

# Responsiveness Summary

## Response to Comments on the Wallace Yard Engineering Evaluation/Cost Analysis (EE/CA)



January 2008

## RESPONSIVENESS SUMMARY

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On October 15, 2007, the United States Environmental Protection Agency (EPA) and Idaho Department of Environmental Quality (IDEQ) (collectively, “the Agencies”) released an Engineering Evaluation/Cost Analysis (EE/CA) for public comment. The EE/CA addresses mine waste contamination found on and in a property known as Wallace Yard, which includes the former Hercules Mill site, and along rail spur lines in Nine Mile and Canyon Creeks. These spur lines and the Wallace Yard are or were owned and operated by Union Pacific Railroad (UPRR) and Burlington Northern Santa Fe (BNSF) Railway (collectively, “the Railroads”) and their predecessors. A public meeting was held on November 1, 2007, in Wallace, Idaho, to provide information on the removal action proposed in the EE/CA and to allow citizens and elected officials the opportunity to provide oral comments. Oral comments were recorded at that community meeting. Written comments were accepted until November 23, 2007.

The Agencies received and carefully reviewed a number of written and oral comments. Many of the comments received will help inform the design process and the products generated during design.

The first portion of this document contains paraphrases of the written and oral comments received from stakeholders during the EE/CA public comment period. These paraphrased comments are organized under subject headings and the Agencies’ responses follow in italics. The second portion of the document addresses comments from the Railroads. Given the highly specific and technical nature of the letter from the Railroads, the comments are directly quoted followed by the Agencies’ response in italics.

Comment topics include:

- 1.1 Adequacy of Barrier in Wallace Yard and Spur Lines for Protecting Human Health
- 1.2 Cleanup Cost Responsibility
- 1.3 Condition and Use of Nine Mile Creek Bridge during Removal Action
- 1.4 Contaminated Soil Disposal
- 1.5 Dust Abatement at the Parking Area Near the Visitor Center
- 1.6 Education and Testing
- 1.7 Floodplain
- 1.8 Future Land Use
- 1.9 Hercules Mill and Tank Foundations
- 1.10 Human Health
- 1.11 Property Ownership
- 1.12 Roads
- 1.13 Tetra Tech Comments (on behalf of Union Pacific Railroad and Burlington Northern Santa Fe Railway)

## **1.1 ADEQUACY OF BARRIER IN WALLACE YARD AND SPUR LINES FOR PROTECTING HUMAN HEALTH**

Several comments were received that questioned the preferred alternative of placing a 12-inch vegetated soil or gravel barrier in the Wallace Yard area and spur lines in Nine Mile and Canyon Creeks.

***EPA and IDEQ Response:** The preferred alternative described in the EE/CA is consistent with the remedy that is currently being implemented in Wallace, other communities, and rural areas of the Coeur d'Alene Basin (Basin). The Wallace Yard cleanup includes the installation of a 12-inch vegetated soil or gravel barrier to protect human health from the heavy metals of concern in the Basin.*

*The preferred alternative is also consistent with the final action installed by UPRR along the Trail of the Coeur d'Alenes and adjacent West Wallace Yard under a separate agreement with the U.S. Government, State of Idaho, and Coeur d'Alene Tribe.*

*Protection of the health of people continues to be the top priority for all cleanups in the Basin. Under the Basin Record of Decision (ROD), cleanup of properties where the residents are pregnant women or children under the age of seven is given first priority. Residents or property owners who wish to have their property sampled through the Basin property screening process can contact Tracie at IDEQ to request sampling. Tracie is available at 208-783-5781.*

## **1.2 CLEANUP COST RESPONSIBILITY**

Several comments were received stating that the Railroads should be held responsible for the costs of the removal action.

***EPA and IDEQ Response:** The Agencies agree. Accordingly, the Agencies entered into an administrative agreement with the Railroads to conduct an EE/CA. The Agencies anticipate negotiating another agreement with the Railroads for implementation of the selected response action.*

## **1.3 CONDITION AND USE OF NINE MILE CREEK BRIDGE DURING REMOVAL ACTION**

Comments were received requesting the repair or replacement of a bridge across Nine Mile Creek that accesses the spur line.

***EPA and IDEQ Response:** The Agencies anticipate that contractors for the Railroads will be conducting the work at Wallace Yard and along the former Nine Mile and Canyon Creek spur lines. Workers will need to move construction equipment, vehicles, and haul trucks to work areas along the spur lines. The locations of the access areas have not been determined at this time; however, construction contractors should survey and evaluate the condition of the bridge before finalizing the access plans. Construction could begin as early as the 2008 construction season.*

## 1.4 CONTAMINATED SOIL DISPOSAL

Comments were received about soil disposal that may be required as a result of contaminated soil removals in the Wallace Yard and spur lines.

