



**ARC PERFORMANCE & BYPRODUCTS OF FIREICE
SUMMARY OF AIR SAMPLING RESULTS**

Kinectrics Report: K-015787-RC-0001-R00

11 February 2011

Client Job Number: K-015787

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PRIVATE INFORMATION

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**ARC PERFORMANCE & BYPRODUCTS OF FIREICE
 SUMMARY OF AIR SAMPLING RESULTS**

1 TEST DESCRIPTION

A total of five field test air sampling collections were undertaken on January 18, 2011 at the High Current Laboratory (HCL) to evaluate the air emissions released from the application of FireIce® to artificially faults generated using copper and aluminum cables provided by GelTech Solutions. The five test scenarios were air sampled for airborne metals and organics. The description of the tests is given in Table 1.

Table 1 Test description

Test #	Shot #	Test description	Cable description
1	119	New cables with copper conductor artificially faulted to create arc with no FireIce® added. Target fault current: 2 kA. Fault duration: until fault self-extinguished.	coned 500 kcmil Cu 600V EAM/LSNH installed in coned precast concrete distribution box type B-3.6
2	120	New cables with copper conductor artificially faulted to create arc with FireIce® added at the on-set of arc. Target fault current: 2 kA. Fault duration: until fault self-extinguished.	coned 500 kcmil Cu 600V EAM/LSNH installed in coned precast concrete distribution box type B-3.6
3	121	New cables with copper conductor artificially faulted to create are with FireIce® added at the on-set of arc – this was a repeat of test#2 due to poor arc generation and non propagation of arc. Target fault current: 2 kA. Fault duration: until fault self-extinguished.	coned 500 kcmil Cu 600V EAM/LSNH installed in coned precast concrete distribution box type B-3.6

4	122	New cables with aluminum conductor artificially faulted to create arc with FireIce® added at the on-set of arc.	coned 350 MCM Al 600V EPR installed in coned precast concrete distribution box type B-3.6
5	123	New cables with aluminum conductor artificially faulted to create arc with “FireIce®” added to concrete box to cover faulted cables prior to high current being applied to create arc. Target fault current: 2 kA. Fault duration: until fault self-extinguished.	coned 350 MCM Al 600V EPR installed in coned precast concrete distribution box type B-3.6

In all the tests the cables were installed at the bottom of the concrete box, and the fault between the cables was created using a fuse wire. The approximate dimensions of the interior volume of the concrete box are: 33” x 33” x 24”. The concrete box drawing is given in Appendix A. One calorimeter was installed above the concrete box to measure the incident energy generated by the fault. Pictures of the set-up are given in Appendix A.

Each test was recorded using a high speed video camera and a normal speed video camera. The current and the voltage waveforms are given in Appendix B. All the test data recorded (recorded waveforms, videos and photos) are provided in digital format on the attached DVD.

The sampling equipment consisted of five separate sampling trains, each with a sampling pump drawing air through various air sampling components using a calibrated mass flow controller to maintain constant flow. The sampling time for each train was two minutes during each of the 5 arc test scenarios. For each sampling train a flow rate was selected based on the type of air sample being collected. The five sampling trains consisted of the following components and the air flow rate utilized:

1. A sampling train consisting of a MCE (mixed cellulose ester) filter in a cartridge filter holder for aerosol collection generated during the arc. The air flow rate through the filter was set to 1 L/min.
2. A sampling train for organic compounds using two Carbotrap 300 sampling tubes in series (front-back arrangement) was placed with the front sampling tube inlet at the edge of the concrete bunker. The air flow rate for the organics sampling tube train was 0.050 L/min.
3. A sampling train consisting of three impingers in series with 1M nitric acid in the first two impingers and an empty third impinger was used to trap airborne metals. The metals train air flow rate was set to 0.50 L/min.
4. A sampling train identical to the one described in 3 but with 0.5M KOH added to the first two impingers and an empty third impinger was setup plus an additional Carbotrap 300 organic compound sampling train as described in 2 was added in series to the outlet of the last impinger. The air sampling flow rate was set to 0.25 l/min for this train.
5. A final sampling train consisting of 3 impingers in series as described in 3 but with KOH added to the first two impingers and an empty third impinger to capture acidic species possibly generated during the FireIce® tests. The air sampling flow rate was set to 0.25 L/min for this train.

2 ORGANIC COMPOUND SAMPLING RESULTS – CARBOTRAP 300 TUBE ANALYSES

2.1 Post-Impinger Air Samples

The organic compounds released to air were captured using Carbotrap™ 300 tubes after the air sample passed through a KOH impinger train. The sampling flow rate was 0.25 L/min. The total mass of organic compounds collected during each of the five arc fault tests are given in Table 2. The organic compounds identified in the air samples are summarized in Table 3.

