Response to Suggestions
60% Design Report
East Mission Flats Repository
Kootenai County, Idaho
3 October 2008

Background

The East Mission Flats Repository (EMF) design process has reached the 60% completion stage. This means that design work is just over half done, and that about 40% of the final details still need to be worked out. The 60% Design Report was made available at public libraries, the EPA office in Coeur d'Alene, and the Basin Environmental Project Improvement Commission (BEIPC) web site on August 8, and the comment period closed September 8. Responses to public input received through September 15 are included in this document.

In addition to the information available at libraries and on the web site, DEQ and EPA hosted an Open House from 3:30 to 7 PM at the Canyon School in Cataldo on July 31. The Open House included a number of exhibits illustrating design features of the repository and a visual simulation of the repository from seven viewpoints, including two viewpoints from the Old Mission State Park. The event was staffed by members of the DEQ, EPA and the DEQ's design engineering consultant.

The repository is necessary to store metals-contaminated waste soil generated by the Bunker Hill Superfund Site (BHSS) cleanup. This method of contaminated soil storage was identified in the Record of Decision (ROD) for Operable Unit 3 (OU-3) issued in 2002 to guide the cleanup effort in the Coeur D'Alene River basin. The waste soil will come from two main sources: the BHSS property cleanup program run by DEQ and EPA; and the Institutional Controls Program (ICP) run by the Panhandle Health District (PHD). The repository is designed to meet all the applicable or relevant and appropriate requirements (ARARs) of a repository as identified in the ROD.

The design has many features to accommodate its location on a floodplain and near wetland areas. The sides from ground level up to three feet above the 100-year flood level will be armored with rocks (rip rap) to protect against erosion during a flood event. A wetlands survey indicated no jurisdictional wetlands were located in the area where soil will be stored. The repository will be about 32 feet high, and have a cap of clean soil on the top and sides to limit the chance of exposure to humans and wildlife. It will hold about 416,000 cubic yards of soil. It will be built to minimize potential of erosion during high water events such as the 100-year flood. The repository will be located on property already contaminated with metals from past mining and smelting activities that occurred upriver of the site.
An Executive Summary of the 60% Design Report is posted on the Basin Commission web site. The Executive Summary is a non-technical digest of repository design features, and is intended to give the reader an overview of the

repository design process at the 60% complete stage. For more information on the repository design, please refer to the "East Mission Flats Repository Info" link on the Basin Commission web page:

http://www.basincommission.com/TLG_PFT_Repository.asp

This link allows the reader to access the entire 60% Design Report. Since this is a big document the report is divided into several files. Each file is clearly identified by content. Hard copies of the report are also available for review at the EPA Office in Coeur D'Alene and at selected libraries in Coeur D'Alene, Kellogg, Wallace, St. Maries, Idaho and Spokane, Washington.

Suggestions

A total of 28 individuals and the Coeur D'Alene Tribe provided suggestions on the 60% Design Report. Of these, 26 individuals expressed general opposition to the EMF site location and had no suggestions or comments regarding the design itself or related studies supporting the design. In regard to concerns about the EMF site location, based upon criteria outlined in the September 2002 ROD, the EMF site has been selected as the most suitable site and repository design is proceeding in accordance with the ROD so that remedial activity can proceed.

Three letters voicing specific concerns were received. Two of these letters were from members of the public while the third letter was from the Coeur D'Alene Tribe. Each concern is addressed in the following section. The suggestion or question is printed in italics, and the response is given in conventional type.

The response section is divided into two categories, General Suggestions and Specific Questions. The General Suggestions were non-specific questions or suggestions offered on a variety of topics. The Specific Questions refer to specific language in the report.

General Suggestions

1. Inadequate Door-to-Door Survey

Response: A door-to-door survey was performed by a joint EPA/DEQ team in January 2005. The objective of the survey was to obtain citizen opinions related to the proposed development of a waste soil repository at the East Mission Flats property. The survey was conducted on properties adjoining the proposed repository site and those believed to be within the line-of-sight of the repository. Eight properties judged to be adjoining or within the line-of-sight of the proposed repository were visited during the survey. The survey was not intended to serve as a comprehensive survey of all residents in the greater Cataldo area.