*EPA and IDEQ Response: The preferred alternative in the EE/CA mainly consists of capping contaminated soils to reduce the potential for direct contact by people in the Wallace Yard area and along the spur lines in Nine Mile and Canyon Creek. Limited volumes of contaminated soil may be excavated from on and around the Hercules Mill foundations, small strips of land that are directly adjacent to residential yards on the spur lines, and other small areas. This excavation is necessary to promote good drainage, to maintain barrier thickness, and to create additional level surfaces. Any excavated soils will be subject to proper handling and disposal requirements. Disposal of contaminated soils will likely occur at the Big Creek Repository located between Osburn and Kellogg. The Big Creek Repository has been the primary repository for the Basin cleanup since 2002.*

## 1.5 DUST ABATEMENT AT THE PARKING AREA NEAR THE VISITOR CENTER

A comment was received requesting dust abating materials be used as cover in the parking area near the Visitor Center.

*EPA and IDEQ Response: This request will be shared with the Railroads for consideration during material specification and design development.*

## 1.6 EDUCATION AND TESTING

Several comments were received stating that railroad funds should be used to provide public education and blood testing regarding lead contamination.

*EPA and IDEQ Response: Public education and blood-lead testing may be important elements to ensure protection of human health in areas with lead contamination, and such activities remain the focus of ongoing programs in the Coeur d'Alene Basin. The Agencies do not believe that ongoing public education and blood-lead testing activities will be adversely affected by the actions selected under the EE/CA. The extent to which such activities could be enhanced through participation or resources of the Railroads remains to be resolved.*

## 1.7 FLOODPLAIN

Comments were received about the floodplain and associated preferred alternative for Wallace Yard. A request was made that the areas that are the subject of the removal action within the 100-year flood risk area be cleaned up in accordance with relevant Shoshone County Ordinances.

*EPA and IDEQ Response: The Agencies are aware that a portion of the Wallace Yard property may be in the floodplain. The Agencies anticipate requesting that the Railroads*

*conduct an updated floodplain analysis based on current conditions of the segment of the South Fork of the Coeur d'Alene River that runs through the Wallace Yard.*

*The floodplain analysis and the substantive requirements of the Shoshone County Ordinances will be carefully considered during the design phase of the removal action in order to provide for proper construction practices and materials. The County Ordinance referenced in one of the comments contains best management practices (BMPs) to control and prevent erosion and migration of sediments and associated contaminants during construction and flood occurrences.*

*This cleanup will not include the construction of flood control dikes, nor will it affect the height of the existing riverbanks.*

## **1.8 FUTURE LAND USE**

Comments were received suggesting that a fence be installed in lieu of vegetated soil or gravel barrier in a specific parcel of WY-2 (west of the Spunstrand access road and east of the residence) in order to promote more efficient future development of a portion of the site.

***EPA and IDEQ Response:** The preferred alternative in the EE/CA calls for a 12-inch cap in Area WY-2 for the protection of people and wildlife to reduce the risk of direct contact with contaminated soils. The implementation of the preferred alternative in this and other areas of the Wallace Yard does not dictate, nor depend on, the type and timing of development that may occur there in the future. While a fence or similar access control could be somewhat effective in preventing access to the property, the preferred alternative provides the most effective barrier against direct exposure and has proven to be effective in the remedies implemented in the Bunker Hill Box and areas of the Coeur d'Alene Basin.*

## **1.9 HERCULES MILL AND TANK FOUNDATIONS**

Comments were received requesting the removal of the Hercules Mill and tank foundations.

***EPA and IDEQ Response:** Removal of the foundations was carefully considered. While removal of the structures may have some aesthetic value, it is not currently included in the EE/CA as it may be beyond the Agencies' mission to protect public health or the environment. It should be noted that any removal of the foundations should be done under the direction of a geotechnical engineer, as slope stabilization will need to be carefully analyzed.*

## **1.10 HUMAN HEALTH**

Several comments were received that voiced concerns about this project being done at the expense of other human health cleanups in the Basin, and that private funds should be used for the cleanup and not funds from government entities.

***EPA and IDEQ Response:** The Wallace Yard and spur lines removal action is expected to be carried out under a negotiated agreement with the Railroads. No remedial action is*

*called for on this site in the Basin Record of Decision, but the preferred alternative in the EE/CA for Wallace Yard, including the spur lines, is consistent with the work being conducted under the ROD. Terms of any agreement with the Railroads must include financial assurances for the work to be conducted under the EE/CA. This work will not displace or replace any work currently being conducted under the ROD. In addition, by making the preferred alternative consistent with remedies in the ROD, the alternative also addresses human health.*

## **1.11 PROPERTY OWNERSHIP**

Comments were received about how ownership of this property is going to be handled.

