



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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C.L. "Butch" Otter, Governor
Toni Hardesty, Director

November 26, 2010

Dennis McLerran
Administrator
USEPA Region X
1200 Sixth Avenue
Seattle, WA

Subject: State of Idaho Comments Regarding the Proposed Plan for the Upper Basin of the Coeur d'Alene River, Bunker Hill Superfund Site (BHSS), July 12, 2010

Dear Mr. McLerran:

By this letter, the Idaho Department of Environmental Quality provides the comments of the State of Idaho regarding the United States Environmental Protection Agency's (EPA) July 12, 2010 Proposed Plan, referenced above. These comments include input, as attached, from the Idaho Department of Water Resources (IDWR) concerning Idaho water rights and flood risk, the Idaho Bureau of Homeland Security (IBHS) concerning flood control and Idaho Department of Fish and Game (IDFG) concerning the importance of improving fisheries.

These comments rely and build upon DEQ's March 15, 2010 comments (attached for convenience) to Dan Opalski regarding the Focused Feasibility Study (FFS) which preceded the present Proposed Plan. DEQ certainly agrees that further cleanup actions are necessary in the BHSS to adequately protect human health and the environment. DEQ's March 15, 2010 comments listed and applied our overarching goals for participating in EPA processes for selection of further cleanup actions via amendment of existing BHSS Records of Decision (RODs). These goals include, in part, protecting existing human health remedial actions, obtaining tangible environmental results at a reasonable cost, ensuring community support and taking into account factors such as cash flow, low operation and maintenance (O&M) costs and adaptive management. DEQ has continued to apply these goals in evaluating the technical details and justifications of the current Proposed Plan and in considering the comments and concerns of many Silver Valley residents and various entities regarding the Plan.

As you are aware, significant public concern has been expressed regarding the possible loss of mining jobs, the need for flood control to protect existing and future remedies and communities, the high cost of the proposed cleanup actions given limited funding and uncertain economic times, the 90 year time frame for cleanup, the cost-benefit of collecting and treating water to possibly meet zinc water quality standards more than a century from now, the impacts of massive floodplain sediment removal along the South Fork of the Coeur d'Alene River (SFCR), the cleanup of mine and mill sites that do not impact water quality or are part of active mining operations, water rights and other issues. While many of these concerns bear on the goals we have established, DEQ believes EPA can satisfactorily address these concerns and others through a ROD Amendment which adopts a cleanup plan which significantly modifies the Proposed Plan. DEQ is prepared to meet with EPA in the coming months regarding state concurrence on such a ROD amendment.

Based on DEQ's review of the Proposed Plan, the input of IDWR, IDFG and IBHS, public comments provided to date, and in light of the goals we have pursued throughout this process, DEQ makes the following additional comments on behalf of the State of Idaho.

Remedy Protection

DEQ remains supportive of the remedy protection work in the Proposed Plan. The proposed work is well-defined, cost effective and critical to the long term success of the Human Health cleanup. This proposed work to protect remedies from localized flooding and EPA's plan to address damaged roads represent important steps toward ensuring the continued effectiveness of existing and pending remedial actions which provide critical human health protection. Concerns about local flooding and damaged roads have been lingering unanswered for years. They are now being meaningfully addressed and EPA's attention and action is commended. Representatives of local government have commented that the remedy protection projects should be designed for the 100 year flood as opposed to the 50 year flood. To address the threat of catastrophic flooding, IDWR recommends even more protective flood design parameters. In designing specific remedial actions, we recommend that EPA perform cost/benefit analyses which consider a broad range of flood year intervals in order to provide remedies which are both cost effective and protective.

The ROD amendment should also include actions to evaluate the need for and, where appropriate, provide similar protections from local flooding events for any environmental remedies implemented under the upcoming ROD Amendment. Additionally, as DEQ has addressed in previous comments, identifying and implementing major flood control projects for the South Fork of the Coeur d'Alene River (SFCDR) and Pine Creek is critical to protecting not only the human health remedy but also proposed future environmental remedies. Though significant flooding of the SFCDR and Pine Creek appears to threaten hundreds of millions of dollars of completed or proposed cleanup work, DEQ recognizes that major flood control projects on these waters are also necessary for the overall protection of human life and property in adjoining communities. DEQ and EPA need to identify concrete actions that can be included in the ROD Amendment to partner with and significantly advance the efforts of local communities and other state and federal agencies to adequately address this common threat.

The attached comments from IDWR and IBHS more specifically address flood risk concerns and needed actions.

Mine and Mill Site

With the caveats discussed below, DEQ continues to support source control work at mine and mill sites as a priority. Source control at such sites is the logical first step to addressing human health issues and water quality concerns and was the first step taken in the BHSS "Box." However, the current list of sites needs to be carefully evaluated and pared down prior to inclusion in the ROD Amendment. We are encouraged that EPA is holding a meeting December 7 in Kellogg to review the sites to discuss those that may be questionable. Sites which are part of active mining facilities should be eliminated. Examples of such sites include tailings ponds in the Mullan and Big Creek areas.

Likewise, sites that pose little or no threat to human health or water quality should not be included in the upcoming ROD Amendment. DEQ has not performed a detailed evaluation of each of the over 300 sites listed in the Proposed Plan to identify those where remediation is unnecessary to address any threat. However, as examples of such sites, based on review of readily available data, DEQ believes work proposed in the Big Creek drainage and above Mullan is unnecessary as summarized below.

Surface water quality samples have been collected in the lowermost reach of Big Creek since December 2001. Review of available data indicates Big Creek zinc concentrations average 3.6 micrograms per liter (ug/l), with the highest reported concentration of 7.3 ug/l. This average discounts the 9 out of 25 sampling events where zinc is below the method reporting limits. The reported Big Creek zinc concentrations are about a tenth of the Idaho State Water Quality Standard of 88 ug/l (assuming a hardness of 30 milligrams per liter CaCO₃ equivalent). These data suggest that dissolved zinc originating in the Big Creek drainage is not a significant environmental impairment to Big Creek or the SFCDR.

Coupled with the Big Creek surface water quality data are data collected from the SFCDR above and below Big Creek valley. This data pair presumably indicates the effect of groundwater discharge to the river from the Big Creek alluvial materials. Although surface water in the river clearly exceeds the 88 ug/l threshold, data from 10 of 12 sampling events since 2007 at the up- and downstream sampling locations show decreasing dissolved zinc concentrations through the Big Creek gaining reach. These data suggest that Big Creek groundwater does not have a significant impact to the river water quality.

According to information in Table D-37 of the FFS, remedial action work in excess of \$45 million is scheduled for the next 30 years in the Big Creek drainage. In light of the referenced water quality data, inclusion of sites in the Big Creek drainage for remediation does not appear justified.