2. Inadequate Well Testing as part of Site Characterization

Response: DEQ and EPA are evaluating current groundwater quality at the EMF site. This is done to establish groundwater quality at the site before we start placing

contaminated soil. For this purpose, four groundwater monitoring wells were constructed at the perimeter of the EMF site. These are the wells that are tested as part of the site characterization process. Groundwater samples collected at the EMF site indicate that groundwater meets drinking water quality standards for the five metals tested: antimony, arsenic, cadmium, lead and zinc.

We are aware that groundwater contamination originating from past mining practices is present in some Silver Valley water-bearing zones. However, it is the responsibility of individual domestic well owners to have their wells tested if contamination is suspected. The testing of every domestic well in the vicinity of a candidate site is not a part of the repository site characterization process.

3. Lack of Public Notification

Response: Public outreach in connection with East Mission Flat Repository started in 2003. A timeline of the events related to public notification and outreach is summarized below. Most of the entries on the timeline were preceded by announcements of time and place of the events in the local newspapers and on the BEIPC web site. Most of the documents posted on the BEIPC web site have a list of contacts for agency personnel that can provide information on the status of repository siting and design. We encourage people with questions on the repository siting and design process to contact the agency representatives indentified on the website and other correspondence.

Public outreach activity is an on-going process. Please refer to the calendar of events on the BEIPC web site for upcoming public involvement opportunities. The link to the calendar is:

http://www.basincommission.com/Calendar/

2003

- Location and Construction of Repositories included in BEIPC annual and 5-year work plans, November 2003.
- BEIPC Repository Project Focus Team (PFT) formed.
- DEQ approached by private landowner about potential repository location near Mission Flats.

2004

- DEQ began initial site evaluations of the EMF site.
- Repository PFT met to consider repository issues, including reporting initial technical information on the EMF. July 27, 2004.
- Repository PFT Meeting to consider repository locations, DEQ presented more information requested by the PFT on the EMF. November 18, 2004.

2005

- Door-to-door visits to adjacent residents by EPA and IDEQ. January 25, 2005.
- Repository presentation at BEIPC Citizens Coordinating Council (CCC) meeting. January 26, 2005.

- EPA and IDEQ Frequently Asked Questions memo sent to Mission Flats adjacent residents. February 4, 2005.
- IDEQ Mission Flats presentation to Basin Information Forum, CDA Casino. February 15, 2005.
- Why This Site presentation by IDEQ at BEIPC meeting. February 16, 2005.
- BEIPC Technical Leadership Group (TLG) EMF site tour. February 24, 2005.
- February 2005 meeting with cultural representative from the CDA Tribe.
- IDEQ and EPA meeting concerning EMF with Kootenai County Commissioner Currie and staff April 26, 2005 and all Commissioners May 7, 2005.
- Press announcement of pending meeting at Old Mission. July 2005.
- EPA and IDEQ sponsored community meeting at the Old Mission. July 20, 2005.
- EMF article in EPA Basin Bulletin. Summer 2005.
- EMF presentation by IDEQ at CCC meeting. October 12, 2005.
- IDEQ Repositories Update Presentation at November, 2005 BEIPC meeting.

2006

- Repository PFT meeting on EMF. February 7, 2006.
- Press announcement of pending meeting at Canyon School. March 2006.
- IDEQ and EPA sponsored community meeting at Canyon School. March 7, 2006.
- EMF presentation at CCC meeting. May 17, 2006.
- IDEQ announces purchase of property for EMF, EPA Basin Bulletin. Winter 2006.

2007

- EMF update presentation at CCC meeting. February 22, 2007
- EMF update article in EPA Bulletin. Spring 2007.
- EMF roads meeting with Kootenai County Commissioners and East Side Highway District. April 24, 2007.
- EMF update presentation at CCC meeting. May 3, 2007.
- IDEQ EMF presentation to TLG meeting. May 1, 2007
- IDEQ request for public input on 30% Design Report. May 16-July 6, 2007.
- EMF Public Site Tour. June 22, 2007.
- Response to public comments on the 30% Design Report presented to public on BEIPC and DEQ Website. September 12, 2007.
- EPA release of EMF Frequently Asked Questions September 14, 2007. Presented to public on EPA, BEIPC and DEQ Websites. Notification also sent out in the mail to concerned citizens.
- Press announcement concerning CCC sponsored EMF 30% Design discussion at Canyon School. October 2007.
- Press Op-Ed article concerning BEIPC and EMF. October 10, 2007.
- CCC meeting at Canyon School with EMF 30% Design discussion. October 16, 2007.

