implementation Action #10 is that EPA should request comments on "standards of practice for mine waste management in the next RCRA Land Disposal Restrictions rulemaking..."**

One commenter stated that the EPA's distinction between Bevill and non-Bevill wastes has been inconsistent and inconclusive. The commenter noted that this topic is the subject of a proposed rulemaking, the Phase IV Land Disposal Restrictions for Mineral Processing Wastes, wherein EPA has suggested a system for determining whether or not certain mining wastes are covered by the Bevill Amendment. The commenter recommended that EPA mention this rulemaking and not begin any training or enforcement efforts until it finalizes the Phase IV rule. (8) **EPA disagrees that it has "done a poor job ... clarifying what is a Bevill waste." EPA has added mention of the Phase IV rulemaking, and does not anticipate any training pending promulgation of the final rule.**

Two commenters suggested that storm water and erosion management and related technical concerns should be of more concern than identifying and managing PCBs and hazardous waste at mine sites, which was one of the recommendations in the draft final framework. (9,10) **EPA agrees that erosion management is a critical issue and worthy of training but also notes that PCBs and hazardous wastes at mine sites can pose long-term problems that are not easily remedied and thus also should be addressed.**

One commenter expressed strong support of the framework's goal of encouraging the voluntary remediation of IAMs by members of the industry. The commenter thought it imperative that the Agency to

work with industry to remove the current statutory and regulatory obstacles to re-mining abandoned hardrock sites. (6) Other commenters echoed this sentiment (9, 10) **EPA appreciates the comments and expresses its willingness to work with all stakeholders to address problem sites.**

One commenter thought there should be incentives (examples included “tax breaks, lower assurance bonds, credit against the \$100/claim maintenance fee, etc.”) for re-mining for the purpose of remediation. (7) **EPA appreciates the comment.**

Two commenters suggested having land withdrawn for mine-waste repositories, that some of the Government's mine waste problems should ultimately be managed as a long-term land use. The commenters noted that mining companies probably would like to see a long-term solution of this kind where appropriate and land managers, in return, should be provided with exchange lands that will serve the general public. (9,10) **EPA notes the comment and has shared it with sister agencies..**

One commenter stated the belief that at least one type of administrative settlement agreement, purchaser agreements, was not a particularly efficient solution to the obstacles that exist since negotiating individual, site-specific, agreements would be extremely time-consuming and cumbersome. The commenter noted that such negotiation of site-specific agreements would be in addition to, and not in lieu of, the company's need to apply for and obtain State and BLM/Forest Service permits and approvals to engage in the operation and as such would be much different from the typical "prospective purchaser" scenario, where the purchaser will not be engaging in new industrial operations at a purchased site. The commenter noted that the purchaser is released only from liability for response costs (not for natural resources damages), which are a concern at abandoned mines. The commenter also noted that EPA's current prospective purchaser policy is applicable only to sites where enforcement action has already been taken, is on-going, or is anticipated by the Agency. Further, the commenter pointed out that there may be many sites amenable to re-mining, where an environmental benefit would be created by re-mining, but that do not fall within these categories. Finally, the commenter noted that it is unclear whether, under EPA's current prospective purchaser policy, an applicant is relieved of liability for new releases that are caused by existing conditions at a site. (6) **EPA notes the possible validity of many of these concerns, and reiterates the willingness to discuss strategies, as noted in the framework.**

One commenter noted that the Framework discusses the possibility of EPA reaching a compromise with the Corps of Engineers concerning differing definitions of "fill material". The commenter was concerned that EPA's idea of a "compromise" was for the Corps to agree to EPA's approach (i.e., to EPA's "effects test"). (5) **EPA notes the comment.**

One commenter was encouraged by the framework's discussion of comprehensive risk-based approach to dealing with inactive and abandoned mines on Federal and mixed ownership lands. The commenter was particularly pleased that the framework emphasized the need for flexibility. (10) **EPA appreciates the comment.**

One commenter viewed favorably EPA's stated commitment to facilitate and encourage the exchange of technical information among federal, state, and tribal agencies, and the commitment to the development of a collaborative program for research and technical support in a number of areas related to risk assessment and development of technology. (10) **EPA appreciates the comment.**

One commenter asked which regulatory issues EPA may want to "disinvest" in. (8) **EPA believes that it is premature to speculate at this time.**

One commenter noted that “EPA proposes to issue minimum design and closure standards as guidance for cyanide heap leaching;” this commenter and another asked if the Agency had identified any standards and requirements that were needed. (3, 8) Another found the suggestion of minimum standards “problematic” (1). Another stated that “EPA has no jurisdiction to regulate such matters under any of the statutes it administers” (6) **EPA emphasizes that it did not and does not propose to issue ... standards (or guidance) or regulations. Instead, the Agency merely suggested the possibility of guidance, development of which would be undertaken only if there is a perceived need.**

COMMENTS AND RESPONSES TO COMMENTS ON APPENDICES

APPENDIX A: MINING INDUSTRY PROFILE

One commenter emphasized the interaction between economic and environmental concerns. This commenter recommended that the framework include a discussion of how EPA's proposals will impact the mining industry, including indirect losses, such as the payment of taxes and the placement of durable goods and heavy machinery orders that lead to the creation of jobs in the support sector. The commenter noted that regulatory pressures have led to a "forced exodus" to other countries, which translates into lost jobs, lost tax revenues, and increased costs to the mining industry (5). **When promulgating new regulations, EPA generally has to consider the impacts on the regulated community and on the economy as a whole. As EPA emphasizes throughout, this framework does not represent any new regulatory initiative. Indeed, to the extent that current programs are better coordinated and made more consistent as a result of the framework, there should be a net economic benefit to the industry. As a final note, EPA notes that many lending institutions and many foreign countries require that multinational companies apply home-country or other "first-world" standards to their operations overseas. To the extent that mines in foreign countries actually have to meet U.S. standards, there should be no economic advantage from moving exploration and development overseas.**

Two commenters found the description of the hardrock mining industries generally factually accurate, but overly simplistic, limited in scope, and lacking conclusions. They noted that companies that produce mineral products from hardrock mines have at best limited control of price, and that international trading and production in these commodity products results in volatile commodity markets with highly variable prices over time. Therefore, an objective analysis of the industry cannot be confined to an arbitrary statistical year or industry averages, as has been done in this case. As a result, such general descriptions only serve as snapshots of the industry within a given moment of time, and strategic planning for regulation of the industry can only be based on a sound long term strategic analysis. (9,10) **EPA has added a paragraph that better explains the nature and intent of this appendix. As noted there, the appendix is not meant to be a thorough analysis, rather it is intended to be a snapshot; as such, it is necessarily simplistic.**

Two commenters emphasized that while metals and other commodities mined by the industry sectors addressed in the framework may account for less than 1 percent of the GNP, they are more important in the national economy than this number indicates. (9, 10) Another pointed out that the low percentage was due to the "highly modernized use of metals and their fabricated products" (4). **EPA agrees that the importance of the commodities of concern in the framework belies their relatively low percentage of GNP and has added a note to that effect.**

One commenter notes that several minerals are essential not only "to the operation of a modern, industrialized society," as stated in the framework, but also to the national security. Thus, the commenter pointed out that increased dependence on foreign mineral sources will have a negative impact on the United States' ability to produce military hardware, and adversely impact our national security. (5) **EPA is aware of the strategic importance of many minerals and appreciates the comment.**

One commenter stated belief that the draft framework overstated the financial health of the industry. This commenter noted that the mining industry is cyclical in nature, operates in a world economy, and could encounter a downturn at any time. (5) **EPA notes that the "industry profile" is intended to give a**

snapshot of the industry at one point in time, in this case the early 1990s. EPA is well aware of the characteristics so well described by the commenter and has noted them in the appendix.