***EPA and IDEQ Response:** The Railroads currently own Wallace Yard and some segments, if not all, of the spur lines in Canyon and Nine Mile Creeks. After implementation of the preferred alternative in those areas, it is anticipated that the Railroads will transfer all or part of their holdings.*

*The future use or ownership of the properties within the project area remains subject to private transactions and local regulation. The City of Wallace and Shoshone County have zoning and planning processes which will govern the type of future use for this property. Interested parties may work directly with the Railroads on ownership issues and work with local zoning authorities to comply with land use planning restrictions.*

## **1.12 ROADS**

Several comments were received on the topic of asphalt roads. Residents requested that an asphalt barrier be used in lieu of a road gravel barrier for people who access residences. Others questioned the prescriptive call for asphalt on certain segments of the former rail lines. Comments were also received stating that any remaining rail should be removed.

***EPA and IDEQ Response:** Most decisions regarding barrier materials will be made during the design phase. However, the preferred alternative in the EE/CA calls for specific barriers for given segments of the former spur lines. While subject to reevaluation and final determination during the design phase, the tentative decisions were made based on the most recent field reconnaissance and subsequent discussions amongst the Agencies.*

*During the final design, a number of site-specific factors will be considered for each type of barrier in order to implement the best barrier for a given site or segment. Asphalt will be considered with those factors in mind. The overall protectiveness of the barrier will remain consistent with the preferred alternative in the EE/CA. Removal of remaining rail has been incorporated into the final EE/CA and will be included in the design document preparation.*

## 1.13 TETRA TECH COMMENTS (ON BEHALF OF UNION PACIFIC RAILROAD AND BURLINGTON NORTHERN SANTA FE RAILWAY)

1. **General Comment:** With regard to the Spur Lines, the UPRR and BNSF do not agree with all aspects of the response action approach presented in the Public Review Draft EE/CA. Specifically, we do not believe that the Basin ROD and HHRA require that all soil throughout the Basin generally, or the Spur Lines specifically, must be removed or covered if it exceeds 700 mg/kg lead, regardless of location, use or risk exposure. Rather, both the Basin ROD and HHRA contemplate the use of alternate action levels, or threshold values, for certain nonresidential areas depending on site specific exposure scenarios. This is discussed in more detail below in comments 5, 6, and 8.

*EPA and IDEQ Response: The Basin Human Health Risk Assessment (HHRA) discusses incremental risks accepting that exposures that occur along the spur lines and other areas are in addition to substantial baseline exposures that occur in the Basin. The exposures are especially high in the Upper Basin, including the area in and near Wallace, Burke, Nine Mile, and Canyon Creek drainages. It is important to take measures to protect against exposures to lead and other metals of concern. The Basin Property Remediation Program (BPRP), the remedy implemented in the Bunker Hill Box, and the Wallace-Mullan Branch Removal Action have provided a highly successful case history of controlling direct exposure to mine waste through removal and capping of contaminated soils. Controlling this exposure was achieved at other locations in the Coeur d'Alene Basin by using a 12-inch-thick barrier to protect human health from the exposure to soils contaminated with heavy metals including lead, arsenic, cadmium, and zinc. The removal action preferred alternative as described in the Wallace Yard EE/CA is consistent with those previous actions and the Basin ROD and is appropriate to address the risk exposures identified in the HHRA. See responses to specific comments below.*

Several comments (7, 10, 11, and 12) are also provided regarding the risk characterization and basis for the selection of response actions within certain portions of the Wallace Yard.

In addition, the Railroads do not agree that the remediation of gravel road shoulders along paved roadways should be considered as part of the EE/CA. As discussed in more detail below in comments 2 and 14, there are two reasons to exclude paved roadways from this EE/CA. The first is that the gravel shoulder areas appear to be gravel road base, rather than ballast or railroad embankment material. The second is that the width of the paved roadway exceeds the width of the functional ROW associated with the former spur lines, and the pavement is an adequate barrier.

*EPA and IDEQ Response: Section 2.1 of the EE/CA states "The Spur Line ROWs have typical widths of 75 to 100 feet with limited sections at 150 feet." Maps produced by MFG, Inc. in February 16, 2007, (Project 040017) also support that statement. Therefore, it is unlikely that the typical width of the paved roadway (approximately 20 feet in these areas) exceeds the width of the RROWs as suggested in the comment from the Railroads. Functional right-of-way width (FROWW) has not been defined for the purposes of the Wallace Yard Removal Action. However, if we refer to the definition in the Wallace-Mullan Branch Statement of Work,*

