

Analysis of Dust Deliquescence for FEP Screening

Scientific Analysis/Calculation **Error Resolution Document**

QA: QA

Complete only applicable items.

Page	1	of	2

1. Document Number:	2. Revision/Addendum:		3. ERD:	
ANL-EBS-MD-000074	01/01	3.	02	
4. Title:		5. No. of Pages A	Attached:	

6. Description of and Justification for Change (Identify affected pages, applicable CRs and TBVs): Description of Changes:

- As indicated in CR 14175, at p. 6-5 of the addendum, the reader is directed to file, Cyclone dusts Summary_NADP salts subtracted xls in output DTN: SN0506T0502205.014. There is no such file in this DTN. However, there is a file with this name in DTN: SN0706AMMONIUM.001. Therefore, the addendum statement, "For these two reasons, the predicted compositions are not shown here, but the results are recorded in an output DTN: SN0506T0502205.014 (file: Cyclone dusts Summary NADP salts subtracted.xls)." is replaced with "For these two reasons, the predicted compositions are not shown here, but the results are recorded in an output DTN: SN0706AMMONIUM.001 (file: Cyclone dusts Summary NADP salts subtracted.xls)."
- As indicated in CR 14175, at p. 6-6 of the addendum, the reader is directed to file Cyclone dusts Summary (NH4)2SO4 subtracted.xls in output DTN: SN0506T0502205.014. There is no such file in this DTN. However, there is a file with this name in DTN: SN0706AMMONIUM.001. Therefore, the addendum statement which reads "To evaluate the potential effects of ammonium sulfate in dust, a second set of simulations was run in which the total ammonium in the cyclonic dust compositions in Table 4-3[a] was removed as ammonium sulfate, (NH₄)₂SO₄ (output DTN: SN0506T0502205.014, file: Cyclone dusts Summary (NH4)2SO4 subtracted.xls)." is replaced with "To evaluate the potential effects of ammonium sulfate in dust, a second set of simulations was run in which the total ammonium in the cyclonic dust compositions in Table 4-3[a] was removed as ammonium sulfate, (NH₄)₂SO₄ (output DTN: SN0706AMMONIUM.001, file: Cyclone dusts Summary (NH4)2SO4 subtracted.xls)."
- As indicated in CR 14175, at pp. 6-6 and 6-7 of the addendum, it is stated, "Using these ammonium salt proportions, the ammonium salt components were subtracted from the new dust leachate analysis data provided by the U.S. Geological Survey (DTN: GS070208313000.001 [DIRS 181405]; see Table 4-3[a]). This calculation is documented in output DTN: SN0706AMMONIUM.001, file: EQ36 - NADP and (NH4)2SO4 adjusted\Underground dust ammonium removed.xls." However, the file that documents the calculation states that the data for the calculation come from DTN: GS060208313000.001, not DTN: GS070208313000.001, as stated in the text. Therefore, the text statement that reads, "Using these ammonium salt proportions, the ammonium salt components were subtracted from the new dust leachate analysis data provided by the U.S. Geological Survey (DTN: GS070208313000.001 [DIRS 181405]; see Table 4-3[a])." is replaced with, "Using these ammonium salt proportions, the ammonium salt components were subtracted from the new dust leachate analysis data provided by the U.S. Geological Survey (DTN: GS060208313000.001 [DIRS 181404]; see Table 4-2[a])."
- At p. 6-2 of the addendum, the statement, "In addition, a new source of data for atmospheric dust compositions is available in the form of analyses of leachates from dust samples collected by the Torit Cyclone dust collector at the South Portal (Table 4-2[a])." The reference to Table 4-2[a] in this statement is incorrect, and therefore, replaced with, "In addition, a new source of data for atmospheric dust compositions is available in the form of analyses of leachates from dust samples collected by the Torit Cyclone dust collector at the South Portal (Table 4-3[a])."

	Printed Name	Signature	Date
7. Checker	Kevin Mon	Kevin mon	04/06/2010
8. QCS/QA Reviewer	Brian Mitcheltree	BM	4/6/10
9. Originator	Gopal De	sopal de	04/06/2010
10. Responsible Manager	Russell Jarek	Know Zfarele	4/6/10

5. At p. 4-1 of the addendum, the first bullet states, "Updated Cr³⁺ aqueous species (CrOH²⁺, CrO⁺, and CrO²⁻)". In this statement, the last chemical formula is incorrect and therefore, this statement is replaced with, "Updated Cr³⁺ aqueous species (CrOH²⁺, CrO⁺, and CrO₂⁻)".

Justification for Change

The above mentioned changes 1 to 3 are necessary to address CR 14175, while changes 4 and 5 are necessary for correcting errors noticed by the originator of this error resolution document (ERD).

All of the changes made are editorial. Consequently, as mentioned in the CR text, the changes documented in this ERD have no impact on safety or waste isolation or on the results of the Safety Analysis Report or the Total System Performance Assessment.

Analysis of Impacted Documents:

The changes listed have no impact on the conclusions of or the outputs from ANL-EBS-MD-000074 REV 01 AD 01. Therefore, there is no impact on the following documents that cite ANL-EBS-MD-000074 REV 01 AD 01 as a reference.

Controlled Documents

- ANL-EBS-MD-000003 Rev. 03
- ANL-EBS-MD-000004 Rev. 02, Addendum 01
- ANL-EBS-MD-000033 Rev. 06
- ANL-NBS-HS-000057 Rev. 00
- ANL-WIS-MD-000024 Rev. 01
- ANL-WIS-MD-000027 Rev. 00
- CAL-DN0-NU-000002 Rev. 00C
- MDL-WIS-PA-000005 Rev. 00
- TDR-MGR-MD-000037 Rev. 02
- TDR-MGR-MD-000056 Rev. 00
- TDR-MGR-MD-000063 Rev. 00.

LA SAR Sections Reviewed:

- LASAR-1.01
- LASAR-2.03.05
- LASAR-2.04.

Documents Under Development:

• IDD-MGR-MD-000001 Rev. 00