One commenter noted that the draft framework characterized the increase in surface mining as attributable to the advent of large earth-moving equipment and less expensive energy sources. The commenter noted that in the gold mining industry, surface mining has become more prevalent because deposits typically are lower grade and in more dispersed form, thus making underground mining expensive and impractical (8). **EPA agrees, and notes that without the equipment and low-cost energy sources, even surface mining of these deposits could be expensive and impractical.**

One commenter inferred from EPA's language that heap and dump leaching are "extraction" processes, rather than "beneficiation" processes. (8) **EPA did not mean to give this impression, and has modified the language accordingly.**

Commenters noted that not all beneficiation techniques are mentioned in the framework, including beneficiation: autoclaving, roasting, chlorination, calcining, Merrill-Crowe zinc precipitation, and others. (3, 8) One commenter noted that cyanide has been used for decades (8). **EPA has added mention of some of these types of beneficiation. EPA also has noted the longevity of cyanide usage.**

One commenter described its process to remove cyanide from the mine tailings before they are deposited in the tailings pond and to recycle the cyanide back into the ore processing circuit. This process was given as "another example of how modern mining is meeting the challenge of protecting the environment." (3) **EPA applauds and encourages the use of such innovative technology.**

One commenter pointed out that language in the April 1996 draft framework might have given the impression that leaching operations were the same in the gold and copper sectors, with specific concern that readers might think that gold heap leach facilities were not always lined. (8) **EPA has rephrased this passage, which now appears in Appendix A, to make clear that gold heap leach facilities are always lined.**

One commenter noted that gold is just as essential as copper and perhaps more so in the electronics industry, especially the crucial high technology electronics industry where gold is irreplaceable for its conductivity and its resistance to corrosion. The commenter also identified other uses of gold. (8) Another commenter objected to the draft final framework's statement that gold was essential to the economy. (13) **The revised framework now notes the use of gold in the electronic industry and in dentistry.**

One commenter was concerned that framework implies that the hardrock mining industry is "wasteful" because "the vast majority" of materials handled by the industry become "waste." The commenter made the point that the material called waste occurs due to the nature of mining itself and suggested that EPA intended to mischaracterize the environmental impacts to imply that only more EPA regulation will resolve such phantom issues. (5) **EPA did not intend to give the impression that the industry is wasteful, but did want to make the point that most mined materials become wastes, and that these are generated in large quantities. EPA has added a statement that notes that waste quantities are largely beyond an operator's control.**

One commenter noted that EPA characterizes "sub-ore" as waste and stated that "sub-ore," also called subgrade ore, is not discarded and so is not a "waste." Instead, the commenter stated that these are ores with lower mineral values than ores being processed when the sub-ores are mined, and as such are stockpiled for later beneficiation, not disposal. (8 page 21) **EPA has added a clarifying sentence. It**

should be noted, however, that material classified as "sub-ore" is often managed in a way identical to that of waste; if economic conditions never improve, the sub-ore remains in place and never is beneficiated.

One commenter suggested replacement language for the description of copper dump leaching solvent extraction/electrowinning. (1) **EPA appreciates the clearer language and has made the substitution.**

One commenter indicated that the framework implied in its description of dump leaching that facilities are intentionally designed so that valuable product solutions are lost to the environment. The commenter pointed out that limits of technology and the relative economics of facility design and construction versus the anticipated efficiency of solution recovery are such that some amount of solution loss is inevitable, but that these facilities are designed for maximum solution recovery within existing technical and economic constraints. (1) **EPA did not mean to suggest that operators design facilities to leak. EPA recognizes that technology and economics dictate the design of a facility, and has added a sentence that makes the commenter's point clear.**

One commenter reported that the framework suggests that waste volumes can be reduced through better classifying ore grades and by improving mineral recovery from ore. They noted that, while technically true, any waste reduction would be quite marginal, since the total amount of the desired metal in all domestic copper ore (and most other hardrock metals including gold and silver) is well below 1\$/ton. They recommended that this should be clarified so as not to leave the impression that technological improvements in metal recovery rates can reduce the volume of waste significantly. (1) **EPA has added a sentence clarifying the limits to classification and recovery; EPA notes, however, that even very small improvements in ultimate recovery efficiency can reduce the absolute quantities of waste by large amounts, even if overall volumes remain high.**

One commenter noted that the framework identified "flotation" and "SX/EW" as the predominant beneficiation methods for copper, but neglected to include "leaching". (1) **This oversight has been corrected.**

APPENDIX B: POTENTIAL ENVIRONMENTAL IMPACTS OF HARDROCK MINING

One commenter noted that the draft framework failed to distinguish between the impacts of well-regulated current mining operations as opposed to those from abandoned mines operated before the advent of regulatory controls and the current environmental ethos. (2) **The intent of the appendix is to show the potential "Environmental Impacts" of mining activities. EPA acknowledges that modern well-designed, well-operated, and well-regulated mines should present few if any of the problems that historic, or poorly operated/ regulated, mines may present. EPA has added a clarifying paragraph in the appendix.**

One commenter thought that the framework did not adequately review many aspects of "mining pollution." Examples were mobilization of metals at cyanide heap leach facilities, wildlife impacts of "pit lakes," effects on aquatic life from dewatering). (13) **EPA acknowledges that there are details left unreported in the framework, but as noted above and below, EPA did not intend that the framework cover all topics or details related to potential impacts but instead provide an overview.**

Another commenter suggested that the separate discussions of potential environmental impacts and of regulatory programs gave the erroneous impression that the impacts are not currently addressed in any

way. (1) **The separation of the discussions was not intended to give the impression cited by the commenter.**

One commenter noted that the physical disturbance from mining led to impacts no different from those resulting from any other development activities, such as construction of a large shopping mall. The commenter noted that upon closure of a mine, the natural environment will eventually be re-established, but that the housing development or shopping mall will remain indefinitely and the natural environment that is displaced will never return in any form. (1) **EPA recognizes that many of the impacts from disturbance are similar to those of construction and other land-clearing and -disturbing activities. There are differences, of course, but many of the impacts are indeed similar. One important, but as yet not very well understood, difference that the commenter touches on is that mine proponents usually have to consider land use after mining in their planning (and have to provide at least partial financial assurance to ensure the use is achieved), but few other development activities are presently required to take such a long view.**

One commenter was concerned at EPA's expression of concern that temporary shutdowns may result in a reduction in cash flows, which could reduce funds available for environmental controls. The commenter pointed out that "most states already address this issue by detailing how facilities must be maintained during temporary shutdowns." (8) **EPA is aware that there are State requirements related to facility maintenance during temporary shutdowns. EPA's concern is that there have to be sufficient funds available even during downturns to cover environmental maintenance and long-term stabilization and closure.**

