

Appendix K: Soundprint® Acoustic System Reports

**SoundPrint® Acoustic Monitoring Report
Sandia PCCV**

LST Sept 26-27, 2001

SFMT November 14, 2001

Background

Acoustic monitoring captures acoustic data arriving at sensors distributed over the PCCV model. For the LST and SIT, fifty-four sensors were used, sixteen of which were inside the vessel on the steel liner, and thirty-eight were installed on the outside of the concrete surface. For the SFMT test, no sensors were remaining inside the model, and thirty-eight sensors remained on the outside of the vessel.

The output of the sensors was recorded as acoustic energy arrived. Post-processing of the recorded information was done to estimate the location and the nature of the source of each event. Event classifications used throughout the testing included:

- Concrete cracking
- Wire Breaks
- Other emissions from the tendons
- Nitrogen Flow
- Leaks

Summary of Results

Concrete cracking events were dominant in SIT and the LST, but were largely absent during the SFMT. During the LST, analysis of the signals from the sensors appear to have detected the appearance of leaks in the liner.

The nitrogen flow noise, wire breaks, and other events originating from the area of tendon anchorages were the dominant features of the SFMT. The classification “tendon pings” was used to describe emissions showing resonant peaks in the 4KHz. To 8 KHz band. The classifications “wire break”, “double wire break”, and “multiple wire break”, were used to describe emissions that had other characteristics consistent with the failure of one or more wires in a tendon.

Estimates were made of the amount of energy released by each event relative to a reference impact. These estimates are qualitative only, as increasing amounts of damage to the concrete affected the propagation of acoustic energy from the source to the sensors.

Streaming audio files were available in real time to assist in understanding the developments on the model during each phase of the test.

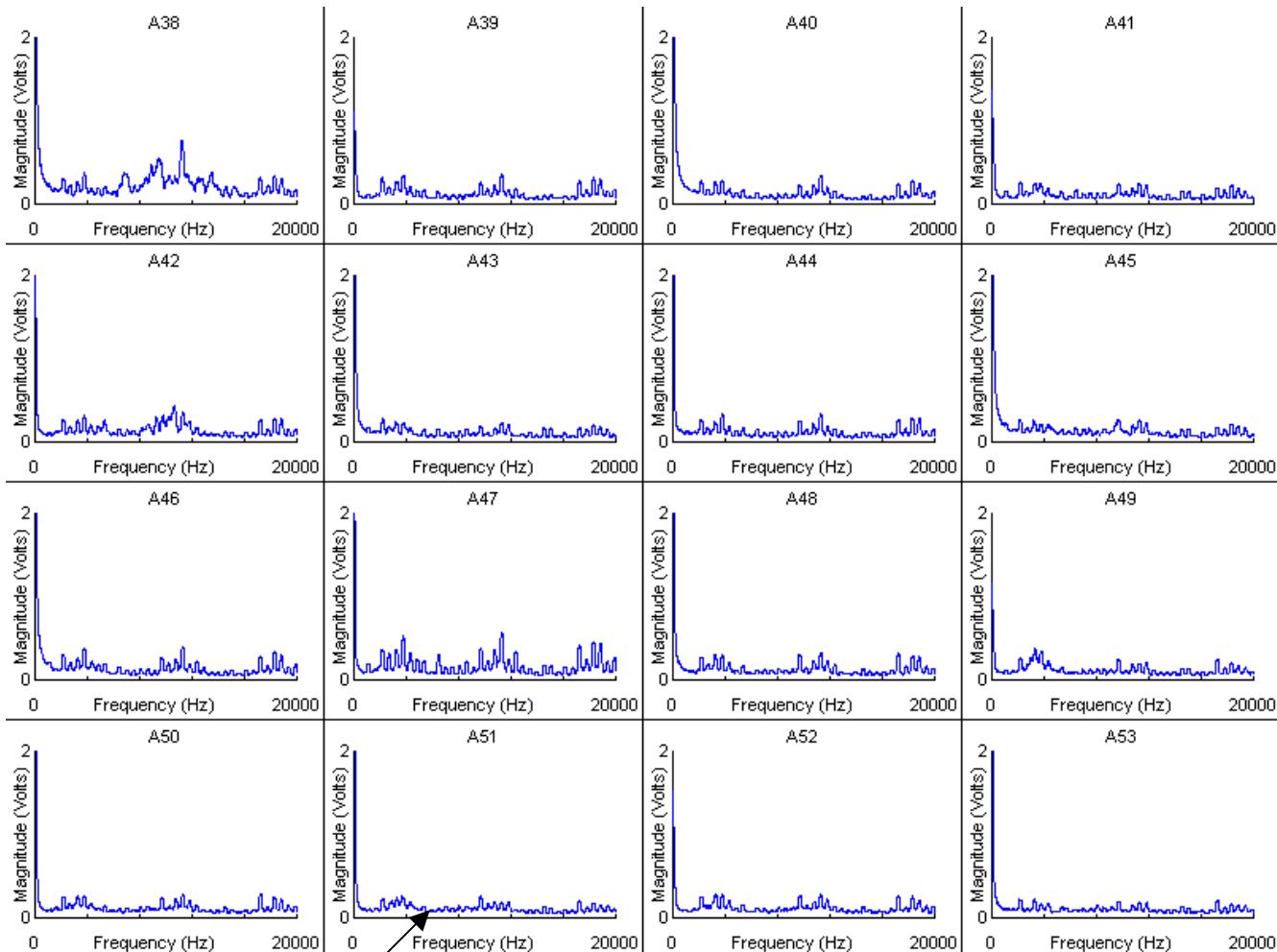
Detection of Concrete Cracking

Concrete cracking was detected during the stressing phase, during aging of the vessel, and during the pressurization phases. Some of the events recorded were confirmed by visual examination. The cracking was audible during pressurization as continuous Kaiser effect cracking as each new pressure plateau was realized.

Larger cracks affected a sufficient number of sensors that the position of the origin of the cracks could be estimated.

Detection of Leaks during the LST

Analysis of the output of the sensors during the pressurization of the LST was done in an attempt to determine the development of leaks, and to determine the location of the first leaks as they appeared. In observing the FFT of all of the internal sensors, anomalies started to appear at 2.4 Pd in the area around the equipment hatch. This appearance is illustrated below in Figures 1 to 3.

Graph of FFT of Internal Sensors at different pressures during LST**Figure 1: Internal Sensors (FFT) at 2.3 Pd**

Normal Background

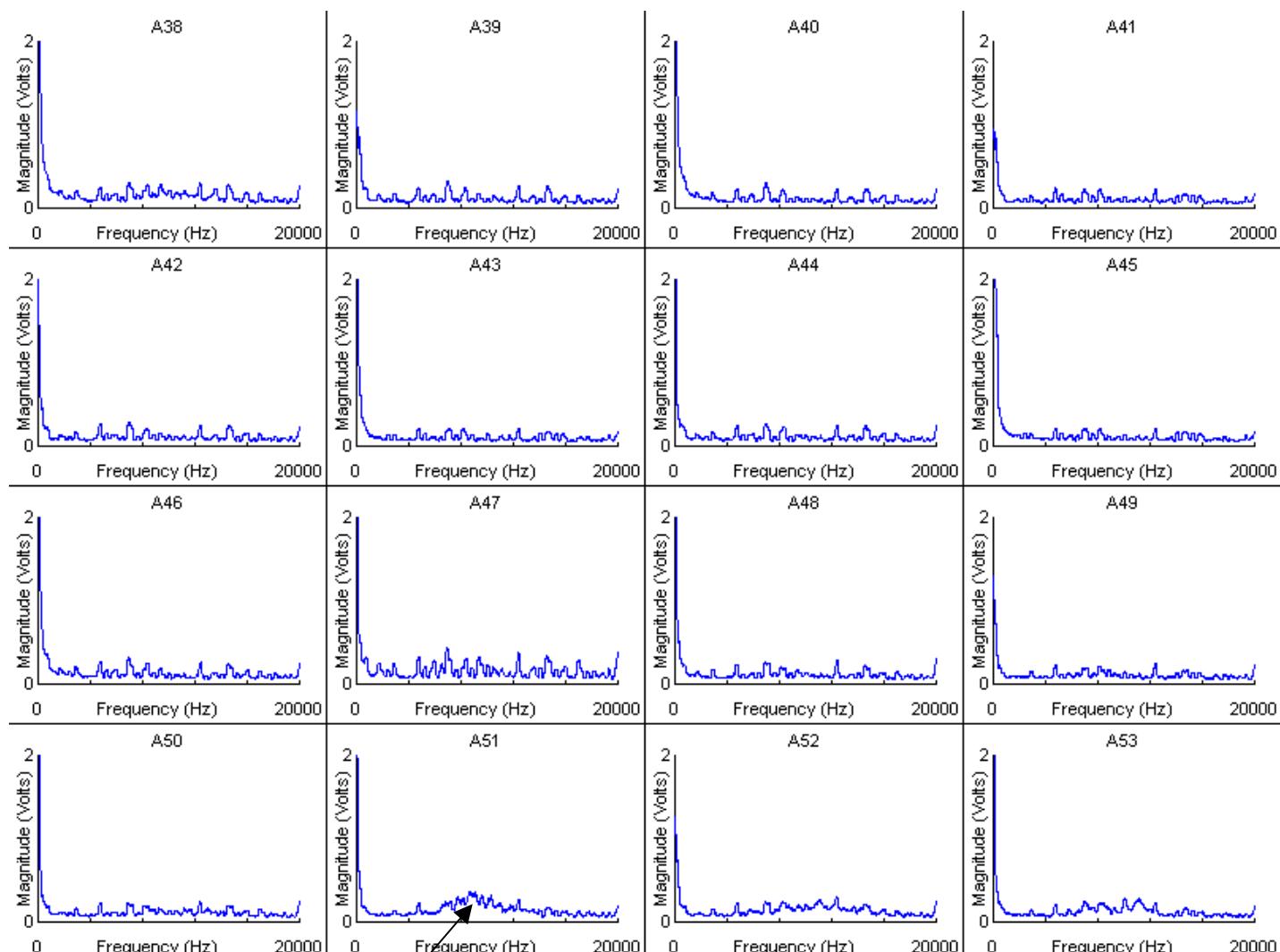


Figure 2: Internal Sensors (FFT) at 2.4 Pd

Elevated White Noise

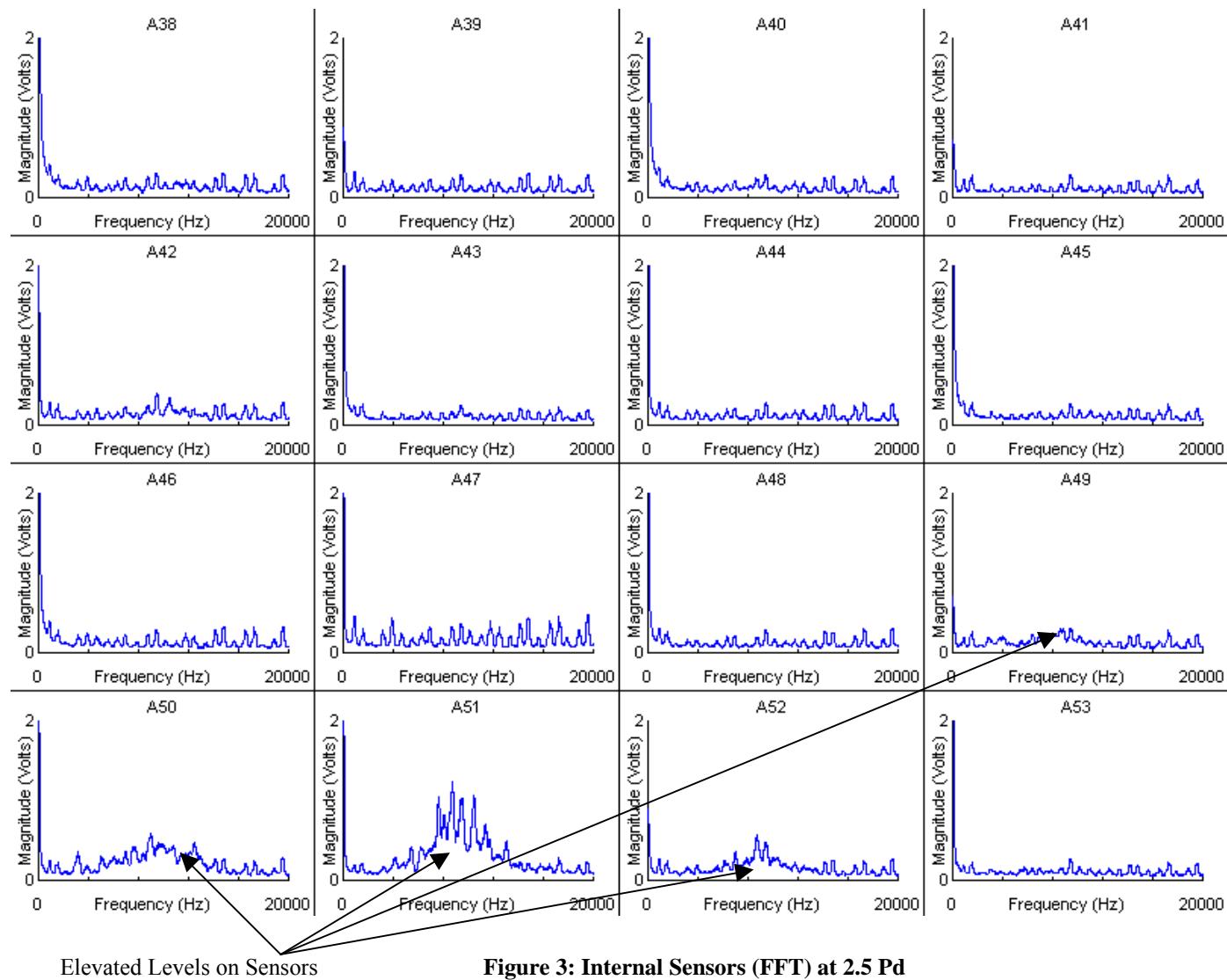


Figure 3: Internal Sensors (FFT) at 2.5 Pd

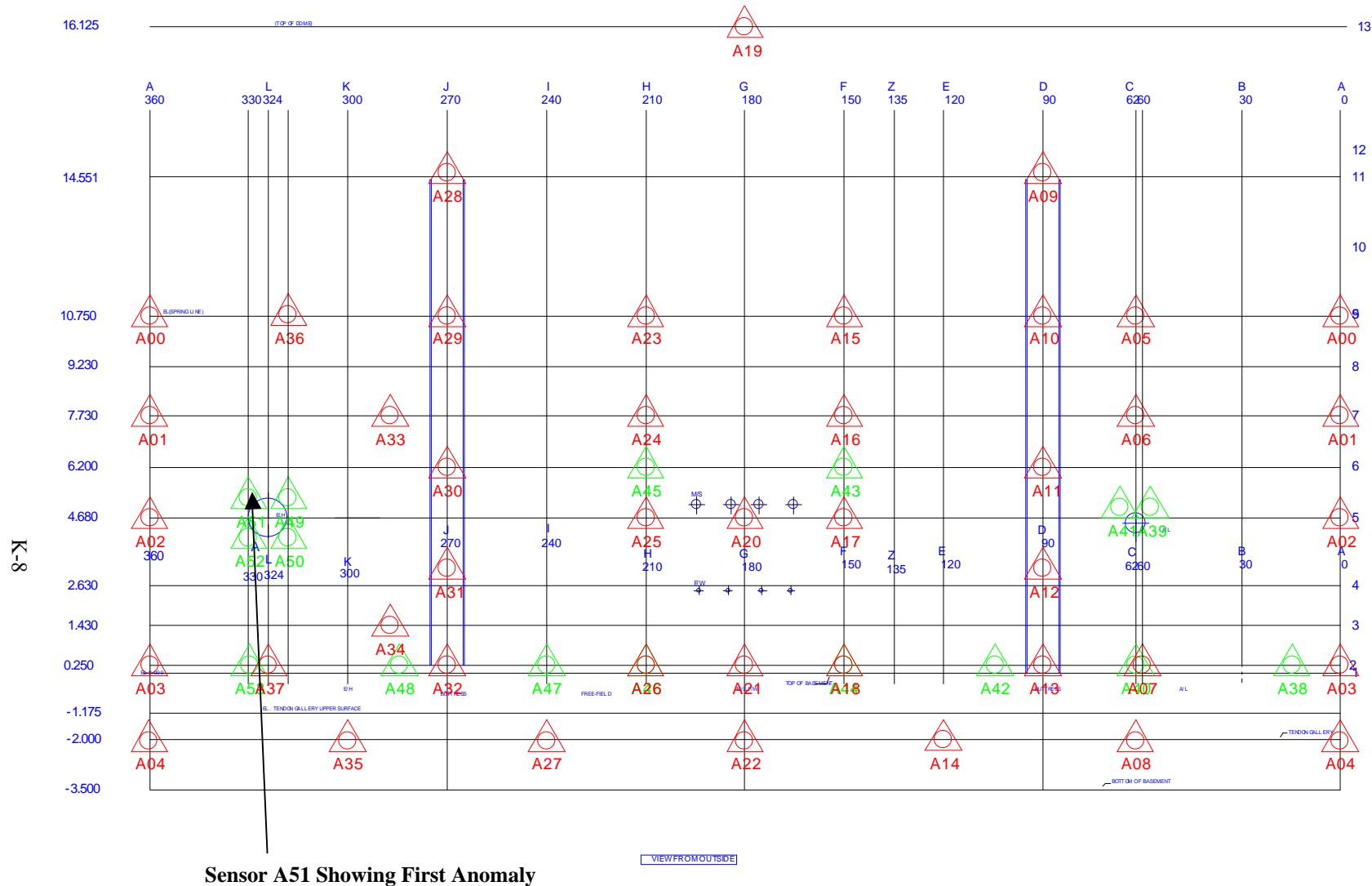


Figure 4: Location of Sensor Detecting the first leak during LST

Effect of Schmidt Hammer on PCCV

Use of a Sclerometer or Schmidt hammer allows the estimation of the size of an acoustic event. The Schmidt hammer generates about 1 Joule of energy. Below are two graphs showing the time domain and energy estimate of a Schmidt hammer impact on the PCCV wall.

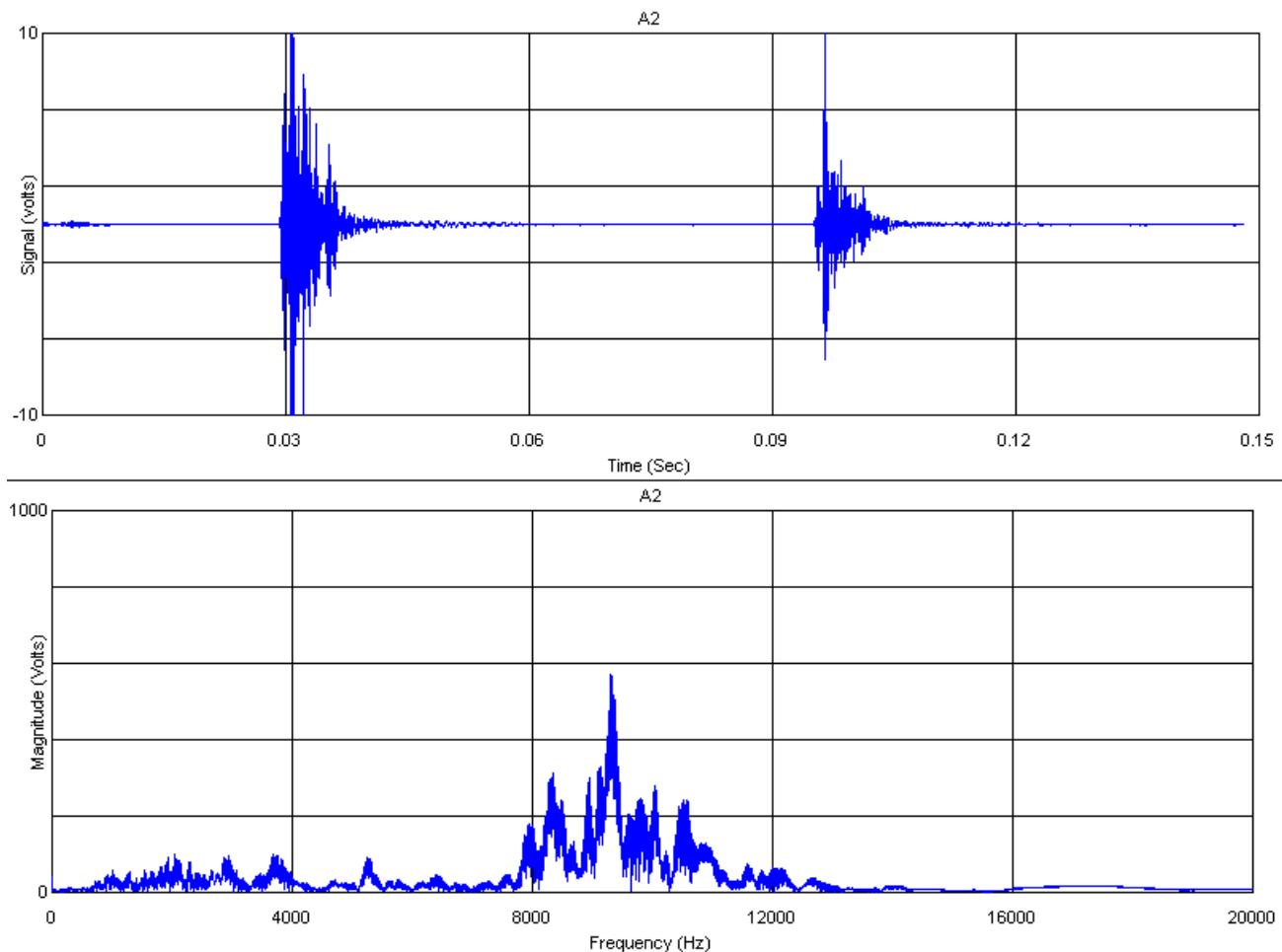


Fig 5: Time Domain and Frequency Domain of Schmidt Hammer Impact

Detection of “Tendon Pings” during LST and SFMT

The phenomenon of “tendon pings” appeared during the LST. These emissions are characterized by a modest energy emission and a ringing sound, as if a taut string were plucked. Virtually all of these originated at or near the buttresses. The ringing manifests itself as a sharp peak in the FFT of the event. Below are two graphs showing the Time domain and Frequency domain graphs of a typical “Tendon Ping”. These started occurring at a pressure of 1.7 Pd and continued to a pressure of 2.9 Pd during the LST

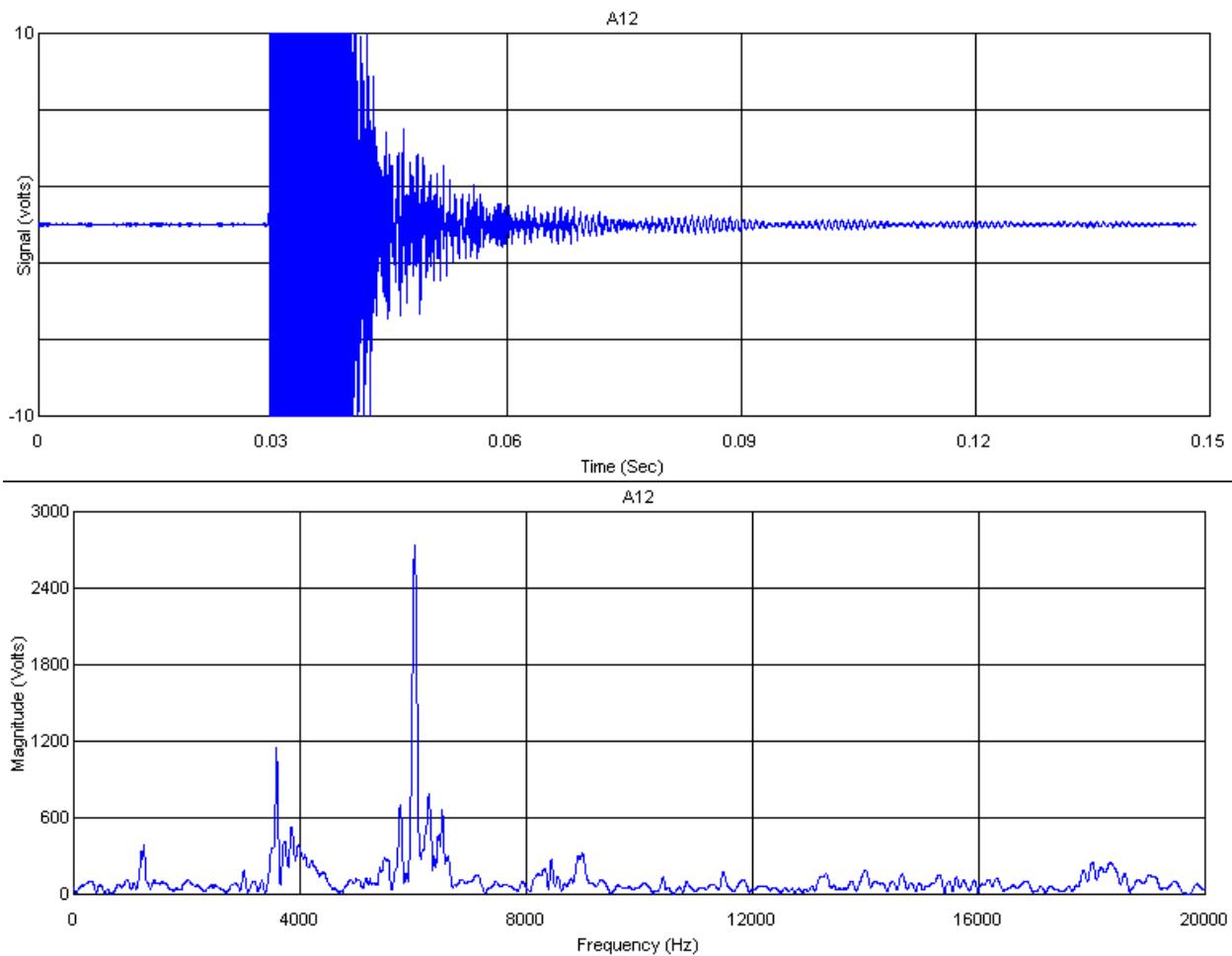


Figure 6: Time and Frequency Domain Plots of a “Tendon Ping”

Detection of Wire Breaks during SFMT

No wire break events were detected during the LST. The first wire break occurred at 10:39:47 Nov 14, during the SFMT. Wire breaks are expected to have at least as much energy as a Schmidt hammer impact, and are expected to show preferential propagation of acoustic energy along the tendon. However, as the concrete of the vessel became increasingly cracked, it became a poorer medium for the transmission of the sound. As a consequence, only the magnitude and frequency content of the output of sensors near each event could be used to assess whether or not a given event was likely the result of a wire break. Fifty-eight events were detected that matched these criteria. Three of these events detected double wire breaks, and Six events detected multiple wire breaks, excluding the final rupture of the vessel.

