

STRIKE[®]net

Aug 11 2006 6:46:06 PM

Nicole Ferro

Thank you for using Vaisala's STRIKE[®]net to validate the referenced claim. Your report was generated using data from Vaisala's National Lightning Detection Network[®], the most comprehensive archive database in North America.

STRIKE[®]net Report 168384

Claim Number:

Insured/Claimant Name:

Approx. Claim/Loss Value:

Items Damaged/Loss Type:

Claim Address:

Search Period: Jan 1 2006 10:00:00 PM US/Eastern

Jan 2 2006 10:00:00 PM US/Eastern

Search Center Point: 38.940940° N (Latitude), 80.202310° W (Longitude)

Search Radius: 15 mi/25 km around the given location.

Comments: 162 strikes were detected by the National Lightning Detection Network for the given time period and location.

Thank you again for selecting STRIKE[®]net. If you have any questions please contact us at 1 800 283 4557 or thunderstorm.support@vaisala.com.

Best Regards,

The Vaisala STRIKE[®]net Team

Vaisala Inc.
Tucson Operations
2705 E. Medina Road
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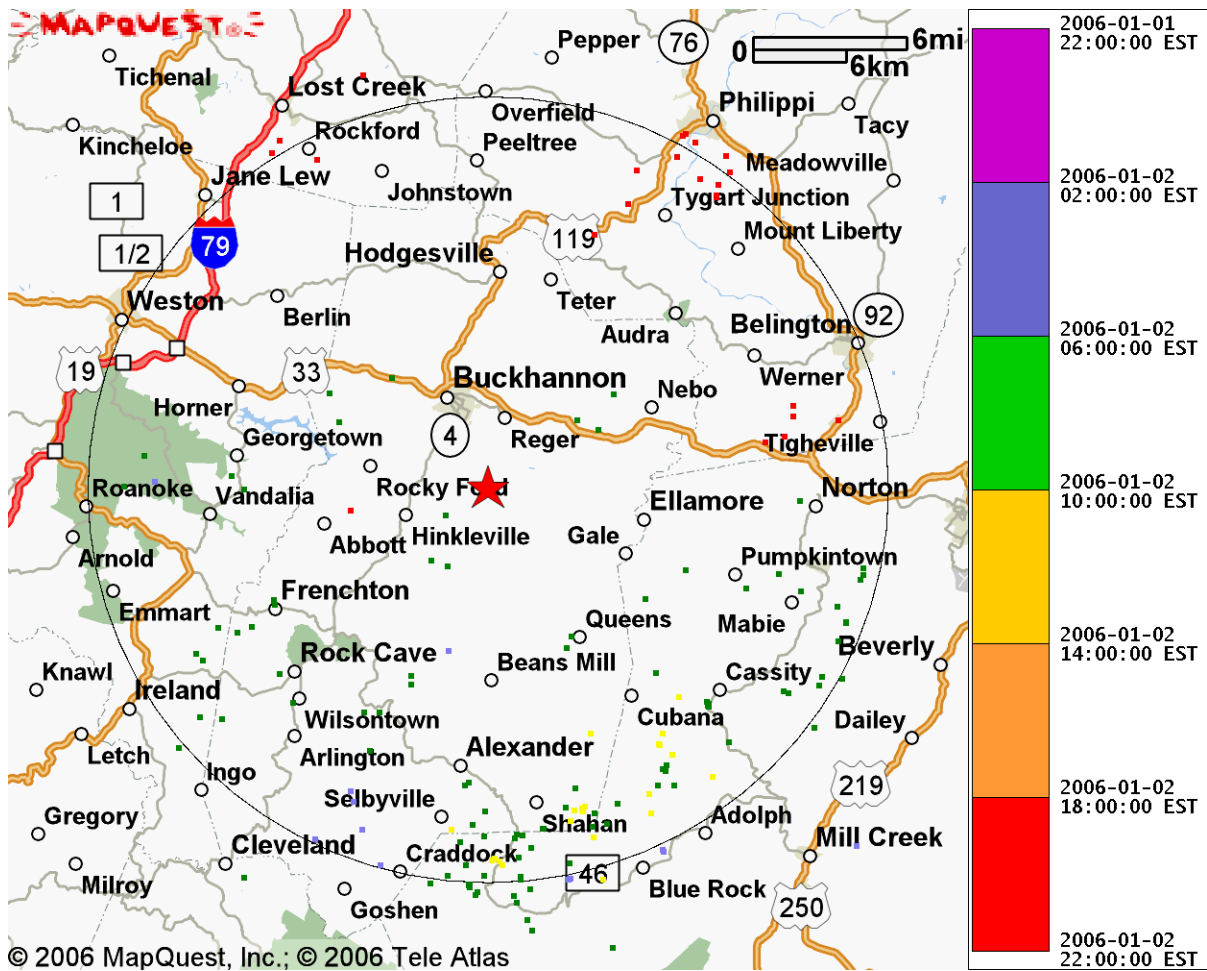
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STRIKEnet Report 168384

Report Title: 60-06MR-308
 Total Lightning Strokes Detected: 162
 Lightning Strokes Detected within 15 mi/25 km radius: 128
 Lightning Strokes Detected beyond 15 mi/25 km whose confidence ellipse overlaps the radius: 34
 Search Radius: 15 mi/25 km
 Time Span: Jan 1 2006 10:00:00 PM US/Eastern to Jan 2 2006 10:00:00 PM US/Eastern

Location Points For Lightning Strokes



Lightning data provided by Vaisala's NLDN® and/or Environment Canada's CLDN.

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Report Title: 60-06MR-308

Total Lightning Strokes Detected: 162

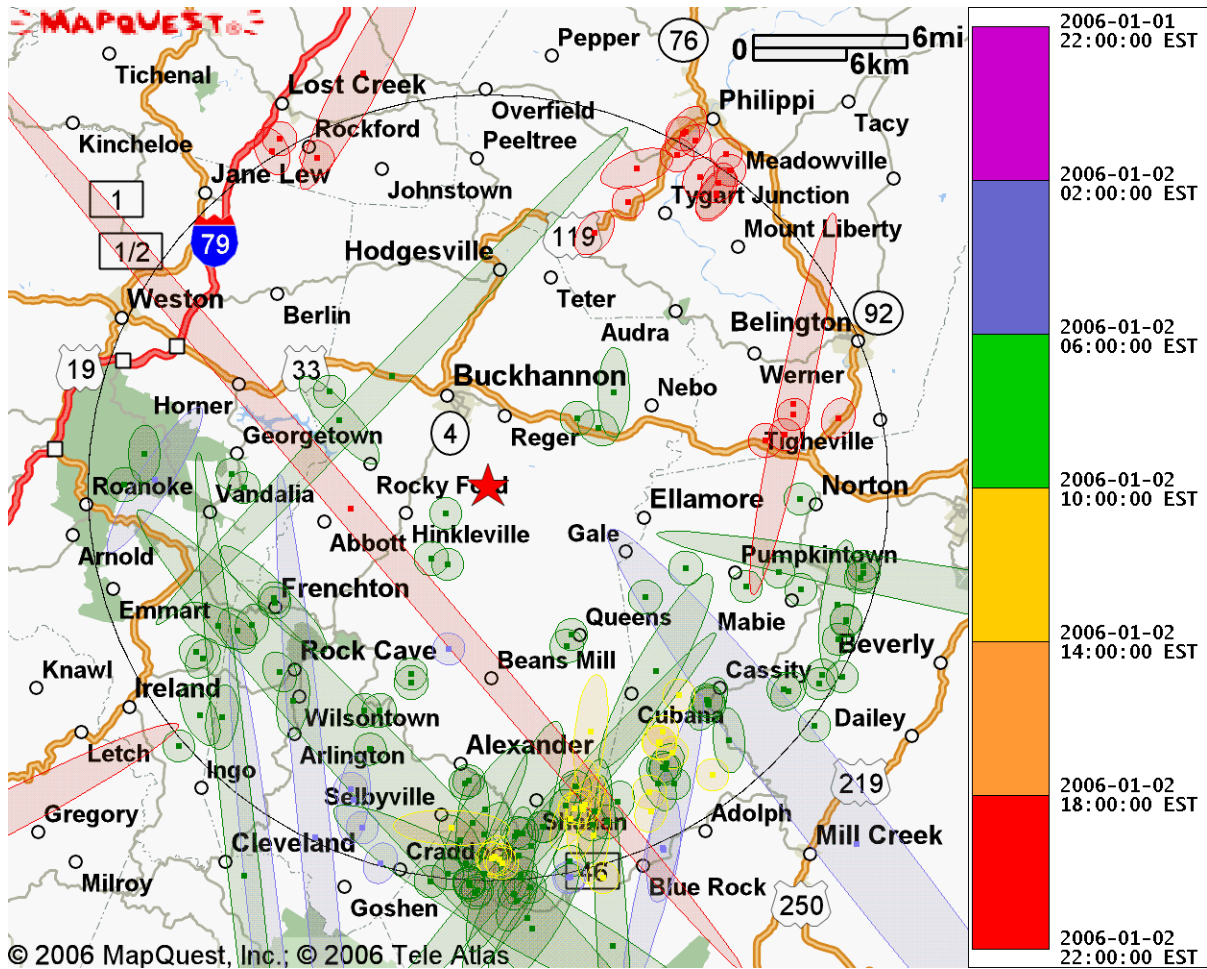
Lightning Strokes Detected within 15 mi/25 km radius: 128

Lightning Strokes Detected beyond 15 mi/25 km whose confidence ellipse overlaps the radius: 34

Search Radius: 15 mi/25 km

Time Span: Jan 1 2006 10:00:00 PM US/Eastern to Jan 2 2006 10:00:00 PM US/Eastern

Confidence Ellipses For Lightning Strokes



Lightning data provided by Vaisala's NLDN® and/or Environment Canada's CLDN. Note: These ellipses indicate a 99% certainty that the recorded lightning event contacted the ground within the bounds of the ellipse.