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One commenter claimed that State financial assurance requirements were underestimated as a source of closure funding. (2) **EPA is well aware of State, and Federal, bonding and financial assurance requirements. As noted elsewhere in the framework, however, in some cases these funds may be insufficient for full site closure, particularly when long-term water treatment or other maintenance is required.**

One commenter noted differences between coal and hardrock mining and suggested removing any reference to coal mining in this hardrock mining framework. (4) **EPA has examined all mentions of coal mining in the framework and retained only those that are relevant to hardrock mining.**

Several commenters objected to the framework's perceived overemphasis of the environmental problems of mining, whether from active or abandoned mines (4,5,6). They believed this undercuts the goal and believability of the framework (4,5). One commenter noted that the draft framework failed to distinguish between the impacts of well-regulated current mining operations as opposed to those from abandoned mines operated before the advent of regulatory controls and the current environmental ethos. (2) Several commenters pointed to specific discussions in the draft framework as overemphasizing potential impacts. Several commenters, for instance, objected that the framework's use of NPL sites as "examples" of various environmental impacts was misleading. They note that, in contrast, little mention is made of the effective application of environmental management techniques and reclamation practices. They were concerned that

this “skewed presentation” gives a distorted picture of the environmental impacts of mining and of modern mining practices (2, 6). One of these was concerned that “the draft final framework does not attempt to evaluate whether the identified theoretical impacts do in fact occur to a significant extent at real world hardrock mining facilities subject to modern environmental regulation, or whether there have been extensive damage incidents associated with such facilities (6). This commenter specifically commented on EPA’s “wholesale, nationwide reinvention of the regulatory framework governing the use of cyanide because of one or a few isolated and aberrational damage incidents.” (6) This commenter also noted that EPA should not be concerned with long-term gradual releases of cyanide to groundwaters, since Nevada, as well as the BLM, have in place detailed design, operating, monitoring, corrective action, closure, and reclamation requirements to ensure that such releases are minimized, and that those that do occur are discovered and promptly remediated (6). Another commenter noted that the framework only cited one example of groundwater impacts at mine sites and asked if EPA thought these kinds of impacts are widespread at modern mining operations or aberrations? (8) **As noted above, the intent of the appendix is to show the potential "Environmental Impacts" of mining activities. EPA is aware that modern well-designed, well-operated, and well-regulated mines should present few if any of the problems that historic, or poorly operated/regulated, mines may present. EPA added a discussion of this to the appendix.**

One commenter reported that the framework failed to acknowledge the potential benefits associated with mining operations, such as wildlife dependence on mining waters and waterways whose flow is comprised of NPDES-discharged mining waters. (5) **EPA acknowledges the fact that some operations create additional wildlife habitat. In addition, EPA is aware of the fact that some operations, as mitigation for current impacts or simply as “good citizens,” clean up or improve degraded areas. Not dwelling on these cases in the framework is not intended to give the impression that EPA is either unaware or unappreciative of these efforts.**

One commenter asked for clarification of the appendix’s statement that “Complicating the effective environmental control at mining sites is the interrelationship between the extraction, beneficiation, and processing of the ore material and the waste materials generated from each of these operations.” (8) **This sentence refers to the fact that a site may have Bevill and non-Bevill wastes, raw materials, waste materials, processed materials co-located in the same drainage area. Similarly, there may be point source discharges subject to effluent guidelines and to storm water BMPs and also nonpoint source discharges, again all in the same drainage. These distinctions make a single regulatory strategy difficult to implement, and the existence or absence of exemptions from regulatory requirements for some materials may have a significant effect on management decisions.**

One commenter stated that pollution from mining is one of the most serious threats to water quality in the west. The commenter was concerned that, though abandoned mines cause significant degradation, the greater risk to watersheds is the “growing number of active and proposed hardrock mines.” (13) **EPA notes the comment.**

One commenter suggested that EPA identify major factors associated with acid drainage, such as annual precipitation, site hydrology, and climatology in general (9). **Although EPA acknowledges that these factors are important in the genesis of acid generation, the framework is not intended to be a primer on acid generation. Rather, it simply identifies some of the major problems that can occur at mine sites.**

One commenter suggested that the discussion of acid drainage note that States and Federal Land Managers have recognized the potential seriousness of acid generation and have imposed extensive characterization,

prevention and control requirements accordingly. (8) **EPA is aware that its co-regulators are at various stages in the development and implementation of requirements related to acid generation, and applauds these efforts.**

One commenter objected to EPA's use of "sloughing of tailings to surface water" as a source of impacts to surface waters. The commenter noted that discharging tailings to surface water without an NPDES permit is illegal, in most cases would never be permitted, and is unheard of in modern mining industry. Thus, the commenter was unclear as to why EPA used it as an example. (8) **EPA used this as an example for two reasons. First, while not common and not permitted, there have been at least a few instances where tailings washed out or otherwise "sloughed" into surface waters or waterways. Second, the framework is intended to help EPA deal with both active and abandoned mines, and there are a number of cases where tailings that sloughed or were discharged into surface waters have led to long-term impacts from sediment contamination.**

One commenter asked for information where the amount of water necessary to rinse heaps to a required standard has been a significant concern (8) **EPA is not aware of any specific instance where this is the case. In arid environments, however, any use of water is a "concern" and that is the purpose of the reference in the appendix, particularly since the duration of rinsing is seldom known at the time of permitting or even at the time of reclamation planning.**

One commenter was concerned that the discussion on heap leaching did not make clear the distinctions between gold mining and copper mining. The concern was that the discussion of copper and gold together creates the impression that spent gold ores may be left without treatment to remove residual cyanide levels, which is not accurate. (8) **EPA is aware that States generally require detoxification of gold leach heaps, whether by rinsing or other means. EPA also notes that, in addition to cyanide, reducing heavy metal loadings in rinsate/leachate can present a problem.**

One commenter noted that Nevada has stringent rules regarding the treatment and monitoring of spent ore heaps at closure, belying the Workgroup's assertion that "spent ore is often left in place (or nearby), in some cases without further treatment." The commenter took issue with the framework statement that the amount of water necessary to rinse heaps at closure to required standards may not be available in arid regions with limited water resources. Also, the commenter noted that heaps left in place at the end of their lives are situated on pads consisting of engineered liner systems which must meet strict containment requirements to prevent any leachate reaching surface water or groundwater. The commenter also noted that tailings impoundments, including those in which cyanide-bearing tailings have been contained, must be stabilized at closure so as to inhibit the migration of any contaminant (including cyanide) that has the potential to degrade waters of the State (including groundwater). (6) **Nevada (and many other States) does indeed require rinsing or some other means to meet cyanide and other limits, and EPA did not mean to imply otherwise. Similarly, closure requirements (or requirements that are imposed based on "guidelines) address tailings impoundments. EPA notes that rinsing alone may not suffice to reduce all constituents of concern (such as selenium, arsenic, and/or other heavy metals) to benign levels.**

Two commenters objected to EPA's statements that "closure and reclamation measures are not well established for cyanide heap leaching operations because of their recent use" and that many cyanide and gold mining regulations "are non-mandatory guidelines." (3,8) One of the commenters asked how EPA could suggest that its own "guidelines" are necessary when it has not thoroughly assessed what states have already done. (8) **Although States do indeed have closure requirements, with some defined end-points, many of the requirements are indeed in the form of "guidelines" or other measures that are required**

on a case-by-case basis. EPA notes that such non-mandatory guidelines can be an appropriate means to account for the site-specific nature of mining impacts. In addition, EPA notes that requirements are evolving as cyanide heap leaching is becoming better understood.