Most of the wire breaks were located near 20 deg. Azimuth at elevations between 3m and 9 m. The graph below plots an asterisk at the position of the source of each wire break.

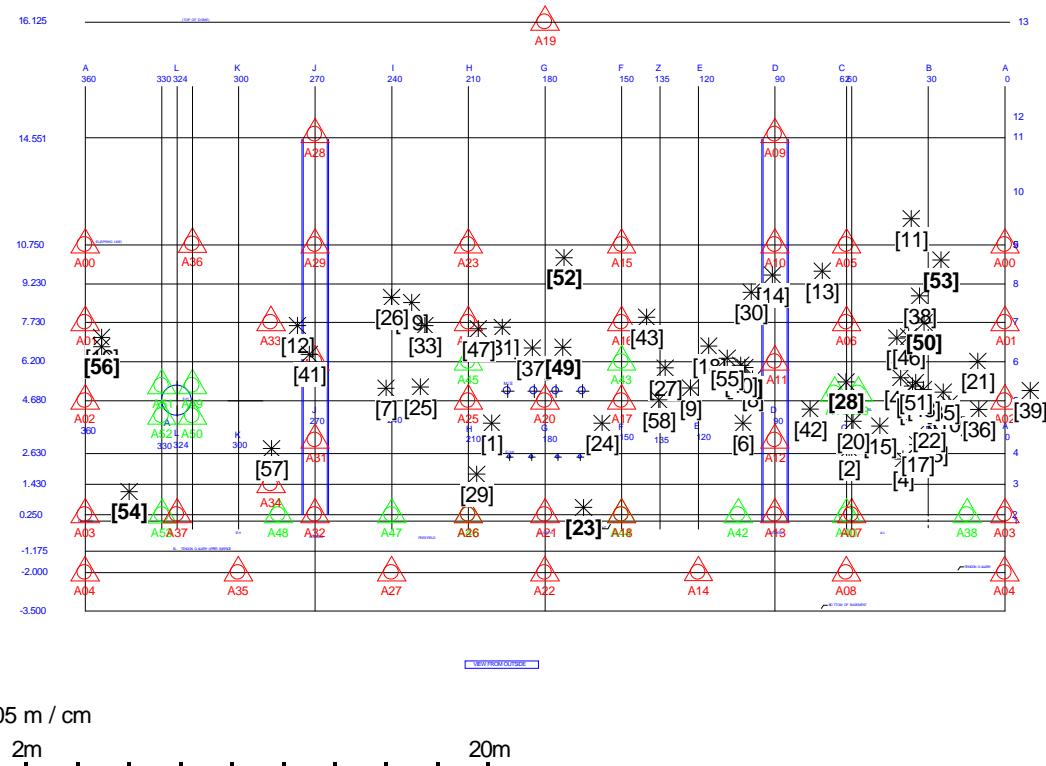


Figure 7: Flattened elevation view (from outside) of location of wire breaks during SFMT

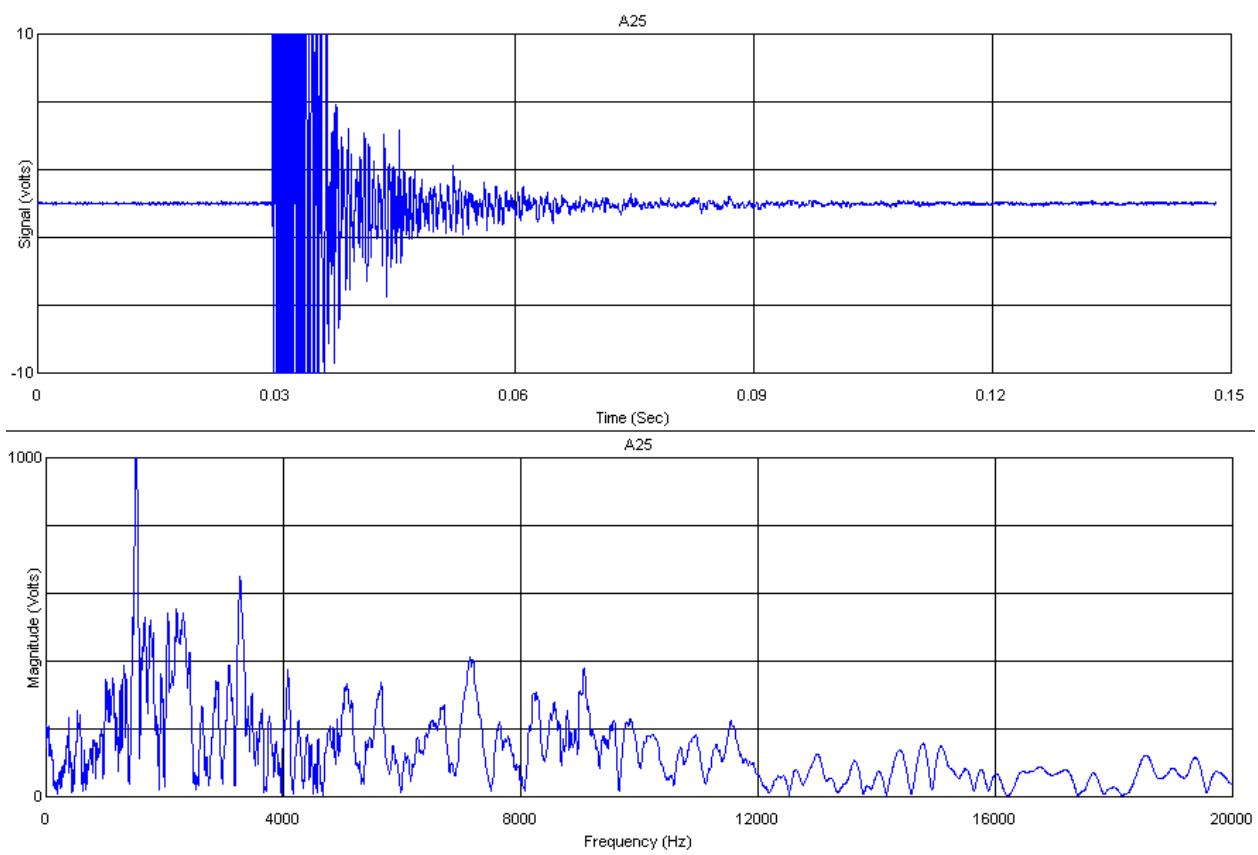


Figure 8: Time Domain and Frequency domain plots of a typical wire break recorded by a nearby sensor

Detection of Events in Basemat during SFMT

During the later stages of the SFMT, events started occurring that originated in the basemat of the PCCV, but which did not have all of the characteristics expected of wire breaks. Sixty-Five events of this type occurred between 10:43:37 and at 10:46:03. The graph below shows the locations of these events.

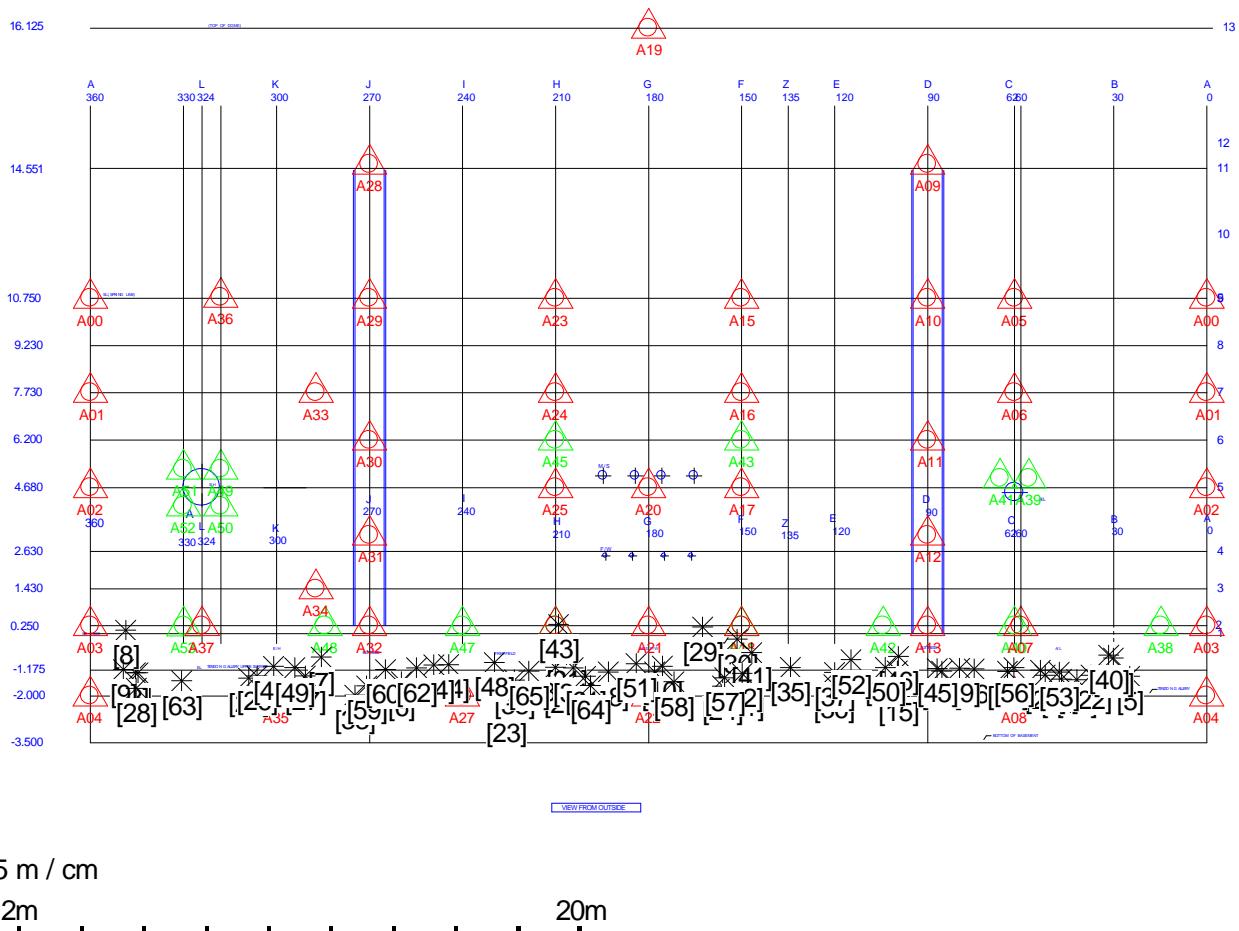


Figure 9: Location of Events in Basemat during SFMT

Detection of Average Energies of Wire Breaks

As the SFMT progressed, successive wire breaks were detected at increasing pressures. An estimate of the relative energy released by these breaks is made below. Note that the last event is the rupture of the vessel.

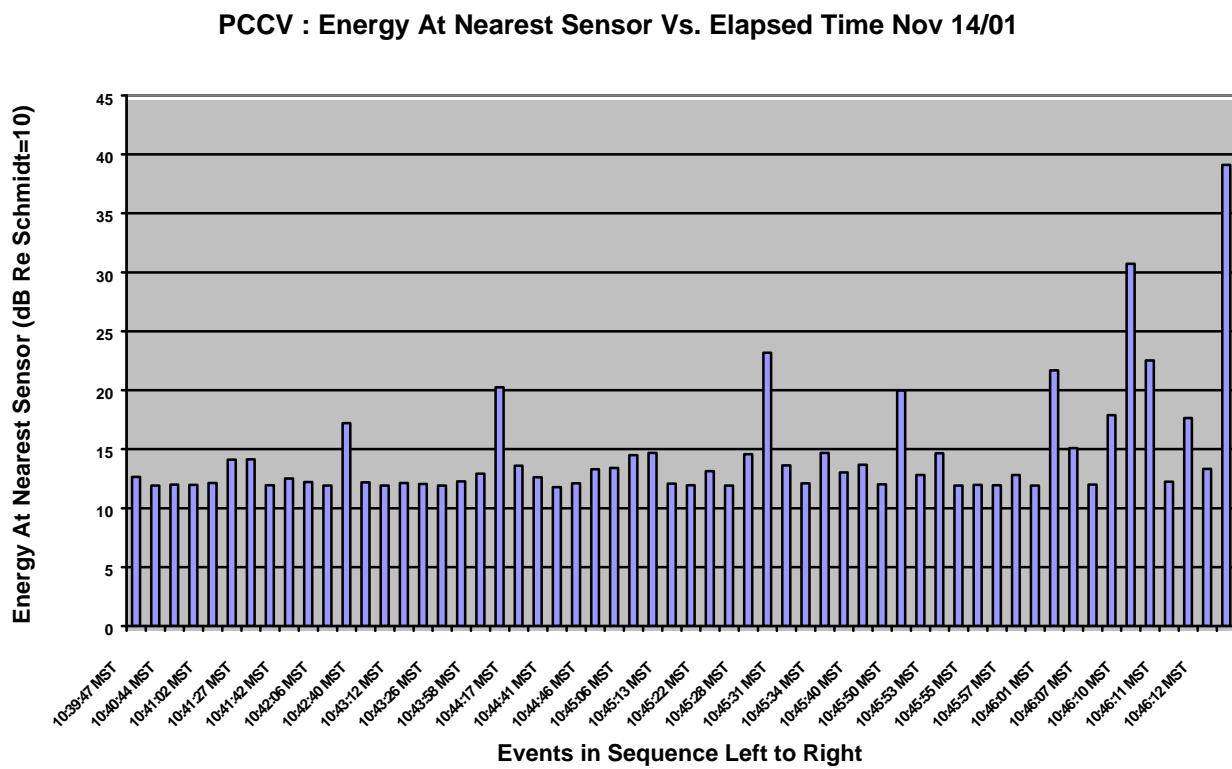


Figure 10 Energy vs Time of wire breaks in SMFT

Detection of Cracking

Throughout the SIT, LST and SFMT, events were detected that had properties consistent with concrete cracking. Most of these events occurred during the LST. Many thousands of these events were heard. Events sufficiently large to be detected at $>5\text{dB}$ were located. During the SIT, there were 20 events located, and during the LST, there were 264 events located. Typical cracking behaviour has a time domain graph with multiple events, and a frequency domain that has anomalies from 6 KHz to 12 KHz.

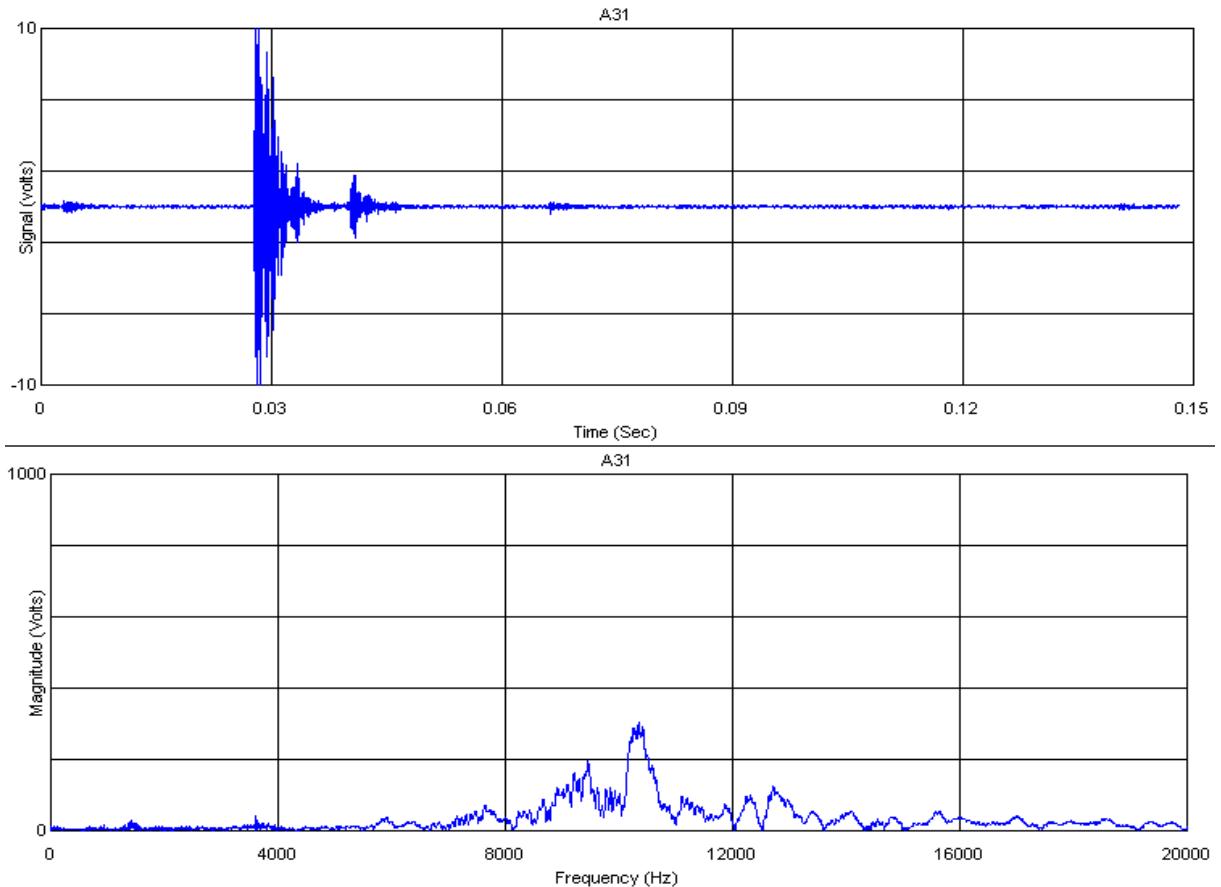


Figure 11 Typical Concrete Cracking Event Large Enough to Locate

Tendon Pings During SFMT

Most of the tendon pings detected during the SFMT occurred in the buttresses with a few originating from the basemat area.

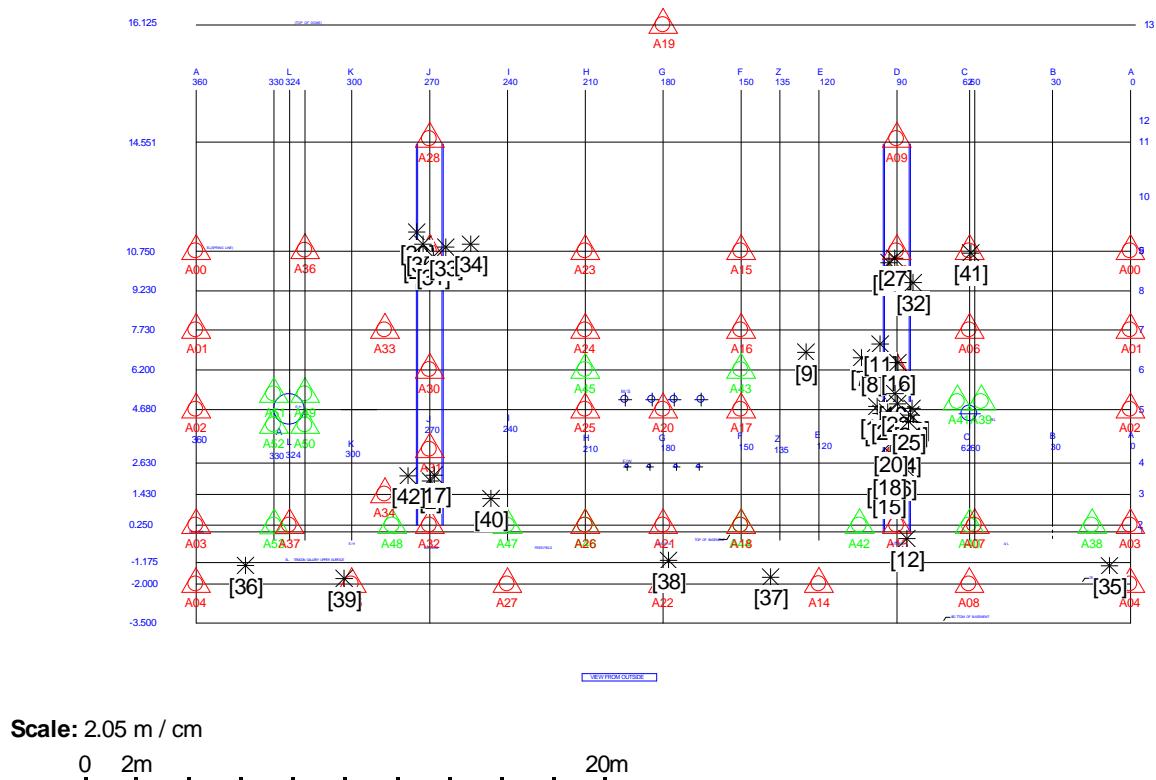


Figure 12: Tendon Pings During SFMT

Summary of Acoustic Monitoring on PCCV

Background

The PCCV vessel was designed to test the failure modes and prediction strategies developed to model the behavior of the vessel as containment pressures exceed the design pressures.

Acoustic monitoring was represented as being able to detect several useful types of information. These included:

1. Failure of Post-Tensioning Strand Wires
2. Concrete Cracking

Although not originally planned, it was hoped that leak development would also be detected.