2008

- 6 February 2008 – Citizens Coordinating Council (CCC) Meeting; Coeur D'Alene, Idaho – presented status report on EMF: archeological monitoring, Phase I Design Draft Report, 60% Design Draft Report, groundwater monitoring results from December 2007 sampling event
- 23 April 2008 – CCC Meeting, Kellogg, Idaho – summarized Waste Management Strategy, identified public opportunities within the Basin Commission structure, presented site plan diagram with repository footprint, groundwater monitoring results from February 2008 sampling event, area of potential expansion to Big Creek Repository
- 13 May 2008 – The Lands Council Meeting, Spokane, WA – summarized groundwater monitoring results from February 2008 sampling event, column leach testing, flood monitoring, updates on 60% and 90% Design Reports, and presented visual simulation of the EMF Repository from the Old Mission at Cataldo.
- 14 May 2008 – Basin Commission Meeting, Wallace, Idaho – announced Community Review Opportunity for the 60% EMF Design Report, scheduled for July 2008.
- 31 July 2008 – Open House at Canyon School in Cataldo. The purpose of the Open House was to give the public a chance to observe important parts of the EMF 60% repository design and talk to the EPA, DEQ, Basin Commission staff and design engineers about the repository.

4. Insufficient Candidate Site Screening

Response: Over 250 sites have been evaluated as potential repository sites. The property survey included both publicly owned land such as Forest Service, Bureau of Land Management and State agencies, and privately-owned land. The sites were given qualitative ratings such as good, average or poor for factors such as potential repository capacity, location in relation to the cleanup areas, and location in relation to residences, road access, surface water threats, and presence of existing contamination.

The objective of this level of screening was to identify a large set of candidate sites, then eliminate the sites that did not meet minimum qualitative siting criteria. Some of the reasons that sites were dropped from additional consideration included: (1) some sites were not on previously contaminated ground; (2) some sites were too small; and (3) some sites were too far from the clean-up areas to be cost-effective for transport of the contaminated material.

Identification of candidate sites was assisted by using two local real estate agents and a local real estate assessor. While it is possible that the State was unaware of other potential repository locations, a significant effort was made to identify suitable locations. In addition, the public was encouraged to offer candidate sites during Basin Commission meetings, CCC meetings, and other public outreach opportunities occurring within the EMF site selection time-frame. The results of the screening process indicated that the EMF site met the repository siting requirements listed in Section 12.5 of the OU-3 ROD issued in September 2002.

5. Final Repository Height – 30 feet or something higher?

Response: The plan in the 30% Design Report called for construction of the EMF repository with a maximum height of 62 feet. In response to public comment during the 30% Design Report comment period in 2007, the repository height was reduced to a maximum height of about 32 feet. The 60% Design Report was prepared with the 32-foot height as the basis for design. It is the intent of the agencies and design team to build this repository to the 32-foot height. There are no plans to construct this to a higher elevation.

The repository will serve as a destination for Superfund cleanup-waste soil for the Lower Basin, essentially the Coeur D'Alene river valley from Pinehurst to Harrison. An estimate of eligible waste volume that would be generated as part of the cleanup in the OU-3 ROD area is about 2.9 million cubic yards (cy). Based on the planned EMF capacity of 416,000 cy, the EMF repository will store about 14% of the waste generated by the current clean-up plan.

Additional repositories will be needed in the future. Development of waste soil repositories is a long and expensive process, and the agencies are responsible for efficient use of tax-payer funds. While there are no plans to expand the EMF repository beyond the current design capacity or height, the agencies reserve the right to modify the design at a later date if an expansion is necessary to meet future needs.