One commenter thought that EPA had painted a “dismal portrait” of cyanide operations, and noted that gold producers have instituted numerous measures to reduce the environmental risks from cyanide use. The commenter noted that the industry largely recycles and reuses the cyanide-bearing streams generated during beneficiation processes. (6) **EPA welcomes and appreciates innovative approaches to managing process materials and wastestreams, especially with respect to the destruction of toxic pollutants.**

One commenter noted the appendix’s references the use of "copper, zinc, chromium.. and phenolic compounds" as common reagents used in the mining industry and stated that these reagents were not known to be used in the copper or molybdenum mining industry segments. The commenter suggested that EPA identify where these are used, as, at minimum, the sentence appears to suggest that these are used throughout the industry rather than in some particular segment. (1) **The offending sentence in the appendix was grammatically correct but was misleading, as the commenter points out. EPA has modified it in response to commenter's concerns.**

One commenter asked for an explanation of the apparent contradiction between the framework’s statements that "... other minerals may be present at much higher concentrations (than the desired mineral or metal)" and that these same metals are found in "trace levels" (1). **EPA has clarified this, but also notes that the two statements are not mutually exclusive (that is, concentrations may be at trace levels AND at higher concentrations than target minerals, given the low concentrations typically found in nature).**

One commenter was concerned with the discussion of hydrologic impacts. First, the commenter noted that the Humboldt River Basin in Nevada, where groundwater drawdown was described, is not representative of conditions generally found in the US but are truly unique. For that reason, the commenter asserted that EPA could not to draw conclusions about the issue of ground water impacts generally by looking at Carlin Trend. (8) **Ground water drawdown is an issue in the Humboldt River Basin. EPA's discussion does not focus only on problems that are found in every circumstance, since mining is so extremely site- and area-specific. EPA has not drawn and does not intend to draw "general" conclusions, simply notes that it can be of concern under certain conditions.**

One commenter pointed out that water pumped for dewatering does not just dissipate, but, under the Nevada regulatory framework, is infiltrated or injected back into the subsurface or put to beneficial use by other users. **EPA acknowledges that most (not all, since some is always lost to evaporation or diversion) of the water is returned to the subsurface or diverted for other uses. As noted previously, the intent of the appendix is to show the potential "Environmental Impacts" of mining activities.**

One commenter corrected EPA's assertion that individual mines in the Carlin Trend are dewatering at rates up to 70,000 gallons per minute by appointing out that only one of the mines in the area is permitted to pump more than 60,000 gallons per minute. (8) **This correction has been made.**

One commenter noted that, pursuant to existing regulations and policies, the appropriate federal and State officials were made aware of the potential impacts of dewatering in the Carlin Trend prior to authorizing ... dewatering operations, and conditioned their authorization on (the operator) undertaking extensive measures to mitigate all potential significant impacts of this dewatering. The commenter pointed out that the operator had in place a plan with local ranchers and BLM to create and improve nearly 2,000 acres of riparian habitat, 82 miles of stream channels, and over 40,000 acres of upland watershed. Finally, the

commented noted that the operator received the prestigious Nevada Governor's Reclamation Award for developing and implementing one of the most comprehensive mitigation plans in Nevada history. (8) **EPA appreciates this additional information.**

One commenter was concerned about the mention of mine site water and mass balance as site conditions that are influenced by mine design and siting, and the fact that these can lead to environmental impacts. The commenter thought EPA's discussion revealed a bias against hydrologic impacts generally but did not identify any environmental impacts that justify its bias. (8) **EPA notes that the purpose of this appendix is to identify potential impacts, not to discuss them in detail or to comment on whether they are acceptable. Also, EPA notes that it is indeed "against hydrologic impacts generally."**

One commenter asserted that the discussion of subsidence is based on facts and statistics to coal mining, not hardrock mining. The commenter expressed the opinion that subsidence in the precious metals industry is a relatively minor issue and certainly not likely to cause or contribute to the kinds of hydrologic impacts discussed here. (8) **EPA acknowledges the commenter's concern and has modified the discussion of subsidence.**

One commenter noted that in the discussion of physical stability, EPA identified what the commenter considered to be an unrelated concern with toxic, acid forming or reactive materials and then included an unrelated discussion of seepage from impoundments and acid generation (1). **EPA disagrees with the comments; the purpose here was to link stability with other environmental problems to which instability can cause or contribute. When a slope is physically unstable, erosion can cause major problems. The erosion could include the runoff of toxic materials, or expose acid forming and reactive materials. In addition, seepage from impoundments may help undermine and contribute to the failure of embankments.**

One commenter opined that it seemed extremely unlikely that the change in wildlife patterns attributable to a newly established slope at a mine site can result in a such a severe change in wildlife patterns as to constitute an "environmental problem". The commenter noted that all development projects displace wildlife to some degree and emphasized that the localized displacement of a small number of individual animals (that are not threatened or endangered species) cannot reasonably be viewed as an environmental problem of national significance. (1) **The comment has been noted. EPA agrees that such localized displacement does not necessarily amount to a nationally significant problem.**

One commenter suggested that the potential environmental impacts discussion in the draft final framework was overly focussed on potential impacts on human health and underemphasized impacts on wildlife and biota. (10) **EPA did not mean to neglect the potential impacts to wildlife and biota, and the discussions related to "alteration of habitat" and "impacts on various media" contained some mention of impacts on wildlife.**

One commenter suggested that EPA's discussion of habitat impacts needed to acknowledge that in many cases, habitat impacts or even destruction do not significantly impact wildlife populations because often habitats are not at or near their "carrying capacity" for wildlife populations. (8) **EPA acknowledges the point.**

One commenter expressed a concern that EPA's discussion of wildlife protection (specifically cyanide related wildlife deaths) misses the point that state and Federal Land Manager remedies have been effective, and this problem, to the extent it remains a problem at all, is under control. (8) Another commenter provided information from a GAO report on avian mortality (6) **The comments has been noted. EPA is**

aware that migratory bird deaths have declined significantly since the mid-1980s. As noted previously, the intent of the appendix is to show the potential "Environmental Impacts" of mining activities. EPA acknowledges that modern well-regulated mines will present few if any of the problems that historic, or poorly operated/regulated, mines may present. EPA added a paragraph to that effect to the appendix.

