



EAST MISSION FLATS 30% DESIGN REPORT RESPONSE TO COMMENTS

September 10, 2007

Background

The 30% Design Report for the East Mission Flats (EMF) Repository was released to the public on May 16, 2007, and comments were received until July 6, 2007. The report is as described in the title; at a 30% level of design, which means that the majority of the design (70%) has yet to be completed. To that end, the purpose of the document, as it appeared in the introduction of the report, was fourfold:

1. To provide to the public, agency personnel, tribal members, and concerned special interest groups information on the design, operation, and closure of the proposed facility in as limited of a technical venue as possible.
2. To support the initial technical/engineering evaluation necessary to see if this site will pass technical muster to continue with the design.
3. To identify technical needs that surfaced during the initial evaluation stage for this project, so that the specific technical needs can be addressed in the forthcoming final design.
4. To solicit, record, and respond to constructive comments on this design from the interested public and key stakeholders.

Issues Explored in the 30% Design Report

This report explores some of the issues associated with siting a repository in the Lower Coeur d' Alene Basin, within the area of contamination as described in the Record of Decision (ROD). The EMF repository site is located adjacent to wetlands north of the Coeur d' Alene River, in a location that is routinely impacted by floodwaters. Consequently, the evaluation and subsequent design were compelled by engineering standards to investigate the scientific and economic feasibility of constructing a repository under less than desirable conditions. To that end, the report addressed the initial information regarding site surface water hydrology that heavily influenced the geo-technical engineering specifications for constructing this facility. The report also was intended to give the reader an idea of how this site will be constructed and how it is expected to look at the end of the repository life in 10-20 years. There is also an initial evaluation of applicable, relevant, and appropriate requirements (ARARs) for a repository in this location and a concomitant evaluation of risks to human health, and the environment. The final section of the report addresses the need for further analysis and reporting and

topics that must be covered in the final report.

The information provided in the text below is an accumulation of comments pertaining to the 30% Design Report for the East Mission Flats Repository, which is located in Kootenai County, Idaho. Comments were recorded from the general public, government agencies, special interest groups, the Catholic Faith Community, and the Coeur d' Alene Tribe.

Some of the comments submitted went well beyond the scope of the what was identified as the purpose of the document and the requests for input (see [Background](#) above). Comments not addressed were those that registered general disagreement with the site, but did not provide any specific comments to address. It is important to keep in mind throughout this process that there will be changes to the design based both on the comments received at the 30% level and from additional technical information gathered since the 30% Design Report was completed.

Following assimilation of these comments and prior to the final design, the DEQ will again provide the public an opportunity to review changes in the proposed design and submit specific comments. Because subsequent design reports will be very technical in nature, the DEQ will make available an abbreviated and condensed technical version of the report, so that members of the public who would like to comment on the report may do so without requiring a detailed technical analysis. The detailed technical scientific and engineering evaluation may be requested from the DEQ upon completion.

Comments regarding the overall location of the East Mission Flats Repository

Why do the DEQ and EPA need to site a repository, and why would they put a repository in this location? 15
comments were received on this topic.

The goal of the cleanup is to protect human health and the environment. The agencies are cleaning up residential, recreational, and commercial properties as part of a Superfund project. Part of the cleanup involves disposing of contaminated materials from cleanup of residents' yards and community areas.

Those materials need a secure place to go. Repositories safely contain contaminated materials, which reduces exposure for people and animals. EPA and DEQ searched for other sites for the repository, but at this time East Mission Flats is the most viable location in the lower Basin. Surveys reveal that the area where the repository will be placed has at least three feet of soils contaminated from past mining activities. No clean land will be used for this repository.

Comments regarding input from the public.

