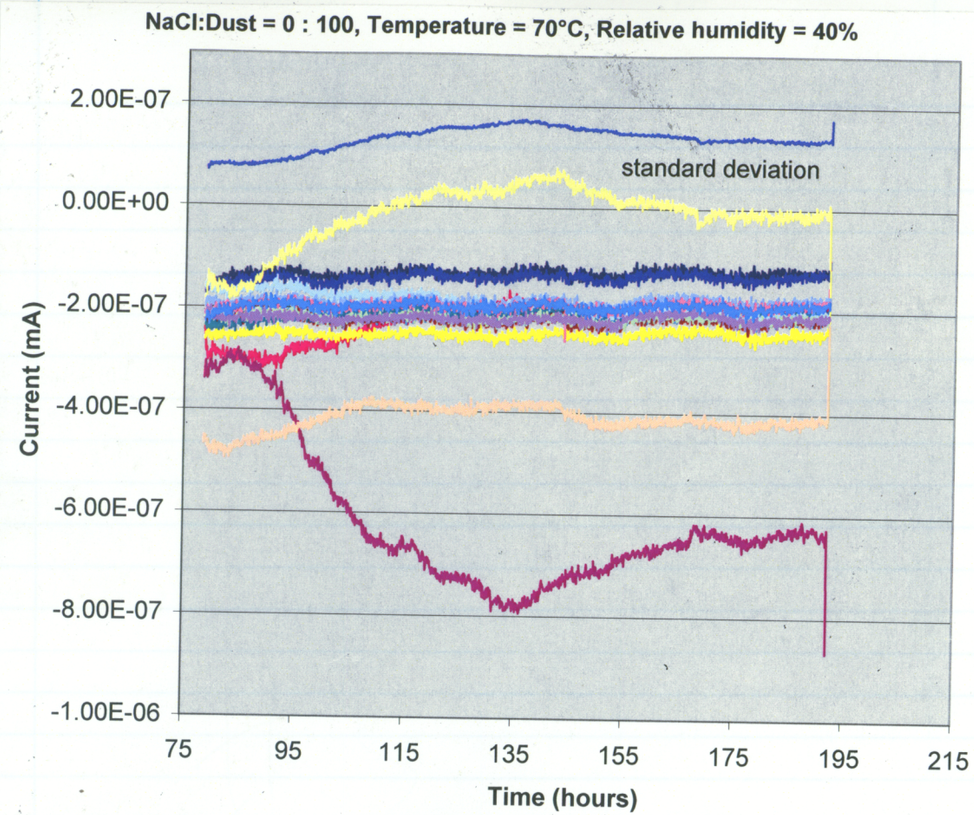
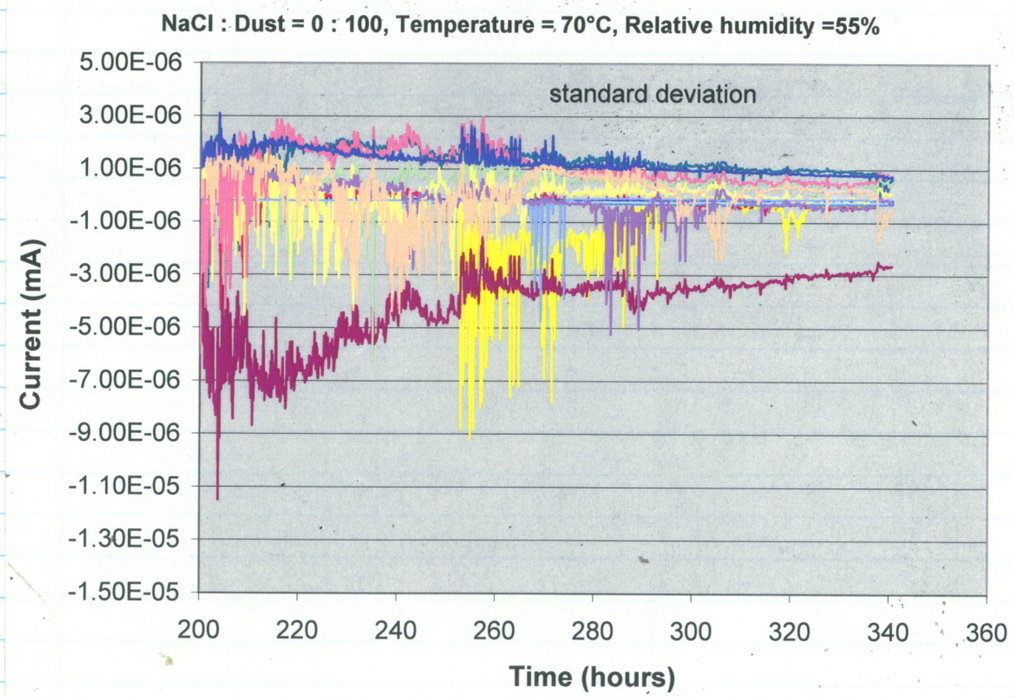