Additionally, Figure D-8 of the Proposed Plan illustrates the pipeline network in the Mullan area; Table 6-6 of the Focused FFS details the proposed remedial actions in the Mullan area. Table 6.6 indicates that groundwater and adit discharge capture and piping is proposed at a number of locations that do not exceed the minimum cleanup criteria of the FFS (88 ug/l dissolved zinc), including the following:

<u>Site No.</u>	<u>Name</u>	<u>Dissolved Zn (ug/l)</u>	<u>Source</u>
MUL020	Lucky Friday No. 2	0	groundwater
MUL058	Lucky Friday No. 1	0	groundwater
LOK088	Idaho Silver No.2	0	surface water
LOK011	Snowstorm No. 3	12	surface water

The pipeline to these sites would be approximately 3.6 miles long. The overall cost for this pipeline will incorporate at least five factors: (1) right-of-way due diligence and acquisition; (2) design; (3) construction; (4) operations and maintenance; and (5) water treatment at the CTP. Based on information presented in the FFS, there is insufficient rationale for this expenditure.

DEQ believes that further review of available data will result in similar conclusions regarding other sites currently included in the list of 300+ proposed for remediation.

An additional significant concern regarding mine and mill site source control and removals is the clear need to avoid the construction of large regional repositories in the SFCDR valley. The public has identified preservation of development potential as one of their highest priorities in the cleanup process. During the 20-month Upper Basin Repository siting effort, public input received from citizens and elected officials strongly endorsed development of upland waste consolidation areas in order to minimize the number and size of repositories needed in the more densely populated SFCDR valley. In response to this widespread public concern, EPA and DEQ have publicly stated that the disposal of wastes generated in upland areas will utilize waste consolidation areas located near the mine and mill site sources, distant from the SFCDR valley.

This position or intention is not evident in the Proposed Plan. For example in the Ninemile Creek drainage alone over 460,000 cubic yards (cy) of waste material is earmarked for disposal in regional

repositories (Figure D-3, Proposed Plan). For residents living along the haul route in Nine Mile Canyon and Wallace, this represents the passing of 92,000 trucks, assuming each truck hauls 10 cy and makes two trips, up-canyon empty and down-canyon full.

Accordingly, the upcoming ROD should not commit to large regional repositories for mine and mill sites. Implementation of large scale removal action should be preceded by a thorough review of disposal alternatives, including on-site consolidation areas. Adopting the disposal strategy of the Proposed Plan is inconsistent with the efforts and progress of the agencies and citizens in addressing repository issues over the past several years.

Finally, EPA has indicated that specific language is needed in RODs to allow work to occur. EPA should ensure that the ROD Amendment provides for the remediation of any significant additional mine and mill sites sources that may be identified or discovered.

Water Collection and Treatment above the Box

There is no dispute that surface water in many reaches of the SFCDR and tributaries is impaired as a result of mining impacts. DEQ understands EPA's effort to propose comprehensive remedial actions is intended, to the extent possible over many decades, to restore surface water quality in the upper Basin. It is, however, DEQ's firm position that selection of the proposal to collect and convey water to the Central Treatment Plant for active treatment is unnecessary and premature at this time. As indicated in the attached March 15, 2010 comments and supplemented below, DEQ believes that source control should be completed and its water quality benefits assessed prior to implementation of active water treatment. Likewise, water quality improvements related to natural attenuation/source depletion need to be further quantified, evaluated and enhanced prior to embarking on costly, never ending active water treatment.

EPA illustrates the extent of mining related water quality impacts with box and scatter plots in Figure 4 of the Proposed Plan. The plots demonstrate the widespread extent of dissolved zinc in the SFCDR and emphasize the contribution that Ninemile and Canyon creeks have to the overall SFCDR zinc load. The data also indicates a trend of decreasing zinc concentrations over a relatively short time span, approximately 20 years for the purpose of discussion. A comparison of the median values from Ninemile and Canyon creeks in Figure 4 show a reduction of approximately 30 percent over the monitoring period.

Supplemental data over a slightly longer time period is available from a sampling point on the SFCDR above Osburn. This data point is below the confluence of both Ninemile and Canyon creeks, reflecting zinc loading to the SFCDR from both creeks. The attached Figure 1 shows the point data and a linear regression trend line. The trend line indicates a 55% reduction in zinc concentrations during the period from 1978 to 2009. Extrapolation of the 1978 to 2009 trend line indicates the 88 ug/l ambient water quality will be met in about 15 years, or by 2025. Although this is an overly simplistic approach, it does illustrate marked water quality improvement over the monitoring period, corroborating the trend reflected in Figure 4 of the Proposed Plan.

Both Figure 4 of the Proposed Plan and attached Figure 1 appear to reflect the role of source depletion as a critical factor in attaining water quality improvements. Despite the availability of data indicating the existence of this process, source depletion is not fully considered as a component of long-term water quality trend prediction in Proposed Plan. Ignoring or failing to factor in these continuing water quality improvements could result in an overestimate of the work needed and waste precious dollars.

The thrust of this information is that selection of active water treatment remedies in the upper Basin is inappropriate prior to completion of source control actions and analysis of post-remediation water quality improvements from such actions and from natural source depletion. Given the finite financial resources

available for remedial action, the ROD Amendment should select prioritized source control actions based on individual site evaluations or at a minimum *clearly* outline a pathway for developing the prioritization of sites. The outcome would eliminate some sites from further remedial consideration and rank the remainder by risk level. EPA should also initiate work to better understand source depletion mechanisms and further assess remedial action effectiveness monitoring to calculate the decline of zinc concentrations and periodically re-evaluate the need for active water treatment. Statutorily required 5 year remedy reviews can be utilized to accomplish such evaluations.

There is no doubt that meeting water quality standards in the SFCDR is a monumental challenge. We are fortunate in that the risks associated with zinc in the river do not pose a human health risk since the solutions to date as outlined in the Proposed Plan are costly, uncertain and would take over a century to achieve existing water quality standards. The bottom line, based on the pervasive nature of the zinc sources impacting ground and surface waters, is that an ARAR waiver based on Technical Impracticability may ultimately be warranted for **both** groundwater and surface water quality standards.

Finally, if and when active water treatment actions which require collection and diversion are pursued, EPA must comply with Idaho water law and address any potential for injury to existing water users as outlined by IDWR. These concerns are particular critical given the large quantity of water proposed to be diverted and significant public concern that Idaho water rights be fully protected. IDWR is also concerned that the plan contains very little detail on the scope of the diversion projects. IDWR expects EPA to comply with Idaho water law and seek water rights prior to the diversion of water.

Fishery Improvements

As detailed in the attached comments of IDFG, a high value is placed on improving the fishery in the SFCDR and its tributaries. Data indicates that while fish do exist in the SFCDR, habitat is a critical limiting factor. Fishery improvements will require habitat improvement and adequate stream flow in addition to water quality improvements. Improving the fishery in the SFCDR will require coordination among the Natural Resource Trustees and entities implementing cleanup remedies. Efforts to improve the fishery must be balanced with the need for flood protection and limitations created by existing adjacent urban development. We believe EPA should continue to use goals based on measurable fishery benchmarks rather than numerical standards and criteria.

