To: "michae[redacted]" [redacted]@sri.com>
From: Steve Krivit [redacted]@newenergytimes.com>
Subject: News Inquiry
Cc: Ellie Javadi [redacted]@sri.com>, "lindsay [redacted]@sri.com>
Bcc:
Attached: H:\N\Pub\34\m4\EPRI-SRI M4 – Full Time Scale-mm.jpg;

Dr. McKubre,

I am writing an article on some aspects of a helium-4 experiment performed at SRI.

I would need responses by 5pm Monday (Jan. 25).

Thank you,

Steven B. Krivit
New Energy Times
[redacted]

Background Facts for Experiment M4:
1. Helium, does not dissolve in metals and permeates only poorly into/out of metals, primarily through cracks in the surface.
2. LENR experiments don't produce excess heat if the cathodes have cracks.
3. Anodic stripping would remove deuterium, impurities (including surface adsorbed helium).
4. M4 had a set of heat bursts running from 464h to 669h.
5. M4 was stripped at 740 h.
6. M4 was stripped again at 1077h.
7. M4 was purged at 1172h.
8. Sample 3 measured 0.340 ppm 4He during or toward the end of the purge.
9. Sample 4 measured 2.077 ppm.

Question 1:
Considering the facts (1-9) can you conceive of any way that the majority of the 2.077 ppm measured in sample 4 could have come from the heat bursts during 464h to 669h, and if so, can you please explain what that would be?

Question 2:
How do you explain the changes [3] in the predicted values of helium as written in the 2000 paper [2] and the 2004 paper [5] from the original predicted values shown in the 1998 paper?[4]

Question 3:
To your knowledge, have any significant errors in [4] , specifically with regard to the predicted helium, ever been reported?

For your convenience, I have constructed an image that displays the full time scale display of the experiment from t-0 through t-1700, based on information from [4]. The image shows the only three power bursts reported by [2] as well as [4]. As you know, only bursts 2 and 3 were considered to represent a "real" energy excursion, in both papers, [2] as well as [4]. The image shows the four helium samples and their actual measurements. Lastly, the image shows references to the time of the two anodic strips that occurred between sample 3 and sample 4. For your convenience, I have provided the page numbers in [4] where you can verify this. **(Enclosed: EPRI-SRI M4 – Full Time Scale.jpg)**

Thank you,

Steven

[1a.] "exercise the cathode to release trapped gases (2.08 +/-0.01ppmV)"
[1b.] "Taking these increases as evidence of sequestered 4He, the cathode was subjected to an extended period (~200 hours) of compositional and temperature cycling by varying the current density in both anodic and cathodic directions."
[1c.] "a calculated mass balance for 4He in the gas phase after compositional and thermal cycling of the cathode results in a number that is 104 ± 10%"
[2.] McKubre, Michael, Tanzella, Francis, Tripodi, Paolo, Hagelstein, Peter, "The Emergence of a Coherent Explanation for Anomalies Observed in D/Pd and H/Pd System: Evidence for 4He and 3He Production," *Proceedings of the Eighth International Conference on Cold Fusion,* Lerici (La Spezia,) Bologna, Italy, (2000)
[3.] (image of variance in helium predictions)

Experiment M4 Helium Predictions in 1998 versus 2000/2004 Papers				
Sample #	S1	S2	S3	S4
Measured Helium (ppm)	1.556	1.661	0.340	2.077
Predicted Helium (1998)	41% (of 3.76 ppm)	147%[1] (of 1.13 ppm)	100%[2]	Not Stated
Predicted Helium (2000/2004)	62%	69% (2004 only)	Shown in 2004 but unclear	104% [3] (84% per 2004 graph)

[4.] Development of Energy Production Systems from Heat Produced in Deuterated Metals, Volume 1, TR-107843-V1, June 1998
[5.]]Peter Hagelstein, Michael McKubre, David Nagel, Talbot Chubb, Randy Hekman, "New Physical Effects In Metal Deuterides," Submitted to the 2004 U.S. Department of Energy LENR Review