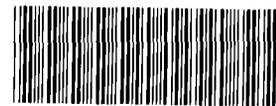


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MEMORANDUM

DATE: October 26, 1995 5400.1

TO: Mark Lewis, S.M. Stoller, Corporation

FROM: T.R. Ryon, Ecology Team, Bldg. T130B, X3657

SUBJECT: REVIEW OF RESPONSE TO COMMENTS FROM ENVIRONMENTAL GUIDANCE DIVISION, ECOLOGICAL PROGRAMS, DOE-TRR-008-95

Attached are comment responses to comments received on September 7, 1995 from the Environmental Guidance Division, Ecological Programs, DOE on the Phase I IM/IRA Decision Document for OU7, Present Landfill. I have highlighted all the comments I would like you to review with respect to report history, comments already resolved (we may have an old version), and regulatory issues. To respond to some comment we would need extensive rewriting, but I am not convinced covering these issues is warranted at this time.

Please review all comments and let me know what you think of the responses in a general fashion.

TRR:trr

- cc:
- C.S. Evans
- L. Peterson-Wright
- J.D. Krause
- Neil Holsteen
- L.E. Woods
- File
- ERPD Records File (2)



4/12

ADMIN RECCRD

BZ-A-000386

PHASE I IM/IRA DECISION DOCUMENT FOR OU7 PRESENT LANDFILL

Draft: September 27, 1995

**Response to comments from Environmental Guidance Division,
Ecological Programs, RFFO, Department of Energy**

October 26, 1995

Section 1.1 Purpose of Report

Page 1-2

- ¶1, Second sentence, "The alternative addressed all source areas with risk levels greater than 1E-06 or a hazard index greater than one."

Response to Comment 1:

A sentence has been added to the paragraph stating "Both human health and ecological risks were considered in choosing the preferred alternative. These potential risks were considered during the alternative screening process by adhering to the first threshold criteria (EPA 1988), Overall Protection of Human Health and the Environment (see section 6.1 Screening Process)."

Section 2.4 Ecology

Section 2.4.2 Wildlife

Page 2-21

- ¶4 "The Rocky Flats site supports several species of reptiles and amphibians."

Page 2-22

- ¶2, Last sentence, "Because the pond lacks predaceous fish..."

Response to Comment 2:

Ecological risk assessment methodology require the use of key receptors and exposure pathways to assess ecological risk. Amphibians are not well represented in the landfill pond and therefore are not considered key receptors. Additionally, EPA has recommended that water quality standards and sediment criteria are protective of aquatic life and therefore, protective of amphibians.

Regardless, the discussion of wildlife in OU7 including the landfill pond is misleading and will be rewritten to more precisely describe what wildlife species occur and therefore may be potentially at risk from OU7 PCOC's.

Section 2.4.2 Wildlife

Page 2-22

- ¶3, Last sentence, "The Preble's meadow jumping mouse is a subspecies of the meadow jumping mouse and, therefore, receives protection under the state law."

Response to Comment 3:

At this time, the Preble's meadow jumping mouse, a subspecies of the meadow jumping mouse, is classified as a non-game species by the State of Colorado, and a C-2 candidate species by the U. S. Fish and Wildlife Service. The Colorado statute

protects non-game species from take (such as hunting) and possession. The U. S. Fish and Wildlife Service received a petition to list the mouse as threatened or endangered in 1994. No formal decision on listing the species has yet been made. Although the mouse has not yet attained protected status under federal law, it may become a protected species in the near future.

We suggest that Paragraph 3 be positioned to follow the current Paragraph 4, and that Paragraph 3 and 4 be replaced to read as follows:

Paragraph 3 (to become Paragraph 4):

Slopes around the East Landfill Pond have been identified as potential Preble's meadow jumping mouse habitat (Figure 2-12) (DOE 1995b). The Preble's meadow jumping mouse, a subspecies of the meadow jumping mouse, is classified as a non-game species by the State of Colorado, and a C-2 candidate species by the U. S. Fish and Wildlife Service (USFWS). The Colorado statute protects non-game species from take (e.g. hunting) and possession. In 1994 the USFWS received a petition to list the mouse as threatened or endangered pursuant to the Endangered Species Act. No formal decision on listing the species has been made. Although the mouse has not yet attained protected status under federal law, it may become a protected species in the near future. Current DOE, RFFO policy is to protect the mouse as if it were endangered.