Throughout the prestressing phase, and the three testing phases, the monitoring system was continuously active. Fifty Four sensors were applied to the vessel, forty eight externally, and sixteen on the liner internally to the vessel.

Summary of Results

Acoustic monitoring of the vessel detected no wire breaks during the prestressing phase, but detected the development of several large cracks during and after the prestressing phase completion. The largest of these were confirmed by visual examination of the external surface of the vessel before pressurization.

During the LST, 136 large events emanating from the buttresses were detected and identified as “tendon pings” meaning a readjustment of position of the tendon near the anchorage, but these were not wire or tendon failures.

A total of 489 cracking events were detected and mapped on the attached drawings. Some views of these data are available with the visual mapping of the cracks overlaying the plots.

Ten events originating near the tendon gallery indicate concrete crushing in that area.

No tendon failures were detected.

One leak was detected at 2.4 Pd near the equipment hatch. Other leaks became apparent as the pressures increased.

Real time audio of the acoustic sensors was made available to the participants in the LST.

Development of Leaks

Tear in the liner allow nitrogen to flow. This process generates acoustic noise that is detectable by nearby sensors. The graphics below are Fourier Transforms of events detected by the sensors mounted internally on the liner. Figure 1 shows the response before any tearing is suspected. Notice that the output of all of the sensors is very low and displays no anomalies.

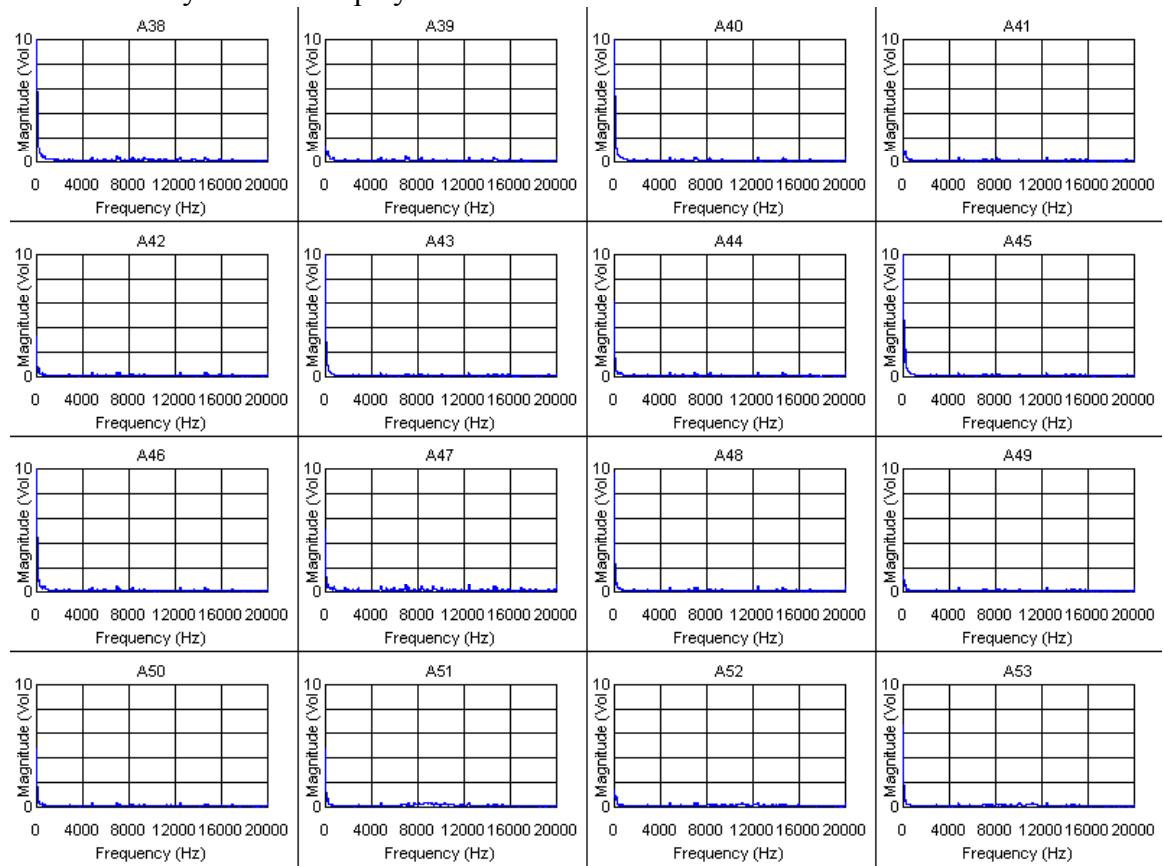


FIG. 1 FFT of internal sensors before liner tearing
Time: 09:27:52 Wed Sept 27, 2000

Figure 2 below shows the development of a suspected tear in the liner near the equipment hatch. Notice that sensors A50, A51, and A52 all show a broadband white noise centered around 8 KHz.

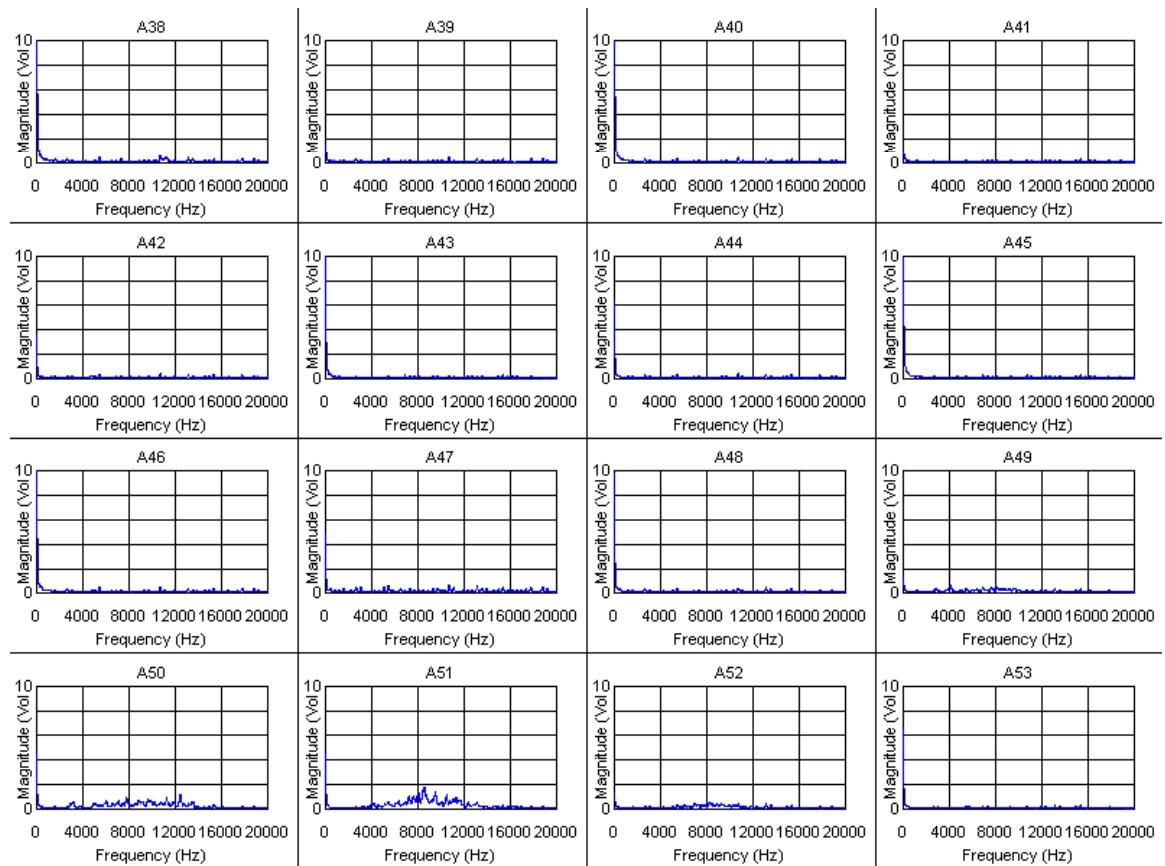


Figure 2. FFT of internal sensors showing noise from liner tear near equipment hatch

Time: 11:18:21 Wed Sept 27, 2000

Figure 3 below shows anomalies that have developed in several places on the liner. Notice that the amplitude of the noise has increased sharply in A50, 51, and 52, indicating that the tears in that area are increasing in size and flow. These anomalies were also detectable on the external sensors.

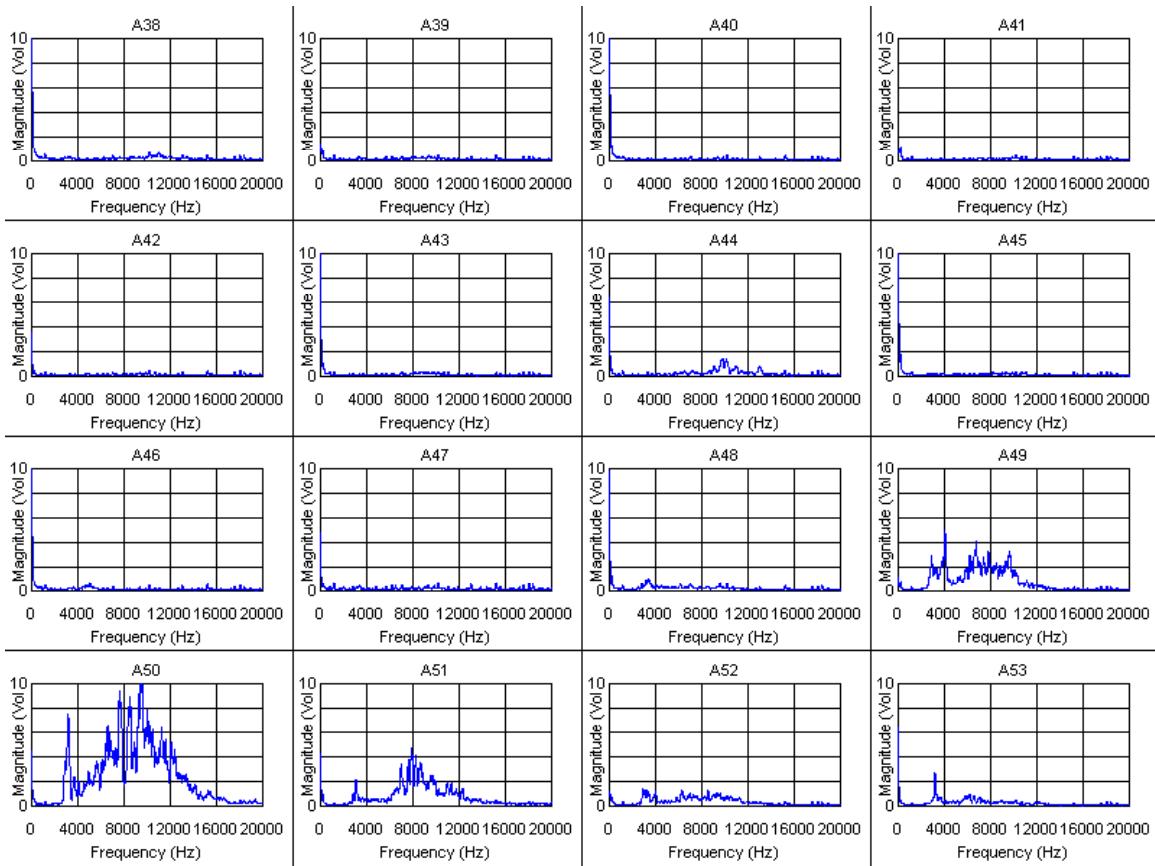


Figure 3. FFT of Internal Sensors showing well developed flow noise from suspected tearing of the liner.

Time 12:12:44 Wed Sept 27, 2000

Figure 4 below also shows increased flow noise in many areas of the liner.

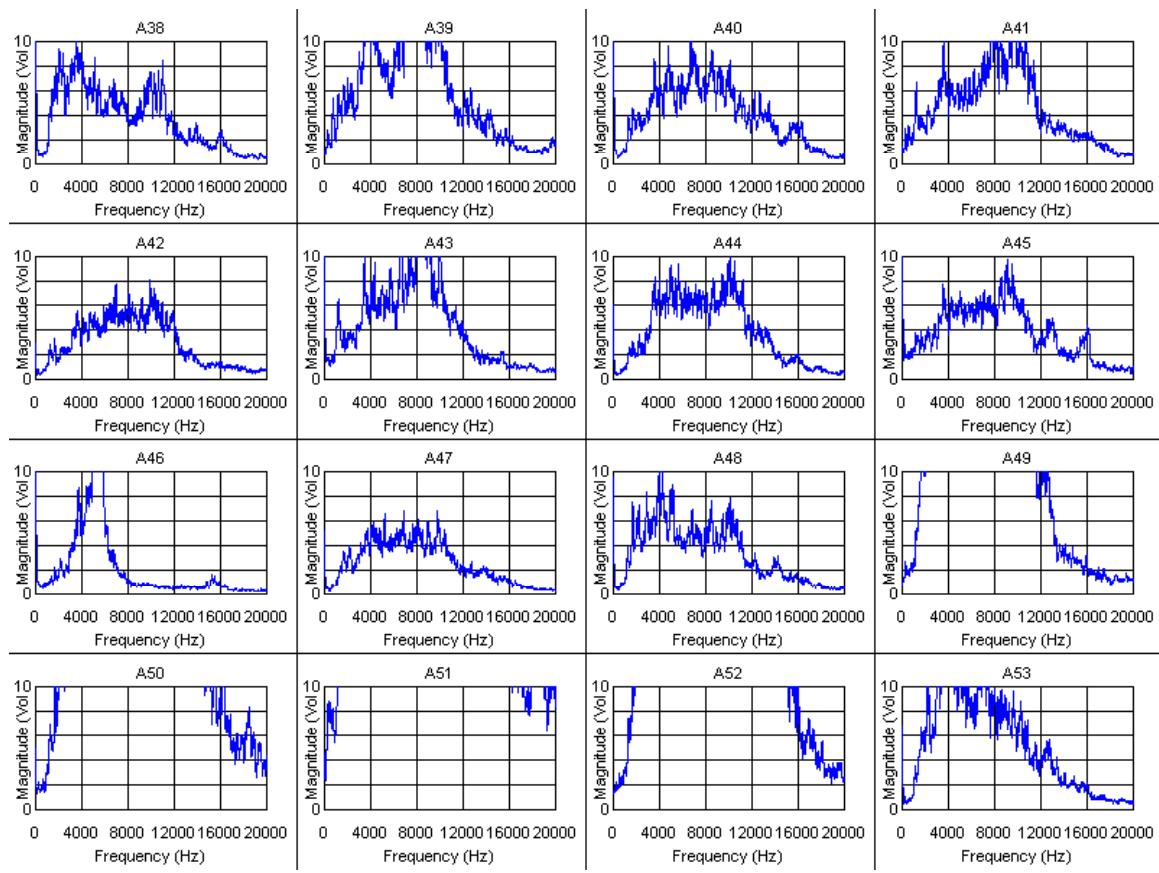


Figure 4. FFT of internal sensors with increased flow noise from many suspected liner tears
Time: 15:45:49 Wed Sept 27, 2000

Development of concrete cracking

Concrete cracking was detected throughout the construction and testing of the PCCV. Large cracking sounds were located on the elevation view of the vessel. For this summary, only three figures are shown.. Figure 4 shows the position of cracks during the LST. Other views of cracks are available in the attached reports.

K-22

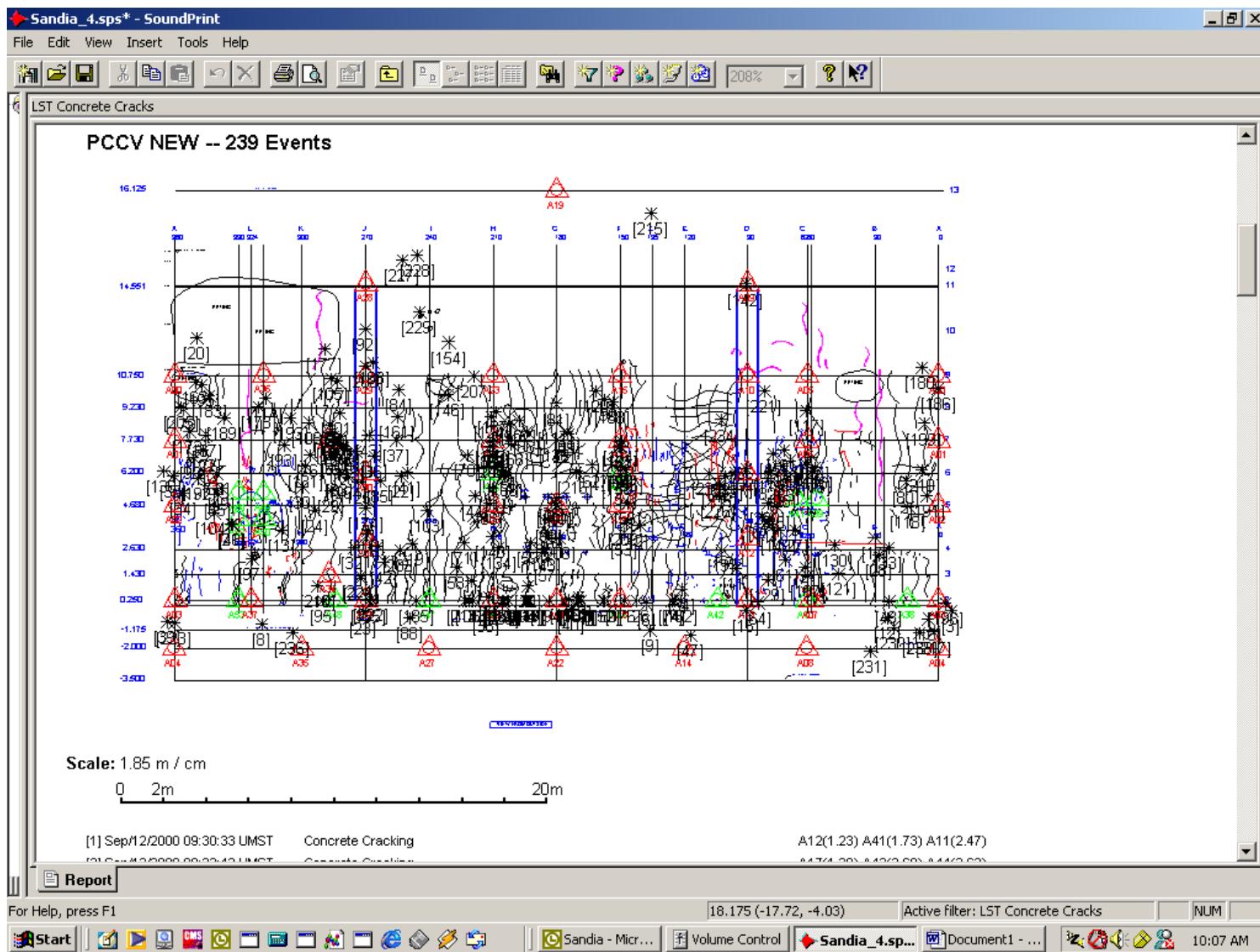


Figure 4 Position of cracking during LST overlain onto map of visual cracking

Events identified as concrete cracking have a sharp time domain signature and a FFT signature with anomalies from 8 KHz to about 12 KHz in the frequency domain. Figure 5 below shows a typical event from cracking of the concrete. The top chart is the time domain representation of the event, while the bottom chart is the frequency domain representation of the same event on the same sensor.

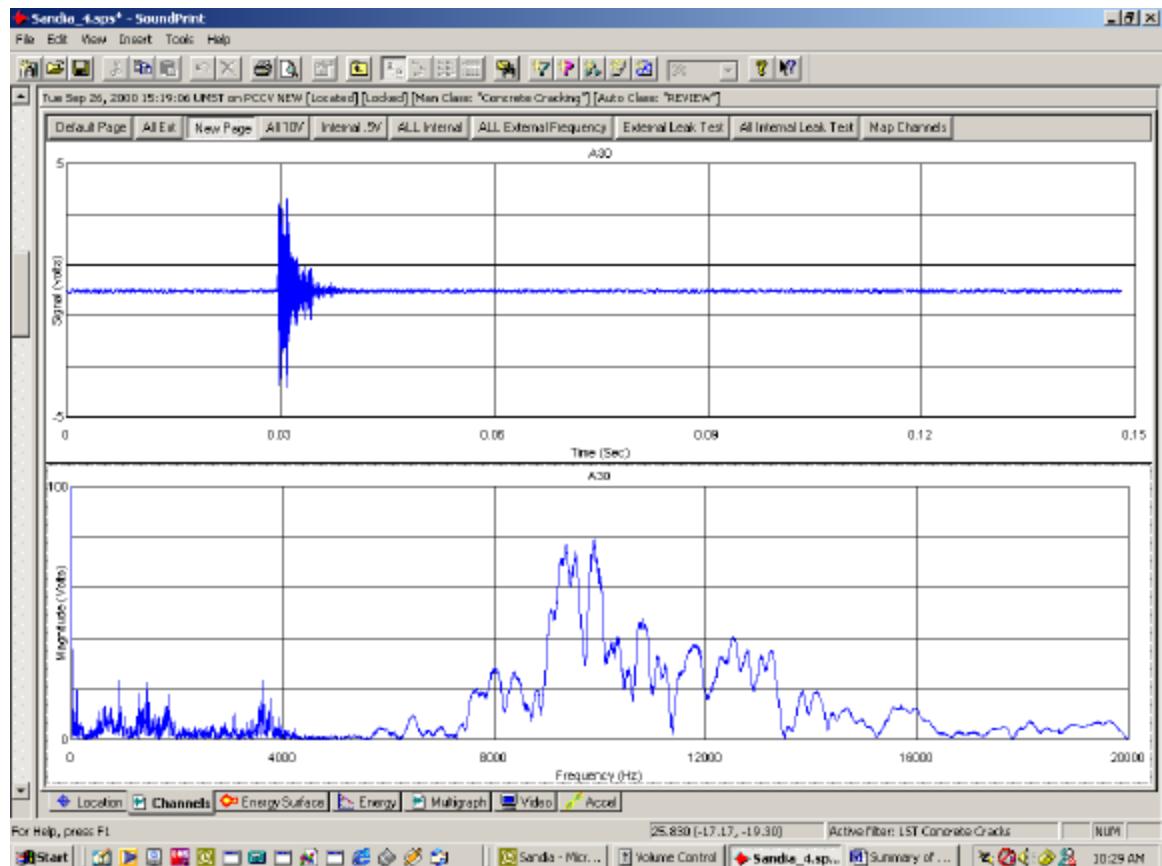


Figure 5 Typical event resulting from concrete cracking during LST

The locations of the “tendon pings” that may have resulted from load distribution is shown below in figure 6.