Table 2 Total Mass of Organic Compounds Collected on Carbotrap 300 Sample Tubes and Estimated FireIce® Inhibition Ratio for Organic Compound Release

Test Number & Description	Total Mass of Organics Collected on Carbotrap 300 Tubes (ng)	Minimum Removal Efficiency Compared to Test 1
1 Pair of New Neoprene Copper Cables – No FireIce® Applied	615	-
2 Pair of New Neoprene Jacketed Copper Cables – Fire-Added at On-Set of Arc	189	3.2
3 Pair of New Neoprene Jacketed Copper Cables – Fire-Added at On-Set of Arc (Repeat)	138	4.5
4 Pair of New Neoprene Jacketed Aluminum Cables – FireIce® Added at On-Set of Arc	No Organic Compounds Detected	>61.5*
5 Pair of New Neoprene Jacketed Aluminum Cables – FireIce® Added Prior to Arc Generation	No Organic Compounds Detected	>61.5*

Note:

* - Assumed minimum removal efficiency is assumed to be >61.5 as detection limit for any single organic compound is 10 ng.

Table 3 Organic Compounds Identified in High Flow Samples

Test Number & Description		Organic Compounds Collected on Carbotrap 300 Tubes After Passage Through KOH Impingers	Total Organic Compound Mass (Front + Back) (ng)
1	Pair of New Neoprene Copper Cables – No FireIce® Added	ethane-1-chloro-1,1 difluoro* 2-butene, 2-methyl 1,3-butadiene, 2-methyl 1,3 pentadiene 1,4 pentadiene cyclopentane 1-pentene, 2-methyl benzene 1,4-cyclohexadiene 3-hexen-1-ol toluene ethylbenzene styrene** α -methyl styrene**	48000* 18 40 35 14 23 36 62 25 28 237 48 2740** 53**
2	Pair of New Neoprene Jacketed Copper Cables – Fire-Added at On-Set of Arc	ethane-1-chloro-1,1-difluoro 1,3-butadiene 1-pentene, 2-methyl propane, 2-methyl-1-nitro 3-heptene benzene butane, 1-chloro-2-methyl styrene** unknown	68* 14 21 31 8 62 25 99** 28
3	Pair of New Neoprene Jacketed Copper Cables – Fire-Added at On-Set of Arc (Repeat)	ethane-1-chloro-1,1-difluoro 1-propene, 2-methyl 1,3-butadiene 2-butene, 2-methyl 1-pentene, 2-methyl benzene unknown	264* 16 40 12 25 34 11
4	Pair of New Neoprene Jacketed Aluminum Cables – FireIce® Added at On-Set of Arc	No organic compounds detected on both front and back Carbotrap™ 300 tubes	0
5	Pair of New Neoprene Jacketed Aluminum Cables – FireIce® Added Prior to Arc Generation	No organic compounds identified on both front and back Carbotrap™ 300 tubes	0

Notes:

* - The ethane-1-chloro-1,1-difluoro is suspected to be contamination resulting from the partial decomposition of impinger train holder used during testing. The Freon HCFC 142b released during tests 1 to 3 is the trapped blowing agent used to make the closed cell foam. The foam was used to support and secure the impinger trains. Not included in organic compound mass reported.

** - The styrene and α -methyl styrene are unintentional contaminants generated from the destruction of the aerosol filter holder used during the first arc fault Test-1. The filter- holder was too close to the arc-fault zone and did not survive Test-1. The styrene values are not included in organic compound mass reported.

2.2 Direct Air Sampling

The total mass of organic compounds in the air samples collected directly on to Carbotrap 300 tubes during each of the five arc fault tests are give in Table 4. The organic compounds captured with the Carbotrap™ 300 tubes and subsequently detected during analysis are listed in Table 5. The sampling flow rate was 0.05 L/min.

Table 4 Total Mass of Organic Compounds on Direct Air Sample onto Carbotrap 300 Tubes and FireIce® Inhibition Ratio

Test Number & Description		Total Mass of Organics Collected on Carbotrap 300 Tubes (Front+Back) (ng)	Minimum Removal Efficiency Compared to Test 1
1	Pair of New Neoprene Jacketed Copper Cables – No FireIce®	158	-
2	Pair of New Neoprene Jacketed Copper Cables – Fire-Added at On-Set of Arc	65	2.4
3	Pair of New Neoprene Jacketed Copper Cables – Fire-Added at On-Set of Arc (Repeat)	15	>10
4	Pair of New Neoprene Jacketed Aluminum Cables – FireIce® Added at On-Set of Arc	None Detected	>15.8
5	Pair of New Neoprene Jacketed Aluminum Cables – FireIce® Added Prior to Arc Generation	10	15.8

The total organic compound concentration measured directly with the Carbotrap 300 tubes associated with the copper cable arc fault in Test-1 is estimated to be 1.6 mg/m³ without the application of FireIce®. For Test-2 through Test-5 the organic compound concentrations are estimated to be 0.6 mg/m³, 0.15 mg/m³, 0.0 mg/m³ and 0.1mg/m³, respectively.