Water Collection and Treatment in the Box

DEQ recognizes that the Box is a significant source of zinc to the SFCDR and that source control measures have already been taken to improve water quality. We also believe that a better understanding of natural source depletion is a necessary prerequisite to treatment of Box water. DEQ agrees that a better case for water treatment can be made for the Box than the Upper Basin. The implementation of such a measure in the Box could also provide valuable experience and information to evaluate the practicality and effectiveness of collecting water for treatment in the broader Upper Basin. However, no funding is currently available to implement this measure and, unless settlement funds can be used, none appears likely within the foreseeable future. As a result, DEQ supports the inclusion of Box water collection and treatment in the ROD Amendment with the recognition that implementation depends on the identification of available funding followed by pilot tests to determine if the proposed remedy will function as anticipated. The efficacy and long term practicality of collecting groundwater should be the focus of such pilot tests. Implementation of the Box water quality work would also require careful cooperation with land owners to ensure current and potential land uses are protected.

Future Mining

One of the early principles of the cleanup at the BHSS, particularly concerning residential yard cleanups, was that the remedy should allow people in the Silver Valley to continue conducting their lives and business with minimal interference or restrictions. This principle should be followed concerning ongoing and future mining activities. DEQ understands that mining interests will suggest reasonable approaches or protocols to EPA that can ensure the coexistence of mining activities and necessary remedial actions. In general, remedial actions should not be initiated at sites with ongoing mining activities that are otherwise regulated and posing no particular threat. Similarly, future mining activities in areas where remedial actions have been taken should not be hindered so long as the protectiveness of the remedial measures will be maintained or replaced. DEQ believes there is an opportunity to develop communication and reasonable approaches among stakeholders with interests in this arena. DEQ is interested in participating with EPA and mining interests in developing such approaches.

Large Scale Floodplain Removals

DEQ generally supports source control, including floodplain removals. The proposed removals have raised significant questions and concerns by the public and have the potential to dramatically impact local residents and businesses. The large scope of these removals could also create large disturbances in hydrologic systems that are in need of evaluation for the design and construction of significant flood control projects. The design and construction of remedial actions in such areas will require careful coordination with local communities to fully consider and provide any necessary flood control components. The comments of IDWR more fully outline these concerns.

DEQ supports early focused action to address floodplain and bedload removals. As indicated, planning, design, and construction of this work must be integrated with and complement flood control planning, design, and construction. As previously suggested, the planned Osburn Ponds Repository should not be used for upland removals and should be reserved for floodplain removals to avoid construction of large regional repositories on the Valley floor.

Scope of ROD Amendment

DEQ's comments indicate that the scope of the remedial action selected by the upcoming ROD Amendment should be considerably reduced from the scope of the Proposed Plan. The ROD Amendment should not include active water treatment in the area above the Box or removals from mine and mill site and other source areas that are active mine facilities or are clearly insignificant contaminant sources based on readily available public knowledge. The ROD should not include unnecessary new repositories along the main valley floor and should, instead, maximize on-site consolidation of materials from mine and mill site removals. Beyond those significant changes, DEQ believes that the overall scope of the upcoming ROD Amendment should be limited to prioritized remedies which can be designed and implemented within a reasonably foreseeable period of time such as 10 to 15 years. A ROD which selects a buffet of broadly described remedies for implementation over nearly a century would not assure important public review and input. Nor would it account for future changes in environmental conditions or standards or the development of new remedial technologies or approaches. A ROD of the scope proposed would be inconsistent with the experience provided by past RODs at the BHHS. Likewise the massive cost of such a ROD could financially preclude the selection and implementation of remedies necessary to address other significant public health and environmental concerns at the BHHS, particularly those in the Lower Basin.

Many other commenters have concluded that a ROD of the scope set out by the Proposed Plan would side-step the public input process provided by statute and EPA regulation. DEQ agrees with this

conclusion despite EPA's good faith intention to provide for public input through the proposed implementation process. The public input processes related to the development and selection of RODs at the BHHS over the past 20 years have no doubt been highly contentious and have utilized considerable governmental resources. Nevertheless, DEQ has to conclude that ease and efficiency is not the highest goal in establishing public policy.

EPA has described the Proposed Plan as a valuable "roadmap" for guiding Upper Basin remedial actions long into the future. Indeed, EPA has made a commendable attempt to develop a single, final comprehensive plan to address the Upper Basin portion of the BHHS. However, a roadmap developed today, no matter how complete or detailed, cannot account for changes that will occur over very long periods of time. Just as actual roadmaps pertaining to road systems cannot account for changes in geography, roads or transport devices and advancements that will occur over the next century, neither can a remedy roadmap account for environmental conditions or standards or cleanup technologies that will exist or be available in the Silver Valley many decades from now.

Three major RODs (1991, 1992 and 2001) have been issued over the past 20 years for the BHHS. We know from experience and from the fact of formal amendments, Explanations of Significant Differences and the need (such as now) for new RODs-- that RODs at this site have limited temporal application and have required frequent update or replacement. The existing BHHS RODs that have functioned best are those that are well defined and limited in scope (comparing for instance the 1991 and 1992 RODs to the 2001 ROD). This experience should be applied to the current concerns about the vast scope of the Proposed Plan. In the past, EPA has itself argued that comprehensive RODs to address the BHHS are not feasible.

Finally, the cost of the Proposed Plan to address contamination in just the Upper Basin far exceed any reasonable level of funding that will likely be available for the BHHS. Selection of the Proposed Plan may effectively preclude any real consideration or selection of remedies for the rest of the Site, particularly the Lower Basin. Consideration of the relative need and merits of remedial actions that are important for the Upper Lower Basin should not be precluded by default.

Additional Matters

In addition to the foregoing comments regarding the Proposed Plan, brief comment is necessary regarding work and issues that are not directly discussed in the Proposed Plan but are critical to successful remediation at the BHHS. First, the fundamental premise of the remedial strategy at the BHSS is that successful cleanup is ultimately dependent upon a healthy community and a strong local economy. It is imperative that work protecting human health remain the highest priority even as EPA is proposing new work to address ecological concerns. Accordingly, EPA should make every effort to conclude work under the Basin Property Remediation Program and initiate work to repair damaged roads that serve as barriers to contamination. It is also important that cleanup work continue to employ local contractors and workers and use local vendors to the greatest extent possible. Work in the past has helped create jobs and supported a local economy that continues to experience extreme challenges.

The remedial dollars available for this Site are ultimately a finite resource. As indicated by the estimates in the Proposed Plan, the Asarco Trust will not be adequate to fund all of the work that may be selected in the upcoming or future RODs. It is therefore imperative to begin planning to ensure adequate O&M funds are established and maintained for any remedies implemented with settlement or Trust funds. Reserved funds must be adequate to address unforeseen future threats that may arise. One example of a threat that was unforeseen is the challenge faced by local governments in maintaining roads as barriers. As EPA and DEQ work with communities to fix the roads in the near term, we need to be aware that this issue and others like it could re-occur or arise to threaten the protectiveness of the human health remedy.

Provision and resources must be made available to address such issues in a timely manner. EPA should also ensure that adequate language exists in the existing RODs and the pending ROD Amendment to timely implement the road work currently being developed by EPA and DEQ.

We appreciate the challenges of developing a comprehensive Proposed Plan for this enormous and complicated site and the long, hard work EPA has put into this effort. On behalf of the State of Idaho, DEQ appreciates this opportunity to provide comments and looks forward to meeting with EPA over the coming months to address our common interest in enhancing the protection of human health and improving environmental conditions within the BHHS.