Paragraph 4 (to become Paragraph 3):

Two federally listed endangered species occur at Rocky Flats, and may enter OU7 on a casual basis: the peregrine falcon and the bald eagle (EG&G 1995). Federal C-2 candidate species that occur at Rocky Flats include the eastern short horned lizard, northern goshawk, western burrowing owl, ferruginous hawk, black swift, loggerhead shrike, Preble's meadow jumping mouse, and small-footed myotis (RMRS 1995). None of these species has been documented in OU7, though suitable habitat exists for the Preble's meadow jumping mouse and eastern short horned lizard. Colorado species of special concern occurring at Rocky Flats include the long-billed curlew, greater sandhill crane, and American white pelican. None of these species has been observed in OU7 (EG&G 1995).

References added in Paragraphs 3 & 4:

RMRS 1995: Special Concern Species for the Rocky Flats Environmental Technology Site. RMRS. Golden, CO. September 20, 1995. (A list.)

EG&E 1995: 1994 Annual Wildlife Survey Report. Natural Resource Protection and Compliance Program. EG&G. Golden CO. April 24, 1995.

Section 3.3 Evaluation of Risks

Section 3.3.4 Landfill Leachate at the Seep

Page 3-7

- ¶¶ 3, 4, 5: The last sentence in ¶3 states, "Baseline risk estimates were based on the conservative assumption that receptors spend all of their time at the East Landfill Pond."

Response to Comment 4:

Typically, statements of uncertainty can be semi-quantitative in order to give a level of confidence as to HI values based on a number of conservative assumptions. We recommend assigning an uncertainty value to those listed in ¶5 to better assess what the HI values for mallards, raccoons, and coyotes really represent.

Section 3.3 Evaluation of Risks

Section 3.3.5 Surface Water in the East Landfill Pond

Page 3-8

- ¶1: The third sentence in ¶1 states, "After contamination from the leachate seep...entered the East Landfill Pond..."

Response to Comment 5:

Comment noted. PCOC's in sediment are discussed in Section 3.3.6 Sediments in the East Landfill Pond. A sentence in Section 3.3.6 will be added stating, "In addition to potential contaminants from the leachate seep or run-off remaining in surface water by suspension or solution, the potential contaminants may settle to the pond sediments."

Section 3.3 Evaluation of Risks

Section 3.3.5 Surface Water in the East Landfill Pond

Page 3-8

- last ¶: The first sentence states, "Since the East Landfill Pond was constructed only 20 years ago..." And the last sentence states, "...should we not conclusively know by now if fish and crayfish populations exist in the East Landfill Pond?"

Response to Comment 6:

Two ecological sampling efforts concerning aquatic vertebrates and invertebrates were conducted on the East Landfill Pond (Pond). Both efforts were conducted by the S.M. Stoller Corp. The first was a fish trapping effort in November, 1992. No fish were captured. The second was a benthic sampling in April, 1993. While a number of invertebrates were captured, there was no evidence of crayfish.

Apart from draining the Pond, there is no way to conclusively know whether such populations exist. Available data gathered through substantial effort suggests that they do not.

Section 3.3 **Evaluation of Risks**

Section 3.3.6 **Sediments in the East Landfill Pond**

Page 3-9

- ¶2: The last sentence in ¶2 states, "There is no risk to human health from inhalation or incidental ingestion of, or dermal contact with sediment from the East Landfill Pond."

Response to Comment 7:

It is within the scope of this document to respond only to risk from contaminants present at OU7. The sentence will be rewritten to states, "There is no risk from PCOC's to human health derived from inhalation or incidental ingestion of, or dermal contact with sediment from the East Landfill Pond."