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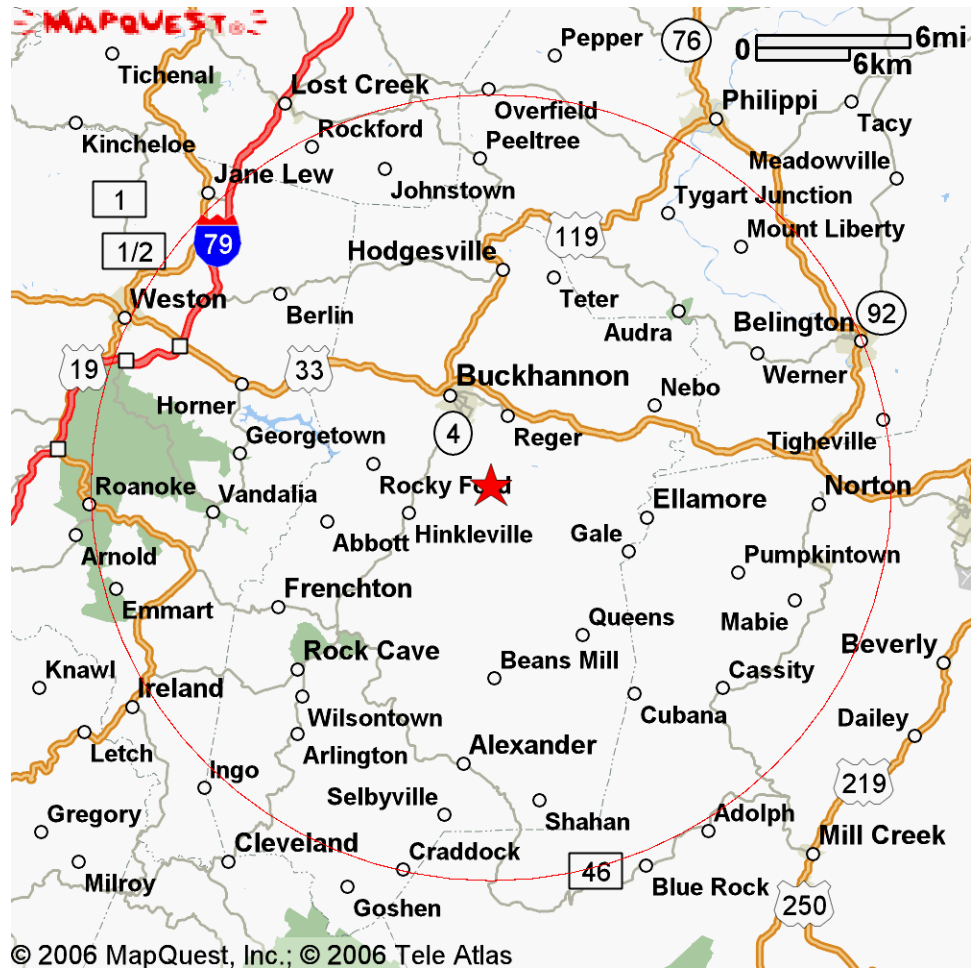
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Area Of Study With Center Point



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STRIKEnet Report 168384

Report Title: 60-06MR-308

Total Lightning Strokes Detected: 162

Lightning Strokes Detected within 15 mi/25 km radius: 128

Lightning Strokes Detected beyond 15 mi/25 km whose confidence ellipse overlaps the radius: 34

Search Radius: 15 mi/25 km

Time Span: Jan 1 2006 10:00:00 PM US/Eastern to Jan 2 2006 10:00:00 PM US/Eastern

Lightning Stroke Table (Note: Earliest 50 events shown. Events ordered by time.)

Date	Time	Peak Current (kA)	Distance From Center (mi/km)	Latitude	Longitude
Jan 2, 2006	4:14:03 AM	-5.3	22.1/35.7	38.6437	-80.3571
Jan 2, 2006	5:33:58 AM	26.5	15.4/24.8	38.7260	-80.2798
Jan 2, 2006	5:35:41 AM	-29.1	15.7/25.3	38.7178	-80.1439
Jan 2, 2006	5:35:41 AM	-16.7	15.7/25.3	38.7181	-80.1427
Jan 2, 2006	5:36:14 AM	-61.8	14.3/23.0	38.7462	-80.2931
Jan 2, 2006	5:36:14 AM	-12.1	13.0/21.0	38.7684	-80.3012
Jan 2, 2006	5:36:14 AM	-8.3	13.4/21.6	38.7619	-80.2993
Jan 2, 2006	5:43:55 AM	-5.7	15.8/25.6	38.7334	-80.0757
Jan 2, 2006	5:43:55 AM	-4.0	15.7/25.4	38.7347	-80.0765
Jan 2, 2006	5:51:33 AM	12.6	12.9/20.8	38.9451	-80.4429
Jan 2, 2006	5:55:25 AM	-5.8	15.3/24.7	38.7407	-80.3269
Jan 2, 2006	5:57:41 AM	-7.8	20.1/32.4	38.7366	-79.9362
Jan 2, 2006	5:57:48 AM	25.1	6.5/10.6	38.8487	-80.2310
Jan 2, 2006	6:00:09 AM	12.5	10.0/16.2	38.8131	-80.2920
Jan 2, 2006	6:04:01 AM	-60.5	15.9/25.6	38.7107	-80.2097
Jan 2, 2006	6:04:01 AM	-11.9	16.0/25.8	38.7090	-80.2116
Jan 2, 2006	6:04:01 AM	-15.8	15.6/25.2	38.7150	-80.2163
Jan 2, 2006	6:04:12 AM	23.9	13.4/21.6	38.9601	-80.4506
Jan 2, 2006	6:04:12 AM	-33.9	14.1/22.7	38.9427	-80.4652
Jan 2, 2006	6:05:30 AM	-6.0	14.6/23.5	38.7303	-80.1803
Jan 2, 2006	6:06:16 AM	-7.5	17.1/27.5	38.6943	-80.1740
Jan 2, 2006	6:06:16 AM	-9.3	15.2/24.6	38.7200	-80.2049
Jan 2, 2006	6:07:26 AM	-48.8	15.9/25.6	38.7122	-80.1721
Jan 2, 2006	6:08:29 AM	-88.7	9.9/16.0	38.9486	-80.3875
Jan 2, 2006	6:08:29 AM	-15.3	9.5/15.3	38.9408	-80.3788
Jan 2, 2006	6:09:23 AM	-23.7	16.1/25.9	38.7083	-80.1837
Jan 2, 2006	6:09:23 AM	-7.1	16.3/26.4	38.7045	-80.1816
Jan 2, 2006	6:09:23 AM	-15.3	14.0/22.5	38.7388	-80.2225
Jan 2, 2006	6:10:32 AM	-12.7	15.7/25.4	38.7151	-80.2443
Jan 2, 2006	6:10:32 AM	-5.9	15.4/24.9	38.7177	-80.1791
Jan 2, 2006	6:10:32 AM	-8.9	15.4/24.8	38.7190	-80.1787
Jan 2, 2006	6:10:32 AM	-8.6	13.8/22.3	38.7413	-80.1827

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Date	Time	Peak Current (kA)	Distance From Center (mi/km)	Latitude	Longitude
Jan 2, 2006	6:10:32 AM	-15.6	12.3/19.8	38.7698	-80.1395
Jan 2, 2006	6:12:16 AM	14.0	11.8/19.1	38.8615	-80.3974
Jan 2, 2006	6:12:16 AM	-27.8	13.0/21.0	38.8467	-80.4129
Jan 2, 2006	6:12:16 AM	-8.3	13.0/20.9	38.8431	-80.4086
Jan 2, 2006	6:13:08 AM	-19.1	13.7/22.0	38.7436	-80.1817
Jan 2, 2006	6:13:08 AM	-17.6	13.7/22.1	38.7427	-80.1775
Jan 2, 2006	6:13:08 AM	-16.0	6.3/10.2	38.9792	-80.3097
Jan 2, 2006	6:13:08 AM	-10.8	7.2/11.6	38.9956	-80.3168
Jan 2, 2006	6:14:27 AM	-35.8	9.7/15.7	38.8361	-80.0813
Jan 2, 2006	6:14:27 AM	6.3	14.2/23.0	38.7359	-80.1713
Jan 2, 2006	6:15:13 AM	20.5	9.4/15.2	38.8770	-80.3572
Jan 2, 2006	6:15:13 AM	-133.9	9.4/15.2	38.8775	-80.3573
Jan 2, 2006	6:15:13 AM	-35.9	9.4/15.2	38.8751	-80.3565
Jan 2, 2006	6:15:13 AM	-5.4	10.6/17.2	38.8620	-80.3729
Jan 2, 2006	6:15:14 AM	-8.1	11.2/18.1	38.8588	-80.3835
Jan 2, 2006	6:15:22 AM	-34.8	13.6/21.9	38.7465	-80.1619
Jan 2, 2006	6:15:23 AM	-11.1	13.5/21.8	38.7469	-80.1628
Jan 2, 2006	6:17:13 AM	-14.2	12.1/19.5	38.8164	-80.0430

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STRIKEnet®**STRIKE**net Report 168384

Report Title: 60-06MR-308

Total Lightning Strokes Detected: 162

Lightning Strokes Detected within 15 mi/25 km radius: 128

Lightning Strokes Detected beyond 15 mi/25 km whose confidence ellipse overlaps the radius: 34

Search Radius: 15 mi/25 km

Time Span: Jan 1 2006 10:00:00 PM US/Eastern to Jan 2 2006 10:00:00 PM US/Eastern

Lightning Stroke Table (Note: Closest 50 events shown. Events ordered by distance.)

Date	Time	Peak Current (kA)	Distance From Center (mi/km)	Latitude	Longitude
Jan 2, 2006	6:26:35 AM	101.0	1.9/3.1	38.9260	-80.2331
Jan 2, 2006	6:26:35 AM	38.8	3.4/5.5	38.8968	-80.2313
Jan 2, 2006	9:30:44 AM	27.5	3.6/5.7	38.9003	-80.2431
Jan 2, 2006	6:38:51 AM	85.7	4.4/7.1	38.9805	-80.1380
Jan 2, 2006	6:38:51 AM	-12.6	4.9/7.8	38.9748	-80.1227
Jan 2, 2006	8:30:44 PM	18.1	5.4/8.7	38.9289	-80.3014
Jan 2, 2006	7:36:46 AM	-5.7	5.8/9.3	39.0048	-80.2719
Jan 2, 2006	6:38:51 AM	-86.0	6.2/9.9	38.9954	-80.1113
Jan 2, 2006	6:13:08 AM	-16.0	6.3/10.2	38.9792	-80.3097
Jan 2, 2006	5:57:48 AM	25.1	6.5/10.6	38.8487	-80.2310
Jan 2, 2006	7:22:01 AM	23.7	6.6/10.7	38.8570	-80.1420
Jan 2, 2006	7:22:01 AM	-19.4	7.0/11.2	38.8500	-80.1457
Jan 2, 2006	6:13:08 AM	-10.8	7.2/11.6	38.9956	-80.3168
Jan 2, 2006	6:29:42 AM	19.3	7.5/12.1	38.8782	-80.0886
Jan 2, 2006	7:11:49 AM	87.8	7.9/12.8	38.8344	-80.2577
Jan 2, 2006	7:03:33 AM	-20.9	8.3/13.3	38.8292	-80.2578
Jan 2, 2006	7:52:21 AM	47.4	8.3/13.4	38.8949	-80.0595
Jan 2, 2006	6:15:13 AM	-133.9	9.4/15.2	38.8775	-80.3573
Jan 2, 2006	6:15:13 AM	20.5	9.4/15.2	38.8770	-80.3572
Jan 2, 2006	6:15:13 AM	-35.9	9.4/15.2	38.8751	-80.3565
Jan 2, 2006	6:08:29 AM	-15.3	9.5/15.3	38.9408	-80.3788
Jan 2, 2006	6:14:27 AM	-35.8	9.7/15.7	38.8361	-80.0813
Jan 2, 2006	7:09:31 AM	178.8	9.8/15.8	38.8130	-80.2805
Jan 2, 2006	6:08:29 AM	-88.7	9.9/16.0	38.9486	-80.3875
Jan 2, 2006	6:00:09 AM	12.5	10.0/16.2	38.8131	-80.2920
Jan 2, 2006	10:52:47 AM	-5.4	10.4/16.8	38.8012	-80.1279
Jan 2, 2006	6:15:13 AM	-5.4	10.6/17.2	38.8620	-80.3729
Jan 2, 2006	6:57:04 AM	-9.3	10.7/17.3	38.8845	-80.0159
Jan 2, 2006	7:35:11 PM	-6.0	10.9/17.5	39.0867	-80.1257
Jan 2, 2006	7:03:33 AM	77.4	10.9/17.5	38.8354	-80.3530
Jan 2, 2006	7:33:54 PM	-14.6	10.9/17.6	38.9679	-80.0018
Jan 2, 2006	10:56:18 AM	32.5	11.1/17.8	38.8218	-80.0641