*FROWW represents that area generally accessible by humans and therefore represents an area of probable exposure to mine waste. Given that the road shoulders of concern are proximal to residential areas, the exposure potential exists for humans. Given the lack of verifiable survey data, the actual alignment of the roadway in relation to the spur line ROWs is in question. The Railroads have not produced accurate survey data to better define the assumed former alignment. Removal and replacement of road shoulders is consistent with the Basin ROD as stated in Section 12.1.1 which states, "All ROWs within the site will be managed to minimize exposure and contaminant migration will be based upon sampling and analysis."*

## **2. Section 2.6 – Site Reconnaissance Bullets:**

Canyon Creek – 2nd Bullet: Unpaved road shoulders, where no visual evidence of the former spur lines exist, should not be considered under this EE/CA. The width of the paved roadway exceeds the width of the functional ROW associated with the former spur lines, and the entire roadway section, including pavement, subgrade, and gravel shoulders should be considered as non-railroad related. Most of the shoulder areas appear to be gravel road base and not ballast or railroad embankment materials.

***EPA and IDEQ Response:** See second response to General Comment 1. Comment has been noted.*

Canyon Creek – 3rd Bullet: Consideration should be given to separating this discussion into two separate bullets to avoid confusion. The 0.6 miles of the former NPRy spur referenced is located along Yellow Dog Road beginning near MM 4.9. The 1.2 miles of the former WIRR spur line referenced is located near the community of Gem from (approximate) MM 3.25 to 3.75. The parenthetical statement regarding observations made at the time of the **2004** field review can be removed because it is superseded by the reference to the 2007 reconnaissance in the paragraph preceding the bullets.

***EPA and IDEQ Response:** The bullet indicated in the comment deals with areas of the ROW that serve as gravel access to residential areas. The data in the bullets is general. The figures provided in the EE/CA show exact locations of the identified areas.*

*There were two field reconnaissance visits completed relative to the rail lines. The 2007 reconnaissance served to augment the 2004 visit. The data included in the bullets in this section represent a summary of all gathered data from both site visits.*

Canyon Creek – 5th Bullet: In the second sentence “residence” should be changed to “residents.”

***EPA and IDEQ Response:** The EE/CA has been updated to reflect correct term.*

Ninemile Creek – 4th Bullet: The switchback referenced is located near MM 3.75.

*EPA and IDEQ Response: Consistent with the format in this section, mile markers have not been used to identify features. The figures included in the EE/CA show the location of the switchback.*

Ninemile Creek – 5th Bullet: See comment related to the 2nd Canyon Creek bullet and remediation of road shoulders, above.

*EPA and IDEQ Response: See response above. Comment has been noted.*

Ninemile Creek – 7th Bullet: The inclusion of the discussion regarding sampling data adds confusion and is not necessary in this section of the EE/CA.

*EPA and IDEQ Response: Given that the bullets in this section are intended to provide information gathered during the reconnaissance visits in 2004 and 2007 and that no soil sampling or analysis was conducted during those visits, this bullet will be updated. The last sentence regarding the sample data will be moved to an applicable section.*

3. **Section 2.10.1 Fourth Bullet:** There is no evidence to support the inclusion of the statement that concentrates could be present as a result of “spillage during derailments, from “weep holes” in the bottoms of open rail cars, or from loading or unloading activities.”

*EPA and IDEQ Response: The statement is supported by historical records and other evidence, including deposition testimony, related to the historic mining industry and railroad operations in the Coeur d’Alene Basin. Additionally, sampling efforts conducted for the Wallace-Mullan Branch Removal Action resulted in the identification and removal of concentrates from the Wallace-Mullan Branch rail lines. It is worth noting that data presented in the 2001 Basin RI Report and summarized in Section 2.10.1 of the EE/CA and the average lead concentrations observed along the rail lines is within the Upland Concentrate and Process Waste range shown in the Basin-Wide Statistical Summary of Metals Concentrations in Mine Waste.*

4. **Section 3.1 – General Comment:** In previous versions of the EE/CA, the Railroads included statements regarding the process and results contained in the Basin HHRA and used in the streamlined risk evaluation for the Wallace Yard and Spur Lines. The Railroads would like to reiterate that the use of the results of the Basin HHRA to supplement the streamlined risk assessment for this EE/CA does not indicate their endorsement of the Basin HHRA. UPRR and BNSF do not necessarily agree with, and reserve the right to contest, toxicity values, exposure assumptions, determinations of carcinogenic and non-carcinogenic effects, and the characterization of risk for lead and non-lead COPCs presented in the Basin HHRA.

*EPA and IDEQ Response: This comment has been noted.*

5. **Section 3.6.2.2:** The Basin ROD and HHRA anticipate the development and application of threshold values for lead in soil other than 700 mg/kg. The development and application of such an alternative threshold is appropriate for certain Common Use, or non-residential, uses identified in the EE/CA. Support for this argument is provided below.