The FireIce® application appears to be effective in reducing organic emissions for both the copper cables and the aluminum cables. The removal efficiencies estimated in Table 2 and Table 4 compare well. The application of FireIce® reduces organic emissions when applied with the arc fault is active. The presence of external contamination confirms the effective organic sampling in the vicinity of the arc fault during the five tests.

Table 5 Organic Compounds Identified in Direct Air Samples Collected on Carbotrap™ 300 Tubes

Test Number & Description		Organic Compounds Collected on Carbotrap 300 Tubes	Organic Compound Mass (ng/tube)
1	Pair of New Neoprene Copper Cables – No FireIce® Added	Ethane-1-chloro-1,1 difluoro* 1-pentene, 2-methyl benzene toluene styrene** α -methyl styrene** isobutyl nitrile propane, 2-methyl-1-nitro unknown	53* 15 64 41 70* 217* 11 14 13
2	Pair of New Neoprene Jacketed Copper Cables – Fire-Added at On-Set of Arc	1-propene, 2-methyl 1,3 butadiene 2-butene, 2-methyl 1-pentene, 2-methyl unknown	8 16 8 23 10
3	Pair of New Neoprene Jacketed Copper Cables – Fire-Added at On-Set of Arc (Repeat)	1-pentene, 2-methyl	15
4	Pair of New Neoprene Jacketed Aluminum Cables – FireIce® Added at On-Set of Arc	No organic compounds detected on both front and back Carbotrap™ 300 tubes	0
5	Pair of New Neoprene Jacketed Aluminum Cables – FireIce® Added Prior to Arc Generation	No organic compounds identified on both front and back Carbotrap™ 300 tubes Unknown peak (Front tube only)	0 10

Notes:

* - The ethane-1-chloro-1,1-difluoro is suspected to be contamination resulting from the partial decomposition of impinger train holder used during testing. The Freon HCFC 142b released during testing is the trapped blowing agent used to make the closed cell foam. The foam was used to support and secure the impinger trains. The Freon was not included in organic compound mass reported.

** - The styrene and α -methyl styrene are unintentional contaminants generated from the destruction of the aerosol filter holder used during the first arc fault Test-1. The filter- holder was too close to the arc-fault zone and did not survive Test-1. The styrene values are not included in organic compound mass reported.

Table 6 Metals Analysis Results (PPM) Filter Pack Sampling ~2m Above Arc Fault

Metal	Blank (Avg)	Test 2 (Cu)	Test 3 (Cu)	Test 4 (Al)	Test 5 (Al)
Al	<0.5	3.15	6.81	1.48	<0.5
Ca	2.15	1.80	4.96	2.52	1.93
Cu	<1.5	94.8	312	1.98	<1.5
Fe	<0.25	<0.25	2.85	<0.25	<0.25
K	67	68	39	28	23
Mg	0.19	8.4	18.9	0.25	<0.1
Na	<2.5	<2.5	5.8	<2.5	<2.5
P	<1	<1	1.2	<1	<1
S	<1	<1	3.7	<1	<1
Si	<1	4.3	20.5	<1	<1
Ag	<0.005	<0.005	0.007	<0.005	<0.005
As	<0.05	<0.05	<0.05	<0.05	<0.05
B	<0.05	<0.05	<0.05	<0.05	<0.05
Ba	0.007	0.012	0.022	0.008	0.006
Bi	<0.005	<0.005	<0.005	<0.005	<0.005
Be	<0.005	<0.005	<0.005	<0.005	<0.005
Cd	<0.005	<0.005	<0.005	<0.005	<0.005
Co	<0.005	<0.005	<0.005	<0.005	<0.005
Cr	<0.005	<0.005	<0.005	<0.005	<0.005
Cs	<0.005	<0.005	<0.005	<0.005	<0.005
Li	<0.005	<0.005	0.013	<0.005	<0.005
Mn	0.005	0.006	0.053	0.007	0.006
Mo	<0.005	<0.005	<0.005	<0.005	<0.005
Ni	0.010	0.013	0.024	0.016	0.011
Pb	<0.005	1.93	4.79	0.063	0.015
Sb	0.003	2.17	5.19	0.072	0.017
Se	<0.05	<0.05	<0.05	<0.05	<0.05
Sn	0.029	0.036	0.028	0.006	0.005
Sr	0.007	0.006	0.028	0.009	0.006
Th	<0.005	<0.005	<0.005	<0.005	<0.005
Ti	0.151	0.122	0.309	0.007	0.007
Th	<0.005	<0.005	<0.005	<0.005	<0.005
W	<0.005	<0.005	<0.005	<0.005	<0.005
Zr	<0.005	<0.005	<0.005	<0.005	<0.005
V	<0.05	<0.05	<0.05	<0.05	<0.05
Zn	0.037	1.22	3.02	0.054	0.042
Hg	<0.005	<0.005	<0.005	<0.005	<0.005
U	<0.005	<0.005	<0.005	<0.005	<0.005