K-24

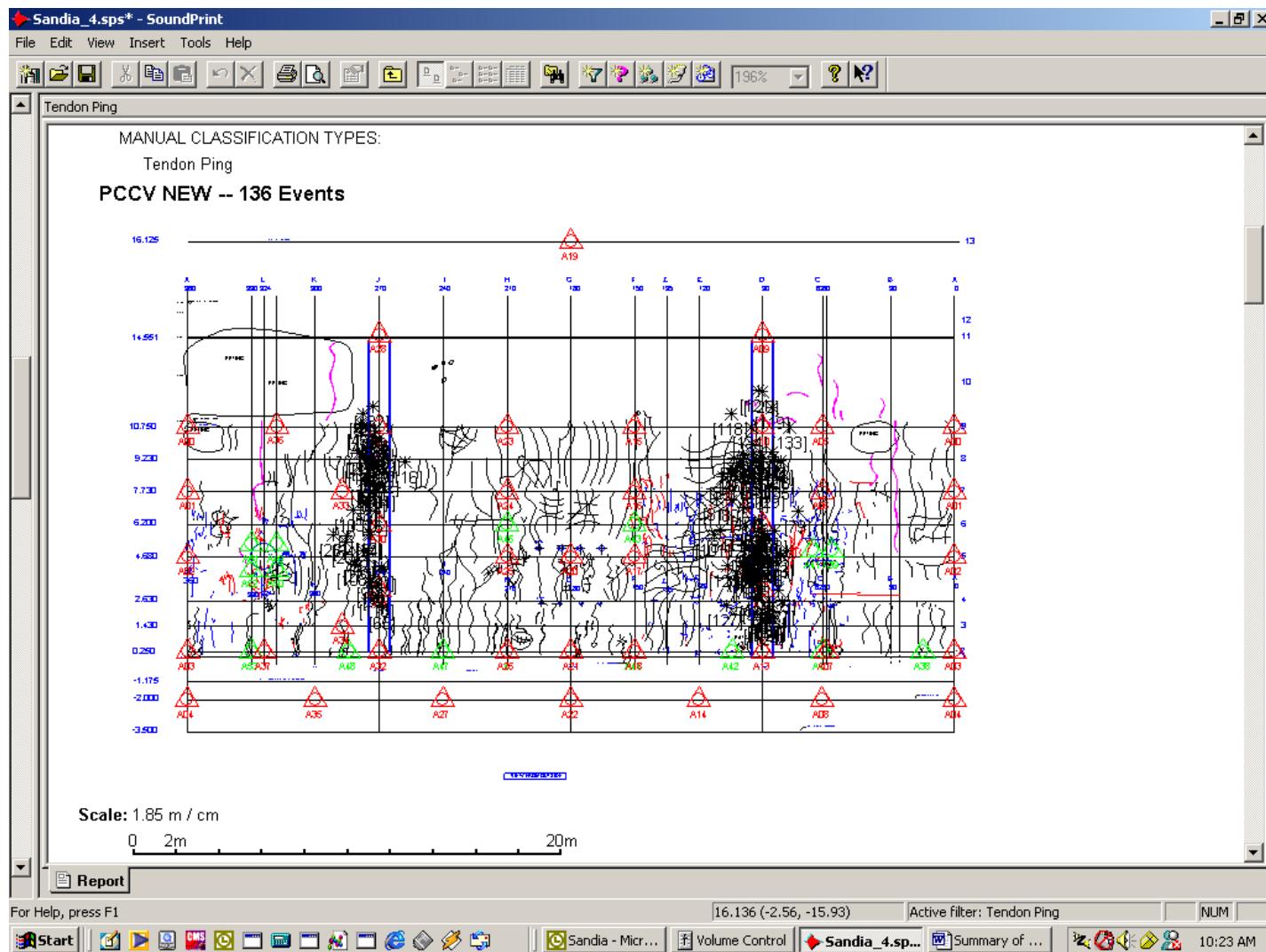


Figure 6 Locations of events identified as tendon pings during the LST

Figure 7 below shows the time and frequency domain plots of a typical tendon ping event.

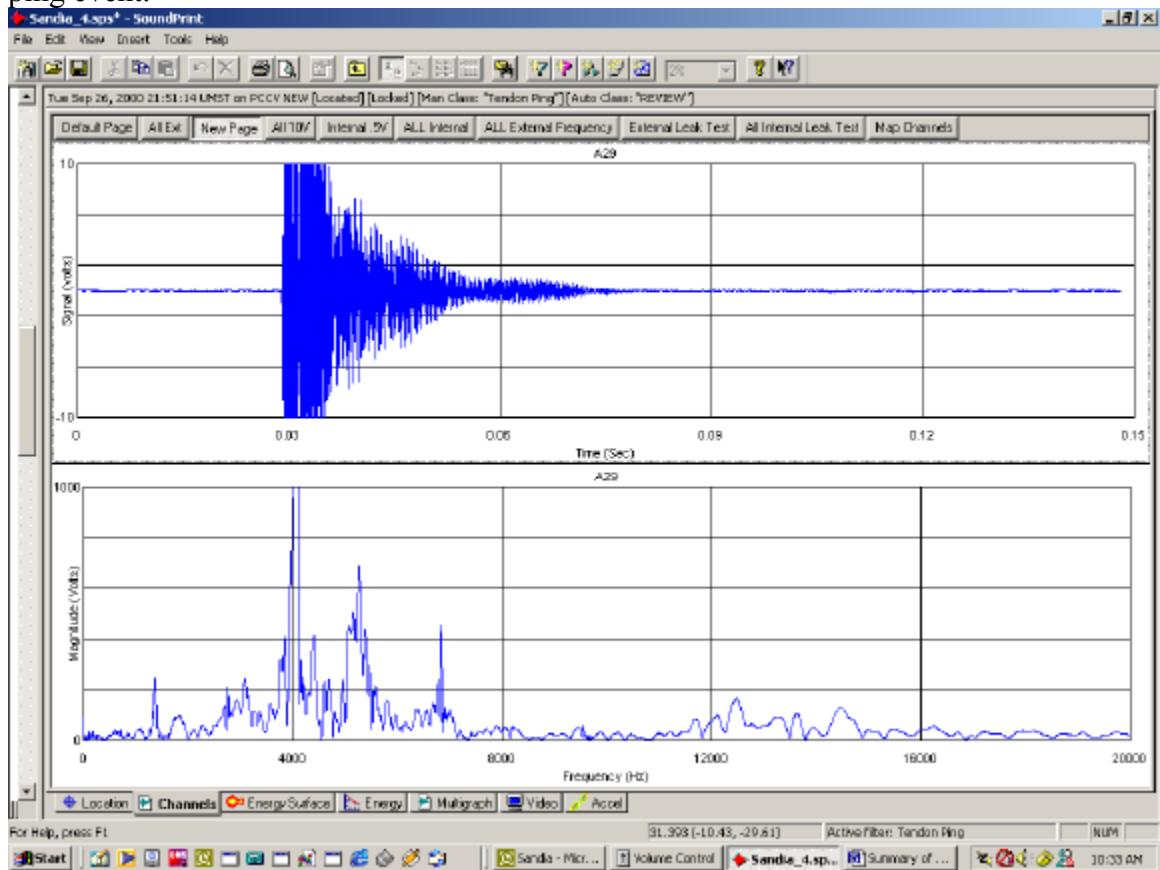


Figure 7 showing Time domain and FFT of a typical tendon ping event.

Conclusion

Acoustic monitoring of the PCCV was able to detect and identify all of the features intended, and some supplementary information was also reported.

- No tendon failures occurred during the construction, the SIT or the LST
- Cracking was widespread and easily detected and mapped
- Other tendon behavior was tracked and reported (tendon pings)
- Localized crushing of the concrete was detected
- Leaks were detected and reported at levels of about 1 mass percent per day

Acoustic monitoring can provide global information about the behavior of a PCCV with widely distributed surface mounted sensors.

**SANDIA PCCV
ALBUQUERQUE, NM**

SOUNDPRINT® ACOUSTIC MONITORING PROGRAM

REPORT

REPORTING PERIOD: MARCH 13 TO SEPTEMBER 27, 2000

DISCLAIMER

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<i>Section</i>	<i>Title</i>
1.0	Executive Summary
2.0	SoundPrint® Report: ALL Cracks: (03/13/2000)

1.0 EXECUTIVE SUMMARY

The following is a summary of relevant activity recorded by the SoundPrint® monitoring system. The summary includes information for both the latest monitoring period and for the entire monitoring period from the start-up date up to and including the most recent monitoring period.

	Period 03/13/2000– 09/27/2000
Operating Efficiency	88.4%
ALL Cracks	489

Comments

Recommendations

There are no new recommendations at this time.

Prepared by:

Peter Paulson
President & CEO

REPORT PRESENTATION

A computerized drawing of the slab with the sensor layout is included on the following page and contains the following symbols:



Sensor Symbol with individual sensor name beneath



Symbolizes an event location. Event details are listed on the page following the drawing.

A list describing event details is provided for each drawing and lists the event number, shown on the computerized drawing, followed by the date, time, event classification and co-ordinates (in meters) to the origin of the events using the three closes sensors.

Event Report For Sandia PCCV

Albuquerque, NM

System Uptime 175 Days (88.4%)

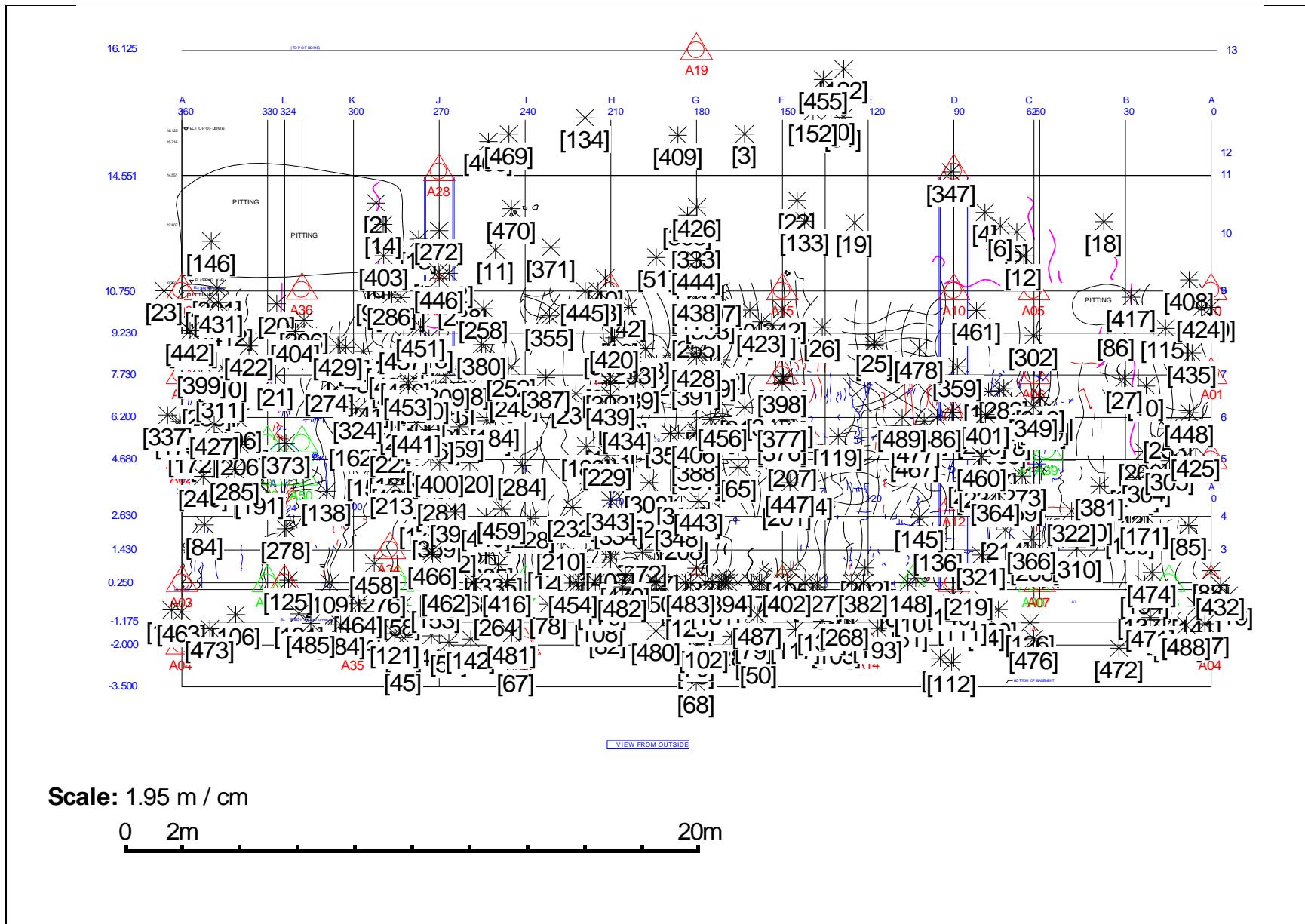
ALL CRACKS

Period: 03/13/2000 to 09/27/2000

Matched Events: 489



PCCV NEW -- 489 EVENTS



Events

No.	Date/Time	Classification	Location (m)
[1]	Mar/13/2000 23:25:01 UMST	Possible Cracking Sound	A48(0.90) A34(1.30) A32(2.33)
[2]	Mar/18/2000 07:37:50 UMST	Circumferential Event	A28(2.46) A29(3.86) A36(4.07)
[3]	Mar/20/2000 10:04:33 UMST	Circumferential Event	A19(3.44) A15(5.81) A23(7.33)
[4]	Mar/20/2000 11:20:19 UMST	Circumferential Event	A09(1.82) A10(3.03) A05(3.31)
[5]	Mar/21/2000 14:42:51 UMST	Circumferential Event	A05(2.21) A10(3.05) A09(3.08)
[6]	Mar/25/2000 12:35:37 UMST	Possible Cracking Sound	A09(2.54) A05(2.62) A10(2.85)
[7]	Apr/04/2000 13:42:13 UMST	Possible Cracking Sound	A36(1.52) A33(3.56) A49(4.00)
[8]	Apr/04/2000 14:07:13 UMST	Possible Cracking Sound	A30(2.40) A24(3.84) A33(3.90)
[9]	Apr/06/2000 07:07:36 UMST	Possible Cracking Sound	A29(2.18) A36(2.75) A33(3.67)
[10]	Apr/06/2000 08:42:23 UMST	Circumferential Event	A01(2.30) A02(3.49) A06(3.92)
[11]	Apr/06/2000 09:37:58 UMST	Circumferential Event	A29(2.45) A28(3.42) A23(4.28)
[12]	Apr/06/2000 09:51:18 UMST	Circumferential Event	A05(1.32) A10(2.74) A09(3.88)
[13]	Apr/06/2000 09:51:59 UMST	Possible Cracking Sound	A29(2.01) A28(2.52) 36(4.46)
[14]	Apr/06/2000 12:51:40 UMST	Circumferential Event	A28(2.72) A29(3.09) A36(3.69)
[15]	Apr/12/2000 08:25:11 UMST	Circumferential Event	A00(1.30) A01(1.83) A36(3.98)
[16]	Apr/12/2000 11:31:41 UMST	Circumferential Event	A23(1.45) A24(1.64) A45(3.15)
[17]	Apr/12/2000 11:45:43 UMST	Circumferential Event	A16(3.37) A10(3.40) A15(3.76)
[18]	Apr/13/2000 09:30:02 UMST	Possible Cracking Sound	A05(3.49) A00(4.49) A09(5.52)
[19]	Apr/14/2000 12:46:01 UMST	Possible Cracking Sound	A15(3.51) A09(3.91) A10(4.24)
[20]	Apr/19/2000 15:18:44 UMST	Circumferential Event	A36(1.00) A00(3.33) A01(4.18)
[21]	Apr/19/2000 15:26:04 UMST	Possible Cracking Sound	A51(2.46) A49(2.61) A36(3.21)
[22]	Apr/20/2000 06:43:28 UMST	Possible Cracking Sound	A15(3.30) A09(5.55) A16(6.30)
[23]	Apr/21/2000 10:17:03 UMST	Possible Cracking Sound	A00(0.62) A01(3.10) A36(4.79)
[24]	Apr/24/2000 07:47:13 UMST	Possible Cracking Sound	A02(1.21) A01(3.13) A39(4.51)
[25]	May/02/2000 16:50:19 UMST	Circumferential Event	A10(3.30) A16(3.43) A15(3.69)
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[38]	Jul/18/2000 08:33:01 UMST	Possible Cracking Sound	A35(1.16) A48(1.78) A34(2.54)
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[42]	Jul/18/2000 08:33:13 UMST	Possible Cracking Sound	A23(0.84) A24(2.51) A45(4.01)
[43]	Jul/18/2000 08:33:15 UMST	Possible Cracking Sound	A22(0.32) A21(2.58) A46(3.93)

[44]	Jul/18/2000 08:33:16 UMST	Possible Cracking Sound	Not Located
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[52]	Jul/18/2000 08:34:57 UMST	Possible Cracking Sound	Not Located
[53]	Jul/18/2000 08:35:10 UMST	Possible Cracking Sound	A32(2.17) A27(2.65) A48(2.78)
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[58]	Jul/18/2000 08:37:02 UMST	Possible Cracking Sound	A48(0.84) A32(1.53) A34(2.05)
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[61]	Jul/18/2000 08:37:20 UMST	Possible Cracking Sound	A42(1.25) A14(1.77) A13(1.97)
[62]	Jul/18/2000 08:37:23 UMST	Possible Cracking Sound	Not Located
[63]	Jul/18/2000 08:37:31 UMST	Possible Cracking Sound	Not Located
[64]	Jul/18/2000 08:37:48 UMST	Possible Cracking Sound	A42(0.70) A13(1.99) A14(2.04)
[65]	Jul/18/2000 08:38:32 UMST	Possible Cracking Sound	A20(1.47) A17(1.56) A43(2.36)
[66]	Jul/18/2000 08:39:36 UMST	Possible Cracking Sound	Not Located
[67]	Jul/18/2000 08:39:36 UMST	Possible Cracking Sound	A27(0.66) A47(2.85) A32(3.89)
[68]	Jul/18/2000 08:39:42 UMST	Possible Cracking Sound	A22(1.34) A21(3.60) A46(4.67)
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[70]	Jul/18/2000 08:40:01 UMST	Possible Cracking Sound	A22(0.04) A21(2.30) A46(3.76)
[71]	Jul/18/2000 08:40:22 UMST	Possible Cracking Sound	A44(1.46) A18(1.46) A21(2.25)
[72]	Jul/18/2000 08:40:25 UMST	Possible Cracking Sound	A35(1.18) A48(1.88) A34(2.58)
[73]	Jul/18/2000 08:40:25 UMST	Possible Cracking Sound	A35(1.24) A37(2.06) A53(2.54)
[74]	Jul/18/2000 08:40:50 UMST	Possible Cracking Sound	A14(2.56) A13(2.76) A42(2.88)
[75]	Jul/18/2000 08:41:39 UMST	Possible Cracking Sound	A21(0.07) A22(2.33) A26(2.98)
[76]	Jul/18/2000 08:42:23 UMST	Possible Cracking Sound	Not Located
[77]	Jul/18/2000 08:42:37 UMST	Possible Cracking Sound	A42(0.18) A13(1.33) A14(2.92)
[78]	Jul/18/2000 08:43:10 UMST	Possible Cracking Sound	A47(1.12) A27(1.69) A26(2.31)
[79]	Jul/18/2000 08:43:13 UMST	Possible Cracking Sound	A18(1.95) A44(1.95) A22(2.08)
[80]	Jul/18/2000 08:43:23 UMST	Possible Cracking Sound	A15(2.14) A16(3.70) A23(3.82)
[81]	Jul/18/2000 08:43:24 UMST	Possible Cracking Sound	Not Located
[82]	Jul/18/2000 08:43:32 UMST	Possible Cracking Sound	A46(1.49) A26(1.49) A27(2.98)
[83]	Jul/18/2000 08:43:33 UMST	Possible Cracking Sound	A14(0.91) A42(2.62) A44(2.86)
[84]	Jul/18/2000 08:43:38 UMST	Possible Cracking Sound	A03(2.23) A02(2.47) A52(2.81)
[85]	Jul/18/2000 08:43:40 UMST	Possible Cracking Sound	A38(2.17) A03(2.21) A02(2.49)
[86]	Jul/18/2000 09:36:32 UMST	Possible Cracking Sound	A05(3.11) A06(3.37) A00(3.53)
[87]	Jul/18/2000 09:46:29 UMST	Possible Cracking Sound	A31(1.06) A32(1.93) A34(2.17)
[88]	Jul/18/2000 09:46:50 UMST	Possible Cracking Sound	A03(0.43) A38(1.52) A04(2.68)
[89]	Jul/18/2000 09:47:46 UMST	Possible Cracking Sound	A44(1.07) A18(1.07) A21(1.91)

[90]	Jul/18/2000 09:47:47 UMST	Possible Cracking Sound	A42(1.67) A14(2.25) A44(2.87)
[91]	Jul/18/2000 09:47:48 UMST	Possible Cracking Sound	A09(4.32) A19(5.64) A15(6.61)
[92]	Jul/18/2000 09:48:04 UMST	Possible Cracking Sound	A29(2.24) A36(2.53) A33(3.06)
[93]	Jul/18/2000 09:48:09 UMST	Possible Cracking Sound	A13(0.93) A42(1.93) A40(2.65)
[94]	Jul/18/2000 09:48:11 UMST	Possible Cracking Sound	A21(1.44) A44(1.54) A18(1.54)
[95]	Jul/18/2000 09:48:20 UMST	Possible Cracking Sound	A18(0.04) A44(0.04) A21(3.02)
[96]	Jul/18/2000 09:48:35 UMST	Possible Cracking Sound	A14(1.19) A18(2.64) A44(2.64)
[97]	Jul/18/2000 09:49:02 UMST	Possible Cracking Sound	Not Located
[98]	Jul/18/2000 09:49:20 UMST	Possible Cracking Sound	A21(0.68) A22(2.02) A26(2.41)
[99]	Jul/18/2000 09:49:21 UMST	Possible Cracking Sound	Not Located
[100]	Jul/18/2000 09:49:30 UMST	Possible Cracking Sound	A04(1.31) A38(1.65) A03(1.99)
[101]	Jul/18/2000 09:49:35 UMST	Possible Cracking Sound	A35(1.18) A37(2.17) A48(2.50)
[102]	Jul/18/2000 09:49:36 UMST	Possible Cracking Sound	A22(0.36) A21(2.01) A44(3.38)
[103]	Jul/18/2000 09:50:01 UMST	Possible Cracking Sound	A14(1.18) A18(2.62) A44(2.62)
[104]	Jul/18/2000 09:51:48 UMST	Possible Cracking Sound	A35(0.76) A48(2.09) A37(2.91)
[105]	Jul/18/2000 09:52:28 UMST	Possible Cracking Sound	A44(0.56) A18(0.56) A21(3.31)
[106]	Jul/18/2000 09:52:54 UMST	Possible Cracking Sound	A53(1.60) A37(2.05) A04(2.18)
[107]	Jul/18/2000 09:53:04 UMST	Possible Cracking Sound	A42(0.73) A13(1.39) A14(2.36)
[108]	Jul/18/2000 09:54:10 UMST	Possible Cracking Sound	A26(1.12) A46(1.12) A47(2.79)
[109]	Jul/18/2000 09:55:48 UMST	Possible Cracking Sound	A37(1.56) A53(2.14) A48(2.38)
[110]	Jul/18/2000 09:56:11 UMST	Possible Cracking Sound	A38(1.39) A04(1.63) A03(1.96)
[111]	Jul/18/2000 09:56:41 UMST	Possible Cracking Sound	A13(1.08) A42(2.02) A40(2.68)
[112]	Jul/18/2000 09:56:49 UMST	Possible Cracking Sound	A13(2.88) A08(2.93) A14(2.97)
[113]	Sep/12/2000 09:30:33 UMST	Concrete Cracking	A12(1.23) A41(1.73) A11(2.47)
[114]	Sep/12/2000 09:33:43 UMST	Concrete Cracking	A17(1.29) A43(2.60) A44(3.62)
[115]	Sep/12/2000 09:48:50 UMST	Concrete Cracking	A00(2.08) A01(2.31) A05(4.77)
[116]	Sep/12/2000 12:21:44 UMST	Concrete Cracking	A03(0.76) A04(1.89) A38(2.12)
[117]	Sep/12/2000 12:22:09 UMST	Possible Cracking Sound	A44(1.74) A18(1.74) A14(2.58)
[118]	Sep/12/2000 12:22:52 UMST	Possible Cracking Sound	Not Located
[119]	Sep/12/2000 12:23:53 UMST	Possible Cracking Sound	A43(2.06) A17(2.12) A16(2.94)
[120]	Sep/12/2000 12:24:10 UMST	Possible Cracking Sound	A09(4.81) A19(5.15) A15(6.72)
[121]	Sep/12/2000 12:24:48 UMST	Possible Cracking Sound	A35(1.50) A48(1.84) A32(2.40)
[122]	Sep/12/2000 12:25:23 UMST	Possible Cracking Sound	A19(5.16) A09(5.33) A15(8.28)
[123]	Sep/12/2000 12:26:53 UMST	Possible Cracking Sound	A21(0.89) A22(1.40) A26(2.90)
[124]	Sep/12/2000 12:28:49 UMST	Possible Cracking Sound	A47(1.27) A26(2.20) A46(2.20)
[125]	Sep/12/2000 12:31:04 UMST	Possible Cracking Sound	A37(0.16) A53(0.72) A35(3.25)
[126]	Sep/12/2000 12:31:55 UMST	Possible Cracking Sound	A08(0.82) A40(1.45) A07(1.48)
[127]	Sep/12/2000 13:22:51 UMST	Concrete Cracking	A26(1.37) A46(1.37) A47(2.18)
[128]	Sep/12/2000 13:27:45 UMST	Concrete Cracking	A26(0.26) A46(0.26) A47(2.77)
[129]	Sep/12/2000 13:53:08 UMST	Concrete Cracking	A44(1.25) A18(1.25) A14(2.73)
[130]	Sep/13/2000 13:06:27 UMST	Concrete Cracking	A42(2.01) A14(2.31) A44(2.53)
[131]	Sep/13/2000 14:27:30 UMST	Concrete Cracking	A37(1.22) A53(1.55) A35(2.20)
[132]	Sep/14/2000 15:57:41 UMST	Concrete Cracking	A14(1.81) A44(1.96) A18(1.96)
[133]	Sep/15/2000 06:45:19 UMST	Small Event on Apex Area	A15(2.64) A09(5.49) A16(5.59)
[134]	Sep/26/2000 13:54:31 UMST	Concrete Cracking	A19(4.57) A28(5.43) A23(6.30)
[135]	Sep/26/2000 13:55:42 UMST	Concrete Cracking	A21(1.05) A44(1.96) A18(1.96)