Section 8.1 of the ROD (Human Health Remedial Action Objectives) states that the RAO for soils, sediments and source materials is to: “Reduce human exposure to soils, ..., and sediments that have concentrations of contaminants of concern greater than selected risk-based levels for soil (as described in Sections 7 and 12 of this ROD).”

In the description of the selected remedy in Section 12.1.1 of the ROD, under the heading Commercial Properties and Common Use Areas the ROD does not specifically cite an action, or threshold, level. The paragraph reads as follows: “Commercial properties and common use areas include public buildings, parks, playgrounds, churches, and commercial buildings. Risks posed by commercial properties and common use areas are similar to those in residential settings; therefore, the cleanup actions for these properties will be similar to those proposed for residential yards. A combination of removals, barriers, and access restrictions will be used at commercial properties and common use areas **based on location, use, and contaminant concentrations**. Barriers will include vegetation, **a minimum of six-inches** of clean soils or gravel, or a paved surface. Final decisions regarding barrier performance standards will be developed during remedial design or as a component of the institutional controls program. Commercial properties used **predominately** by sensitive populations will require a 12-inch barrier.” (emphasis added).

***EPA and IDEQ Response:** As indicated in responses below, the Wallace Yard area and spur lines are located next to local residences and are accessible to the general public, including sensitive populations (e.g., young children under the age of 7 years). In addition, the Wallace Yard is adjacent to a highly used recreational corridor constructed on the former Wallace-Mullan Railroad Branch. The Basin ROD considers risks for commercial and common use areas such as playgrounds, churches, parks, public buildings, etc., to be similar to those in residential settings. The Selected Remedy in the Basin ROD, incorporated experience from successful cleanup actions within the Bunker Hill Box. The soil action for lead was developed based upon the Bunker Hill Box model and was established to reduce exposure pathways for a typical child. A tiered approach was developed based on the results of the model, which supported a soil response action level starting at approximately 700 mg/kg. Therefore, for soil with lead concentrations between 700 mg/kg and 1,000 mg/kg, a barrier is required to prevent direct exposure to soil and migration of soil to dust in homes. No other action thresholds are provided for lead in the Basin ROD with regard to common use and residential areas. Therefore, the Agencies seek to implement a removal action that is protective of human health and believes that a residential/common use lead action threshold of 700 mg/kg is appropriate for the site and is consistent with the ROD. By implementing a soil action level of 700 mg/kg for lead, future development of the site will not be restricted based upon action level.*

*The thickness of the barrier is consistent with the Basin ROD and the adjacent Wallace-Mullan Branch Removal Action. The ROD Selected Remedy calls for 12 inches of clean soil barrier in residential areas and the Wallace-Mullan Branch Removal Action implemented a minimum of 12 inches of clean soil barriers in all residential areas. The residential areas in the Wallace-Mullan Branch Removal Action are defined as those areas of the ROW that are within or immediately adjacent to either an incorporated or unincorporated community. The residential areas include that portion of the ROW that lies a distance of 1,000 feet along the ROW measured from the outermost residential structure. A soil cover thickness of 12 inches is consistent with the previous removal actions performed. Also, a 12-inch cover is necessary to provide adequate durability of the cover to resist damage by erosion and traffic.*

The description of Soil Alternative S4 (cited in the EE/CA as the preferred alternative) in Section 9.1 of the ROD (Human Health Alternatives for Community and Residential Areas) states that: “Common use areas such as streets, alleys, rights-of-way, and playgrounds would also be candidates for remediation **if soil contamination and exposure risks warrant.**” (emphasis added).

Section 12 of the ROD specifies action, or threshold levels, only for Residential Yards, and formal Recreational Areas, which are open to and frequented by the general public at large, such as boat ramps, picnic areas, and campgrounds. For these areas the ROD does specify the use of 700 mg/kg lead as an action level. However, for Street Rights-of-Way, Commercial Properties and Common Use Areas, the ROD clearly states that actions will be based on location, use and contaminant concentrations. We believe that the ROD contemplates the use of alternate threshold criteria for these non-residential uses. We do not believe that the statement “risks posed by commercial properties and common use areas are similar to those in residential settings...” implies that the same action level should be applied, but rather the risk exposure pathways are similar, supporting the remainder of the statement that cleanup actions for these areas should be similar to those in residential settings (i.e., removal and replacement, or barrier placement). Clearly, the exposure scenarios are different for residential versus non-residential areas, as contemplated in the HHRA.