Section 3.3 **Evaluation of Risks**

Section 3.3.6 **Sediments in the East Landfill Pond**

Page 3-10

- ¶1: The last sentence in ¶1 states, "Although there is no risk to terrestrial wildlife, it is unlikely that receptors spend all of their time at the East Landfill Pond,..."

Response to Comment 8:

See response to comment 4.

Section 3.4 **Compliance with ARARs**

Section 3.4.2.1 **Wetlands Requirements**

Page 3-19

- ¶2: Second sentence states, "Because the East Landfill Pond and pond margins have been designated as wetland, they are considered waters of the United States under the CWA." Comment - Not all wetlands are necessarily waters of the . . .

Response to Comment 9:

There are legal questions about the regulatory status of certain ponds at RFETS, not for the reasons stated in this comment, but for other reasons that deal with certain treatment ponds being specifically excluded as waters of the U.S. (see 33 CFR 328.3(a)(7)). Unless there is some overriding need to keep this sentence, it appears that the entire sentence in question should simply be deleted. Legal guidance should be sought if there is a need to further resolve the current status of the landfill pond.

Regardless of whether the landfill pond itself is considered a water of the U.S., wetlands adjacent to the pond may still be considered jurisdictional under the CWA. Wetlands are included under the definition of waters of the U. S. at 33 CFR 328.3. Since 1986, wetlands do not have to be hydrological connected and tributary to water bodies that are waters of the U.S. in order to be jurisdictional under the CWA. Use, and sometimes even potential for use by migratory birds is sufficient to provide the required nexus to interstate commerce. If this is a point of contention for ARAR

determination, legal guidance should be sought instead of using lay interpretations.

Note: It appears that other parts of section 3.4.2.1 need some changes. 40 CFR part 6 doesn't deal with the Clean Water Act regulations. It deals with EPA administrative actions involving Executive Order 11990 wetland protection requirements, among other things. DOE has its own regulations implementing DOE's compliance with Executive Order 11990, which are found at 10 CFR part 1022. It would appear that 10 CFR 1022 should be the regulation that DOE would have to follow in this case, not 40 CFR part 6. CWA Section 404 regulations are found in 33 CFR Parts 320-330 (Corps of Engineers), and 40 CFR Part 230 (EPA). Also, since this is a CERCLA activity conducted entirely onsite, federal permits such as Department of the Army (404) permits are not required, according to CERCLA Section 121(e). The substantive requirements of the CWA may still be ARARs, but the administrative requirements, such as obtaining a permit, do not apply. Seek legal or ARAR input on this.

The Corps study indicates that the landfill pond is lacustrine open water with an average depth greater than 6.6 feet. This makes it technically not a wetland, but open water, potentially waters of the U.S., or other waters, but not a wetland. Legal input is needed here also.

Section 7.0 **Recommended Alternative**

Section 7.1 **Description**

Page 7-1

- ¶1: Comment - has the need for a biota barrier layer been over looked?

Response to Comment 10:

Administrative controls could be used to keep prairie dogs from burrowing into the capped area. Controls could include fencing of a small enough mesh to exclude prairie dogs, then trapping or disposal of established prairie dogs. A clay barrier and 30 inches of a vegetative layer will prevent any small rodents from digging through to the gas collection geonet. A layer of gravel above the drainage geonet would add protection to this layer, but would also add cost to the preferred alternative. Typically, small rodents will not burrow below 36 inches from the surface.

An additional layer of gravel or implementation of administrative controls for burrowing rodents could be added to the design description if deemed necessary.

Section 7.2 **Design Requirements**

Section 7.2.1 **Compliance with RAOs**

Page 7-4

- ¶2, states in part, "Wetlands mitigation is in progress. Acreage . . ."
Comment - To date the wetland considering the problems [sic] . . .