Concerns were expressed about how, how often, and when the general public was notified of the proposed repository. *At least 10 comments were received on this topic.*

The following is a breakdown of how the public has been involved in the process:

Local Community

- Door-to-door visits in the general area of the repository. EPA and DEQ representatives ~ during May 2005
- One community meeting at the Mission ~ July 20, 2005 (notices in local newspapers and the Basin Environmental Improvement Commission (BEIPC) Website, BEIPC Technical Leadership Group (TLG) and Citizens Coordinating Committee (CCC) meetings)
- One community meeting at Canyon School ~ March 7, 2006
- Frequently Asked Questions (FAQ) letter sent to residents living near the repository~ 2/4/05
- EMF Site Tour June 22, 2007 ~ >20 members of the public, elected officials, Tribe and industry

Broader Community

- Coeur d' Alene Tribe and Mission State Parks – Feb 2005 meeting with cultural representatives from the Tribe (Phil Cernera, Dr. Jill Wagner, and Quannah Matheson) and Bill Scudder from the State Parks Department

Throughout the repository identification and operation processes, the DEQ and EPA have worked through the format identified by the BEIPC. The BEIPC process provides input from the public, the Coeur d' Alene Tribe, as well as local, state, and federal governmental agencies. Members of the agencies are involved in the Technical Leadership Group (TLG) and members of the public are represented in the Citizens Coordinating Committee (CCC).

Specific repository issues were addressed in the Repository Project Focus Team (PFT) meetings. During these meetings a team of technical experts and members of the community provide input into specific projects like the potential siting and evaluation of repositories. The PFT meetings were typically open to agencies and the public, but, in most meetings, the public has not been active.

Finally, activities germane to the cleanup of the Coeur d' Alene Basin, including updates on repository activities, were presented at technical forums (Basin Information Forums or BIF) which are always open to technical and non-technical folks. The information was presented for both an agency and public audience. The minutes of most of these meetings are also available on the Basin

Environmental Improvement Project Commission web site. A summary of the meetings where the East Mission Flats Repository was discussed is provided below:

- CCC Meetings: Jan 26, 2005; Oct. 12, 2005; May 17, 2006; Feb 22, 2007 & May 3, 2007
- BEIPC Meetings:
 - February 16, 2005 J. Lawson, Presentation – Why This Site?
 - Nov. 2005 J. Lawson – Repositories Update Presentation
 - Status updates provided as a routine part of BEIPC business
- BEIPC Work Plans:
 - 1yr. & 5 Yr.
- TLG/BIF/PFT Meetings:
 - PFT Meeting 7/27/04
 - PFT Meeting 11/18/04
 - PFT Meeting 2/07/06
 - TLG site tour 2/24/05
 - BIF – 2/15/05 @ CDA Casino. – J. Lawson presentation
 - May 2007 TLG - J. Lawson presentation
- Kootenai County meeting with Commissioner Curry and staff 4/26/05, all commissioners 5/7/05
- Press Announcements:
 - Prior to community meetings in July of 2005 and March of 2006

Basin Bulletins

- Spring 2005 – searching for new site
- Summer 2005 –search continues; possible siting at EMF
- Autumn 2005 – search for sites underway; ideas solicited
- Winter 2006-07 – DEQ announces property purchase
- April 2007 – waste repository update
- August 2007 – EMF repository update

Comments regarding timeline

Those commenting on this topic expressed concerns with implementation of work at EMF prior to the comment period deadline and with DEQ plans to open the repository prior to final design. Why would waste even be accepted before the final design? *At least five specific comments were received on this topic.*

Following a full review through the BEIPC process and purchase of the EMF site, some work was completed in June and early July of 2007, before the comment period on the design was closed. Because the project had been reviewed in the BEIPC process and the design would not be changed by the addition of 5-20,000 cubic yards (cy) of material, the DEQ elected to proceed with Phase 1 construction of the EMF.

Work in the area was prompted when, earlier this year, the Idaho legislature approved an Institutional Controls Program (ICP) for the Basin. The purpose of implementing this initial repository was to provide a place for local property owners and folks who live on high risk yards a place to safely dispose of contaminated soils.

In order to meet the ICP needs, limited site work began in late June, and less than two acres have been cleared to prepare a small part of the site for use under the ICP. Clean materials were brought in and placed in this area to provide people a clean access road and dumping area so they could safely dispose of their ICP waste. Gates, silt fence, and signs were also installed to provide access, erosion controls, and instructions. Under the ICP, waste from local community activities needs a disposal place.

The DEQ requested comments on the design of the facility. The four different design scenarios all included an ICP entrance at the location where the work was completed in mid-July. In order to access the site from Canyon Road, the entrance is most feasibly located in the one previously established location. Because there was only one viable location for this access road, public comments would not have affected its placement. Thus far comments on the placement of the ICP entrance to the EMF have been discussed with the East Side Highway District (ESHD) and ESHD requirements and restrictions have been observed and met.