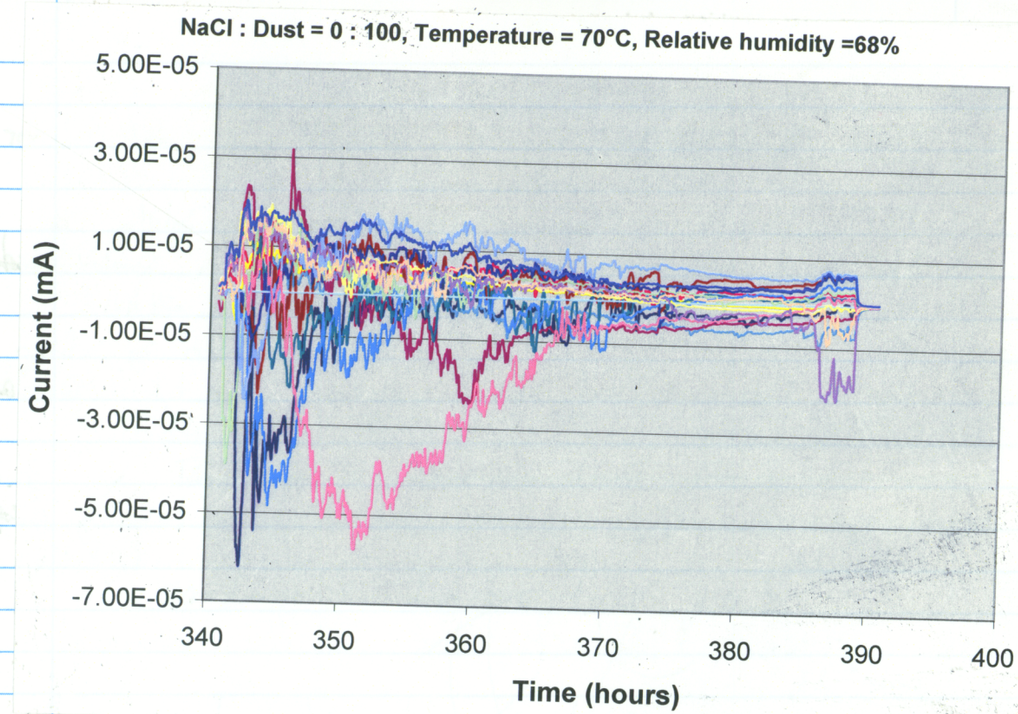


