

VM

14th March 2011**Our Reference: 810/S/12599R**

Site 3 Development Co. Pty Limited
Locked Bag 1451
MEADOWBANK NSW 2114
Attention: Mr. Michael Azar

Email: Michael Azar [Michael@waterpoint.am]

Dear Michael,

**Re: Stray Rail Current Electrolysis Risk Report for Proposed
Stage 2 & 3 Development, Australia Ave, Sydney Olympic Park.**

In accordance with instructions from Site 3 Development Co. Pty Limited, Savcor ART Pty Ltd has undertaken stray current electrolysis interference testing at the above location between the 10th and 11th March 2011 to ascertain the level of stray current interference produced by the nearby electrified railway system.

Results of the interference testing and recommendations based on the test result charts are discussed below.

Test Procedure

In order to determine the level of stray rail interference the potentials of a number of existing and temporary metallic structures within the proposed development site were monitored against portable reference electrodes over a 24 hour period using Waikura Data Loggers to record any changes in potential.

Eight (8) metallic structures on the site were selected for monitoring. These structures included the following:

- i) Chart – Site 0001 – Temporary earth stake (south) eastern end of development.
- ii) Chart – Site 0002 – Temporary earth stake western side of development.
- iii) Chart – Site 0003 – Cyclone fence north of large fig tree.
- iv) Chart – Site 0004 – Temporary earth stake north east side of development.
- v) Chart – Site 0005 – Temporary earth stake south eastern side of development.
- vi) Chart – Site 0006 – Water meter adjacent to eastern entrance to development.
- vii) Chart – Site 0007 – Temporary earth stake eastern side near rail corridor.
- viii) Chart – Site 0008 – Temporary earth stake behind portable offices, west boundary.

Criteria

Criteria adopted for the testing work is Australian Standard AS2832.1 – 2004.

Test Locations and Results

For data logger monitoring locations refer to site drawing in Appendix 1. For data logger chart results refer to Appendix 2.

Discussion of Test Results and Conclusions

Low levels of interference were recorded on the eight metallic structures during the monitoring period. A summary of the results is as follows:

- i) Site 0001 – Temporary earth stake (south) eastern end of development: Low levels of interference were recorded on the earth stake at this location during the survey with average potential shifts of approximately 10mV being recorded.
- ii) Site 0002 – Temporary earth stake western side of development: Low levels of interference were also recorded at this location with average potential shifts of approximately 15mV being recorded.
- iii) Site 0003 – Cyclone fence north of large fig tree: Low levels of interference were recorded on the fence during the monitoring period with average potential shifts of approximately 10mV being recorded.
- iv) Site 0004 – Temporary earth stake north east side of development: Low levels of interference were recorded on the earth stake with average potential shifts of approximately 10mV being recorded.
- v) Site 0005 – Temporary earth stake south eastern side of development: Low levels of interference were recorded on the earth stake during the peak rail periods with average potential shifts of approximately 10mV being recorded.
- vi) Site 0006 – Water meter adjacent to eastern entrance to development: Low levels of interference were recorded at the water meter with average potential shifts of approximately 10mV being recorded during the peak periods.
- vii) Site 0007 – Temporary earth stake eastern side near rail corridor: Low levels of interference were recorded on the earth stake at this location with average potential shifts of approximately 15mV being recorded.
- viii) Site 0008 – Temporary earth stake behind portable offices, west boundary: Low levels of interference were recorded on the earth stake at this location with average potential shifts of approximately 5mV being recorded.

Recommendations

As low levels of stray rail interference were detected during the monitoring period the recommendation is made to use the following changes to construction methods to mitigate possible future interference:

- Where practicable, make all steel reinforcement in the concrete footings for slabs and brickwork electrically continuous using standard tie wire construction.
- Maintain a minimum cover of the concrete to the reinforcement of 40mm where the concrete is in contact with the soil. Use a waterproof membrane between the soil and reinforced concrete interface at all locations where the concrete is in direct contact with the surrounding soil. Alternatively, use a high quality water proofing agent in all concrete.
- Electrically isolate any new buried metallic services (eg. water and gas) at the site boundary using insulating fittings or install high-pressure plastic pipe for these buried services.

Note: Although low levels of stray rail interference were recorded during the data logger survey, levels of interference may change due to weather conditions and /or changes to Railway operations / activities.

We trust you find our report satisfactory. Should however, you have any queries or require clarification on any items, please do not hesitate to contact our office.