Table 7 Metals Analysis Results (PPM) from Acid Impinger Sampler Train

Metal	MDL	Test 1 (Cu)	Test 2 (Cu)	Test 3 (Cu)	Test 4 (Al)	Test 5 (Al)
Al	<0.01	0.145	0.272	0.330	0.328	0.640
Ca	<0.01	0.485	1.30	0.388	0.523	0.094
Cu	<0.01	0.22	0.918	0.816	0.66	0.062
Fe	<0.005	0.02	0.056	0.023	0.028	0.025
K	<0.01	1.24	0.896	0.644	77.8	13000
Mg	<0.002	0.042	0.134	0.056	0.318	0.012
Na	<0.05	0.951	0.727	1.78	0.905	10.5
P	<0.02	<0.02	0.049	<0.02	<0.02	<0.02
S	<0.05	0.043	0.070	0.099	0.043	0.504
Si	<0.1	0.303	0.48	1.10	0.49	21.4
Ag	<0.0001	0.004	0.005	0.004	0.005	0.002
As	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
B	<0.025	0.853	0.638	1.61	0.922	2.88
Ba	<0.0001	0.006	0.008	0.007	0.006	0.002
Bi	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Be	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cd	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001
Co	<0.0001	0.0001	0.0004	<0.0001	0.0002	0.0001
Cr	<0.0001	0.0007	0.0009	0.0006	0.0006	0.019
Cs	<0.0001	<0.0001	<0.0001	<0.0001	0.002	0.819
Li	<0.001	<0.001	<0.001	<0.001	<0.001	0.004
Mn	<0.0001	0.001	0.002	0.0006	0.0010	0.015
Mo	<0.0001	0.0002	0.0002	0.0003	0.0002	0.0020
Ni	<0.0001	0.002	0.001	0.002	0.002	0.001
Pb	<0.0001	0.003	0.003	0.008	0.009	0.008
Sb	<0.001	0.002	0.002	0.007	0.003	<0.001
Se	<0.001	<0.001	<0.001	<0.001	<0.001	0.004
Sn	<0.0001	0.0004	0.0003	0.0002	0.0005	0.0020
Sr	<0.0001	0.002	0.005	0.002	0.003	0.001
Th	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Ti	<0.0001	0.001	0.004	0.002	0.002	0.014
Tl	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
W	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.037
Zr	<0.0001	0.0002	0.0008	0.0007	0.0007	0.027
V	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002
Zn	<0.0001	0.01	0.009	0.01	0.021	0.003
Hg	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
U	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

A 2-liter air sample was taken through a filter pack at about 2 meters above each arc test. Each available exposed filter was analyzed for metals and other elements. The results for 38 element analyses are presented in Table 6. As a note, the filter pack used during Test-1 was destroyed by the extreme heat generated by the copper cable arc as the filter was too close to the arc.

Some key observations are noted from filter analysis for the Test-2 through Test-5 data available in Table 6:

- A key result noted is the below detection of aluminum for Test 5 compared to a measurable detection in Test 4. Both tests used new aluminum cables for the arc fault but in the Test 5 case the fault zone was encapsulated in FireIce® prior to arc fault generation whereas for Test 4 the arc fault was initiated into air and then FireIce® was added to quench the arc fault. The lead (Pb), antimony (Sb), magnesium (Mg), copper (Cu) and calcium (Ca) results add confirmation to the reduction of released metals with the arc fault encapsulated.
- The counter ion for FireIce® is potassium (K). For all four arc fault tests, the filter analysis did not detect potassium above the nominal background concentration of potassium present on the filter prior to exposure. This is good evidence that FireIce® did not undergo detectable degradation during the arc faults where FireIce® was applied.
- Test 2 and Test 3 were essentially duplicate tests using new neoprene jacketed copper cables for the arc fault with Test-3 having the more sustained arc fault. The procedure for applying FireIce® was the same for both tests. At the on-set of the arc fault the addition of FireIce® was begun and continued until the concrete cell was about ½ full. For the more sustained arc fault (Test-3) the key metals from the vapourized copper cable as measured with the filter pack were about 3 to 4 times higher than the metals released in the much shorter arc period of Test-2. Key metals released were aluminum (1.7%), copper (80%), magnesium (4.8%), zinc (0.8%), lead (1.2%), calcium (1.3%) and antimony (1.3%) with remaining components at <1% to only present at trace levels.
- The estimated airborne total metals concentration for Test-3 is 0.17g/m³ and for Test-2 is 0.058 g/m³. Similarly for the aluminum cables the estimated airborne total metals concentration for Test-4 is 0.003 g/m³ and for Test-5 is 0.001 g/m³.
- For comparison the Ontario Ministry of Labor time-weighted average exposure concentration (TWAEC) for a variety of fumes and particulate, ranges from 0.003 to 0.01 g/m³ for 40-hr work week and for short term exposures, the particulate concentrations range from 0.005 to 0.02 g/m³ for a maximum 15 minute continuous exposure depending on the fume and particulate present.

Observations from the metals train analysis for Tests 1 through 5 are summarized below and are based on the metal/element analysis data present in Table 7.

