ADVANCED METAL COATING ANALYSIS, INC.
5038 LAUDERDALE AVENUE
VIRGINIA BEACH, VIRGINIA 23455
PH: +1 (757) 715-7920
AdMetCo@AdMetCo.US.com
http://www.rustdr.com/

June 06, 2008

Lori Burry
Eastern Foundry Limited
3 Wharf Rd.
Clarenville, NL, CANADA A5A 2B2

RE: AdMetCo Project 8148141: Performance Evaluation of Aluminum Alloy Anodes: NACE TM0190 Testing.

Dear Ms. Burry:

This letter represents the report on the laboratory testing of three aluminum specimens you supplied to me.

Three (3) individual tapped aluminum alloy samples were received by Advanced Metal Coating Analysis, Inc. The anode specimens were tested in accordance with NACE Standard TM0190, "Impressed Current Laboratory Testing of Aluminum Alloy Anodes." Each specimen was cleaned using the specified pre-cleaning solution, dried and weighed to the nearest 0.001g, prior to testing. All specimens were tested simultaneously and connected in series.

Table 1 shows the closed circuit potential measurements for each of the specimens after three hours, 24 hours, 48 hours, 72 hours, and 336 hours. These potentials were referenced verses a saturated calomel electrode (SCE). The solution was changed twice during the testing period with freshly aerated solution to maintain pH stability. The total number of ampere-hours passed through the cells during the fourteen-day test was 8.08 Ah.

Table 2 reports the ampere-hours per unit mass loss for each specimen. Also included in Table 2 is the anode impressed current capacity based upon mass loss and ampere hour charge for a two week period.

Sincerely

Desmond Cook

Desmond C. Cook, Ph.D.
President, Advanced Metal Coating Analysis, Inc.
Desmond@AdMetCo.US.com
Mobile: 757-715-792
Office: 757-683-4695

Table 1. Open- and Closed-Circuit Potentials.

Sample No.	Closed Circuit Potential, Three Hours (V-vs.-Calomel)	Closed Circuit Potential, 24 Hours (V-vs.-Calomel)	Closed Circuit Potential, 48 Hours (V-vs.-Calomel)	Closed Circuit Potential, 72 Hours (V-vs.-Calomel)	Closed Circuit Potential, 336 Hours (V-vs.-Calomel)	Open Circuit Potential, 337 Hours (V-vs.-Calomel)
1	-1.089	-1.096	-1.098	-1.096	-1.077	-1.157
2	-1.097	-1.103	-1.094	-1.094	-1.070	-1.154
3	-1.098	-1.105	-1.094	-1.094	-1.059	-1.14

Table 2. Ampere-Hour / Mass Loss – Impressed Current Capacity Results.

Sample №	Ampere-Hours/Mass Loss (Ah/g)	Efficiency (%)	Impressed Current Capacity A-h/kg
1	2.166	72.7	2166
2	2.423	81.4	2423
3	2.020	67.8	2020