The work completed thus far could accommodate about 20,000 cubic yards (cy) of waste. This minimal amount of material will not affect the design options for the repository. When considering the four different scenarios provided in the 30% Design Report, Scenario 1 (the smallest volume proposed for this site) would contain about 466,000 cy of material (20,000 cy is less than 5% of that volume).

To date, no waste has been brought to the repository. No waste will be brought to the repository until the public comments have been responded to, and issues that were brought up in the comment period have been addressed.

Comments regarding location/aesthetics

Those commenting on this topic expressed concern over the view from the Mission, which is an historic landmark and the fact that placement of the contaminated soil could reach up to 62 ft. high. Some commenting suggested a height of no more than 20 ft., that all current trees be protected, and that more trees should be planted to further help block the view of the repository from the Mission. Some folks requested that we please explain what sizes, shapes, and other locations were considered that may have less of an impact than the proposed design option and location seemed to general topic of these comments. *Eight comments were received on this topic.*

Many people have expressed concerns about the visibility of the repository from the Old Mission grounds. The DEQ and EPA have already begun to reevaluate and reconsider the repository configuration based on comments from the public on this issue. The agencies are sensitive to these concerns and did consider these visual issues in initially proposing Scenario 4 for consideration. That scenario, which, if filled, could top out in 20-30 years at 62 ft. During that time, existing trees will continue to grow and the DEQ will plant more trees and revegetate the surface of the repository. Nonetheless, based on public comment, the DEQ will provide an analysis of visual impacts associated with the construction of the repository at different heights and configurations.

Before segments of the repository are finished, the DEQ and EPA will consult a final contour plan that will be presented in the subsequent design reports. Ultimately the approved plan will provide guidance for the construction of the repository slopes and angles. The final product will be sculpted to curve and blend in with the surrounding hills. The DEQ will present drawings and/or schematics of the modified design in the next publication of the design report. The final design and product on the ground will blend into the surrounding environment and will not look like a cube, block, or steps. When the repository is full, DEQ will maintain the final volume of soil placed there and ensure it is adequately protected.

The DEQ reviewed four different scenarios in looking for a design to offer the public. Prior to developing the concept for the 30% Design, the engineers designing the repository were tasked with providing options for the repository in both size and shape. Because repositories are difficult and expensive to site, construct, operate, and close, the DEQ chose to maximize the investment in this location. This decision to maximize the utilization of this location is important not only from the responsibility of state government to manage funds in a conservative manner, but because there is not an abundance of repository sites anywhere in the Coeur d' Alene Basin. A final scenario selection has not yet been made. The final selection will incorporate input from citizens, the Tribe, Kootenai County and the numerous agencies associated with the cleanup.

Comments regarding the repository located in the floodplain

The floodplain analysis indicated that there will be impacts to a repository that is located in the floodplain. Those commenting on this topic noted that it seems inappropriate to intentionally locate a hazardous material repository in a flood plain instead of away from areas that have the potential to be flooded. Some of those commenting felt that there may be a direct connection with the Coeur d' Alene River and this property. *Thirteen comments were received on this topic.*

The location of this repository is within the designated Area of Contamination (AOC) for the Coeur d' Alene Basin. The AOC is loosely defined as the area where the contaminants have come to be found. In the lower basin, that area generally is the 100 year floodplain. It is the established policy for this Superfund cleanup that work will be conducted within the AOC, this includes siting of repositories.

In response to comments received at early public meetings held on this site in 2005 and 2006, EPA hired the Army Corps of Engineers (USACE) to perform the floodplain analysis displayed and discussed in the EMF 30% Design Report. In the analysis, the USACE found that the site is prone to flooding and, in certain conditions, may flood up to a level of 16 ft at the base of the repository. The possibility that flooding could occur in a variety of conditions was considered in performing the design analyses. The USACE analysis of flood waters concluded that river and storm water would come into the EMF area much like water rises in a reservoir or a lake. Consequently, the exposed sides of the repository would not likely be exposed to erosive conditions created by rushing water. The most critical concern was whether the repository would remain stable after a flood due to the level of saturation.

The USACE, floodplain analysis also concluded that there would not be significant impacts to the storage capacity of the floodplain from the construction of this repository. Furthermore, Kootenai County concluded that the location of this site would not impact the town of Cataldo or associated residences and structures in the area.