Yours faithfully,

SAVCOR ART PTY LTD

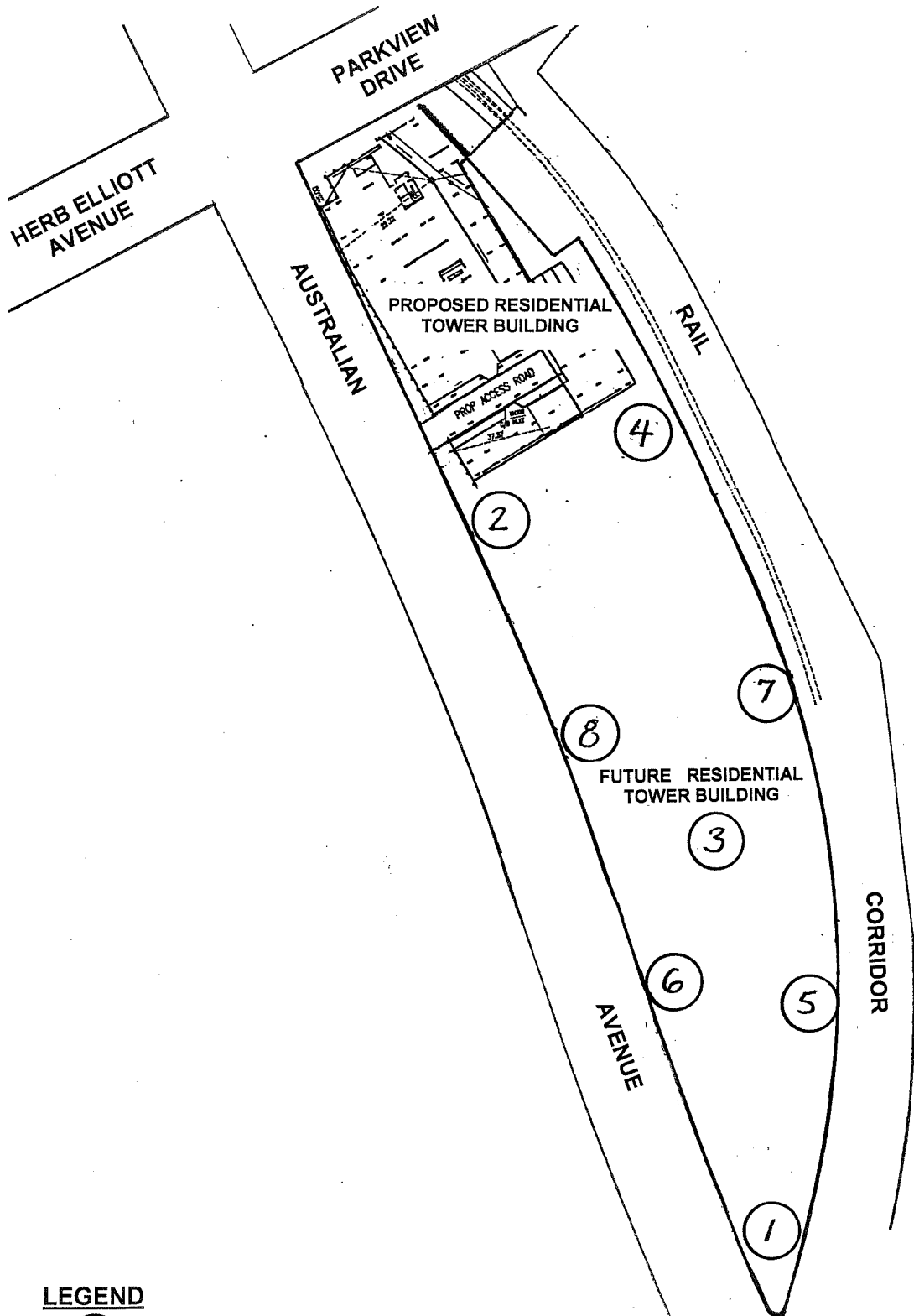


VIC McLEAN
Engineering Manager NSW - Steel Structures

Encl.