[136]	Sep/26/2000 14:25:54	UMST	Concrete Cracking	A12(1.51) A13(1.59) A42(1.73)
[137]	Sep/26/2000 14:27:18	UMST	Concrete Cracking	A38(1.22) A03(2.52) A04(2.80)
[138]	Sep/26/2000 14:27:20	UMST	Concrete Cracking	A50(1.01) A49(1.93) A52(2.12)
[139]	Sep/26/2000 14:30:04	UMST	Concrete Cracking	A45(0.62) A24(1.63) A25(1.66)
[140]	Sep/26/2000 14:30:22	UMST	Concrete Cracking	A13(0.45) A42(1.44) A40(2.88)
[141]	Sep/26/2000 14:30:32	UMST	Concrete Cracking	A03(0.99) A38(1.28) A04(1.49)
[142]	Sep/26/2000 14:31:58	UMST	Concrete Cracking	A27(1.89) A32(2.31) A47(2.77)
[143]	Sep/26/2000 14:47:36	UMST	Concrete Cracking	A39(3.27) A38(3.29) A02(3.35)
[144]	Sep/26/2000 14:50:18	UMST	Concrete Cracking	A21(1.51) A26(1.79) A46(1.79)
[145]	Sep/26/2000 14:50:47	UMST	Concrete Cracking	A12(1.32) A42(2.36) A13(2.64)
[146]	Sep/26/2000 14:54:19	UMST	Concrete Cracking	A00(2.07) A36(3.61) A01(4.93)
[147]	Sep/26/2000 15:16:32	UMST	Concrete Cracking	A52(0.43) A51(1.50) A50(1.54)
[148]	Sep/26/2000 15:18:38	UMST	Concrete Cracking	A42(0.17) A13(1.59) A14(2.64)
[149]	Sep/26/2000 15:18:51	UMST	Concrete Cracking	A31(1.67) A30(2.40) A34(2.78)
[150]	Sep/26/2000 15:19:06	UMST	Concrete Cracking	A30(1.65) A31(3.36) A33(3.75)
[151]	Sep/26/2000 15:19:19	UMST	Concrete Cracking	A15(2.92) A23(3.19) A16(4.66)
[152]	Sep/26/2000 15:20:32	UMST	Concrete Cracking	A19(4.61) A09(5.36) A15(6.56)
[153]	Sep/26/2000 15:20:55	UMST	Concrete Cracking	A32(0.57) A48(1.42) A34(2.36)
[154]	Sep/26/2000 15:21:38	UMST	Concrete Cracking	A02(1.24) A51(1.82) A52(2.08)
[155]	Sep/26/2000 15:21:47	UMST	Concrete Cracking	A50(2.45) A49(2.56) A31(2.69)
[156]	Sep/26/2000 15:21:50	UMST	Concrete Cracking	A33(1.02) A30(1.59) A49(3.59)
[157]	Sep/26/2000 15:21:51	UMST	Concrete Cracking	A41(1.03) A39(1.92) A12(2.01)
[158]	Sep/26/2000 15:21:59	UMST	Concrete Cracking	A41(0.91) A39(1.69) A11(1.77)
[159]	Sep/26/2000 15:22:18	UMST	Concrete Cracking	A41(1.44) A39(1.75) A12(2.28)
[160]	Sep/26/2000 15:22:27	UMST	Concrete Cracking	A38(2.50) A03(3.51) A02(3.65)
[161]	Sep/26/2000 15:22:45	UMST	Concrete Cracking	A30(1.85) A33(2.38) A31(2.75)
[162]	Sep/26/2000 15:22:54	UMST	Concrete Cracking	A49(1.82) A50(2.31) A33(2.53)
[163]	Sep/26/2000 15:23:02	UMST	Concrete Cracking	A45(0.74) A25(0.78) A24(2.27)
[164]	Sep/26/2000 15:23:03	UMST	Concrete Cracking	A51(1.64) A02(2.14) A01(2.25)
[165]	Sep/26/2000 15:23:21	UMST	Concrete Cracking	A31(2.09) A30(2.31) A34(3.10)
[166]	Sep/26/2000 15:23:23	UMST	Concrete Cracking	A30(0.74) A33(1.61) A31(3.41)
[167]	Sep/26/2000 15:23:40	UMST	Concrete Cracking	A31(0.62) A30(2.43) A34(2.90)
[168]	Sep/26/2000 15:23:58	UMST	Concrete Cracking	A31(1.77) A30(2.59) A34(2.67)
[169]	Sep/26/2000 15:24:00	UMST	Concrete Cracking	A30(0.66) A33(1.63) A31(3.51)
[170]	Sep/26/2000 15:24:01	UMST	Concrete Cracking	A31(0.69) A34(1.74) A32(2.51)
[171]	Sep/26/2000 15:24:02	UMST	Concrete Cracking	A38(2.59) A02(3.05) A03(3.37)
[172]	Sep/26/2000 15:24:06	UMST	Concrete Cracking	A02(0.71) A01(2.48) A51(2.60)
[173]	Sep/26/2000 15:24:08	UMST	Concrete Cracking	A02(1.38) A01(1.68) A51(3.15)
[174]	Sep/26/2000 15:24:09	UMST	Concrete Cracking	A01(1.31) A02(2.45) A51(2.55)
[175]	Sep/26/2000 15:24:41	UMST	Concrete Cracking	A02(1.26) A01(1.79) A51(3.12)
[176]	Sep/26/2000 15:25:22	UMST	Concrete Cracking	A30(0.87) A33(2.23) A29(3.79)
[177]	Sep/26/2000 15:25:24	UMST	Concrete Cracking	A30(2.11) A33(3.16) A29(3.35)
[178]	Sep/26/2000 15:25:29	UMST	Concrete Cracking	A33(1.15) A29(2.36) A30(2.59)
[179]	Sep/26/2000 15:25:32	UMST	Concrete Cracking	A26(0.54) A46(0.54) A47(2.73)
[180]	Sep/26/2000 15:25:33	UMST	Concrete Cracking	A03(1.04) A04(1.32) A53(3.49)
[181]	Sep/26/2000 15:25:37	UMST	Concrete Cracking	A21(0.80) A22(1.94) A18(2.35)

[182]	Sep/26/2000 15:25:38	UMST	Concrete Cracking	A33(0.95) A30(2.38) A29(2.59)
[183]	Sep/26/2000 15:25:41	UMST	Concrete Cracking	A20(1.14) A45(2.42) A25(2.54)
[184]	Sep/26/2000 15:25:53	UMST	Concrete Cracking	A30(1.94) A31(3.66) A33(3.95)
[185]	Sep/26/2000 15:25:59	UMST	Concrete Cracking	A06(1.32) A11(1.86) A41(2.31)
[186]	Sep/26/2000 15:26:00	UMST	Concrete Cracking	A31(1.39) A32(2.00) A34(2.64)
[187]	Sep/26/2000 15:26:01	UMST	Concrete Cracking	A30(1.79) A33(1.87) A29(2.77)
[188]	Sep/26/2000 15:26:33	UMST	Concrete Cracking	A30(1.76) A33(2.60) A29(3.15)
[189]	Sep/26/2000 15:27:21	UMST	Concrete Cracking	A25(0.98) A45(1.35) A24(2.71)
[190]	Sep/26/2000 15:27:22	UMST	Concrete Cracking	A11(1.52) A06(1.69) A41(2.42)
[191]	Sep/26/2000 15:27:43	UMST	Concrete Cracking	A52(0.40) A50(1.49) A51(1.50)
[192]	Sep/26/2000 15:28:18	UMST	Concrete Cracking	A16(2.19) A43(2.97) A15(3.26)
[193]	Sep/26/2000 15:28:58	UMST	Concrete Cracking	A14(0.69) A42(2.05) A13(3.12)
[194]	Sep/26/2000 15:29:51	UMST	Concrete Cracking	A38(0.84) A03(2.31) A04(3.19)
[195]	Sep/26/2000 15:32:46	UMST	Concrete Cracking	A51(0.84) A52(1.63) A49(2.02)
[196]	Sep/26/2000 15:33:46	UMST	Concrete Cracking	A51(1.37) A52(2.32) A49(2.41)
[197]	Sep/26/2000 15:35:01	UMST	Concrete Cracking	A31(0.19) A34(2.59) A30(2.87)
[198]	Sep/26/2000 15:37:31	UMST	Concrete Cracking	A11(0.20) A41(2.77) A06(3.15)
[199]	Sep/26/2000 15:39:04	UMST	Concrete Cracking	A02(2.91) A39(3.08) A38(3.92)
[200]	Sep/26/2000 15:43:25	UMST	Concrete Cracking	A02(2.38) A39(3.35) A01(3.62)
[201]	Sep/26/2000 15:52:30	UMST	Concrete Cracking	A17(1.31) A43(2.83) A18(3.13)
[202]	Sep/26/2000 16:12:23	UMST	Concrete Cracking	A42(1.75) A14(2.79) A44(2.92)
[203]	Sep/26/2000 16:48:11	UMST	Concrete Cracking	A02(2.73) A39(3.20) A38(3.96)
[204]	Sep/26/2000 19:40:55	UMST	Concrete Cracking	A30(1.04) A33(1.67) A29(3.51)
[205]	Sep/26/2000 19:44:44	UMST	Concrete Cracking	A30(1.15) A33(1.68) A31(3.21)
[206]	Sep/26/2000 19:56:32	UMST	Concrete Cracking	A51(0.96) A52(1.48) A02(2.09)
[207]	Sep/26/2000 19:56:33	UMST	Concrete Cracking	A17(0.37) A43(1.46) A16(2.96)
[208]	Sep/26/2000 19:56:57	UMST	Concrete Cracking	A21(1.97) A20(2.55) A46(3.19)
[209]	Sep/26/2000 19:57:02	UMST	Concrete Cracking	A30(1.52) A33(1.94) A29(3.05)
[210]	Sep/26/2000 19:57:03	UMST	Concrete Cracking	A47(1.98) A26(2.30) A46(2.30)
[211]	Sep/26/2000 19:57:05	UMST	Concrete Cracking	A20(2.14) A25(2.47) A21(2.95)
[212]	Sep/26/2000 19:57:09	UMST	Concrete Cracking	A26(0.72) A46(0.72) A21(2.26)
[213]	Sep/26/2000 19:57:11	UMST	Concrete Cracking	A31(1.66) A34(2.35) A30(2.87)
[214]	Sep/26/2000 19:57:19	UMST	Concrete Cracking	A12(2.05) A40(2.15) A07(2.25)
[215]	Sep/26/2000 19:57:30	UMST	Concrete Cracking	A30(0.49) A31(2.57) A33(2.58)
[216]	Sep/26/2000 19:57:32	UMST	Concrete Cracking	A26(0.53) A46(0.53) A21(2.46)
[217]	Sep/26/2000 19:57:37	UMST	Concrete Cracking	A43(1.36) A16(1.76) A17(2.29)
[218]	Sep/26/2000 19:57:45	UMST	Concrete Cracking	A41(1.04) A39(1.68) A11(1.86)
[219]	Sep/26/2000 19:57:50	UMST	Concrete Cracking	A13(0.52) A42(1.95) A40(2.27)
[220]	Sep/26/2000 19:57:55	UMST	Concrete Cracking	A31(1.77) A30(1.95) A34(4.19)
[221]	Sep/26/2000 19:58:08	UMST	Concrete Cracking	A33(0.67) A30(1.72) A49(3.78)
[222]	Sep/26/2000 19:58:09	UMST	Concrete Cracking	A30(1.80) A33(2.45) A31(2.64)
[223]	Sep/26/2000 19:58:15	UMST	Concrete Cracking	A30(0.55) A33(1.75) A31(3.42)
[224]	Sep/26/2000 19:58:20	UMST	Concrete Cracking	A24(1.64) A45(2.50) A23(3.07)
[225]	Sep/26/2000 19:58:31	UMST	Concrete Cracking	A12(1.22) A41(1.85) A11(2.13)
[226]	Sep/26/2000 19:58:40	UMST	Concrete Cracking	A26(0.63) A46(0.63) A21(2.35)
[227]	Sep/26/2000 19:59:04	UMST	Concrete Cracking	A24(2.24) A45(3.08) A23(3.15)

[228]	Sep/26/2000 19:59:07	UMST	Concrete Cracking	A47(2.33) A31(3.22) A25(3.50)
[229]	Sep/26/2000 19:59:13	UMST	Concrete Cracking	A25(0.19) A45(1.38) A24(2.91)
[230]	Sep/26/2000 19:59:25	UMST	Concrete Cracking	A33(0.33) A30(1.98) A29(3.60)
[231]	Sep/26/2000 19:59:26	UMST	Concrete Cracking	A24(1.39) A45(1.48) A25(2.67)
[232]	Sep/26/2000 19:59:27	UMST	Concrete Cracking	A25(2.18) A46(3.03) A26(3.03)
[233]	Sep/26/2000 19:59:39	UMST	Concrete Cracking	A21(0.53) A22(2.78) A26(3.03)
[234]	Sep/26/2000 20:00:00	UMST	Concrete Cracking	A12(1.35) A41(1.61) A11(2.40)
[235]	Sep/26/2000 20:00:04	UMST	Concrete Cracking	A30(0.21) A33(2.10) A31(3.14)
[236]	Sep/26/2000 20:00:15	UMST	Concrete Cracking	A06(1.23) A41(1.83) A11(2.08)
[237]	Sep/26/2000 20:00:16	UMST	Concrete Cracking	A29(2.51) A30(3.08) A33(3.51)
[238]	Sep/26/2000 20:00:18	UMST	Concrete Cracking	A29(0.83) A33(3.81) A30(4.46)
[239]	Sep/26/2000 20:00:20	UMST	Concrete Cracking	A42(2.13) A14(2.32) A44(2.41)
[240]	Sep/26/2000 20:00:25	UMST	Concrete Cracking	A30(2.82) A24(3.39) A45(3.53)
[241]	Sep/26/2000 20:00:27	UMST	Concrete Cracking	A33(1.10) A30(2.73) A49(2.83)
[242]	Sep/26/2000 20:00:27	UMST	Concrete Cracking	A45(0.50) A24(1.34) A25(1.83)
[243]	Sep/26/2000 20:00:46	UMST	Concrete Cracking	A20(1.46) A21(2.97) A25(3.31)
[244]	Sep/26/2000 20:01:11	UMST	Concrete Cracking	A29(1.36) A33(2.82) A36(3.45)
[245]	Sep/26/2000 20:01:19	UMST	Concrete Cracking	A21(0.87) A44(2.11) A18(2.11)
[246]	Sep/26/2000 20:01:20	UMST	Concrete Cracking	A43(0.32) A16(1.21) A17(1.84)
[247]	Sep/26/2000 20:01:31	UMST	Concrete Cracking	A46(0.45) A26(0.45) A21(2.53)
[248]	Sep/26/2000 20:01:33	UMST	Concrete Cracking	A33(1.43) A36(3.12) A49(3.35)
[249]	Sep/26/2000 20:02:17	UMST	Concrete Cracking	A02(0.95) A52(2.25) A51(2.54)
[250]	Sep/26/2000 20:02:29	UMST	Concrete Cracking	A30(0.14) A33(2.17) A31(3.09)
[251]	Sep/26/2000 20:02:41	UMST	Concrete Cracking	A06(1.24) A39(1.62) A41(1.89)
[252]	Sep/26/2000 20:02:45	UMST	Concrete Cracking	A30(3.10) A24(3.48) A29(3.70)
[253]	Sep/26/2000 20:03:01	UMST	Concrete Cracking	A02(1.88) A01(2.44) A39(4.29)
[254]	Sep/26/2000 20:03:35	UMST	Concrete Cracking	A24(2.30) A45(2.94) A20(3.45)
[255]	Sep/26/2000 20:03:36	UMST	Concrete Cracking	A23(3.26) A15(3.26) A24(3.44)
[256]	Sep/26/2000 20:03:43	UMST	Concrete Cracking	A11(1.02) A41(1.66) A39(2.46)
[257]	Sep/26/2000 20:06:01	UMST	Concrete Cracking	A30(1.21) A33(1.71) A31(3.18)
[258]	Sep/26/2000 20:08:46	UMST	Concrete Cracking	A29(1.67) A33(4.04) A30(4.21)
[259]	Sep/26/2000 20:09:33	UMST	Concrete Cracking	A30(0.78) A31(2.80) A33(3.06)
[260]	Sep/26/2000 20:11:46	UMST	Concrete Cracking	A39(2.57) A07(3.10) A41(3.17)
[261]	Sep/26/2000 20:36:14	UMST	Concrete Cracking	A20(1.63) A21(2.80) A25(3.39)
[262]	Sep/26/2000 20:36:38	UMST	Concrete Cracking	A24(0.32) A45(1.24) A25(2.76)
[263]	Sep/26/2000 20:36:47	UMST	Concrete Cracking	A06(1.66) A11(1.67) A41(1.69)
[264]	Sep/26/2000 20:37:09	UMST	Concrete Cracking	A47(1.24) A27(1.70) A32(2.22)
[265]	Sep/26/2000 20:37:13	UMST	Concrete Cracking	A47(1.59) A32(1.98) A31(2.59)
[266]	Sep/26/2000 20:37:14	UMST	Concrete Cracking	A26(0.59) A46(0.59) A47(2.40)
[267]	Sep/26/2000 20:37:17	UMST	Concrete Cracking	A21(1.64) A26(1.69) A46(1.69)
[268]	Sep/26/2000 20:37:25	UMST	Concrete Cracking	A14(1.34) A18(2.47) A44(2.47)
[269]	Sep/26/2000 20:37:39	UMST	Concrete Cracking	A16(2.54) A43(3.17) A24(3.49)
[270]	Sep/26/2000 20:37:52	UMST	Concrete Cracking	A20(0.76) A25(2.71) A17(3.41)
[271]	Sep/26/2000 20:38:00	UMST	Concrete Cracking	A33(0.27) A30(2.25) A29(3.23)
[272]	Sep/26/2000 20:38:04	UMST	Concrete Cracking	A28(2.12) A29(2.18) A36(5.23)
[273]	Sep/26/2000 20:38:27	UMST	Concrete Cracking	A41(0.90) A39(1.25) A12(2.55)

[274]	Sep/26/2000 20:38:28	UMST	Concrete Cracking	A33(2.12) A49(2.41) A51(3.08)
[275]	Sep/26/2000 20:38:44	UMST	Concrete Cracking	A21(1.34) A46(1.64) A26(1.64)
[276]	Sep/26/2000 20:38:57	UMST	Concrete Cracking	A48(0.57) A34(1.22) A32(2.00)
[277]	Sep/26/2000 20:39:01	UMST	Concrete Cracking	A20(0.01) A25(2.98) A17(2.99)
[278]	Sep/26/2000 20:39:13	UMST	Concrete Cracking	A37(1.94) A50(1.98) A52(2.00)
[279]	Sep/26/2000 20:39:21	UMST	Concrete Cracking	A16(2.47) A43(3.07) A20(3.41)
[280]	Sep/26/2000 20:39:24	UMST	Concrete Cracking	A01(1.16) A02(2.44) A51(2.71)
[281]	Sep/26/2000 20:39:28	UMST	Concrete Cracking	A31(0.40) A30(2.66) A34(2.78)
[282]	Sep/26/2000 20:39:42	UMST	Concrete Cracking	A06(1.16) A11(2.03) A41(2.35)
[283]	Sep/26/2000 20:39:45	UMST	Concrete Cracking	A24(1.53) A23(2.41) A45(2.75)
[284]	Sep/26/2000 20:39:48	UMST	Concrete Cracking	A25(3.09) A31(3.17) A30(3.37)
[285]	Sep/26/2000 20:39:50	UMST	Concrete Cracking	A52(1.16) A51(1.48) A02(1.88)
[286]	Sep/26/2000 20:39:54	UMST	Concrete Cracking	A29(1.65) A33(2.89) A36(3.13)
[287]	Sep/26/2000 20:40:20	UMST	Concrete Cracking	A46(1.14) A26(1.14) A47(1.85)
[288]	Sep/26/2000 20:40:29	UMST	Concrete Cracking	A40(1.15) A07(1.16) A13(3.05)
[289]	Sep/26/2000 20:40:31	UMST	Concrete Cracking	A33(1.25) A36(3.07) A29(3.42)
[290]	Sep/26/2000 20:40:32	UMST	Concrete Cracking	A33(0.24) A30(2.16) A29(3.31)
[291]	Sep/26/2000 20:40:33	UMST	Concrete Cracking	A20(0.14) A25(2.90) A17(3.07)
[292]	Sep/26/2000 20:40:47	UMST	Concrete Cracking	A24(3.05) A16(3.13) A23(3.69)
[293]	Sep/26/2000 20:41:04	UMST	Concrete Cracking	A24(1.08) A23(2.37) A45(2.42)
[294]	Sep/26/2000 20:41:10	UMST	Concrete Cracking	A20(0.23) A25(2.99) A17(3.00)
[295]	Sep/26/2000 20:41:12	UMST	Concrete Cracking	A30(1.11) A33(1.19) A31(3.84)
[296]	Sep/26/2000 20:41:16	UMST	Concrete Cracking	A36(1.08) A33(3.58) A00(4.37)
[297]	Sep/26/2000 20:41:21	UMST	Concrete Cracking	A23(2.98) A15(2.99) A24(4.24)
[298]	Sep/26/2000 20:41:27	UMST	Concrete Cracking	A39(1.34) A06(1.45) A41(1.51)
[299]	Sep/26/2000 20:41:28	UMST	Concrete Cracking	A06(1.32) A39(1.48) A41(1.70)
[300]	Sep/26/2000 20:41:36	UMST	Concrete Cracking	A30(0.71) A33(1.62) A31(3.44)
[301]	Sep/26/2000 20:41:37	UMST	Concrete Cracking	A00(1.23) A36(2.96) A01(3.36)
[302]	Sep/26/2000 20:41:39	UMST	Concrete Cracking	A06(1.41) A05(1.61) A10(3.20)
[303]	Sep/26/2000 20:41:53	UMST	Concrete Cracking	A33(1.03) A29(2.47) A30(2.84)
[304]	Sep/26/2000 20:41:55	UMST	Concrete Cracking	A02(2.29) A39(3.55) A38(4.05)
[305]	Sep/26/2000 20:41:57	UMST	Concrete Cracking	A02(1.44) A01(3.41) A39(4.28)
[306]	Sep/26/2000 20:42:03	UMST	Concrete Cracking	A21(1.38) A26(1.60) A46(1.60)
[307]	Sep/26/2000 20:42:19	UMST	Concrete Cracking	A26(0.66) A46(0.66) A21(2.32)
[308]	Sep/26/2000 20:42:20	UMST	Concrete Cracking	A25(1.57) A20(1.85) A45(2.70)
[309]	Sep/26/2000 20:42:28	UMST	Concrete Cracking	A15(1.33) A16(2.59) A43(4.03)
[310]	Sep/26/2000 20:42:29	UMST	Concrete Cracking	A07(1.80) A40(1.95) A38(3.44)
[311]	Sep/26/2000 20:42:33	UMST	Concrete Cracking	A01(1.43) A51(2.58) A02(2.91)
[312]	Sep/26/2000 20:42:49	UMST	Concrete Cracking	A21(1.39) A26(1.59) A46(1.59)
[313]	Sep/26/2000 20:42:50	UMST	Concrete Cracking	A29(0.69) A28(3.61) A33(4.07)
[314]	Sep/26/2000 20:42:51	UMST	Concrete Cracking	A20(1.35) A25(2.76) A21(3.23)
[315]	Sep/26/2000 20:42:53	UMST	Concrete Cracking	A24(1.08) A23(1.94) A45(2.61)
[316]	Sep/26/2000 20:42:57	UMST	Concrete Cracking	A30(0.54) A33(2.40) A31(2.64)
[317]	Sep/26/2000 20:43:00	UMST	Concrete Cracking	A18(0.78) A44(0.78) A14(3.15)
[318]	Sep/26/2000 20:43:02	UMST	Concrete Cracking	A29(1.73) A33(1.90) A30(2.87)
[319]	Sep/26/2000 20:43:21	UMST	Concrete Cracking	A06(0.83) A39(1.96) A41(2.06)