Armed with this information, DEQ consulted their design engineers and found that it would be necessary to construct the repository to withstand inundation with the 100 year flood event for a period of one day at a level of about 15 feet. But because the majority of the flood water would move out of the area within a day or so, the site would not have to endure maximum levels of flood waters for long periods of time. However, the evaluation did find that the site would be

partially inundated at level of about five feet for a longer period of time. Ultimately, the design engineers took the worst case design and planned for 15 feet of inundation for prolonged periods of time. Following the initial analysis, it was concluded that flooding would not render the site as being inadequate for use as a soil repository.

The potential for material from this repository to reach the Coeur d' Alene River is low. The river at the closest possible point is about a half of a mile from the repository. Between the river and the site, the area is bordered by the Dredge Road to the west, I-90 to the south and east and the Canyon Road to the north. The only way that sediment from this site would travel to the river would be through a series of culverts located under I-90 over a large expanse of flat land that extends for more than a half of a mile. This is a similar pathway that the entire Mission Flats depositional environment would follow.

The EMF site will be protected with best management practices (BMPs) such as erosion control fences, shallow run off trenches, and eco-blocks to reduce flow and promote settling of materials. Over the course of construction of the repository, the management of the facility will focus on BMPs, including revegetation of exposed surfaces. Consequently, the site, throughout construction, final closure, and into perpetuity will be under continual management by the DEQ. This level of control (both naturally and man aided) will actually *decrease* the amount of sediment that would be available to move within the floodplain.

Comments regarding impacts from stormwater

Concerns were expressed about runoff and leaching of metals during the pre-capped life of the repository. Those commenting on this topic asked how the operation would potentially affect the aquifer for drinking water. *Five comments were received on this topic.*

This is a specific issue that the DEQ addressed preliminarily in the 30% Design, in the construction of the initial ICP repository location, and which DEQ will completely evaluate prior to completion of the final design. Essentially, the DEQ will manage stormwater runoff from the site and balance that with percolation of stormwater through the contaminated material. During construction of the repository, the waste soil and sediment material will be compacted to a very high degree to ensure site stability. The compaction process will also help reduce percolation into the material and promote runoff. Runoff will be contained by BMPs as described in response 6 above.

It is important to compare the scope of this project with the amount of material that already exists in the area. The issue of leaching to ground water, and, potentially the river, is a complicated one. Huge amounts (estimated to be greater than 35 million tons) of highly contaminated sediments were deposited during river dredging operations (during the 1930s-1960s) within a radius of .7 to 2.25 miles from the site. In addition, contaminated sediments were deposited directly in the EMF area before I-90 was constructed. All of these materials have been leaching into the environment for over 50 years.

While the groundwater in the area will be studied more as the design continues, research conducted through the University of Idaho found that there is a perched ground water zone in the Mission Flats area that does not communicate with lower ground water zones or the alluvium associated with the river. The study also found that the concentrations of metals in the perched zone did not impact the concentrations of metals in the river.

Therefore, based on the primary scientific research available on this topic for this area, there was not a measured pathway for contaminated water in the perched zone to reach the river or the lower groundwater zones from which groundwater associated with down gradient drinking wells are extracted. The evidence that this natural system is working was found in the water quality of down gradient drinking water wells. The DEQ has reviewed the drinking water at the Mission and found that it meets all criteria for drinking water standards and does not show elevated levels of metals. This information was presented in the 30% Design Report and confirms the U of I research.

Comments regarding impacts to local roadways

Concerns were expressed about the impact of the operation to the local roadways, including the Canyon Road and the exit from I -90. *Five comments were received on this topic.*

The DEQ has presented the proposed plan for the operation of the East Mission Flats Repository (EMF) to the East Side Highway District, Kootenai County, and the Idaho Transportation Department. The operation of the EMF as performed by the DEQ or their contractors will be conducted in compliance with local, state, and federal road restrictions. This includes the use of I-90 and exit 39, the bridge over the Coeur d' Alene River east of the EMF location, and the temporary road restrictions placed on the Canyon Road by the East Side Highway District. The DEQ has completed a road use evaluation and recordation of the current condition of Canyon Road so that impacts can be accurately assessed. It is important to note that use of the roads will be by local citizens and local contractors who purchase fuel locally and pay taxes

to use these roads. While it is not anticipated that truck traffic going to or coming from the EMF will impact the road system, the DEQ will communicate with local, state, and federal agencies about specific requirements or suggestions they will have to reduce impacts to all roadways.