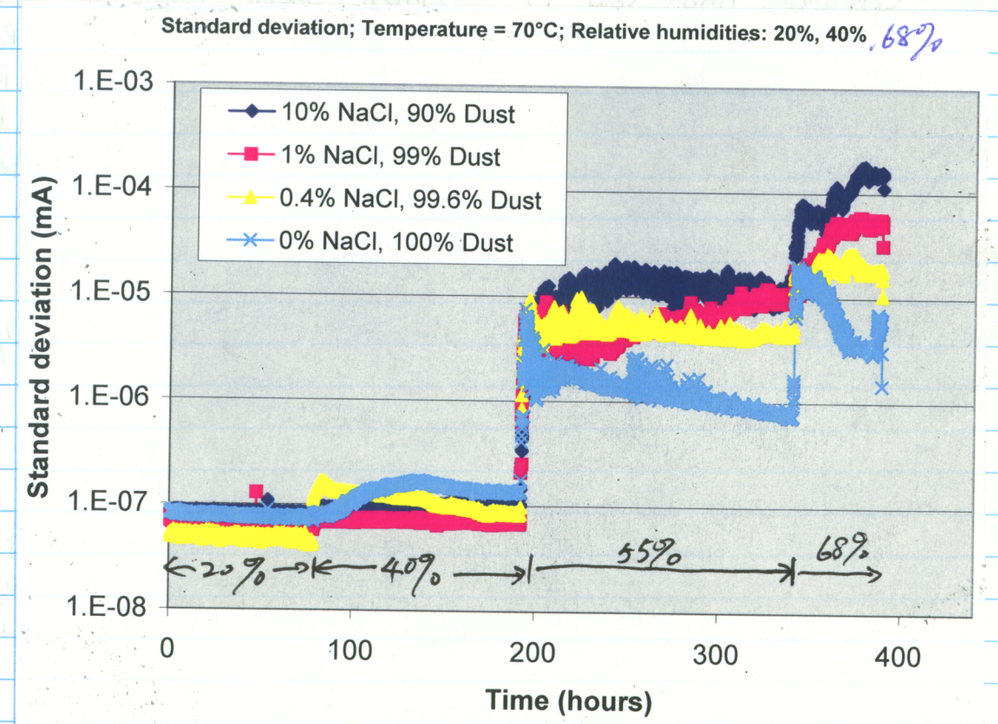
Xihua He 7/21/06



Xihua He 7/27/06



Xihua He 8/2/06



continued on p. 54 Xihua He 8/2/06

Dust leaching Test

PTFE Vessels - Cleaned with Nitric Acid Solution
And Rinsed well with DI H_2O. filled with ~~fresh fresh~~ 8/24/06
New DI water placed In Oven @ 90°c for 24 hrs
then Rinsed with DI At least 6 x. Placed 5g Sifted 200 mesh
Dust Into 3 Test Vessels - Measured 50 mls DI In Graduated Cyl.

Cell # 8
5.029g Dust 200 mesh w/ 50 mls DI

Cell # 12
5.016g Dust 200 mesh w/ 50 mls DI

} In Oven @ 70°c

Cell # 23
5.009g Dust 200 mesh w/ 50 mls DI - Room Temp

Cell #8 And Cell #12 Placed Into Oven @ 70°c
Cell #8 will Have Samples Pulled Cell #12 will Remained closed for A set Amount of Time. Cell #23 will Remain At Room Temperature 25°c And Samples will be Pulled
* Note: All Samples of Solution will be Pulled After Cell Has been Shook up, then Solution will be filtered by A 0.45μm filter then will be Sent for ICP Analysis

All weight measurements Taken on Ohaus SN# 2883 cal: 7/5/06 Due 1/5/07

Oven: Fisher Isotemp Oven SN# 507N0024
set point: 70°c Temp: 70.6°c

Temp Measurement Taken with Fisher Temperature Meter
SN# 41523645 cal: 5/23/06 Due 5/23/07
Thermocouple # 334 cal: 4/28/06 Due: 10/27/06

Started Test 7/19/06 @ 10:30 am * Room Temp started 7/21/06 @ 9:00 am
(Continued Next Pg #51) 7/21/06

70°c Pulled 1st Solution Sample 7/24/06 @ 10:35 A.m
filtered 3 mls of Solution thru 0.45μm filter (Cell #8)

25°c Pulled 1st Solution Sample 7/26/06 @ 9:00 Am
filtered 3 mls of Solution thru 0.45μm filter (Cell #23)

70°c Pulled 2nd Solution Sample 8/2/06 @ 10:30 Am
filtered 3 mls of Solution thru 0.45μm filter (Cell #8)

25°c Pulled 2nd Solution Sample 8/9/06 @ 9:00 Am (Cell #23)
filtered 3 mls of solution thru 0.45μm filter

Samples will be Sent for ICP Analysis

* Samples will Be Marked with Cell Number
then Solutions will Be Marked A & B
A = 1st sample Pulled B = 2nd sample Pulled

* 8/29/06

Pulled Sample from Cell #23 After 5 wks 3 days At Room Temp. Dust Had Settled To Bottom of Test Cell Shook for 30 sec. then Pulled 3 ml same out. Sample was filtered with 0.45μm filter Sent for ICP/IC Analysis

Sample Marked #23 C

Analysis results are on pages 74, 75

8/9/06

FORM FOR REQUESTING WORK FROM OTHER DIVISIONS

A. TO BE COMPLETED BY DIVISION 20 PERSONNEL

Requester: Xihua He **Request Date:** 8-10-06
Project No.: 20.06002.01.322 **Phone No.:** X5194
Description of Work Requested:
Complete ICP Analysis And IC for F^-, NO_3^-, Cl^- SO_4^{2-}

