



## Scientific Analysis/Calculation Error Resolution Document

QA: QA  
Page 1 of 2

Complete only applicable items.

### INITIATION

1. Originator: Kevin Mon	2. Date: 4/10/2008	3. ERD No. ANL-DSD-MD-000001 ERD02
4. Document Identifier: ANL-DSD-MD-000001 REV 01	5. Document Title: Aqueous Corrosion Rates for Waste Package Materials	

### 6. Description of and Justification for Change (Identify applicable CRs and TBVs):

#### Description of Changes:

In regard to CR 10367:

1. CR 10367 documents that incorrect environmental descriptions (i.e., exposure temperatures) were listed in DTN: LL030410012251.056 [DIRS 169583] for Titanium Grade 7 specimens exposed in SCW solutions (DTN: LL030410012251.056 has been corrected previously). Although the exposure temperature is not used to produce the technical product output from ANL-DSD-MD-000001 REV 01, Table 4-31 is changed as shown on the following page. Column 1 is added to Table 4-31 to aid in traceability. The exposure temperatures for the specimens now identified as NWA 118, NWA 119, NWA 120, NWE 118, NWE 119, and NWE 120 are changed from 90 to 60.
2. Appendix II of ANL-DSD-MD-000001 REV 01 is modified. Cells I11, I12, I13, I17, I18, I19 of the worksheet named "Sheet 1" in the file named *titanium.xls* are changed from 90 to 60. A similar change has been made previously in output DTN: MO0409SPAACRWP.000 (which is output from ANL-DSD-MD-000001 REV 01).
3. In evaluation of CR 10367, it was found that cell J22 of the worksheet named "Sheet 1" in the file named *titanium.xls* in output DTN: MO0409SPAACRWP.000 (which is output from ANL-DSD-MD-000001 REV 01), contains the value 49.49 for the corrosion rate in nm/yr of Titanium Grade 7 in SCW solution at 90°C. According to DTN: LL030410012251.056 [DIRS 169583], this value should be 49.46. This error had no impact on the subsequent calculations to the number of digits displayed. The correct value is listed in ANL-DSD-MD-000001 REV 01, Table 4-31 and in the worksheet named "Sheet 1" in the file named *titanium.xls* in Appendix II. A comment was added to the comment field of output DTN: MO0409SPAACRWP.000 (which is output from ANL-DSD-MD-000001 REV 01).

### CONCURRENCE

	Printed Name	Signature	Date
7. Checker	Gopal De		05/14/2008
8. QCS/QA Reviewer	Brian Mitcheltree		5/14/08

### APPROVAL

9. Originator	Kevin Mon		05/14/08
10. Responsible Manager	Paul Dixon		5-19-08



# Scientific Analysis/Calculation Error Resolution Document

QA: QA  
Page 2 of 2

Complete only applicable items.

## INITIATION

1. Originator:  
Kevin Mon

2. Date:  
4/10/2008

3. ERD No.  
ANL-DSD-MD-000001 ERD02

4. Document Identifier:  
ANL-DSD-MD-000001 REV 01

5. Document Title:  
Aqueous Corrosion Rates for Waste Package Materials

Table 4-31. Titanium Grade 7 Weight-Loss Corrosion Rates in Aqueous Media (2.5-Year Data)

Specimen Identifier	Corrosion Rate (nm/yr)	Temp (°C)	Type of Analysis	Fluid Type
NWA 028	0.00	60	WL	Aqueous Phase SAW
NWA 029	0.00	60	WL	Aqueous Phase SAW
NWA 030	0.00	60	WL	Aqueous Phase SAW
NWA 088	0.00	90	WL	Aqueous Phase SAW
NWA 089	2.91	90	WL	Aqueous Phase SAW
NWA 090	14.59	90	WL	Aqueous Phase SAW
NWA 118	23.37	60	WL	Aqueous Phase SCW
NWA 119	2.92	60	WL	Aqueous Phase SCW
NWA 120	26.30	60	WL	Aqueous Phase SCW
NWA 148	43.57	90	WL	Aqueous Phase SCW
NWA 149	43.63	90	WL	Aqueous Phase SCW
NWA 150	46.29	90	WL	Aqueous Phase SCW
NWA 178	2.89	60	WL	Aqueous Phase SDW
NWA 179	5.77	60	WL	Aqueous Phase SDW
NWA 180	2.89	60	WL	Aqueous Phase SDW
NWA 208	0.00	90	WL	Aqueous Phase SDW
NWA 209	0.00	90	WL	Aqueous Phase SDW
NWA 210	0.00	90	WL	Aqueous Phase SDW
NWE 028	0.00	60	WL	Aqueous Phase SAW
NWE 029	0.00	60	WL	Aqueous Phase SAW
NWE 030	2.95	60	WL	Aqueous Phase SAW
NWE 088	17.64	90	WL	Aqueous Phase SAW
NWE 089	2.94	90	WL	Aqueous Phase SAW
NWE 090	2.94	90	WL	Aqueous Phase SAW
NWE 118	11.83	60	WL	Aqueous Phase SCW
NWE 119	14.83	60	WL	Aqueous Phase SCW
NWE 120	17.64	60	WL	Aqueous Phase SCW
NWE 148	43.75	90	WL	Aqueous Phase SCW
NWE 149	49.70	90	WL	Aqueous Phase SCW
NWE 150	49.46	90	WL	Aqueous Phase SCW
NWE 178	0.00	60	WL	Aqueous Phase SDW
NWE 179	0.00	60	WL	Aqueous Phase SDW
NWE 180	0.00	60	WL	Aqueous Phase SDW
NWE 208	0.00	90	WL	Aqueous Phase SDW
NWE 209	0.00	90	WL	Aqueous Phase SDW
NWE 210	2.92	90	WL	Aqueous Phase SDW

Justification for Change:

In regard to CR 10367:

CR 10367 documents that incorrect environmental descriptions (i.e., exposure temperatures) were listed in DTN: LL030410012251.056 [DIRS 169583] for Titanium Grade 7 specimens exposed in SCW solutions (DTN: LL030410012251.056 has been corrected previously). The exposure temperature is not used to produce the technical product output from ANL-DSD-MD-000001 REV 01. Therefore, the changes in items 1) and 2), above, are not relevant to safety or waste isolation and do not have any impact on the results of the Safety Analysis Report or the Total System Performance Assessment.

Analysis of Impacted Documents:

The changes listed in items 1), 2) and 3) have no impact on the conclusions of or the outputs from ANL-DSD-MD-000001 REV 01. Therefore, there is no impact on the following controlled document that cites ANL-DSD-MD-000001 REV 01 as direct input: ANL-DS0-NU-000001 Rev. 00.