Milltown Reservoir Sediments
Site Operable Unit
of the Milltown Reservoir/Clark Fork River Superfund Site

Record of Decision

Part 3: Responsiveness Summary

U.S. Environmental Protection Agency Region 8

10 West 15th Street
Suite 3200
Helena, Montana 59626

December 2004

Contents

Section **Page**

1 Introduction 3-1
1.1 Public Comment History 3-1
1.2 Public Comment Process 3-2

2 Original Proposed Plan Comments and Responses 3-3
2.1 Overview of Process, Responders, and Stakeholder Comments 3-3
2.1.1 Kinds of Form Letters Received 3-3
2.1.2 Comment Documents by Commenter Type 3-4
2.1.3 Types of Comments Received 3-5
2.2 Stakeholder Comments and Responses 3-8
2.2.1 Opinion of Plan 3-8
2.2.2 Dam Removal 3-10
2.2.3 Sediment Removal 3-11
2.2.4 Bandman Flats Repository 3-15
2.2.5 Opportunity Ponds Repository 3-16
2.2.6 Channel Reconstruction 3-18
2.2.7 Groundwater 3-19
2.2.8 Human Health Risks 3-21
2.2.9 Ecological Risks 3-22
2.2.10 Opinion of EPA 3-25
2.2.11 Economic Impacts 3-26
2.2.12 Comment Noted—No Response Required 3-28
2.2.13 Unrelated Comment—Out of Scope 3-28
2.2.14 Compliance with Regulations 3-28
2.2.15 Comment Period—Extend Comment Period 3-30
2.2.16 Social Impacts 3-30

3 Revised Proposed Plan Comments and Responses 3-33
3.1 Overview of Process, Responders, and Stakeholder Comments 3-33
3.1.1 Kinds of Form Letters Received 3-33
3.1.2 Comment Documents by Commenter Type 3-34
3.1.3 Types of Comments Received 3-35
3.2 Stakeholder Comments and Responses 3-38
3.2.1 Opinion of Plan 3-38
3.2.2 Dam Removal 3-40
3.2.3 Sediment Removal 3-41
3.2.4 Bandman Flats Repository 3-44
3.2.5 Opportunity Ponds Repository 3-44
3.2.6 Channel Reconstruction 3-47
3.2.7 Groundwater 3-50

Section **Page**

3.2.8 Surface Water....3-51
3.2.9 Human Health Risks....3-52
3.2.10 Ecological Risks....3-56
3.2.11 Opinion of EPA....3-57
3.2.12 Economic Impacts....3-57
3.2.13 Comment Noted—No Response Required....3-59
3.2.14 Compliance with Regulations....3-59
3.2.15 Social Impacts....3-61
3.2.16 Cooperation Among Agencies....3-63
3.2.17 Third Party Interests....3-63

4 RP Comments and EPA Responses....3-65
4.1 Introduction....3-65
4.2 NorthWestern Corporation....3-65
4.3 Atlantic Richfield Company: General Comments....3-66
4.3.1 Section I: General Comments on the MRSOU Cleanup Proposal..3-66
4.3.2 Section II: Alternative Dam and Sediment Removal Approach Description....3-70
4.4 Atlantic Richfield Company: Specific Comments on the *Original Proposed Plan*....3-71

5 Stakeholder and RP Categorized Comments....3-81

Exhibit **Page**

3-1 Number of Commenters for Each Type of Form Letter: Original Proposed Plan.....3-4
3-2 Number of Total Comment Documents Received, Listed by Commenter Type: Original Proposed Plan....3-5
3-3 Categories and Subcategories Applied to Stakeholder Comments (Excluding the RPs): Original Proposed Plan....3-5
3-4 Number of Commenters for Each Type of Form Letter: Revised Proposed Plan....3-34
3-5 Number of Total Comment Documents Received, Listed by Commenter Type: Revised Proposed Plan....3-34
3-6 Categories and Subcategories Applied to Stakeholder Comments (Excluding the RPs): Revised Proposed Plan....3-35

1 Introduction

This *Responsiveness Summary* is Part 3 of the *Record of Decision* for the Milltown Reservoir Sediments Operable Unit (MRSOU). The purpose of the *Responsiveness Summary* is to present the U.S. Environmental Protection Agency's (EPA's) response to significant stakeholder and responsible party (RP) comments on the *Proposed Plan* in accordance with 40 CFR 300.430(f)(3)(F) and Section 117(a) and (b) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (CERCLA). The public outreach process used to encourage comment and participation on this decision is presented in this *Record of Decision* at Part 2, *Decision Summary*, Section 3.

This *Responsiveness Summary*, consists of four sections, as follows:

- **Section 1—Introduction:** Provides an overview of the public comment history and process.
- **Section 2—Original Proposed Plan Comments and Responses:** Provides an overview of the comments received from the public and various stakeholder groups on the April 2003 *Original Proposed Plan*, then summarizes with more detail the specific, significant comments received from all submittals. Responses to those comments are provided by the lead agency: Region 8 of the EPA, in consultation with the Montana Department of Environmental Quality (DEQ).
- **Section 3—Revised Proposed Plan Comments and Responses:** Provides an overview of the comments received from the public and various stakeholder groups on the May 2004 *Revised Proposed Plan*, then summarizes with more detail the specific, significant comments received from all submittals. Responses to those comments are provided.
- **Section 4—RP Comments and Lead Agency Responses:** Summarizes significant *Original Proposed Plan* comments from the RPs—the Atlantic Richfield Company and NorthWestern Corporation—and lead agency responses to those comments.
- **Section 5—Stakeholder and RP Categorized Comments:** The original text of the comments, from the stakeholders on both the *Original* and *Revised Proposed Plan*, and from the RPs on the *Revised Proposed Plan*, are provided as Adobe Acrobat Reader (PDF) files on an enclosed CD-ROM.

1.1 Public Comment History

The history of public involvement at the MRSOU is described in this *Record of Decision* in Part 2, *Decision Summary*, Section 3, *EPA, State, and Community Participation in the RI/FS Process.* Formal public comment on a preferred cleanup alternative began with the release of the *Original Proposed Plan* in April 2003. In this plan, EPA noted that changes may result from public comments or during the remedial process.

During the 90-day public comment period on the *Original Proposed Plan*, EPA received a significant number of comments that opposed disposing of the removed sediments at

Bandman Flats, the proposed local waste repository. EPA also received comment from the Atlantic Richfield Company, which presented new information and outlined a proposal to remove the sediments in a manner different than that described in the *Original Proposed Plan*. The Atlantic Richfield Company comment, developed in conjunction with Missoula contractor Envirocon, Inc., proposed to excavate sediments using conventional mechanical excavation equipment instead of hydraulic cutterhead dredges and proposed to haul the removed sediments by rail to, and dispose of them at, Opportunity Ponds rather than placing the materials in the Bandman Flats repository. EPA and DEQ evaluated this new information, required the Atlantic Richfield Company to produce additional information regarding potential scouring of sediment associated with the proposal, and brought in scientific peer reviewers from across the country to examine the modeling results. The agencies' conclusion after evaluating the new information was that the dry sediment removal and Opportunity Ponds disposal could be done safely and effectively.

In response to the public and RP comments, EPA issued a *Revised Proposed Plan* in May 2004. EPA held a 30-day comment period on the revised plan. Public comment was more favorable than for the *Original Proposed Plan*. The Selected Remedy in this *Record of Decision* is similar to the cleanup plan proposed in the *Revised Proposed Plan*. The Selected Remedy is described in detail in Part 2, *Decision Summary*, Section 12, *Selected Remedy*.

1.2 Public Comment Process

The analysis method used by EPA provided a means of categorizing (and thereby separating) comments into common topics, then grouping similar comments together so that the public's and stakeholder's comments could be thoroughly and efficiently examined. To accomplish this, EPA analyzed and responded to comments using a four-step process:

- First, EPA identified comment categories and subcategories after reviewing comment documents.
- Second, EPA assigned individual comments within each piece of correspondence a comment number, category, and subcategory.
- Third, EPA viewed the comments for each subcategory as a group and summarized the range of issues represented by the comments.
- Finally, EPA, in consultation with DEQ, wrote a response for each subcategory of comments.

The original comment letters, with categories and subcategories identified for each, are provided in Section 5, *Stakeholder and RP Categorized Comments.*

2 Original Proposed Plan Comments and Responses

2.1 Overview of Process, Responders, and Stakeholder Comments

A total of **3,853 people submitted comments**, excluding the Atlantic Richfield Company and NorthWestern Corporation (their comments and responses are summarized in Section 4, *RP Comments and Lead Agency Responses*). Many people submitted more than one comment document. Therefore, the **total number of comment documents submitted was higher, at 4,029,** excluding Atlantic Richfield Company and NorthWestern Corporation.

The statistics in this summary **are based on comment documents**—not people. Two basic types of comment documents are recognized:

- **Unique Comment Documents**, such as letters, e-mails, telephone messages, or postcards with additional comments written on them. We have a total of **336 unique comment documents**.
- **Form Letters,** which include such documents as postcards and form e-mails. We have a total of **3,693 form letters**.

To identify the range of the public represented by the comment documents, this section contains a description of the kinds of form letters received. Later, this section contains a description of the comment documents by commenter type.

2.1.1 Kinds of Form Letters Received

The form letters were grouped by the content of the postcard or e-mail, as shown below:

- Confluence: Form e-mail closing with restored confluence
- ForbaBlank: Postcard addressed to Forba with blank lines for comments
- Labor: Letter from several groups asking for local labor
- TwoRivers: Postcard from Two Rivers Community Park
- Opportunity: Form e-mail asking for Opportunity disposal
- TRCP: Form e-mail from Theodore Roosevelt Conservation Partnership members
- Wardell-1: Postcard to Wardell with one paragraph
- Wardell-3: Postcard to Wardell with three paragraphs
- Wardell-3_Opp: Postcard to Wardell with three paragraphs, plus a written comment on the postcard to use Opportunity Ponds as the sediment repository

If someone submitted two different kinds of form letters, for example, a “TwoRivers” postcard and a “ForbaBlank” postcard, each postcard was counted. That is, each postcard is counted in its group as a separate comment document, rather than just one for the person.

Exhibit 3-1 shows the number of comment documents received for each of these kinds of form letters.

EXHIBIT 3-1
Number of Commenters for Each Type of Form Letter: Original Proposed Plan

Group Name	Description	Count
Confluence	Form e-mail closing with hope for a restored confluence	1
ForbaBlank	Postcard to Forba with blank lines for comments	27
Labor	Letter from several groups asking for local labor	10
Opportunity	Form e-mail asking for Opportunity disposal	28
TRCP	Form e-mail from Theodore Roosevelt Conservation Partnership members	59
TwoRivers	Postcard from Two Rivers Community Park	304
Wardell-1	Postcard to Wardell with one paragraph	11
Wardell-3	Postcard to Wardell with three paragraphs	3,106
Wardell-3_Opp	Postcard to Wardell with three paragraphs, plus a written comment on the postcard to use Opportunity Ponds as the sediment repository	147

2.1.2 Comment Documents by Commenter Type

The authors of comment letters were organized into the following commenter types:

- Milltown Residents
- Missoula Residents
- Upstream Residents
- Downstream Interests
- Others
- No Address
- Meeting
- Groups
- Local Government
- Elected Officials
- Natural Resources Trustees
- Corporate Interests
- RPs

Exhibit 3-2 presents the numbers of comment documents submitted by each commenter type, including unique comment documents and form letters.

EXHIBIT 3-2
Number of Total Comment Documents Received, Listed by Commenter Type: Original Proposed Plan

Name	Description	Count
Milltown Residents	Milltown Area Residents (Bonner, Piltzville, Turah, Milltown)	42
Missoula Residents	Missoula Residents	2,671
Upstream Residents	Upstream Residents (Drummond, Clinton, Deer Lodge, Garrison, Anaconda, Butte)	38
Downstream Interests	Residents Downstream of Missoula (Frenchtown, Huson, Alberton, Rivulet, Tarkio, Superior)	27
Others	Other individuals from outside the CFB	816
No Address	People who did not supply an address	386
Meeting	Oral comments provided to EPA at meeting or hearing	2
Group	Citizen Groups and Organizations	30
Local Government	City and County agencies, Conservation District Board	5
Elected Officials	Mayors, senators, representatives, and other elected officials	2
Natural Resources Trustees	Federal, Tribal, and State Trustees	1
Corporate Interests	Corporate entities such as Mountain Water Co., Avista, PPL, etc.	7
RPs	Responsible Party comments (Atlantic Richfield Company, NorthWestern Corp.)	2

2.1.3 Types of Comments Received

All comments received during the comment period were categorized as shown in Exhibit 3-3, *Categories and Subcategories Applied to Stakeholder Comments*. Comments within each comment document were marked and assigned to a specific category and subcategory, regardless of whether the comment document was an e-mail, letter, fax, phone message, or public meeting transcript. These marked and categorized comment documents are available as part of the Administrative Record for this OU. Contact Diana Hammer to request a copy; a copying fee will be applied. Exhibit 3-3 also indicates the number of comments received for each category.

EXHIBIT 3-3
Categories and Subcategories Applied to Stakeholder Comments (Excluding the RPs): Original Proposed Plan

Categories	Subcategories	Description	Number of Comments
Opinion of Plan	Fully Supports Plan	Supports plan as written	3,560
	Conditionally Supports Plan	Supports plan with a few modifications	18
	Needs More Information	Does not support or oppose; needs more information	6

EXHIBIT 3-3
Categories and Subcategories Applied to Stakeholder Comments (Excluding the RPs): Original Proposed Plan

Categories	Subcategories	Description	Number of Comments
	Opposes Plan	Opposes the plan entirely as written	25
Dam Removal	Remove Dam	Desire dam removal	37
	Do Not Remove Dam	Do not want dam to be removed	22
	Powerhouse	Whether or not powerhouse should be removed with dam	16
Sediment Removal	Remove More Sediment	Remove more than is outlined in the Proposed Plan	35
	Remove Less Sediment	Remove less than described in the Proposed Plan	2
	Water Quality during Dredging	Water quality and treatment of dredged water	18
	Staging and Transportation	How removed sediment will be staged and transported	11
	Adequate Amount of Removal	Sediment to be removed in plan is correct as is	3
	Risks of Exposing Sediments	Risks associated with exposing sediments through removal	9
Bandman Flats Repository	Review Repository Considerations	Examine whether this is a good location or not	8
	Use Bandman Flats Repository	Dispose of contaminated sediments at Bandman Flats	6
	Do Not Use Bandman Flats	Do not use Bandman Flats as the sediment repository	56
	Modify Bandman Flats Site	Use Bandman but suggest modifications to site	13
Opportunity Ponds Repository	Use Opportunity Ponds	Use Opportunity Ponds for sediment repository	271
	Do Not Use Opportunity Ponds	Do not use Opportunity Ponds as sediment repository	3
	Transportation to Opportunity Ponds	Suggestions or concerns about transporting sediment to Opportunity	6
Channel Reconstruction	Backfill Source	Source of sediment for backfill following removal	3
	Design Considerations	Design of channel reconstruction project	3,381
	Bridge Structures	Impacts on Duck Bridge and other structures	11
Groundwater	Replacement Water Supply	Continuation of replacement water supply for Milltown	6
	Missoula Aquifer	Potential for impacts on Missoula aquifer if sediments are released	30

EXHIBIT 3-3
Categories and Subcategories Applied to Stakeholder Comments (Excluding the RPs): Original Proposed Plan

Categories	Subcategories	Description	Number of Comments
	Institutional Controls and Monitoring	ICs needed for groundwater use or protection	26
Human Health Risks	Contaminants in Surface Water	Human exposure to arsenic in surface water	14
	Air Quality	Air quality impacts during construction	19
Ecological Risks	Wildlife Habitat	Risks to wildlife in the Proposed Plan	18
	Aquatic Health	Risks to aquatic organisms in the Proposed Plan	16
	Upstream Inputs	Upstream inputs to Milltown Reservoir	3
	Sediment Transport Downstream	Concerns about downstream sediment transport	28
	Risks During Construction	Construction risks from floods, equipment failure, etc.	14
Opinion of EPA	No Mailing List	Request to be removed from mailing list	17
	Add to Mailing List	Add this name to the mailing list	2
	Public Outreach Effectiveness	Degree to which EPA's public outreach was successful	18
Economic Impacts	Construction Values	Economic impact of project construction	24
	Property Values	Value of properties adjacent to project	14
	Payment for Cleanup	Who should pay for the cleanup	22
	Community Economic Changes	Economic impacts or changes in surrounding communities	44
Comment Noted	No Response Required	No response needed because comment is an opinion	107
Unrelated Comment	Out of Scope	Comment was on an unrelated topic – no response needed	7
Compliance with Regulations	Other Federal Regulations	Compliance with ESA and other regulations	6
	Fully Considered Impacts	EPA's considerations of all impacts under CERCLA	8
	RAOs and RAGs	Appropriateness of goals and objectives	4
Comment Period	Extend Comment Period	Request extension of comment period	3
Social Impacts	Reservoir Recreation	Reservoir recreation impacts	2
	Two Rivers Park and Facilities	Concern about park and other community facilities	318
	Noise, Traffic, and Dust	Impacts from noise during construction	20

2.2 Stakeholder Comments and Responses

This section is organized alphabetically by category. The subcategories are listed under each category. Within each subcategory, a summary of the comments is provided, along with the lead agencys' response.

2.2.1 Opinion of Plan

2.2.1.1 Fully Supports Plan

Summary of Comments

Comments in this category stated full support of Milltown Dam and sediment removal. Some commenters may have asked for minor modifications, if possible, but did not base their support on whether or not those modifications occurred. For example, many people stated full support, and then suggested that the sediment repository location be someplace other than Bandman Flats. However, if the final repository location is Bandman Flats, they would still support the *Proposed Plan*.

Respondents provided many reasons for supporting dam and sediment removal. Many expressed enthusiasm for restoration of the confluence, achievement of fish passage, removal of risks to groundwater, and improvement of safety by removing an old dam structure. Some of the supporters urged EPA to move forward as quickly as possible with the *Proposed Plan* remedy.

Response

EPA acknowledges the support of more than 3,500 commenters for the *Proposed Plan's* recommended remedy.

2.2.1.2 Conditionally Supports Plan

Summary of Comments

These commenters would support the *Proposed Plan*, but only if modifications were made. For example, some commenters stated that they would support dam and sediment removal, but only if the sediments were not stored at Bandman Flats. Many of these respondents expressed concern that the removal methods, including the use of silt curtains and other protective measures, would be insufficient to prevent sediment from moving downstream during construction. Others were concerned that such a large re-shaping of the landscape and river channel would not be technically feasible and would cause more problems in the future. Several of the commenters felt that the plan goes too far and is too ambitious, while a few commenters felt that the *Proposed Plan* does not go far enough and that more sediment removal would be needed to protect downstream reservoirs and aquifers.

Response

EPA examined these comments and made adjustments to the *Record of Decision* to address many of these comments. Bandman Flats was replaced by the Opportunity Ponds as a repository for the sediments. Based on Atlantic Richfield Company's proposed change in removal methods and their agreement to build a temporary bypass channel for the Clark Fork River, the majority of the sediments will be excavated "in the dry" and transported by rail to the repository rather than hydraulically dredged. EPA disagrees that a new reach of channel and floodplain for the Clark Fork River cannot be designed to accommodate future

hydrologic events. Remedial design of the final channel will undergo technical scrutiny by numerous experts, including the U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), the State of Montana, and other Trustees before the design will be approved for construction. EPA believes that changing the local environment from a reservoir to an active river channel, removal of the source sediments, and physical isolation of those with residual contamination in the manner described in the *Record of Decision* is the most prudent approach for safeguarding human health and the environment risk associated with the project.

Removal of all the sediments associated with the reservoir is not practical nor cost effective under EPA's remedy selection criteria, and we believe the remedy described in this *Record of Decision* best meets the remedy selection criteria. EPA had a wide variety of technical specialists involved throughout the Remedial Investigation / Feasibility Study (RI / FS) process, and used those people's views and input extensively in the remedy selection process. EPA did employ outside experts in evaluating sediment control measures, potential sediment scouring, and resultant downstream impacts from implementation of the remedy.

EPA, in consultation with DEQ, believes that the remedy does reflect the appropriate balancing of the long-term effectiveness and permanence balancing criteria with the other balancing and modifying criteria, as noted in Part 2, *Decision Summary*. EPA believes that the detailed monitoring requirements and performance standard definitions, along with institutional controls (ICs), will result in the reliable management of residual risk at the site.

2.2.1.3 Needs More Information

Summary of Comments

Commenters in this category did not support or oppose the *Proposed Plan*, but felt that more information would be needed to make a determination for themselves. Others felt that EPA had not yet fully addressed the risks of dam and sediment removal, and asked for more study before such drastic measures were taken.

Response

Proposed plans are summaries of EPA's proposed cleanup decision, provided for the public in a readable format. The Remedial Investigation, Risk Assessments, Feasibility Studies, and other documents contained more detailed information relating to the *Proposed Plan*. EPA supplemented the *Proposed Plan* with specific answers to specific questions, to ensure that the public had adequate information during the public comment period. This *Record of Decision* contains detail on the issues that commenters identified as too vague in the *Proposed Plan*—such as the risks relevant to dam and sediment removal, and efforts to control and reduce that risk.

2.2.1.4 Opposes Plan

Summary of Comments

These commenters were completely opposed to both dam and sediment removal as described in the *Proposed Plan*. Reasons for opposing the plan included concern that exposing reservoir sediments would create air quality problems, and that upstream contaminants from the Clark Fork River Operable Unit (OU) will no longer be trapped at Milltown and will just go to the next reservoir downstream. Others believed that it would be more cost-effective to install fish ladders and upgrade the dam to prevent ice scour

incidents than to remove the dam and sediments, and that it is also better for the local economy. One respondent felt that the *Proposed Plan* did not contain enough detail to indicate that EPA used a good decision-making process, and that dam and sediment removal could have catastrophic consequences for the valley.