- The high level of potassium in the Test 5 results were from the entrainment of airborne FireIce® into the first impinger as the arc generated gas that ejected some of the FireIce® material into the air. This is confirmed by the increase in silica, sodium and sulfur.
- For Test 4 a significant level of copper (0.66ppm) is measured as copper residue from tests 1 to 3 is released during the aluminum cable arc fault. However in Test 5 very little

copper is detected (>10x less detected 0.062ppm) with the FireIce® encapsulating the arc fault zone. This also confirmed by the similar reduction in magnesium detected.

- The impinger samples collected similar amounts of metals for the copper cable arc fault tests. The metal concentration levels were and are given in Table 7.

3 SUMMARY

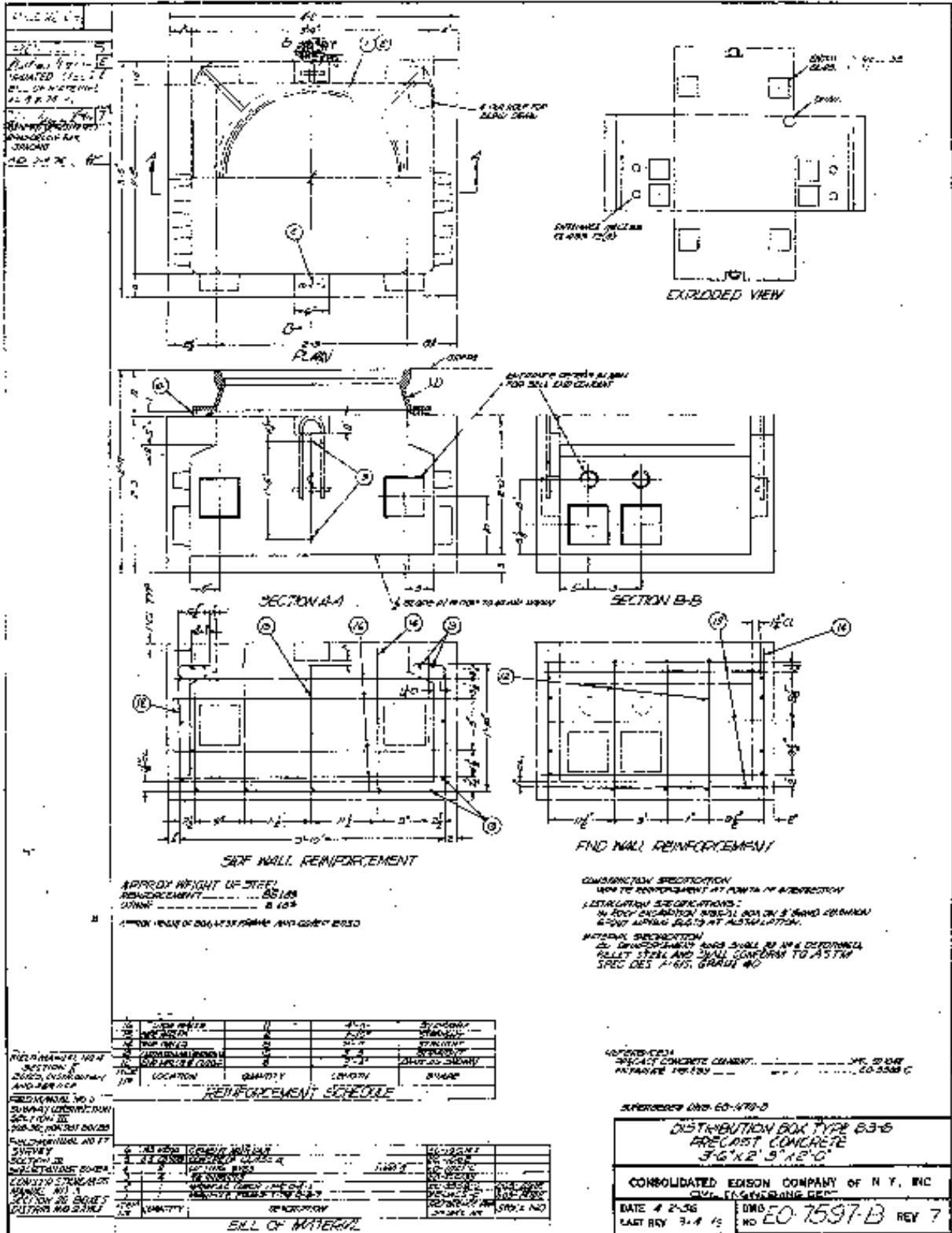
The application of FireIce® to neoprene jacketed copper and aluminum cables is effective in reducing airborne organic compounds and also airborne metals. Removal efficiencies from 2 times to greater than 15 times can be expected when added to an active arc fault. For a FireIce® encapsulated arc fault greater than 60 times removal of metals and arc generated arc products is possible based on the five tests performed.

DISTRIBUTION:

Michael Cordani GelTech Solutions, Inc.