Sincerely,



Toni Hardesty
Director

Attachments:

- March 15, 2010 Letter to Dan Opalski
- November 5, 2010 Letter from Bureau of Homeland Security to Toni Hardesty
- Proposed Plan Upper Basin of the Coeur d'Alene River comments submitted by Idaho Department of Water Resources
- November 10, 2010 Letter from Idaho Department of Fish and Game to Toni Hardesty
- Figure 1. Surface Water Zinc Concentrations

This is the graph that Bill Rust put together showing declines in zinc concentrations.



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Toni Hardesty, Director

March 15, 2010

Daniel Opalski, Director
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U.S. Environmental Protection Agency
1200 Sixth Avenue Suite 900 (MS ECL-117)
Seattle, WA 98101

Dear Mr. Opalski:

This letter provides Idaho DEQ's overarching technical review of the Focused Feasibility Study for the Upper Coeur d'Alene Basin at the Bunker Hill Superfund Site. This review does not address ROD concurrence or State Superfund Contract issues. Our comments on the proposed ROD Amendment for the Bunker Hill Site are consistent with the goals that we set at the beginning of the process. Our goals are listed below.

Protecting the existing remedy is DEQ's first priority.

Cleanup must result in tangible environmental improvements at a reasonable cost.

The ROD must provide for use of innovative methods; examples are the re-processing of contaminated waste to offset cleanup costs and hydro-power generation associated with side drainage remedies.

The implementation plan must take into account factors such as cash flow, low operating and maintenance (O&M) costs, and adaptive management.

Provide clarity and certainty for re-use and recycling of contaminated soil and other wastes under the ICP so that local residents know how to safely manage and utilize these materials.

The ROD must have active community support.

We provided these goals to EPA Region 10 and have participated in the development of the Focused Feasibility Study with these goals as our guiding principles.

Idaho's first two goals are the most germane to the questions before the NRRB. Our technical comments on the FFS are discussed below.

Remedy Protection

Idaho DEQ supports the Remedy Protection (RP) work outlined in Alternative 2. We believe this work is critical to maintaining the human health remedy. Without RP actions, the long-term

sustainability of the cleanup is questionable. The proposed RP work takes a significant step in addressing a conclusion reached by the National Research Council (NRC). In *Superfund and Mining Megasites* (2005) the NRC noted that none of the remedies at Bunker Hill are permanent (p. 398).

The human health remedy for the Site relies on clean barriers to isolate underlying contaminated materials. The remedy removed the top 6 to 12 inches of contaminated soils based on contamination depth and property use and replaced that material with clean soil or gravel. This created the clean barrier between contaminated materials and human receptors.

The communities in the site are located in narrow mountain valleys with typical surface drainage issues associated with this setting. Local flow conditions during high precipitation events are characterized as steep gradient, high energy environments. Floodwaters may erode or bury the clean soil barriers, rendering the remedy ineffective. In watersheds with upgradient mine and mill site waste piles direct erosion of these piles and deposition of contaminated materials can also occur. The FFS demonstrates the case for Alternative 2 using the EPA evaluation criteria.

The RP work is consistent with DEQ's first goal to protect the human health remedy. However, additional work is needed to maintain the human health remedy. Two examples of additional remedy protection issues of concern for the State are: (1) local paved roads that fail as barriers due to normal wear and tear and expose the underlying contaminated road base materials; and (2) flood threats from the South Fork of the Coeur d'Alene River and Pine Creek. The roads issue will be addressed under existing RODs. DEQ and EPA are working with the Basin Environmental Improvement Project Commission to bring agencies with flood control jurisdiction together to develop a flood control project. Draft language for the ROD Amendment being reviewed by community leaders to address the flooding issues states the following:

"During EPA's Five Year Reviews of the completed portions of the Superfund cleanup, EPA evaluated risks of flooding and related threats to the remedy and recommended follow-up actions, resulting in the selection of remedy protection projects in this Amendment. EPA will continue to evaluate such risks to the Superfund cleanup in future Five Year reviews. However, comprehensive flood control is a complex multi-jurisdictional issue that exceeds the expertise and regulatory authority of EPA's and IDEQ's cleanup programs, and the local communities.

Therefore, the Basin Environmental Improvement Project Commission (BEIPC), consistent with its authority, agreed in November 2009 to take a leadership role in evaluating flooding issues associated with the South Fork and Pine Creek. Flooding is a large, system-wide concern for which a comprehensive review and plan are required to ensure that work with the greatest flood protection potential is ultimately implemented. The BEIPC has engaged a range of entities with the combined required expertise and regulatory jurisdiction. These entities include the Corps of Engineers (COE), Federal Emergency Management Agency (FEMA), Idaho Bureau of Homeland Security (IBHS), EPA, and IDEQ. EPA and IDEQ are committed to assisting the BEIPC led activities to evaluate and plan actions relative to dealing with South Fork and Pine Creek flooding issues. A funding source for the BEIPC led activities will need to be established. If these efforts identify actions that would meet Superfund remedy requirements, EPA could define and select these activities in future decision documents (e.g., ROD amendment)."

DEQ is currently working with EPA to identify potential funding to support the BEIPC efforts.

Mine and Mill Site Remediation

DEQ supports the mine and mill site remediation work in the FFS. This work will not only reduce risks associated with recreational use at these sites, it will help to improve water quality. As work progresses on mine and mill sites, each site will need to be further evaluated as to its contribution to water contamination and the risks it poses to recreationalists. This work will produce tangible environmental benefits at reasonable costs and should be prioritized over active water quality treatment.

Water Quality Remediation

Idaho DEQ supports cost effective and achievable surface and ground water quality improvement at the Bunker Hill Site. It is consistent with our mission. The biggest challenge of addressing water quality at this site is the pervasive nature of contaminant sources from mine wastes. There is no single geographic source of contamination impacting the surface water system. Due to the widespread distribution of contaminated soils in direct contact with groundwater, the surface water contaminant sources are more typically identified with large-volume alluvial deposits. Remediating these wide-spread sources as proposed in Alternative 2 is problematic, costly, and represents an open-ended commitment to active water treatment.

Observed metal levels have generally declined over time in surface- and groundwater at the site. This is believed to be due to previous source removal actions and natural attenuation. DEQ and its contractors have considered action that could harness one of the natural attenuation mechanisms to gain water quality improvements. These considerations were based on the observation that lower zinc concentrations in groundwater were associated with water that had slightly higher pH. This is believed to be due in part to the greater amount of precipitation of ferric hydrous oxides in the higher pH geochemical environment.

A preliminary alternative was developed that called for a permeable reactive barrier (PRB) using limestone to increase pH. DEQ and EPA ultimately agreed this approach needed more work and that it was premature to be part of the preferred alternative because of unknowns related to cost and effectiveness compared to conventional treatment. As indicated in the NRRB package the PRB may be further evaluated and may have particular application at specific areas. The State encourages further evaluation to understand the potential applicability of a PRB and other alternative treatment approaches.