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Date	Time	Peak Current (kA)	Distance From Center (mi/km)	Latitude	Longitude
Jan 2, 2006	6:15:14 AM	-8.1	11.2/18.1	38.8588	-80.3835
Jan 2, 2006	7:07:03 AM	-198.4	11.3/18.2	38.7912	-80.2878
Jan 2, 2006	7:03:33 AM	-35.7	11.3/18.2	38.8191	-80.3433
Jan 2, 2006	7:54:44 AM	-9.0	11.6/18.7	38.7732	-80.2165
Jan 2, 2006	7:35:55 PM	-8.6	11.7/18.8	38.9710	-79.9878
Jan 2, 2006	7:54:44 AM	-23.3	11.7/18.9	38.7714	-80.2190
Jan 2, 2006	7:54:44 AM	-17.8	11.7/18.9	38.7714	-80.2191
Jan 2, 2006	6:57:04 AM	-20.7	11.7/18.9	38.8925	-79.9923
Jan 2, 2006	10:57:53 AM	-51.1	11.8/19.0	38.8009	-80.0760
Jan 2, 2006	6:12:16 AM	14.0	11.8/19.1	38.8615	-80.3974
Jan 2, 2006	6:17:13 AM	-10.9	11.9/19.2	38.8195	-80.0443
Jan 2, 2006	10:56:18 AM	-47.4	12.0/19.4	38.7952	-80.0790
Jan 2, 2006	6:17:13 AM	-9.3	12.0/19.4	38.8183	-80.0427
Jan 2, 2006	6:17:13 AM	-7.5	12.1/19.5	38.8170	-80.0436
Jan 2, 2006	6:37:59 AM	-27.8	12.1/19.5	38.9342	-79.9771
Jan 2, 2006	10:56:18 AM	18.1	12.1/19.5	38.7945	-80.0782
Jan 2, 2006	6:17:13 AM	-14.2	12.1/19.5	38.8164	-80.0430
Jan 2, 2006	7:37:00 PM	-8.4	12.2/19.6	38.9826	-79.9816

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STRIKEnet®**STRIKE**net Report 168384

Report Title: 60-06MR-308

Total Lightning Strokes Detected: 162

Lightning Strokes Detected within 15 mi/25 km radius: 128

Lightning Strokes Detected beyond 15 mi/25 km whose confidence ellipse overlaps the radius: 34

Search Radius: 15 mi/25 km

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Jan 2, 2006	5:36:14 AM	-8.3	13.4/21.6	38.7619	-80.2993
Jan 2, 2006	5:43:55 AM	-5.7	15.8/25.6	38.7334	-80.0757
Jan 2, 2006	5:43:55 AM	-4.0	15.7/25.4	38.7347	-80.0765
Jan 2, 2006	5:51:33 AM	12.6	12.9/20.8	38.9451	-80.4429
Jan 2, 2006	5:55:25 AM	-5.8	15.3/24.7	38.7407	-80.3269
Jan 2, 2006	5:57:41 AM	-7.8	20.1/32.4	38.7366	-79.9362
Jan 2, 2006	5:57:48 AM	25.1	6.5/10.6	38.8487	-80.2310
Jan 2, 2006	6:00:09 AM	12.5	10.0/16.2	38.8131	-80.2920
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Jan 2, 2006	6:04:01 AM	-15.8	15.6/25.2	38.7150	-80.2163
Jan 2, 2006	6:04:12 AM	23.9	13.4/21.6	38.9601	-80.4506
Jan 2, 2006	6:04:12 AM	-33.9	14.1/22.7	38.9427	-80.4652
Jan 2, 2006	6:05:30 AM	-6.0	14.6/23.5	38.7303	-80.1803
Jan 2, 2006	6:06:16 AM	-7.5	17.1/27.5	38.6943	-80.1740
Jan 2, 2006	6:06:16 AM	-9.3	15.2/24.6	38.7200	-80.2049
Jan 2, 2006	6:07:26 AM	-48.8	15.9/25.6	38.7122	-80.1721
Jan 2, 2006	6:08:29 AM	-88.7	9.9/16.0	38.9486	-80.3875
Jan 2, 2006	6:08:29 AM	-15.3	9.5/15.3	38.9408	-80.3788
Jan 2, 2006	6:09:23 AM	-23.7	16.1/25.9	38.7083	-80.1837
Jan 2, 2006	6:09:23 AM	-7.1	16.3/26.4	38.7045	-80.1816
Jan 2, 2006	6:09:23 AM	-15.3	14.0/22.5	38.7388	-80.2225
Jan 2, 2006	6:10:32 AM	-12.7	15.7/25.4	38.7151	-80.2443
Jan 2, 2006	6:10:32 AM	-5.9	15.4/24.9	38.7177	-80.1791
Jan 2, 2006	6:10:32 AM	-8.9	15.4/24.8	38.7190	-80.1787
Jan 2, 2006	6:10:32 AM	-8.6	13.8/22.3	38.7413	-80.1827

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Jan 2, 2006	6:10:32 AM	-15.6	12.3/19.8	38.7698	-80.1395
Jan 2, 2006	6:12:16 AM	14.0	11.8/19.1	38.8615	-80.3974
Jan 2, 2006	6:12:16 AM	-27.8	13.0/21.0	38.8467	-80.4129
Jan 2, 2006	6:12:16 AM	-8.3	13.0/20.9	38.8431	-80.4086
Jan 2, 2006	6:13:08 AM	-19.1	13.7/22.0	38.7436	-80.1817
Jan 2, 2006	6:13:08 AM	-17.6	13.7/22.1	38.7427	-80.1775
Jan 2, 2006	6:13:08 AM	-16.0	6.3/10.2	38.9792	-80.3097
Jan 2, 2006	6:13:08 AM	-10.8	7.2/11.6	38.9956	-80.3168
Jan 2, 2006	6:14:27 AM	-35.8	9.7/15.7	38.8361	-80.0813
Jan 2, 2006	6:14:27 AM	6.3	14.2/23.0	38.7359	-80.1713
Jan 2, 2006	6:15:13 AM	20.5	9.4/15.2	38.8770	-80.3572
Jan 2, 2006	6:15:13 AM	-133.9	9.4/15.2	38.8775	-80.3573
Jan 2, 2006	6:15:13 AM	-35.9	9.4/15.2	38.8751	-80.3565
Jan 2, 2006	6:15:13 AM	-5.4	10.6/17.2	38.8620	-80.3729
Jan 2, 2006	6:15:14 AM	-8.1	11.2/18.1	38.8588	-80.3835
Jan 2, 2006	6:15:22 AM	-34.8	13.6/21.9	38.7465	-80.1619
Jan 2, 2006	6:15:23 AM	-11.1	13.5/21.8	38.7469	-80.1628
Jan 2, 2006	6:17:13 AM	-14.2	12.1/19.5	38.8164	-80.0430
Jan 2, 2006	6:17:13 AM	-9.3	12.0/19.4	38.8183	-80.0427
Jan 2, 2006	6:17:13 AM	-7.5	12.1/19.5	38.8170	-80.0436
Jan 2, 2006	6:17:13 AM	-10.9	11.9/19.2	38.8195	-80.0443
Jan 2, 2006	6:17:14 AM	-9.1	12.9/20.8	38.7586	-80.1463
Jan 2, 2006	6:18:11 AM	-17.9	13.9/22.5	38.7477	-80.1268
Jan 2, 2006	6:18:11 AM	-14.9	14.0/22.6	38.7492	-80.1164
Jan 2, 2006	6:18:11 AM	-4.8	13.4/21.7	38.7555	-80.1257
Jan 2, 2006	6:19:55 AM	-7.9	13.4/21.6	38.7612	-80.1087
Jan 2, 2006	6:21:23 AM	8.8	13.7/22.1	38.7715	-80.0681
Jan 2, 2006	6:22:15 AM	-9.4	12.9/20.8	38.7832	-80.0733
Jan 2, 2006	6:22:15 AM	-19.5	13.1/21.1	38.7797	-80.0738
Jan 2, 2006	6:22:15 AM	8.3	12.9/20.9	38.7808	-80.0763
Jan 2, 2006	6:26:35 AM	38.8	3.4/5.5	38.8968	-80.2313
Jan 2, 2006	6:26:35 AM	101.0	1.9/3.1	38.9260	-80.2331
Jan 2, 2006	6:29:42 AM	19.3	7.5/12.1	38.8782	-80.0886
Jan 2, 2006	6:34:55 AM	-116.3	15.6/25.2	38.8325	-79.9468
Jan 2, 2006	6:37:59 AM	-27.8	12.1/19.5	38.9342	-79.9771
Jan 2, 2006	6:38:51 AM	-12.6	4.9/7.8	38.9748	-80.1227
Jan 2, 2006	6:38:51 AM	85.7	4.4/7.1	38.9805	-80.1380
Jan 2, 2006	6:38:51 AM	-86.0	6.2/9.9	38.9954	-80.1113
Jan 2, 2006	6:49:31 AM	-13.4	14.9/24.0	38.8643	-79.9435
Jan 2, 2006	6:49:31 AM	-23.4	14.8/23.9	38.8650	-79.9439
Jan 2, 2006	6:51:41 AM	-5.9	14.3/23.1	38.8741	-79.9501
Jan 2, 2006	6:51:41 AM	-8.0	14.8/24.0	38.8539	-79.9492
Jan 2, 2006	6:53:39 AM	-12.7	14.9/24.0	38.8956	-79.9316