Tom Jarv, Kinectrics Inc.
Claude Maurice, Kinectrics Inc.
Emanuel Petrache, Kinectrics Inc.
Stephen Cress, Kinectrics Inc.

APPENDIX A: REFERENCE DRAWINGS AND PHOTOS





Before shot



Before shot



Before shot



Cable used

Figure 1 Set-up Test # 1



Before shot



Before shot



Before shot



Before shot

Figure 2 Set-up Test # 2



Before shot



Before shot



After shot



After shot

Figure 3 Set-up Test # 3 and test outcome



Figure 4 Cable Set-up Test # 4 and test outcome



Before shot



Before shote

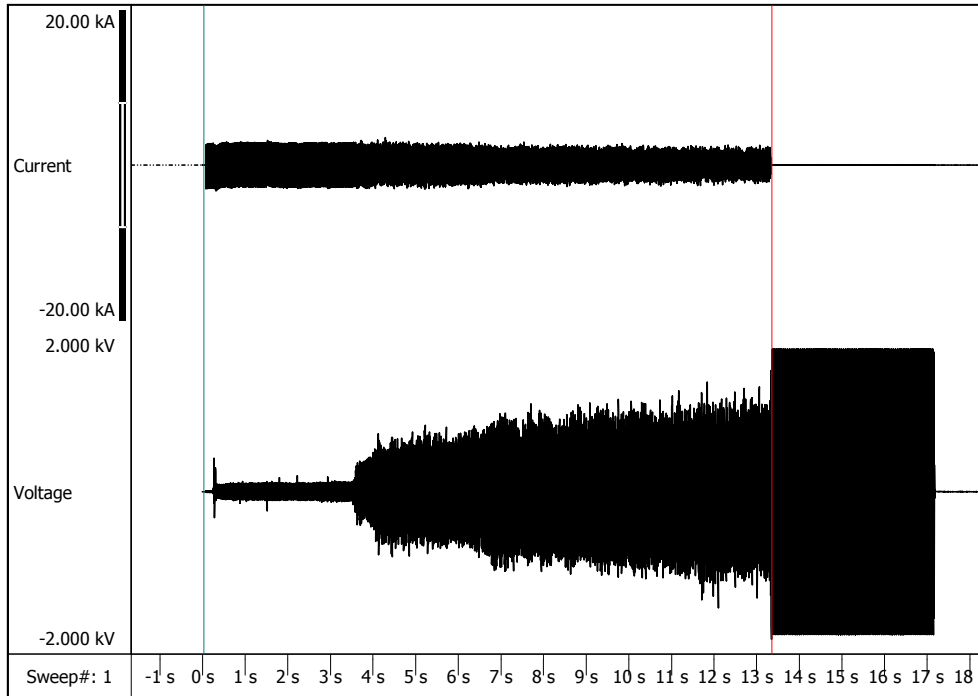
Figure 5 Set-up Test # 5

APPENDIX B: DETAILED TEST RECORDS


<h2>High Current Lab</h2> <p>Kinectrics Inc 800 Kipling Ave Toronto, Ontario</p>		
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Record #	k-015787-119		
Project #	K-015787	Client:	GeTech Solutions Inc

Test description:	Fire and smoke suppression of electrical fire in concrete vault
Sample description:	- - -
Shot information:	Shot #1, copper cables, no suppression