Response to Comment 11:

The text has already been changed from that quoted in the comment. It now indicates that the mitigation bank is proposed. As of noon on 10-25-95, DOE, RFFO SSD indicated that the banking agreement has been signed by DOE, and will probably be signed by EPA before the end of the day, so it appears that the bank is close to being finalized.

Alternatively, it might be possible to use a generic statement such as "compensatory mitigation for unavoidable impacts to wetlands will be provided, in accordance with ARARs." This would allow use of the mitigation bank, or other suitable mitigation, on-site or off-site, regardless of whether it is part of the bank.

Section 7.2 Design Requirements

Section 7.2.2.2 Location-Specific ARAR's, Wetland Assessment, Wetland Effects
Page 7-5

- Comment - This section states that placement of fill material...will degrade approximately 1.1 wetland acres.

Response to Comment 12:

Mark Lewis best to respond to this aquatic ecology - deep water needs - question.

Section 9. Environmental Assessment

Section 9.2 Ecological Risk
Page 9-5

Comment - Although this section is labeled "Ecological Risk" it appears . . .

Response to Comment 13:

Natural Resource Damage concerns are being addressed within the scope and funding levels approved by DOE, RFFO, according to legal guidance and with the knowledge of appropriate contacts in DOE, RFFO.

Note: This is potentially a situation where complying with this comment would impact the cost, schedule or scope of the contract. It would be a good idea to run this whole issue by legal or someone who is more familiar with the contract, scope, etc. The text of the response above should also be at least discussed with legal or some other appropriate person.

Section 9.2.1 Wildlife and Vegetation

Section 9.2.1.1 Short -Term (Construction Period) Impacts
Page 9-6

Comment - ¶1 addresses potential loss of Preble's meadow jumping mouse habitat.

Response to Comment 14:

Natural Resource Damage concerns are being addressed within the scope and funding levels approved by DOE, RFFO, according to legal guidance and with the knowledge of appropriate contacts in DOE, RFFO.

The document states "*Potential* habitat for the Preble's meadow jumping mouse.... (emphasis added) will be significantly affected...." The comment seems to indicate that there is actual Preble's meadow jumping mouse habitat present. No Preble's meadow jumping mice have been captured at this site to date. Their possible presence cannot be discounted, however, due to suitable, if isolated habitat at the site. The Project has acknowledged this possibility in Section 7.2.2.2 (Page 7-6), and has committed to Preble's meadow jumping mouse habitat mitigation as appropriate. In estimating the possible habitat destruction, the Project has assumed a worst-case scenario of complete destruction of habitat around the pond. Until the mouse is listed, and the presence of the mouse within the OU7 work area is confirmed, further specific planning is unwarranted.

Note: This is potentially a situation where complying with this comment would impact the cost, schedule or scope of the contract. It would be a good idea to run this whole thing by legal or someone who is more familiar with the contract, scope, etc. The text of the response above should also be at least discussed with legal or some other appropriate person.

Section 9.2.1 **Wildlife and Vegetation**

Section 9.2.1.1 **Short -Term (Construction Period) Impacts**

Page 9-6

- ¶2 states in part, "the area of disturbed vegetation is closer to 35 acres."
Comment - no detailed mitigation/remediation plan...is proposed."

Response to Comment 15:

Generally, this comment questions the lack of discussion of destruction and mitigation for lost aquatic, wetland, and terrestrial habitat values. While this is not discussed here, destruction and mitigation for wetlands/aquatic habitat is discussed in Section 7.2.2.2 (Pages 7-5, 7-6). The discussion as written in Section 9.2.1.1, Paragraph 2, is somewhat vague as to the actual habitat impacts of the project. Refer to the suggested replacement paragraph below:

Temporary loss of approximately 23 acres of semi-disturbed and reclaimed grassland habitat is expected when the surface of the landfill toe is disturbed during contouring and capping construction activities. Vegetation will be stripped from the work surface and fill placed on the landfill, toe area, and around and within the pond margins as necessary to achieve proper endstate contours. As discussed in Section 7.2.2.2, a maximum of 1.1 acres of aquatic and wetland habitat may be affected by construction. An additional 0.1 acres of habitat adjacent to the wetlands may also be affected. The final cap design

indicates that approximately 12 acres of temporarily barren land (including area currently occupied by wetlands) may be created during construction. Approximately 9 acres of haul roads and up to 2 acres of staging areas may also be stripped of vegetation. Final revegetation, the end goal of the capping project, will result in a net gain of high quality wildlife habitat due to the restoration of the approximately 20 acres of currently barren land of the landfill itself, and improved condition of another approximately 12 acres of significantly degraded habitat. Wetlands mitigation strategies are discussed in Section 7.2.2.2. Noxious weed control would be included in the revegetation plan for the Project due to the current weed problem in the area.

Section 9.2.1 **Wildlife and Vegetation**

Section 9.2.1.1 **Short -Term (Construction Period) Impacts**

Page 9-6

- ¶2 also states in part, "...noxious weeds could be introduced during revegetation and would be controlled until adequate native vegetation is established."

Comment - concerned with past revegetation efforts and a repeat performance.

Response to Comment 16:

See comments 15 and 18. Additionally, response to the criticism of the OU1 and OU3 revegetation efforts is not within the scope of this document.

Section 9.2.1 **Wildlife and Vegetation**

Section 9.2.1.1 **Short -Term (Construction Period) Impacts**

Page 9-6

- ¶3 states, "Temporary loss of habitat may cause direct mortality..."

Response to Comment 17:

Typographical errors within this comment make response to the precise point difficult, however, we assume that the comment is concerned with cumulative impacts sitewide from all remediation activities. It is not within the scope of this document to analyze impacts from all other projects at the site. The point that all impacts are cumulative is well taken, but would be better addressed within a sitewide Environmental Impact Statement or other such document. With regard to the area to be impacted by the capping project, the majority of the habitat affected is of poor quality, and the total acreage affected (approximately 43 acres) represents less than 0.007 percent of the Site. The wetland and aquatic habitat will be only partially destroyed, and that which is destroyed will be mitigated at a 3:1 ratio, resulting in a net increase of available wetland and aquatic habitat.

We would suggest adding the italicized words to the first sentence of Paragraph 3 to clarify what will actually happen during construction. ***"Temporary loss of habitat, and trampling by construction equipment is expected to cause direct***

mortality...."

Section 9.2.1 **Wildlife and Vegetation**

Section 9.2.1.1 **Short -Term (Construction Period) Impacts**

Page 9-6

- ¶4 states in part, "Increased equipment and human activities associated with construction..."

Response to Comment 18:

This comment apparently takes issue with the statement down-playing the stress induced due to the high traffic activity because the wildlife is habituated. This is probably a valid point, although the comment does not indicate what is expected in response. We would suggest rewriting the paragraph to read:

Increased equipment and human activities associated with construction inevitably results in increased noise levels and vehicular traffic. These activities are expected to cause larger, more mobile species to avoid the immediate work area due to increased stress. Less mobile wildlife will suffer greater mortality due to habitat loss and direct mortality from the activity. Increased stress in the work area will likely cause reduced reproductive success of less mobile species until construction is completed, and revegetation starts. Wildlife populations are expected to recover rapidly once work is complete, the human presence is reduced, and appropriate vegetative cover is reestablished.

Section 9.2.1 **Wildlife and Vegetation**

Section 9.2.1.1 **Short -Term (Construction Period) Impacts**

Page 9-6

- ¶4 also states in part, "Habitat loss is expected to be temporary and would continue only until adequate revegetation."

Response to Comment 19:

This comment also criticizes revegetation success of OU1 and OU3, and it is out of scope to respond to that criticism within this document. There is a need to more specifically discuss revegetation plans for this Project, however. We suggest that this be handled as a separate paragraph as follows:

Revegetation of the final contoured cap of the landfill is an important component for the success of this project. Once the source of the topsoil for the landfill cap has been determined, and the soil characteristics can be evaluated, ecologists will establish an appropriate seed mixture for the final vegetative cover. Soil characteristics and the need for shallow-rooted species that provide good erosion control will be taken into account during the selection

of a revegetation seed mixture.