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Date	Time	Peak Current (kA)	Distance From Center (mi/km)	Latitude	Longitude
Jan 2, 2006	6:55:33 AM	-57.6	14.3/23.1	38.8105	-80.4102
Jan 2, 2006	6:55:33 AM	-8.0	13.7/22.1	38.8093	-80.3942
Jan 2, 2006	6:55:33 AM	81.5	15.8/25.4	38.7927	-80.4256
Jan 2, 2006	6:57:04 AM	-20.7	11.7/18.9	38.8925	-79.9923
Jan 2, 2006	6:57:04 AM	-9.3	10.7/17.3	38.8845	-80.0159
Jan 2, 2006	6:57:04 AM	-12.8	12.8/20.6	38.8824	-79.9765
Jan 2, 2006	7:02:39 AM	-10.5	18.7/30.2	38.6788	-80.1120
Jan 2, 2006	7:03:33 AM	-20.9	8.3/13.3	38.8292	-80.2578
Jan 2, 2006	7:03:33 AM	77.4	10.9/17.5	38.8354	-80.3530
Jan 2, 2006	7:03:33 AM	-35.7	11.3/18.2	38.8191	-80.3433
Jan 2, 2006	7:07:03 AM	-198.4	11.3/18.2	38.7912	-80.2878
Jan 2, 2006	7:09:31 AM	178.8	9.8/15.8	38.8130	-80.2805
Jan 2, 2006	7:11:49 AM	87.8	7.9/12.8	38.8344	-80.2577
Jan 2, 2006	7:22:01 AM	-19.4	7.0/11.2	38.8500	-80.1457
Jan 2, 2006	7:22:01 AM	23.7	6.6/10.7	38.8570	-80.1420
Jan 2, 2006	7:25:06 AM	-11.3	13.4/21.6	38.7715	-80.0796
Jan 2, 2006	7:25:35 AM	-9.9	14.8/23.9	38.8894	-79.9337
Jan 2, 2006	7:34:50 AM	-8.6	14.1/22.8	38.8245	-79.9853
Jan 2, 2006	7:35:26 AM	-4.9	18.0/29.0	38.7189	-80.3784
Jan 2, 2006	7:36:15 AM	-16.7	14.9/24.0	38.8337	-79.9613
Jan 2, 2006	7:36:15 AM	-14.9	15.0/24.2	38.8287	-79.9632
Jan 2, 2006	7:36:46 AM	-5.7	5.8/9.3	39.0048	-80.2719
Jan 2, 2006	7:41:00 AM	-8.5	15.3/24.7	38.7197	-80.2313
Jan 2, 2006	7:42:35 AM	-5.6	13.3/21.4	38.7489	-80.2137
Jan 2, 2006	7:42:35 AM	-8.7	14.9/24.0	38.7257	-80.2184
Jan 2, 2006	7:42:35 AM	-9.8	15.6/25.2	38.7148	-80.2158
Jan 2, 2006	7:42:35 AM	-12.0	15.6/25.2	38.7145	-80.2161
Jan 2, 2006	7:42:35 AM	-21.5	15.7/25.3	38.7133	-80.2154
Jan 2, 2006	7:42:35 AM	-9.1	12.7/20.5	38.7567	-80.2043
Jan 2, 2006	7:42:35 AM	10.6	13.7/22.1	38.7425	-80.2052
Jan 2, 2006	7:50:24 AM	-9.1	17.5/28.2	38.6882	-80.1707
Jan 2, 2006	7:52:21 AM	47.4	8.3/13.4	38.8949	-80.0595
Jan 2, 2006	7:54:44 AM	-17.8	11.7/18.9	38.7714	-80.2191
Jan 2, 2006	7:54:44 AM	-23.3	11.7/18.9	38.7714	-80.2190
Jan 2, 2006	7:54:44 AM	-9.0	11.6/18.7	38.7732	-80.2165
Jan 2, 2006	7:56:59 AM	35.3	15.1/24.4	38.7267	-80.1431
Jan 2, 2006	8:03:36 AM	69.4	14.9/24.1	38.8919	-79.9315
Jan 2, 2006	9:16:58 AM	-12.5	13.7/22.0	38.7963	-80.0283
Jan 2, 2006	9:19:08 AM	-30.1	13.9/22.5	38.8256	-79.9888
Jan 2, 2006	9:30:44 AM	27.5	3.6/5.7	38.9003	-80.2431
Jan 2, 2006	9:32:24 AM	-10.5	15.8/25.4	38.8046	-79.9663
Jan 2, 2006	9:45:50 AM	-11.4	30.4/49.0	38.8504	-79.6481
Jan 2, 2006	10:43:53 AM	-18.1	13.1/21.1	38.7571	-80.1397

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Date	Time	Peak Current (kA)	Distance From Center (mi/km)	Latitude	Longitude
Jan 2, 2006	10:46:01 AM	58.3	14.7/23.7	38.7283	-80.1940
Jan 2, 2006	10:46:01 AM	-23.3	13.5/21.7	38.7464	-80.2287
Jan 2, 2006	10:46:01 AM	19.0	14.8/23.9	38.7261	-80.1922
Jan 2, 2006	10:46:02 AM	-26.7	14.6/23.6	38.7287	-80.1995
Jan 2, 2006	10:46:02 AM	-8.0	14.5/23.5	38.7300	-80.1976
Jan 2, 2006	10:50:58 AM	-6.0	14.3/23.1	38.7415	-80.1264
Jan 2, 2006	10:51:58 AM	-6.6	13.1/21.1	38.7591	-80.1325
Jan 2, 2006	10:51:58 AM	-13.2	13.1/21.1	38.7585	-80.1346
Jan 2, 2006	10:51:58 AM	-7.3	13.2/21.3	38.7568	-80.1335
Jan 2, 2006	10:51:58 AM	-8.0	13.5/21.7	38.7511	-80.1430
Jan 2, 2006	10:52:47 AM	-5.4	10.4/16.8	38.8012	-80.1279
Jan 2, 2006	10:54:41 AM	-31.1	13.5/21.8	38.7668	-80.0861
Jan 2, 2006	10:54:41 AM	-7.2	14.3/23.0	38.7557	-80.0844
Jan 2, 2006	10:56:18 AM	-47.4	12.0/19.4	38.7952	-80.0790
Jan 2, 2006	10:56:18 AM	18.1	12.1/19.5	38.7945	-80.0782
Jan 2, 2006	10:56:18 AM	-12.5	12.7/20.4	38.7894	-80.0693
Jan 2, 2006	10:56:18 AM	32.5	11.1/17.8	38.8218	-80.0641
Jan 2, 2006	10:57:53 AM	-51.1	11.8/19.0	38.8009	-80.0760
Jan 2, 2006	10:57:53 AM	-9.7	14.3/23.1	38.7766	-80.0399
Jan 2, 2006	11:33:33 AM	34.0	16.1/25.9	38.7174	-80.1189
Jan 2, 2006	7:22:07 PM	-10.6	15.7/25.3	39.1332	-80.3585
Jan 2, 2006	7:24:01 PM	-20.7	16.0/25.7	39.1406	-80.3531
Jan 2, 2006	7:26:41 PM	-34.0	14.6/23.6	39.1298	-80.3258
Jan 2, 2006	7:30:10 PM	-9.9	17.0/27.5	39.1779	-80.2922
Jan 2, 2006	7:33:54 PM	-14.6	10.9/17.6	38.9679	-80.0018
Jan 2, 2006	7:35:11 PM	-6.0	10.9/17.5	39.0867	-80.1257
Jan 2, 2006	7:35:55 PM	-8.6	11.7/18.8	38.9710	-79.9878
Jan 2, 2006	7:37:00 PM	-8.4	12.2/19.6	38.9826	-79.9816
Jan 2, 2006	7:37:00 PM	-4.2	12.3/19.8	38.9890	-79.9819
Jan 2, 2006	7:38:14 PM	-20.4	12.5/20.1	39.1042	-80.1014
Jan 2, 2006	7:38:37 PM	-6.2	13.8/22.3	38.9805	-79.9491
Jan 2, 2006	7:43:10 PM	-6.4	14.6/23.5	39.1090	-80.0371
Jan 2, 2006	7:43:10 PM	-5.7	14.5/23.5	39.1083	-80.0370
Jan 2, 2006	7:43:10 PM	-8.3	15.0/24.1	39.1151	-80.0359
Jan 2, 2006	7:45:43 PM	-14.1	15.6/25.2	39.1224	-80.0278
Jan 2, 2006	7:51:16 PM	-8.3	14.8/23.8	39.1187	-80.0490
Jan 2, 2006	7:53:38 PM	-22.7	15.0/24.2	39.1313	-80.0657
Jan 2, 2006	7:53:38 PM	-15.1	16.1/25.9	39.1319	-80.0306
Jan 2, 2006	7:55:27 PM	18.0	24.6/39.6	38.7418	-80.5816
Jan 2, 2006	7:56:00 PM	-51.1	15.9/25.6	39.1394	-80.0525
Jan 2, 2006	7:56:00 PM	-13.4	15.9/25.6	39.1434	-80.0613
Jan 2, 2006	7:56:00 PM	-6.9	16.0/25.8	39.1445	-80.0597
Jan 2, 2006	8:00:54 PM	22.7	13.8/22.3	39.1238	-80.0953

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Date	Time	Peak Current (kA)	Distance From Center (mi/km)	Latitude	Longitude
Jan 2, 2006	8:30:44 PM	18.1	5.4/8.7	38.9289	-80.3014

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STRIKEnet®**STRIKE**net Report 168384

Report Title: 60-06MR-308

Total Lightning Strokes Detected: 162

Lightning Strokes Detected within 15 mi/25 km radius: 128

Lightning Strokes Detected beyond 15 mi/25 km whose confidence ellipse overlaps the radius: 34

Search Radius: 15 mi/25 km

Time Span: Jan 1 2006 10:00:00 PM US/Eastern to Jan 2 2006 10:00:00 PM US/Eastern

Lightning Stroke Table (Note: All events shown. Events ordered by distance.)