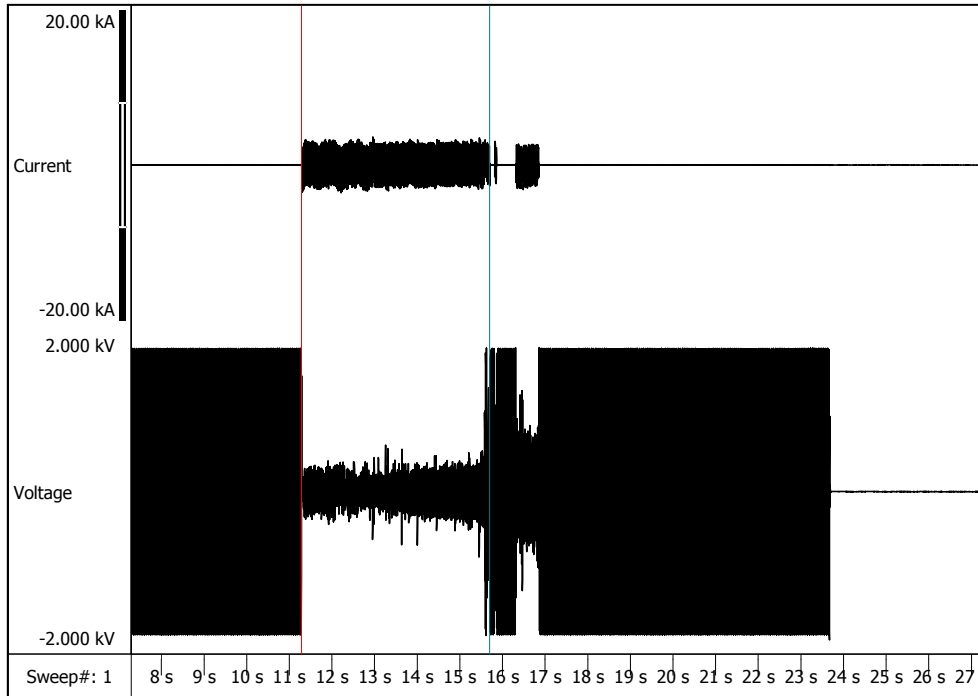


Calculated values between cursors			
Current Total RMS	1.670 kA		
Current Peak	3.405 kA		
Terminal Voltage	500.4 V		
Duration (cycles of 60Hz)	800 cycles		
Duration (time)	13.32 s		


<h2>High Current Lab</h2> <p>Kinectrics Inc 800 Kipling Ave Toronto, Ontario</p>		
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Record #	K-015787-120	
Project #	K-4015787	Client: GelTech Solutions Inc

Test description:	Fire and smoke suppression of electrical fire in concrete vault
Sample description:	Calorimeter at 60 inches
Shot information:	Shot #2, copper cables, with Firelce suppression

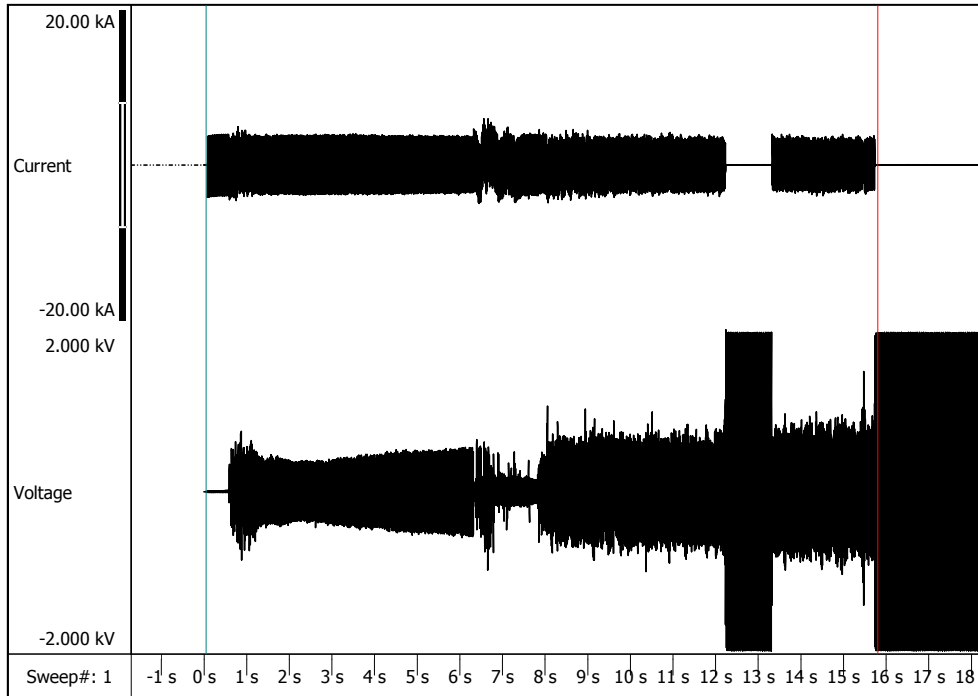


Calculated values between cursors			
Current Total RMS	1.07 kA		
Current Peak	3.4 kA		
Terminal Voltage	245.7 V		
Duration (cycles of 60Hz)	265 cycles		
Duration (time)	4.414 s		


<h2>High Current Lab</h2> <p>Kinectrics Inc 800 Kipling Ave Toronto, Ontario</p>		
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Record #	K-015787-121	
Project #	K-4015787	Client: GelTech Solutions Inc

Test description:	Fire and smoke suppression of electrical fire in concrete vault
Sample description:	Calorimeter at 60 inches
Shot information:	Shot #3, copper cables, with Firelce suppression