APPENDIX 1

DATA LOGGER TEST LOCATIONS



LEGEND

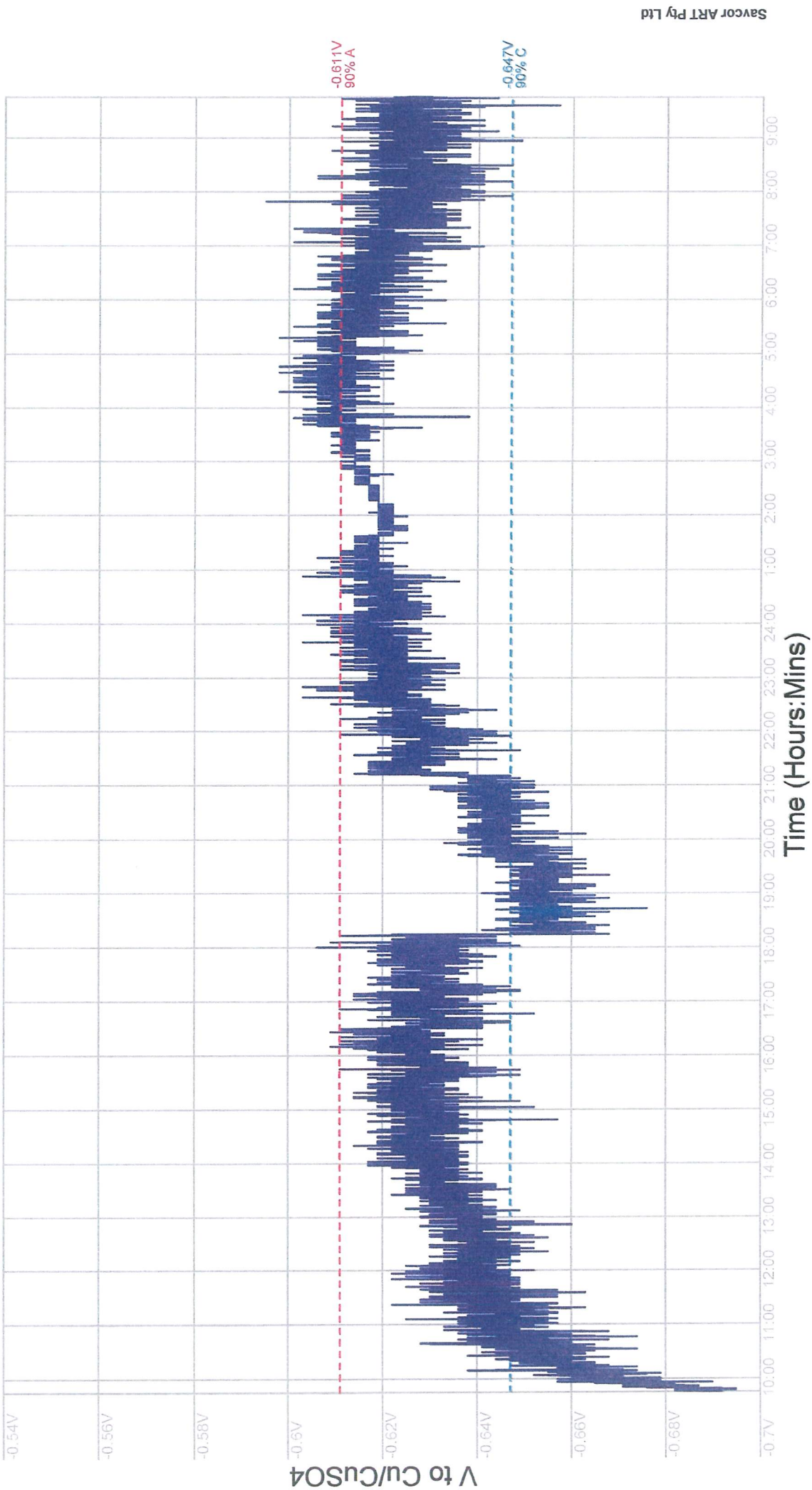
(2) Denotes data logger test location No. 0002

BRANCH: SYDNEY	DESCRIPTION: ELECTROLYSIS RISK REPORT – PROPOSED STAGE 2 & 3 DEVELOPMENT, AUSTRALIA AVENUE, SYDNEY OLYMPIC PARK	DATE: MARCH 2011
JOB NO: 12599R	DATA LOGGER TEST LOCATION DETAILS	BY: BP