DEQ's interest in exploring action which could take advantage of natural attenuation is not limited to simply addressing the high cost of conventional treatment. It also relates to the pervasive nature of the problem and the insufficiency of technical solutions available today to comprehensively address the problem.

The preferred alternative, Alt 3+, collects large amounts of water for treatment that will continue for the foreseeable future. There is no way to accurately predict how long it would take to meet water quality standards after implementation of the remedy. The Predictive Analysis Tool is useful to compare alternatives, but is not particularly useful in predicting when water quality standards will be

met. What we do know is that it will likely take several decades at a minimum to meet water quality standards at a very high cost.

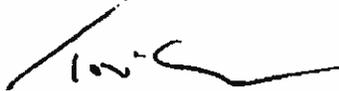
As listed at the beginning of this letter, DEQ's second goal is to provide tangible environmental improvements at a reasonable cost. The water quality alternatives in the FS push hard against this objective. DEQ does not oppose the water quality alternatives in the FFS. However, we believe the selected remedy from the FFS should be implemented in a deliberative and iterative manner to ensure that the proposed remedies will function as expected. Treatability studies that test the Typical Conceptual Designs should also focus on better understanding of the geochemical and groundwater system to evaluate whether better alternatives are available to improve water quality. As discussed above, we support the prioritization of source control actions related to mine and mill sites over implementation of the water quality treatment remedy. During the period of mine and mill site cleanup, the cleanup project should continue to monitor water quality and evaluate the timing and sequencing of the water quality remedy.

Summary

DEQ supports EPA's technical work in the FFS. Our recommendations would be to prioritize work that protects the investment already made to protect human health. Secondly, we would prioritize the mine and mill site work that will produce tangible results to protect human health and water quality. Finally, we share EPA's concern and mission to meet water quality standards. However, the pervasiveness of the sources creates a complexity that will cost hundreds of millions of dollars and take many decades to meet those standards. There is a risk that scarce dollars could be lost on work that makes little progress in improving water quality. Thus, we encourage a deliberative and measured approach to implementing the remedy associated with water collection and treatment.

Finally, I would like to recognize that this FFS reflects a solid effort to meet EPA's obligation to develop a clean up plan that protects human health and the environment which includes meeting water quality standards. This is a difficult if not almost impossible task at this site. I also appreciate EPA's role in creating an open and constructive working relationship between EPA and DEQ. My intent is to keep working collaboratively to create a cleanup plan that will help make the Silver Valley whole for the benefit of its current and future residents.

Sincerely,



Toni Hardesty
Director

TH:ra



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November 5, 2010

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RE: Environmental Protection Agency Proposed Records of Decision (ROD) Amendment

Dear Ms. Hardesty:

The Bureau of Homeland Security (BHS) would like to take the opportunity to comment on the Records of Decision (ROD) Amendment proposed by the U.S. Environmental Protection Agency (EPA) pertaining to projects proposed for the Superfund site located in Shoshone County. In particular, because the risk exposure from flooding in Shoshone County is great and the mitigation of flood risk is most effective when considered during the design phase of projects occurring in flood-prone areas, BHS would like to bring to the attention of DEQ some important points to consider in regards to the area's flood risk and floodplain management as DEQ formulates the State's comments on the proposed ROD Amendment.

Over the last several decades, flooding continues to be the primary natural hazard impacting Shoshone County. The most obvious impact from flooding is the damage to life and property. Further, the deposit of contaminated materials from old mine and mill sites throughout Shoshone County's floodplain resulting from flood events exacerbate the cost of recovery and increase the population's risk of exposure to the health hazards associated with those contaminants. As a result, there has been a significant impact on the economic and physical well-being of Shoshone County's residents.

Each flood event presents a significant risk of recontamination to the remediated properties. With that in mind, BHS fully support's EPA's goal to protect existing remediation from the effects of localized flooding. Significant investment has been made by taxpayers to remediate contaminated properties to protect the health of citizens and the environment, and these investments should be protected. These properties and remediation projects represent a substantial risk of exposure to flood damage for Shoshone County and its communities, as well as for the State of Idaho. The protection of past remediation efforts from recontamination means protecting from further damage and unnecessary expense the investment of time, money, and effort that Idahoans have made to protect Shoshone County and its communities.

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Ms. Toni Hardesty

November 5, 2010

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It is the position of BHS that in order to be most effective, future remediation efforts by EPA must take into consideration the risk of flooding and its potential ramifications. We would like to express our concern over the need for close coordination between appropriate state and federal agencies and the flood plain management officials from the local jurisdictions for any remedy action that takes place within a designated special flood hazard zone.

The effort for coordinated input from key stakeholders such as the U.S. Army Corps of Engineers, Federal Emergency Management Agency, Idaho Department of Water Resources, local Floodplain Administrators, and the Idaho Bureau of Homeland Security is important to ensure decisions are made in a risk-informed manner with respect to all remedy projects. Given that the long-term maintenance of remediation projects in Shoshone County falls to the State of Idaho, it is important that Idaho's taxpayers are protected as much as possible from any future duplication of past efforts and expenditure that may occur as a result of a failure to plan appropriately. We believe that a collaborative and comprehensive basin-wide flood study involving multiple state and federal partners will best accomplish this.

In addition, any development in the floodplain impacts floodplain management and the ability of Shoshone County and its communities to remain in compliance with the requirements of the National Flood Insurance Program (NFIP). For Shoshone County and its residents, access to NFIP allows for federally-backed mortgages and business loans that are critical to the economic engine of Shoshone County. Participation in the NFIP also provides a mechanism to mitigate economic losses from flooding in the area and hinges on the remediation of flood risk. It is important that the risk of flooding and further deposition of contaminants not be exacerbated, with the result that these communities fall out of compliance with NFIP and lose the ability to obtain flood insurance. Therefore, the need to maintain NFIP compliance and protect homes, businesses, and public property necessitates the coordination of remediation with local floodplain administrators.

BHS wants to ensure that any projects undertaken in the Superfund site by EPA considers flood risk so that the State's responsibility to maintain remedies will be feasible. We also hope that EPA's remedies will go far in protecting the people of Shoshone County from further harm and enhance their quality of life. We appreciate the opportunity to comment and ask that DEQ considers our points in the State's formal comments to EPA on this proposed ROD Amendment.

Sincerely,



Bill Shawver, Brigadier General
Director, Idaho Bureau of Homeland Security

BS/amc

Proposed Plan
Upper Basin of the Coeur d'Alene River,
Bunker Hill Mining and Metallurgical Complex
Superfund Site

Comments submitted by
Idaho Department of Water Resources

Comment Related to Water Rights:

The Preferred Remedial Alternative ("PRA") for the Upper Basin, Alternative 3+(d), includes extensive remedial actions along the South Fork of the Coeur d'Alene River (SFCDR) and its primary tributaries (Canyon Creek, Ninemile Creek, Big Creek, Moon Creek, and Pine Creek). Specifically, the PRA calls for the interception and diversion of an estimated average of 12,800 gpm (nearly 29 cfs) of surface and ground water.¹ The PRA then calls for treatment of the diverted water, piping some of the water as far as 15 miles to the Central Treatment Plant in Kellogg, Idaho. The Idaho Department of Water Resources ("IDWR") is concerned that the Proposed Plan lacks any discussion regarding water rights and the potential for injury to existing water users under the proposed action. This is especially critical given the large quantity of water proposed to be diverted and transported through the basin. IDWR is also concerned that the plan contains very little detail on the scope of the diversion projects. IDWR expects the EPA to comply with Idaho water law and seek water rights prior to diverting water as proposed in the PRA.