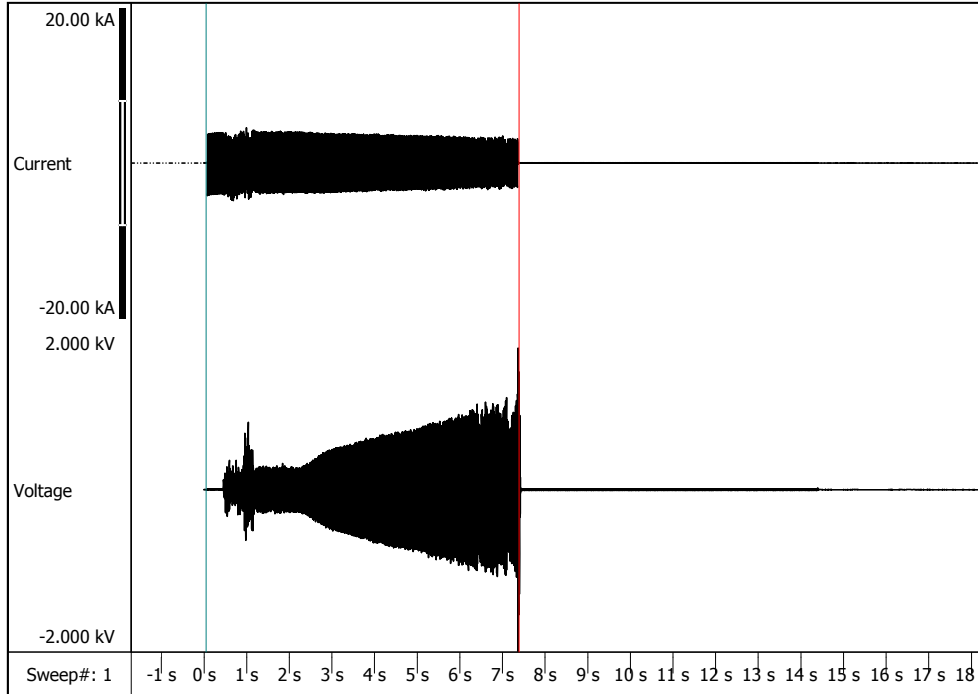


Calculated values between cursors			
Current Total RMS	2.404 kA		
Current Peak	5.71 kA		
Terminal Voltage	538.2 V		
Duration (cycles of 60Hz)	45 cycles		
Duration (time)	15.75 s		


<h2>High Current Lab</h2> <p>Kinectrics Inc 800 Kipling Ave Toronto, Ontario</p>		
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Record #	K-015787-122	
Project #	K-4015787	Client: GelTech Solutions Inc

Test description:	Fire and smoke suppression of electrical fire in concrete vault
Sample description:	Calorimeter at 60 inches
Shot information:	Shot #4, aluminum cables, with Firelce suppression

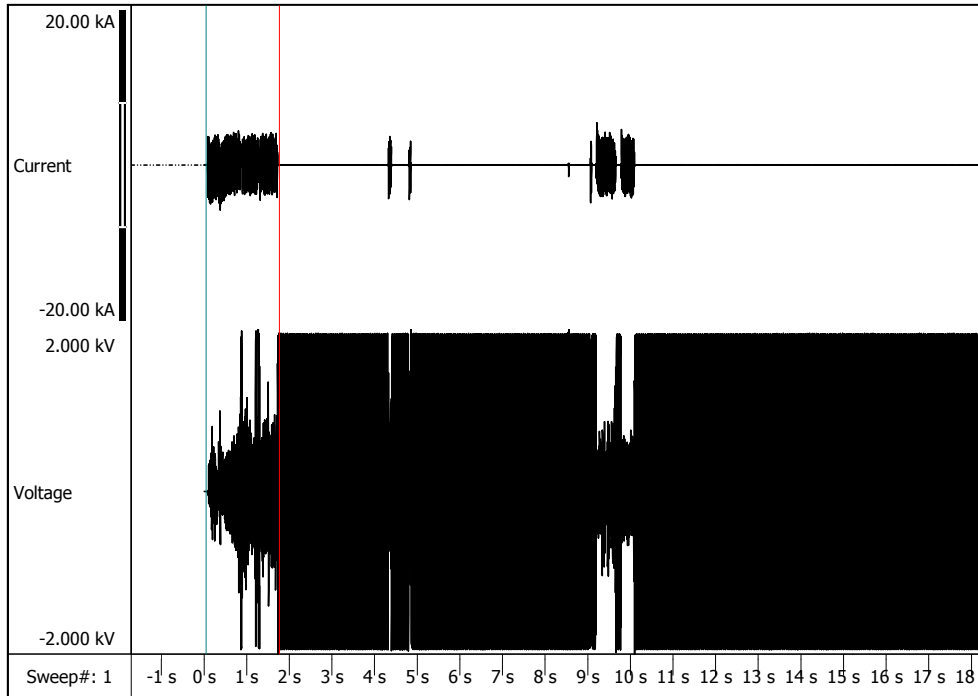


Calculated values between cursors			
Current Total RMS	2.44 kA		
Current Peak	4.686 kA		
Terminal Voltage	456.2 V		
Duration (cycles of 60Hz)	440 cycles		
Duration (time)	7.338 s		

<h2>High Current Lab</h2> <p>Kinectrics Inc 800 Kipling Ave Toronto, Ontario</p>		
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Record #	K-015787-123	
Project #	K-4015787	Client: GelTech Solutions Inc

Test description:	Fire and smoke suppression of electrical fire in concrete vault
Sample description:	Calorimeter at 60 inches
Shot information:	Shot #5, aluminum cables, with Firelce suppression pre-filled



Calculated values between cursors			
Current Total RMS	2.356 kA		
Current Peak	5.646 kA		
Terminal Voltage	5.66 V		
Duration (cycles of 60Hz)	103 cycles		
Duration (time)	1.710 s		