One commenter noted that, notwithstanding the framework's statement that tailings facilities are becoming more common in modern design and construction, there are still very few lined impoundments in any industry segment, and none in the copper industry, including the most recently constructed major impoundment in the U.S., BHP's Robinson Project in Nevada. (1) Another commenter stated that waste rock and tailings at typical gold and copper mines are disposed in unlined facilities. (13) **The comments have been noted.**

One commenter objected to EPA's statement that fugitive dust may accumulate downwind of an impoundment in "troubling amounts," recommending that the framework discussion be confined to whether or not levels are within applicable standards. (1) **The comment has been noted and a change has been made to the appendix.**

One commenter noted that while the risk posed by fugitive dust may depend on the location of receptors, the inherent toxicity of the material is independent of the location or the presence or absence of receptors. The commenter also notes that "type of ore being mined" must also include a consideration of the mineral form in which the metal exists. For example, the bioavailability of different metal forms of lead or arsenic varies significantly, and therefore so does the risk posed by ingestion or inhalation of these different species. (1) **The comment has been noted and a change has been made to the appendix.**

One commenter thought the example of problems caused by air emissions was inappropriate. The commenter noted that the Palmerton Smelter started production in the 19th century, and operated for decades without environmental controls. The commenter thought it had no bearing on current practices or the need to integrate various regulatory programs to target the mining industry's current impacts. (1) **The Palmerton example was not meant to highlight emissions from modern stacks, but rather, as the commenter suggested, to illustrate that uncontrolled emissions may contain toxics. Further, the intent of the appendix is to show the potential "Environmental Impacts" of mining activities. EPA acknowledges that modern well-regulated mines will present few if any of the problems that historic, or poorly operated/regulated, mines may present. EPA added a paragraph to that effect to the appendix.**

One commenter thought that references to impacts from decades of uncontrollable smelter emissions at Bunker Hill were inappropriate. The commenter asserted that these types of impacts cannot be used to justify the need for a focused and integrated program to address currently operating mining and mineral processing facilities. (1) **The intent of the appendix is to show the potential "Environmental Impacts" of mining activities. EPA acknowledges that modern well-regulated mines will present few if any of the problems that historic, or poorly operated/regulated, mines may present. EPA added a paragraph to that effect to the appendix. Notwithstanding the commenters' concerns, EPA also notes that a "focused and integrated program" is more cost-effective and efficient than an unfocused and piecemeal approach and thus is EPA's goal with this framework.**

One commenter thought that EPA unnecessarily repeated impact discussions in different sections, including references under soil impacts to "cyanide reaching surface water or groundwater" and resulting in fish kills or contamination of drinking water. Similarly, the commenter was concerned about the discussions under

erosion focussing on surface water impacts due to sediment transport, pointing out that they were already included in the section of surface water quality. (1) **The comment has been noted. However, it is important that the commenter understand that once soils are contaminated there is the possibility that they may be transported via erosion, or storm water runoff, which may lead to fish kills and contaminated drinking water. EPA also reiterates that the intent of the appendix is to show the potential "Environmental Impacts" of mining activities. EPA acknowledges that modern well-regulated mines will present few if any of the problems that historic, or poorly operated/regulated, mines may present.**

APPENDIX C. REGULATORY AND NON-REGULATORY TOOLS

Comments related to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Two commenters asked for a more realistic assessment of CERCLA, given its “dismal track record” and the commenters’ asserted likelihood that CERCLA was be substantially amended in the near future (3,8). **EPA strongly disagrees with the commenters’ characterization of CERCLA’s record. In addition, EPA describes the statute and programs as they exist, not as they may be amended at some time in the future.**

Commenters asked about the reference (on page 31 of the draft final framework) to CERCLA’s “positive synergistic effects.” (5,8) **EPA has modified the language somewhat to better characterize these effects.**

One commenter thought that, given the large numbers of “polluting mine sites,” CERCLA has been under-utilized.” (13) **EPA appreciates the comment but disagrees. As noted throughout the framework, EPA strongly prefers approaches that prevent impacts and thus make CERCLA a last resort.**

Two commenters noted that Superfund requires a large amount of documentation and study that may not be appropriate in all cases, and that the Superfund Accelerated Cleanup Model (SACM) has been utilized to expedite cleanups. (9,10) **EPA agrees that not all cases are appropriate for CERCLA, and appreciates the reference to SACM.**

Two commenters pointed out that there had been a number of examples where the CERCLA process has resulted in recovery of funds were the EPA was not the lead agency. It was noted that most of the authorities under CERCLA, including cost recovery, are delegated to Department heads such the Secretary of the Interior. They suggested that other authorities could be used in addition to, or in place of, enforcement actions. They noted that BLM, for example, has authority to recover funds and pursue PRPs; it is the “lead agency” authority on Public Lands, and also has natural resource trust authority. The commenters suggested more discussion of the potential for expanding BLM/EPA partnerships, as well as partnerships with all stakeholders to get the job done. (9,10) **EPA has modified the text (now in Appendix D) to clarify authorities. Further, EPA would welcome the opportunity to discuss interagency and other partnerships.**

Another commenter asked what types of actions were contemplated and what authorities would be used? (8) **As noted in the previous response, EPA has clarified the discussion.**

One commenter suggested that a section be added to discuss Natural Resource Damage Assessments (under CERCLA sections 104(b)(2); 107(a)(4); 107(f); 122(j); 301(c); 113(g); 111(I); and 111(l)) (10) **EPA has added language referring to Natural Resource Damages and Trustees.**

One commenter thought that EPA had overemphasized CERCLA’s flexibility and, further, had not taken advantage of what flexibility was offered. (5) **Over the past several years, EPA has incorporated increasing flexibility into the program, and this is reflected in successes achieved in that time. EPA continues to seek ways in which to improve the process, and seeks constructive suggestions on means by which this can be achieved.**

One commenter perceived, and objected to, an emphasis on the “deterrent effects” of CERCLA in the draft final framework. The commenter thought this was due to an intent to increase “federal EPA control.” (5) **While EPA did not mean to overemphasize the deterrent effects of CERCLA, the Agency also does not underestimate the importance of those effects. As noted previously, EPA’s purpose is to improve the effectiveness and efficiency of Agency efforts related to mining, not to increase its role beyond its mandate.**

One commenter suggested that the framework acknowledge what were seen as problems with the Hazard Ranking System (“HRS”) as it applies to mining, which were said to contribute to EPA’s exaggeration of mining’s environmental impacts (5). **This level of detail is beyond the scope of this framework. Also, EPA notes that it has used the HRS quite flexibly in order to accurately characterize potential risks posed by mining sites.**

Comments related to the Emergency Planning and Community Right-to-Know Act (EPCRA)

One commenter pointed out that mining facilities are not required to report certain data under section 313 of EPCRA. (6) **EPA notes that, since the draft final framework was prepared, the Agency has proposed to include SIC Code 10 (Metal Mining) within the industry categories required to report to the Toxics Release Inventory under section 313.**

A commenter objected to the fact that, as noted in the framework, EPA is investigating the addition of non-manufacturing industries, including mining, to those required to report under Sections 311 - 312 of EPCRA. (5) **EPA notes the comment.**

Comments related to the Clean Water Act

One commenter noted that the statement in the draft final framework (page 7) that a watershed approach to water quality protection allowed EPA to reach the highest number of point sources, and asked whether EPA should instead be working to reach the sources of most significance. (8) **That is indeed the purpose of the watershed approach, whose advantage is that it allows EPA to reach the highest number of significant sources. EPA appreciates the clarification.**