6. Potential for Metals Leaching to Groundwater from the Repository

Response: We know that the top two to four feet of soil at the repository site are contaminated with mine waste. Soil samples have been collected at EMF to assess the existing metals content in shallow soils. Laboratory results from these samples indicate lead concentrations over 8,000 parts per million (ppm) and arsenic concentrations over 110 ppm. In spite of the decades-long presence of contaminated soil, the first groundwater-bearing zone beneath the site meets drinking water standards for metals. This suggests the clean soil underneath the contaminated soil has the ability to remove (sorb) metals from the water moving downward from the surface to the groundwater below the surface of the site.
We also know that the area on average receives over 30 inches of precipitation a year. The clean soil layer has demonstrated the capability to remove metals from over 30 inches of precipitation leaching through the ground every year. Construction of the repository will greatly reduce the amount of water leaching through the soil beneath the repository footprint, as noted below.

Three factors will help reduce the amount of water passing from the surface to the groundwater beneath the repository. The first is soil compaction. Waste soil placed on the repository will be compacted to 90% of maximum dry density. Soil compacted to this density forms a hard surface. You would need a hammer to drive a spike into the compacted soil. The compaction will reduce the amount of water that can flow from the surface downwards to groundwater because most of the space between the soil grains will be eliminated.

The second factor is top surface grading. The top of the waste soil mass will be sloped during filling operations and in the final configuration to drain stormwater and snowmelt; no uncontrolled water ponding be allowed on top of the repository. This water will be captured and routed to stormwater retention ponds located on-site.

The third factor is construction of a low-permeability cap to cover the top of the repository. Calculations performed to support design of a similar cap for the Big Creek Repository predicted the cap will reduce infiltration by 99% or more. This means that of the original 30 inches of precipitation per year, only a fraction of an inch will penetrate the cap and root zone and come in contact with the waste soil.

These three factors will essentially eliminate the passage of water through the soil beneath the repository. In fact construction of the repository may benefit water quality in the first water-bearing zone by covering a large area of contaminated soil currently available to the seeping water. The area underneath the repository will no longer be a source area for metals leaching to the groundwater.

7. Location near a State Park

Response: The repository will be constructed on the opposite side of the freeway from Old Mission State Park. As explained above in the response to Comment 3, the height of the repository has been reduced from 62 to 32 feet above ground surface to decrease visibility at the Old Mission.

In order to evaluate visual impacts of the 32-foot high repository on the view from the Old Mission, a visual simulation was completed to show what the repository would look like from seven viewpoints at the Old Mission State Park and in the immediate vicinity of EMF. Two simulations were performed at each location at the State Park; one in October when the deciduous trees were in full canopy, and one in December when the leaves had fallen from the trees. In both the September and December simulations only very small parts of the top of the repository are visible as minor background elements at the State Park viewpoints.

Based on results of the simulation, the overall impact of the repository in visual resources is low. The visual simulation can be downloaded and viewed from the Basin Commission webpage:

http://www.basincommission.com/TLG_PFT_Repository.asp#EMFR

To locate the visual simulation file on this web page, scroll down to the “East Mission Flats” heading, then click on the link: EMF Visual Simulation 3/19/2008.

The Old Mission State Park is visited by over 100,000 visitors per year. Despite that number of visitors, according to ITD traffic counts and capacity analyses, the Exit 39 interchange serving both the State Park and EMF has more than adequate capacity to serve the needs of both land uses. Week-day traffic will increase as a result of the repository, but the traffic increase will not result in notable inconvenience to Old Mission Park visitors.

8. Problems with Contaminant Concentration at Repository

Response: The repositories are needed to safely store contaminated soil that would otherwise be in close contact with humans or animals. The repositories are designed to minimize the potential for contact of humans and animals, and decrease the overall health risk for Basin residents.

9. Construction in a Floodplain

Response: The repository will be built in the 100-year floodplain. Hydraulic modeling of the repository configuration indicates that the 100-year flood may raise the water level to about 18 feet above the current ground surface. The repository is designed to withstand the effects of the 100-year flood.

The repository will be constructed with features to minimize chances a major flood event will damage the repository. The sides of the repository will be gently sloped at a 3:1 angle (three feet horizontal for every foot vertical) in order to create a stable slope. The potential is very low that saturation due to flooding will cause a slope failure that exposes contaminated soil to floodwater erosion.

The second feature protecting the repository from erosion during floods is the installation of large rocks, called rip rap, on the repository sides. The rip rap will extend from the ground surface up to a level three feet above the height of a 100-year flood. The rip rap will be sized to resist movement related to the velocity of the moving flood water. These features will result in a durable surface able to withstand the floods we expect to occur in the 100-year floodplain.