Response

EPA notes opposition to the *Original Proposed Plan*. EPA followed the process for Superfund decision making required by CERCLA and the NCP. The remedial action described in the *Record of Decision* meets the threshold criteria for remedy selection, and provides the best balance among the remaining balancing and modifying criteria. Issues such as air quality during construction, the transport of sediment from the upper Clark Fork River, fish passage, and ice scour are discussed in detail in Part 2, *Decision Summary*. The remedy selection analysis and the remedy are described in greater detail in Part 2, *Decision Summary*, Sections 10, 12, 13, and 14.

2.2.2 Dam Removal

2.2.2.1 Remove Dam

Summary of Comments

Comments in this category focused exclusively on the benefits of dam removal and did not address reservoir sediments or other issues. These commenters generally had the same reasons for supporting dam removal as described in the *Fully Supports Plan* subcategory.

Response

EPA acknowledges the comments expressing support for the removal of the dam. As explained in Part 2, *Decision Summary*, EPA intends to remove the spillway and radial gate and as part of the remedy. The powerhouse, right abutment, and dividing block would be removed as part of the State's restoration plan. Removal of the dam contributes to the permanence of the remedy by eliminating a site condition that resulted in the liberation of arsenic into the groundwater, reduces the threat of scour of contaminated sediments during infrequent ice buildup events, alleviates a perpetual collection point for deposition of new sediment, eliminates the perpetual operation and maintenance burden that accompanied retaining the dam, and restores the river to a free flowing state allowing the unimpeded passage of bull trout and other fish.

2.2.2.2 Do Not Remove Dam

Summary of Comments

These commenters advocated leaving the dam in place. Many of the commenters asked that the reservoir be dredged and the sediments removed, but to keep the dam as a trap for sediments and contaminants that might be coming from the Clark Fork River OU. Others felt that the human health and ecological risks were overstated, and the dam is fine left in place. One commenter felt that the dam serves an important flood control function for the City of Missoula and should remain for that reason. These commenters generally had the same reasons as those described in the *Opposes Plan* subcategory.

Response

EPA acknowledges the comments to retain the dam. However, EPA is required by law to seek a remedy that provides a permanent, long-term solution that is protective of public

health and the environment. Leaving a perpetual sediment trap, as well as retaining a reservoir pool elevation that contributes to the recharge of the local aquifer and will inundate residual sediment deposits possibly creating similar conditions to those presently occurring, is not in the best interest of the community. The existence of a groundwater arsenic plume that has rendered a portion of the alluvial aquifer undrinkable is not "an exaggerated human health concern." The dam itself, as indicated by FERC inspection reports, will require some significant structural support if it is to reliably withstand future extreme hydrologic events. In its current state and if the proposed sediment volume were to be removed, it would provide only minor flood control downstream because of the small storage capacity in the reservoir.

2.2.2.3 Powerhouse

Summary of Comments

The people who expressed an opinion on the powerhouse were nearly equally divided. Approximately half would like the powerhouse to remain as a historic structure, while the other half felt that the powerhouse is incompatible with the restored confluence, from an aesthetic or from an engineering design perspective.

Response

EPA concurs that the National Historic Preservation Act (NHPA) does apply to the Milltown project. The entire Milltown Dam complex has been characterized and assessed for its historic value and public input relative to the dam was solicited as part of the process. Analyses by EPA and DEQ (the two agencies with responsibility for CERCLA action at the site) have determined that the Milltown Dam will be removed as part of the CERCLA action at the site. The removal of the spillway and radial gate is part of the remedial action at the site. The removal of the powerhouse, dividing block, and right abutment is part of the restoration plan developed by and under the authority granted to the Trustees. One of the primary objectives of the restoration plan for the Milltown area is to restore the river channel and floodplain to a naturally functioning and stable system. The Trustees believe that the most effective way to meet this objective is to remove the powerhouse, dividing block, and right abutment. Mitigation measures consistent with the NHPA, such as photo documentation and the off-site preservation of valuable equipment such as the turbines, will be applied before it is removed. More detailed information relative to this subject may be found in Part 2, *Decision Summary,* Section 5.7, *Important Cultural and Historical Features*, of this *Record of Decision*.

2.2.3 Sediment Removal

2.2.3.1 Remove More Sediment

Summary of Comments

Commenters in this category feared that leaving any contaminated sediment in place could create new problems downstream. As one person explained, "it seems inevitable that any sediments left in place within the floodplain will eventually be eroded and transported down the river, effectively moving the problem, albeit a smaller one, down to the next reservoir." A few commenters asked what measures would be used to prevent material from Areas 3 and 4 from eroding into the river after the remedy is completed, and whether previous sampling may have missed areas of higher contamination outside of Area 1.

Another stated that removing more sediment means that fewer engineering controls would be required for the reconstructed channel, since the river could freely meander over a cleaner floodplain.

Response

The *Remedial Investigation* of the Milltown Site characterized, through sampling, the entire OU. The designation of Area 1 originated from this work, which also identified Area 1 as the deepest, most heavily contaminated sediments and the "source area" from which most of the arsenic originates. These sediments are targeted for removal as part of the remedy. In addition, certain sediments within Area 3 which are more heavily contaminated will be isolated from the floodplain and armored to protect them from erosion. EPA believes that the remaining sediments in Areas 2 through 5, which contain lower level contamination, can be successfully addressed by conversion of the reservoir area to a free flowing channel (which accommodates a seasonally fluctuating water table), and the re-configuration and construction of a new, well vegetated Clark Fork River channel and floodplain through the project area. Above Duck Bridge, restoration activities may consolidate the braided channels created from the reservoir backwater and an aggrading channel bed into a single channel, with a meander pattern consistent with a natural, self-sustaining grade. EPA believes that a functional, natural floodplain with healthy riparian vegetation can be established that would accommodate and resist a variety of hydrologic regimes without unacceptably liberating the residual contaminants contained there.

2.2.3.2 Remove Less Sediment

Summary of Comments

Commenters in this category felt that sediments should not be removed at all. They believed that the sediments are better left in place.

Response

EPA evaluated this position by considering a number of alternatives that involved leaving the sediments and dam in place. In its evaluation process, EPA determined that removing the sediments and dam would allow for cleanup of the groundwater in a reasonable time frame, reduce the potential for harmful ice scour or high flow events, and provide for a more permanent solution. As such, the remedy meets the CERCLA criteria that determine the appropriate selection of a remedy at a Superfund site.

2.2.3.3 Water Quality during Dredging

Summary of Comments

People who commented in this category were concerned that water quality downstream will suffer during the dredging operation, in spite of the best management practices (BMPs) and construction barriers that will be used. A few commenters indicated that all process water may need to be treated before returning it to the river. Several people asked that a detailed contingency plan be established as part of the *Record of Decision*, in case of accidental spills or leaks occur during dredging. One commenter felt that the temporary water quality standards are not adequate to protect the fishery. Another asked that EPA study whether the dredging will release nitrogen or phosphorous, in addition to the metals that may be released.

Response

In the *Original Proposed Plan*, dredging was the chosen method for removing 85 percent of the sediment from Area 1. As a result of public input and innovative thinking by Atlantic Richfield Company's contractor, the primary method for removal of sediment described in Part 2, *Decision Summary*, Section 12, is "in the dry" excavation. Removal of the Milltown Dam early in the construction will reduce local groundwater elevations to allow for the excavation of most, if not all, of the targeted sediment. Implementation of construction BMP's during excavation provides more control of the sediment and reduces the likelihood of uncontrolled releases that might affect downstream water quality. The early construction and use of a temporary, armored bypass channel for the Clark Fork River will eliminate the scouring of contaminated channel bottom sediments from Areas 2 and 3 and will help control erosion issues associated with seasonal flow regimes for the duration of project construction. Timing of the opening of the bypass channel and the removal of Milltown Dam will be set to coincide with spring runoff. Temporary standards were selected carefully, in consultation with State and Federal wildlife protection experts, and are supported as protective by EPA's *Ecological Risk Assessment* (EPA 1993a and 2000). Surface water monitoring, including the use of caged fish studies and radio tracking, will be conducted on a frequent basis and compared to EPA's temporary water quality standards. EPA believes that through careful design and implementation of the remedy, downstream water quality will be protected.

2.2.3.4 Staging and Transportation

Summary of Comments

These commenters expressed concern that the staging area for sediment removal and transfer to trucks or rail is inappropriate. Many people said that this area is too close to Bonner School and residences, would pose threats to human health and safety, and should be moved away from the community. One person suggested that a small portion of the railroad track could be replaced to access the river directly near the sediment removal site. Then, material could be loaded directly into rail cars instead of staged and then loaded. Another suggested that dry removal be used instead of dredging so that the material could be loaded directly into rail cars and taken to Opportunity Ponds (this commenter was assuming that the Bandman Flats repository site would not be used). A few people were concerned that the newly developed trail system and pavilion recreational area near the reservoir would be destroyed by the staging area. Some people suggested putting the staging area on the south side of the river, or on the north bank immediately below the dam. A few people commented on the slurry line concept, and asked what spill control and prevention methods would be in place to make sure the floating line doesn't rupture.

Response

EPA carefully assessed the comments in this category and their safety implications. In response, the remedy described in Part 2, *Decision Summary*, Section 12, now proposes a sediment loading area west of the interstate. A rail spur and loading ramp will be constructed near Area 1 to facilitate the excavation and material handling process, as well as eliminate a potential safety hazard. Trains will still need to use existing tracks east of the interstate with some enhancements, but their movement will be restricted to late night departures and arrivals. The transport of contaminated sediment to Opportunity Ponds by

rail eliminates the concerns associated with the previously proposed dredging and slurry transport of sediment to Bandman Flats.

2.2.3.5 Adequate Amount of Removal

Summary of Comments

These commenters felt that removing 2.6 million cubic yards (mcy) of sediment is the appropriate amount. They supported EPA's analysis and felt that this removal was adequate to protect human health and the environment.

Response

EPA appreciates the endorsement and believes that the remedial action described in this *Record of Decision* meets the threshold criteria for remedy selection, and provides the best balance among the remaining balancing and modifying criteria.

2.2.3.6 Risks of Exposing Sediments

Summary of Comments

Commenters were concerned about exposure of reservoir sediments during remedy implementation for a variety of reasons. Some of these reasons included air quality, erosion, and geochemical changes that might occur. Some people reasoned that exposing the sediments to air could cause arsenic in sediments to mobilize to groundwater. Others felt that removing sediments in one area and allowing the river to flow through other sediments will cause arsenic to become available to surface water. A few felt that the *Proposed Plan* contains too many unknowns about what exactly will happen when sediments are exposed, and therefore that removal is risky.

Response

In early fall 2002, the Milltown Reservoir underwent a planned drawdown event that was used to allow collection of additional sediment, soil, and groundwater samples. Analysis of these samples was performed to help answer questions about how the sediments and associated contaminants would react to dewatering and exposure to the atmosphere. EPA's contractors prepared several technical memos addressing the acid generating potential of the soils and sediments, and the potential for impacts to surface and groundwater (CH2M HILL 2002, Schroeder 2001, CH2M HILL 2003). In general, the investigations and modeling concluded that exposing the reservoir sediments to atmospheric conditions is not expected to present significant water chemistry problems. The pH of the sediments may range from slightly acidic to neutral, and adjustments can be made if necessary. Water associated with the sediments is also expected to display an intermediate pH similar to that for the sediment. The addition of Blackfoot and Clark Fork River water will increase the pH of seepage waters and groundwater associated with reservoir sediments through neutralization and dilution. Dissolved metals concentrations can be expected to decrease rather than increase. Earlier surface water quality modeling results by the USACE (Schroeder 2001) involving a dredging option also predicted that arsenic concentrations are not likely to exceed the Montana WQB-7 Standard for protection of human health during dredging with or without BMPs. EPA is comfortable with these findings and does not anticipate adverse water chemistry impacts, but will remain attentive to water quality monitoring results obtained during remedial action and make the appropriate adjustments if necessary.

2.2.4 Bandman Flats Repository

2.2.4.1 Review Repository Considerations

Summary of Comments

Commenters in this category asked EPA to consider whether Bandman Flats is the best site. Some of the factors that people asked EPA to review include human health, long-term ecological protection, and the highest and best use of this site (as a repository or as developable land for the community). These people did not ask that the site be changed, but that the process for selecting the site be made clearer and that the basis for the decision be rooted in human and ecological health rather than overall remedy cost.

Response

EPA carefully assessed the comments in this category. Coincidentally, Atlantic Richfield Company and their contractor proposed changes in sediment removal methods and the location of a repository. Atlantic Richfield Company proposed dewatering and excavating the sediments, loading them locally into train cars and transporting them by rail to the Opportunity Ponds near Anaconda for disposal. The high organic content of the sediment may make it a useful capping material that would support plant life. EPA approved these changes which are described in more detail in Section 12.3.4, *Sediment Transportation and Disposal*, of the *Record of Decision*.

2.2.4.2 Use Bandman Flats Repository

Summary of Comments

Commenters in this category were comfortable with EPA's analysis of the Bandman Flats site, and felt that the site had undergone sufficient scrutiny to be used. A few indicated that the slurry pipeline and short transportation route increased safety during remediation.

Response

EPA appreciates endorsement of the local repository idea. However, the remedy, as described in Part 2, *Decision Summary*, Section 12, of this *Record of Decision*, has changed since the *Original Proposed Plan*. Sediment removed from the project site will now be transported by rail to the Opportunity Ponds.

2.2.4.3 Do Not Use Bandman Flats

Summary of Comments

These people felt that Bandman Flats would not be appropriate for a repository, but did not specifically endorse another site or alternative. Reasons for opposing the site include human health, potential ecological risks if the liner fails, and economic impacts on the community. Currently, a golf course and housing development is proposed near the site, and this area is becoming a popular location for development. The individuals who are attempting to develop this area indicated that a repository would be the "kiss of death" for their project and make it impossible to acquire financing. Most of the commenters felt that encouraging housing and business development in the Bandman Flats area is much more appropriate for the economic recovery of the neighboring communities. Further, they felt that locating a waste repository between Bonner and Missoula would discourage development and adversely impact the community. A few expressed concern about locating a toxic storage site near the Kim Williams trail and impacting recreation opportunities. Some people simply

felt using Bandman Flats takes one contaminated site and creates a second opportunity for contamination in the Clark Fork River area. Others felt that no liner could be considered safe "in perpetuity" and that the risks of further contamination in the future, or of contaminating the Missoula aquifer, are too high. One commenter indicated that the permeability of the soils is too high to consider its use as a repository. Some people were concerned that the Bandman Flats site would not be large enough to contain all of the sediments.

Response

EPA read and evaluated these comments carefully. As indicated in previous responses, EPA accepted changes to the *Original Proposed Plan* based on proposals made by Atlantic Richfield Company and their contractors. EPA felt that recommendations made by Atlantic Richfield Company strengthened the remedy and resulted in the Bandman Repository site being replaced by the Opportunity Ponds as the repository for excavated sediments. The many comments stating opposition to the Bandman Flats repository helped EPA conclude that the project was better served by accommodating Atlantic Richfield Company's proposal to transport the material to the Opportunity Ponds. A more detailed discussion of the Opportunity site is provided in Part 2, *Decision Summary*, Section 12.3.4, *Sediment Transportation and Disposal*, of this *Record of Decision*.

2.2.4.4 Modify Bandman Flats Site

Summary of Comments

Commenters in this category indicated that Bandman Flats could be a good repository site, but only if certain modifications were made in the design. These people offered several specific proposals for lining the repository, installing a leachate cap, locating the slurry line, ensuring protection from the probable maximum floods, and re-designing nearby bridges and structures to better accommodate sediment transport to Bandman Flats.

Response

EPA appreciated all the comments and suggestions provided under this category. As discussed in the previous response, the Bandman Flats Site was replaced by the Opportunity Ponds as the preferred repository site.

2.2.5 Opportunity Ponds Repository

2.2.5.1 Use Opportunity Ponds

Summary of Comments

All of the commenters in this category supported using the Opportunity Ponds repository. In addition to the reasons expressed by those who opposed the Bandman Flats site, some commenters indicated that Opportunity Ponds is already an impacted area and existing repository, so the addition of more contaminated sediment is not a critical issue. Many commenters felt that the sediments should be transferred to Opportunity Ponds regardless of the cost involved. A few people suggested that the Berkley Pit would be an appropriate location to landfill the contaminated sediments. One person indicated that if it were found during remediation that more sediments would need to be removed, then Opportunity Ponds would offer adequate space to store additional sediment.

Response

EPA agrees with the use of the Opportunity Ponds as the primary repository. The sediment proposed for disposal (the exact amount will be determined during design) will represent less than 1 percent of the total wastes disposed of at this location. The excavated waste can be transported and disposed of safely. In addition, the high organic matter content of the sediment may allow it to be used in a positive manner because of its ability to support plant growth. It also prevents the creation of another waste repository within the Clark Fork River Basin.

2.2.5.2 Do Not Use Opportunity Ponds

Summary of Comments

People who are opposed to using Opportunity Ponds as a repository cited concerns about accidents or spills during transport. One person was concerned that the people near Opportunity Ponds may not want additional waste in their area, and another thought that this change might cause a lawsuit that could delay the entire project.

Response

Sixteen trains (typically with 100 cars each) pass through the project corridor per day. These trains presently transport a variety of cargo, which includes industrial and agricultural chemicals, fuels, and other manufacturing and natural resource goods. Transporting materials by train is considered safe and economical, and the additional Milltown waste will not significantly increase railcar numbers or risk. EPA acknowledges the concerns of the residents of Opportunity. However, EPA believes that disposal of this material at this location, which is on Atlantic Richfield Company property and a distance away from the town of Opportunity, best meets the threshold and balancing evaluation criteria while significantly reducing human health and environmental risks.

2.2.5.3 Transportation to Opportunity Ponds

Summary of Comments

Comments in this category did not specifically state a preference for using or not using Opportunity Ponds, but rather expressed concern that transporting sediments back upstream creates the potential for accidents. A few felt that the cost involved in the transportation is not worthwhile.

Response

EPA acknowledges these concerns and will work to ensure a safe transportation plan is in place for the rail haul of excavated sediments. Rail transportation, as previously stated, is a safe, economical, and expedient means of moving material. The sediment being placed into leak proof rail cars will be dewatered before loading and covered during transit. All the safety precautions presently in place to guide the safe operation of trains will be applied to the activities of these trains. Transport schedules will move loads late at night to help reduce impacts on local traffic patterns and take advantage of open rail time.

2.2.6 Channel Reconstruction

2.2.6.1 Backfill Source

Summary of Comments

Primarily, these individuals asked where the backfill to replace 2.6 mcy of removed sediments would come from. One person indicated that if the soil is to come from Bandman Flats, then it would not make sense to transfer the waste to Opportunity Ponds.

Response

The rodeo grounds near Bonner, Montana, are proposed as the source of much of the borrow material to be used for floodplain construction. Most of the detailed decisions regarding suitable sources for borrow material will be made and confirmed during the remedial design phase of the project. Preliminary estimates indicate an adequate volume for construction without using the previously considered repository site of Bandman Flats.

2.2.6.2 Design Considerations

Summary of Comments

Most people asked EPA to work closely with the State of Montana and other partners to ensure that the design of the new channel dovetails with restoration plans. Some asked for enhanced recreational opportunities, such as a whitewater park. Others said that a whitewater park would be inappropriate, and the area should instead be managed solely for wildlife habitat and wetlands. One suggested that a low-head hydroelectric power plant be incorporated in the new channel to replace the lost generation from Milltown Dam. Many people were concerned that the *Proposed Plan* is too vague on the issue of channel design, and feared that the channel will not be compatible with recreation or aesthetic values in the valley. Some indicated that putting the channel in the remaining reservoir area will create severe erosion and contamination problems.

Several people commented that the design should incorporate as many natural floodplain processes as possible instead of a highly "engineered" solution involving hard banks. Others felt that hard engineering structures would be needed to prevent headcutting of the channel. Still others indicated that ice scour and flooding would continue, and that any channel design would have difficulty in passing such a flood without seriously damaging the streambanks and releasing contamination. Some felt that the channel location indicated in the *Proposed Plan* is too close to the interstate and would require too much armoring to protect the road and bridges, and one person indicated that an old dump was located in that area in the 1950s before the interstate was built over the top of it. A few people offered specific engineering proposals for removing the dam and sediments in the best way to support channel reconstruction.

Response

EPA has worked with the Trustees to provide close coordination between the remediation and restoration plans within the remediation project area (the area from the dam to Duck Bridge on the Clark Fork River arm of the reservoir and to the Interstate Bridge on the Blackfoot River arm). Because the remediation and restoration plans must be closely integrated within the remediation project area, the restoration aspects of the project are

reflected in the maps and drawings that appear in Part 2, *Decision Summary,* Section 12, of this *Record of Decision*. The coordinated restoration elements include the following:

- Removal of the divider block / power house / north (right) abutment
- Changes in the floodplain topography and channel alignment throughout the OU
- Implementation of soft stabilization / revegetation techniques to stabilize the channel

Another related element to this entire project is the removal of the Stimson Dam, which is being planned as a cooperative effort through the USFWS National Fish Passage Program.

A new channel and floodplain for the Clark Fork River will be constructed extending from approximately 1.5 miles upstream of Duck Bridge to the I-90 bridge downstream of the dam. The new channel will reflect a "restoration" design that matches a more natural meander pattern with a sustainable gradient. Recreational use will be preserved and wetlands will be created in accordance with direction provided by USFWS and Montana Fish, Wildlife and Parks (FWP). There are presently no plans to incorporate a low head hydropower facility in this reach of the river. EPA acknowledges the concerns of commenters regarding the proximity of the new channel to the interstate, and the potential for erosion and future ice jams. EPA and the USACE will address these concerns during final design and consider safety to be a high priority. Where possible, natural materials will be used for construction purposes to dissipate energy and accommodate the required fluctuations in flow regime as described in Part 2, *Decision Summary,* Section 12.3.8, *Clark Fork River and Blackfoot River Channel.*

2.2.6.3 Bridge Structures

Summary of Comments

Most people who had comments in this category were concerned that removing the Milltown Dam will create engineering problems for upstream bridges because of headcutting, and downstream bridges because of flooding. Commenters feared that these bridges could become destabilized or eventually be destroyed. Many people commented on an alternative design for Duck Bridge that would need to be adjusted if the dam is removed and the channel reconstructed.