☐ Optical Microscopy ☐ SEM ☐ Hardness ☐ Profilometer ☐ Auger ☐ Other

***QUALITY REQUIREMENTS:** The work requested is governed by the CNWRA Quality Assurance Program which addresses requirements of 10CFR50, Appendix B. Personnel performing this work shall be qualified under the CNWRA QA program or equivalently under the SwRI Nuclear QA program. Test and analysis methods shall be documented by approved procedures or recognized, standard methods. Measuring and test equipment shall be calibrated and controlled according to CNWRA and SwRI Nuclear QA program requirements.*

Sample Identification	Description
#8 A	DI with Dust (crushes Rock)
#8 B	
#23 A	
#23 B	

B. TO BE COMPLETED BY DIVISION PERFORMING WORK[1]

☐ Optical Microscopy ☐ SEM ☐ Hardness ☐ Profilometer ☐ Auger ☐ Other

Person Assigned: _____ **Signature:** _____
Division: _____ **Date:** _____

Make, Model & Serial No. of Equipment Used (*attach list if necessary*): _____

Software Used (If any): _____

Standards Used (If any): _____

Photographic Negative Numbers (If Applicable): _____

[1] Please sign and date any hardcopy of analysis or list of photographs (The photographs themselves need not be signed). If error occurred during entry, do not erase or overwrite, but strikeout with single line, initial and date, and then reenter correct information.

8/10/06

Div 01 COC Form 01-01-001, Rev 8/02

SAMPLE LIST/CHAIN OF CUSTODY
Southwest Research Institute®
Chemistry and Chemical Engineering Division
6220 Culebra Road
San Antonio, Texas 78238-5166

Client: Div 20 Xihua He
Shipper Name/Address:
Client Purchase Order/Other ID:
Site/Zone ID:
SwRI Contact: Xihua He X5194
Requested Turnaround: ☑ 2 Weeks ☐ 3 Weeks ☐ Other: _____

Sample ID	Sample Collection Date (mm/dd/yy)	Sample Collection Time	Matrix Type	Sample Type	# of Containers	ICP Analysis Complete	IC for F^-, NO_3^-, Cl^- SO_4^{2-}
8A	7/24/06	10:30	L		1	✓	✓
8B	7/24/06	10:30	L		1	✓	✓
23A	7/26/06	5:00	L		1	✓	✓
23B	8/9/06	1:00	L		1	✓	✓

Analyses Requested: QA Nuclear

Matrix Types: A – Air; B – Biota; D - Dust; E – Emission/Stack; L - Liquid; P – Product; Sd - Solid; S – Soil; SED – Sediment; T - Tissue; W - Water; WP - Wipe

Sample Types: D - Duplicate; ER – Equipment Rinsate; ES – Environmental Sample; FB – Field Blank; FD – Field Duplicate; MS – Matrix Spike; MSD – Matrix Spike Dup; TB – Trip Blank

Temp: Therm #: Comments:

Preservation: a = HCl to pH <2; b = HNO_3 to pH <2; c = H_2SO_4 to pH <2; d = NaOH to pH >12; e = Cool (4°C±2°C); f = Other (specify)