[320]	Sep/26/2000 20:43:30	UMST	Concrete Cracking	A43(0.34) A16(1.19) A17(1.86)
[321]	Sep/26/2000 20:43:38	UMST	Concrete Cracking	A13(1.37) A40(2.09) A12(2.13)
[322]	Sep/26/2000 20:44:11	UMST	Concrete Cracking	A39(2.32) A41(2.79) A07(2.81)
[323]	Sep/26/2000 20:55:32	UMST	Concrete Cracking	A30(1.49) A31(1.61) A33(3.31)
[324]	Sep/26/2000 20:59:54	UMST	Concrete Cracking	A33(1.65) A49(2.30) A30(2.85)
[325]	Sep/26/2000 21:17:59	UMST	Concrete Cracking	A46(0.46) A26(0.46) A47(2.81)
[326]	Sep/26/2000 21:18:32	UMST	Concrete Cracking	A21(1.46) A26(1.53) A46(1.53)
[327]	Sep/26/2000 21:18:34	UMST	Concrete Cracking	A44(1.22) A18(1.22) A14(2.86)
[328]	Sep/26/2000 21:18:38	UMST	Concrete Cracking	A21(0.95) A44(2.03) A18(2.03)
[329]	Sep/26/2000 21:18:46	UMST	Concrete Cracking	A21(1.42) A26(1.56) A46(1.56)
[330]	Sep/26/2000 21:18:49	UMST	Concrete Cracking	A46(1.01) A26(1.01) A47(3.14)
[331]	Sep/26/2000 21:18:51	UMST	Concrete Cracking	A20(0.01) A25(2.98) A17(2.99)
[332]	Sep/26/2000 21:18:52	UMST	Concrete Cracking	A26(0.94) A46(0.94) A47(2.04)
[333]	Sep/26/2000 21:18:55	UMST	Concrete Cracking	A23(3.54) A15(3.55) A24(5.77)
[334]	Sep/26/2000 21:18:59	UMST	Concrete Cracking	A25(2.00) A26(2.47) A46(2.47)
[335]	Sep/26/2000 21:19:01	UMST	Concrete Cracking	A47(1.13) A32(2.16) A27(3.05)
[336]	Sep/26/2000 21:19:06	UMST	Concrete Cracking	A32(0.16) A48(1.59) A34(2.22)
[337]	Sep/26/2000 21:19:06	UMST	Concrete Cracking	A01(1.53) A02(1.68) A51(3.62)
[338]	Sep/26/2000 21:19:12	UMST	Concrete Cracking	A21(1.26) A46(1.72) A26(1.72)
[339]	Sep/26/2000 21:19:15	UMST	Concrete Cracking	A20(1.52) A43(2.49) A17(2.88)
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[341]	Sep/26/2000 21:19:18	UMST	Concrete Cracking	A24(2.98) A16(2.99) A20(3.05)
[342]	Sep/26/2000 21:19:19	UMST	Concrete Cracking	A15(0.65) A16(2.37) A43(3.90)
[343]	Sep/26/2000 21:19:22	UMST	Concrete Cracking	A25(1.46) A46(2.97) A26(2.97)
[344]	Sep/26/2000 21:19:35	UMST	Concrete Cracking	A23(2.98) A15(2.99) A24(4.24)
[345]	Sep/26/2000 21:19:38	UMST	Concrete Cracking	A43(0.56) A16(1.18) A17(1.97)
[346]	Sep/26/2000 21:19:39	UMST	Concrete Cracking	A26(1.49) A46(1.49) A21(1.50)
[347]	Sep/26/2000 21:19:42	UMST	Concrete Cracking	A09(0.09) A10(4.29) A05(5.16)
[348]	Sep/26/2000 21:19:50	UMST	Concrete Cracking	A20(2.13) A21(2.46) A25(3.14)
[349]	Sep/26/2000 21:19:52	UMST	Concrete Cracking	A06(1.14) A41(1.67) A39(1.67)
[350]	Sep/26/2000 21:19:54	UMST	Concrete Cracking	A20(1.04) A45(3.02) A43(3.03)
[351]	Sep/26/2000 21:19:57	UMST	Concrete Cracking	A24(0.68) A45(0.85) A25(2.37)
[352]	Sep/26/2000 21:20:17	UMST	Concrete Cracking	A23(2.99) A15(3.02) A24(3.99)
[353]	Sep/26/2000 21:20:37	UMST	Concrete Cracking	A20(1.31) A45(2.15) A25(2.27)
[354]	Sep/26/2000 21:20:42	UMST	Concrete Cracking	A43(0.53) A17(0.99) A16(2.06)
[355]	Sep/26/2000 21:20:47	UMST	Concrete Cracking	A23(2.31) A24(3.01) A29(3.94)
[356]	Sep/26/2000 21:20:51	UMST	Concrete Cracking	A21(1.38) A26(1.60) A46(1.60)
[357]	Sep/26/2000 21:20:56	UMST	Concrete Cracking	A24(2.98) A16(2.99) A20(3.05)
[358]	Sep/26/2000 21:21:00	UMST	Concrete Cracking	A15(2.58) A16(3.44) A23(3.53)
[359]	Sep/26/2000 21:21:03	UMST	Concrete Cracking	A11(1.83) A06(2.68) A10(2.72)
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[361]	Sep/26/2000 21:21:09	UMST	Concrete Cracking	A21(0.30) A22(2.27) A44(2.68)
[362]	Sep/26/2000 21:21:12	UMST	Concrete Cracking	A31(1.50) A32(1.53) A34(2.18)
[363]	Sep/26/2000 21:21:14	UMST	Concrete Cracking	A23(3.82) A15(4.28) A19(5.94)
[364]	Sep/26/2000 21:21:15	UMST	Concrete Cracking	A12(1.50) A41(1.69) A39(2.30)
[365]	Sep/26/2000 21:21:24	UMST	Concrete Cracking	A21(0.54) A22(2.37) A44(2.44)

[366]	Sep/26/2000 21:21:29	UMST	Concrete Cracking	A40(1.56) A07(1.58) A12(3.02)
[367]	Sep/26/2000 21:21:32	UMST	Concrete Cracking	A18(0.80) A44(0.80) A21(2.18)
[368]	Sep/26/2000 21:21:38	UMST	Concrete Cracking	A32(1.19) A47(1.79) A48(2.62)
[369]	Sep/26/2000 21:21:43	UMST	Concrete Cracking	A31(0.91) A34(1.82) A32(2.00)
[370]	Sep/26/2000 21:21:51	UMST	Concrete Cracking	A16(0.26) A43(1.27) A17(2.79)
[371]	Sep/26/2000 21:21:55	UMST	Concrete Cracking	A23(2.61) A29(4.20) A28(4.74)
[372]	Sep/26/2000 21:21:57	UMST	Concrete Cracking	A26(1.55) A46(1.55) A21(2.18)
[373]	Sep/26/2000 21:21:59	UMST	Concrete Cracking	A49(0.56) A51(0.63) A50(1.31)
[374]	Sep/26/2000 21:22:00	UMST	Concrete Cracking	A43(0.28) A16(1.41) A17(1.68)
[375]	Sep/26/2000 21:22:05	UMST	Concrete Cracking	A24(0.30) A45(1.23) A25(2.75)
[376]	Sep/26/2000 21:22:07	UMST	Concrete Cracking	A43(0.48) A17(1.04) A16(2.01)
[377]	Sep/26/2000 21:22:08	UMST	Concrete Cracking	A43(0.01) A17(1.52) A16(1.52)
[378]	Sep/26/2000 21:22:11	UMST	Concrete Cracking	A24(0.06) A45(1.47) A25(2.99)
[379]	Sep/26/2000 21:22:19	UMST	Concrete Cracking	A18(0.72) A44(0.72) A21(2.26)
[380]	Sep/26/2000 21:22:25	UMST	Concrete Cracking	A29(2.43) A30(3.01) A33(3.37)
[381]	Sep/26/2000 21:22:32	UMST	Concrete Cracking	A39(2.22) A41(3.02) A02(3.99)
[382]	Sep/26/2000 21:22:38	UMST	Concrete Cracking	A42(1.73) A14(2.26) A44(2.81)
[383]	Sep/26/2000 21:22:43	UMST	Concrete Cracking	A23(0.44) A24(3.05) A45(4.57)
[384]	Sep/26/2000 21:22:46	UMST	Concrete Cracking	A00(1.01) A01(2.91) A36(3.22)
[385]	Sep/26/2000 21:22:51	UMST	Concrete Cracking	A33(1.84) A36(2.55) A49(3.78)
[386]	Sep/26/2000 21:22:52	UMST	Concrete Cracking	A16(0.08) A43(1.46) A17(2.98)
[387]	Sep/26/2000 21:22:53	UMST	Concrete Cracking	A24(2.25) A45(2.67) A25(3.71)
[388]	Sep/26/2000 21:22:55	UMST	Concrete Cracking	A20(0.32) A25(2.99) A17(3.01)
[389]	Sep/26/2000 21:23:06	UMST	Concrete Cracking	A24(0.86) A45(1.63) A25(3.03)
[390]	Sep/26/2000 21:23:08	UMST	Concrete Cracking	A01(1.45) A00(3.10) A51(3.14)
[391]	Sep/26/2000 21:23:11	UMST	Concrete Cracking	A24(2.98) A16(2.99) A20(3.05)
[392]	Sep/26/2000 21:23:27	UMST	Concrete Cracking	A29(0.73) A28(3.67) A33(4.20)
[393]	Sep/26/2000 21:23:32	UMST	Concrete Cracking	A24(0.27) A45(1.26) A25(2.78)
[394]	Sep/26/2000 21:23:36	UMST	Concrete Cracking	A21(1.12) A18(1.86) A44(1.86)
[395]	Sep/26/2000 21:23:38	UMST	Concrete Cracking	A21(1.40) A26(1.59) A46(1.59)
[396]	Sep/26/2000 21:23:43	UMST	Concrete Cracking	A31(0.65) A32(2.61) A34(2.64)
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[398]	Sep/26/2000 21:24:34	UMST	Concrete Cracking	A16(0.29) A43(1.24) A17(2.76)
[399]	Sep/26/2000 21:45:39	UMST	Concrete Cracking	A01(0.81) A00(2.71) A02(3.52)
[400]	Sep/26/2000 21:45:40	UMST	Concrete Cracking	A31(1.43) A30(1.62) A33(3.59)
[401]	Sep/26/2000 21:45:54	UMST	Concrete Cracking	A11(1.11) A41(1.81) A06(2.20)
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[403]	Sep/26/2000 21:45:59	UMST	Concrete Cracking	A29(2.31) A36(3.10) A28(3.59)
[404]	Sep/26/2000 21:46:00	UMST	Concrete Cracking	A36(1.51) A33(3.64) A49(4.03)
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[408]	Sep/26/2000 21:47:11	UMST	Concrete Cracking	A00(0.87) A01(3.51) A05(5.41)
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[410]	Sep/26/2000 21:47:56	UMST	Concrete Cracking	A30(1.14) A33(1.32) A29(3.56)
[411]	Sep/26/2000 21:48:15	UMST	Concrete Cracking	A46(0.47) A26(0.47) A21(2.51)

[412]	Sep/26/2000 21:48:21	UMST	Concrete Cracking	A00(1.87) A01(2.66) A36(2.72)
[413]	Sep/26/2000 21:48:22	UMST	Concrete Cracking	A23(2.98) A15(2.99) A24(4.24)
[414]	Sep/26/2000 21:48:23	UMST	Concrete Cracking	A23(2.99) A15(3.00) A24(4.04)
[415]	Sep/26/2000 21:48:24	UMST	Concrete Cracking	A33(0.71) A30(2.79) A29(2.85)
[416]	Sep/26/2000 21:48:32	UMST	Concrete Cracking	A47(0.61) A27(2.33) A32(2.37)
[417]	Sep/26/2000 21:48:40	UMST	Concrete Cracking	A00(2.80) A05(3.38) A01(3.95)
[418]	Sep/26/2000 21:48:55	UMST	Concrete Cracking	A23(2.98) A15(2.99) A24(4.24)
[419]	Sep/26/2000 21:48:59	UMST	Concrete Cracking	A00(0.59) A01(2.43) A02(5.48)
[420]	Sep/26/2000 21:49:03	UMST	Concrete Cracking	A24(1.35) A23(1.68) A45(2.88)
[421]	Sep/26/2000 21:49:06	UMST	Concrete Cracking	A15(1.28) A16(1.83) A43(3.34)
[422]	Sep/26/2000 21:49:33	UMST	Concrete Cracking	A01(2.56) A36(2.72) A00(3.05)
[423]	Sep/26/2000 21:49:34	UMST	Concrete Cracking	A15(1.33) A16(2.04) A43(3.51)
[424]	Sep/26/2000 21:49:38	UMST	Concrete Cracking	A00(0.69) A01(2.45) A02(5.48)
[425]	Sep/26/2000 21:49:52	UMST	Concrete Cracking	A02(0.71) A01(2.65) A03(4.91)
[426]	Sep/26/2000 21:50:19	UMST	Concrete Cracking	A15(4.23) A23(4.26) A19(5.64)
[427]	Sep/26/2000 21:50:20	UMST	Concrete Cracking	A02(1.69) A51(1.98) A01(2.11)
[428]	Sep/26/2000 21:50:22	UMST	Concrete Cracking	A24(3.05) A16(3.06) A45(3.69)
[429]	Sep/26/2000 21:50:32	UMST	Concrete Cracking	A33(2.10) A36(2.35) A49(3.74)
[430]	Sep/26/2000 21:51:07	UMST	Concrete Cracking	A21(0.39) A22(2.29) A26(2.60)
[431]	Sep/26/2000 21:52:40	UMST	Concrete Cracking	A00(1.34) A01(2.90) A36(2.94)
[432]	Sep/26/2000 21:53:16	UMST	Concrete Cracking	A03(0.34) A38(1.80) A04(2.17)
[433]	Sep/26/2000 21:53:27	UMST	Concrete Cracking	A33(0.40) A30(2.48) A29(3.08)
[434]	Sep/26/2000 22:16:26	UMST	Concrete Cracking	A45(0.58) A25(1.57) A24(1.69)
[435]	Sep/26/2000 22:17:08	UMST	Concrete Cracking	A01(1.03) A00(2.33) A02(3.90)
[436]	Sep/26/2000 22:17:15	UMST	Concrete Cracking	A33(0.55) A30(2.07) A29(3.09)
[437]	Sep/26/2000 22:17:38	UMST	Concrete Cracking	A33(1.36) A29(2.14) A30(3.06)
[438]	Sep/26/2000 22:17:46	UMST	Concrete Cracking	A23(2.98) A15(2.99) A24(4.24)
[439]	Sep/26/2000 22:17:49	UMST	Concrete Cracking	A24(0.74) A45(0.79) A25(2.31)
[440]	Sep/26/2000 22:18:01	UMST	Concrete Cracking	A31(1.71) A47(2.74) A32(2.88)
[441]	Sep/26/2000 22:18:21	UMST	Concrete Cracking	A30(0.83) A33(1.95) A31(2.96)
[442]	Sep/26/2000 22:18:36	UMST	Concrete Cracking	A00(1.46) A01(1.61) A36(4.16)
[443]	Sep/26/2000 22:19:09	UMST	Concrete Cracking	A20(1.50) A21(2.94) A17(3.27)
[444]	Sep/26/2000 22:19:24	UMST	Concrete Cracking	A23(3.18) A15(3.19) A24(5.09)
[445]	Sep/26/2000 22:19:27	UMST	Concrete Cracking	A23(0.89) A24(3.15) A45(4.63)
[446]	Sep/26/2000 22:20:24	UMST	Concrete Cracking	A29(0.46) A28(3.84) A33(3.88)
[447]	Sep/26/2000 22:20:29	UMST	Concrete Cracking	A17(0.88) A43(2.37) A20(3.36)
[448]	Sep/26/2000 22:21:12	UMST	Concrete Cracking	A01(1.56) A02(1.86) A00(4.44)
[449]	Sep/26/2000 22:21:36	UMST	Concrete Cracking	A26(0.53) A46(0.53) A47(2.45)
[450]	Sep/26/2000 22:21:57	UMST	Concrete Cracking	A21(1.45) A26(1.53) A46(1.53)
[451]	Sep/26/2000 22:22:36	UMST	Concrete Cracking	A29(1.44) A33(2.04) A30(3.32)
[452]	Sep/26/2000 22:25:01	UMST	Concrete Cracking	A33(0.69) A30(1.67) A29(3.43)
[453]	Sep/26/2000 22:25:09	UMST	Concrete Cracking	A33(0.74) A30(1.58) A29(3.55)
[454]	Sep/26/2000 22:33:24	UMST	Concrete Cracking	A46(1.31) A26(1.31) A47(1.68)
[455]	Sep/26/2000 22:43:32	UMST	Concrete Cracking	A19(4.53) A09(5.63) A15(7.75)
[456]	Sep/27/2000 03:05:13	UMST	Concrete Cracking	A20(1.79) A43(2.07) A16(2.56)
[457]	Sep/27/2000 07:09:31	UMST	Concrete Cracking	A04(0.80) A03(1.50) A38(1.93)

[458]	Sep/27/2000 07:22:25	UMST	Concrete Cracking	A34(0.73) A48(1.08) A32(2.36)
[459]	Sep/27/2000 07:56:41	UMST	Concrete Cracking	A31(2.18) A47(2.77) A32(3.42)
[460]	Sep/27/2000 07:59:36	UMST	Concrete Cracking	A41(1.38) A11(1.70) A12(1.90)
[461]	Sep/27/2000 08:00:09	UMST	Concrete Cracking	A10(1.05) A05(2.11) A06(3.07)
[462]	Sep/27/2000 12:05:41	UMST	Concrete Cracking	A32(0.25) A48(1.68) A34(2.27)
[463]	Sep/27/2000 12:22:49	UMST	Concrete Cracking	A03(1.05) A04(1.20) A53(3.18)
[464]	Sep/27/2000 12:49:41	UMST	Crushing Concrete	A35(1.50) A48(1.58) A34(2.23)
[465]	Sep/27/2000 13:01:32	UMST	Concrete Cracking	A32(1.16) A34(1.46) A48(1.63)
[466]	Sep/27/2000 13:01:32	UMST	Concrete Cracking	A32(1.03) A34(1.49) A48(1.56)
[467]	Sep/27/2000 13:01:56	UMST	Concrete Cracking	A11(1.73) A12(2.39) A41(3.68)
[468]	Sep/27/2000 13:04:28	UMST	Concrete Cracking	A28(2.03) A29(5.65) A23(6.86)
[469]	Sep/27/2000 13:04:29	UMST	Concrete Cracking	A28(2.78) A29(6.15) A23(6.67)
[470]	Sep/27/2000 13:05:35	UMST	Concrete Cracking	A28(2.84) A29(3.89) A23(4.56)
[471]	Sep/27/2000 13:20:04	UMST	Concrete Cracking	A38(1.41) A04(2.34) A03(2.46)
[472]	Sep/27/2000 13:21:07	UMST	Concrete Cracking	A38(2.93) A08(2.96) A04(3.21)
[473]	Sep/27/2000 13:34:56	UMST	Crushing Concrete	A04(1.15) A03(1.92) A53(2.61)
[474]	Sep/27/2000 13:35:58	UMST	Crushing Concrete	A38(0.70) A03(2.09) A04(3.33)
[475]	Sep/27/2000 13:37:28	UMST	Concrete Cracking	A11(1.04) A12(3.10) A41(3.53)
[476]	Sep/27/2000 13:37:46	UMST	Crushing Concrete	A08(0.23) A40(2.02) A07(2.03)
[477]	Sep/27/2000 13:38:01	UMST	Concrete Cracking	A11(1.43) A12(2.82) A41(3.70)
[478]	Sep/27/2000 13:38:03	UMST	Concrete Cracking	A10(2.39) A11(2.77) A06(4.11)
[479]	Sep/27/2000 13:43:18	UMST	Crushing Concrete	A26(0.57) A46(0.57) A21(2.50)
[480]	Sep/27/2000 13:49:57	UMST	Crushing Concrete	A22(1.50) A21(2.24) A46(2.34)
[481]	Sep/27/2000 13:50:01	UMST	Crushing Concrete	A27(0.62) A47(1.90) A32(3.12)
[482]	Sep/27/2000 13:51:37	UMST	Concrete Cracking	A46(0.43) A26(0.43) A21(2.58)
[483]	Sep/27/2000 14:05:10	UMST	Crushing Concrete	A21(0.21) A22(2.26) A26(2.78)
[484]	Sep/27/2000 14:15:21	UMST	Concrete Cracking	A35(0.86) A37(2.46) A48(2.51)
[485]	Sep/27/2000 14:15:22	UMST	Crushing Concrete	A35(1.67) A37(1.72) A53(2.09)
[486]	Sep/27/2000 14:18:42	UMST	Concrete Cracking	A11(0.58) A12(3.11) A41(3.15)
[487]	Sep/27/2000 14:24:44	UMST	Crushing Concrete	A44(1.46) A18(1.46) A22(2.38)
[488]	Sep/27/2000 14:36:18	UMST	Concrete Cracking	A04(1.13) A38(1.64) A03(1.76)
[489]	Sep/27/2000 14:44:02	UMST	Concrete Cracking	A11(1.79) A12(3.54) A43(4.17)

**SANDIA PCCV
ALBUQUERQUE, NM**

SOUNDPRINT® ACOUSTIC MONITORING PROGRAM

REPORT

REPORTING PERIOD: SEPTEMBER 12 TO SEPTEMBER 27, 2000

DISCLAIMER

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1.0	Executive Summary
2.0	SoundPrint® Report: LST Concrete Cracks: (09/12/2000)

1.0 EXECUTIVE SUMMARY

The following is a summary of relevant activity recorded by the SoundPrint® monitoring system. The summary includes information for both the latest monitoring period and for the entire monitoring period from the start-up date up to and including the most recent monitoring period.

	Period 09/12/2000– 09/27/2000
Operating Efficiency	100 %
LST Concrete Cracks	239

Comments

Recommendations

There are no new recommendations at this time.

Prepared by:

Peter Paulson
President & CEO

REPORT PRESENTATION

A computerized drawing of the slab with the sensor layout is included on the following page and contains the following symbols:



Sensor Symbol with individual sensor name beneath



Symbolizes an event location. Event details are listed on the page following the drawing.