***EPA and IDEQ Response:** See other responses in this section, which address this comment. Comment has been noted.*

Analyses performed in the HHRA can be used as the basis for developing alternative soil threshold levels. Specifically, Section 6.6.3 of the Basin HHRA (Adult Model Blood Lead Estimates) calculates Preliminary Remediation Goals (PRGs) for upland park and Common Use Area recreational activities for adults. For intensive (RME) soil contact recreational activities such as dirt biking, beach activities, fourwheeling, gardening, landscaping, etc. that involve deliberate and continued contact with soils, the probability for blood lead levels to exceed 10 µg/dl is greater than the 5% criteria at concentrations ranging from 3,700 mg/kg to 6,400 mg/kg. Using Central Tendency (CT) values, for medium intensity activities, the range of PRGs becomes 15,000 to 25,600 mg/kg.

***EPA and IDEQ Response:** Section 6.6.3 of the Basin HHRA is based on incremental risks. Section 6.5 is clear that exposures and accompanying risks are in addition to the substantial baseline exposures experienced in the Basin. The*

*exposures are especially high in the Upper Basin, including Burke, Nine Mile, and the Wallace areas. Sections 6.5 through 6.6.2 and corresponding Neighborhood Stream Recreation Tables (6-51ab, 6-52 ab, 6-53ab, and 6-54ab) clearly indicate any exposures, above the residential baseline in the entire Upper Basin, result in blood lead risk probabilities exceeding 5 percent.*

*The HHRA action levels are consistent with lead risk assessment practices based on blood levels, which must consider the cumulative effect of exposures in the Basin. The National Academy of Sciences thoroughly reviewed, vetted, and upheld the HHRA and ROD.*

*The comment assumes that portions of the site are accessible only to the adult population and by people who have no other exposure risks. However, this is not the case. The Wallace Yard area is accessible to local residents, including pregnant women and children. As displayed in the EE/CA, two residential dwellings currently exist on the Wallace Yard site. The Wallace Yard area is therefore accessible to a population of all ages and risk exposure scenarios and not limited to certain portions of the population.*

*The case is similar for portions of the spur line that are designated for response action in the EE/CA. These sections of the spur lines were selected for response action based both on lead concentration and on ease of access by local residents and recreational users. No response action was called for on contaminated sections of the spur lines that were heavily vegetated, steeply sloped, or that possessed other features that would make access difficult. Generally, only those portions of the spur lines that were accessible to the public and that showed signs of use (e.g., ATV [fourwheeling] traffic, dirt biking, foot trail, dwelling access) were included for the response action. Additionally, most of the accessible spur line areas are next to or within walking distance from residential homes. Accordingly, the spur lines are accessible to a population of all ages with multiple exposure risks and the 700 mg/kg lead threshold is applicable.*

Applying the 700 mg/kg threshold categorically across all non-residential exposure scenarios is overly conservative. On the basis of these arguments, and consistent with the Basin ROD and HHRA, characterization of lead risk should be performed on a case specific basis using a range of lead action thresholds of 700 mg/kg to 6,400 mg/kg depending on the location and nature of the common use activity. Statements made by the EPA and the IDEQ in the past that no activities are being conducted under the Basin ROD (by the EPA or IDEQ) using any other threshold than 700 mg/kg is not a valid argument that alternative lead action thresholds are not consistent with the ROD and the HHRA and should not be used as justification to expand the scope of risk-based remediation.

***EPA and IDEQ Response:*** *Comment has been noted, see responses above.*

- 6. Section 3.7.3:** Consistent with comment 5 above, the Railroads object to the application of the residential lead action threshold of 700 mg/kg to all common use areas within the Wallace Yard and Spur Line ROWs. Characterization of lead risk associated with common

uses, or non-residential, areas within the Site should be evaluated using thresholds developed in the Basin HHRA based on the specific type of use at a given location.

*EPA and IDEQ Response: Comment noted; see responses to Comment 5.*

7. **Section 3.8:** The risk characterization results presented in this section appear to be based on lead concentrations at individual sample locations. Consistent with the last two paragraphs of Section 3.4, consideration should be given to the use of mean concentrations over larger sub-areas of the Wallace Yard to represent exposure point concentrations. In common use areas such as the Wallace Yard sub-areas it is not appropriate to evaluate risk based on individual sample locations given the less frequent use and the fact that exposure will not be limited to a smaller restricted area (such as the case with a residential yard). In addition, as stated in Section 3.4, risk is to be evaluated against potential exposure to surface soils only (the upper 0- to 6-inch interval). Some of the conclusions presented in Section 3.8 (Area WY-4 for example), and recommendations for response actions identified in Section 6.0, relate to concentrations observed only at deeper intervals. Statements made in Section 3.8, which are inconsistent with the risk assessment approach described in previous sections, should be revised.