REMARKS

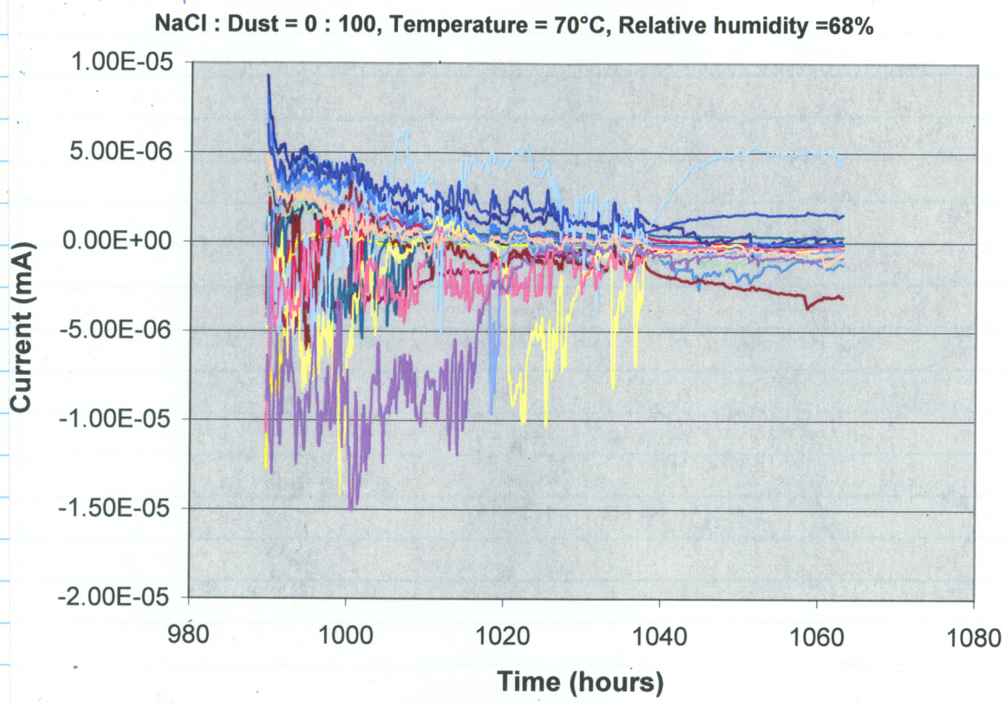
Relinquished by (Print/Signature)	Date	Time	Received by (Print/Signature)	Date	Time
Brian K. Dealy	8/10/06				

SwRI Project#: 20.06002.01.322
Received by SwRI Lab: (Signature) Date Time
Samples Disposed: Date Time
Samples Disposed by:

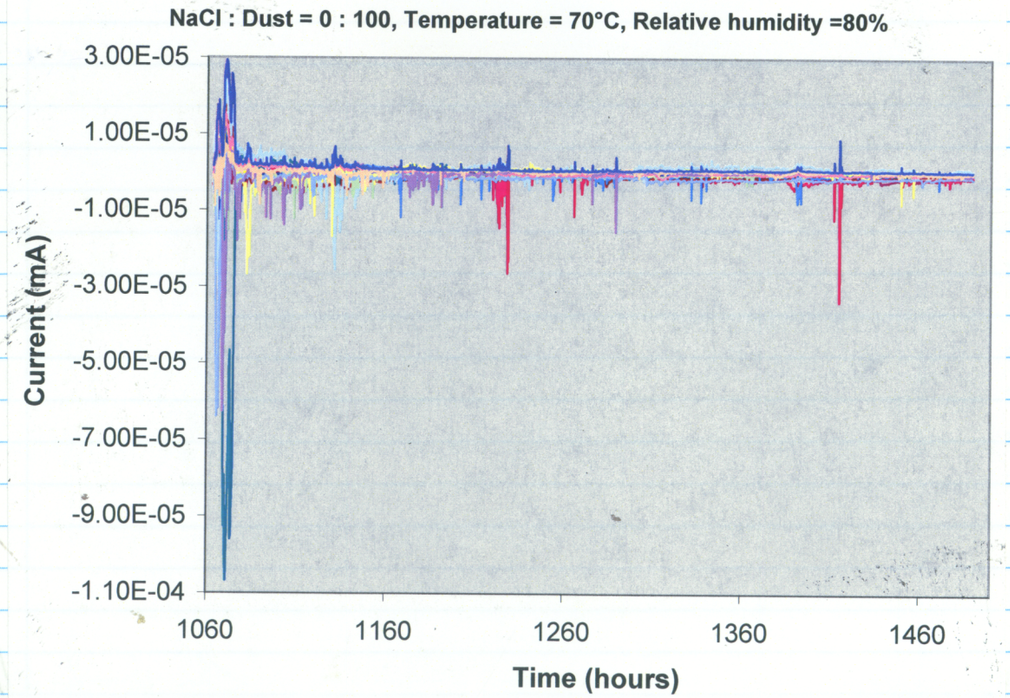
Page ____ of ____

8/10/06

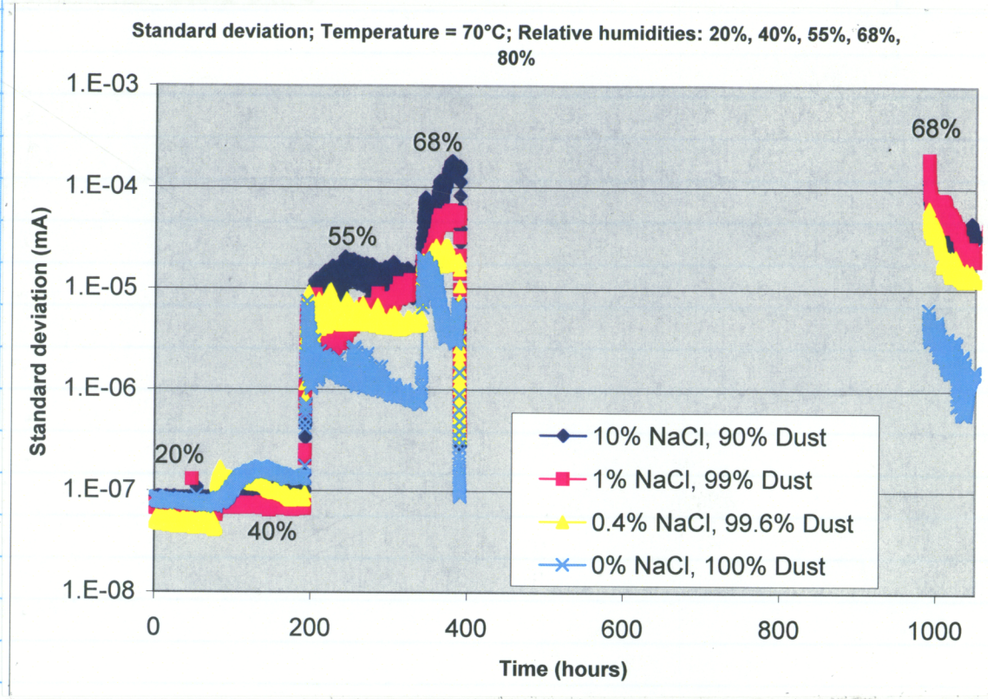
Continued from p. 49

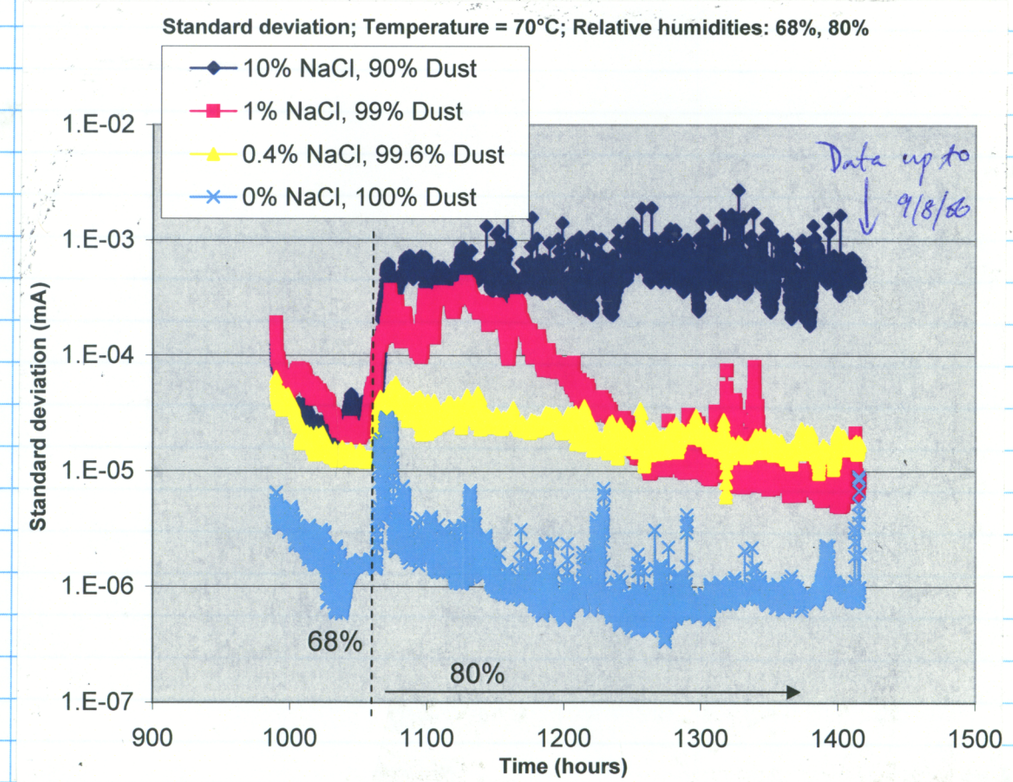


Xichua He 8/28/06



Xichua He 9/11 06





Xichua He 9/8/06