Comments regarding impacts from dust

Concerns were expressed about dust generated from the site impacting local residents, visitors to the Mission and the view from the Mission. *Four comments were received on this topic.*

Dust is common in this area due to large areas of bare ground. For decades, people have used the area west of the Dredge Road to drive recreational vehicles, which also stirs up dust. To prevent adding to the existing issue of fugitive dust, DEQ will monitor dust at the site. When the site is active, the site and road will be watered or treated to control dust. Measures also will be taken to ensure that dust does not blow off of work vehicles carrying materials to the site. In addition, any areas that are anticipated to lie idle for an extended period of time will be seeded to control erosion and the potential for fugitive dust.

Comments regarding siting a repository in this location

Concerns were expressed about where the EMF is sited and that there wasn't adequate input from the public during the evaluation process. *Eleven comments were received on this topic.*

The decision to site the repository at East Mission Flats occurred over a period of several years. A full description of the public involvement as coordinated by the agencies was presented in response # 2 above.

Comments regarding Applicable Relevant and Appropriate Requirements (ARARs)

Concerns were expressed about the process of evaluating and presenting the Applicable Relevant and Appropriate Requirements (ARARs) for this site. *Eight comments were received on this topic.*

The EPA and DEQ are required by Superfund to address those laws and regulations that pertain to the remedial activity at a site. These laws and regulations are called ARARs and they include laws such as the Endangered Species Act, the Clean Water Act, and the National Historic Preservation Act. A list of applicable laws was provided in the 30% Design report. A full list of ARARs for the Coeur d' Alene Basin Superfund cleanup was also provided in the Record of Decision for

Operable Unit 3 (September 2002).

The decision to site the repository at East Mission Flats occurred after:

- an initial review of the site for wetlands,
- preliminary discussions with the Fish and Wildlife Service regarding the potential for presence of endangered species in this area,
- discussions with the Coeur d' Alene Tribe and Mission State Parks representatives,
- Analysis of flooding potential,
- Multiple public meetings,
- Door-to-door discussions with neighbors adjacent to the potential site,
- Meetings with Kootenai County officials and,
- meetings with the Basin Environmental Improvement Project Commission's Technical Leadership Group and Project Focus Team.

The list of ARARs presented in the 30% Design Report will be fully evaluated before the Final Design Report is complete. It was not the intention of the design team to complete the ARAR evaluation for the 30% Design Report.

After the May 16, 2007 release of the 30% Design Report, additional work continued on the Clean Water Act analysis (including the wetlands analysis) and consultation with USFWS regarding the Endangered Species Act. Evaluation of cultural resources has been completed in consultation with the State Historic Preservation Office (SHPO) and provided to the Coeur d' Alene Tribe. Any work conducted on site has been and will continue to follow the plan approved by the SHPO, in accordance with Section 106 of the National Historic Preservation Act.

At the end of June, the DEQ began work on the site to prepare for receipt of materials from the Institutional Controls Program (ICP). The total disturbance of 1.3 acres was cleared from a cultural resource standpoint and did not impact any wetlands. The disturbances were confined to this area, which is located within a large previously-contaminated flood plain, all within the described project area. Due to implementation of Best Management Practices, there have been no releases of any type from the site due to stormwater or any fugitive dust.

Comments regarding the operation of the repository

Concerns were expressed about how the operation would be conducted. The majority of these comments were in regard to how the site would be maintained; the hours of operation, the enforcement of dumping regulations, and how the DEQ would monitor impacts from the operation. *Six comments were received on this topic.*

The DEQ will work with the Panhandle Health District (PHD) to ensure that the Institutional Controls Program use of the EMF site will be orderly and consistent with the cleanup. When the site will receive waste soil from yard clean up activities the DEQ contractors will be on-site to monitor use. In general the EMF site will be operated very much like the Big Creek Repository which controls access and maintains compliance with local, state and federal requirements. However, during the majority of the life of the site, oversight will be on a pre-arranged basis, based on needs dictated by the ICP permits issued by the PHD.