Date	Time	Peak Current (kA)	Distance From Center (mi/km)	Latitude	Longitude
Jan 2, 2006	6:26:35 AM	101.0	1.9/3.1	38.9260	-80.2331
Jan 2, 2006	6:26:35 AM	38.8	3.4/5.5	38.8968	-80.2313
Jan 2, 2006	9:30:44 AM	27.5	3.6/5.7	38.9003	-80.2431
Jan 2, 2006	6:38:51 AM	85.7	4.4/7.1	38.9805	-80.1380
Jan 2, 2006	6:38:51 AM	-12.6	4.9/7.8	38.9748	-80.1227
Jan 2, 2006	8:30:44 PM	18.1	5.4/8.7	38.9289	-80.3014
Jan 2, 2006	7:36:46 AM	-5.7	5.8/9.3	39.0048	-80.2719
Jan 2, 2006	6:38:51 AM	-86.0	6.2/9.9	38.9954	-80.1113
Jan 2, 2006	6:13:08 AM	-16.0	6.3/10.2	38.9792	-80.3097
Jan 2, 2006	5:57:48 AM	25.1	6.5/10.6	38.8487	-80.2310
Jan 2, 2006	7:22:01 AM	23.7	6.6/10.7	38.8570	-80.1420
Jan 2, 2006	7:22:01 AM	-19.4	7.0/11.2	38.8500	-80.1457
Jan 2, 2006	6:13:08 AM	-10.8	7.2/11.6	38.9956	-80.3168
Jan 2, 2006	6:29:42 AM	19.3	7.5/12.1	38.8782	-80.0886
Jan 2, 2006	7:11:49 AM	87.8	7.9/12.8	38.8344	-80.2577
Jan 2, 2006	7:03:33 AM	-20.9	8.3/13.3	38.8292	-80.2578
Jan 2, 2006	7:52:21 AM	47.4	8.3/13.4	38.8949	-80.0595
Jan 2, 2006	6:15:13 AM	-133.9	9.4/15.2	38.8775	-80.3573
Jan 2, 2006	6:15:13 AM	20.5	9.4/15.2	38.8770	-80.3572
Jan 2, 2006	6:15:13 AM	-35.9	9.4/15.2	38.8751	-80.3565
Jan 2, 2006	6:08:29 AM	-15.3	9.5/15.3	38.9408	-80.3788
Jan 2, 2006	6:14:27 AM	-35.8	9.7/15.7	38.8361	-80.0813
Jan 2, 2006	7:09:31 AM	178.8	9.8/15.8	38.8130	-80.2805
Jan 2, 2006	6:08:29 AM	-88.7	9.9/16.0	38.9486	-80.3875
Jan 2, 2006	6:00:09 AM	12.5	10.0/16.2	38.8131	-80.2920
Jan 2, 2006	10:52:47 AM	-5.4	10.4/16.8	38.8012	-80.1279
Jan 2, 2006	6:15:13 AM	-5.4	10.6/17.2	38.8620	-80.3729
Jan 2, 2006	6:57:04 AM	-9.3	10.7/17.3	38.8845	-80.0159
Jan 2, 2006	7:35:11 PM	-6.0	10.9/17.5	39.0867	-80.1257
Jan 2, 2006	7:03:33 AM	77.4	10.9/17.5	38.8354	-80.3530
Jan 2, 2006	7:33:54 PM	-14.6	10.9/17.6	38.9679	-80.0018
Jan 2, 2006	10:56:18 AM	32.5	11.1/17.8	38.8218	-80.0641

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Date	Time	Peak Current (kA)	Distance From Center (mi/km)	Latitude	Longitude
Jan 2, 2006	6:15:14 AM	-8.1	11.2/18.1	38.8588	-80.3835
Jan 2, 2006	7:07:03 AM	-198.4	11.3/18.2	38.7912	-80.2878
Jan 2, 2006	7:03:33 AM	-35.7	11.3/18.2	38.8191	-80.3433
Jan 2, 2006	7:54:44 AM	-9.0	11.6/18.7	38.7732	-80.2165
Jan 2, 2006	7:35:55 PM	-8.6	11.7/18.8	38.9710	-79.9878
Jan 2, 2006	7:54:44 AM	-23.3	11.7/18.9	38.7714	-80.2190
Jan 2, 2006	7:54:44 AM	-17.8	11.7/18.9	38.7714	-80.2191
Jan 2, 2006	6:57:04 AM	-20.7	11.7/18.9	38.8925	-79.9923
Jan 2, 2006	10:57:53 AM	-51.1	11.8/19.0	38.8009	-80.0760
Jan 2, 2006	6:12:16 AM	14.0	11.8/19.1	38.8615	-80.3974
Jan 2, 2006	6:17:13 AM	-10.9	11.9/19.2	38.8195	-80.0443
Jan 2, 2006	10:56:18 AM	-47.4	12.0/19.4	38.7952	-80.0790
Jan 2, 2006	6:17:13 AM	-9.3	12.0/19.4	38.8183	-80.0427
Jan 2, 2006	6:17:13 AM	-7.5	12.1/19.5	38.8170	-80.0436
Jan 2, 2006	6:37:59 AM	-27.8	12.1/19.5	38.9342	-79.9771
Jan 2, 2006	10:56:18 AM	18.1	12.1/19.5	38.7945	-80.0782
Jan 2, 2006	6:17:13 AM	-14.2	12.1/19.5	38.8164	-80.0430
Jan 2, 2006	7:37:00 PM	-8.4	12.2/19.6	38.9826	-79.9816
Jan 2, 2006	7:37:00 PM	-4.2	12.3/19.8	38.9890	-79.9819
Jan 2, 2006	6:10:32 AM	-15.6	12.3/19.8	38.7698	-80.1395
Jan 2, 2006	7:38:14 PM	-20.4	12.5/20.1	39.1042	-80.1014
Jan 2, 2006	10:56:18 AM	-12.5	12.7/20.4	38.7894	-80.0693
Jan 2, 2006	7:42:35 AM	-9.1	12.7/20.5	38.7567	-80.2043
Jan 2, 2006	6:57:04 AM	-12.8	12.8/20.6	38.8824	-79.9765
Jan 2, 2006	6:22:15 AM	-9.4	12.9/20.8	38.7832	-80.0733
Jan 2, 2006	5:51:33 AM	12.6	12.9/20.8	38.9451	-80.4429
Jan 2, 2006	6:17:14 AM	-9.1	12.9/20.8	38.7586	-80.1463
Jan 2, 2006	6:22:15 AM	8.3	12.9/20.9	38.7808	-80.0763
Jan 2, 2006	6:12:16 AM	-8.3	13.0/20.9	38.8431	-80.4086
Jan 2, 2006	5:36:14 AM	-12.1	13.0/21.0	38.7684	-80.3012
Jan 2, 2006	6:12:16 AM	-27.8	13.0/21.0	38.8467	-80.4129
Jan 2, 2006	6:22:15 AM	-19.5	13.1/21.1	38.7797	-80.0738
Jan 2, 2006	10:51:58 AM	-6.6	13.1/21.1	38.7591	-80.1325
Jan 2, 2006	10:51:58 AM	-13.2	13.1/21.1	38.7585	-80.1346
Jan 2, 2006	10:43:53 AM	-18.1	13.1/21.1	38.7571	-80.1397
Jan 2, 2006	10:51:58 AM	-7.3	13.2/21.3	38.7568	-80.1335
Jan 2, 2006	7:42:35 AM	-5.6	13.3/21.4	38.7489	-80.2137
Jan 2, 2006	6:19:55 AM	-7.9	13.4/21.6	38.7612	-80.1087
Jan 2, 2006	6:04:12 AM	23.9	13.4/21.6	38.9601	-80.4506
Jan 2, 2006	5:36:14 AM	-8.3	13.4/21.6	38.7619	-80.2993
Jan 2, 2006	7:25:06 AM	-11.3	13.4/21.6	38.7715	-80.0796
Jan 2, 2006	6:18:11 AM	-4.8	13.4/21.7	38.7555	-80.1257
Jan 2, 2006	10:51:58 AM	-8.0	13.5/21.7	38.7511	-80.1430

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Date	Time	Peak Current (kA)	Distance From Center (mi/km)	Latitude	Longitude
Jan 2, 2006	10:46:01 AM	-23.3	13.5/21.7	38.7464	-80.2287
Jan 2, 2006	10:54:41 AM	-31.1	13.5/21.8	38.7668	-80.0861
Jan 2, 2006	6:15:23 AM	-11.1	13.5/21.8	38.7469	-80.1628
Jan 2, 2006	6:15:22 AM	-34.8	13.6/21.9	38.7465	-80.1619
Jan 2, 2006	6:13:08 AM	-19.1	13.7/22.0	38.7436	-80.1817
Jan 2, 2006	9:16:58 AM	-12.5	13.7/22.0	38.7963	-80.0283
Jan 2, 2006	7:42:35 AM	10.6	13.7/22.1	38.7425	-80.2052
Jan 2, 2006	6:21:23 AM	8.8	13.7/22.1	38.7715	-80.0681
Jan 2, 2006	6:55:33 AM	-8.0	13.7/22.1	38.8093	-80.3942
Jan 2, 2006	6:13:08 AM	-17.6	13.7/22.1	38.7427	-80.1775
Jan 2, 2006	6:10:32 AM	-8.6	13.8/22.3	38.7413	-80.1827
Jan 2, 2006	8:00:54 PM	22.7	13.8/22.3	39.1238	-80.0953
Jan 2, 2006	7:38:37 PM	-6.2	13.8/22.3	38.9805	-79.9491
Jan 2, 2006	6:18:11 AM	-17.9	13.9/22.5	38.7477	-80.1268
Jan 2, 2006	9:19:08 AM	-30.1	13.9/22.5	38.8256	-79.9888
Jan 2, 2006	6:09:23 AM	-15.3	14.0/22.5	38.7388	-80.2225
Jan 2, 2006	6:18:11 AM	-14.9	14.0/22.6	38.7492	-80.1164
Jan 2, 2006	6:04:12 AM	-33.9	14.1/22.7	38.9427	-80.4652
Jan 2, 2006	7:34:50 AM	-8.6	14.1/22.8	38.8245	-79.9853
Jan 2, 2006	6:14:27 AM	6.3	14.2/23.0	38.7359	-80.1713
Jan 2, 2006	10:54:41 AM	-7.2	14.3/23.0	38.7557	-80.0844
Jan 2, 2006	5:36:14 AM	-61.8	14.3/23.0	38.7462	-80.2931
Jan 2, 2006	6:51:41 AM	-5.9	14.3/23.1	38.8741	-79.9501
Jan 2, 2006	10:57:53 AM	-9.7	14.3/23.1	38.7766	-80.0399
Jan 2, 2006	6:55:33 AM	-57.6	14.3/23.1	38.8105	-80.4102
Jan 2, 2006	10:50:58 AM	-6.0	14.3/23.1	38.7415	-80.1264
Jan 2, 2006	7:43:10 PM	-5.7	14.5/23.5	39.1083	-80.0370
Jan 2, 2006	10:46:02 AM	-8.0	14.5/23.5	38.7300	-80.1976
Jan 2, 2006	6:05:30 AM	-6.0	14.6/23.5	38.7303	-80.1803
Jan 2, 2006	7:43:10 PM	-6.4	14.6/23.5	39.1090	-80.0371
Jan 2, 2006	7:26:41 PM	-34.0	14.6/23.6	39.1298	-80.3258
Jan 2, 2006	10:46:02 AM	-26.7	14.6/23.6	38.7287	-80.1995
Jan 2, 2006	10:46:01 AM	58.3	14.7/23.7	38.7283	-80.1940
Jan 2, 2006	7:51:16 PM	-8.3	14.8/23.8	39.1187	-80.0490
Jan 2, 2006	6:49:31 AM	-23.4	14.8/23.9	38.8650	-79.9439
Jan 2, 2006	10:46:01 AM	19.0	14.8/23.9	38.7261	-80.1922
Jan 2, 2006	7:25:35 AM	-9.9	14.8/23.9	38.8894	-79.9337
Jan 2, 2006	6:51:41 AM	-8.0	14.8/24.0	38.8539	-79.9492
Jan 2, 2006	6:53:39 AM	-12.7	14.9/24.0	38.8956	-79.9316
Jan 2, 2006	6:49:31 AM	-13.4	14.9/24.0	38.8643	-79.9435
Jan 2, 2006	7:42:35 AM	-8.7	14.9/24.0	38.7257	-80.2184
Jan 2, 2006	7:36:15 AM	-16.7	14.9/24.0	38.8337	-79.9613
Jan 2, 2006	8:03:36 AM	69.4	14.9/24.1	38.8919	-79.9315