Comments Related To Flood Risk:

A statement in the first paragraph of the plan summary is the critical idea on which these comments are based. The sentence says, "The changes to the cleanup plan will result in a more complete cleanup of the Basin, will protect human health for the long-term and will also ensure better protection for water quality, wildlife and habitat."

The site is the entire basin of the SFCDR. By adopting a basin or watershed approach, it implies the characteristics of the watershed will be analyzed or discussed. There is no evidence in the plan of a watershed inventory or analysis. Hydrology and hydraulics, where mentioned, are for site-specific project areas. The hydrology and hydraulic characteristics of the watershed, or basin, are critical to understanding all of the risks to humans, their health, their property, and to water quality, wildlife and habitat. The plan is totally focused on the health effects of contamination from historical mining-related waste and consequently it misses the interaction between the risks posed by the contaminants and the increased risks of recontamination posed by natural hazards such as flooding, landslides, wildfire and earth quake. As presented in the

¹ The Proposed Plan states that an estimated average flow of 12,800 gpm of water will be treated. Proposed Plan at p. 7-6. It is assumed that the estimated average flow of water treated equals the estimated average amount of water diverted.

plan, there is no environmental or geomorphological context of local conditions, which makes it impossible to evaluate the range of effects of the actions in the proposed alternative.

Before a preferred alternative is selected, a basin-wide study of the interaction between remediation activities and flooding should be conducted. When the potential effects of the proposed actions on hydrology, flooding and stormwater are known, then appropriate actions can be identified and a preferred alternative selected with the confidence that a comprehensive, integrated analysis exists for public and technical review.

Flooding of the main stem SFCDR and its tributaries is common. A history of flooding in the plan would impart the need for protection of remediated sites. One of the few direct references to flooding was in Chapter 3, where the breaching of dams impounding mining waste was identified as a significant factor in the distribution of mining wastes across the valley.

Currently there are about 825 National Flood Insurance policies insuring properties (structures and contents) for more than \$1.126 billion. There may be other insurance policies underwritten by private companies. There have been 93 paid losses since 1978. This highlights the awareness and value residents of the Silver Valley place on protecting their properties from flooding – a common occurrence.

Flood risk is identified on Flood Information Rate Maps (FIRMs) that have been available for the SFCDR and some tributaries at least since 1979. There is no evidence that these were consulted during development of the plan or previous remediation activities. Although the FIRM is a limited approach to defining flood risk, it is a tool the communities in the National Flood Insurance Program (NFIP) use to regulate floodplain development activities. Shoshone County, Mullan, Wallace, Osburn, Wardner, Kellogg, Smeltonville and Pinehurst all are in good standing in the NFIP. Each community has an ordinance that adopts the FIRM and the Flood Insurance Study (FIS), which provides the technical information used to develop the FIRM. Where there are detailed studies, the FIS includes stream profiles based on surveyed cross sections of the water course and Base Flood Elevations (the 1% annual chance event formerly known as the 100-year flood event) derived from hydraulic modeling.

Development in the watershed may affect the hydrology and hydraulics on which the FIRMs are based. Development in the mapped flood hazard area must be permitted by the NFIP communities. If the development (which by regulation includes construction, grading, drilling, mining, etc.) causes changes in the mapped flood hazard area, technical information documenting the change to the hydrology and/or hydraulics and therefore the FIRM, must be submitted to the Federal Emergency Management Agency for review and approval.

Will the remediation activities in the alternatives be documented in the FEMA map revision process? If not, the changes may affect the flood risk to properties and these changes will not be documented. In some cases, the changes may reduce the flood risk, and in others increase flood risk. Either way, property owners, lenders, and the communities need to know, otherwise some property owners may over-insure their buildings and others may under-insure against

flood damage, and new development may be permitted in areas that have been made more at risk of flooding due to remediation actions. The location and nature of flooding may be altered and the safety of people, their property and remediated sites affected without review or notification. The concern expressed in the plan is that remediated sites may be damaged in flooding. In reality, inundation of homes, businesses and other buildings would result in contamination. This would pose an additional risk to human health that should be considered along with other potential sources of exposure to contamination.

Several proposed actions in the preferred alternative disconnect ground and surface water. The hydrological effects need to be evaluated. An unintended consequence of these actions could be alteration of riparian vegetation and ecology if the hydrologic regime were altered. Wildlife and habitat may be negatively affected rather than protected. Another negative aspect of breaking the connection between surface and ground water is reducing the attenuation of flooding provided by an intact floodplain. Putting flood and storm water in a lined channel moves the water quickly, but may result in faster downstream flooding of greater magnitude. Communities in the NFIP and the Community Rating System are encouraged to protect the natural and beneficial functions of floodplains in realization of the ecological services they provide to reduce flooding.

A catastrophic flood event is likely to affect the entire basin. Remedies should be designed to offer protection to at least the .2% chance event (500-year) to effectively protect human health, property and the investment of public funds.

Chapter 7 includes mention of hydrology and hydraulic studies. Storm frequencies are identified. Storm and flood frequencies are not the same. Storm frequencies are important for storm water impacts and site specific run off calculations, but flood frequencies are necessary to evaluate flood risk and flood mitigation activities.

In Chapter 4 the plan says that "Potential damage to a large portion of the remedies from major flooding has not been addressed at this time...Flood control projects will be done by others." A holistic approach to remediation would integrate the flood risk and flood mitigation activities into the preferred alternative for remediation of contaminated soils and water. Flooding is such an integral part of the natural processes in the basin, it needs to be included in all future actions, whether remediation or community growth and development. Flood control is an impossible target. The goal should be mitigating the impacts of flooding. The best approach would be moving forward with an integrated plan for remediation and flood mitigation in a process involving experts in all areas of hazards and risk reduction.



IDAHO DEPARTMENT OF FISH AND GAME

PANHANDLE REGION
2885 West Kathleen Avenue
Coeur d'Alene, Idaho 83815

C.L. "Butch" Otter/Governor
Cal Groen/Director

November 10, 2010

Ms. Toni Hardesty, Director
Idaho Dept. of Environmental Quality
1410 N. Hilton
Boise, ID 83706

Dear Toni:

RE: IDFG Comments on the Proposed Upper Basin Cleanup Plan

We have reviewed the Environmental Protection Agency's proposed plan to cleanup historical mining-related contamination in the upper basin of the Coeur d'Alene River (Upper Basin). The proposed plan focuses on contaminated areas along the South Fork of the Coeur d'Alene River, its tributaries downstream to one mile west of the confluence of the South and North Forks of the river, and the Bunker Hill "Box."