Response

Undermining the structural integrity of existing bridges through implementation of remedial activities is also a concern to EPA. These issues will be resolved through modeling and careful remedial design and use of engineering controls where necessary. Atlantic Richfield Company's technical team has also recognized these issues as concerns. The design will be carefully reviewed by EPA's contractor (USACE, Seattle District) structural and hydraulic engineers before authorization to proceed is provided.

2.2.7 Groundwater

2.2.7.1 Replacement Water Supply

Summary of Comments

Commenters felt that the replacement water supply is an adequate solution to the reservoir contamination problem. Since the groundwater plume has been stable for many years, these people do not feel that further action is needed at the MRSOU. One person indicated that

disturbing the sediments creates more ecological and human health risks, and that those risks are adequately managed with the replacement water system and the presence of the dam.

Response

EPA agrees that the replacement water supply has served as an excellent interim solution to contamination of the aquifer by an arsenic plume. EPA notes that there are no permanent ICs in place to prevent domestic use of the groundwater near Milltown. EPA is mandated through the application of specific criteria, to seek a permanent solution that greatly reduces or eliminates the risk to human health and the environment. EPA believes that the remedy as proposed in Part 2, *Decision Summary*, Section 12, will meet the following primary remedial action objectives:

- Protect human health and the environment
- Attain compliance with applicable or relevant and appropriate Federal and State standards, criteria, and requirements

Under the present remedy (dry excavation with a bypass channel), EPA does not believe that disturbing the sediments in Area 1 will create any unacceptable risks to human health or the environment. Incorporating construction BMPs, continuous downstream monitoring of surface and groundwater, and careful scheduling of major field construction activities (dam demolition, construction and opening of the bypass, etc.) should mitigate potential risks inherent to these activities.

2.2.7.2 Missoula Aquifer

Summary of Comments

Commenters in this category were concerned that removal activities will impact the Missoula aquifer. Regardless of their position on dam removal, these people felt that EPA should provide a written guarantee that degradation of water quality will not occur in the Milltown aquifer, and a detailed plan and commitment of funds for restoring clean water if degradation does occur. Mountain Water Co., the utility that draws from the Missoula aquifer, felt that the *Proposed Plan*, as written, does not include enough monitoring or controls to be protective of the Missoula aquifer.

Response

EPA is committed to safeguarding the potable water supply of the Missoula sole source aquifer and area residents. EPA has conducted surface water quality modeling (P. Schroeder, USACE, 12-31-01 Memo to EPA; Final Tech Memo Milltown Reservoir Dry Removal Scour Evaluation, Envirocon, May 17, 2004) to evaluate the potential impact on surface water and has concluded that no impact is likely on the Missoula Sole Source Aquifer from remedial activities proposed as part of the Milltown cleanup. Furthermore, EPA proposes extensive and frequent monitoring of both surface and groundwater monitoring to gage the status of water quality during the construction activities. This *Record of Decision* requires the provision of alternate water supplies for any domestic well or water source which is unexpectedly contaminated during remedy implementation.

2.2.7.3 Institutional Controls and Monitoring

Summary of Comments

Commenters in this category focused on the long-term recovery of the contaminated aquifer below Milltown. Many simply indicated that they hope the aquifer can some day be used again for drinking water. Others questioned EPA's projection that the aquifer would recover with only part of the sediments removed, and asked if a contingency plan were in place for removing additional sediment if the aquifer was not recovering. A few questioned the use of ICs to limit groundwater access until the aquifer recovers through natural attenuation, and felt that the need for ICs indicates that this is not a permanent remedy. These people request more aggressive measures to clean the aquifer. Some people asked that performance standards be made a key part of the long-term groundwater monitoring plan.

Response

EPA's primary remedial action objective (RAO, Part 2, *Decision Summary*, Section 8, of this *Record of Decision*) is to "protect groundwater by restoring it to its beneficial use in a reasonable time." This will be achieved by the removal of the primary contaminant source material (sediments) that reside in Area 1 and the removal of the Milltown Dam (will lower the water table). Sediment with lower arsenic and copper concentrations will be shielded from the active river channel by revegetation efforts. Through natural processes, EPA predicts that the arsenic plume should clean up within 4 to 10 years. The ICs are intended to act as safeguards to public health by preventing the use of this portion of the aquifer until it meets water quality standards. Short and long-term monitoring are incorporated into the remedy. The remedy is subject to ongoing reviews to ensure that the objectives and performance standards, including those relating to groundwater cleanup, are met.

2.2.8 Human Health Risks

2.2.8.1 Contaminants in Surface Water

Summary of Comments

Commenters in this category feared that the sediment removal process would release arsenic into surface water. People indicated that the arsenic could contaminate groundwater after it is released into surface water, and also contaminate drinking water sources downstream. A few indicated that monitoring surface water would be just as important as monitoring groundwater for arsenic levels. Some also suggested that fish could be contaminated with arsenic, and that health risks to people could follow from eating the fish.

Response

In 2001, EPA worked with the USACE (Seattle District) to model potential surface water quality impacts (USACE, P. Schroeder, 2001) that might occur, should sediment pore water and suspended sediment be released during the proposed removal of sediments, which at that time consisted of 15 percent excavation and 85 percent dredging. The results of the modeling illustrated that arsenic, cadmium, lead, and zinc concentrations are not predicted to exceed the Montana acute toxicity standards during dredging. Similarly, arsenic and zinc are not predicted to exceed the Montana chronic toxicity standards. Arsenic concentrations are also not predicted to exceed Montana WQB-7 Standard for the protection of human health during the dredging. As previously stated in other responses, the transition of the project into dry removal of the sediments after the dams have been removed and a bypass

for the Clark Fork River constructed further reduces the potential for water quality impacts. Under this *Record of Decision*, the reservoir is eliminated, groundwater levels are reduced, and sediment scour during construction by the active Clark Fork and Blackfoot Rivers will be minimized with use of the bypass and the timing of major field activities to coincide with spring runoff. Hence, the source of dissolved and total recoverable arsenic associated with the total suspended solids loads, that could theoretically infiltrate the local Milltown aquifer and the Missoula sole source aquifer below Hellgate Canyon, is greatly diminished by the change in the sediment removal method. EPA will have a comprehensive water quality monitoring program during the project that compares predetermined standards to existing water quality data. Vigilant monitoring will be a cornerstone of early detection of problems and making appropriate adjustments to mitigate any potential impacts. EPA believes that the remedy does not pose a threat to the sole source Missoula aquifer or the residents that draw from it as a potable drinking water source.

2.2.8.2 Air Quality

Summary of Comments

All of the commenters in this category feared that exposing, staging, and transporting contaminated sediments would release arsenic into the air. Some asked for air quality monitoring and performance standards to assure that BMPs are applied and public health is protected. A few commenters expressed concern for high-risk populations, such as children (at Bonner School), the elderly, and asthmatics, that may be adversely affected to a greater degree than the general public.

Response

EPA understands the concern about construction activities generating dust, particularly during the drier seasons of the year. All of the excavation and rail loading work will be located west of the Interstate and away from local structures and residences. Precautions to reduce dust levels, such as keeping roads moist, will be implemented as part of the site activities. Construction BMPs, to be identified in detail during remedial design, will be used during the remedial work to assure that the generation of contaminated dust and inhalation exposure is minimized.

Additionally, EPA believes the risks posed by construction dust are not significant. The *Baseline Human Health Risk Assessment* (ETI, July 1993) performed an evaluation of the risk associated with dust inhalation and ingestion of contaminated soils and groundwater. It was concluded that the inhalation risk (for arsenic and cadmium) was small compared to the risk posed by ingestion. These finding were confirmed in 2003 by an Agency for Toxic Substances and Disease Registry (ATSDR) review of human health effects from dust inhalation.

2.2.9 Ecological Risks

2.2.9.1 Wildlife Habitat

Summary of Comments

The commenters in this category expressed the belief that wildlife populations would be adversely affected by the remediation described in the *Proposed Plan*. They feel that dam and sediment removal will destroy the wetlands surrounding the reservoir, and adversely

impact bald eagles, waterfowl, migrating birds, amphibians, deer, moose, and other species. Some asked if the wetlands could be preserved or restored following remediation.

Response

EPA agrees that the remedial action, as described in this *Record of Decision*, will result in a dramatic change to the wetlands of the reservoir. Trustees such as the USFWS, USACE, and FWP have been working with, and advising, EPA on the remedial action and associated mitigation for any destroyed wetlands. The restoration plan will create valuable riparian wetlands at the site. Replacement of any destroyed wetlands is required. Two extensive Biological Assessments, one for bull trout and a second one for the terrestrial threatened and endangered species (including bald eagles, grizzly bear, etc.) have been prepared by EPA (CH2M HILL 2004a, 2004b). These documents outline, in detail, the anticipated impacts and proposed mitigation for aquatic and terrestrial species of concern.

2.2.9.2 Aquatic Health

Summary of Comments

Several topics were discussed in this category, including water quality, risks to fish populations, and bull trout passage. Some in this category argued that water quality is not impacting fish now, and that implementing the remedy could make water quality worse and affect fish. A few indicated that ice scour risks are still high, and that this has the potential to continue to impact fish populations. One person asked why the remedy would be implemented at all if the surface water would still not be expected to meet State of Montana water quality standards. Another said that the *Proposed Plan* is an important protective measure, since a natural disaster could wipe out the dam and create a massive release of contaminated sediments. While many people supported dam removal on the basis of restoring connectivity for bull trout populations, a few argued that bull trout flourish above the dam and the connectivity is not important or desired.

Response

Responses to concerns relative to implementation of the remedy and its effects on water quality have been addressed in previous comment responses (and are discussed in Section 12, *Selected Remedy*, of Part 2, *Decision Summary*). EPA believes that the remedy will meet Montana WQB-7 standards with the exception of copper exceedances caused by upstream releases. Removal of the primary source of contamination, removal of the Milltown Dam, and the design and construction of a new channel will eliminate the potential for a catastrophic natural disaster should the Milltown Dam fail. It also reduces the potential for ice scour events that generate and transport contaminated sediment downstream. The remedy will create a free flowing passage for a variety of fish species, including bull trout, to migrate directly into the Blackfoot River drainage and the upper Clark Fork River.

2.2.9.3 Upstream Inputs

Summary of Comments

Commenters in this category feel that the *Proposed Plan* should not be implemented until the Clark Fork River OU is completed. The primary reason given for this is that if a flood occurs during remediation activities upstream, the dam should be kept in place to prevent contamination from washing further downstream.

Response

Implementation of the Clark Fork River OU remedy will require approximately 10 years to complete. The existing conditions in the upper Clark Fork do not resemble those of historic times when mine tailings and waste were discharged directly into Silverbow Creek, the Clark Fork River, and other tributary streams. Years of floods and rainfall events have scoured most of the available waste material and transported it downstream. EPA does not believe that sustaining the Milltown reservoir as an in-stream mine waste repository is necessary or useful under these conditions. EPA is obligated to implement a permanent remedy in a timely fashion to resolve human health and ecological risk concerns associated with the MRSOU. The remedy as proposed accomplishes this task while meeting the required CERCLA criteria.

2.2.9.4 Sediment Transport Downstream

Summary of Comments

All commenters in this category were concerned that the sediments behind Milltown Dam could wash downstream and cause contamination problems either along the river or at Thompson Falls Reservoir. People felt that no BMPs would be sufficient to prevent all sediment from going downstream during remedy implementation, and that sediments escaping from Milltown Reservoir are of greater concern than in ordinary construction or dredging projects because of arsenic in the sediments. One person asked that total maximum daily load (TMDL) studies be completed on the Clark Fork and Blackfoot rivers and all tributaries before implementation of the *Proposed Plan*.

Response

EPA heard your comments and has responded with the *Revised Proposed Plan*. This *Record of Decision* describes a new method of removing the sediments in Part 2, *Decision Summary*, Section 12. The new method begins with construction of an armored bypass channel intended to prevent scouring of contaminated sediments as the reservoir is drawn down and the dam is removed. The bypass was selected to specifically limit the potential for sediment scour and transport through the project area. The timing of field activities (such as opening of the bypass and removal of the dams), and coordination of such activities with spring runoff, is intended to help reduce any unforeseen impact associated with the liberation of the sediment resulting from the major field activities. EPA is coordinating the remedy with Montana DEQ, Montana Natural Resource Damage Program (NRDP), FWP, USFWS, and the Confederated Salish and Kootenai Tribes (CSKT). Many of theses agencies have direct responsibility and stewardship for the water and aquatic resources of the Clark Fork River. They have reviewed the proposed remedial action, understand the potential concerns and detrimental impacts (most of which are short-term) to the resources, and endorse the program because of the long-term rehabilitating aspects of returning the rivers to a free-flowing status.

2.2.9.5 Risks During Construction

Summary of Comments

One of the primary concerns cited in this category was the risk of spills, regardless of truck, rail, or slurry pipe transport. Another concern expressed by commenters was the risk of a flood during construction that could destroy protective measures. Some commenters asked

for detailed construction monitoring plans to mitigate these risks, while others felt that these risks were too great to attempt dam removal.

Response

EPA acknowledges the concerns about uncontrolled releases of contaminated sediment during transporting activities. Under this *Record of Decision*, sediment will be removed in the "dry" and loaded directly into rail cars located in the project area. Transportation of the sediment to the Opportunity Ponds will be conducted carefully. Trains will move at night during off hours and will be under scrutiny to observe all safety requirements that typically apply to the movement of hazardous materials by rail.

Flooding during the construction period is a potential risk of the project. The remedial design will incorporate mitigation to guard against floods up to a 100-year event (by increasing the capacity of the bypass channel and armoring banks and other potential erosion points). However, the risk of an extreme event (greater than a 100-year flood) remains. EPA intends to mitigate this issue by requiring the project (the removal process) be managed into a more compact schedule (5 years) that would reduce the risk for upset resulting from the occurrence of an extreme hydrologic event. During the construction period, EPA, with the help of the U.S. Geological Survey (USGS), intends to be watchful for climatic conditions that would indicate the potential for an extreme event.

2.2.10 Opinion of EPA

2.2.10.1 No Mailing List

Summary of Comments

People who requested that they not be added to the mailing list were not added.

Response

EPA thanks you for your comment on this project.

2.2.10.2 Add to Mailing List

Summary of Comments

People who requested further information were added to the mailing list.

Response

EPA thanks you for your comment on this project and for your interest in receiving project related information, and has added these commenters to the mailing list.

2.2.10.3 Public Outreach Effectiveness

Summary of Comments

Some of the commenters felt that the EPA public outreach process has been effective, while others have felt "left out of the loop" and that their concerns have not been addressed. A few other people commented that there has not been enough detailed information for the public to make an informed decision.

Response

EPA has a rich history of stakeholder and community involvement on the Milltown project since 1981. Over the years, community members have had ample opportunity to be

involved and learn the details of all facets of the project. Local community members have participated individually and through groups such as the Clark Fork Coalition, Trout Unlimited, Bonner Development Group, Bonner-Milltown Community Forum, Friends of Two Rivers, Milltown Redevelopment Group, and Missoula County. EPA believes that adequate information has been provided for the public to understand the project and be able to make an informed opinion. EPA has made information available via public meetings, fact sheets, direct mailings, web pages, etc. See further detail about community involvement at this site in Section 3 of the *Record of Decision*.

2.2.11 Economic Impacts

2.2.11.1 Construction Values

Summary of Comments

Comments in this category focused on the economic impacts of remedy construction on the valley. Most of the commenters requested that local, union labor be used on the construction project. A few specifically requested that local equipment be used so that the business equipment tax would benefit the local school district and the county. One person requested a workforce retraining program to help out-of-work timber industry employees to learn skills needed for working on the remedy.

Response

The remedy for the MRSOU may have an overall cost of close to $100 million. Previous experience with other cleanup projects in the basin indicate that much of that money will go to local contractors and businesses. For instance, approximately 95 percent of the $30 million spent so far on cleanup of Silver Bow Creek has been paid to Montana contractors. This will have an overall positive impact on the local economy for the duration of the Milltown project, which is expected to be approximately 5 to 7 years.

2.2.11.2 Property Values

Summary of Comments

Most people expressed concern that this project could lower property values throughout the Bonner and east Missoula areas. According to several commenters, this area is already depressed, and staging a major remediation project while locating a new waste repository in the same area would devastate property values and the tax base for the economy. Some people are concerned that some private wells will become useless or require more drilling because of a drop in the water table. Proponents of development near Bandman Flats, which might be threatened if the repository is sited there, expect that their development would give a large boost to local property values. A few commenters in this category felt that property values would increase after the remediation was completed and the confluence was restored.

Response

EPA has listened to these concerns and revised the *Proposed Plan* accordingly, as stated in previous responses. This *Record of Decision* describes a new method for removing sediments in the "dry" and transporting them by rail to the Opportunity Ponds near Anaconda. The Bandman Flats repository site is no longer under consideration. The remedial action and restoration activities proposed for the MRSOU should have a positive effect on local

property values after the work is completed. During construction, the County's tax base should increase because of the local construction activities. EPA has stated that if remedial construction adversely affects local potable water supplies by lowering the water table, they would work with the property owner to re-establish a viable source of drinking water.

2.2.11.3 Payment for Cleanup

Summary of Comments

None of the people who commented in this category felt that the taxpayers should bear any responsibility for the cleanup, and asked that the RPs be held responsible for the entire cost. Some were concerned that the remediation costs would not be combined with restoration costs or a restoration plan. Thus, EPA would address human and ecological risks through the remedy, but the valley would not be restored to a condition that aesthetically supports recreation use or wildlife. These commenters felt that funding for restoration must be identified before remediation work begins.

Response

The RPs for the Milltown Site are Atlantic Richfield Company and NorthWestern Corporation. They will bear the burden of the costs associated with all remedial activities within the Milltown OU, including ICs and BMP activities. In a previous agreement, Atlantic Richfield Company settled with the State of Montana on natural resource damage claims for this area. The State has additional claims against NorthWestern Corporation. A portion of this settlement money, along with the funds from any settlement with NorthWestern Corporation, will be used by the State in concert with remedial activities to achieve a pre-determined restoration design. The remedial design will incorporate restoration concepts requested by the State that do aesthetically support recreation use and wildlife habitat. Taxpayer dollars will not be used for this cleanup.

2.2.11.4 Community Economic Changes

Summary of Comments

Many commenters in this category desired reimbursement to Bonner School, the community of Bonner, and the County for lost property tax revenue as a result of dam removal. Many of these people felt that a trust fund should be established (some suggested a $3 million fund), perhaps funded by the RPs, to compensate for a projected loss of $80,000 to $90,000 annually in tax revenue. A few others were concerned with the loss of the hydroelectric power that the dam provides. One commenter was concerned that short-term impacts on the downstream fishery could put smaller fishing shops out of business.

Many other commenters feel that this project, when completed, will be a boon to the local economy. These commenters cited additional purchases of goods and services by tourists, and removal of the "Superfund site stigma" that has historically slowed growth in the area. Several commenters indicated that Bonner is slowly changing from a resource-based economy to a tourism-based economy, and that this project will help provide more recreation opportunities and a better fishery to help the local economy improve. Some commenters, who are opposed to locating the sediment repository at Bandman Flats, cited the development opportunities for open space near the river, and the increased tax base such development would bring to the community.

Response

In the short term, the tax base for the County should increase because of construction of the project. It is true that over the long term the County will lose tax base support once provided by operation of the dam. Revenue from the dam has been decreasing steadily over the past few years and now constitutes 1.59 percent of school revenue in 2004. Remediation of the sediments and re-establishment of the free flowing status of the Clark Fork and Blackfoot Rivers should have a positive effect on the local economy through additional development, improved health of local fisheries, and enhanced recreational opportunities along the rivers, and restoration of the local drinking water supply.

2.2.12 Comment Noted—No Response Required

EPA read many comments that were general opinions or historical data and did not comment directly on a specific component of the *Proposed Plan*. For example, such comments ranged from, "let proven science determine when and how the process is done, not politics," to, "rhetoric printed about the Milltown Dam is the obvious one-sided opinion printed in the *Missoulian*." Some of the other comments included data from other Superfund sites, historical anecdotes that enhance EPA's understanding of the project area, and copies of articles and presentations concerning the MRSOU. These opinions and information benefited EPA's staff and assisted with development of the *Proposed Plan*. However, a direct response was not possible.

Response

No specific response is required.

2.2.13 Unrelated Comment—Out of Scope

These comments concerned projects that are outside of the *Proposed Plan* and the MRSOU. Examples include conducting extensive sampling at Thompson Falls Reservoir, suggestions about cleanup procedures in the Clark Fork River OU, and the influence of water rights after the remedy is implemented.

Response

These comments were deemed to be outside the scope of the plan and, therefore, no specific response is required.

2.2.14 Compliance with Regulations

2.2.14.1 Other Federal Regulations

Summary of Comments

Some of the commenters in this category asked that a full Environmental Impact Statement be prepared for this project. Others asked that the project be compliant with the Endangered Species Act, and listed the habitat requirements for bull trout in particular. A few others requested compliance with the Clean Water Act, and specifically the TMDL process.

Response

Under CERCLA, the RI/FS process, through preparation of a *Record of Decision*, is comparable to the National Environmental Policy Act (NEPA) process. By law, EPA is not required to conduct an EIS for Superfund projects. A biological assessment for bull trout,

bald eagle and other endangered species has been prepared, reviewed, and approved by the appropriate Federal Trustees (CH2M HILL 2004a and 2004b). USFWS issued a Biological Opinion supporting EPA's conclusions (USFWS 2004). EPA is obligated to comply with Section 121 of CERCLA, which addresses compliance with applicable or relevant and appropriate requirements (ARARs). Compliance with the Clean Water Act is an ARAR. EPA believes that the remedy is a necessary step in attaining a clean and healthful environment (ARAR compliant). When combined with the restoration activities that the State plans to implement, it is believed that a clean and healthful environment will be attained to the fullest extent possible through the Milltown OU into the lower Clark Fork River.