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Date	Time	Peak Current (kA)	Distance From Center (mi/km)	Latitude	Longitude
Jan 2, 2006	7:43:10 PM	-8.3	15.0/24.1	39.1151	-80.0359
Jan 2, 2006	7:36:15 AM	-14.9	15.0/24.2	38.8287	-79.9632
Jan 2, 2006	7:53:38 PM	-22.7	15.0/24.2	39.1313	-80.0657
Jan 2, 2006	7:56:59 AM	35.3	15.1/24.4	38.7267	-80.1431
Jan 2, 2006	6:06:16 AM	-9.3	15.2/24.6	38.7200	-80.2049
Jan 2, 2006	7:41:00 AM	-8.5	15.3/24.7	38.7197	-80.2313
Jan 2, 2006	5:55:25 AM	-5.8	15.3/24.7	38.7407	-80.3269
Jan 2, 2006	6:10:32 AM	-8.9	15.4/24.8	38.7190	-80.1787
Jan 2, 2006	5:33:58 AM	26.5	15.4/24.8	38.7260	-80.2798
Jan 2, 2006	6:10:32 AM	-5.9	15.4/24.9	38.7177	-80.1791
Jan 2, 2006	6:04:01 AM	-15.8	15.6/25.2	38.7150	-80.2163
Jan 2, 2006	7:42:35 AM	-9.8	15.6/25.2	38.7148	-80.2158
Jan 2, 2006	7:45:43 PM	-14.1	15.6/25.2	39.1224	-80.0278
Jan 2, 2006	6:34:55 AM	-116.3	15.6/25.2	38.8325	-79.9468
Jan 2, 2006	7:42:35 AM	-12.0	15.6/25.2	38.7145	-80.2161
Jan 2, 2006	7:22:07 PM	-10.6	15.7/25.3	39.1332	-80.3585
Jan 2, 2006	5:35:41 AM	-16.7	15.7/25.3	38.7181	-80.1427
Jan 2, 2006	5:35:41 AM	-29.1	15.7/25.3	38.7178	-80.1439
Jan 2, 2006	7:42:35 AM	-21.5	15.7/25.3	38.7133	-80.2154
Jan 2, 2006	6:10:32 AM	-12.7	15.7/25.4	38.7151	-80.2443
Jan 2, 2006	5:43:55 AM	-4.0	15.7/25.4	38.7347	-80.0765
Jan 2, 2006	6:55:33 AM	81.5	15.8/25.4	38.7927	-80.4256
Jan 2, 2006	9:32:24 AM	-10.5	15.8/25.4	38.8046	-79.9663
Jan 2, 2006	5:43:55 AM	-5.7	15.8/25.6	38.7334	-80.0757
Jan 2, 2006	6:07:26 AM	-48.8	15.9/25.6	38.7122	-80.1721
Jan 2, 2006	7:56:00 PM	-51.1	15.9/25.6	39.1394	-80.0525
Jan 2, 2006	7:56:00 PM	-13.4	15.9/25.6	39.1434	-80.0613
Jan 2, 2006	6:04:01 AM	-60.5	15.9/25.6	38.7107	-80.2097
Jan 2, 2006	7:24:01 PM	-20.7	16.0/25.7	39.1406	-80.3531
Jan 2, 2006	7:56:00 PM	-6.9	16.0/25.8	39.1445	-80.0597
Jan 2, 2006	6:04:01 AM	-11.9	16.0/25.8	38.7090	-80.2116
Jan 2, 2006	11:33:33 AM	34.0	16.1/25.9	38.7174	-80.1189
Jan 2, 2006	7:53:38 PM	-15.1	16.1/25.9	39.1319	-80.0306
Jan 2, 2006	6:09:23 AM	-23.7	16.1/25.9	38.7083	-80.1837
Jan 2, 2006	6:09:23 AM	-7.1	16.3/26.4	38.7045	-80.1816
Jan 2, 2006	7:30:10 PM	-9.9	17.0/27.5	39.1779	-80.2922
Jan 2, 2006	6:06:16 AM	-7.5	17.1/27.5	38.6943	-80.1740
Jan 2, 2006	7:50:24 AM	-9.1	17.5/28.2	38.6882	-80.1707
Jan 2, 2006	7:35:26 AM	-4.9	18.0/29.0	38.7189	-80.3784
Jan 2, 2006	7:02:39 AM	-10.5	18.7/30.2	38.6788	-80.1120
Jan 2, 2006	5:57:41 AM	-7.8	20.1/32.4	38.7366	-79.9362
Jan 2, 2006	4:14:03 AM	-5.3	22.1/35.7	38.6437	-80.3571
Jan 2, 2006	7:55:27 PM	18.0	24.6/39.6	38.7418	-80.5816

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Date	Time	Peak Current (kA)	Distance From Center (mi/km)	Latitude	Longitude
Jan 2, 2006	9:45:50 AM	-11.4	30.4/49.0	38.8504	-79.6481

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SAGO MINE EXPLOSION January 2, 2006

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- Confidential -

Overview

On January 2, 2006 at approximately 6:30am, an explosion at the Sago coal mine in Tallmansville, West Virginia filled a mine shaft with poisonous gas, killing 12 miners and leaving another in critical condition. Although, the cause of the explosion has not yet been determined, it has been widely reported that lightning near the mine could be one of the contributing causes of the incident. Lightning in the area could have detonated elevated methane levels in the mine caused by changes in the barometric pressure that are more common in the winter months or other factors.

The United States Precision Lightning Network (USPLN) detected a single, powerful lightning stroke at or near the mouth of the Sago mine at 6:26:36 (6:26am and 36 seconds). Through additional research initiated by WeatherBug it was discovered that Dr. Martin Chapman, PhD, a research assistant professor from Virginia Tech, analyzed the seismic data and found that two independent seismic sensors read a minor seismic event, possibly from the explosion, two seconds after that stroke at 6:26:38 (6:26am and 38 seconds). The lightning stroke held a particularly strong positive charge of 35 kAmps, compared to a typical stroke of 20 kAmps. Overall, the USPLN detected 100 lightning strokes in the region within a two hour time period around the explosion (6:30am plus or minus one hour). The USPLN network has a verified accuracy of 250 meters on average.

The documents and findings in this report represent our data and analysis of the Sago Mine Explosion. It is our hope that this information will help your investigation into this matter and that WeatherBug can serve as a resource for determining the cause of this accident and for any preventive measures that may prevent future incidents of this nature to protect lives and property.

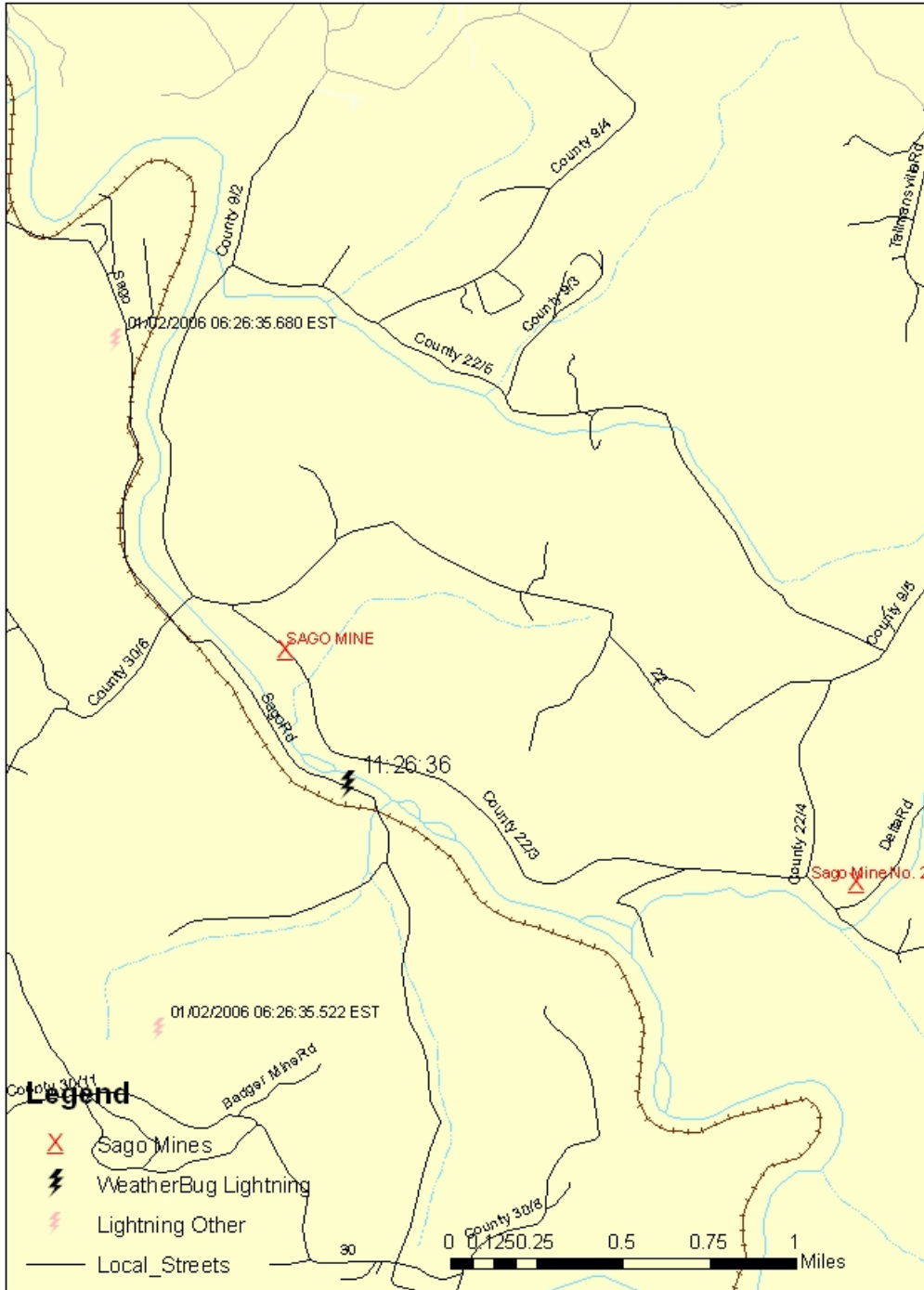
United States Precision Lightning Network (USPLN)

About the Lightning Detected and the Lightning Network

- The USPLN, which is owned and operated by TOA Systems and Weather Decision Technologies, consists of 100 sensors deployed throughout the U.S.
 - These sensors are antennas that detect the radio wave pulse generated by lightning strokes
 - On average 9 sensors detect an individual lightning stroke, and only 3 are needed to accurately determine the location of a stroke – providing redundancy and excess capacity
- The USPLN uses a Time of Arrival technology similar to GPS (used for OnStar or other navigation systems) and advanced signal processing to determine the time, location, strength and charge of the lightning strokes.
 - The USPLN utilizes a fully redundant and fault tolerant IT infrastructure
 - USPLN uses newer and more advanced technology than that used by the competing lightning detection network
 - The USPLN is capable of differentiating between cloud-to-cloud lightning and cloud-to-ground lightning
 - Individual lightning “Flashes” often contain multiple branches called “Strokes”. The USPLN can detect these strokes in real-time
- The USPLN has a verified accuracy of 250 meters on average (RMS), the competing network is reported to have accuracy of 500 meters.
- The USPLN detected 100 strokes within 1 hour before and after the explosion within a 35 mile radius of the mine.
 - The flash/stroke that struck closest to the mine is estimated to have hit 450 meters from the mine entrance. It carried a charge of +35 kAmps. Positive strokes are often more destructive than negative strokes. This was a very powerful stroke. The average stroke is about 20 kAmps. It takes about 100 Amps to run all the appliances in an average home, so this would be over 200 times more powerful than that and all the energy is delivered in a millisecond.