*EPA and IDEQ Response: Soil investigations for metals conducted in the EE/CA were developed and implemented based on a wide grid pattern so that the large area under consideration could be characterized for the nature and extent of contamination with a reasonable level of effort. A large portion of all samples collected showed exceedances of the lead action threshold of 700 mg/kg. The majority of surface soil samples (0 to 6 inches) collected during the Wallace Yard investigation were above the threshold level. The soil data for lead are consistent with the historic activities and events that resulted in contamination of soils. The soils were contaminated by historic mining practices involving the mining, milling, and transportation of metal concentrates and fluvial tailings deposits and by the widespread practices in the area that involved use of tailings and mine waste rock materials for building roads and railroads. The lead data display widespread contamination of the site, consistent with historic industrial activities. The data indicate that most of the Wallace Yard subareas are contaminated above lead threshold levels and require capping. The recommended removal action in the EE/CA does in fact allow for no action in subareas that are below threshold levels (such as the WY-4 area) and for areas showing only limited contamination (as exemplified by the Visitor Center, where only discrete capping is required). The preferred removal action alternative also accounts for areas observed where only deep contamination occurs such as the western portion of WY-3 where only a 6-inch cover is required.*

8. **Section 4.2.2:** The Remedial Action Objectives should be modified to consider site-specific conditions such as location, use, contaminant concentration, and institutional controls, as discussed above in comment 5. We recommend the following revision to the second RAO related to common use areas:

Reduce human exposure to soils within readily accessible common use areas of Wallace Yard or the Spur Lines based on the following criteria:

- Average lead concentrations above 700 mg/kg where the use will predominately involve local child receptors;
- Average lead concentrations above 3,700 where the use will involve adults in intensive soil activities; and
- Average lead concentrations above 6,400 where the use will either involve adults that are local residents or adult/child receptors that are visitors.

***EPA and IDEQ Response:** As indicated in previous responses, it is inappropriate and impractical to assume that site users will only have one exposure risk and that some portions of the site will only be accessible to individuals of a certain age. The Wallace Yard area and spur lines are located next to local residences and are accessible to the general public including sensitive populations (i.e., young children under the age of 7 years and pregnant women). By requiring a response action level of 700 mg/kg for lead, the site will be available for future development and use consistent with other property in the Basin that has underlying contamination without restricting the type of development that may occur. Action levels of 3,700 mg/kg or greater are not consistent with the RAOs in the Basin ROD.*

9. **Section 6.0:** There is an inconsistency between statements made in the second paragraph of Section 6.0 and the recommended remedial action tables included in Section 6.2 for the Spur Lines. Section 6.0 states that the EE/CA leaves the option for using several different types of covers, including asphalt pavement, gravel, or a vegetated soil cover. The Railroads agree with the approach of determining the appropriate cover type during remedial design, however, in some cases the remedial actions recommended for certain segments of the spur lines do not indicate that an option exists. For example the segment of the NPRy spur along Canyon Creek from MM 4.9 to 5.5 lists “pave road with asphalt” as the recommended response action. It should be made clear that a 12-inch gravel cover would also be acceptable and that the final determination will be made during remedial design considering the preferences identified in Section 6.0, but also considering cost effectiveness.

***EPA and IDEQ Response:** In general, the preferred removal action alternative allows for final barrier determination to occur during preparation of the work plan and during design. Alternative cap designs may include asphalt, gravel, or vegetated top soil and will need to meet the intent of the EE/CA. The type of cover will depend on the use of the area. Asphalt and gravel covers will be preferred for high traffic areas such as residential access roads and soil covers will be preferred in open use areas that are less frequently traveled by automobile, ATV, etc. For*

*example, in the specific case identified in this comment, the section of former rail spur along Canyon Creek between MM 4.9 and MM 5.5 is existing unpaved road providing access to residences. Due to the higher vehicle traffic and snowplow routes in this area, a paved access is the preferred action. Asphalt barrier will provide a longer-lasting, more durable barrier for repeated use where roads require intensive snow removal. There may be other areas that will result in asphalt barrier rather than gravel after further evaluation.*

- 10. Section 6.1.1:** As stated, the two existing residential properties within the boundaries of the Wallace Yard are owned by the UPRR and leased to the current residents. UPRR reserves their right to vacate these leases and address these properties as part of a potential future common use area.

***EPA and IDEQ Response:** The Agencies acknowledge UPRR's right to manage its properties within the boundaries of Wallace Yard. The Agencies also recognize that current uses of these properties may change. However, at the time of finalizing the EE/CA, residents occupied these properties.*

- 11. Section 6.1.2:** Several of the areas identified for response action within the Visitor's Center Area exhibit a continuous and sustainable vegetative cover and lead concentration below 700 mg/kg in the 0-6 inch depth interval (Sample numbers WY-120, VC-5, and VC-6). The Agencies should consider a no action determination in this area as the existing barrier meets the objectives of reducing direct exposure and migration of soil to dust.