The Upper Basin is the principal area of historical mining activities and is the primary source of heavy metals contamination downstream from the town of Wallace. Proposed changes to the current cleanup plan are intended to take a "holistic approach" resulting in a more complete cleanup of the Basin, and better protection of public health for the long-term. Additionally, to address recommendations from the National Academy of Sciences¹ (from the 2002 ROD), this effort is also intended, in part, to provide better protection for water quality, wildlife, and habitat.

The Preferred Alternative is Alternative 3+(d) and RP-2.

Alternatives 3 and 4 are Operable Unit 3 (Upper Basin outside the Box) Remedial Alternatives (same as Ecological Alternatives from the 2001 Feasibility Study). Alternatives (a) through (e) involve Operable Unit 2 (inside the Bunker Hill Box) Remedial Alternatives. Alternative 3+ and 4+ are the updated and expanded remedial alternatives – the difference being the number of sites that have changed from no proposed action to proposed action(s). Also included in the Preferred Alternative is Remedy Protection Alternative RP-2. Alternative RP-2 consists of combinations of actions expected to protect existing remedies (from previous decision documents) against tributary flooding and high precipitation events up to the 50-year storm. (Alternative RP-1: No Further Action)

¹ "Though EPA's decisions about human health risks were generally sound, the committee found some serious blind spots in the agency's plan for cleaning up the environment and protecting fish and wildlife" (The National Academies INFOCUS, Fall 2005 Vol. 5 No.3).

Alternative 3: More Extensive Removal, Disposal, & Treatment

Updates to 2001 FS Alternatives 3 & 4 based on information & data obtained since the 2002 ROD for OU3	Alternative (a): Minimal Stream Lining
	Alternative (b): Extensive Stream Lining
	Alternative (c): French Drains
	Alternative (d): Stream Lining/French Drain Combination
	Alternative (e): Extensive Stream Lining/ French Drain Combination

Alternative 4: Maximum Removal, Disposal, & Treatment

Updates to 2001 FS Alternatives 3 & 4 based on information & data obtained since the 2002 ROD for OU3	Alternative (a): Minimal Stream Lining
	Alternative (b): Extensive Stream Lining
	Alternative (c): French Drains
	Alternative (d): Stream Lining/French Drain Combination
	Alternative (e): Extensive Stream Lining/ French Drain Combination

“The Preferred Alternative for the Upper Basin would represent a final remedy for:

- Human health protection for surface water used for drinking purposes;
- Ecological protection for surface water; and
- Human health and ecological protection for soil, sediments, and source materials at locations where remedial actions are taken.”

These goals are expected to be accomplished by extensive excavation of waste rock, tailings, and floodplain sediments; capping, re-grading, and re-vegetating of waste rock areas; and isolating contaminated groundwater (using French drains and stream liners) from existing tailings impoundment facilities to reduce flows into surface water.

Also included as part of Alternative 3+ are stream and riparian cleanup actions in every major watershed within the Upper Basin. The objective is to improve bank and stream stability by reducing erosion and sediment loading in the stream. No stream restoration activities are included in these objectives.

Recent efforts have reduced the amount of heavy metals entering the Upper Basin river system, reducing risks to human health, fish, and other aquatic species that live in and near the river. The further reduction of heavy metals entering the Coeur d'Alene River system will enhance water quality, and improve conditions for numerous fish and wildlife species.

The streams and rivers were not only impacted by the heavy metals leaching into them, but also by removal of all of the trees along the stream course, and by the tailings and waste rock that was deposited in and along the banks of the stream, altering the natural channel. Channelization for

development of transportation infrastructure (railroads and highways) and flood control have also significantly impacted the ability of Upper Basin streams to support beneficial uses.

Prior to the mining boom in the Silver Valley beaver dams were abundant along the South Fork Coeur d'Alene River. They supported a variety of fish and wildlife and helped stabilize water levels during high runoff periods. The banks of the stream were well vegetated with willow and alder and cottonwood trees arched over the water providing shade for the abundant fish inhabiting the stream (Rabe and Flaherty 1974). Dense western red cedar groves were also reported in the journals of Captain John Mullan (circa 1858).

Although human health is of primary importance, the benefits of improving aquatic and riparian habitat are important as well. Section 102 (a) of the Clean Water Act states:

The Administrator shall, after careful investigation, and in cooperation with other Federal agencies, State water pollution control agencies, interstate agencies, and the municipalities and industries involved, prepare or develop comprehensive programs for preventing, reducing, or eliminating the pollution of the navigable waters and ground waters and improving the sanitary condition of surface and underground waters. In the development of such comprehensive programs due regard shall be given to the improvements which are necessary to conserve such waters for the protection and propagation of fish and aquatic life and wildlife, recreational purposes, and the withdrawal of such waters for public water supply, agricultural, industrial, and other purposes. For the purpose of this section, the Administrator is authorized to make joint investigations with any such agencies of the condition of any waters in any State or States, and of the discharges of any sewage, industrial wastes, or substance which may adversely affect such waters.

The fish species in the Coeur d'Alene River system represent a valuable resource, not only for the local population, but also for Idaho residents and the numerous nonresidents that come to Idaho to enjoy substantial recreational opportunities including fishing. Fish species in the basin not only have value from a sport fishing perspective, but also for ecological and conservation purposes. Westslope cutthroat trout and bull trout were both reported from Upper Basin streams in the late 1800s/early 1900s; westslope cutthroat are still found in the Upper Basin.

Information on sport fishing values is available as a result of a 2003 Idaho Department of Fish and Game mail survey of Idaho fishing license holders. Completed survey responses were used to develop statewide economic information about fishing in Idaho. Shoshone County ranked 16th out of the 44 counties in Idaho for spending by anglers on fishing trips. Anglers fished 100,784 days on 75,237 trips to Shoshone County spending an average of \$112 per trip. Angler spending on fishing with destinations in Shoshone County was \$8,439,539 in 2003. Anglers spent an additional \$118,791 on fishing licenses and permits purchased in Shoshone County.

- \$2,921,441 was spent on food and beverages in stores
- \$ 678,127 was spent on food and beverages in restaurants
- \$1,564,385 was spent on fishing supplies
- \$ 802,266 was spent on other equipment and supplies
- \$1,823,912 was spent on round-trip transportation
- \$ 70,995 was spent on outfitters and/or guides
- \$ 368,772 was spent on motels
- \$ 182,381 was spent on campgrounds (public and/or private)
- \$ 27,260 was spent on Access Fees (boat launches, parking, etc)
- \$ 118,791 was spent on fishing licenses and permits purchased in Shoshone County

The following table shows the primary fishing destinations in Shoshone County for 2003, and the amount spent on fishing trips during that period.

	St. Joe	NF CdA	CdA
Total Spending	\$4,077,947	\$1,980,687	\$1,070,493
Total Trips	25,384	20,035	15,320
Average Trip	\$161	\$99	\$70

Restoring the riparian zones and the natural channel characteristics (to the extent possible), as well as improving water quality in the Upper Basin is important and necessary for improving and re-establishing the valuable fish resource in the Valley. High quality riparian vegetation (trees and shrubs) has complex root systems that slow stream bank erosion during high flows with well-rooted, woody vegetation that can withstand increased flows more effectively than stream banks that are sparsely vegetated. In time, the trees and shrubs will provide shade and cover for fish and habitat for many species of wildlife, and eventually, will become a source for valuable large woody debris in the river. Riparian vegetation also provides habitat for numerous species of macroinvertebrates; an important food source for fish and songbirds. Improving conditions translates to increased fishing opportunities as well as other recreational opportunities for the public (e.g., Galena Ridge – page 3-2 of the Proposed Plan).