APPENDIX 2

DATA LOGGER CHARTS

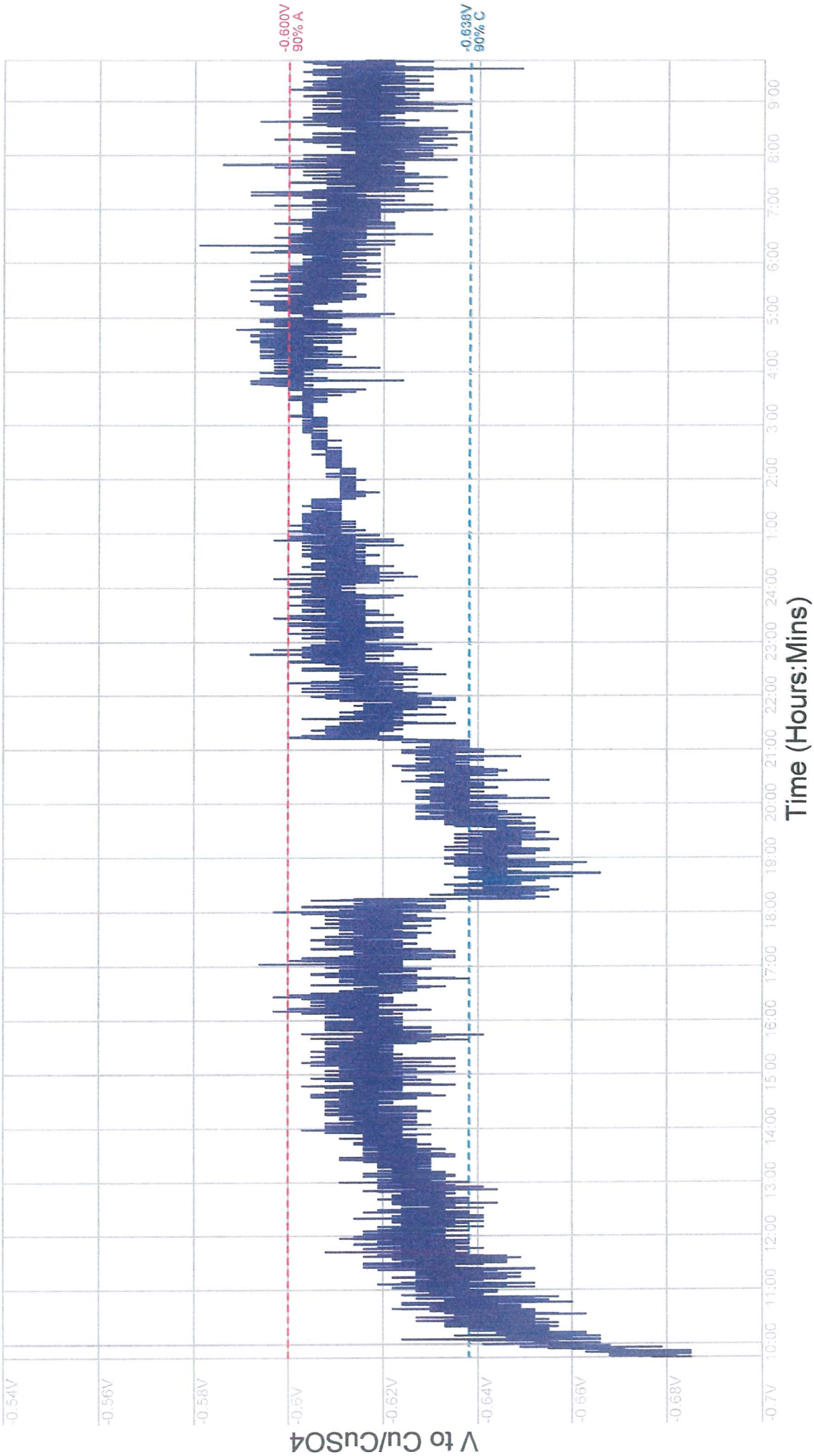
SYDNEY OLYMPIC PARK DEVELOPMENT STAGE 2 & 3
Site 0001 - 0Km : EARTH STAKE EASTERN SIDE
Start: 10/03/2011 9:45:00 AM End: 11/03/2011 9:45:00 AM
Waikura-128K-1A 7257 Channel 1



Savcor ART Pty Ltd

Standard	> Threshold	> Thres+50	> Thres+100	> Thres+850	Avg On	90% C	90% A	Min Neg (ON)	Avg OFF	Max Pos (ON)	Max Pos (OFF)
Actual	100.00%	100.00%	100.00%	0.00%	-0.629V	-0.647V	-0.611V	-0.695V	0.000V	-0.595V	0.000V
Allowable	LP 10%	SP 5%	SP 1%	SP 0.2%							

SYDNEY OLYMPIC PARK DEVELOPMENT STAGE 2 & 3
Site 0002 - 0Km : EARTH STAKE WESTERN SIDE
Start: 10/03/2011 9:45:00 AM End: 11/03/2011 9:45:00 AM
Waikura-128K-1A 7099 Channel 1



Standard	> Threshold	> Thres+50	> Thres+100	> Thres+850
Actual	100.00%	100.00%	100.00%	0.00%
Allowable	LP 10%	SP 2%	SP 1%	SP 0.2%

Avg On	90% C	90% A	Min Neg (ON)	Avg OFF	Max Pos (ON)	Max Pos (OFF)
-0.620V	-0.638V	-0.600V	-0.685V	0.000V	-0.581V	0.000V

SYDNEY OLYMPIC PARK DEVELOPMENT STAGE 2 & 3

Site 0003 - 0Km : CYCLONE FENCE NORTH OF LARGE FIG TREE

Start: 10/03/2011 10:10:00 AM End: 11/03/2011 10:10:00 AM

Waikura-128K-1A 7249 Channel 1