2.2.14.2 Fully Considered Impacts

Summary of Comments

The commenters in this category focused on whether EPA fulfilled all of its obligations for remedy analysis under CERCLA. Most of the commenters felt that EPA had not completed a thorough enough analysis of all of the risks in the remedy. Aspects of particular concern included the risks from leaving some sediments in place, consideration of downstream impacts during construction, use of ICs for groundwater contamination control, and ambiguity of certain parts of the *Proposed Plan* that will be addressed "during the remedial design."

Response

EPA believes it has fulfilled all of its obligations for remedy analysis under the NCP and has conducted a thorough analysis of the risks and benefits from the remedy. This *Record of Decision* contains a more thorough discussion of the sediments left in place, and how certain Area 3 sediments will be isolated from the active river channel and how other restoration activities above Duck Bridge are expected to decrease erosion. Downstream impacts associated with uncontrolled releases of sediments were modeled using HEC 6 to assess mobilization and transport of scoured sediment downstream. This activity resulted in the decision to construct a bypass channel through Area 1 (see Part 2, *Decision Summary*, Section 12) and to pursue certain construction activities on a schedule that coincided with spring runoff. Under the remedy, groundwater ICs will continue until monitoring indicates the arsenic plume has abated to below drinking water standards. Removal of the primary source sediments and the reservoir pool should hasten the arsenic natural attenuation process.

It is not uncommon for details of design strategies to be delayed until the onset of remedial design. EPA has provided as much information as possible, as it discusses the remedy in this *Record of Decision*.

2.2.14.3 RAOs and RAGs

Summary of Comments

One commenter felt that the RAOs and Remedial Goals (RGs) were incomplete because they do not address the Missoula aquifer drinking water supply. Other commenters felt that more "performance standards" were needed in addition to the stated objectives and goals.

Response

EPA disagrees with the comments. The RAOs specifically address expectations for groundwater and surface water quality downstream of the dam as it relates to water quality

in the Missoula aquifer. These expectations are discussed in detail in Part 2, *Decision Summary,* Section 8, *Remedial Action Objectives,* of this *Record of Decision*. Surface water and groundwater standards are discussed in Section 12.7, *Performance Standards and Remedial Goals,* of the *Record of Decision*.

2.2.15 Comment Period—Extend Comment Period

Summary of Comments

These commenters requested an extended public comment period.

Response

EPA extended the original comment period an additional 30 days and provided a second opportunity to comment under the *Revised Proposed Plan,* which presented significant changes from the original plan.

2.2.16 Social Impacts

2.2.16.1 Reservoir Recreation

Summary of Comments

Commenters in this category were concerned about the loss of flatwater recreation in the area, and asked that the dam be retained.

Response

This *Record of Decision* requires the removal of Milltown Dam and approximately 2.6 million cubic yards of sediment in an action designed to help protect human health and the environment. Removal of the dam eliminates the reservoir and the flat water resource associated with it. In its place, the Clark Fork and Blackfoot Rivers will be restored to a free flowing state, allowing fish passage (including bull trout) and restoring the natural confluence of the rivers.

2.2.16.2 Two Rivers Park and Facilities

Summary of Comments

Commenters in this category asked for continued access to and use of the Two Rivers Community Park throughout the remediation process. Other commenters expressed their hope that a rail line or haul road would not be built through the park. A few others were concerned that the Kim Williams Trail extension to the Milltown Reservoir would not be completed if the Bandman Flats site is used as a repository.

Response

Implementation of this *Record of Decision* will entail significant construction activities. It is anticipated that some of these activities will impact the Two Rivers Community Park area. Section 12 of Part 2, *Decision Summary,* provides a description and illustrations of the rail spur/loading area, roads, and bypass that are intended for construction. During construction, access to the reservoir by the general public will be very limited. Upon completion of construction, reclamation of park areas and trails will be restored to pre-construction condition by the RPs.

2.2.16.3 Noise, Traffic, and Dust

Summary of Comments

Most people who commented in this category are concerned about the quality of life in Milltown and Bonner during remediation. The increased traffic poses a safety risk, and the noise from haul trucks and equipment will impact the residents and the educational environment at Bonner School. As described in the *Human Health Risks—Air Quality* category, dust could pose a health threat, or at least an annoyance during remediation. A few people indicated that noise, traffic, and dust impacts would indeed occur during the project, but said that the long-term benefits of dam and sediment removal outweigh a few years of inconveniences to the community.

Response

Noise, traffic and dust will be mitigated by the location of the rail spur and train loading dock onto Area 1 as described in the *Revised Proposed Plan*. Most of the comments expressed under this category are addressed in Part 2, *Decision Summary*, Section 12. Equipment will operate and be staged south of the Interstate. Trains will be operating late at night to avoid adding to local traffic congestion and disturbing residents and the educational environment of Bonner School. As discussed previously for another comment, dust will be abated through the use of water. Although dust is not presently considered a health hazard (USEPA 1993b), it can quickly become an annoyance if not addressed through BMPs.

This page left blank intentionally.

3 Revised Proposed Plan Comments and Responses

3.1 Overview of Process, Responders, and Stakeholder Comments

A total of **804 people submitted comments**, excluding the Atlantic Richfield Company and NorthWestern Corporation. One person submitted more than one comment document. Therefore, the **total number of comment documents submitted was higher, at 805,** excluding Atlantic Richfield Company and NorthWestern Corporation.

The statistics in this summary **are based on comment documents**—not people. Two basic types of comment documents are recognized:

- **Unique Comment Documents**, such as letters, e-mails, or postcards with additional comments written on them. EPA received a total of **44 unique comment documents** and **2 public meeting transcripts**.
- **Form Letters,** which include such documents as postcards and petitions. EPA received a total of **759 form letters**.

To identify the range of the public represented by the comment documents, this section contains a description of the kinds of form letters received. Later, this section contains a description of the comment documents by commenter type.

3.1.1 Kinds of Form Letters Received

The form letters were grouped by content, as shown below:

- TwoParagraph: Postcard with two paragraphs of text
- BulletList: Postcard with a bulleted list of items
- Petition: Letter from Milltown residents signed in the form of a petition

If someone submitted two different kinds of form letters, for example, a “TwoParagraph” postcard and a “BulletList” postcard, each postcard was counted. That is, each postcard is counted in its group as a separate comment document, rather than just one for the person. The table below shows the number of comment documents received for each of these kinds of form letters.

TABLE 3-4
Number of Commenters for Each Type of Form Letter: Revised Proposed Plan

Group Name	Description	Count
TwoParagraph	Two-paragraph postcard supporting the Revised Proposed Plan	622
BulletList	Postcard supporting the Revised Proposed Plan with a bullet list of desired features	103
Petition	Letter listing concerns with the Selected Remedy that is signed by Milltown residents	34

3.1.2 Comment Documents by Commenter Type

The authors of comment letters were organized into the following commenter types:

- Milltown Residents
- Missoula Residents
- Upstream Residents
- Downstream Interests
- Others
- No Address
- Meeting
- Groups
- Local Government
- Elected Officials
- Natural Resources Trustees
- Corporate Interests
- RPs

The table below presents the numbers of comment documents submitted by each commenter type, including unique comment documents and form letters. The same commenter types were used for this comment analysis as for the *Original Proposed Plan*. Therefore, some of the commenter types show a zero in the table below because that type of person did not comment on the *Revised Proposed Plan*.

TABLE 3-5
Number of Total Comment Documents Received, Listed by Commenter Type: Revised Proposed Plan

Name	Description	Count
Milltown Residents	Milltown Area Residents (Bonner, Piltzville, Turah, Milltown West Riverside)	79
Missoula Residents	Missoula Residents	543
Upstream Residents	Upstream Residents (Drummond, Clinton, Deer Lodge, Garrison, Anaconda, Butte)	9

TABLE 3-5
Number of Total Comment Documents Received, Listed by Commenter Type: Revised Proposed Plan

Name	Description	Count
Downstream Interests	Residents Downstream of Missoula (Frenchtown, Huson, Alberton, Rivulet, Tarkio, Superior)	8
Others	Other individuals from outside the Clark Fork Basin	137
No Address	People who did not supply an address	7
Meeting	Oral comments provided to EPA at meeting or hearing	2
Group	Citizen Groups and Organizations	12
Local Government	City and County Agencies, Conservation District Board	3
Elected Officials	Mayors, senators, representatives, and other elected officials	0
Natural Resources Trustees	Federal, Tribal, and State Trustees	2
Corporate Interests	Corporate entities such as Mountain Water Co., Avista, PPL, etc.	3

3.1.3 Types of Comments Received

All comments received during the comment period were categorized as shown in Exhibit 3-6, *Categories and Subcategories Applied to Stakeholder Comments*. Comments within each comment document were marked and assigned to a specific category and subcategory, regardless of whether the comment document was an e-mail, letter, fax, phone message, or public meeting transcript. These marked and categorized comment documents are available as part of the Administrative Record for this OU. Contact Diana Hammer to request a copy; a copying fee will be applied. Exhibit 3-6 also indicates the number of comments received for each category.

EXHIBIT 3-6
Categories and Subcategories Applied to Stakeholder Comments (Excluding the RPs): Revised Proposed Plan

Categories	Subcategories	Description	Number of Comments
Opinion of Plan	Fully Supports Plan	Supports plan as written	776
	Conditionally Supports Plan	Supports plan, with a few modifications	9
	Needs More Information	Does not support or oppose; needs more info	36
	Opposes Plan	Opposes the plan entirely as written	5
Dam Removal	Remove Dam	Desire dam removal	635
	Do Not Remove Dam	Do not want dam to be removed	3
	Powerhouse	Whether or not powerhouse should be removed with dam	118

EXHIBIT 3-6
Categories and Subcategories Applied to Stakeholder Comments (Excluding the RPs): Revised Proposed Plan

Categories	Subcategories	Description	Number of Comments
Sediment Removal	Remove More Sediment	Remove more than is outlined in the Proposed Plan	11
	Water Quality during Construction	Water quality and treatment of impacted water	6
	River Scour Modeling	Concerns about scour modeling methodology	3
Bandman Flats Repository	Do Not Use Bandman Flats	Do not use Bandman Flats as the sediment repository	1
Opportunity Ponds Repository	Use Opportunity Ponds	Use Opportunity Ponds for sediment repository	758
	Do Not Use Opportunity Ponds	Do not use Opportunity Ponds as sediment repository	2
	Transportation to Opportunity Ponds	Suggestions or concerns about transporting sediment to Opportunity	3
	Lack of Local Involvement	Lack of public involvement and consideration in Opportunity	4
	Impacts to Aquifer	Potential impacts on the aquifer at Opportunity	1
	Mitigation for Disposal	Mitigation to Opportunity for disposing of sediments at Opportunity Ponds	8
	Air Quality in Opportunity	Air quality in Opportunity from blowing dust	1
	Economy of Opportunity	Economic impacts on Opportunity from repository	3
Channel Reconstruction	Backfill Source	Source of sediment for backfill following removal	2
	Design Considerations	Design of channel reconstruction project	127
	Bridge Structures	Impacts on Duck Bridge and other structures	35
Groundwater	Missoula Aquifer	Potential for impacts on Missoula aquifer if sediments are released	3
	Institutional Controls and Monitoring	ICs needed for groundwater use or protection	42
	Loss of Drinking Water Wells	Concern that dam removal will lower water levels	44
Surface Water	Institutional Controls and Monitoring	ICs and monitoring for surface water impacts	4

EXHIBIT 3-6
Categories and Subcategories Applied to Stakeholder Comments (Excluding the RPs): Revised Proposed Plan

Categories	Subcategories	Description	Number of Comments
Human Health Risks	Safety during Construction	Public safety, including traffic, trains, etc.	8
	Contaminants in Groundwater	Risks from groundwater contamination to Milltown residents	114
	Contaminants in Surface Water	Human exposure to arsenic in surface water	8
	Air Quality	Air quality impacts during construction	3
Ecological Risks	Wildlife Habitat	Risks to wildlife in the Proposed Plan	6
	Aquatic Health	Risks to aquatic organisms in the Proposed Plan	2
Opinion of EPA	No Mailing List	Request to be removed from mailing list	11
	Public Outreach Effectiveness	Degree to which EPA's public outreach was successful	2
Economic Impacts	Property Values	Value of properties adjacent to project	43
	Payment for Cleanup	Who should pay for the cleanup	3
	Community Economic Changes	Economic impacts or changes in surrounding communities	46
	Water Rights	Use of water rights during and after the remedy	1
Comment Noted	No Response Required	No response needed because comment is an opinion	20
Compliance with Regulations	Other Federal Regulations	Compliance with ESA and other regulations	1
	Fully Considered Impacts	EPA's considerations of all impacts under CERCLA	4
	RAOs and RAGs	Appropriateness of goals and objectives	2
Social Impacts	Reservoir Recreation	Reservoir recreation impacts	2
	Noise, Traffic, Dust, and Odors	Impacts to the public during construction	44
	Controlled Public Access	Public access during construction for observation	5
	Historical Documentation	Document the historical resources and the dam removal	5
Cooperation among Agencies	Favors Integration with Other Agency Plans	Favors integration of the selected remedy with restoration	795
Third Party Interests	Upstream Impact Concerns	Impact concerns upstream, particularly Opportunity	1
	Downstream Impact Concerns	Impact concerns of parties downstream of the action	5

3.2 Stakeholder Comments and Responses

This section is organized by category as shown in Exhibit 3-6. The subcategories are listed under each category. Within each subcategory, a summary of the comments is provided, along with the lead agencies' response.

3.2.1 Opinion of Plan

3.2.1.1 Fully Supports Plan

Summary of Comments

Comments in this category stated full support of the *Revised Proposed Plan*. Respondents provided many reasons for supporting the Milltown Dam and sediment removal. Many expressed enthusiasm for stream restoration, achievement of fish passage, improvement of conditions for aquatic life, restoration of polluted surface water and groundwater, and improvement of safety by removing an old dam structure. Some of the supporters urged EPA to move forward as quickly as possible with the *Revised Proposed Plan* remedy.

Response

EPA acknowledges the full support of more than 770 commenters for the *Revised Proposed Plan's* recommended remedy, representing approximately 97 percent of commenters.

3.2.1.2 Conditionally Supports Plan

Summary of Comments

These commenters would fully support the *Revised Proposed Plan*, but their approvals were expressed with suggestions for modifications that they believe would make the remedy more complete, such as the following:

- Proceeding with the project in spite of what they perceive is an incomplete risk assessment on impacts to downstream users.
- Impacts related to reservoir drawdown on residents' homes adjacent to the Clark Fork and Blackfoot Rivers in the Milltown area.

Despite such qualifications, support for the remedy was generally expressed by these commenters.

Response

EPA examined these comments and included additional detail in the *Record of Decision* to address these issues. EPA is very concerned about the risk to downstream receptors and has engaged in a number of activities to evaluate those risks. For example, during development of the final remedy, EPA required Atlantic Richfield Company to complete an extensive surface water modeling effort (using HEC 6) to predict the amount of sediment scour the remedial activities would generate and transport downstream under specific options. The modeling approach and results were reviewed by a panel of national experts. Their opinions resulted in EPA requiring a Clark Fork River bypass channel to reduce contaminated sediment scour potential and adjusting major sediment-yielding field activities (such as dam removal) so they coincide with spring runoff. These changes will reduce the risk of generating large volumes of contaminated sediment that would be transported to

depositional areas downstream, such as Thompson Falls or Noxon Reservoirs. EPA believes that changing the local environment from a reservoir to an active river channel, removal of the source sediments, and physical isolation of those sediments that contain lower levels of contamination is the most prudent approach for safeguarding human health and the environment risk at the reservoir and downstream.

EPA understands the concerns of adjacent property owners over eliminating the reservoir and the dam, and is committed to working with residents to help mitigate significant impacts through remedial design. Implementation of the restoration plan will provide significant enhancements to the area as well.

3.2.1.3 Needs More Information

Summary of Comments

Commenters in this category did not support or oppose the *Revised Proposed Plan*, but felt that more information would be needed to make a determination for themselves. Others asked for clarification on whether or not restoration efforts would be made on the Blackfoot arm of the project upstream of the Interstate bridge to Stimson Dam.

Response

Proposed plans are normally general in nature. EPA supplemented the *Revised Proposed Plan* with specific answers to questions raised during the *Original Proposed Plan*, to ensure that the public had adequate information during the public comment period. This *Record of Decision* contains details on the issues that commenters identified as too vague in the *Revised Proposed Plan*. Some restoration is planned by the State for the reach of the Blackfoot River up to the Stimson Dam, and a USFWS fish passage project will include the removal of the Stimson Dam, which will be conducted in concert with the Milltown remedial activities (see Part 2, *Decision Summary*, Section 12.3.2). The State's NRDP will direct and fund other restoration activities beyond the MRSOU boundaries.

3.2.1.4 Opposes Plan

Summary of Comments

These commenters were completely opposed to both dam and sediment removal as described in the *Revised Proposed Plan*. Not many reasons were given for respondents opposing the plan, other than they were against total dam removal including the powerhouse, sediment removal and storage at Opportunity Repository, diverting the Clark Fork River into a bypass channel during clean-up activities, and combining clean-up and restoration for cost savings. One respondent felt that the *Revised Proposed Plan* was a complete waste of tax payers dollars.

Response

EPA notes opposition to the *Original Proposed Plan*, but believes that the remedial action described in this *Record of Decision* meets the threshold criteria for remedy selection, and provides the best balance among the remaining balancing and modifying criteria. Issues such as historic preservation of the powerhouse, explanation of the sediment removal methods and their transport to Opportunity Ponds, incorporating a bypass channel into the remedial activities, and combining remedial action with some restoration activities are presented an discussed in detail in Part 2, *Decision Summary*, Section 12.

3.2.2 Dam Removal

3.2.2.1 Remove Dam

Summary of Comments

Comments in this category focused specifically on dam and sediment removal. These commenters generally had the same reasons for supporting dam removal as described in the *Fully Supports Plan* subcategory.

Response

EPA agrees with the comments expressing support for the removal of the dam. As explained in Part 2, *Decision Summary*, of this *Record of Decision*, EPA believes the remedy will restore the contaminated Milltown aquifer, restore fish passage, improve the overall aquatic environment, and significantly reduce the potential risk of future impacts to aquatic life from the scour of sediment left onsite.

3.2.2.2 Do Not Remove Dam

Summary of Comments

Several commenters advocated leaving the dam in place primarily because of its historic significance. One comment discussed a previous survey authorized by the Missoula Health Department and conducted by the University of Montana in which respondents wanted the dam to be left in place. Another comment expressed essentially the same reasons for not supporting dam removal as described in the *Opposes Plan* subcategory.

Response

EPA acknowledges the comments to retain the dam. However, as explained in the previous set of comments for the *Original Proposed Plan* (see Section 2.2.2.2, *Do Not Remove Dam*, of this *Responsiveness Summary*), EPA is required under the Superfund law to seek a remedy that provides a permanent, long-term solution that is protective of public health and the environment. Leaving the dam in place would allow additional sediments to accumulate and would likely continue polluting the local drinking water aquifer. In effect, the situation could revert back to its pre-removal condition. That is not in the best interest of the community or acceptable under CERCLA.

3.2.2.3 Powerhouse

Summary of Comments

Many of the commenters advocated total dam removal including the powerhouse. Some of these commenters view the removal of the dam and powerhouse as an important component to natural channel restoration but also recognize the historical significance of the powerhouse and suggest that the history of the powerhouse be preserved at an offsite interpretive center. One respondent would like the powerhouse to remain as a historic structure citing its historic value and eligibility for the NRHP, and stating that the Milltown powerhouse does not pose a threat to human health, the environment, or impede fish passage. Other comments recognize the financial and operation and maintenance burden of keeping the powerhouse complex in place given its proximity to the river channel.

Response

EPA acknowledges a diversity of opinions on how to deal with the powerhouse and affiliated dam structures. As discussed in comments to the *Original Proposed Plan* (see Section 2.2.2.3, *Powerhouse*, of this *Responsiveness Summary*), EPA agrees with and understands the historic significance of the dam complex, but has determined with input from the State of Montana that the Milltown Dam will be completely removed as part of the CERCLA action at the site. Mitigation measures consistent with the NHPA will be developed and applied. More detailed information is contained in Part 2, *Decision Summary*, Section 5.7, of this *Record of Decision*. In addition, Milltown Redevelopment Group, a local community redevelopment group, is examining possible ways to recognize and celebrate the historical significance of the dam, powerhouse, and river confluence.

3.2.3 Sediment Removal

3.2.3.1 Remove More Sediment

Summary of Comments

Commenters in this category expressed concern that leaving contaminated sediment in place could, under certain circumstances, create new problems downstream. The sediments of concern were those associated with Area 3 (the old Clark Fork River channel). Some of these commenters would like removal of additional contaminated sediment from Area 3 to address potential short and long-term impacts for both surface water and groundwater. One commenter cited more permanence and less engineering controls to prevent future erosion of sediments downstream if additional sediment were to be removed from Area 3.

Response

Comments on the *Original Proposed Plan* raised some of the similar concerns (see Section 2.2.2.4, *Remove More Sediment*, of this *Responsiveness Summary*). EPA believes that contaminated sediments in Area 3 can be successfully isolated from the floodplain by utilizing engineering controls, and diverting the river away from those sediments into Area 1 (where all sediments were excavated). A newly constructed, free-flowing channel would be designed to accommodate a seasonally fluctuating flow regime, and would occupy a reconstructed, functional floodplain through the project area. Elimination of the reservoir pool is anticipated to influence local water table levels, by dropping them to pre-reservoir elevations. Groundwater levels are also expected to fluctuate seasonally throughout the area after remedy implementation. Lower level contaminants underlying the existing Clark Fork River channel may or may not be intercepted by the new groundwater levels. At this time, EPA does not anticipate any new groundwater impacts from this material. Groundwater flow paths are likely to intercept or parallel the river. In both cases, dilution is expected. EPA believes that through design, a natural floodplain with healthy riparian vegetation can be established that would accommodate a variety of hydrologic regimes without unacceptably liberating contaminants. Removal of all the sediments (Areas 3, 4, and 5), as suggested by commenters, is not cost-effective, and therefore it was not retained as an option.