10. Location Near a Wetland

Response: The repository is located in the vicinity of extensive wetland areas. Prior to finalizing the footprint for the repository, a wetlands survey was performed to identify the presence of wetlands in the area. A summary of the wetlands survey is included in Appendix C of the 60% Design Report. The study concluded that regulated (naturally-occurring) wetlands occur northwest of the site, and along a narrow sliver on the northern property boundary.

Two small wetlands areas were noted within the 19-acre property boundary. These two areas are pits that have been excavated sometime in the past. They are small, oblong depressions approximately five feet deep encompassing slightly more than one-tenth of an acre that fill with water during the winter and dry out during the course of the summer. These two wetland areas are located beneath the proposed repository footprint. Because the areas are not connected or adjacent to any other water bodies and have no connection to interstate or foreign commerce, they are not regulated under the Clean Water Act.

11. Lack of Oversight of Waste Disposal Process

Response: The repository is not intended to be a municipal waste landfill. The repository will generally receive two kinds of waste soil: (1) waste coming from the property cleanup program; and (2) waste coming from the Institutional Controls

Program (ICP) managed by the Panhandle Health District (PHD). During the excavation season, usually May through October, DEQ will have an operator on-site during operational hours to receive the soil, spread and compact the soil, and decontaminate the equipment as it leaves the site. Once the construction season is over, the operators will not be on-site on a daily basis.

The site will be available to receive ICP waste 24-hours per day, 365 days per year to accommodate public need to dispose of metals-contaminated soil. Oversight of the ICP disposal area will occur on a daily basis during the work week in the excavation season, and on a periodic basis during the winter season.

Access to the site for ICP waste disposal will be controlled by the PHD through the use of an electronic gate. The electronic gate can be opened by using a key card issued to ICP users by the PHD office in Kellogg.

The key card can be used to open the locked gate off of Canyon Road at the east side of EMF. The card reader at the gate will recognize the card as registered to a specific individual, and allow the person to dispose of waste at the repository. A camera will automatically record vehicles as they come and go. Individuals that dispose of waste not meeting the Waste Acceptance Criteria can be fined by the PHD.

During the construction season, the on-site DEQ contracted operators will monitor the accumulation of ICP waste on a daily basis. During the winter when the Basin Property Remediation Program (BPRP) is not active, the repository operators will monitor the ICP accumulation on a daily or weekly basis, as needed. When sufficient ICP waste has been collected, the operators will move the material to the waste pile and stockpile it for final placement the following spring.

DEQ will manage the waste disposal contractors, and PHD will manage ICP waste disposal and coordinate with DEQ on waste delivery schedule and volumes. This strategy will allow for around-the-clock access to the repository, while controlling who can access the site and dispose of wastes. No unmonitored disposal will occur.

12. Repository capacity should be increased to 600,000 yards as originally planned

Response: The plan in the 30% Design Report called for construction of the EMF repository with a maximum height of 62 feet. In response to public input at the 30% Design Report comment period in 2007, the repository height was reduced to a maximum height of about 32 feet. This change will increase per-yard cost to acquire property, and design, construct and operate the repository. The decision to decrease the repository height was made to respond to public opinion concerning visibility from the Old Mission, not from a cost-control or value engineering basis.

13. Floodwater should be diverted from the repository site to allow for year-around dry operation

Response: The repository is located within the 100-year floodplain. The decision was made to accommodate for periodic flooding at the repository rather than divert flow away from the north side of I-90 where the repository is located. Changing the location of flood-flows will raise flood water elevations in other areas and could potentially result in the unintended consequence of increasing flood damage in other areas of the floodplain. It is DEQ's desire that the repository design does not lead to an increased flood risk in other areas.

14. Changes in surface water modeling input from the 2005 model to the 2007 model

Response: The primary reason for the changes between the modeling done by the US Army Corps of Engineers and TerraGraphics is likely twofold: (1) The updated repository configuration moved the corner of the repository closer to the Exit 39 off-ramp causing greater water constriction at this point; and (2) During a flood event, water is introduced to the site, in part, through a set of culverts under I-90. As the water rises in the Coeur d'Alene River, water eventually overtops the freeway. The balance and sequence of these two events, with respect to flow in the river, were altered with improved elevation data on the culvert inverts.