- o Individual storms have different ratios of positive and negative strokes, but typically only 10% of strokes are positive. The stroke closest to the mine was an unusual positive stroke.

The image below shows the location of the lightning stroke in relation to the mine as reported by the USPLN.



Within a 10 mile radius in the 2 hour period around the explosion, the USPLN detected 59 lightning strokes. It should be noted that only the USPLN detects strokes in real-time. The NLDN Network detects Flashes and can count the number of strokes but not locate them in real-time; they provide stroke data to their clients only after further signal processing and usually delayed by a day.

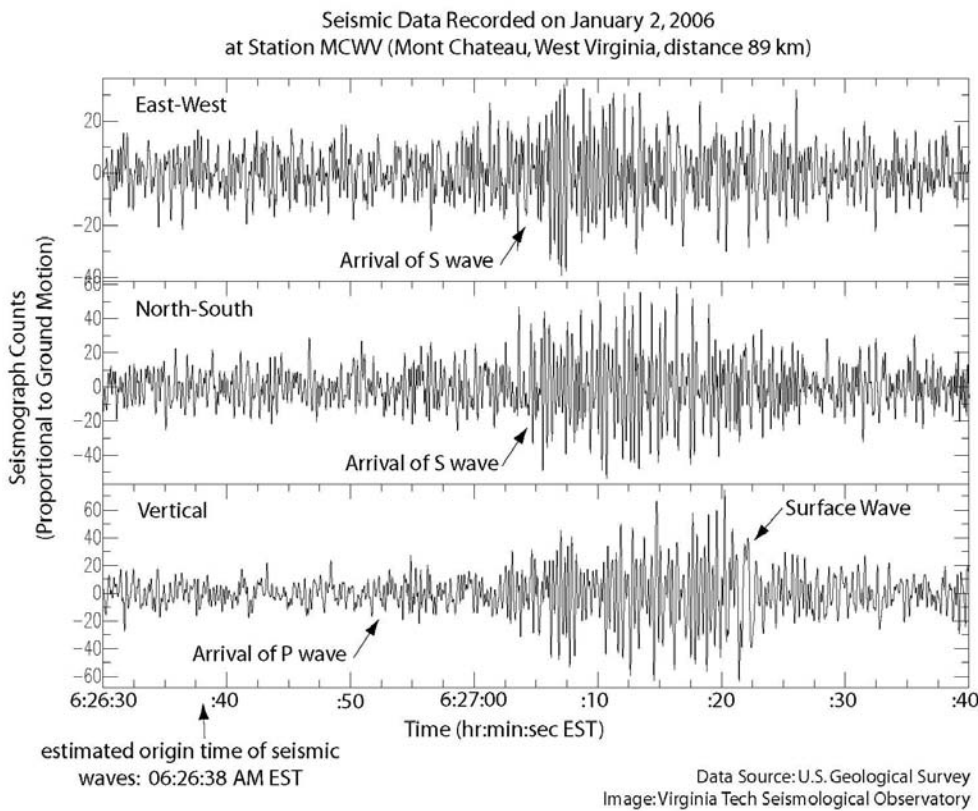
There is some uncertainty on our part about where the exact entrance of the mine is, so in the Table below distances from the mine entrance are calculated to three locations (A, B, C) where the latitude of each are: A (38.941N, 80.202W), B (38.906N, 80.219W), and C (38.851N, 80.159W). The Table includes all lightning STROKES detected by the USPLN within a 10 mile radius of either A, B or C.

USPLN Strokes Detected Within 10 miles of locations A, B, or C for 2 hour Period Centered on Time of Explosion								
Date	Time (UTC)	ms	Latitude	Longitude	kAmps	Distance (miles) from		
						A	B	C
1/2/2006	10:35:41	308	38.7256813	-80.1397018	-29.2	15.2	13.1	8.7
1/2/2006	10:35:41	333	38.7263298	-80.137291	-17	15.2	13.1	8.7
1/2/2006	10:36:14	404	38.7643547	-80.2599258	-49.8	12.6	10	8.1
1/2/2006	10:36:14	504	38.7682266	-80.30616	33.4	13.2	10.6	9.8
1/2/2006	10:36:14	581	38.7627296	-80.2898941	-7.8	13.2	10.6	9.3
1/2/2006	10:57:48	353	38.8658638	-80.2489243	0	5.8	3.2	4.9
1/2/2006	10:57:48	375	38.8514175	-80.2336044	24.6	6.4	3.8	4
1/2/2006	11:00:09	219	38.8187141	-80.2847443	13.7	9.5	7	7.1
1/2/2006	11:04:01	373	38.7195168	-80.199173	-55	15.3	12.9	9.3
1/2/2006	11:04:01	415	38.7145233	-80.2081985	-10.3	15.6	13.2	9.8
1/2/2006	11:04:01	455	38.7198029	-80.2114258	-14.9	15.3	12.8	9.5
1/2/2006	11:06:16	272	38.8094749	-80.2173615	8.2	9.1	6.6	4.2
1/2/2006	11:07:26	446	38.7319336	-80.1406555	-42.1	14.8	12.7	8.3
1/2/2006	11:07:26	465	38.7228661	-80.1519928	-11.6	15.3	13.1	8.9
1/2/2006	11:07:26	493	38.7229614	-80.1611481	-16.6	15.2	13	8.8
1/2/2006	11:08:29	431	38.9610901	-80.3887711	-70.7	10.2	9.9	14.5
1/2/2006	11:08:29	445	38.9581146	-80.3610382	-13.7	8.6	8.4	13.1
1/2/2006	11:09:22	982	38.7323303	-80.1612625	-88.9	14.5	12.4	8.2
1/2/2006	11:09:23	3	38.7115021	-80.1793137	-20.5	15.9	13.6	9.7
1/2/2006	11:09:23	67	38.7313423	-80.2371216	27.6	14.6	12.1	9.3
1/2/2006	11:09:23	72	38.7474098	-80.215271	15.6	13.4	10.9	7.8
1/2/2006	11:09:23	247	38.7327232	-80.1151581	0	15.1	13.2	8.5

USPLN Strokes Detected Within 10 miles of locations A, B, or C for 2 hour Period Centered on Time of Explosion								
Date	Time (UTC)	ms	Latitude	Longitude	kAmps	Distance (miles) from		
						A	B	C
1/2/2006	11:10:32	102	38.708683	-80.1775665	12.6	16.1	13.8	9.9
1/2/2006	11:10:32	428	38.7793159	-80.1447983	-14.3	11.6	9.6	5
1/2/2006	11:13:08	30	38.7285919	-80.1767654	28	14.7	12.4	8.5
1/2/2006	11:13:08	243	38.9870758	-80.3248367	0	7.3	8	12.9
1/2/2006	11:14:27	704	38.7603951	-80.1751938	0	12.5	10.3	6.3
1/2/2006	11:14:27	763	38.7609596	-80.1472244	7.8	12.8	10.7	6.3
1/2/2006	11:15:13	768	38.887516	-80.3489304	0	8.7	7.1	10.5
1/2/2006	11:15:13	783	38.8016663	-80.0149536	63.7	13.9	13.2	8.5
1/2/2006	11:15:14	106	38.866375	-80.3815384	-6.9	11	9.2	12
1/2/2006	11:15:22	844	38.757637	-80.1463165	-32.1	13	11	6.5
1/2/2006	11:15:23	106	38.7530136	-80.1476288	-10.2	13.3	11.2	6.8
1/2/2006	11:17:13	30	38.8184853	-80.0413284	-12.3	12.1	11.3	6.8
1/2/2006	11:17:13	81	38.8194199	-80.0407715	-8.8	12.1	11.3	6.8
1/2/2006	11:17:13	92	38.8250198	-80.0415115	-6.2	11.8	11.1	6.6
1/2/2006	11:17:13	119	38.8213539	-80.0394287	-10.1	12	11.3	6.8
1/2/2006	11:17:14	728	38.7708473	-80.1356812	-8.1	12.3	10.3	5.7
1/2/2006	11:18:11	419	38.756115	-80.1195526	-16.6	13.5	11.6	6.9
1/2/2006	11:18:11	443	38.7548027	-80.1096191	-12.5	13.8	12	7.2
1/2/2006	11:19:55	468	38.7682266	-80.1063004	-7	13	11.3	6.4
1/2/2006	11:22:15	388	38.7882881	-80.0673065	-8.7	12.8	11.5	6.6
1/2/2006	11:22:15	425	38.7905159	-80.0675964	-16.7	12.7	11.4	6.5
1/2/2006	11:22:15	580	38.7889099	-80.0668335	9.2	12.8	11.5	6.6
1/2/2006	11:26:35	522	38.9071693	-80.220871	35	2.5	0.1	5.1
1/2/2006	11:29:42	454	38.8838577	-80.0839996	20	7.5	7.4	4.7
1/2/2006	11:29:42	938	39.0450668	-80.0777817	-15.8	9.8	12.3	14.1
1/2/2006	11:38:51	846	38.9996719	-80.042984	93	9.5	11.5	12
1/2/2006	11:57:04	758	38.8792191	-79.9833374	-11.6	12.5	12.9	9.7
1/2/2006	12:03:33	399	38.8381348	-80.2485428	0	7.5	4.9	4.9
1/2/2006	12:03:33	441	38.8451958	-80.2446899	12.8	7	4.4	4.6
1/2/2006	12:03:33	445	38.8097878	-80.3446274	6.3	11.9	9.5	10.4
1/2/2006	12:09:31	753	38.8004189	-80.0074463	-73.4	14.3	13.5	8.9
1/2/2006	12:11:49	823	38.8285065	-80.2458344	0	8.1	5.5	4.9
1/2/2006	12:13:49	886	38.8299713	-80.250267	-22.3	8.1	5.5	5.1
1/2/2006	12:17:56	482	38.8618698	-80.1765823	0	5.6	3.8	1.2
1/2/2006	12:17:56	498	38.8562851	-80.1635132	-9.8	6.2	4.6	0.4
1/2/2006	12:22:01	325	38.8690491	-80.1388321	-15.3	6	5	1.7
1/2/2006	12:22:01	364	38.8736839	-80.1124039	22.7	6.7	6.2	3

Seismic Data

Coincident with the reported lightning strokes, WeatherBug brought in expertise from the Virginia Tech Department of Geosciences to examine whether there was seismic activity in the mine region at 6:26:38 that may have been caused by the explosion. The seismic readings have a timing error of plus or minus 3 seconds. The evidence suggests that the lightning stroke could have caused the explosion due to the correlation between the timing and location of the lightning stroke and seismic activity.