3.2.3.2 Water Quality during Construction

Summary of Comments

Comments under this category expressed concern that water quality downstream will suffer during construction, in spite of the BMPs and construction barriers that will be used. A few commenters indicated that all process water may need to be treated before returning it to the river. Several people were also concerned about the construction and design of the bypass channel and how it will mitigate or control toxic sediments, high spring water flow, and ice jams.

Response

Similar comments were expressed on the *Original Proposed Plan* (see Section 2.2.3.3, *Water Quality during Dredging*, of this *Responsiveness Summary*). However, under the *Revised Proposed Plan*, the proposed method for sediment removal is "dry" excavation. Removal of the Milltown Dam early in the construction will reduce local groundwater elevations to allow for the dry excavation of most, if not all, of the targeted sediment. Implementation of construction BMPs during dry excavation provides more control of the sediment and reduces the likelihood of uncontrolled releases to the river that might affect downstream water quality. Construction of the bypass will occur with the Clark Fork River in its current channel. The bypass channel will be designed to handle a 100-year flood, which should allow the channel to pass ice during the winter. EPA has consulted with USACE experts on the formation of ice jams, and how best to design for their passage. The bypass channel will also be armored to significantly reduce scouring of contaminated channel bottom sediments from Area 1 and will help control erosion issues associated with seasonal flow regimes for the duration of project construction. Sequencing of the dam removals and opening of the bypass will be timed to coincide with spring runoff to help mitigate any potential scour of sediments. Drainage water from moist sediment will be carefully and frequently analyzed and compared to EPA's temporary water quality standards. If those standards are exceeded, seepage water will be treated to remove the contaminants before being discharged to the river. EPA believes that through careful design and implementation of the remedy, downstream water quality will be preserved.

3.2.3.3 River Scour Modeling

Summary of Comments

One commenter expressed several concerns with using HEC 6 to estimate sediment erosion and deposition associated with the removal of Milltown Dam. The commenter listed several limitations of HEC 6 and of the selected modeling equation and parameters. The commenter noted that HEC 6 is a one-dimensional model and unable to predict erosion from channel widening and upstream headcut migration. The commenter also expressed concerns associated with the selection of Yang's equation and parameters used to estimate erosion rates of silt and clay. A couple of commenters felt that modeling flood events only up to the 25-year event was inadequate and that sediment erosion estimates should be determined for more extreme floods. Others expressed concerns about the potential for impacts to downstream impoundments such as Thompson Falls Reservoir.

Response

As noted by the commenters, the *Final Technical Memorandum: Milltown Reservoir Dry Removal Scour Evaluation*, clearly acknowledges and discusses the limitations of HEC 6.

Because of these limitations and the complexity of estimating sediment erosion, EPA had several sediment transport experts review the modeling results. These experts included sediment transport researchers and modelers from the U.S. Bureau of Reclamation, USACE, EPA, and private consulting firms. Several of these reviewers had been involved in model evaluations of previous dam removals. These reviewers were satisfied that the model results were adequate for their intended purpose. The intent of the model results was to estimate potential worst-case conditions and for comparison of various alternatives. Erosion equations and parameters were selected using these criteria. For example, the selected critical shear stress for mobilizing cohesive sediment was low enough that generally all the sediment was predicted to be eroded regardless of the specific value selected. Therefore, efforts to refine the specific critical shear stress were not merited. Volume computations of available sediment based on channel geometry were also performed to support HEC 6 model estimations. The scour modeling results are discussed in detail in Part 2, *Decision Summary*, Section 12.4, *Control of Sediment Releases during Construction*.

The merits of evaluating floods greater than the 25-year event are discussed in *Final Technical Memorandum: Milltown Reservoir Dry Removal Scour Evaluation*. Based on model sensitivity analysis and conservative erosion predictions, it is estimated that flood events greater than the 25-year event will have a dilution effect because likely increases in flow would exceed the increases in sediment load. It should also be noted that the selected bypass alternative will be designed to control flows up to the 100-year event.

The scour modeling effort did provide some input into the potential for sediment and associated copper and arsenic loads to be transported to downstream impoundments. Assuming the sediment scoured from the Milltown Reservoir and sediment loads from all interim tributaries (Bitterroot river, Flathead River, etc.) reach the Thompson Falls Reservoir over 4 years of remedial construction at Milltown, the total load contribution is predicted to be approximately 2.2 million tons. Of this amount, 0.3 million tons (or 13 to 14 percent) is predicted to come from Milltown reservoir activities. EPA believes this prediction may be conservative (over-estimating the impact of the Milltown activities) given the model used and its inherent operating assumptions. Given the fine-grained size of suspended sediment from Milltown, it is likely that much of the sediment would pass through, rather than deposit in, the Thompson Falls Reservoir.

The average copper and arsenic concentrations associated with the scoured Milltown sediment is estimated to be 232 mg/kg and 34 mg/kg, respectively. Mixed with sediment source material from other tributaries, the average copper and arsenic concentrations as it enters Thompson Falls Reservoir is estimated to be approximately 106 mg/kg and 25 mg/kg, respectively (based on a weighted average of the predicted sediment loads from the major sources calculated over the 4-year excavation period). For comparison, the estimated total copper and arsenic in Thompson Falls Reservoir sediments, estimated in 1985, is about 108 mg/kg and 19.3 mg/kg, respectively, based on work completed by University of Montana researchers Johns and Moore (*Copper, Zinc and Arsenic in Bottom Sediments of Clark Fork River Reservoirs*). The predicted 4-year load (construction period) of copper potentially entering the reservoir from all sources is estimated to be 264 tons. Of this amount, 26 percent is predicted to come from the scour of Milltown sediments. Arsenic is similar. Of the predicted 63 tons estimated to enter the Thompson Falls reservoir, 16 percent is predicted to have its origin in Milltown. It should be noted that the Milltown contribution

to this downstream load is estimated to occur over a 4-year period, whereas loading from other natural sources will continue indefinitely. Thus, if viewed over the long-term, the potential Milltown contribution becomes relatively small and probably insignificant.

3.2.4 Bandman Flats Repository

3.2.4.1 Do Not Use Bandman Flats

Summary of Comments

A comment received supported moving sediment from the proposed Bandman Flats area to Opportunity Ponds for cover material, which makes the land available for development.

Response

EPA appreciates the comment and concurs with the commenter's approval of transporting the excavated sediments to Opportunity Ponds. EPA also agrees that when possible, it is preferable to use existing repositories rather than creating new places to store excavated material.

3.2.5 Opportunity Ponds Repository

3.2.5.1 Use Opportunity Ponds

Summary of Comments

The comments associated with this category supported using the Opportunity Ponds repository. Transporting the sediment material by rail to Opportunity Ponds was viewed positively by most commenters. Some commenters indicated that Opportunity Ponds is already an impacted area and existing repository, so the addition of more contaminated sediment (approximately 1 percent) to the overall volume of contaminated material is not a critical issue. Furthermore, many commenters support using the sediment material as a cap for Opportunity Ponds. One respondent recommended that the capped or topsoil material exposed to erosion from air or precipitation be addressed.

Response

EPA concurs with the use of the Opportunity Ponds as the primary repository. The sediment proposed for disposal (the exact amount will be determined during design) represents less than 1 percent of the total waste materials currently disposed of at the Opportunity Ponds. In addition, its high organic matter may allow it to be used as part of an effective capping medium. Once placed, the cap materials will be treated if necessary and re-vegetated with selected native species to reduce the potential for wind and water erosion. In fact, this re-vegetated cap will improve the current conditions that allow occasional wind and water erosion of the materials currently disposed of at the Opportunity Ponds. In addition, use of these sediments as capping material greatly reduces the need for digging borrow pits for capping soil in the Anaconda area.

3.2.5.2 Do Not Use Opportunity Ponds

Summary of Comments

A comment in this category voiced no support for disposing of the Milltown sediments at Opportunity. In the commenter's eyes, Opportunity has been the dumping ground for the

Clark Fork basin and very little attention has been paid to local residents who must ultimately live with it, but certainly did not voice public acceptance of the idea.

Response

EPA acknowledges the concern of the residents of the Opportunity and Anaconda area. EPA has evaluated a number of potential repository locations during the course of preparation of the *Feasibility Study*, the *Proposed Plan*, and this *Record of Decision*, and has determined that disposal at Opportunity Ponds best meets the threshold and balancing evaluation criteria while significantly reducing human health and environmental risks. The Opportunity Ponds are located on Atlantic Richfield Company property, and appropriate controls will be placed on this area as part of the Anaconda remedy so that disposal of the sediments can be done safely and effectively.

3.2.5.3 Transportation to Opportunity Ponds

Summary of Comments

Comments in this category generally support the proposed location for rail car loading and using rail to transport sediment to Opportunity Ponds. However, one respondent stipulates that the only acceptable timeframe for train travel is after 6:00 PM to pass through Grant Kohrs Historic Ranch. This commenter expects Atlantic Richfield Company to prepare a Spill Prevention, Control and Countermeasure (SPCC) Plan and a fire suppression plan subject to review and approval. In addition, this commenter recommended the scope of the existing Clark Fork / Flathead Basin Sub Area Contingency Plan be expanded upstream to cover at least the reach of the Clark Fork River from Missoula County line to Anaconda, and address the potential spill of contaminated sediments.

Response

EPA concurs that rail transport is safe, effective, and the most cost-effective method to transport the sediments to Opportunity Ponds. The sediments will be dewatered prior to transport and will be covered during transport, so there will be minimal risk of spillage. The trains carrying the sediments will be unit trains and will travel at night to minimize traffic conflicts and impacts to communities as well as the Grant Kohrs Historic Ranch. A Health and Safety Plan will be developed to minimize risks to human health and the environment (including risks resulting from fire and spillage) during transport. An SPCC Plan will be developed if there is storage of oil or petroleum products associated with the transport system in excess of the regulatory threshold of 1,320 gallons. These plans should be sufficient to address risks and spills during rail haul of the excavated sediments.

3.2.5.4 Lack of Local Involvement

Summary of Comments

Comments in this category express concern for effects to human health and the environment for the residents of Opportunity from sediment proposed to be deposited into the Opportunity repository.

Response

The sediments that will be deposited at Opportunity Ponds do not represent a risk to human health or the environment in the vicinity of Opportunity. In fact, the use of the sediments at the ponds may reduce the current minimal risks to human health and the environment associated with wind and water erosion of the existing tailings materials

currently deposited at the Opportunity Ponds. Use of the sediments as capping material could reduce the need for additional capping soil borrow pits which would create less disturbance in the Opportunity area.

3.2.5.5 Impacts to Aquifer

Summary of Comments

A comment was received concerning groundwater impacts to the local aquifer that serves as the drinking water source for the town of Opportunity. The commenter notes that the Opportunity Ponds are supposed to be sealed, but is concerned that the seal might fail as more wastes are received from sites like Milltown.

Response

EPA acknowledges Milltown's contribution to the Opportunity Ponds, which amounts to less than 1 percent of the waste onsite. The sediments that will be deposited do not represent any increased risk to the aquifer in the vicinity of Opportunity. This is because the arsenic in these sediments is more mobile under reducing (oxygen deficit) conditions or high pH. The sediments may be used as a cap and may therefore be spread over the surface of the Opportunity Ponds in a comparatively thin layer, generally not more than 1 to 2 feet deep, if standards are met. Groundwater at the perimeter of the site will be monitored and if necessary, treatment will be required. The thin layer of these sediments will be in an oxidized state that immobilizes the arsenic, therefore resulting in minimal risk for transport of arsenic into the aquifer. The re-vegetation of the cap materials will result in increased surface evapotranspiration and decreased infiltration into the underlying waste materials, actually reducing the risks to the aquifer associated with the underlying existing waste materials.

3.2.5.6 Mitigation for Disposal

Summary of Comments

Comments in this category support mitigation disposal measures for the community of Opportunity. Many citizens of Opportunity would like to see some economic benefit in return for the contaminated sediment proposed to be disposed of in the Opportunity repository. In addition, one respondent pointed out that the citizens of Opportunity would like their concerns addressed regarding "contamination from wind-blown dust, domestic water supplies, and their community being perceived of as a dumping ground."

Response

There will be significant economic benefits for the residents of the Clark Fork Valley (including Opportunity) during the period of implementation of the remedy. The benefits at Opportunity will be primarily associated with job opportunities resulting from the construction of the cap incorporating the transported sediments from Milltown Dam. As noted previously, there will be no increased risk to the aquifer associated with deposition of the sediment materials. In fact, the use of the sediments in a vegetated cap, if that is approved, will reduce the current risks to human health and the environment associated with wind and water erosion of the existing tailings materials currently deposited at the Opportunity Ponds. Also, as part of long-term monitoring for the Anaconda site, domestic wells will be monitored for exceedances of water quality standards.

3.2.5.7 Air Quality in Opportunity

Summary of Comments

A citizen of Opportunity is concerned about air quality issues downwind of the Opportunity repository. Apparently a "very yellow, foul-looking dust" covered one side of a local residence house during a past wind storm. The citizen proposed to have the material covered to avoid future wind events.

Response

The high organic matter in the sediments transported to the Opportunity Ponds may allow it to be used in an effective capping medium on the Ponds. Once placed, the cap materials will be treated, if necessary, and re-vegetated with selected native species to reduce the potential for wind erosion. In fact, this re-vegetated cap will improve the current conditions that allow occasional wind erosion of the materials currently disposed of at the Opportunity Ponds.

3.2.5.8 Economy of Opportunity

Summary of Comments

Several respondents expressed concern about the short term positive economic impacts versus the long term negative impacts of having the repository located at Opportunity.

Response

EPA agrees that the short term economic benefits to Opportunity will be primarily from jobs associated with transport of the sediments and construction of the cap. Therefore, the short term benefits will extend only for the 5 to 7 years associated with implementation of the remedy. However, the quantity of the materials transported from the Milltown area represent less than 1 percent of the total materials currently deposited at Opportunity Ponds; therefore they do not represent a significant increase in the negative impacts associated with the location of the repository at Opportunity. Use of these sediments would also reduce the need for additional borrow pits in the Opportunity area. In fact, the construction of the cap, if that occurs with the sediments, will result in long term benefits associated with reduced wind erosion of the existing waste materials and improvement to visual resources associated with re-vegetation of the surface of the ponds.

3.2.6 Channel Reconstruction

3.2.6.1 Backfill Source

Summary of Comments

Comments in this category express concern about the amount of clean fill material that is needed for channel and floodplain reconfiguration. One person asked, where will additional material would come from and how it would be transported if the Sheriff Posse and Bonner Development Group properties do not have enough gravel material needed for the project. Another comment indicated that preliminary discussions with Atlantic Richfield Company are underway for the use of clean fill material, but that no formal agreement has been finalized.

Response

The rodeo grounds is proposed as the source of much of the borrow material to be used for floodplain construction. Most of the detailed decisions regarding specific sources for borrow material will be made and confirmed during the remedial design phase of the project. Preliminary estimates indicate an adequate volume for construction.

3.2.6.2 Design Considerations

Summary of Comments

Comments in this category were directed to both the bypass and the new channel designs. Favorable comments were received in response to diverting the Clark Fork River into a bypass channel during cleanup to reduce sediment releases from the reservoir and river channels. However, some commenters were concerned about having an adequate channel design capacity to control high flows and ice scouring during construction and restoration activities. One respondent recommended performing a risk assessment through a process called the Failure Modes and Effects Analysis. This analysis is commonly used to prioritize and manage the implementation of risk reduction measures during dam and sediment removal.

A variety of comments also emphasized the importance of completing a proper river channel design and coordinating it with restoration activities. Comments suggested less "hard engineering" be used and restoration ideas be included in the remedial design to create a natural river through the area. Other comments raised the concern about properly using drop structures to reduce headcutting and appreciated clarification of this topic during the public meeting. Another comment voiced concern that the gradient remediation structures need to be safe to allow for eventual public recreation activities on the river through the former Milltown and Stimson dam locations. Maintaining a high water elevation above Duck Bridge and retaining a shallow gradient from the Blackfoot River up to Duck Bridge were both suggested to protect wetland and riparian areas above Duck Bridge. Another recommendation involved using a HECRAS engineering hydraulic analysis to document the effects when removing the Milltown and Stimson dams, as well as providing results of the channel/floodplain modifications.

Institutional controls were also proposed for the new channel. For example, the installation of several weirs in the channel was suggested to monitor water loss. Concerns about flood and erosion control and ultimately the movement of contaminated sediment were stated. A comment also suggested that bentonite be used at some point during the project to prevent water from seeping into the aquifer.

Response

The conceptual design for the bypass channel is presented in Part 2, *Decision Summary*, Section 12.3.1, *Bypass Construction*. The channel will be designed with the capacity to handle a 100-year flood. The channel will be armored to reduce the potential for erosion while in use. Specific details of the bypass design will be prepared during the remedial design phase. The design of these conveyance features will be prepared by water resource and geotechnical engineers. On behalf of EPA, water resource engineers with the USACE will provide technical oversight to make sure design specifications comply with state of the practice principles. The risk inherent to the final design will be evaluated by these experts,

who will specify their method of analyses (may or may not include the Failure Mode Effects Analysis), before any implementation or construction of the remedy occurs.

A new channel and floodplain for the Clark Fork River will be constructed extending from Duck Bridge to the new confluence with the Blackfoot River. The new channel will reflect a "restoration" design that matches a natural meander pattern with a sustainable gradient and adequate design capacity to handle the seasonal flow regimes. Where possible, natural materials will be used for construction purposes to dissipate energy and accommodate the required fluctuations in flow regime as described in Part 2, *Decision Summary*, Section 12.3.8, of this *Record of Decision*. The State will complete channel and floodplain restoration work upstream of Duck Bridge, transitioning the Clark Fork River channel and floodplain into the primary remediation project area. This restoration work will eliminate the need for drop structures at Duck Bridge. Details relative to the State's plan were presented in *Restoration of the Clark Fork and Blackfoot Rivers near Milltown Dam* (State of Montana, Natural Resource Damage Program, May 2003) and *Amendment to the Draft Conceptual Restoration Plan for the Clark Fork and Blackfoot Rivers near Milltown Dam* (State of Montana, Natural Resource Damage Program, June 9, 2004). Public comments on the plan were answered and addressed by the State in the amendment.

EPA has worked with the Trustees to provide close coordination between the remediation and restoration plans within the primary remediation project area (the area from the dam to Duck Bridge on the Clark Fork River arm of the reservoir and to the Interstate Bridge on the Blackfoot River arm). Because the remediation and restoration plans must be closely integrated within the remediation project area, the restoration aspects of the project were incorporated into the figures that appear in Part 2, *Decision Summary*, Section 12, of this *Record of Decision*. The coordinated restoration elements include the following:

- Removal of the divider block / power house / north (right) abutment
- Changes in the floodplain and channel alignment
- Implementation of soft stabilization / revegetation techniques to stabilize the channel

Another project associated with this action is the removal of the Stimson Dam, which is being planned as a cooperative effort through the USFWS National Fish Passage Program with matching funds.

EPA shares the concern that final design of the channel include a component that will remove existing channel features (such as the timber cribs that functioned as log raft tie-offs upstream of the Stimson Dam) that would present a safety hazard to recreational users of the river.

3.2.6.3 Bridge Structures

Summary of Comments

A comment expressed concern about whether or not the concrete bridge piers in the Blackfoot River below Stimson Dam will be removed or left in place. More specifically, the commenter asked what the risks are to these structures by lowering the water level, and what, if any, investigations have been completed.

Response

Undermining the structural integrity of existing bridges and piers through implementation of remedial activities are also concerns of EPA. These issues will be resolved through engineering analysis of the changed conditions during remedial design. If necessary, modification to the designs of the existing bridges and piers will be implemented and/or grade control structures will be installed to prevent additional scouring. Atlantic Richfield Company's technical team has also recognized these issues as concerns. Designs will be carefully reviewed by the structural and hydraulic engineers of EPA's contractor and by the USACE before authorization to proceed is provided.

3.2.7 Groundwater

3.2.7.1 Missoula Aquifer

Summary of Comments

Comments in this category expressed concern that the Selected Remedy may contaminate the Missoula aquifer—a sole source aquifer. Concern was expressed about the potential for a rise in surface and groundwater contamination resulting from the excavation of contaminated sediment. Transport of contaminants downstream through Hellgate Canyon where the Clark Fork River becomes a losing reach and recharges the Missoula aquifer was specifically cited as a concern. Exposure of the alluvium underlying the Milltown sediments and enhancing its ability to transport contaminated water into the local groundwater was also mentioned.

Response

Comments on the *Original Proposed Plan* (see Section 2.2.7.2, *Missoula Aquifer*, of this *Responsiveness Summary*) reflect similar concerns and questions relative to the Missoula Sole Source Aquifer. Our response to those comments are also applicable to these comments, and therefore repeated here: EPA is committed to safeguarding the potable water supply of the Missoula Sole Source Aquifer. EPA has conducted surface water quality modeling (P. Schroeder, USACE, 12-31-01 Memo to EPA; Final Tech Memo Milltown Reservoir Dry Removal Scour Evaluation, Envirocon, May 17, 2004) to evaluate the potential impact on surface water and has concluded that no impact is likely on the Missoula Sole Source Aquifer from remedial activities proposed as part of the Milltown cleanup. Furthermore, EPA proposes extensive and frequent monitoring of both surface and groundwater to gage the status of water quality during the construction activities, and the *Record of Decision* provides for replacing water supplies that are unexpectedly contaminated during remedial implementation.

3.2.7.2 Institutional Controls and Monitoring

Summary of Comments

Comments in this category asked that EPA continue to frequently monitor existing Milltown wells, set up a comprehensive groundwater monitoring system that extends below the Deer Creek USGS station, and identify the criteria for monitoring well locations and monitoring frequency, as well as discuss what steps will be taken if an impact to groundwater is identified and develop a contingency plan that can be implemented in the event that the water supply becomes contaminated.

Response

Part 2, *Decision Summary*, Section 12.5, discusses the surface water and groundwater monitoring to be employed during and after construction. It is anticipated that modifications to increase their effectiveness will be made to these networks during the remedial design phase. The goal is to have a comprehensive system that allows real time monitoring so managers will be alerted to construction related upsets and be able to make adjustments that mitigate unacceptable conditions. In terms of defining specific contingencies in the event a water supply becomes contaminated, the *Record of Decision* provides for replacing water supplies that are unexpectedly contaminated during remedial implementation.