These changes were due to refinement of the topographic survey data, primarily inside the property boundary, which were updated with the 2007 survey. Culvert invert elevations were incorrect in 2005 model. As the design process had advanced since 2005, the contemporary repository configuration was used in the 2007 model.

15. Over-wintering plans for soil stabilization

Response: End-of-season, temporary measures will help stabilize EMF during the winter. An interim hydroseed and tackifier cover will be applied during winter shut down periods, and may be applied during prolonged inactive periods at the EMF Repository, as determined by IDEQ. Exposed surfaces including the open working surface, the leading edge, and other open slopes will be hydroseeded/tacked prior to the winter shutdown. The perimeter protection will be installed on the face of the perimeter embankments of EMF before it is closed each winter. The other faces of the repository, those not covered with rip rap, will either be sealed with a soil binder or covered with a temporary synthetic liner or by other appropriate measures that will be removed at the start of the next operations period.

Due to the projected limited amount of BPRP waste soil received during initial operations, it is anticipated that the constructed slopes will not be significantly greater than five feet vertical. Perimeter slopes will be placed and compacted in accordance with fill placement specifications. The 3:1 (H:V) perimeter slopes will be track-walked with a D6 tractor (or equivalent) to seal off the slopes and will be protected using appropriate stabilization measures.

16. Concern that storm water facilities will be overwhelmed by a flood event

Response: The EMF storm water facilities are designed to collect and store rainfall from a 24-hour, 25-year design storm event. This design storm complies with applicable regulatory requirements. The storm water collected in these facilities would not be released to the river. This collected water would either infiltrate into the subsurface or be used for dust control at EMF.

Several additional best management practices (BMPs) will be implemented to minimize impacts from contaminated stormwater. These BMPs are described more fully in Appendix K of the 60% Design Report. The BMPs include the following control measures:

a. Limited area of clearing and grubbing
b. Silt fence around the perimeter of the activity
c. Stabilized construction entrance
d. Slope and surface roughening
e. Hydromulching or hydroseeding
f. Perimeter protection

These BMPs are not based upon the design storm (24-hour, 25 year event) but are additional project practices/features that further minimize impacts from contaminated storm water flowing over waste materials.

17. Wetting and drying of the repository sidewall and release of contaminants

Response: When flood waters rise around the sidewall of the repository, this is a transient, short term (few days) event. A small amount of water will infiltrate a short distance into the perimeter embankment while the flood waters are in contact with the sides of the repository. As the waters recede, infiltration into the perimeter embankment will stop.

What will happen to the water absorbed by the repository? The small amount of infiltrated water taken up by the repository will be subjected to “consumption” by cover vegetation transpiration or evaporation. If excess water still is present, the water will percolate vertically and could drain out from the sidewall of the repository. This drainage has a low potential to significantly impact the groundwater because the volume of this water is very small in comparison to the overall volume of water inundating the site. Backstopping this is the observation that the clean soil underlying the tailings-contaminated soil at the site has the ability to effectively sorb metals from percolating groundwater.

18. Land surrounding the Old Mission, including land outside the boundary of Old Mission State Park, may contain significant cultural resources. In addition, construction and operation of the repository may result in visual, auditory, atmospheric or other impacts to the Cataldo Mission National Historic Landmark. These concerns must continue to be addressed.

Response: DEQ is currently performing site characterization and development work at EMF under a Cultural Resources Monitoring Agreement with the Coeur D'Alene Tribe. Under this agreement DEQ is required to notify the Cultural Resources Management Program (CRMP) archaeologist or a Tribal designee of upcoming work that will cause subsurface disturbance. Observation of the field activities is left to the discretion of the CRMP representative. Other provisions of the agreement outline DEQ contractor notification requirements for work in a culturally sensitive area, communication protocols for health and safety issues, and protocols for action should human remains and/or cultural resources be encountered during the course of work at EMF. DEQ fully intends to continue operations at EMF in compliance with this agreement.