***EPA and IDEQ Response:** In determining the preferred response action for the Visitor Center, sample results were reviewed. After consideration of the data on the entire Wallace Visitor Center property, grounds, and parking area, actions were selected on only discrete areas. In order to maintain consistency with the preferred response action across Wallace Yard, meet risk reduction objectives, and provide adequate barrier thickness, the Visitor Center response action will remain as proposed.*

- 12. Section 6.1.3:** We request that the Agencies reconsider the recommended response action in areas of WY-3 and WY-4. In areas where the lead results from the 0- to 6-inch depth interval are below 700 mg/kg, especially isolated areas such as the area within WY-4 represented by sample WY-148, no action is warranted. The use of average lead concentrations (see comment 7), in common use areas such as WY-3 and WY-4, to represent exposure area concentrations should be considered appropriate as opposed to evaluating individual sample locations, especially where only the deeper interval sample exceeds the threshold level. The recommendation of response actions for areas where the surface soil concentration is lower than the action threshold is inconsistent with the risk evaluation and an exceedance at a deeper interval is not sufficient justification to warrant response action. In addition, as stated in the ROD, a six-inch barrier is acceptable for commercial properties and common use areas.

***EPA and IDEQ Response:** This comment has been largely addressed in response to Comment No. 5 above. In order to maintain consistency with the preferred response action across Wallace Yard and subareas of a 12-inch barrier, the*

*response action will remain as proposed. In some areas such as near WY-148, limited removal may be necessary to maintain consistency with the response action and to prevent drainage impediments.*

- 13. Section 6.1.5: Sampling Bullet:** Additional sampling is not necessary prior to the implementation of the response action. As stated under the Disposal bullet, material to be removed from the site can be sampled, post excavation and prior to disposal, to determine if the material contains metals concentrations greater than the criteria for principal threat materials (PTM).

*EPA and IDEQ Response: Prior to disposal of removed material, sampling and analysis will be required in order to perform PTM criteria screening. It is appropriate to determine scheduling for sampling and analysis during work plan development. The EE/CA has been updated to reflect this.*

- 14. Section 6.2: Paragraph 2:** Where the former spur lines coincide with paved roads, the remediation of shoulder areas should not be considered under this EE/CA. There is no evidence that contamination that may be present in the gravel road shoulders is associated with former railroad activities. As noted above in Comment 2, most of the shoulder areas appear to be gravel road base rather than ballast or railroad embankment materials. The width of the paved roadway also exceeds the width of the functional ROW associated with the former spur lines, and the pavement is considered to be an adequate barrier. The entire roadway section, including asphalt pavement, gravel subgrade, and shoulders, should be considered as non-railroad related.

*EPA and IDEQ Response: See response to Comment 2. Comment has been noted.*

- 15. Section 6.2 – Recommended Remedial Action Tables:**

Consistent with comment 9, above, all references to the placement of asphalt pavement as a barrier should be accompanied by “or place 12 inches of clean gravel barrier suitable for roadway use.”

*EPA and IDEQ Response: See response to Comment No. 9, above. Comment has been noted.*

Consistent with Comment 5 above and the last sentence of the opening paragraph of Section 6.2, the recommended response action for the segment of the former NPRy spur line along Ninemile Creek between MM 1.25 and MM 2.25 should be modified to no further action. This stretch of the ROW is generally not within residential use areas. The exposure potential from intermittent recreational use is not high and the average lead concentration (samples NM-9, 11, 12, and 13) is 2,274 mg/kg, below the threshold range for adult recreation use. Therefore, no action is warranted. In addition, this stretch of the ROW is in private ownership with different property owners, and should therefore not be considered a public recreational use area. Capping of this area, which would encourage continued use, may not be acceptable to one or more of the property owners. The elimination of the access may also not be acceptable to the property owners.

***EPA and IDEQ Response:*** As noted during the May 2007 reconnaissance visit, the referenced section has been getting heavy use by ATV and other traffic. This section of the ROW is open space and within walking distance of local residences. As noted elsewhere in responses to comments, exposure risk is cumulative and therefore, soil action levels must account for other exposure risks. The preferred removal action alternative for this section, as presented in the Public Review Draft EE/CA, is appropriate.

The reference to “tailings bank visible within railroad ROW at MM 1.6” in the Recommended Remedial Action Table for the Former NPRy Spur Line along Ninemile Creek should be eliminated. This tailings deposit is not within the functional ROW of the former spur line and is in no way related to former railroad operations. No action related to this deposit is warranted under this EE/CA.

***EPA and IDEQ Response:*** The Public Review Draft of the EE/CA stated that portions of the RROW subject to transport by surface waters would be addressed. This tailings bank is one such example, and is appropriately included in the preferred removal action alternative and meets the definition of the FFROW as used for the purposes of the Wallace-Mullan Branch.