3.2.7.3 Loss of Drinking Water Wells

Summary of Comments

Comments in this category expressed concern that irrigation and domestic wells may be adversely impacted if the river water levels are lowered. Many respondents are concerned that not enough water will be available for irrigation purposes and that this reduction would affect their water rights. Others are concerned that domestic wells will dry up (in terms of quantity as well as water quality), and that they would need compensation for deepening a well or drilling a new well. Others are concerned about contamination to shallow domestic wells. A few also called for a contingency plan to address the potential loss of water table and contamination impacts. One respondent suggested the water level in Area 5 (above Duck Bridge) should be maintained at or above the current low water level so as not to adversely impact domestic water wells.

Response

As discussed in the previous section (Section 3.2.7.2), EPA will monitor groundwater elevations during construction, and believes direct mitigation to impacted wells is appropriate. EPA does not believe that implementation of the remedy will lead to expansion of the groundwater plume. On the contrary, EPA anticipates an improvement in water quality in the local aquifer in a relatively short period of time (4 to 10 years).

3.2.8 Surface Water

3.2.8.1 Institutional Controls and Monitoring

Summary of Comments

Comments in this category expressed concern for both short-term and long-term surface water quality monitoring downstream of Milltown dam. Several comments state that monitoring needs to extend much farther than the proposed 2.8 mile stretch downstream of Milltown dam. A recommendation was made for monitoring at the next series of Clark Fork River dams (i.e., Thompson Falls, Noxon, and Cabinet George). At a minimum, it was recommended that costs for including metals in the suite of analytes presently sampled downstream as part of the Clark Fork River basin-wide sampling program be added to the cost of the project.

Response

Under this *Record of Decision*, the reservoir is eliminated, groundwater levels are reduced, sediment scour during construction by the active Clark Fork and Blackfoot Rivers will be

minimized with use of the bypass, and major field activities will be scheduled to coincide with spring runoff. Hence, the source of dissolved and total recoverable arsenic associated with the total suspended solids loads, speculated to infiltrate from surface water into the local Milltown aquifer and the Missoula sole source aquifer below Hellgate Canyon and move downstream to other reservoirs, is greatly diminished by the change in the sediment removal method. EPA will have comprehensive surface water quality and groundwater (see response to comment 3.2.7.2) monitoring programs during the project that compare predetermined standards to existing water quality data. Periodic monitoring immediately upstream of Thompson Falls will be performed, but monitoring at Noxon, and Cabinet Gorge is not anticipated as part of the remedy, given the engineering controls and comprehensive local monitoring planned for the project. Vigilant local monitoring will be a cornerstone of early detection of problems and making appropriate adjustments to mitigate any potential impacts. Based on extensive modeling (water quality and sediment scour) and the planned BMPs, EPA believes that the remedy does not pose a threat to the sole source Missoula aquifer or nor the downstream Clark Fork River resources.

3.2.9 Human Health Risks

3.2.9.1 Safety During Construction

Summary of Comments

There were many comments on public safety related to train traffic (location of loading areas), interstate traffic, and precautions for children and the general public who want to view progress of the project. One respondent suggested working together with the EPA, local groups, and residents to establish a safety and traffic control plan.

Response

EPA is also very concerned about safety during implementation of the remedial actions. The RPs and their contractors will be required to develop detailed Health and Safety Plans to address these concerns, including traffic and public safety, prior to implementation of the remedy. In response to safety concerns, the proposed railcar loading areas have been relocated away from town to the river side of the Interstate. EPA anticipates that truck and local traffic planning will be coordinated through County and City officials before being implemented to help minimize impacts on local residents. Travel routes for mobilizing equipment will be publicized ahead of time to notify the community of travel corridors that will be used. Through a careful planning process, construction risks can be managed to avoid injury. EPA will consider implementing a program of sponsoring guided site tours for school children and for the general public, so that the public can view the progress of construction of remedial actions in a safe and supervised manner.

3.2.9.2 Contaminants in Groundwater

Summary of Comments

Concern about the potential for adverse impacts on the Milltown aquifer resulted in a number of comments. One respondent is concerned that other groundwater studies conducted by independent sources show results that may further degrade the aquifer in the Milltown area and may take additional time to clean up. A few were also concerned that the proposed new channel might impact the aquifer with contaminated river water during excavation activities across the aquifer. One commenter also raised concern about

infiltration damage to the aquifer during reconstruction activities for the wetland and riparian area below Duck Bridge.

Response

EPA shares the concern about the Milltown aquifer; however, EPA believes the process and pathway through which arsenic enters the aquifer, as described in the *Remedial Investigation*, will be changed through implementation of the remedy as described in this *Record of Decision*. Remedial activities will eliminate the reservoir (through dam removal), which created the head to drive the arsenic into the groundwater system. The elevation of local groundwater will drop to its pre-dam levels, which will influence whether the river contributes water to the groundwater or visa versa through the project area. The most contaminated source material (Area 1) will be removed, eliminating the contaminated pore water, and a new floodplain and channel will accommodate the freely flowing Clark Fork River. These significant changes will have a positive effect on aquifer water quality by hastening the degradation of the existing plume. EPA will carefully monitor this occurrence to document the results and make changes if necessary.

3.2.9.3 Contaminants in Surface Water

Summary of Comments

Several topics were discussed in this category and most commenters wanted additional studies conducted downstream of Milltown dam since historical flow events in the Clark Fork River have transported contaminated sediments hundreds of miles from their source. The primary concerns posed by commenters are as follows:

- The proposed remedy is perceived as removing the only safeguard in place (Milltown Reservoir) that prevents the transport of contaminated sediments further downstream. EPA has not studied the downstream risks and ramifications associated with this action.
- EPA has not considered the potential for recontamination of Milltown and all other downstream reservoirs as a result of contaminated sediment transport from the upper reaches of the Clark Fork River. BMPs and other control measures need to be used to prevent redeposition of contaminants and the creation of another Superfund site downstream.
- Increased contaminant loading during implementation of remedial construction is a concern and EPA's modeling, which is perceived as an underestimation of the amount of contamination that could be released, fails to reasonably assess the cumulative impact on human health and the environment.
- Concern was expressed about impacts to the integrity of the existing lined tunnel pond (sediment pond) by the remedial activities.
- Another concern was whether all seepage water from the excavated sediments would be sampled and treated or whether it would be directed back into the excavation where it might enter groundwater.
- The *Revised Proposed Plan* did not mention how sediment effluent concentrations may change in the river environment (geochemical reactions) and how dilution from tributaries might influence water quality. Such changes should be incorporated into the

determination of the downstream monitoring program including where to sample, frequency of sampling and the constituents sampled.

- EPA's construction water quality standards are presented in the *Revised Proposed Plan* in *Exhibit 5: Milltown Reservoir Sediments Site Proposed Temporary Construction Related Water Quality Standards*; however, no discussion is provided for how these numbers were generated.

Response

For clarity, the individual comments expressed above are separated into individual response paragraphs below.

EPA understands the concerns expressed by downstream interests relative to the removal of the Milltown Dam. EPA evaluated numerous alternatives before deciding on the merits of this remedy as is discussed in the *Record of Decision*. Embodied in that decision making process is careful consideration of a long term option that will protect human health and the environment, and will not relocate the problem to a site further downstream. EPA believes that the current plan—which incorporates engineering controls, BMPs, and dry excavation and specific timing of critical field activities (just prior to spring runoff)—appropriately mitigates risks to downstream interests.

As discussed in a comment on the *Original Proposed Plan* relative to upstream inputs (see Section 2.2.9.3, *Upstream Inputs*, of this *Responsiveness Summary*), implementation of the upper Clark Fork River OU remedy will require approximately 10 years to complete. The existing conditions in the upper Clark Fork do not resemble those of historic times when mine tailings and waste were discharged directly into the Clark Fork River, and other tributary streams. Years of floods and rainfall events have already scoured, transported, and deposited most of the available waste material downstream. EPA is not interested in sustaining the Milltown reservoir as an in-stream mine waste repository. EPA is obliged to implement a permanent remedy in a timely fashion to resolve human health and ecological risk concerns associated with the MRSOU. The remedy as proposed, accomplishes this task while meeting the required CERCLA criteria.

EPA has conducted careful studies on the impacts to surface water quality resulting from the remedial activities. These include surface water quality modeling by the USACE (P. Schroeder, 2001), computer modeling of groundwater completed by Dr. Chris Brick, Clark Fork Coalition (January 24, 2003), a report on *Impacts of Groundwater and Bank Storage Inflow on Water Quality in the Clark Fork River* (CH2M HILL 2003), and sediment scour modeling (Envirocon, May 2004). The results of these studies have illustrated to EPA that the remedy is well conceived and it will have no long term adverse effects on downstream interests.

The existing lined waste repository near the tunnel will be preserved without impact. The remedial design for the floodplain will isolate this area even more than it currently is from future flood events. The monitoring network around this repository will be retained and utilized in accordance with existing post-construction remedial monitoring requirements.

Seepage water from excavation of the sediments will be sampled and evaluated. The specifics of how best to handle it will be decided during remedial design and the initial stages of construction. If it would cause an exceedance of the temporary construction water

quality standards or otherwise pose a threat to surface or groundwater quality, it will be treated before being discharged.

As discussed in previous responses to the *Original Proposed Plan*, EPA employed a number of studies to help answer questions about impacts to water quality. For example, in 2001, EPA worked with the USACE (Seattle District, P. Schroeder, 2001) to model potential surface water quality impacts that might occur, if sediment pore water and suspended sediment were released during the proposed removal of sediments (at that time, the removal method consisted of 15 percent excavation and 85 percent dredging). The results of the modeling illustrated that arsenic, cadmium, lead, and zinc concentrations are not predicted to exceed the Montana acute toxicity standards. Similarly, arsenic and zinc are not predicted to exceed the Montana chronic toxicity standards. Arsenic concentrations are also not predicted to exceed Montana WQB-7 Standard for the protection of Human Health during the dredging. As previously stated, the transition of the project into dry excavation of the sediments after the dams have been removed, as well as construction of a bypass channel for the Clark Fork River, further reduces the potential for water quality impacts. A comprehensive, detailed surface water monitoring plan will be prepared during the remedial design phase of the project. This plan will be thoroughly reviewed by EPA, DEQ, all Trustees, and other designated parties before its implementation.

An explanation of the water quality construction standards to be applied to this project is presented in Part 2, *Decision Summary*, of this *Record of Decision*, Section 12.4, *Control of Sediment Releases During Construction*. Their development and application were predicated on both EPA and State approval.

3.2.9.4 Air Quality

Summary of Comments

Comments in this category focused on contaminated sediment material becoming airborne dust, resulting in health hazards to the general public as well as an annoyance. On a larger scale, several comments expressed concern that airborne dust would affect the general public in Opportunity, Bonner, and surrounding communities.

Response

The *Human Health Risk Assessment* determined that inhalation of arsenic associated with airborne dust from the sediments, in and of itself, would not pose an unacceptable risk to human health. Regardless, dust will be controlled to reduce the nuisance factor during the implementation of the remedy through several measures. Such measures will include spraying water on dry sediments prior to and during excavation, covering or spraying water on stockpiled sediments, spraying water or dust palliatives (such as magnesium chloride) on unpaved haul roads, and covering of the sediments hauled in railroad cars. In addition, any sediments used in a capping medium at Opportunity Ponds will be re-vegetated, which will improve the current situation wherein blowing dust is an occasional problem for the residents in the vicinity of the ponds.

3.2.10 Ecological Risks

3.2.10.1 Wildlife Habitat

Summary of Comments

Comments in this category expressed the belief that wildlife populations would be adversely affected by the remediation described in the *Revised Proposed Plan*. They feel that dam and sediment removal will destroy the wetlands surrounding the reservoir, and adversely impact bald eagles, waterfowl, migrating birds, amphibians, deer, moose, and other species. Some asked if the wetlands could be preserved or restored following remediation.

Response

This response is identical to that provided for similar comments made on the *Original Proposed Plan* (see Section 2.2.9.1, *Ecological Risks*, of this *Responsiveness Summary*). EPA agrees that the remedial action, as described in this *Record of Decision*, will result in a dramatic change to the wetlands of the reservoir. Trustees such as the USFWS, FWP, and USACE have been working with and advising EPA on the remedial action and associated mitigation for the wetlands. Two extensive Biological Assessments, one for bull trout (CH2M HILL 2004a), and a second one for the terrestrial threatened and endangered species (including such species as bald eagles, grizzly bears), have been prepared (CH2M HILL 2004b). These documents outline in detail the anticipated impacts and proposed mitigation for aquatic and terrestrial species of concern. For instance, the assessment for the bull trout concluded that short term challenges would involve interim passage for bull trout during site remediation activities and the suspended sediment load created by the construction activities. However, upon completion, the remedy is expected to have a long term beneficial effect on bull trout. In the case of the bald eagle, it was determined that there would be some short term adverse impact because of the displacement of eagles from their foraging and historic nesting sites. However, this would have no overall effect on the bald eagle populations along the Clark Fork River corridor or in western Montana. No long term adverse impacts were identified.

3.2.10.2 Aquatic Health

Summary of Comments

Several topics were discussed by commenters in this category, including water quality, risks to fish populations, and bull trout passage. Some commenters in this category argued that water quality is not impacting fish now, and that implementing the remedy could make water quality worse and affect fish. While other discussion supported dam removal on the basis of restoring connectivity for bull trout populations, a few argued that bull trout flourish above the dam and the connectivity is not important or desired.

Response

This response is identical to that provided for similar comments made on the *Original Proposed Plan* (see Section 2.2.9.2, *Aquatic Health*, of this *Responsiveness Summary*). Responses to concerns about implementation of the remedy and its effects on water quality have been addressed in previous comment responses within this section. EPA believes that the remedy will result in attainment of Montana WQB-7 standards with the exception of copper exceedances caused by upstream releases. Removal of the primary source of contamination,

removal of the Milltown Dam, and design and construction of a new channel will eliminate the potential for a catastrophic natural disaster should the Milltown Dam fail. It also reduces the potential for ice scour events that generate and transport contaminated sediment downstream, events which do adversely impact fish and other aquatic life. The remedy will create a free flowing passage for a variety of fish species, including bull trout, to migrate directly into the Blackfoot River drainage and the upper Clark Fork River.

3.2.11 Opinion of EPA

3.2.11.1 No Mailing List

Summary of Comments

People who requested that they not be added to the mailing list were not added.

Response

The names of these people were not added to the mailing list.

3.11.2 Public Outreach Effectiveness

Summary of Comments

One comment supported the *Revised Proposed Plan* because the plan resulted in public involvement and community acceptance.

Response

EPA agrees. The comments received from the public demonstrate a good knowledge of the *Revised Proposed Plan* and illustrate strong community support for the remedy. Ninety-seven percent of commenters fully support (or support with minor modifications) the *Revised Proposed Plan*.

3.2.12 Economic Impacts

3.2.12.1 Property Values

Summary of Comments

Comments in this category focused on the economic impacts of remediation and construction activities on the valley. Most of the commenters requested that wetlands impacted as a result of remediation activities be replaced so that homeowners do not lose irrigation and may enjoy wildlife aesthetics. Some people are also concerned that the lowering of the Blackfoot River may affect property values, expose steep banks, result in the loss of access to the river, and create increased personal liabilities. In addition, a few people are also concerned that there is no mention of remediation and restoration activities for residential properties upstream of Interstate 90 bridge on the Blackfoot River arm of the project area. Specific recommendations to the *Revised Proposed Plan* include the following:

- Extending the restoration project boundary to include the arm of the Blackfoot River, including adjacent residential properties.
- Developing a mitigation plan that address the loss of water elevation and any other impacts to homeowners on the Blackfoot River arm and would will effectively restore the quality of life for affected property owners.

Response

The Clean Water Act requires mitigation for impacts to wetlands, resulting in no net loss of wetlands. A mitigation plan will be developed, in consultation with the USFWS and USACE, to provide mitigation for the wetlands that will be lost and/or modified by implementation of the remedy. The implementation of the Restoration Plan will provide significant improvements to the riverine conditions at the site. EPA has been working with Milltown Redevelopment Group, a redevelopment group comprised of area residents, to explore future land use and development opportunities.

3.2.12.2 Payment for Cleanup

Summary of Comments

Several topics were discussed in this category, including agreement within the *Revised Proposed Plan* that an effective remedy was chosen correctly in terms of cost, that the RPs be held responsible for their share of the costs, and a rhetorical comment that every town and taxpayer contributing garbage to the Clark Fork River also be held accountable for some of the cleanup cost burden.

Response

EPA concurs that the remedy described in the *Revised Proposed Plan* is a cost-effective remedy. The RPs will be responsible for the cost of the cleanup, either by implementing the remedy themselves, or by paying for the costs if EPA undertakes implementation of the remedy. Appropriate responsible parties for the site have been identified by EPA, in accordance with CERCLA. EPA has conducted a careful search for potentially responsible parties, and Atlantic Richfield Company, a subsidiary of British Petroleum, and the NorthWestern Corporation were the only RPs identified as being responsible for the contamination at the Milltown site.

3.2.12.3 Community Economic Changes

Summary of Comments

Many commenters stated that the plan was a good investment in the area and expected the remediation to positively impact area jobs (hopes that local union labor would benefit), recreation, and businesses. Some people feel that the economic impacts to local residents have not been adequately addressed. Others would like support to attract development to the area. Comments from Opportunity request assistance through funding to aid the town with some infrastructure or utility projects to offset the waste dumping and "Superfund site stigma" perception that has historically slowed growth in the area. Some people also would like additional funding for redevelopment planning efforts to hire local and professional services, and continued support for the Milltown Working Group.

Response

Under the Superfund program, EPA can provide grants to local entities for technical assistance associated with the cleanup program. These types of grants typically provide funding such that local communities or concerned stakeholder organizations can obtain independent professional advice and assistance concerning the technical aspects of the cleanup. This type of grant has been awarded to the Clark Fork River Technical Assistance Committee for this site. Similar grants were awarded to the Arrowhead Foundation for the Anaconda Site. EPA has been working with a local redevelopment group, the Milltown

Redevelopment Group, and has provided funding in support of this group. EPA will continue to work with and support the Milltown Redevelopment Group as the site moves through remediation and restoration and into redevelopment. EPA acknowledges Opportunity residents' desire for funding; however, it should be noted that cleanup activity in the area has already resulted in millions of dollars added to the area economy, numerous jobs associated with the cleanup, and an improved environment.

3.2.12.4 Water Rights

Summary of Comments

These comments asked EPA to follow the appropriate process for applying for water rights that might be needed as part of the remedy. Water rights are integral to any consumptive or non-consumptive use of water and appropriations are strictly regulated. The commenter stressed that regulatory and resource agencies should work together to comply with the needs of the project in a timely manner. The use of water for dust abatement is an example where a water right may be required to accommodate that consumptive use.

Response

EPA, in consultation with the State, will work with the various regulatory and resource agencies should these issues arise.

3.2.13 Comment Noted—No Response Required

EPA read many comments that were general opinions or historical data and did not comment directly on a specific component of the *Revised Proposed Plan*. Some of the other comments included results of aquifer modeling, historical anecdotes that enhance EPA's understanding of the project area, and copies of articles and presentations concerning the MRSOU. These opinions and information benefited EPA's staff and assisted with development of the *Revised Proposed Plan*. However, a direct response was not possible.

Response

No specific response is required.

3.2.14 Compliance with Regulations

3.2.14.1 Other Federal Regulations

Summary of Comments

A comment in this category stated that changes to the current Federal Emergency Management Agency (FEMA) regulatory floodplain maps and flood insurance studies will need to be approved through an application for Conditional Letters of Map Revision by FEMA prior to construction as well as final Letters of Map Revision issued upon project completion.

Response

EPA acknowledges that the removal of Milltown Dam and Stimson Dam will change the characteristics of the floodplains regulated under FEMA. The FEMA and floodplain requirements are an ARAR that is addressed in Attachment A to this *Record of Decision*. EPA will consult with the FEMA authorities to assure that the substantive requirements of FEMA are addressed prior to and upon completion of the remedial actions.

3.2.14.2 Fully Considered Impacts

Summary of Comments

The commenters in this category focused on whether EPA fulfilled all of its obligations for remedy analysis under CERCLA. Some were concerned that the *Revised Proposed Plan* was deficient in both public accountability and assurances. Others were concerned that the *Revised Proposed Plan* did not address the potential for a catastrophic event and requested that an analysis be performed to evaluate BMPs and control measures to minimize the deposition of contaminated sediments downstream. A few were also concerned that the *Revised Proposed Plan* failed under CERCLA because the remediation would significantly increase arsenic, copper, and total suspended sediment (TSS) loading to the Clark Fork River.

In addition, a recommendation was proposed to prepare a "comprehensive groundwater and surface water source, transport, and fate assessment that evaluates both the short and long-term potential for risk from contamination from a post-remediation standpoint from the Opportunity Ponds and other sources in the Upper Clark Fork River Basin."

Response

EPA believes it has fulfilled all of its obligations for remedy analysis under the NCP and conducted a thorough analysis of issues regarding the Milltown cleanup. This *Record of Decision* contains a more thorough discussion of potential water quality impacts and conceptual design elements for the capacity of the bypass and new channel to handle flood flows. However, it is not uncommon for details of design strategies to be delayed until the onset of remedial design. EPA has provided as much information as possible, as it discusses the remedy in this *Record of Decision*.

Downstream impacts associated with uncontrolled releases of sediments were modeled by the USACE to evaluate potential metals loading and by using HEC 6 to assess mobilization and transport of scoured sediment downstream. This activity resulted in the decision to construct a bypass channel through Area 1 (see Part 2, *Decision Summary*, Section 12) and to pursue certain construction activities on a schedule that coincided with spring runoff.

Surface and groundwater monitoring during construction and post construction will provide EPA with adequate information to determine the effectiveness of its remedies on the Upper Clark Fork and at Milltown.