One commenter recommended that the “watershed” (or “bubble”) approach to regulating water quality impacts be used only in narrowly tailored situations. The commenter stated that, while it might be appropriate for watersheds affected by abandoned mines, it would not be appropriate when active mines are involved. Instead, all discharges from active mines should have to meet effluent standards (13). **EPA appreciates the comment. EPA notes that the framework discussed watershed approaches in the context of inactive and abandoned mines.**

Two commenters suggested that EPA mention recent lawsuits against EPA, future Total Maximum Daily Load efforts, and how these programs vary state to state and from EPA region to region. The commenter also perceived a focus on NPDES program and an insufficient discussion of nonpoint sources. (9,10) Another commenter echoed the recommendation to discuss TMDLs, and also recommended that the Clean Water Act’s antidegradation program be discussed (13). **EPA focused on the NPDES program because this is the sources of EPA’s authority to implement water quality standards, TMDL, and antidegradation programs. The framework now includes information on nonpoint sources, water quality standards, and TMDLs. EPA notes that TMDLs may or may not be developed at mining sites. Each year, States prioritize streams for TMDL development, typically basing priorities on NPDES reissuance and water quality problems. TMDLs, like water quality standards, are not**

enforceable, and implementation requires that the loads be incorporated into an NPDES permit or included as part of a cleanup activity's goal.

Several commenters noted that the framework referenced Table G-4 on page 50897 in the September 29, 1995 *Federal Register* (60 FR 50804). They pointed out that this table and the regulatory program of which it is a part is in litigation, and recommended that this be noted in the framework (5,6,8). **EPA has added a notation to that effect. (EPA notes that these commenters made other assertions and recommendations concerning the legal defensibility of the table and the relationship to the framework. EPA does not address these here pending the outcome of the litigation.)**

One commenter recommended that the framework clarify EPA authority to regulate mine drainage from waste rock piles and other point sources. (13) **EPA appreciates the comment but believes the framework provides a clear summary of EPA's authority. A comprehensive explanation of the Agency's regulatory authority is beyond the scope of the framework.**

One commenter noted that one passage (page 28 of the April 1996 draft final framework, discussion on CWA 404 program, paragraph beginning "Where applicable, the 404 program...") seemed to assume that issues related to the 404 program are ignored by other agencies involved in mine permitting. The commenter stated that issues related to waste dump placement and "filling" of existing drainageways may be critical issues during the permitting process. (10) **EPA did not mean to give that impression, and agrees that these may indeed be critical issues.**

Comments related to the National Environmental Policy Act (NEPA)

A commenter objected to what it considered "EPA's suggestions regarding its role in implementing NEPA." This commenter characterized EPA's role under NEPA as "entirely procedural" and "advisory". (8) Another commenter was concerned with EPA's discussion regarding the integration of NEPA with permitting procedures and the use of NEPA to integrated decision-making under various Federal statutes. This commenter noted that NEPA fosters interagency collaboration on the development of an EIS and provides information on the adverse impacts of the project, other alternatives, and possible mitigating measures, but that it is not intended as a basis for integrating the decisions of several agencies, nor as a document upon which permitting is based. (9) Another commenter (8) made much the same point about integrated decisionmaking. **EPA continues to believe that NEPA can better be used to integrate intra- and inter-Agency decisionmaking. An assessment of potential environmental effects of proposed actions and analyses of feasible alternatives, as required under NEPA, are crucial to informed decisionmaking and effective permitting or approvals. When multiple agencies are involved as cooperating agencies, similarly, EPA believes these agencies should ensure close coordination of analyses and decisionmaking in order to minimize inconsistencies and conflicts.**

One commenter noted that the description of NEPA could be improved by noting the intent of NEPA to eliminate Federal duplication as opposed to "integrate decision making under various Federal Statutes," as stated (on page 23) in the draft final framework (9, 10). **EPA has noted in the framework (now in Appendix C) the intent of NEPA to eliminate Federal duplication.**

One commenter stated a belief that the description of NEPA (on page 23) was too focused on the EIS associated with NEPA and not the goal of better decision-making. (9, 10) **EPA agrees with the commenter about the goal of NEPA, and has modified the language to make this explicit.**

One commenter described its “disappointing experiences with EPA in the NEPA process,” and another echoed this concern. It was noted that EPA has declined to submit comments on some occasions in the past, and on others has only become involved at the last minute. As a result, EPA was encouraged to become involved early and to stay involved during the process, an invitation EPA was said to have declined in some cases. Thus, it was recommended that EPA correct its own “considerable deficiencies....before proposing a broader strategy for mining.” (8,5) **EPA intends, as noted in the framework, to improve the way it does business. One of the goals of the framework is to establish a means by which EPA can identify and prioritize its involvement under NEPA.**

It was suggested that the discussion of NEPA include an indication that the Council on Environmental Quality has “ultimate oversight responsibility for implementing NEPA” as well as stating (as in the draft final framework) that EPA has a unique role.... (9,10) Another commenter suggested other language (replace “EPA has a unique role” with “EPA has responsibility....”) **EPA has modified the language.**

One commenter suggested that EPA discuss more fully how EPA would use NEPA to identify “permit conditions including those needed to avoid or minimize impacts or to mitigate for unavoidable impacts” (which was mentioned on page 23, fourth paragraph, fourth sentence). (8) **EPA is not clear what the commenter is asking. This section provided a description of NEPA, and the use of NEPA for this purpose is relatively common.**

One commenter noted that the NEPA process affords EPA the ability to comment on and lend its expertise to other agencies in connection with specific projects that must be approved by other federal agencies, but that it is not a mechanism for EPA to engage in general rulemaking to establish national standards or “guidelines.” (6) **EPA agrees with the commenter.**

One commenter suggested that the framework contemplated the use of MOAs and MOUs with other agencies as a means by which EPA would expand its jurisdiction and authorities (6). Another suggested that EPA intended to use its role under NEPA to do the same (5). **EPA’s jurisdiction is limited by its statutory and regulatory authorities and cannot be expanded as the commenters suggest.**

Comments related to RCRA

One commenter stated that RCRA Subtitle C hazardous waste rules and interpretations “thwarted” environmentally beneficial remining and waste management. The commenter suggested that “active management” of an historic waste should not result in the generation of a non-exempt waste (unlike the position taken by EPA in the framework) (5). **EPA clarified its position on active management in 61 FR 2353 where the Agency stated”...that removal of waste from such a unit does not constitute "disposal" for purposes of triggering Subtitle C regulation, and the language of the 1989 preamble, although somewhat unclear, should be read to be consistent with EPA's statements in the NCP preamble on this point. The Agency does not therefore believe that the proposed regulatory approach would discourage remining.**

One commenter was “stunned” the framework suggested that the 1986 regulatory determination simply be revisited. (6) Another stated that the alternative, RCRA Subtitle C, would be “particularly inappropriate.” (5) **The Agency has been collecting information on the environmental impacts of mining since 1980. As a result of court-ordered rulemaking on mineral processing, the Agency has collected additional information on the generation, and management of Bevill wastes. The Agency is, at this time, seeking public input on whether a revisiting of how the Bevill exclusion is implemented is warranted. The**

Agency has not made any decision whether any changes to the Bevill exclusion are needed. Based on public comment, the Agency will then determine if any further actions are needed.