A list describing event details is provided for each drawing and lists the event number, shown on the computerized drawing, followed by the date, time, event classification and coordinates (in meters) to the origin of the events using the three closes sensors.

Event Report For Sandia PCCV

Albuquerque, NM

System Uptime 15.9 Days (100%)

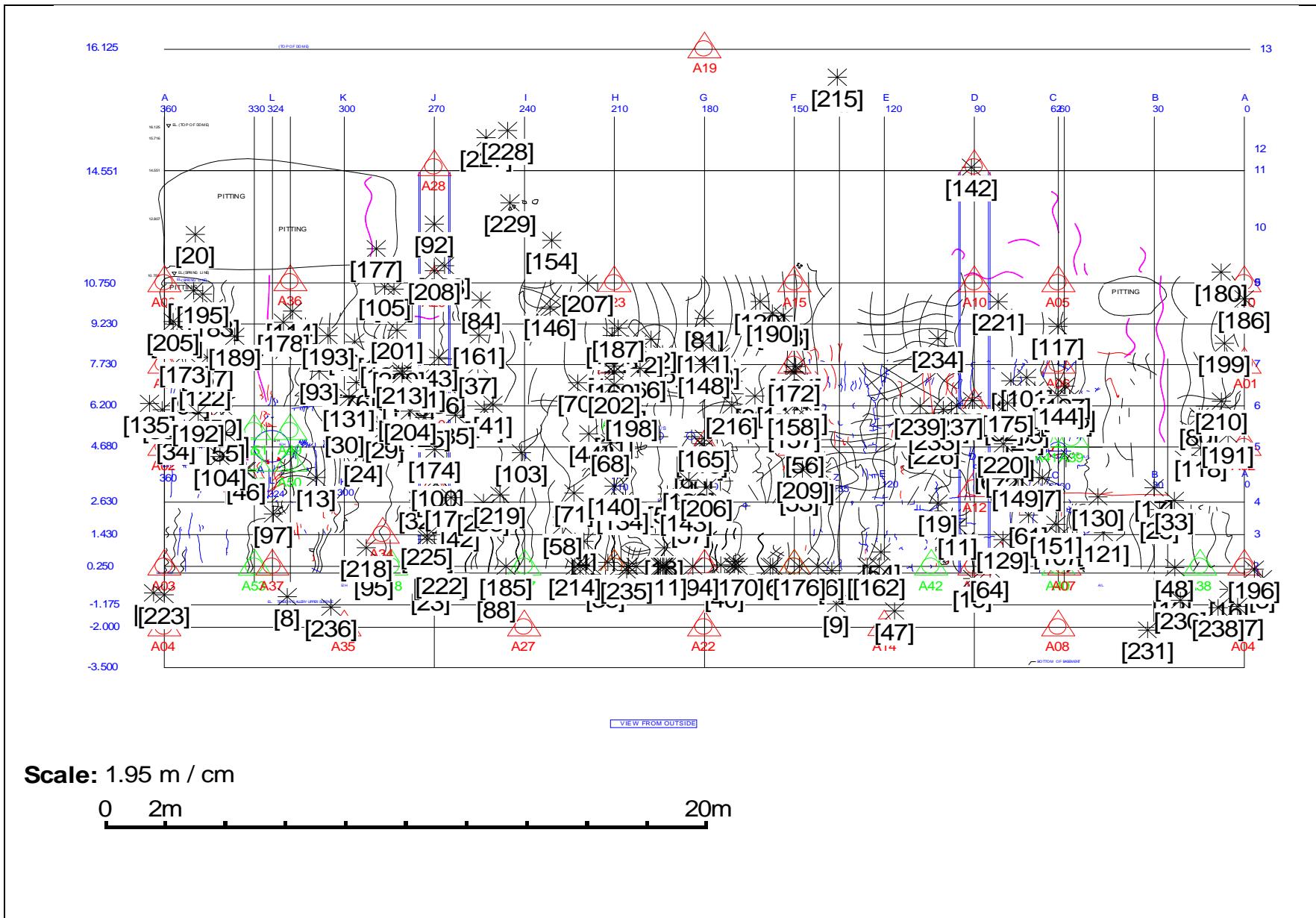
LST Concrete Cracks

Period: 09/12/2000 to 09/27/2000

9/12/2000	9/28/2000
-----------	-----------

Matched Events: 239

PCCV NEW -- 239 EVENTS



Events

No.	Date/Time	Classification	Location (m)
[1]	Sep/12/2000 09:30:33 UMST	Concrete Cracking	A12(1.23) A41(1.73) A11(2.47)
[2]	Sep/12/2000 09:33:43 UMST	Concrete Cracking	A17(1.29) A43(2.60) A44(3.62)
[3]	Sep/12/2000 12:21:44 UMST	Concrete Cracking	A03(0.76) A04(1.89) A38(2.12)
[4]	Sep/12/2000 13:22:51 UMST	Concrete Cracking	A26(1.37) A46(1.37) A47(2.18)
[5]	Sep/12/2000 13:27:45 UMST	Concrete Cracking	A26(0.26) A46(0.26) A47(2.77)
[6]	Sep/12/2000 13:53:08 UMST	Concrete Cracking	A44(1.25) A18(1.25) A14(2.73)
[7]	Sep/13/2000 13:06:27 UMST	Concrete Cracking	A42(2.01) A14(2.31) A44(2.53)
[8]	Sep/13/2000 14:27:30 UMST	Concrete Cracking	A37(1.22) A53(1.55) A35(2.20)
[9]	Sep/14/2000 15:57:41 UMST	Concrete Cracking	A14(1.81) A44(1.96) A18(1.96)
[10]	Sep/26/2000 13:55:42 UMST	Concrete Cracking	A21(1.05) A44(1.96) A18(1.96)
[11]	Sep/26/2000 14:25:54 UMST	Concrete Cracking	A12(1.51) A13(1.59) A42(1.73)
[12]	Sep/26/2000 14:27:18 UMST	Concrete Cracking	A38(1.22) A03(2.52) A04(2.80)
[13]	Sep/26/2000 14:27:20 UMST	Concrete Cracking	A50(1.01) A49(1.93) A52(2.12)
[14]	Sep/26/2000 14:30:04 UMST	Concrete Cracking	A45(0.62) A24(1.63) A25(1.66)
[15]	Sep/26/2000 14:30:22 UMST	Concrete Cracking	A13(0.45) A42(1.44) A40(2.88)
[16]	Sep/26/2000 14:30:32 UMST	Concrete Cracking	A03(0.99) A38(1.28) A04(1.49)
[17]	Sep/26/2000 14:47:36 UMST	Concrete Cracking	A39(3.27) A38(3.29) A02(3.35)
[18]	Sep/26/2000 14:50:18 UMST	Concrete Cracking	A21(1.51) A26(1.79) A46(1.79)
[19]	Sep/26/2000 14:50:47 UMST	Concrete Cracking	A12(1.32) A42(2.36) A13(2.64)
[20]	Sep/26/2000 14:54:19 UMST	Concrete Cracking	A00(2.07) A36(3.61) A01(4.93)
[21]	Sep/26/2000 15:16:32 UMST	Concrete Cracking	A52(0.43) A51(1.50) A50(1.54)
[22]	Sep/26/2000 15:19:06 UMST	Concrete Cracking	A30(1.65) A31(3.36) A33(3.75)
[23]	Sep/26/2000 15:20:55 UMST	Concrete Cracking	A32(0.57) A48(1.42) A34(2.36)
[24]	Sep/26/2000 15:21:47 UMST	Concrete Cracking	A50(2.45) A49(2.56) A31(2.69)
[25]	Sep/26/2000 15:21:51 UMST	Concrete Cracking	A41(1.03) A39(1.92) A12(2.01)
[26]	Sep/26/2000 15:21:59 UMST	Concrete Cracking	A41(0.91) A39(1.69) A11(1.77)
[27]	Sep/26/2000 15:22:18 UMST	Concrete Cracking	A41(1.44) A39(1.75) A12(2.28)
[28]	Sep/26/2000 15:22:27 UMST	Concrete Cracking	A38(2.50) A03(3.51) A02(3.65)
[29]	Sep/26/2000 15:22:45 UMST	Concrete Cracking	A30(1.85) A33(2.38) A31(2.75)
[30]	Sep/26/2000 15:22:54 UMST	Concrete Cracking	A49(1.82) A50(2.31) A33(2.53)
[31]	Sep/26/2000 15:23:02 UMST	Concrete Cracking	A45(0.74) A25(0.78) A24(2.27)
[32]	Sep/26/2000 15:24:01 UMST	Concrete Cracking	A31(0.69) A34(1.74) A32(2.51)
[33]	Sep/26/2000 15:24:02 UMST	Concrete Cracking	A38(2.59) A02(3.05) A03(3.37)
[34]	Sep/26/2000 15:24:06 UMST	Concrete Cracking	A02(0.71) A01(2.48) A51(2.60)
[35]	Sep/26/2000 15:24:08 UMST	Concrete Cracking	A02(1.38) A01(1.68) A51(3.15)
[36]	Sep/26/2000 15:25:22 UMST	Concrete Cracking	A30(0.87) A33(2.23) A29(3.79)
[37]	Sep/26/2000 15:25:24 UMST	Concrete Cracking	A30(2.11) A33(3.16) A29(3.35)
[38]	Sep/26/2000 15:25:32 UMST	Concrete Cracking	A26(0.54) A46(0.54) A47(2.73)
[39]	Sep/26/2000 15:25:33 UMST	Concrete Cracking	A03(1.04) A04(1.32) A53(3.49)
[40]	Sep/26/2000 15:25:37 UMST	Concrete Cracking	A21(0.80) A22(1.94) A18(2.35)
[41]	Sep/26/2000 15:25:53 UMST	Concrete Cracking	A30(1.94) A31(3.66) A33(3.95)
[42]	Sep/26/2000 15:26:00 UMST	Concrete Cracking	A31(1.39) A32(2.00) A34(2.64)
[43]	Sep/26/2000 15:26:01 UMST	Concrete Cracking	A30(1.79) A33(1.87) A29(2.77)

[44]	Sep/26/2000 15:27:21 UMST	Concrete Cracking	A25(0.98) A45(1.35) A24(2.71)
[45]	Sep/26/2000 15:27:22 UMST	Concrete Cracking	A11(1.52) A06(1.69) A41(2.42)
[46]	Sep/26/2000 15:27:43 UMST	Concrete Cracking	A52(0.40) A50(1.49) A51(1.50)
[47]	Sep/26/2000 15:28:58 UMST	Concrete Cracking	A14(0.69) A42(2.05) A13(3.12)
[48]	Sep/26/2000 15:29:51 UMST	Concrete Cracking	A38(0.84) A03(2.31) A04(3.19)
[49]	Sep/26/2000 15:32:46 UMST	Concrete Cracking	A51(0.84) A52(1.63) A49(2.02)
[50]	Sep/26/2000 15:33:46 UMST	Concrete Cracking	A51(1.37) A52(2.32) A49(2.41)
[51]	Sep/26/2000 15:35:01 UMST	Concrete Cracking	A31(0.19) A34(2.59) A30(2.87)
[52]	Sep/26/2000 15:37:31 UMST	Concrete Cracking	A11(0.20) A41(2.77) A06(3.15)
[53]	Sep/26/2000 15:52:30 UMST	Concrete Cracking	A17(1.31) A43(2.83) A18(3.13)
[54]	Sep/26/2000 16:12:23 UMST	Concrete Cracking	A42(1.75) A14(2.79) A44(2.92)
[55]	Sep/26/2000 19:56:32 UMST	Concrete Cracking	A51(0.96) A52(1.48) A02(2.09)
[56]	Sep/26/2000 19:56:33 UMST	Concrete Cracking	A17(0.37) A43(1.46) A16(2.96)
[57]	Sep/26/2000 19:56:57 UMST	Concrete Cracking	A21(1.97) A20(2.55) A46(3.19)
[58]	Sep/26/2000 19:57:03 UMST	Concrete Cracking	A47(1.98) A26(2.30) A46(2.30)
[59]	Sep/26/2000 19:57:05 UMST	Concrete Cracking	A20(2.14) A25(2.47) A21(2.95)
[60]	Sep/26/2000 19:57:09 UMST	Concrete Cracking	A26(0.72) A46(0.72) A21(2.26)
[61]	Sep/26/2000 19:57:19 UMST	Concrete Cracking	A12(2.05) A40(2.15) A07(2.25)
[62]	Sep/26/2000 19:57:37 UMST	Concrete Cracking	A43(1.36) A16(1.76) A17(2.29)
[63]	Sep/26/2000 19:57:45 UMST	Concrete Cracking	A41(1.04) A39(1.68) A11(1.86)
[64]	Sep/26/2000 19:57:50 UMST	Concrete Cracking	A13(0.52) A42(1.95) A40(2.27)
[65]	Sep/26/2000 19:58:08 UMST	Concrete Cracking	A33(0.67) A30(1.72) A49(3.78)
[66]	Sep/26/2000 19:58:20 UMST	Concrete Cracking	A24(1.64) A45(2.50) A23(3.07)
[67]	Sep/26/2000 19:58:31 UMST	Concrete Cracking	A12(1.22) A41(1.85) A11(2.13)
[68]	Sep/26/2000 19:59:13 UMST	Concrete Cracking	A25(0.19) A45(1.38) A24(2.91)
[69]	Sep/26/2000 19:59:25 UMST	Concrete Cracking	A33(0.33) A30(1.98) A29(3.60)
[70]	Sep/26/2000 19:59:26 UMST	Concrete Cracking	A24(1.39) A45(1.48) A25(2.67)
[71]	Sep/26/2000 19:59:27 UMST	Concrete Cracking	A25(2.18) A46(3.03) A26(3.03)
[72]	Sep/26/2000 20:00:00 UMST	Concrete Cracking	A12(1.35) A41(1.61) A11(2.40)
[73]	Sep/26/2000 20:00:15 UMST	Concrete Cracking	A06(1.23) A41(1.83) A11(2.08)
[74]	Sep/26/2000 20:00:20 UMST	Concrete Cracking	A42(2.13) A14(2.32) A44(2.41)
[75]	Sep/26/2000 20:00:27 UMST	Concrete Cracking	A45(0.50) A24(1.34) A25(1.83)
[76]	Sep/26/2000 20:00:27 UMST	Concrete Cracking	A33(1.10) A30(2.73) A49(2.83)
[77]	Sep/26/2000 20:01:11 UMST	Concrete Cracking	A29(1.36) A33(2.82) A36(3.45)
[78]	Sep/26/2000 20:01:20 UMST	Concrete Cracking	A43(0.32) A16(1.21) A17(1.84)
[79]	Sep/26/2000 20:01:31 UMST	Concrete Cracking	A46(0.45) A26(0.45) A21(2.53)
[80]	Sep/26/2000 20:03:01 UMST	Concrete Cracking	A02(1.88) A01(2.44) A39(4.29)
[81]	Sep/26/2000 20:03:36 UMST	Concrete Cracking	A23(3.26) A15(3.26) A24(3.44)
[82]	Sep/26/2000 20:03:43 UMST	Concrete Cracking	A11(1.02) A41(1.66) A39(2.46)
[83]	Sep/26/2000 20:06:01 UMST	Concrete Cracking	A30(1.21) A33(1.71) A31(3.18)
[84]	Sep/26/2000 20:08:46 UMST	Concrete Cracking	A29(1.67) A33(4.04) A30(4.21)
[85]	Sep/26/2000 20:09:33 UMST	Concrete Cracking	A30(0.78) A31(2.80) A33(3.06)
[86]	Sep/26/2000 20:36:38 UMST	Concrete Cracking	A24(0.32) A45(1.24) A25(2.76)
[87]	Sep/26/2000 20:36:47 UMST	Concrete Cracking	A06(1.66) A11(1.67) A41(1.69)
[88]	Sep/26/2000 20:37:09 UMST	Concrete Cracking	A47(1.24) A27(1.70) A32(2.22)
[89]	Sep/26/2000 20:37:39 UMST	Concrete Cracking	A16(2.54) A43(3.17) A24(3.49)

[90]	Sep/26/2000 20:37:52 UMST	Concrete Cracking	A20(0.76) A25(2.71) A17(3.41)
[91]	Sep/26/2000 20:38:00 UMST	Concrete Cracking	A33(0.27) A30(2.25) A29(3.23)
[92]	Sep/26/2000 20:38:04 UMST	Concrete Cracking	A28(2.12) A29(2.18) A36(5.23)
[93]	Sep/26/2000 20:38:28 UMST	Concrete Cracking	A33(2.12) A49(2.41) A51(3.08)
[94]	Sep/26/2000 20:38:44 UMST	Concrete Cracking	A21(1.34) A46(1.64) A26(1.64)
[95]	Sep/26/2000 20:38:57 UMST	Concrete Cracking	A48(0.57) A34(1.22) A32(2.00)
[96]	Sep/26/2000 20:39:01 UMST	Concrete Cracking	A20(0.01) A25(2.98) A17(2.99)
[97]	Sep/26/2000 20:39:13 UMST	Concrete Cracking	A37(1.94) A50(1.98) A52(2.00)
[98]	Sep/26/2000 20:39:21 UMST	Concrete Cracking	A16(2.47) A43(3.07) A20(3.41)
[99]	Sep/26/2000 20:39:24 UMST	Concrete Cracking	A01(1.16) A02(2.44) A51(2.71)
[100]	Sep/26/2000 20:39:28 UMST	Concrete Cracking	A31(0.40) A30(2.66) A34(2.78)
[101]	Sep/26/2000 20:39:42 UMST	Concrete Cracking	A06(1.16) A11(2.03) A41(2.35)
[102]	Sep/26/2000 20:39:45 UMST	Concrete Cracking	A24(1.53) A23(2.41) A45(2.75)
[103]	Sep/26/2000 20:39:48 UMST	Concrete Cracking	A25(3.09) A31(3.17) A30(3.37)
[104]	Sep/26/2000 20:39:50 UMST	Concrete Cracking	A52(1.16) A51(1.48) A02(1.88)
[105]	Sep/26/2000 20:39:54 UMST	Concrete Cracking	A29(1.65) A33(2.89) A36(3.13)
[106]	Sep/26/2000 20:40:20 UMST	Concrete Cracking	A46(1.14) A26(1.14) A47(1.85)
[107]	Sep/26/2000 20:40:29 UMST	Concrete Cracking	A40(1.15) A07(1.16) A13(3.05)
[108]	Sep/26/2000 20:40:31 UMST	Concrete Cracking	A33(1.25) A36(3.07) A29(3.42)
[109]	Sep/26/2000 20:40:32 UMST	Concrete Cracking	A33(0.24) A30(2.16) A29(3.31)
[110]	Sep/26/2000 20:40:33 UMST	Concrete Cracking	A20(0.14) A25(2.90) A17(3.07)
[111]	Sep/26/2000 20:40:47 UMST	Concrete Cracking	A24(3.05) A16(3.13) A23(3.69)
[112]	Sep/26/2000 20:41:04 UMST	Concrete Cracking	A24(1.08) A23(2.37) A45(2.42)
[113]	Sep/26/2000 20:41:12 UMST	Concrete Cracking	A30(1.11) A33(1.19) A31(3.84)
[114]	Sep/26/2000 20:41:16 UMST	Concrete Cracking	A36(1.08) A33(3.58) A00(4.37)
[115]	Sep/26/2000 20:41:27 UMST	Concrete Cracking	A39(1.34) A06(1.45) A41(1.51)
[116]	Sep/26/2000 20:41:28 UMST	Concrete Cracking	A06(1.32) A39(1.48) A41(1.70)
[117]	Sep/26/2000 20:41:39 UMST	Concrete Cracking	A06(1.41) A05(1.61) A10(3.20)
[118]	Sep/26/2000 20:41:57 UMST	Concrete Cracking	A02(1.44) A01(3.41) A39(4.28)
[119]	Sep/26/2000 20:42:03 UMST	Concrete Cracking	A21(1.38) A26(1.60) A46(1.60)
[120]	Sep/26/2000 20:42:28 UMST	Concrete Cracking	A15(1.33) A16(2.59) A43(4.03)
[121]	Sep/26/2000 20:42:29 UMST	Concrete Cracking	A07(1.80) A40(1.95) A38(3.44)
[122]	Sep/26/2000 20:42:33 UMST	Concrete Cracking	A01(1.43) A51(2.58) A02(2.91)
[123]	Sep/26/2000 20:42:51 UMST	Concrete Cracking	A20(1.35) A25(2.76) A21(3.23)
[124]	Sep/26/2000 20:42:53 UMST	Concrete Cracking	A24(1.08) A23(1.94) A45(2.61)
[125]	Sep/26/2000 20:42:57 UMST	Concrete Cracking	A30(0.54) A33(2.40) A31(2.64)
[126]	Sep/26/2000 20:43:00 UMST	Concrete Cracking	A18(0.78) A44(0.78) A14(3.15)
[127]	Sep/26/2000 20:43:21 UMST	Concrete Cracking	A06(0.83) A39(1.96) A41(2.06)
[128]	Sep/26/2000 20:43:30 UMST	Concrete Cracking	A43(0.34) A16(1.19) A17(1.86)
[129]	Sep/26/2000 20:43:38 UMST	Concrete Cracking	A13(1.37) A40(2.09) A12(2.13)
[130]	Sep/26/2000 20:44:11 UMST	Concrete Cracking	A39(2.32) A41(2.79) A07(2.81)
[131]	Sep/26/2000 20:59:54 UMST	Concrete Cracking	A33(1.65) A49(2.30) A30(2.85)
[132]	Sep/26/2000 21:18:38 UMST	Concrete Cracking	A21(0.95) A44(2.03) A18(2.03)
[133]	Sep/26/2000 21:18:52 UMST	Concrete Cracking	A26(0.94) A46(0.94) A47(2.04)
[134]	Sep/26/2000 21:18:59 UMST	Concrete Cracking	A25(2.00) A26(2.47) A46(2.47)
[135]	Sep/26/2000 21:19:06 UMST	Concrete Cracking	A01(1.53) A02(1.68) A51(3.62)