3.2.14.3 RAOs and RAGs

Summary of Comments

One commenter felt that the RAOs and RAGs were incomplete because they do not adequately address the quality of life performance standards for local residents through the duration of the project in the form of monitoring, complaint evaluation, mitigation and contingencies, and reporting and notification. Another commenter recommended that development of technical performance standards provide detailed "course of action" solutions to eliminate the "may be," the "potential for," and "could have" clauses in the *Revised Proposed Plan.*

Response

The RAOs were developed to protect human health and the environment relative to the threat of principle wastes in accordance with EPA guidance. The remedy as described in this *Record of Decision* accomplishes that objective. EPA has taken a number of steps to minimize the impact on the local community (traffic, noise, dust, etc.) during construction, steps which BPA believes will help maintain quality of life in the Milltown area. However, if issues arise which cause concern, the public is encouraged to contact EPA at (406) 457-5040. With regards to the second comment, performance standards are set forth in this *Record of Decision*. It is anticipated that refinements to the methods for meeting these standards will be crafted as part of the remedial design phase of the project, before implementation.

3.2.15 Social Impacts

3.2.15.1 Reservoir Recreation

Summary of Comments

Commenters in this category were concerned about the loss of flatwater recreation in the area, and asked that a whitewater park be included in the final restoration.

Response

As stated in a response to a similar comment made on the *Original Proposed Plan* (see Section 2.2.16.1, *Reservoir Recreation*, of this *Responsiveness Summary*), the *Record of Decision* requires the removal of Milltown Dam and 2.6 million cubic yards of sediment in an action designed to help protect human health and the environment. This is EPA's primary goal. Removal of the dam eliminates the reservoir and the flatwater resource associated with it. In its place, the Clark Fork and Blackfoot rivers are restored to a free flowing state, allowing fish passage (including bull trout) and re-instating the natural confluence of the rivers. The natural resource damage Trustees developed the restoration goals associated with this *Record of Decision*. Construction of a whitewater park is beyond EPA's authority under Superfund law; however, the idea has been proposed by Missoula County. Current restoration plans will provide some whitewater due to the gradient of the rivers at the confluence.

3.2.15.2 Noise, Traffic, Dust, and Odors

Summary of Comments

Most people who commented in this category are concerned about the quality of life in Milltown and Bonner during remediation. The increased traffic poses a safety risk, and the noise from haul trucks, trains, and equipment will impact the residents and the educational environment at Bonner School. Airborne dust could pose a health threat, or at least an annoyance during remediation, especially on the exposed river bank. A few people indicated that odor control will also be an issue once the Milltown reservoir is lowered, exposing organic material found in the river sediment.

Response

Noise, traffic, and dust will be mitigated by the location of the rail spur and train loading dock at Area 1, as described in this *Record of Decision*. Most of the comments expressed under this category are addressed in Part 2, *Decision Summary*, Section 12. Equipment will operate and be staged south of Interstate 90. Trains will be operated late at night to avoid

adding to local traffic congestion and disturbing residents and the educational environment of Bonner School. The human health risk assessment and the ATSDR health consultation in 2003 determined that inhalation of arsenic associated with airborne dust from the sediments would not pose an unacceptable risk to human health. Regardless, dust will be controlled to reduce the nuisance factor during the implementation of the remedy through several measures. These will include spraying water on dry sediments prior to and during excavation, covering or spraying water on stockpiled sediments, spraying water or dust palliatives (such as magnesium chloride) on unpaved haul roads, and covering of the sediments hauled in railroad cars.

EPA is aware of concerns about possible odors and has consulted with the USACE. In the USACE's experience, odor is generally not a problem for this type of project.

3.2.15.3 Controlled Public Access

Summary of Comments

Most of the comments in this category focused on the need (from a safety standpoint) to establish some type of viewing or spectator area during the different phases of construction and remediation activities. A few people commented on public safety, such as providing fencing in select locations. One commenter was concerned about recreational use in the area during remediation efforts. Another commenter suggested installing a web cam to view the remediation and restoration activities during implementation.

Response

Temporary construction fencing will be installed at selected locations during the course of the remedial activities where access to construction areas could pose a safety risk to the public. EPA will sponsor site tours and open houses at selected junctures during the project to provide information and guided tours/presentations so that a safe forum for public viewing of construction activities is provided. EPA is also looking at possible safe locations to establish a public viewing area during construction. EPA will work with the RPs and their contractors to try to minimize impacts to recreationists as much as feasible. However, to protect public safety, recreational use of the area will unfortunately need to be curtailed at critical times and locations during portions of the remedial actions. EPA will suggest the concept of web cam(s) to the RPs as a method of keeping the public informed about project progress in a safe manner.

3.2.15.4 Historical Documentation

Summary of Comments

Most of the comments in this category recommended that some type of interpretive center near Milltown reservoir be established to preserve and document the historic events surrounding the Milltown Dam. One commenter requested that a historian or web cam be considered to document historic events associated with dam removal and record the remediation and restoration efforts. Another agency recommended initiating the Section 106 (historic preservation) process so that timely consultation, discussion, and planning may proceed. In most instances, commenters stated that funding should be made available as part of the remediation and restoration process to accommodate the historic nature of the project.

Response

The NHPA is an ARAR that is addressed in Attachment A to this *Record of Decision*. The requirements for documenting the historic features of Milltown Dam and its powerhouse are covered under Section 106 of the NHPA. EPA and the Federal Energy Regulatory Commission (FERC) will comply with the requirements of Section 106, which specifies that a plan for documentation of the historic aspects of the site be developed, in consultation with the Montana State Historic Preservation Officer (SHPO), prior to removal of Milltown Dam and the powerhouse. The documentation will be conducted by qualified professional historians or archeologists, and the documentation will be available to the public. The Milltown Redevelopment Group is researching the possibility of an interpretive center located near the site to describe the history of the area and the dam.

3.2.16 Cooperation Among Agencies

3.2.16.1 Favors Integration with Other Agency Plans

Summary of Comments

The overwhelming majority of comments in this category emphasized coordinating the remediation plan with the restoration plan and collaborating between local working groups, government agencies, and property owners. One commenter suggested reviewing the FERC process, under the functional equivalency doctrine, to consider whether or not a separate EIS is really required instead of using the existing RI/FS and other documentation. A couple of comments also stated that FERC should expedite license surrender for Milltown dam to allow the EPA implementation schedule to be met.

Response

EPA has been coordinating with the State throughout this entire project. The CERCLA process includes criteria for State acceptance of the remedy and this criteria is important to EPA at this site. In addition, CERCLA requires coordination between EPA and the natural resource damage Trustees. The remedial design will include both remedial and restoration activities and all Trustees will review the final plans prior to implementation. Because the surrender of a hydropower operating license is at stake, FERC will continue to assist all government parties with the FERC license surrender process associated with this project.

3.2.17 Third Party Interests

3.2.17.1 Upstream Impact Concerns

Summary of Comments

A comment expressed concern for the residents of Opportunity in that there has not been sufficient information regarding quality of life, water quality, air quality, and general health and safety concerns for the placement of contaminated sediments in the Opportunity Repository.

Response

The Opportunity Ponds is an active waste repository managed by Atlantic Richfield Company on its property under EPA and State oversight. Activities associated with disposal of the Milltown sediments will be monitored as part of the Anaconda Regional Water and

Waste OU. EPA does not anticipate creating adverse impacts to the town of Opportunity by depositing these wastes at Opportunity Ponds.

3.2.17.2 Downstream Impact Concerns

Summary of Comments

Several topics were discussed in this category, including a sampling analysis of the Thompson Falls Dam sediment, liability to downstream stakeholders, and accountability throughout the relicensing process. One commenter asked for a sampling analysis of the Thompson Falls Dam sediment to establish a baseline for future effects of the sediment. Others suggested improving the *Revised Proposed Plan* to limit liability to downstream stakeholders. Another requested that EPA and Atlantic Richfield Company provide assurances that measures will be in place to limit impacts to downstream resources and FERC-licensed projects, and that FERC provide assurances that downstream hydroelectric licensees will not be held accountable for impacts associated with the cleanup.

Response

The *Record of Decision* identifies a significant program to reduce the risk of downstream impacts associated with the project. These include construction of the bypass channel, use of sheet pile to isolate sediments, employment of sediment control BMPs (for example, silt curtains, coffer dams, flood control berms, and regrading of stream banks), construction of grade control structures in the new river channels, and extensive re-vegetation of the re-constructed river channel, and careful scheduling of reservoir drawdown and dam removal. Downstream irrigation intakes will be monitored during implementation of the remedy, and will be cleaned out if sediments are deposited that could impact the delivery of irrigation water. A comprehensive monitoring plan will assess the downstream physical, chemical, and biological impacts. If necessary, adjustments or additional BMPs will be employed to minimize the downstream impacts. In summary, EPA will make every effort to minimize downstream impacts.

4 RP Comments and EPA Responses

4.1 Introduction

The Atlantic Richfield Company and NorthWestern Corporation, the RPs for the MRSOU, submitted comments on the *Original Proposed Plan*. Neither party provided comments on the *Revised Proposed Plan*. Section 4.2 contains responses to the comments provided by NorthWestern Corporation. Sections 4.3 and 4.4 contain responses to the comments provided by the Atlantic Richfield Company.

4.2 NorthWestern Corporation

NorthWestern Corporation submitted a two-page comment letter, dated July 21, 2003. Their comments, along with EPA's responses, are provided below.

1) NorthWestern Corporation's Role in the Remedy

Summary of Comments

NorthWestern Corporation owns the Milltown Dam and holds the valid FERC license through 2007. NorthWestern Corporation does not believe it has any significant liability under Federal or State law for the contamination at the Milltown Dam and reservoir, because of the provisions expressly exempting the owner/operator of the Milltown Dam from such liability found in Section 118(g) of CERCLA. However, NorthWestern Corporation has been working cooperatively with all affected parties and the concurrence of NorthWestern Corporation is an essential ingredient of any final remediation of the MRSOU.

Response

EPA acknowledges the concurrence of NorthWestern Corporation with the Selected Remedy, and the formal actions by NorthWestern Corporation since the comment letter was written towards surrender of the FERC license.

2) Support for the Remedy

Summary of Comments

If the FERC license is formally relinquished, which is contingent on agreement to a satisfactory settlement of various liability issues in the form of a consent decree, then NorthWestern Corporation would support the *Proposed Plan*.

Response

EPA acknowledges NorthWestern Corporation's conditional support. EPA, NorthWestern Corporation, and other parties are in discussions regarding NorthWestern Corporation's alleged liability and the settlement of CERCLA and other claims against NorthWestern Corporation and other parties.

4.3 Atlantic Richfield Company: General Comments

The letter from the Atlantic Richfield Company, dated July 21, 2003, contained three sections. The first two sections contained general comments, primarily consisting of legal and policy issues, concerning the selection of the Preferred Remedy. The third section contained point-by-point comments on the *Original Proposed Plan*. This section addresses the general comments. The comments specific to the *Original Proposed Plan* are addressed in Section 4.4.

4.3.1 Section I: General Comments on the MRSOU Cleanup Proposal

1) Comment A

Summary of Comments

Comment A discusses the administrative uncertainties associated with decommissioning a FERC-licensed hydropower project and removal of a dam owned by a third party. The Atlantic Richfield Company maintains that EPA does not have authority under CERCLA to remove Milltown Dam without permission from the licensee, and asserts that such action would constitute a takings of private property requiring payment of just compensation. Recovery of such costs cannot be part of response costs. FERC has exclusive authority over licensing, decommissioning, and removal of hydropower projects, and the Atlantic Richfield Company alleges that EPA is overstepping its bounds in determining that the dam must be removed.

Response

As noted above, EPA is working cooperatively with the dam owner, NorthWestern Corporation, concerning the voluntary surrender of the Milltown dam license by NorthWestern Corporation. EPA is also working with the FERC to ensure that the CERCLA remedy is implemented in a manner that is consistent with FERC's authorities over Federally licensed dams, in accordance with CERCLA law. EPA disagrees that remediating a harmful environmental situation is a takings of property, and, in any case, any such issue can be addressed through other compensation processes if it is deemed a takings. Finally, the issues raised by Atlantic Richfield Company in this comment are actually issues of concern to NorthWestern Corporation, and not Atlantic Richfield Company, and Atlantic Richfield Company lacks standing to raise them in a formal, legal sense.

2) Comment B

Summary of Comments

Comment B summarizes the results of previous ecological and human health risk evaluations that demonstrate actual risks are being overstated and mischaracterized to support selection of a dam and sediment removal alternative. The Atlantic Richfield Company cited findings from several studies that indicate that there is a lack of observable ecological risks at the site. Human health risks at the site, in the Atlantic Richfield Company's opinion, were limited to an exposure pathway that was already addressed through constructing a replacement water supply for the community of Milltown.

Response

EPA believes the risks to the environment are carefully weighed and evaluated in its Baseline Ecological Risk Assessment (1993b) and the Ecological Risk Assessment Addendum (April 2000). Atlantic Richfield Company was given opportunity for input into those processes, and all of Atlantic Richfield Company's comments were carefully considered. EPA's ecological risk assessments found that there is unacceptable risk caused by releases of hazardous substances under certain conditions at the Milltown Dam. The 1996 ice scour event was an episodic occurrence of such a situation. Water quality data collected by the USGS and others after that event documented the corresponding increase in suspended sediment load and associated total and dissolved metals and arsenic concentrations that occurred during the event. After the 1996 ice scour event, fish populations downstream of the dam decreased significantly. According to Montana FWP, total catchable trout (greater than 8 inches) decreased from 425 to 162 per mile, while the declines of juvenile brown and rainbow trout (less than 8 inches) were 70 and 85 percent, respectively. EPA's more detailed response to the Atlantic Richfield Company concerns about ecological risk found by EPA are addressed in the text of the Ecological Risk Assessment and its Addendum, which is incorporated herein by reference. Finally, Atlantic Richfield Company does not contest the serious ecological risk that would occur if the Milltown Dam were to fail. The Milltown Dam was re-classified by FERC as a high hazard dam. FERC regulations would require significant structural improvements to the dam by NorthWestern Corporation, the dam owner, if the dam were left in place and used to permanently contain the contaminated sediments behind it. NorthWestern Corporation has not shown any desire to implement such improvements because the Milltown Dam is no longer a profitable energy producer for the company. Thus, there remains the substantial risk from dam failure and the release of the contaminated sediments in the reservoir if the Selected Remedy is not implemented.

As to human health risks, EPA's risk assessment protocols require the examination of possible risk, as well as actual risk. For the Milltown area aquifer, it is without controversy that drinking water from the contaminated portions of that aquifer would cause unacceptable risk in the form of increased cancer and non-cancer risk—see EPA's Human Health Risk Assessment (Baseline Human Health Risk Assessment, Milltown Reservoir Operable Unit, MRSOU, 1993a). Atlantic Richfield Company contends that the existing replacement water supply prevents the risk of any exposure to the aquifer. However, there are not permanent and enforceable institutional controls in place at the site to prevent a homeowner from drilling a new well or using an existing well, if that homeowner chooses to opt out of the alternative water supply system. The State of Montana classifies the aquifer as usable for drinking water, and has expressed its view that the aquifer must be cleaned, if feasible, to make it usable again as a drinking water source. Accordingly, the unacceptable risk to human health is well founded for this site, and an appropriate basis for the selection and implementation of the Selected Remedy.

3) Comment C

Summary of Comments

Comment C describes the dam modification plus institutional controls remedy (Alternative 2A of the *Final Combined Feasibility Study* [CFS], Atlantic Richfield 2001) supported by the Atlantic Richfield Company and explains how it is protective, attains

ARARs or justifies an ARARs waiver, is fully consistent with the National Contingency Plan (NCP), and meets CERCLA's cost-effectiveness mandate. Alternative 2A would have provided for enhanced fish passage around the dam, dam safety upgrades as needed to withstand the probable maximum flow, replacement of the spillway and flashboard system with a pneumatic crest (inflatable rubber dam) to control peak flow and ice events, and implementation of institutional controls and continued operation and maintenance funding for Milltown's replacement water supply. Atlantic Richfield Company feels that Alternative 2A provides long-term effectiveness and permanence and reduces contaminant toxicity, mobility, and volume through physical containment and natural attenuation over time. Finally, the Atlantic Richfield Company stated that this is the most cost-effective remedy for the MRSOU, and responds best to the concerns of the local communities most affected by dam removal (Milltown and Bonner).

Response

Atlantic Richfield Company's preferred remedy does not meet the criteria for selection of a remedy found in CERCLA and the NCP regulations. ARAR compliance, including groundwater ARAR compliance, is necessary and required at a Superfund Site, unless a waiver is justified. EPA examined Atlantic Richfield Company's proposals and its petition for a waiver of groundwater standards, and found that, under these site-specific circumstances, it is feasible to clean up the aquifer and that a waiver of groundwater standards would not be appropriate under the law. The Feasibility Study also demonstrated that the Atlantic Richfield Company's preferred remedy did not meet the long term effectiveness and permanence balancing criteria, because it required perpetual operation and significant maintenance of the aging Milltown Dam—something the owner of the dam indicated they would prefer not to do. The ICs necessary for Atlantic Richfield Company's preferred remedy are opposed by Missoula County and may not be implementable. Finally, Atlantic Richfield Company's preferred remedy did not receive support from the community or the State, two important modifying criteria under the NCP. All of this led EPA to determine that Atlantic Richfield Company's preferred remedy did not meet threshold criteria, or provide an appropriate balance and tradeoff among the balancing and modifying criteria of the NCP, and thus could not be selected.

4) Comment D

Summary of Comments

Comment D provides a general critique applicable to all the dam and sediment removal alternatives including the alternative presented as the Proposed Action in the MRSOU Cleanup Proposal. As part of the critique, Atlantic Richfield Company shows how higher costs of dam and sediment removal alternatives and their additional short-term impacts are not offset by improvements in protectiveness, risk reduction, or compliance with surface water quality ARARs relative to Alternative 2A. Atlantic Richfield company also cited concerns that wetland impacts are greater than stated by EPA; specifically stating that replacing 130 acres of productive onsite wetlands is not a good approach. Finally, issues related to bull trout predation by Northern pike are unrelated to the fate and transport of metals through the MRSOU and are not a factor that can be legally considered in the remedy decision.

Response

EPA acknowledges that there are short term impacts—wetlands destruction and water quality contaminant increases during removal of sediments—are present with the Selected Remedy. However, EPA believes that with careful planning and engineering, the water quality contaminant increases can be managed to stay within or near acceptable levels such that long term risk does not occur to aquatic or downstream receptors. EPA also believes that riparian wetlands that will be created at the site during implementation of the Selected Remedy and the State of Montana Restoration Plan will be valuable and important to the riparian habitat and the area. The ARARs for the Selected Remedy require that there be no net loss of wetlands as a result of the implementation of the Selected Remedy, and EPA intends to ensure that this happens. Finally, if EPA selected a remedy that left the dam in place, that Federal action is required to be reviewed under the Endangered Species Act (ESA) according to Federal law. EPA's initial consultation with the US Fish and Wildlife Service, and the resulting Biological Assessment and Biological Opinion, examined the alternatives and their effects appropriately—and this includes the effects of continued pike fishery populations towards the protected bull trout. In short, EPA has considered the issues raised in this comment in detail, and concluded that the Selected Remedy's short term impacts are manageable and do not outweigh the significant long term benefits from the Selected Remedy, and that the Selected Remedy is in compliance with the ESA.

---

5) Comment E

Summary of Comments

Based on Comments A through D, Atlantic Richfield company concludes that a dam / sediment removal action may not be lawfully selected for the MRSOU. However, Comment E identifies design criteria and construction flexibility that must be considered, should EPA ultimately select a dam / sediment removal alternative, as follows:

1. Removal and offsite disposal should be limited to sediments that potentially represent a significant loading source to the downstream surface water or to the alluvial aquifer groundwater.

2. Active treatment of pore water released during removal and handling of sediments is cost prohibitive and impracticable given anticipated flow rates.

3. Impacts to downstream water quality and aquatic life during construction are unavoidable if sediment / dam removal alternative is selected.

4. EPA's proposed river channel and floodplain reconstruction / revegetation must be limited to meeting remedial action objectives only, and not include natural resource restoration.

5. Additional interim fish passage measures are unnecessary and not cost-effective. Further, this is FERC's responsibility, and not the EPA's or Atlantic Richfield Company's.

6. Replacement revenues to government is unauthorized under CERCLA and the NCP. Any revenues lost because the Milltown Project is eliminated are not related to protection of human health and the environment.

Response

EPA's Selected Remedy does indeed focus on the most contaminated and mobile of the sediments, and requires the removal of only those sediments. Active treatment of pore water is not currently required under the Selected Remedy, but may be required if temporary water quality standards are violated during remedy implementation. EPA's remedial channel design and reconstruction with vegetation meet EPA remediation standards—EPA has worked closely with natural resource damage Trustees to provide for the construction of a more natural and fish friendly channel as part of the project, using a combination of Superfund remedial and restoration authorities. Interim fish passage measures have been addressed by EPA and FERC in the comprehensive Biological Assessment and Biological Opinion for this project, and are likely to be implemented by the dam owner, NorthWestern Corporation. Lost government revenues are not addressed in the Selected Remedy.

4.3.2 Section II: Alternative Dam and Sediment Removal Approach Description

The recommended design and construction flexibility discussed above in Atlantic Richfield Company's Comment E is incorporated into an alternate approach to sediment and dam removal that is presented in detail in Section II of their comments.

1) Comment A

Summary of Comments

In this comment, the Atlantic Richfield Company describes a dry sediment removal alternative, including dewatering Area 1 sediments by lowering the reservoir water levels, isolating the Area 1 sediments from flowing surface water with sheet piles, removing the spillway and radial gate section of the Milltown Dam, preloading Area 1 sediments with backfill material, removing up to 2.6 mcy of sediment in Area 1 through mechanical excavation, loading the sediment into train cars for transport to Opportunity Ponds, reconstructing the Clark Fork and Blackfoot River channels and regrading the floodplain to provide stability, and acknowledging the existence of the replacement water supply program.