The operation of the EMF site will be reviewed by the DEQ, EPA, PHD, the Basin Environmental Improvement Project Commission and their various subgroups. Reports will be submitted annually to the agencies and the Commission on the progress of the operation of the repository.

Comments regarding the use of a site west of the EMF, the main Mission Flats Site

Suggestions were made that the agencies use the general Mission Flats area west of the Dredge Road as a repository, in addition to the current location. Roughly 5 comments were received on this topic (some comments were included as parts of other comments and were included by reference).

The area west of the Dredge Road on the Canyon Road is also west of the proposed East Mission Flats Repository site. The area holds the majority of the waste moved from the Coeur d' Alene River by the dredging operations conducted by mining companies during the 1930s-1960s. The land in question has many of the same issues as the EMF site (potential for flooding, fugitive dust, important to indigenous peoples, design requirements necessary to mitigate potential impacts to surface and groundwater). Potentially the most significant issue is the fact that neither the State of Idaho nor the Federal Government (EPA) own this site. In addition, the site is clearly visible from the Mission and is surrounded by large areas of exposed sediments that are susceptible to fugitive dust issues.

The reality of siting repositories is that each potential site has a set of challenging human health and environmental concerns that must be identified and evaluated before the site is selected for further review. Through the evaluation process for each site, the potential impacts that are identified must be assessed and quantified before a design level resolution can be evaluated. All of this must occur prior to acquisition, design, and construction of a repository.

Comments regarding the impacts to cultural resources and the importance of the area around the Mission State Park to the overall experience of those visiting the Mission.

What are you doing to protect the sacred land around the Cataldo Mission? *Over 10 comments were received regarding this general topic.*

The issue of the importance of this area to the Cataldo Mission State Park, the Coeur d' Alene Tribe, the Catholic Faith Community, and others interested in the historic value of this site have always been forefront in evaluation of this site. Therefore, the agencies invoked the input of the Tribe and the Mission State Park manager early in the evaluation of this site.

The visibility of the site from the Mission was addressed in response # 4.

In addition to the information presented in the 30% Design document, the DEQ has completed initial consultation with the Idaho State Historic Preservation Office and submitted a document that was in full compliance with Section 106 of the National Historic Preservation Act. The initial evaluation did not document any specific cultural sites that have been identified in the 19-acre area outlined as the location of the repository. All cultural work has been provided to the Tribe for their review, comment and further input.

In the future, the DEQ will continue to communicate with the Tribe on all activities in this area.

In addition, the DEQ has contacted the Catholic Faith Community in regard to their concern about activities in this area. Because there has been a significant amount of miscommunication on technical issues associated with this project, the agencies have offered to meet with the Catholic community to address specific concerns and to heighten awareness of specific technical issues. The agencies also pledged to work with the Catholic community to preclude work on key faith holidays, especially the Feast of the Assumption on August 15 each year.

Comments regarding miscellaneous issues

Concerns were expressed about a wide variety of issues. Some of those are listed and addressed below. *Seven comments were received on these topics.*

- Comment: Why don't you dump the waste in an old mine in the Silver Valley? – Response: This proposal has been evaluated numerous times and found to be not practical (an old mine in Canyon Creek is a long way from Medimont) and expensive (it would be costly to open the mine in a manner compliant with safety standards and construction specifications in order to transport material into the mine).
- Comment: Using a repository for waste doesn't fix a problem; it just moves it from A to B. Response: While it is true that moving the material doesn't totally get the material out of the environment, it does sequester the material in an area that reduces exposure to people who could otherwise be harmed by it. In order to clean up residential yards and community areas, we need a safe, secure place to dispose of the cleanup waste. The goal is to protect human health and the environment.
- Comment: What are the contingency plans if we determine a negative impact from the repository? Response: The site was selected because the risk of negative impacts is very low. Much of the reasoning behind this decision is provided in the response regarding impacts of stormwater and potential leaching of the repository soil.
- Comment: Some people get their irrigation water from the Mission Slough. How will this impact their irrigation water? Response: According to the question, the irrigation water of concern comes from the slough on the south side of I-90. The EMF project is north of I-90 and they are not linked. The slough south of I-90 is also heavily impacted by contaminated dredged sediments, so the slough water may be impacted as well.

Contact:

John Lawson, DEQ Project Manager
208-373-0141 or
john.lawson@deq.idaho.gov