The Operating Plan has provisions to monitor and abate as necessary noise and dust originating from operations at the EMF repository. With respect to visual impacts, the result of the visual simulations of the repository when viewed from near the Old Mission indicate the completed repository, where visible at all, will be a minor background element in the viewscape. A copy of the visual simulation can be downloaded from the BEIPC's East Mission Flats web page. The visual simulation can be downloaded and viewed from the Basin Commission webpage:

http://www.basincommission.com/TLG_PFT_Repository.asp#EMFR

To locate the visual simulation file on this web page, scroll down to the "East Mission Flats" heading, then click on the link: EMF Visual Simulation 3/19/2008.

Technical Comments

19. 60% Design Report Page 8, end of last full paragraph: Ability of groundwater monitoring well network to adequately assess groundwater quality

Response: The groundwater monitoring network at EMF provides a well in a location that will be representative of background ground-water quality and not affected by the facility and monitoring wells installed hydraulically downgradient of EMF to comply with applicable or relevant and appropriate requirements (ARARs). Further, two proposed wells that are off-site but are hydraulically downgradient of EMF will be installed. These two wells will be installed based upon recommendations in Appendix B to address potential ground water flow paths from EMF. The additional wells suggested in the comment will not improve compliance with ARARs or give a better understanding of flow direction or water quality during repository development.

20. 60% Design Report Page 10, sentence ending at top of page: Are words missing?

Response: This sentence will be rewritten as follows: "See the Floodplain Requirements and Hydraulic Analysis in Appendix D and Section 3.17 for further details on Floodplain."

21. 60% Design Report Page 15, Section 3.1.9, last bullet: Why is it assumed no bottom liner is necessary?

Response: This assumption will be deleted because both the 30% and 60% Design Reports provide engineering analyses pertaining to groundwater and why a bottom liner is not believed necessary for this facility.

22. 60% Design Report Page 18, Section 3.2.3.4: Text should discuss Tundra Swans migrating through the basin.

Response: In the *Coeur d'Alene Basin Final Interim Restoration Plan and Environmental Assessment,* page 98, the following was stated regarding Tundra Swans:

"*Migratory Bird Treaty Act (MBTA),* 16 USC 703 et seq. The MBTA makes it unlawful to "hunt, take, capture, kill" or take various other actions adversely affecting a broad range of migratory birds, including Tundra swans…"

The selected proposed action would be carried out in a manner that avoids the taking or killing of protected migratory bird species, including individual birds or their nests or eggs. Section 3.2.3.4 demonstrates EMF Repository compliance with MBTA as one of the ARARs. Thus the Tundra Swans have been addressed.

23. 60% Design Report Page 20, First sentence under "Operating Requirements": What rules are being referred to?

Response: The rules referred to are the Idaho Solid Waste Management Rules IDAPA 58.01.06.

24. 60% Design Report Page 23, Section 4.3.2, last sentence: Do the deleterious materials refer to waste or is it "property" soils?

Response: With the plan to construct perimeter embankments out of soils originating from the BPRP, it is expected that the materials listed in the last sentence of this subsection will be delivered to EMF. The BPRP excavates contaminated soil materials from various properties. Since excavated materials are removed from the property and hauled to a repository, the excavated materials will contain a small amount of the materials listed in this section. To meet the compaction requirements to build the perimeter embankments, these listed materials will be removed before the soil is placed and compacted. These removed materials will be disposed at EMF but in an area of the repository that is not part of the perimeter embankment.

25. 60% Design Report Page 31, Section 4.11: Has the storm water been calculated on a seasonal or annual basis? What happens after the storm? Does (the stormwater) *get sampled? Is there a way to convey it off-site if it meets discharge standards? What if it doesn't meet standards?*

Response: The storm water quantity is based on a 25-year, 24-hour storm where the designers assumed that the ground would be frozen and all storm water would be

collected in the sedimentation basin. This collected water will not leave EMF or be discharged from EMF. There are no plans to sample this collected storm water pertaining to meeting discharge standards since the water will not be discharged.

26. 60% Design Report Page 33, second paragraph, second sentence: This text suggests that the evapotranspiration cover may not work very well in the winter because the plants will be dormant. Was this taken into account when evaluating the cap?

Response: Yes, this consideration was taken into account. The cover consists of two sections. The upper section will consist of top soil to start the cover plants. The lower section will be clean soil that stores water in the soil pores when the plants are dormant. The cap thickness will be correspondingly thick to store the water infiltrating through the top soil during the non-growing season.

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