The dry removal conceptual approach has several advantages, according to the Atlantic Richfield Company. Some of these advantages include enhancing sediment dewatering efficiency prior to removal, providing for early fish passage, providing cost savings to the dam owner for a reduced period of maintenance, mitigating risks of dam failure during construction, potentially reducing the timeframe for achieving improved groundwater quality, and shortening the overall duration of the project.

Response

Subsequent to the writing of this comment letter, Atlantic Richfield Company and its contractor, Envirocon, submitted to EPA a modification to alternative 7A2. The modification proposed a dry removal process that would allow, as described above, the mechanical excavation of the sediments and their loading into rail cars for transport to the Opportunity Ponds for disposal. EPA evaluated the technical aspects of the proposal, and requested additional information relevant to potential scouring of sediment by the rivers when the pool level of the reservoir is dropped. After review of the sediment scour modeling by Atlantic Richfield Company, EPA requested that a bypass channel be incorporated into the

dry removal proposal to further reduce the risk of transporting contaminated sediment downstream. EPA has been receptive to Atlantic Richfield Company's construction modification suggestions. A refined remedial process, which incorporates this approach, was the subject of a *Revised Proposed Plan* (EPA, May 2004) and is presented as part of the Selected Remedy in Section 12 of this *Record of Decision*.

2) Comment B

Summary of Comments

FERC should adopt EPA environmental review as a functional equivalent of its own environmental review and use EPA's analyses in its decision making process. The Atlantic Richfield Company feels that no duplicative Biological Assessments, or Environmental Assessments / Environmental Impact Statements, would be necessary to support an application to decommission the Milltown Project and remove the dam. While the functional equivalent doctrine is typically applied to relieve EPA of NEPA requirements, the doctrine applies here to relieve FERC of any requirement for preparing a separate but redundant environmental review of the same actions that have been analyzed in the comprehensive CERCLA decision process.

Response

EPA is working cooperatively with FERC concerning FERC's consideration of the Milltown response and restoration project, including FERC's use of EPA studies and analysis under the NEPA law. FERC is ultimately responsible for compliance with this law in the context of FERC license surrender proceedings, and will make appropriate determinations. EPA has also worked cooperatively with the USFWS and FERC to produce a comprehensive Biological Assessment and Biological Opinion for the comprehensive cleanup, in an effort to avoid duplication or inefficient analysis.

4.4 Atlantic Richfield Company: Specific Comments on the *Original Proposed Plan*

The text of each issue number refers to the page and section of the April 2003 *Proposed Plan* that Atlantic Richfield Company targets in their comments.

1) Proposed Plan, page 10, last paragraph of "Surface Water Transport of Contaminants"

Summary of Comments

In the *Proposed Plan* it is stated that, "If the dam were ever to fail, catastrophic environmental effects would occur from the release of contaminated sediments into the Clark Fork River." Atlantic Richfield Company believes this statement is contrary to, and overstates, the findings of the Continued Release Risk Assessment (1994) relative to the environmental risks associated with such an occurrence.

Response

EPA stands by its assertion that if the Milltown Dam were to catastrophically fail, significant impacts to the downstream aquatic environment would occur. This opinion is based, in part, on the results of the 1996 ice scour event where significant volumes of reservoir sediment were mechanically scoured, entrained in the water column, and transported downstream.

Water quality data collected by the USGS and others documented the corresponding increase in suspended sediment load and associated total and dissolved metals and arsenic concentrations that occurred during the event. The ice scour event entrained far less sediment than would a failure of the dam, and illustrates on a much smaller scale the potential for environmental impacts should such a release occur. The continued Release Risk Assessment (1994) also supports in a qualitative fashion, the obvious unacceptable risks that would occur from dam failure and the release of the 6 to 7 million cubic yards of contaminated material which resides behind Milltown Dam.

2) Proposed Plan, page 11, first paragraph of "Wetlands"

Summary of Comments

Atlantic Richfield Company objects to the statement that, "the existing wetlands were formed by deposition behind a man-made dam; the new replacement wetlands associated with a free flowing river will be of **higher quality**." This statement appears to conclude that riverine wetlands are of higher quality than those formed in the reservoir. Furthermore, there is no lawful basis upon which the United States may seek mitigation / replacement of dam-related wetlands that are eliminated by EPA's selection of a remedial alternative.

Response

Section 12.10 of this *Record of Decision* (Part 2, *Decision Summary*) describes the expected outcomes of the remedy. Wetlands lost by removing the Milltown Reservoir will be replaced according to valuation methods developed by USFWS. EPA believes that valuable riparian wetlands will be created by the implementation of the State's Restoration Plan at the site. If these wetlands do not equal the functional value of the destroyed wetlands, EPA will require that additional wetlands will be developed within the Clark Fork Basin.

3) Proposed Plan, page 11, second paragraph of "Fisheries and macroinvertebrates"

Summary of Comments

The *Proposed Plan* makes a statement about slightly impaired biointegrity of the macroinvertebrate population below Milltown Dam except for the years 2000 and 2001. Atlantic Richfield Company believes this statement infers that the impairment is due to metals and should be more complete by stating that impairment can result from contaminants such as nutrients and organics which are a pervasive problem that is unrelated to mining within the Clark Fork Basin.

Response

EPA agrees that macroinvertebrate populations are influenced by numerous waterborne contaminants including nutrients, organics and metals. Below Milltown Dam, biointegrity was slightly impaired in 2003, although not corroborated with organic or metals sensitive metrics. The population metrics used, indicate no metals pollution had been observed since 1990, although nutrient-organic pollution has been evident (Part 2, *Decision Summary*, Section 5.6.2).

4) Proposed Plan, page 13, first paragraph of "Human Health Risks"

Summary of Comments

Contrary to the statement in the *Proposed Plan*, Atlantic Richfield Company believes that the configuration of the groundwater arsenic plume is stable and has not changed "significantly," as indicated by 20 years of monitoring results.

Response

The basic configuration of the groundwater arsenic plume, as defined by the existing monitoring well network and results, has remained relatively stable at the MRSOU. EPA believes the *Proposed Plan* accurately represented the possibility of fluctuation of the aquifer contamination under certain circumstances.

5) Proposed Plan, page 14, first paragraph of "Ecological Risks"

Summary of Comments

The *Proposed Plan* states that "Concentrations were likely higher during the peak of this event (ice scour), but unfortunately, samples could not safely be collected during the peak…" Atlantic Richfield Company believes that this is misleading and disregards the water quality data collected by Missoula County during the event, and which possibly occurred through the peak of the event.

Response

The statement in the *Proposed Plan* is made in reference to the USGS's inability to collect depth integrated samples at their gauging station above Missoula during the ice scour event because of personnel safety issues. River discharge with ice flows peaked at 12,400 cfs above Missoula. Missoula County resorted to the collection of grab samples to characterize water quality during the event as a last resort. Grab samples, although useful, are not as accurate as a depth integrated sample, nor were the samples matched to river discharge stages, which led EPA and the State to conclude that the peak period of the event may not have been sampled.

6) Proposed Plan, page 15, first paragraph of initial bullets under "Preliminary Remediation Goals"

Summary of Comments

Text of several of the preliminary remediation goals (PRGs) were changed or added to, from the original PRGs provided to Atlantic Richfield Company during preparation of the FS. EPA's original PRGs should replace the revised PRGs in the cleanup proposal. More specifically, the PRG stating "protect downstream fish and macroinvertebrate populations from releases of contaminated reservoir sediments which occur with ice scour and high flow events" did not end with the qualifying text "by reducing dissolved copper and zinc concentrations below Toxicity Reference Values (TRVs) for trout." Atlantic Richfield Company believes referencing the TRVs is appropriate because they are site specific, risked-based criteria for the protection of downstream aquatic life. Atlantic Richfield Company also believes that EPA's and the State's temporary construction standards are arbitrary and they should use the TRVs.

Atlantic Richfield Company also noted a change to the wetlands PRG from "protecting wetlands to the maximum extent possible" to "protect wetlands through avoidance of loss

or replacement of wetlands." Further changes to the wetlands RAO included: "Provide compliance with ESA and wetland protection through consultation with USFWS, the Confederated Salish and Kootenai Tribes and relevant State agencies." By making these changes, EPA appears to conclude that replacing the approximately 130 acres of onsite wetlands is equivalent to the reconstructed riverine wetlands.

Response

The PRGs were appropriately modified for the *Proposed Plan* and *Record of Decision*, based on the current site conditions, analysis, and site needs. The NCP allows PRGs to be modified as the remedial investigation and feasibility study progresses and the remedial action is selected. EPA agrees that protection of downstream fish and macroinvertebrate population is important. The remedy, as described in Section 12 of this *Record of Decision*, will greatly reduce the potential for mobilization of any contaminated sediment by ice scour or high flow events through removal of contaminated sediment in Area 1 and construction of a new channel and floodplain. State restoration activities will also help limit the erosion or scour of remaining sediment that might harbor lower level concentrations of arsenic and metals. EPA disagrees with the comment about the temporary water quality construction standards. The temporary standards were established by EPA and DEQ, in consultation with FWP, to protect human health and prevent acute impacts to the downstream fishery, including bull trout. Reference to exceedance of the temporary standards during construction activities will take into consideration loading from upstream sources.

In reference to Atlantic Richfield Company's concern about the reconstruction of wetlands, please refer to item number 2 above.

7) Proposed Plan, page 16, bullets under "Groundwater PRAOs and Surface Water PRAOs"

Summary of Comments

The Groundwater and Surface Water PRAOs were changed in the *Proposed Plan*. For the groundwater PRAO, returning it to "its beneficial use within a reasonable time frame and preventing ingestion until drinking water standards are achieved," needs to be qualified with "if practicable." For surface water, the PRAO references achieving Federal Ambient Water Quality Criteria (FAWQC). Atlantic Richfield Company believes it should read, "achieve TRVs, which are fully protective of aquatic life."

Response

EPA believes that implementation of the remedy, as described in this *Record of Decision* (Section 12), will result in restoration of the aquifer to its beneficial use within a couple of decades, if not sooner. Thus there is no need for the qualifying phrase. EPA is striving for a remedy that will meet all ARARs. The FAWQC are surface water ARARs, the TRVs for trout, although site-specific, are not. The FAWQC values are identical to the Montana WQB-7 acute and chronic standards except they are for dissolved rather than total recoverable analyses. Under CERCLA law, it is appropriate to use such standards as ARARs and remedial goals.

8) Proposed Plan, page 18, last paragraph of "Applicable or Relevant and Appropriate Requirements"

Summary of Comments

Atlantic Richfield Company believes, as stated in the *Proposed Plan*, "Soils with low levels of contaminants left in place will be primarily out of the floodplain after dam removal and the remedial action is completed. State floodplain and solid waste ARARs do not apply to this material." However, they also believe it should apply regardless of the location of the soil.

Response

EPA acknowledges this comment. A detailed consideration of this comment is not required, and the ARARs attachment to the *Record of Decision* accurately describes the treatment of soils and mixed waste under ARARs at the Milltown Site.

9) Proposed Plan, page 21, first paragraph

Summary of Comments

Atlantic Richfield Company disagrees with EPA's evaluation that Alternative 2A doesn't provide permanent protection from dam failure and ice scour. Atlantic Richfield Company believes that a FERC safety upgrade to enhance the stability of the structure, coupled with an inflatable crest, would result in adequate permanence for the structure.

Response

The remedy as presently described in this *Record of Decision* is truly a permanent solution to a 100-year-old problem. Retaining the dam with the associated sediments perpetuates the status quo, which is not an acceptable solution to the problem. As noted above, the dam owner, NorthWestern Corporation, has indicated it did not wish to spend the substantial capital it would take to improve the facility to current standards, because the dam is not a revenue producing dam, and there is no guarantee that continued dam maintenance over time would be performed by the dam owners or the Atlantic Richfield Company.

10) Proposed Plan, page 23, first paragraph

Summary of Comments

The *Proposed Plan* states that EPA expects fill material for the floodplain reconfiguration to come from the excavation of a downstream repository. Alternate sources of backfill borrow material closer to the site should be considered.

Response

EPA agrees. Borrow sources closer to the reservoir may be utilized for construction of the floodplain. Area 1 material may also be available for fill or topsoil, if it meets appropriate standards.

11) Proposed Plan, page 23, Exhibit 8 Table

Summary of Comments

The sediment thickness listed under Area 3 needs to be updated in Exhibit 8 to reflect sediment core data collected during the 2002 drawdown. The thickness range should read 5 to 21 feet.

Response
EPA agrees. This information is updated in this *Record of Decision*, Exhibit 2-10.

12) Proposed Plan, page 28, first paragraph of Sediment Removal, Dewatering, Transportation and Disposal

Summary of Comments
Atlantic Richfield Company requests that Cleanup Proposal language discussing sediment removal, emphasize that removal will be tied to a specific depth contour elevation, not based on concentration criteria.

Response
EPA concurs that the initial depth of sediment removal in Area 1 will correspond to a pre-determined contour elevation that will be determined during remedial design based on concentration criteria. Section 12.3, *Dam and Sediment Removal*, of Part 2 of this *Record of Decision*, describes the conceptual removal process as currently envisioned under the remedy. The actual details of the removal process may change as remedial design proceeds and may provide for confirmation sampling and possible adjustments during or following initial excavation.

13) Proposed Plan, page 28, second paragraph of Sediment Removal, Dewatering, Transportation and Disposal

Summary of Comments
Implementation of installation of sheet piling and removal of the upper 15 percent of sediment from Area 1 will require a drawdown of the reservoir. The requirement for drawdown, along with any proposed evaluations of the potential environmental consequences (scouring, etc.) should be identified and discussed in the cleanup proposal.

Response
EPA agrees with the comment. During the evaluation of the comments, EPA and Atlantic Richfield Company put considerable effort into modeling potential sediment scour scenarios. The results of these efforts influenced the approach to the remedy and removal of the sediment. Sequencing of drawdowns, dam removals, bypass construction and water quality monitoring are described in detail in Sections 12.4 and 12.5 of Part 2 of this *Record of Decision*.

14) Proposed Plan, page 29, last paragraph

Summary of Comments
The proposed daily surface water quality monitoring frequency for TSS and dissolved / total metals may be appropriate for a limited time during construction startup and during initiation of new types of construction and / or dam operational activities, but an allowance should be provided for a reduction in surface water monitoring frequency after these initial periods. Continuous turbidity monitoring at the USGS gauging station above Missoula could be correlated with TSS concentrations to provide a continuous reading of TSS and actual sampling could be reduced to coincide with periods of high turbidity / TSS.

Response

EPA understands Atlantic Richfield Company's comment and will employ an efficient surface water monitoring program during implementation of the remedy. This program will incorporate continuous monitoring of turbidity, daily monitoring of TSS, and dissolved and total metals and arsenic (USGS Station 12340500—above Missoula). Results of the daily monitoring will be evaluated against Temporary Surface Water Quality Standards established by EPA and DEQ to be applied during construction. The temporary standards were established to protect human health and prevent acute impacts to the downstream fisheries, including bull trout. Periodic downstream monitoring of TSS, metals, and arsenic at pre-determined locations immediately above Thompson Falls Reservoir will also be incorporated into the monitoring plan (see Sections 12.5 and 12.7 in Part 2 of this *Record of Decision* for more details).

---

15) Proposed Plan, page 30, second paragraph

Summary of Comments

Caged fish studies and fish surveys, as proposed in the *Proposed Plan*, are confounded by many factors unrelated to metals/sediment release and have shown a high degree of variability. Requiring these methods of monitoring would likely be of limited benefit and would not justify the cost.

Response

The specifics of the aquatic biomonitoring program to be implemented by the remedy will be crafted by EPA, DEQ, USFWS, and FWP as part of the remedial design. The program is discussed in Part 2 of this *Record of Decision*, in Sections 12.5 and 12.7.

---

16) Proposed Plan, page 30, Exhibit 12

Summary of Comments

The temporary water quality standards for construction proposed by EPA are not based on the database of site specific toxicity (except for copper) developed for the Clark Fork River. Temporary and final water quality criteria for the MRSOU should be based onsite-specific toxicity data as defined by the dissolved metal TRVs for the Clark Fork River, which are considered conservative. Any exceedances of the temporary criteria should determine whether it is from construction activities, upstream loading, or any other sources of metals/TSS unrelated to construction activities.

Response

As part of the remedy, EPA has invoked a waiver of MRSOU final ambient surface water standards during construction activities because exceedances of final standards is unavoidable during river construction activities. The temporary construction standards were established by EPA and DEQ, in consultation with FWP, to protect human health and prevent acute impacts to downstream fisheries, including bull trout, and are appropriate and protective. Reference to these standards during remedy implementation will consider whether an exceedance of a temporary standard is the result of construction activities or loading from upstream or other sources (see Section 12.7.2 of Part 2 of this *Record of Decision* for more details).

17) Proposed Plan, page 30, last paragraph

Summary of Comments

Atlantic Richfield Company acknowledges EPA's need to coordinate the remedial action and facilitate fish passage. Atlantic Richfield Company recommends that EPA emphasize, and more favorably weigh, the long term needs and benefits of completing the project in a timely manner over the short term benefits of facilitating fish passage.

Response

The construction process for implementing the remedy has evolved since this comment was written. The remedy as described in this *Record of Decision* will accommodate an aggressive construction schedule while facilitating the passage of fish. EPA and other agencies agree that the successful implementation of the remedy, in a timely and efficient manner, will also allow for fish passage. Section 12.3 of Part 2 of this *Record of Decision* provides a discussion about the remedial construction process and sequencing of activities.

18) Proposed Plan, page 31, second paragraph of "Channel Reconstruction"

Summary of Comments

The conceptual approach and an estimate for the volume of floodplain backfill is presented in the *Proposed Plan*. An alternate approach that utilizes less backfill should be considered.

Response

Since this comment was written, a revised approach was proposed by Atlantic Richfield Company, reviewed and evaluated by EPA, and accepted. The remedy as described in Section 12 of this *Record of Decision*, incorporates the new approach, including the identification of local sources of backfill material.

19) Proposed Plan, page 31, first paragraph of "Milltown Dam Removal"

Summary of Comments

The *Proposed Plan* identifies that dam removal would be completed after the sediment removal and channel/control structure construction work was completed. Under an alternate plan that uses a dry removal approach, the benefits of early dam removal must be considered in sequencing removal of the spillway and radial gate section of the dam.

Response

A revised approach, which evaluates the merits of an early dam removal and dry excavation, was presented to EPA for consideration by Atlantic Richfield Company and its contractor. The remedy, as described in Section 12 of this *Record of Decision*, incorporates a refined version of this approach. A sustained drawdown, construction of a bypass channel, and early removal of the Milltown Dam spillway are all components of the remedy.

20) Proposed Plan, page 33, first two bullets

Summary of Comments

The *Proposed Plan* identifies a requirement for Atlantic Richfield Company to continue funding for maintaining the replacement water supply for Milltown residents and making contingency funds available to reconfigure, expand or update replacement water supplies. The cleanup proposal needs to recognize that Atlantic Richfield Company already meets these requirements through its settlement with the Milltown Water Users Association.

Response

The requirements are appropriate for the *Record of Decision*. If the RPs can demonstrate that the continuation of the temporary alternative water supply has been accomplished under pre-existing agreements in a satisfactory manner, that will be accepted by EPA.

---

21) Proposed Plan, page 34, sixth bullet

Summary of Comments

The *Proposed Plan* includes a bullet statement that indicates that the former Clark Fork River channel will be backfilled as part of the re-contouring and stabilization of the new floodplain. The Cleanup Proposal should clarify that the use of imported backfill is not anticipated outside of Area 1 and that recontouring of Area 2 and 3 will be done by the regrading of existing soils and sediments.

Response

The remedy provides a conceptual description of the backfilling of the abandoned Clark Fork River channel with borrow material that originates on or near the site. The specific details relevant to the design, construction, and contouring of the floodplain will be developed, reviewed, and evaluated as part of remedial design phase of the project.

This page left blank intentionally.

5 Stakeholder and RP Categorized Comments

All of the comments provided by stakeholders and the Executive Summary of the RP's comments on the *Revised Proposed Plan* are contained on the attached CD-ROM. To use this CD, insert it in the CD-ROM drive of your computer. The CD should auto-launch in Adobe Acrobat Reader as a PDF file. If CD does not auto-launch, click on "Start," and select "Run" in Windows. Type "D:/start.pdf," where "D" is your CD-ROM drive.

For stakeholder comments, the files are grouped into the following commenter types:

- **Milltown Residents:** Milltown Area Residents (Bonner, Piltzville, Turah, Milltown, West Riverside)
- **Missoula Residents:** Missoula Residents
- **Upstream Residents:** Upstream Residents (Drummond, Clinton, Deer Lodge, Garrison Anaconda, Butte)
- **Downstream Interests:** Residents Downstream of Missoula (Frenchtown, Huson Alberton, Rivulet, Tarkio, Superior)
- **Others:** Other individuals from outside the CFB
- **No Address:** People who did not supply an address
- **Meeting:** Oral comments provided to EPA at meeting or hearing
- **Group:** Citizen Groups and Organizations
- **Local Government:** City and County agencies, Conservation District Board
- **Elected Officials:** Mayors, senators, representatives, and other elected officials
- **Natural Resources Trustees:** Federal, Tribal, and State Trustees
- **Corporate Interests:** Corporate entities such as Mountain Water Co., Avista, PPL, etc.
- **RP:** Potentially Responsible Party comments (Atlantic Richfield Company and NorthWestern Corporation)

Upon opening the file, a table of contents is provided with the letter identification number and the commenter's name. For each letter, the original comment document appears on the left-hand side of the page. This document is marked with lines and numbers for where each comment within the document begins and ends. To the right, the number associated with each comment is listed, and the category and subcategory is identified. To see a response to a particular comment, refer to the specific category and subcategory in Sections 2 or 3 of this *Responsiveness Summary*. For the RPs, the comments were not categorized, but rather were responded to comment-by-comment in Section 4, *RP Issues and Lead Agency Responses*.

If you do not have access to a computer, you may request a paper copy of your comments (a copying fee will be charged). To request this, please contact:

Russ Forba
10 W. 15th St.; Suite 3200
Helena, MT 59626
Forba.Russ@epamail.epa.gov
(406) 457-5042

This page left blank intentionally.