In addition to the above mentioned benefits, Idaho and neighboring states (MT/WA/OR) have recently fended off a listing of westslope cutthroat under the Endangered Species Act by demonstrating that healthy populations and habitat exist in places like the North Fork Coeur d'Alene River, and that the appropriate state regulatory mechanisms are in place to protect them. Currently the North Fork is managed by IDFG as a quality westslope cutthroat trout fishery and it is very popular with anglers. Several research and restoration projects have been and are currently being conducted on the North Fork and the Little North Fork Coeur d'Alene Rivers. Restoration activities on the South Fork could expand westslope cutthroat habitat, which could further bolster the status of this highly valued native sport fish.

Whether the Preferred Alternative or another alternative is selected, the outcome will be an Implementation Plan that is expected to identify priority projects and propose a framework for guiding on-the-ground projects and activities selected in the ROD Amendment. The Implementation Plan is intended to be a dynamic document that incorporates public input; testing, monitoring, and evaluating applied strategies; and incorporating new knowledge into management activities.

The Upper Basin of the Coeur d'Alene River – Bunker Hill Mining and Metallurgical Complex Superfund Site is an extremely large site with wide-ranging impacts. The scope and complexity of the proposed activities for the cleanup of historical mining related contamination in the Upper Basin is tremendous. Properly implemented, EPA's proposed actions in the Upper Basin have significant potential to benefit fish and wildlife, and the recreation they support. We also agree with an adaptive management approach. Appropriately applied, the adaptive management approach should provide EPA the ability to make needed adjustments over time in both a biologically and socially defensible manner. We believe adaptive management implies a clear purpose or goal with a detailed plan that describes benchmarks for measuring success.

Cleanup in the Upper Basin, in a manner that address public health, meets the intent of the Clean Water Act to provide for fishery resources, and is in concert with social needs is a challenging task. With proposed actions that could potentially affect the hydrology of the Upper Basin and will include alterations to existing stream channels and riparian areas, we believe it is essential that these actions result in conditions that allow for recovery of native fish stocks by insuring adequate stream flows and complex habitat features along with improved water quality.

Thank you for the opportunity to comment. We look forward to working with EPA on developing the Implementation Plan(s).

Sincerely,



Charles E. Corsi
Regional Supervisor

CEC:MTB

C: Sharon Kiefer, Boise

Rabe, F.W., and D.C. Flaherty. 1974. The River of Green and Gold: A Pristine Wilderness Dramatically Affected by Man's Discovery of Gold. Natural Resources Series No. 4. Moscow, ID: Idaho Research Foundation, Inc. 93pp.

EPA – Upper Basin proposed plan

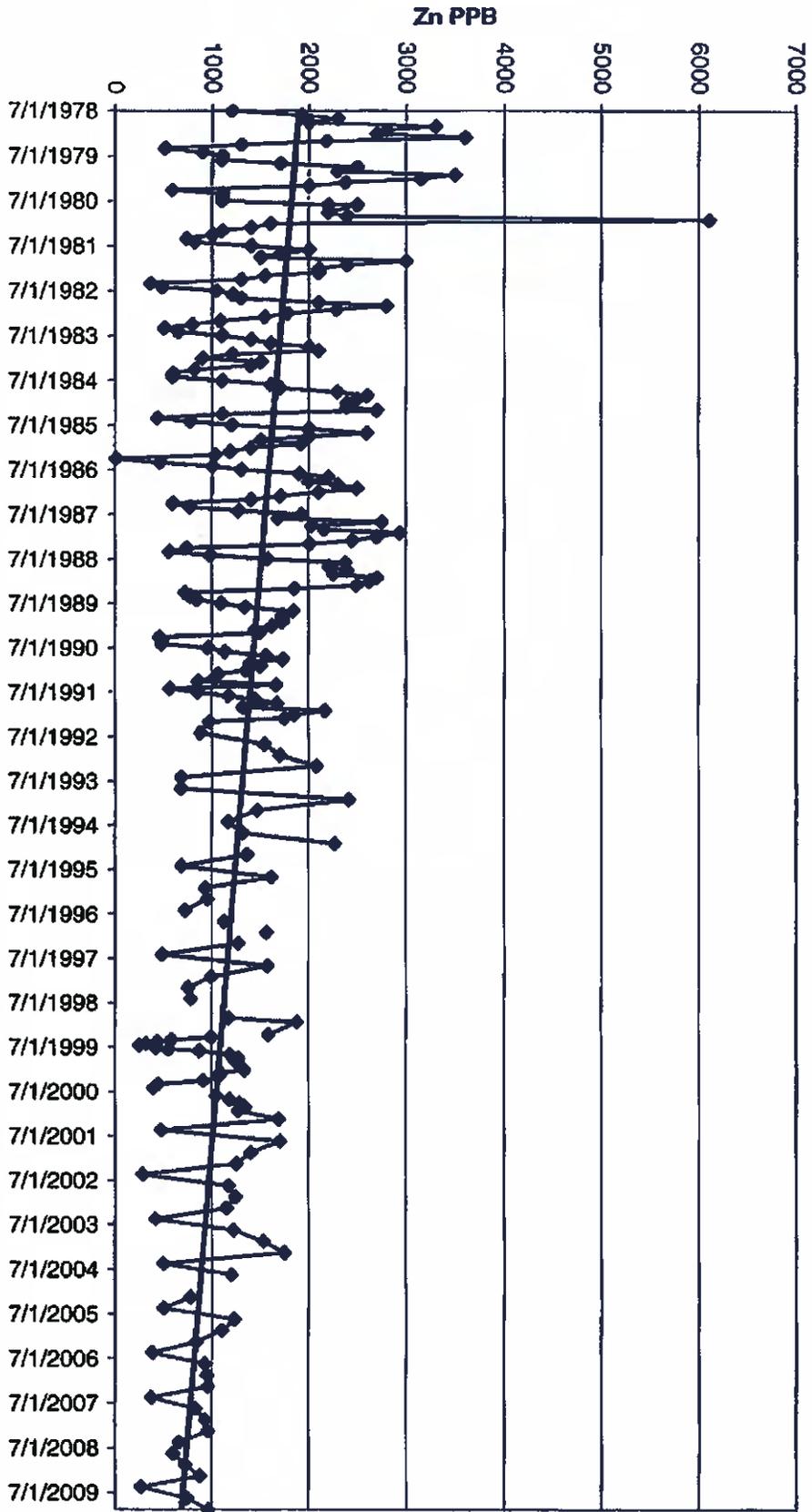


Figure 1
Surface Water Zinc Concentrations
South Fork Above Osburn Ponds
NPDES Compliance Sampling