Approximately 6 inches of topsoil will be spread over the final fill material. The soil surface will be scarified by ripping as necessary. Appropriate soil amendments will be applied and disced into the soil before seed application. Seed will be applied directly into the soil by seed drill or broadcasting/chaining methods. A weed-free mulch will be applied after seeding. The mulch application method will be season and budget dependent, with taced hydromulch the preferred method. Revegetation success will be evaluated annually for sufficient ground cover and noxious weed presence. Reapplication of seed will be undertaken and active weed control will be used if revegetation success is not acceptable.

Section 9.2.1 **Wildlife and Vegetation**

Section 9.2.1.2 **Long-Term Impacts**

Page 9-7

- ¶1 last sentence states, "...will enough water be seasonally and annually available to the pond to sustain its high quality aquatic, wetland, and terrestrial habitat attributes to a relative level and extent commensurate with its size?"

Response to Comment 20:

Mark Lewis and Myra Vaag best to respond.

Section 9.2.1 **Wildlife and Vegetation**

Section 9.2.1.3 **Sensitive Habitats and Endangered Species**

Page 9-7

Response to Comment 21:

The following discussion should be included in Section 9.2.1.3, "Approximately one third of one hectare of summer habitat for the Preble's meadow jumping mouse within the OU7 area. This habitat patch is relatively small and isolated from other suitable areas containing populations of this species and is located along the inlet of the East Landfill Pond. This area would be lost due to remedial activities."

Section 9.2.2 **Wetlands/Floodplains**

Page 9-8

- ¶1, last two sentences states,[sic] "A wetlands assessment which describes the . . .
Comment - As commented on above, the proposed wetlands bank is still suffering administrative difficulty . . .

Response to Comment 22:

As previously responded to the previous comment on the same subject, as of noon on 10-25-95, DOE, RFFO SSD indicated that the banking agreement has been signed by DOE, and will probably be signed by EPA before the end of the day, so it appears that the bank is close to being finalized. The current wording clearly indicates that the

bank is proposed at this point in time. The status of the bank can be updated as that information becomes available.

Alternatively, it might be possible to use a generic statement such as "compensatory mitigation for unavoidable impacts to wetlands will be provided, in accordance with ARARs." This would allow use of the mitigation bank, or other suitable mitigation, on-site or off-site, regardless of whether it is part of the bank.

Section 9.2.2 **Wetlands/Floodplains**

Page 9-8

- ¶12 states in part, "The importance of the East Landfill Pond to aquatic life..."
Comment - it seems important that we should know conclusively by now what the composition of aquatic food webs and food foraging guilds are in deeper water habitats on the Site; especially for the most biologically productive ponds.

Response to Comment 23:

Please refer to the response to comment 6, above. Aquatic sampling at the East Landfill Pond to date does not support the statement in the comment. Food webs and foraging guilds are known for other water bodies on site, due to the more extensive sampling done.

Section 9.2.2 **Wetlands/Floodplains**

Section 9.2.2.2 **Long-Term Impacts**

Page 9-9

- ¶11 states, "The East Landfill Pond does not empty directly into a stream..."
Comment - hydrologic connection to No Name Gulch/storm water runoff into a smaller impoundment/event "has not occurred"/common shinner and stoneroller not considered in risk assessment.

Response to Comment 25

Mark Lewis and Myra Vaag best to respond.

Section 9.6 **Commitment of Irreversible and Irretrievable Resource**

Page 9-17

Response to Comment 26

Most of the discussion here has already been addressed in previous comments.

Note: This is potentially a situation where complying with this comment would impact the cost, schedule or scope of the contract. It would be a good idea to run this whole thing by legal or someone who is more familiar with the contract, scope, etc. The text of the response above should also be at least discussed with legal or some other appropriate person.

12/17