Two commenters stated that, contrary to the framework's assertion, the Strawman was not drafted "in cooperation with States, industry and other interest groups" but was drafted by EPA staff. These commenters also stated that the items on which the framework appears to claim consensus were never entirely resolved to all parties' satisfaction (1,5). **The Agency acknowledges that consensus was not reached during the meetings held by the Policy Dialogue Committee on Mining. The Agency did work closely with the states, industry, and environmental groups during its preparation of Strawman 1 and 2. The interested parties did prepare separate and distinct counterproposal to Strawman 1 and 2. The Agency found this process extremely useful in identifying different approaches to effectively managing mining wastes.**

One commenter suggested that the framework acknowledge that a very small percentage of Bevill-exempt beneficiation wastes exhibit any hazardous waste characteristics (1). **The 1985 Report to Congress found that extraction and beneficiation wastes did exhibit hazardous characteristics. The Agency stated in the 1986 Regulatory Determination that extraction and beneficiation wastes did exhibit hazardous characteristics and had caused environmental damage.**

One commenter noted that RCRA corrective action authorities are available to address releases from "units containing Bevill wastes" only if hazardous wastes are managed therein (1,8). One of the commenters was unaware of a single gold mine where this is true (8). **The Agency has the authority to utilize its RCRA corrective action authorities when hazardous wastes threaten human health and the environment. If hazardous wastes are improperly generated, stored, handled or disposed of at a mine site, such actions may be subject to RCRA authority.**

Two commenters questioned the draft final framework's reference (on page 25) to "several RCRA provisions that are potentially applicable to mining situations but which have not been historically applied." (1,5) One noted that prior regulatory determinations made their application inappropriate (1). Another commenter inferred from the statement that EPA intended to expand its regulatory authorities and asserted that the framework presented an inaccurate view of the relevance of these sections. (5) **The Agency does not contemplate any expansion of its current authorities.**

Comments related to Toxic Substances Control Act (TSCA)

One commenter suggested that the framework acknowledge that PCB equipment has been replaced in many mines and that all mine built after the ban on production of PCB equipment have not had PBS in transformers and capacitors. (2) **EPA has added language to this effect.**

Comments related to Nonregulatory tools

One commenter noted that BLM has been involved in two of the site-specific examples given in Appendix C of the draft framework (the Coeur D'Alene Basin Restoration Project has the BLM in the Pine Creek Area effort and the Clear Creek Watershed Project has the BLM in the Boodle Mill Effort. (9) **EPA has added a note to that effect to the appendix.**

One commenter suggested that the statement in Appendix C, when discussing the Clear Creek Watershed project, that "Mining is part of the history and culture of the area that must be respected," should be emphasized throughout the Framework about EPA's regions. (4) **EPA appreciates the comment.**

One commenter noted that the U. S. Bureau of Mines (USBM), which was defunded by Congress during FY 96. The U.S. Geological Survey assumed some of its responsibilities and references to the Bureau should be changed accordingly. (10) **EPA has changed the references.**

One commenter asked about the University of Montana's Mining Waste Institute (9).

One commenter commended that the Idaho Joint Review process as a model that the Framework should seriously review as a successful example of state lead programs that efficiently and effectively regulate mining. (3) **EPA has observed the IJRP with interest, and believes that it shows great promise in promoting the early involvement of all stakeholders, allowing areas of common interest and disagreement to be identified and addressed.**

APPENDIX D. OTHER FEDERAL REGULATORY AUTHORITIES

One commenter recommended that the framework indicate that SMCRA can be used as a regulatory device for restoration of hardrock mine sites. (1) **EPA has added a statement to this effect.**

Several commenters found the discussion on the number of claimants under the general mining law misleading. One noted that an implication that there had been 2,700,000 claims since 1976 when the BLM started accepting claims was in error, since this is the number of claims that the BLM has records of from all sources since the beginning of the Mining Law of 1872, as amended. (5,9,10) **EPA has modified the language accordingly.**

One commenter noted that the framework's mention that there were over 1,100,000 unpatented claims on Federal lands is misleading, since the number of claims has been significantly reduced since the government imposed a \$100 rental/claim maintenance fee starting in 1993. The commenter recommended a clarification. (10) **EPA has added language that captures the commenter's point.**

One commenter recommended that the discussion of the General Mining Law and mining claims should be deleted in its entirety, stating that the numbers of total claims recorded, abandoned, etc., is irrelevant to the purposes of the framework. (5) **The purpose of this discussion is to give an idea of the magnitude (and importance) of the mining claim system. For that reason, the discussion has been retained in the appendix.**

Another commenter noted that claim validity is hardly ever questioned, but that "proper discussion of bonding costs would enable agencies and the public to properly ascertain if the claim was indeed valid." (13) **EPA notes the comment. EPA also notes that claim validity is not within the Agency's purview.**

Two commenters pointed out that, contrary to a statement in Appendix D, uranium is a locatable mineral. (5,9) **EPA made this correction.**

One commenter recommended that the discussion of legislative vehicles affecting the Mining Law should simply acknowledge that congressional Mining Law reform efforts now include support by all interests for creation of an abandoned mine lands fund, and not provide detail of various proposals. (5) **EPA has modified the language accordingly.**

One commenter suggested a number of corrections to the Mineral Development and Disposition Statutes section (9). Another noted that unpatented mining claims, if valid, are only possessory interests as against the US Government, subject to the 5th amendment (10). **EPA has made the recommended corrections.**

One commenter noted that the Forest Service requires a bond for all plans of operations. (5) **The description of Forest Service regulations notes that bonds may be required.**

One commenter recommended changes to the discussion of the Mining in the Parks Act of 1976. The commenter recommended that the report be modified to explicitly track the statutory language. (10) **EPA has modified the language accordingly.**

One commenter recommended that EPA pare back the section on Inactive and Abandoned Mines on Federal Lands, since congressional activity had slowed. They also recommended that, in the first sentence

of this section, the word "explicitly" should be included before the word "provide." (10) **EPA has made the recommended changes.**

One commenter recommended change to the table's reference to the Endangered Species Act in "Overview"), characterizing the description of the requirements imposed upon Federal agencies as "overbroad." (10) **EPA has made the recommended change.**

One commenter recommended changes to language in the body of the framework that implied that FLPMA directs BLM to take actions which impair peoples' rights. The commenter suggested that language in Appendix D that describes BLM's responsibilities under § 302(b) of FLPMA be substituted, because "the language in Appendix D makes clear that FLPMA protects persons' rights, with certain limited exceptions." (10) **EPA has made the substitution.**

One commenter pointed to EPA's observation that there are "few specific technical standards" among the broad requirements imposed by the BLM or Fish and Wildlife regulations, and noted that this is not necessarily a weakness in those requirements. (2) **EPA did not mean to imply that this is a shortcoming of the regulations, but was simply making the point to provide background for the reader.**

One commenter noted that the Forest Service is responsible for surface management administration of mineral resources on Forest Service lands, and that Bureau of Land Management has the primary responsibility for administering the laws and regulations regarding disposition of locatable minerals from all federally-managed lands. (5) **EPA appreciates the clarification and has modified the language accordingly.**

