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STATE OF COLORADO

COLORADO DEPARTMENT OF HEALTH

Dedicated to protecting and improving the health and environment of the people of Colorado

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000054384

April 29, 1994

Mr. Richard J. Schassburger
U. S. Department of Energy
Rocky Flats Office, Bldg 116
P.O. Box 928
Golden, Colorado 80402-0928

RE: FO.29, Disposition of Soil and Sediment Investigation Derived Materials

Dear Mr. Schassburger,

The Colorado Department of Health, Hazardous Materials and Waste Management Division (the Division), has reviewed the above referenced document submitted by DOE and prime operating contractor, EG&G. Though much improved over previous versions of the FO.29 procedure that the Division has reviewed, there are remaining problems that must be addressed. These are delineated in the attached comments.

Because DOE must perform this procedure on a large number of drums filled with IDM in a short amount of time, we hereby grant this procedure conditional approval. However, it is incumbent on DOE to address the attached comments, revise the procedure, and submit revised pages or sections of the procedure by May 10, 1994. It is also DOE's responsibility to see that the corrected procedure is utilized to determine the correct disposition of the IDM drums. In addition, the Division would like to point out that EPA's approval of this procedure is also required for implementation.

DOE is also hereby notified that Division personnel will inspect the IDM drums on June 1, 1994, to evaluate that the IDM has been properly evaluated and stored. If you have any questions regarding these matters, please call Joe Schieffelin of my staff at 692-3356.

Sincerely,

Gary W. Baughman, Chief
Facilities Section
Hazardous Waste Control Program

cc: Martin Hestmark, EPA
Vern Wetherill, DOE
Alan Schubert, EG&G
Marla Broussard, EG&G
Gary Potter, EG&G
Dan Miller, AGO
Steve Tarlton, CDH-OE

ADMIN RECORD
A-SW-002804

Colorado Department of Health

Review and Comment

4-H46-ENV-OPS-FO.29
Disposition of Soil and Sediment Investigation
Derived Material (IDM)
received 4/19/94

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General Comments:

1) Relative to Section 1.0, we reiterate our comment to the previous version of this procedure that until an alternate procedure for conducting a "contained-in" hazardous waste determination for contaminated environmental media is approved, we expect that FO.29 will be used to determine proper disposition of IDM.

Specific Comments:

Section 3.0: Overview, page 6: In the text describing Case #3, there is a small error. The "and/or" in the first paragraph should be changed to "and." In addition, this description of Case 3 is not consistent with the Case 3 description on page 10.

Section 7.2, step 2, page 14: Corrosive, ignitable, and reactive wastes are very different from one another and have different criteria. We suggest that to make this evaluation accurate, three different boxes, one for each characteristic, be created on the appropriate forms so that separate evaluations occur. In addition, this procedure does not include the regulatory citation for determining whether these characteristics are present in the IDM. This needs to be included so that, if there is reason to doubt process knowledge, the project manager (PM) can make a better and more accurate determination.

Section 7.9, step 3, page 29: It appears that the "RCRA" designation was inadvertently omitted from the first line of text in this section. In addition, as Appendix VIII includes constituents that are not listed wastes, the word "listed" should be deleted from the last line of text in this section.

Appendix 1, pages 45 and 46: This flowchart contains remaining problems and inconsistencies with the text. First, the Division does not care when the evaluation for hazardous waste characteristics is done. It could be done before or after the RCRA

risk assessment. However, the second box (first diamond) on the flowchart - "Are materials with corrosive, ignitable, or reactive characteristics present?", should not be structured as a decision point. Rather, it should be a task that is performed. The reason for this is that whether the question is answered yes or no, the process continues down the flowchart.

Second, immediately to the right of the sixth box (third diamond) - "Metals comparison: $AVG < (Mean + 2SD)?$ ", should be another diamond. This diamond should ask the question "Are non-background analytes present?" If the answer to this question is no, continue to the right, intersecting the line that goes to Case 1. If the answer is yes, return to the main line of the process (line A).

Third, the seventh box (fourth diamond) should be replaced with the TCLP analysis. This may have been the intent of the authors. However, there are many TCLP constituents that are not metals. As above, this should be a performed task and not a decision point.

Fourth, because the characteristic analysis has been done previously, but no decision has been rendered regarding the characteristics until the RCRA risk evaluation has also been done (which is all correct), another decision diamond needs to be placed immediately under the "Cancer risk $> 10^{-6}$ or $HI > 1?$ " diamond. This diamond would say "Is IDM characteristic?" If the answer to this question is no, the arrow should go down and continue to the inclusive risk analysis. If the answer to yes, the arrow should go to the left and tie in to Case 2.

Fifth, the Case 2 block should include "Label properly." IDM that has been classified as Case 2 could be listed, or characteristic, or both. Labelling requirements and ultimate disposition will be different for each of these eventualities.

Appendix 2, page 1: Columns 4 and 5 and box 3 at the bottom of this form should be updated to include mean background + 2SD. Corrosive, ignitable, and reactive characteristics should each be given a separate box. The fifth box should include a reference to the RCRA risk analysis rather than the inclusive risk analysis.

Appendix 3, page 1: Placing the hazardous waste listing number next to the listed constituents on this table would probably aid the project manager in correctly labelling the IDM. This is already done in Appendix VIII of the regulations.

Appendix 4, page 1: The boxes on the bottom should be changed to read "Total carcinogenic and non-carcinogenic ratios are both less than 1" and "Either total carcinogenic and non-carcinogenic ratio is equal to or greater than 1." This will make the forms correct and consistent with the flowchart and text.

Appendix 5, page 1: See above comment for Appendix 4.

Appendix 6: The following toxicity values were not included in this table or were included incorrectly:

chlorobenzene	RfC value from HEAST, not from IRIS
methylene chloride	RfC (HEAST) = 3E+0 mg/m3 is not listed
o-dichlorobenzene	RfC (HEAST) = 2E-1 mg/m3 is not listed
manganese	RfD listed is for Mn in food. RfD for Mn in water = 5E-3 (IRIS).
1,1-dichloroethane	RfC (HEAST) = 5E-1 mg/m3 is not listed
1,2,4-trichlorobenzene	RfC (HEAST) = 9E-3 mg/m3 is not listed
2-nitroaniline	RfC (HEAST) = 2E-4 mg/m3 is not listed
hexachlorocyclopentadiene	RfC (HEAST) = 7E-5 mg/m3 is not listed

Appendix 7, page 1: See above comment for Appendix 2 relative to column 3. In addition, the heading on column 8 contains a typo.

Appendix 8: Please provide the Division with the plant transfer coefficients and their sources for the plant uptake pathway.

The Division is attempting to contact EPA's ECAO with regard to dermal exposure to PAHs. If, based on our communication with ECAO, we find that neglecting dermal exposure to PAHs can not be allowed, we will immediately notify DOE. Until then, since this procedure is being conditionally approved, dermal exposure to PAHs does not need to be addressed.