USPLN versus Vaisala’s NLDN Network

It is important to note that two separate lightning networks reported lightning data related to the Sago Mine Explosion – The USPLN and Vaisala’s NLDN Network. These networks are different, based on different technologies, and do not have the same accuracy. Since lightning is a potential cause of the explosion, it is important to note the differences between these networks and evaluate their validity.

It was reported in the Charleston Gazette that, Vaisala, a federal government contractor, reported lightning strikes within 1.5 miles of the mine.

“Three lightning strikes hit within five miles of the Sago Mine within a half-hour of Monday morning’s deadly explosion, according to a federal government contractor that monitors thunderstorms.

Two of the strikes, including one that was four to 10 times stronger than average, hit within 1 1/2 miles of the center of the Upshur County mine, according to the contractor.”

<http://www.wvgazette.com/section/News/2006010439>

- The USPLN can detect both the Flash from the main bolt of lightning, and the individual Strokes, all the little forks in the lightning bolt, some of which can strike the ground many miles from the main Flash.
- Visalia’s published accuracy of 500 meters on average for the National Lightning Data Network (NLDN) versus 250 meters for the USPLN.

About WeatherBug

- WeatherBug's mission is to protect lives and property by providing the most precise weather available
- WeatherBug owns and manages the largest and most advanced weather network in the U.S. --- totaling 8,000
- WeatherBug technology can provide advance warning of all types of weather threats, including lightning
- Only WeatherBug offers live, neighborhood level weather – vs. hourly weather reports from area airports
- WeatherBug partners with local TV broadcasters, the National Weather Service, government agencies and private organizations

APENDIX

Dow Jones Article -

http://www.aws.com/aws_2005/releases/2006/release_01062006.asp

WeatherBug Press Release

http://www.aws.com/aws_2005/releases/2006/release_01062006b.asp

Pittsburgh Tribune Article

http://pittsburghlive.com/x/tribune-review/trib/regional/s_412305.html

**The Occurrence of Lightning near
Lat: 30.2002997 Lon: -85.6244055
West Virginia**

**For the Period
5:00 AM EST January 2, 2006 to 5:00 AM EST January 3,
2006**

Prepared by

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Meteorologist

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Date Prepared: January 11, 2006



INTRODUCTION

This report describes the identified cloud-to-ground and cloud-to-cloud lightning activity within a 10 mile radius centered on the location of interest in West Virginia (Lat: 30.2002997, Lon: -85.6244055). Expert meteorologists at Weather Decision Technologies, Inc. (WDT) have carefully examined the archived record of cloud-to-ground and cloud-to-cloud lightning strikes within this area of interest for the time period 5:00 AM EST January 2, 2006 to 5:00 AM EST January 3, 2006. This report describes the results of our investigation.

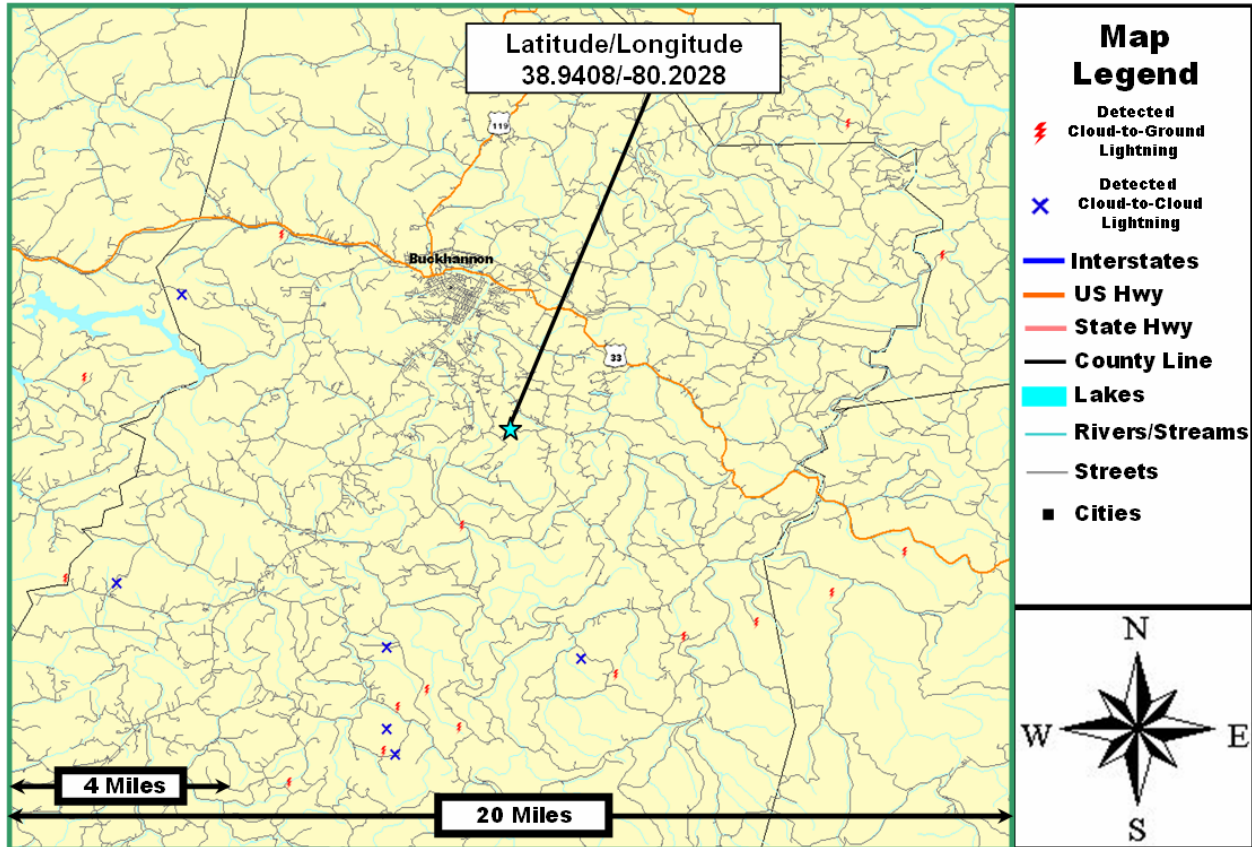
LIGHTNING ANALYSIS/CONCLUSION

The purpose of this investigation is to determine the closest lightning strike to the location of interest. The source of lightning data for this investigation is the United States Precision Lightning Network (USPLN) which is maintained and operated by WDT and TOA systems Inc. The USPLN lightning data archive consists of identified cloud-to-ground lightning strikes since May 28, 2004, and the location accuracy of cloud-to-ground lightning data detected by USPLN is 250 meters (.076 miles).

An examination of the lightning strikes during the 24 hour period of interest reveals that seventeen cloud-to-ground lightning strikes and six cloud-to-cloud lightning strikes occurred within the 10 mile radius centered on the address of interest (Figure 1). In addition, the closest cloud-to-ground lightning strike occurred 2.5 miles south-southwest of the address of interest at 6:26 EST on January 2, 2006. All other identified lightning strikes are shown in Figure 1 as well as in Table 1.

Appendix AA - Vaisala Group and AWS Convergence Technologies, Inc. Reports

Figure 1. Map centered on the location of interest. The identified cloud-to-ground lightning strikes are depicted with red "bolts". The identified cloud-to-cloud lightning strikes are depicted with a blue "X". The light blue star depicts the location of interest. The areal extent is 2 miles by 20 miles (400 mi²). (Lightning data source: USPLN)



Appendix AA - Vaisala Group and AWS Convergence Technologies, Inc. Reports

Appendix 1. Cloud-to-ground and cloud-to-cloud lightning strikes for the period of 5:00 AM EST January 2, 2006 to 5:00 AM EST January 3, 2006 and within 10 miles of the address of interest. Time is in 24-hour Eastern Standard Time (EST) format. Bearing is relative to due north from the location of interest. For example, 90 degrees = east, 180 degrees = south, 270 degrees = west, 0 degrees = north. (Lightning data source: USPLN)

Date-Time (EST)	Amplitude	Latitude	Longitude	Bearinging (°)	Distance (mi.)
1/2/2006 5:57	24600	38.851	-80.234	195	6.4
1/2/2006 5:57	0	38.866	-80.249	206	5.7
1/2/2006 6:00	13700	38.819	-80.285	208	9.5
1/2/2006 6:06	8200	38.809	-80.217	185	9.1
1/2/2006 6:08	-13700	38.958	-80.361	278	8.6
1/2/2006 6:13	0	38.987	-80.325	296	7.3
1/2/2006 6:15	0	38.888	-80.349	245	8.7
1/2/2006 6:15	-125100	38.889	-80.368	248	9.6
1/2/2006 6:26	35000	38.907	-80.221	203	2.5
1/2/2006 6:29	20000	38.884	-80.084	122	7.5
1/2/2006 6:29	-15800	39.045	-80.078	43	9.9
1/2/2006 6:38	93000	39	-80.043	65	9.5
1/2/2006 6:38	-35800	39.007	-80.288	315	6.5
1/2/2006 7:03	0	38.838	-80.249	199	7.5
1/2/2006 7:03	12800	38.845	-80.245	199	7
1/2/2006 7:11	0	38.829	-80.246	197	8.1
1/2/2006 7:13	-22300	38.83	-80.25	198	8.1
1/2/2006 7:13	-22700	38.838	-80.222	188	7.2
1/2/2006 7:17	-9800	38.856	-80.164	160	6.2
1/2/2006 7:17	0	38.862	-80.177	165	5.6
1/2/2006 7:22	-15300	38.869	-80.139	145	6
1/2/2006 7:22	22700	38.874	-80.112	134	6.7
1/2/2006 7:52	43500	38.898	-80.057	111	8.4