One commenter noted that the framework is misleading in that it leaves the impression that lands under Fish and Wildlife Service (F&WS) management are available for mineral entry. The commenter noted that most F&WS units, when established, were withdrawn from mineral entry and that those few that were open to such entry have since been withdrawn. Further, while there may some valid existing rights under the Mining Law, the commenter knew of no active mining operations in the F&WS preserve system. (5) **EPA appreciates the clarification and has modified language in the appendix accordingly.**

One commenter suggested an opening sentence on the (then-page 22) description of National Park Service responsibilities: "The National Park Service has been charged by Congress to manage units of the National Park System so as "to conserve the scenery and the natural and historic objects and wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."" (10) **EPA has modified the language.**

A commenter clarified the operation of the Mineral Leasing Act on National Park Service lands. The commenter provided language. (10) **EPA has adopted this language.**

APPENDIX E: OVERVIEW OF STATE REGULATORY APPROACHES

One commenter notes the framework's statement that State and federal regulatory authorities have in fact "established broad regulatory requirements that generally address all phases of mine operations." The commenter found this militated strongly against the need for more EPA involvement or input into the decisions of these agencies. (6) **The comment has been noted. EPA emphasizes the purpose of the Framework, which is to improve EPA's effectiveness.**

One commenter clarified EPA's statement that implied environmental requirements were only recently imposed on mining operations in Arizona and New Mexico. The commenter noted that Arizona and New Mexico recently adopted formal reclamation requirements, but environmental laws, both Federal and State, have been in place for years, in some cases decades. (8) **EPA has changed the language to clarify that it refers to reclamation requirements.**

One commenter recommended that the framework point out that coal producing states have used the Surface Mining Control and Reclamation Act (SMCRA) authority and Abandoned Mine Lands (AML) program grants to reclaim hardrock mine sites, either through SMCRA Section 409 or, as Wyoming has, through section 411. (11) **EPA has added a statement to this effect.**

One commenter suggested the need for increased cooperation between States and EPA on State-issued NPDES permits. The commenter expressed a belief that this would lead to fewer cases where EPA is "forced to exert" its authorities over the State. (13) **EPA appreciates the comment and intends to work close with the States that are partners in the NPDES permitting process.**

One commenter noted that EPA's mention of a new component of Montana's regulatory regime implied that the entire Montana program was new. (9) **EPA has added a statement clarifying the point.**

One commenter suggested that the Environmental Law Institute study referenced in the text may not be an accurate portrayal of state programs and suggested that EPA take a closer look at the state programs and how they work (8). **EPA believes the ELI study was an accurate snapshot of state programs. EPA also notes that Appendix E contains another review of state programs that comes to a favorable conclusion of state programs.**

One commenter noted that the framework's discussion of state financial assurance requirements was very brief and suggested a more comprehensive description (2). **EPA is aware of the many different types of financial assurance and bonding programs. The framework, however, is not intended to be a compendium of state practices but simply provides information on state and Federal programs as background for the reader.**

One commenter asked why states impose different standards for detoxification of spent leach heaps, other than based on water quality standards. (8) **EPA notes that most cyanide detoxification standards are based to some degree on drinking water values, and standards for other pollutants are usually based on surface water standards. EPA also notes that the distinction between free, total, and weak acid dissociable cyanide is not always clear in detoxification standards.**

One commenter suggested that EPA's "disclaimer" in Appendix E calls its accuracy into question and this contributed to the overall impression that message that the environmental impacts of the mining industry are not currently being addressed through regulation. (1) **This disclaimer was not intended to call the accuracy of the information into question but simply to disclose that the descriptions and any conclusions were those of the authors and not necessarily those of EPA. As noted above, EPA acknowledges that modern well-regulated mines will present few if any of the problems that historic, or poorly operated/regulated, mines may present and has added a paragraph to that effect in Appendix B. EPA also has moved information that was previously presented in the body of the framework to this appendix.**

One commenter stated that the conclusion of the study in Appendix E (State regulation), that the "alleged gaps in state authority do not exist" is buried in the appendix, rather than emphasized in the framework

text. (4) **EPA has now reorganized the document so that the entire discussion is in the appendix. However, EPA notes that Appendix E in the draft final framework was neither prepared nor endorsed by EPA, but was simply presented, as stated in the Appendix, “for informational purposes.”**

One commenter was concerned that there was “no real attempt in ... to evaluate the scope and depth of those state programs” (5). **It was not EPA’s intent to evaluate the “scope and depth” of State programs, merely to provide some information on State programs.**

APPENDIX F. SETTING PRIORITIES FOR EPA ACTION AT INACTIVE AND ABANDONED MINE SITES

One commenter expressed a willingness to work with EPA in evaluating alternative site ranking methodologies, including (but not limited to) those discussed in the framework. (5) **EPA appreciates the offer, and hopes the opportunity arises.**

One commenter pointed out that section 403 of SMCRA offers a list of priorities for AML sites that has been proven effective over the years and could easily be adapted as a guide for this Hardrock Mining Framework. The commenter noted that, under SMCRA, sites that pose the most severe and immediate danger to the public should be considered the highest priority. (11) **EPA appreciates the information.**

Some commenters noted that dealing with abandoned sites, from prioritization and remediation, is a multi-agency and multi-government planning process, and that the fact that the framework deals only with EPA is a major impediment. The commenter was concerned that EPA has developed a 13 system unilaterally, and recommended a wider involvement. (8) Another recommended that industry's expertise and experience be brought into the process (6). **EPA appreciates this point and emphasizes its willingness and intent to work with other agencies and stakeholders.**

One commenter recommended that the framework clearly encourage re-mining (3). **EPA appreciates the comment. In the final framework, Recommendation #13 explicitly calls for "reprocessing of historic mine wastes..." and Implementation Action #8 calls for "...identifying...recommendations for promoting...reprocessing/re-mining of inactive and abandoned mines."**

One commenter asked if it was an unfunded mandate that EPA plans to direct states to identify impacted watersheds that deserve priority attention. (7) **Should EPA require such a system, the Agency would consider the financial implications.**

One commenter noted the suggestion that EPA be involved in evaluating the balancing of resources between environmental and safety threats, and objected that "safety" is not within EPA's jurisdiction. (5) **EPA appreciates this comment, but would like to point out that environmental threats can present issues of safety.**

One commenter noted that the U.S. Geological Survey has developed a GIS technique that was quite useful in assisting the states of Colorado and Montana and the Federal land management agencies in establishing watershed priorities for remediation. We believe that it would be useful to EPA to identify in the Framework document the USGS's unique capabilities in this area. (10) **EPA has included a reference to USGS GIS capabilities.**

One commenter was concerned that the multi-level priority setting was missing a key step: watershed characterization. The commenter was concerned that the subsection on "Watershed Level" only covers the analysis performed to determine which watersheds require detailed characterization (the term used in the document is assessment). After watershed prioritization and before site-level tasks, however, watersheds must be characterized through water quality analysis, synoptic sampling, flow monitoring, identification of natural and man-made pollution sources, identification of geochemical processes, sediment sampling, biologic assessments of aquatic and riparian zones, and related studies (10). **EPA agrees that scientific and other factual data at a watershed level is necessary to making decisions on priorities. In general, the quality and amount of good information is directly related to the ease of decisionmaking.**