[136]	Sep/26/2000 21:19:06 UMST	Concrete Cracking	A32(0.16) A48(1.59) A34(2.22)
[137]	Sep/26/2000 21:19:12 UMST	Concrete Cracking	A21(1.26) A46(1.72) A26(1.72)
[138]	Sep/26/2000 21:19:17 UMST	Concrete Cracking	A21(1.00) A44(1.98) A18(1.98)
[139]	Sep/26/2000 21:19:18 UMST	Concrete Cracking	A24(2.98) A16(2.99) A20(3.05)
[140]	Sep/26/2000 21:19:22 UMST	Concrete Cracking	A25(1.46) A46(2.97) A26(2.97)
[141]	Sep/26/2000 21:19:38 UMST	Concrete Cracking	A43(0.56) A16(1.18) A17(1.97)
[142]	Sep/26/2000 21:19:42 UMST	Concrete Cracking	A09(0.09) A10(4.29) A05(5.16)
[143]	Sep/26/2000 21:19:50 UMST	Concrete Cracking	A20(2.13) A21(2.46) A25(3.14)
[144]	Sep/26/2000 21:19:52 UMST	Concrete Cracking	A06(1.14) A41(1.67) A39(1.67)
[145]	Sep/26/2000 21:19:57 UMST	Concrete Cracking	A24(0.68) A45(0.85) A25(2.37)
[146]	Sep/26/2000 21:20:47 UMST	Concrete Cracking	A23(2.31) A24(3.01) A29(3.94)
[147]	Sep/26/2000 21:20:51 UMST	Concrete Cracking	A21(1.38) A26(1.60) A46(1.60)
[148]	Sep/26/2000 21:21:07 UMST	Concrete Cracking	A24(2.98) A16(2.99) A20(3.05)
[149]	Sep/26/2000 21:21:15 UMST	Concrete Cracking	A12(1.50) A41(1.69) A39(2.30)
[150]	Sep/26/2000 21:21:24 UMST	Concrete Cracking	A21(0.54) A22(2.37) A44(2.44)
[151]	Sep/26/2000 21:21:29 UMST	Concrete Cracking	A40(1.56) A07(1.58) A12(3.02)
[152]	Sep/26/2000 21:21:32 UMST	Concrete Cracking	A18(0.80) A44(0.80) A21(2.18)
[153]	Sep/26/2000 21:21:51 UMST	Concrete Cracking	A16(0.26) A43(1.27) A17(2.79)
[154]	Sep/26/2000 21:21:55 UMST	Concrete Cracking	A23(2.61) A29(4.20) A28(4.74)
[155]	Sep/26/2000 21:22:00 UMST	Concrete Cracking	A43(0.28) A16(1.41) A17(1.68)
[156]	Sep/26/2000 21:22:05 UMST	Concrete Cracking	A24(0.30) A45(1.23) A25(2.75)
[157]	Sep/26/2000 21:22:07 UMST	Concrete Cracking	A43(0.48) A17(1.04) A16(2.01)
[158]	Sep/26/2000 21:22:08 UMST	Concrete Cracking	A43(0.01) A17(1.52) A16(1.52)
[159]	Sep/26/2000 21:22:11 UMST	Concrete Cracking	A24(0.06) A45(1.47) A25(2.99)
[160]	Sep/26/2000 21:22:19 UMST	Concrete Cracking	A18(0.72) A44(0.72) A21(2.26)
[161]	Sep/26/2000 21:22:25 UMST	Concrete Cracking	A29(2.43) A30(3.01) A33(3.37)
[162]	Sep/26/2000 21:22:38 UMST	Concrete Cracking	A42(1.73) A14(2.26) A44(2.81)
[163]	Sep/26/2000 21:22:46 UMST	Concrete Cracking	A00(1.01) A01(2.91) A36(3.22)
[164]	Sep/26/2000 21:22:52 UMST	Concrete Cracking	A16(0.08) A43(1.46) A17(2.98)
[165]	Sep/26/2000 21:22:55 UMST	Concrete Cracking	A20(0.32) A25(2.99) A17(3.01)
[166]	Sep/26/2000 21:23:06 UMST	Concrete Cracking	A24(0.86) A45(1.63) A25(3.03)
[167]	Sep/26/2000 21:23:08 UMST	Concrete Cracking	A01(1.45) A00(3.10) A51(3.14)
[168]	Sep/26/2000 21:23:27 UMST	Concrete Cracking	A29(0.73) A28(3.67) A33(4.20)
[169]	Sep/26/2000 21:23:32 UMST	Concrete Cracking	A24(0.27) A45(1.26) A25(2.78)
[170]	Sep/26/2000 21:23:36 UMST	Concrete Cracking	A21(1.12) A18(1.86) A44(1.86)
[171]	Sep/26/2000 21:23:43 UMST	Concrete Cracking	A31(0.65) A32(2.61) A34(2.64)
[172]	Sep/26/2000 21:24:34 UMST	Concrete Cracking	A16(0.29) A43(1.24) A17(2.76)
[173]	Sep/26/2000 21:45:39 UMST	Concrete Cracking	A01(0.81) A00(2.71) A02(3.52)
[174]	Sep/26/2000 21:45:40 UMST	Concrete Cracking	A31(1.43) A30(1.62) A33(3.59)
[175]	Sep/26/2000 21:45:54 UMST	Concrete Cracking	A11(1.11) A41(1.81) A06(2.20)
[176]	Sep/26/2000 21:45:55 UMST	Concrete Cracking	A44(0.17) A18(0.17) A21(3.15)
[177]	Sep/26/2000 21:45:59 UMST	Concrete Cracking	A29(2.31) A36(3.10) A28(3.59)
[178]	Sep/26/2000 21:46:00 UMST	Concrete Cracking	A36(1.51) A33(3.64) A49(4.03)
[179]	Sep/26/2000 21:46:17 UMST	Concrete Cracking	A01(1.54) A00(1.59) A36(4.08)
[180]	Sep/26/2000 21:47:11 UMST	Concrete Cracking	A00(0.87) A01(3.51) A05(5.41)
[181]	Sep/26/2000 21:47:56 UMST	Concrete Cracking	A30(1.14) A33(1.32) A29(3.56)

[182]	Sep/26/2000 21:48:15 UMST	Concrete Cracking	A46(0.47) A26(0.47) A21(2.51)
[183]	Sep/26/2000 21:48:21 UMST	Concrete Cracking	A00(1.87) A01(2.66) A36(2.72)
[184]	Sep/26/2000 21:48:24 UMST	Concrete Cracking	A33(0.71) A30(2.79) A29(2.85)
[185]	Sep/26/2000 21:48:32 UMST	Concrete Cracking	A47(0.61) A27(2.33) A32(2.37)
[186]	Sep/26/2000 21:48:59 UMST	Concrete Cracking	A00(0.59) A01(2.43) A02(5.48)
[187]	Sep/26/2000 21:49:03 UMST	Concrete Cracking	A24(1.35) A23(1.68) A45(2.88)
[188]	Sep/26/2000 21:49:06 UMST	Concrete Cracking	A15(1.28) A16(1.83) A43(3.34)
[189]	Sep/26/2000 21:49:33 UMST	Concrete Cracking	A01(2.56) A36(2.72) A00(3.05)
[190]	Sep/26/2000 21:49:34 UMST	Concrete Cracking	A15(1.33) A16(2.04) A43(3.51)
[191]	Sep/26/2000 21:49:52 UMST	Concrete Cracking	A02(0.71) A01(2.65) A03(4.91)
[192]	Sep/26/2000 21:50:20 UMST	Concrete Cracking	A02(1.69) A51(1.98) A01(2.11)
[193]	Sep/26/2000 21:50:32 UMST	Concrete Cracking	A33(2.10) A36(2.35) A49(3.74)
[194]	Sep/26/2000 21:51:07 UMST	Concrete Cracking	A21(0.39) A22(2.29) A26(2.60)
[195]	Sep/26/2000 21:52:40 UMST	Concrete Cracking	A00(1.34) A01(2.90) A36(2.94)
[196]	Sep/26/2000 21:53:16 UMST	Concrete Cracking	A03(0.34) A38(1.80) A04(2.17)
[197]	Sep/26/2000 21:53:27 UMST	Concrete Cracking	A33(0.40) A30(2.48) A29(3.08)
[198]	Sep/26/2000 22:16:26 UMST	Concrete Cracking	A45(0.58) A25(1.57) A24(1.69)
[199]	Sep/26/2000 22:17:08 UMST	Concrete Cracking	A01(1.03) A00(2.33) A02(3.90)
[200]	Sep/26/2000 22:17:15 UMST	Concrete Cracking	A33(0.55) A30(2.07) A29(3.09)
[201]	Sep/26/2000 22:17:38 UMST	Concrete Cracking	A33(1.36) A29(2.14) A30(3.06)
[202]	Sep/26/2000 22:17:49 UMST	Concrete Cracking	A24(0.74) A45(0.79) A25(2.31)
[203]	Sep/26/2000 22:18:01 UMST	Concrete Cracking	A31(1.71) A47(2.74) A32(2.88)
[204]	Sep/26/2000 22:18:21 UMST	Concrete Cracking	A30(0.83) A33(1.95) A31(2.96)
[205]	Sep/26/2000 22:18:36 UMST	Concrete Cracking	A00(1.46) A01(1.61) A36(4.16)
[206]	Sep/26/2000 22:19:09 UMST	Concrete Cracking	A20(1.50) A21(2.94) A17(3.27)
[207]	Sep/26/2000 22:19:27 UMST	Concrete Cracking	A23(0.89) A24(3.15) A45(4.63)
[208]	Sep/26/2000 22:20:24 UMST	Concrete Cracking	A29(0.46) A28(3.84) A33(3.88)
[209]	Sep/26/2000 22:20:29 UMST	Concrete Cracking	A17(0.88) A43(2.37) A20(3.36)
[210]	Sep/26/2000 22:21:12 UMST	Concrete Cracking	A01(1.56) A02(1.86) A00(4.44)
[211]	Sep/26/2000 22:21:57 UMST	Concrete Cracking	A21(1.45) A26(1.53) A46(1.53)
[212]	Sep/26/2000 22:25:01 UMST	Concrete Cracking	A33(0.69) A30(1.67) A29(3.43)
[213]	Sep/26/2000 22:25:09 UMST	Concrete Cracking	A33(0.74) A30(1.58) A29(3.55)
[214]	Sep/26/2000 22:33:24 UMST	Concrete Cracking	A46(1.31) A26(1.31) A47(1.68)
[215]	Sep/26/2000 22:43:32 UMST	Concrete Cracking	A19(4.53) A09(5.63) A15(7.75)
[216]	Sep/27/2000 03:05:13 UMST	Concrete Cracking	A20(1.79) A43(2.07) A16(2.56)
[217]	Sep/27/2000 07:09:31 UMST	Concrete Cracking	A04(0.80) A03(1.50) A38(1.93)
[218]	Sep/27/2000 07:22:25 UMST	Concrete Cracking	A34(0.73) A48(1.08) A32(2.36)
[219]	Sep/27/2000 07:56:41 UMST	Concrete Cracking	A31(2.18) A47(2.77) A32(3.42)
[220]	Sep/27/2000 07:59:36 UMST	Concrete Cracking	A41(1.38) A11(1.70) A12(1.90)
[221]	Sep/27/2000 08:00:09 UMST	Concrete Cracking	A10(1.05) A05(2.11) A06(3.07)
[222]	Sep/27/2000 12:05:41 UMST	Concrete Cracking	A32(0.25) A48(1.68) A34(2.27)
[223]	Sep/27/2000 12:22:49 UMST	Concrete Cracking	A03(1.05) A04(1.20) A53(3.18)
[224]	Sep/27/2000 13:01:32 UMST	Concrete Cracking	A32(1.03) A34(1.49) A48(1.56)
[225]	Sep/27/2000 13:01:32 UMST	Concrete Cracking	A32(1.16) A34(1.46) A48(1.63)
[226]	Sep/27/2000 13:01:56 UMST	Concrete Cracking	A11(1.73) A12(2.39) A41(3.68)

[227]	Sep/27/2000 13:04:28 UMST	Concrete Cracking	A28(2.03) A29(5.65) A23(6.86)
[228]	Sep/27/2000 13:04:29 UMST	Concrete Cracking	A28(2.78) A29(6.15) A23(6.67)
[229]	Sep/27/2000 13:05:35 UMST	Concrete Cracking	A28(2.84) A29(3.89) A23(4.56)
[230]	Sep/27/2000 13:20:04 UMST	Concrete Cracking	A38(1.41) A04(2.34) A03(2.46)
[231]	Sep/27/2000 13:21:07 UMST	Concrete Cracking	A38(2.93) A08(2.96) A04(3.21)
[232]	Sep/27/2000 13:37:28 UMST	Concrete Cracking	A11(1.04) A12(3.10) A41(3.53)
[233]	Sep/27/2000 13:38:01 UMST	Concrete Cracking	A11(1.43) A12(2.82) A41(3.70)
[234]	Sep/27/2000 13:38:03 UMST	Concrete Cracking	A10(2.39) A11(2.77) A06(4.11)
[235]	Sep/27/2000 13:51:37 UMST	Concrete Cracking	A46(0.43) A26(0.43) A21(2.58)
[236]	Sep/27/2000 14:15:21 UMST	Concrete Cracking	A35(0.86) A37(2.46) A48(2.51)
[237]	Sep/27/2000 14:18:42 UMST	Concrete Cracking	A11(0.58) A12(3.11) A41(3.15)
[238]	Sep/27/2000 14:36:18 UMST	Concrete Cracking	A04(1.13) A38(1.64) A03(1.76)
[239]	Sep/27/2000 14:44:02 UMST	Concrete Cracking	A11(1.79) A12(3.54) A43(4.17)

**SANDIA PCCV
ALBUQUERQUE, NM**

SOUNDPRINT® ACOUSTIC MONITORING PROGRAM

REPORT

REPORTING PERIOD: SEPTEMBER 27 TO SEPTEMBER 27, 2000

DISCLAIMER

The information provided in this report is not intended to constitute an engineering report and should not be construed as such. The client is advised to retain qualified engineering expertise to interpret the data contained in this report. The information contained in this report is provided "as is" without warranty of any kind, either express or implied. Pure Technologies Ltd. is not liable for any lost profits, lost savings or other incidental, special or consequential damage arising out of the use of the monitoring system or the information contained in this report. Please refer to the terms and conditions attached to Pure's SoundPrint® System Purchase Agreement and Pure's Technical Support Agreement for further details.

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<i>Section</i>	<i>Title</i>
1.0	Executive Summary
2.0	SoundPrint® Report: Concrete Crashing: (09/27/2000)

1.0 EXECUTIVE SUMMARY

The following is a summary of relevant activity recorded by the SoundPrint® monitoring system. The summary includes information for both the latest monitoring period and for the entire monitoring period from the start-up date up to and including the most recent monitoring period.

	Period 09/27/2000– 09/27/2000
Operating Efficiency	100.0%
Concrete Crushing	10

Comments

Recommendations

There are no new recommendations at this time.

Prepared by:

Peter Paulson
President & CEO

REPORT PRESENTATION

A computerized drawing of the slab with the sensor layout is included on the following page and contains the following symbols:



Sensor Symbol with individual sensor name beneath



Symbolizes an event location. Event details are listed on the page following the drawing.

A list describing event details is provided for each drawing and lists the event number, shown on the computerized drawing, followed by the date, time, event classification and coordinates (in meters) to the origin of the events using the three closes sensors.

Event Report For Sandia PCCV

Albuquerque, NM

System Uptime 0.1 Days (100.0%)

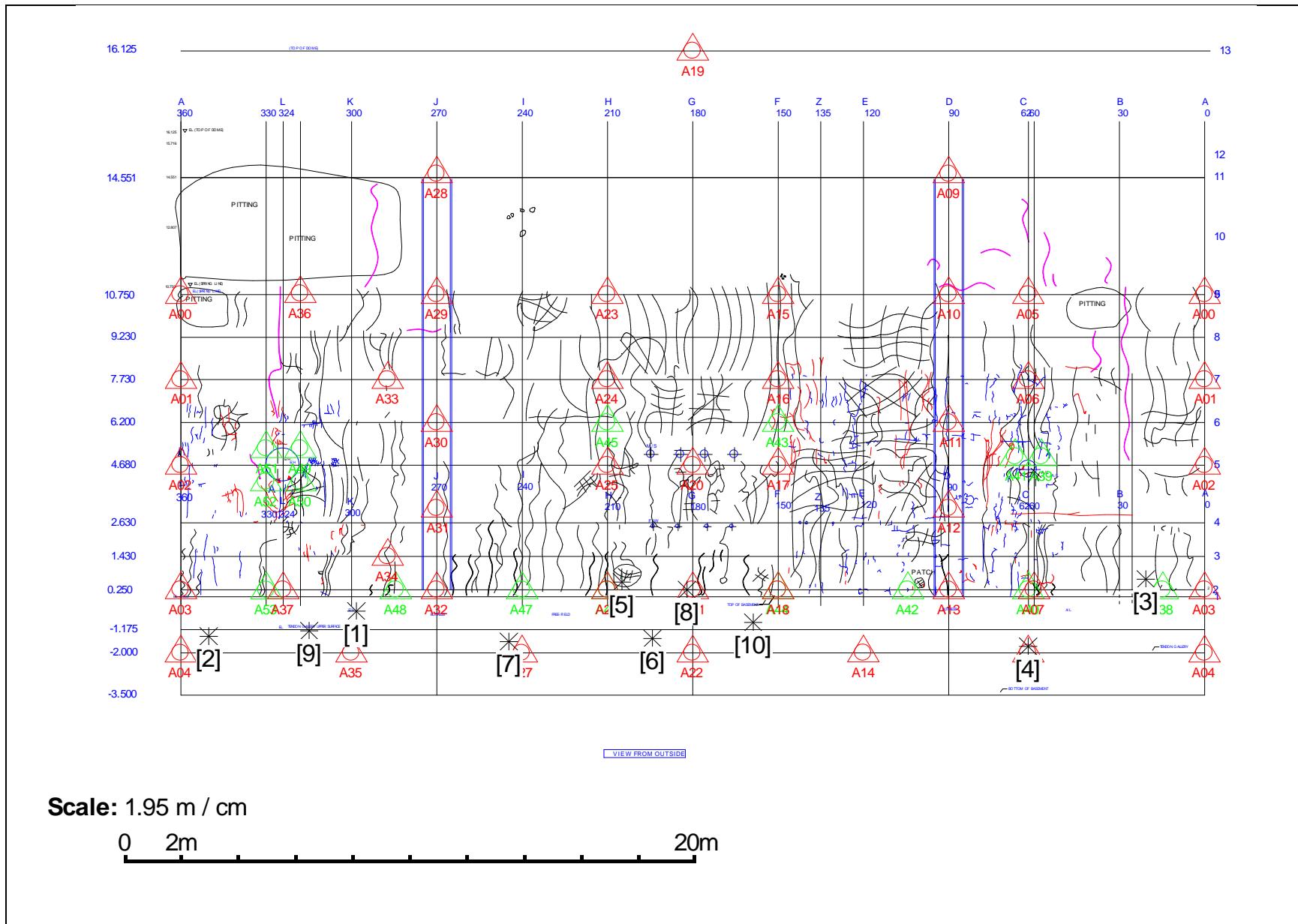
Concrete Crushing

Period: 09/27/2000 to 09/27/2000

Matched Events: 10



PCCV NEW -- 10 EVENTS



Events

No.	Date/Time	Classification	Location (m)
[1]	Sep/27/2000 12:49:41 UMST	Crushing Concrete	A35(1.50) A48(1.58) A34(2.23)
[2]	Sep/27/2000 13:34:56 UMST	Crushing Concrete	A04(1.15) A03(1.92) A53(2.61)
[3]	Sep/27/2000 13:35:58 UMST	Crushing Concrete	A38(0.70) A03(2.09) A04(3.33)
[4]	Sep/27/2000 13:37:46 UMST	Crushing Concrete	A08(0.23) A40(2.02) A07(2.03)
[5]	Sep/27/2000 13:43:18 UMST	Crushing Concrete	A26(0.57) A46(0.57) A21(2.50)
[6]	Sep/27/2000 13:49:57 UMST	Crushing Concrete	A22(1.50) A21(2.24) A46(2.34)
[7]	Sep/27/2000 13:50:01 UMST	Crushing Concrete	A27(0.62) A47(1.90) A32(3.12)
[8]	Sep/27/2000 14:05:10 UMST	Crushing Concrete	A21(0.21) A22(2.26) A26(2.78)
[9]	Sep/27/2000 14:15:22 UMST	Crushing Concrete	A35(1.67) A37(1.72) A53(2.09)
[10]	Sep/27/2000 14:24:44 UMST	Crushing Concrete	A44(1.46) A18(1.46) A22(2.38)

**SANDIA PCCV
ALBUQUERQUE, NM**

SOUNDPRINT® ACOUSTIC MONITORING PROGRAM

REPORT

REPORTING PERIOD: SEPTEMBER 26 TO SEPTEMBER 27, 2000

DISCLAIMER

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<i>Section</i>	<i>Title</i>
1.0	Executive Summary
2.0	SoundPrint® Report: Tendon Pings: (09/26/2000)

1.0 EXECUTIVE SUMMARY

The following is a summary of relevant activity recorded by the SoundPrint® monitoring system. The summary includes information for both the latest monitoring period and for the entire monitoring period from the start-up date up to and including the most recent monitoring period.

	Period 09/26/2000– 09/27/2000
Operating Efficiency	100.0%
Tendon Pings	136

Comments

Recommendations

There are no new recommendations at this time.

Prepared by:

Peter Paulson
President & CEO

REPORT PRESENTATION

A computerized drawing of the slab with the sensor layout is included on the following page and contains the following symbols:



Sensor Symbol with individual sensor name beneath



Symbolizes an event location. Event details are listed on the page following the drawing.

A list describing event details is provided for each drawing and lists the event number, shown on the computerized drawing, followed by the date, time, event classification and co-ordinates (in meters) to the origin of the events using the three closes sensors.

Event Report For Sandia PCCV

Albuquerque, NM

System Uptime 1.9 Days (100.0%)

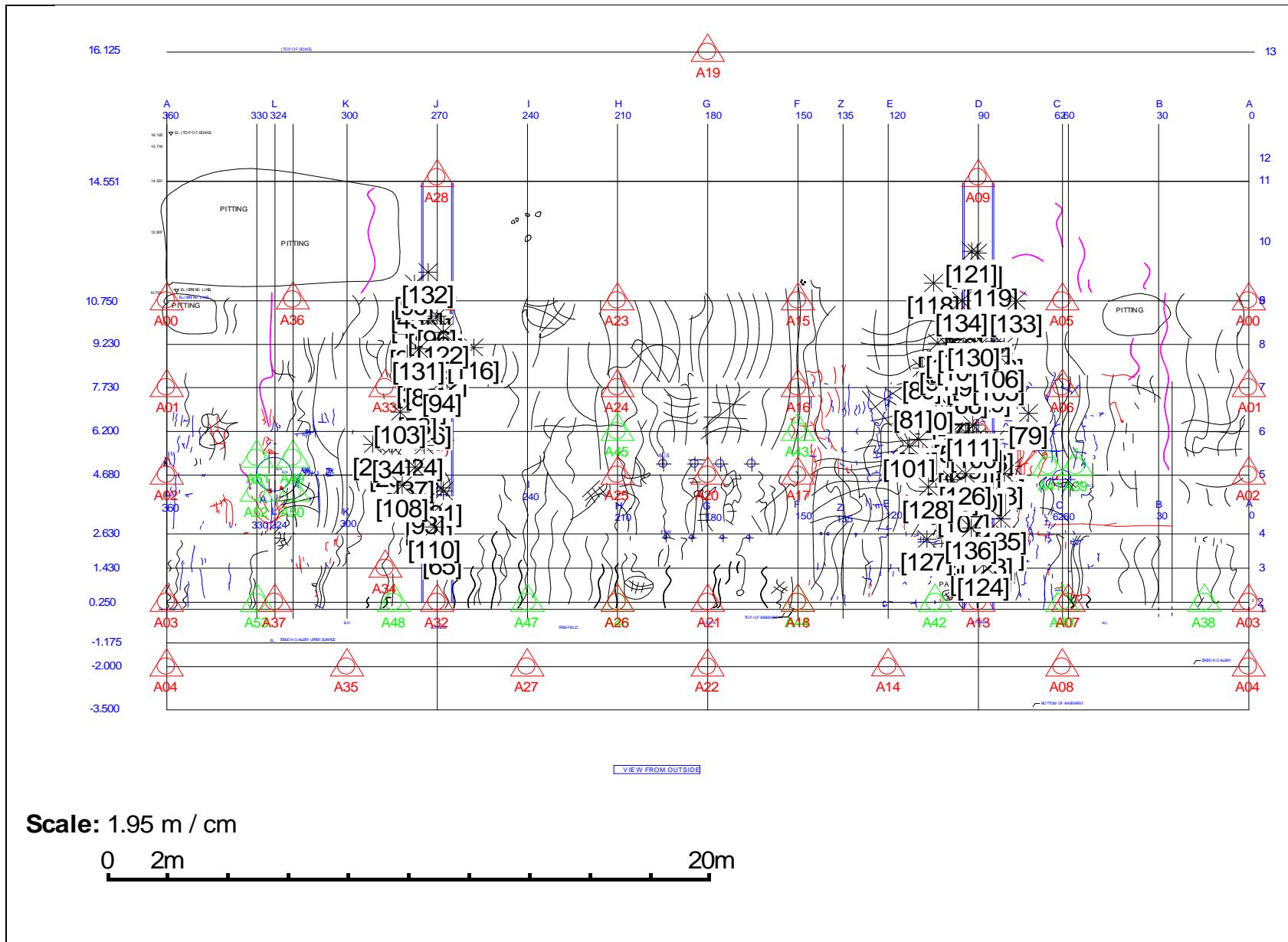
Tendon Pings

Period: 09/26/2000 to 09/27/2000

Matched Events: 136



PCCV NEW -- 136 EVENTS



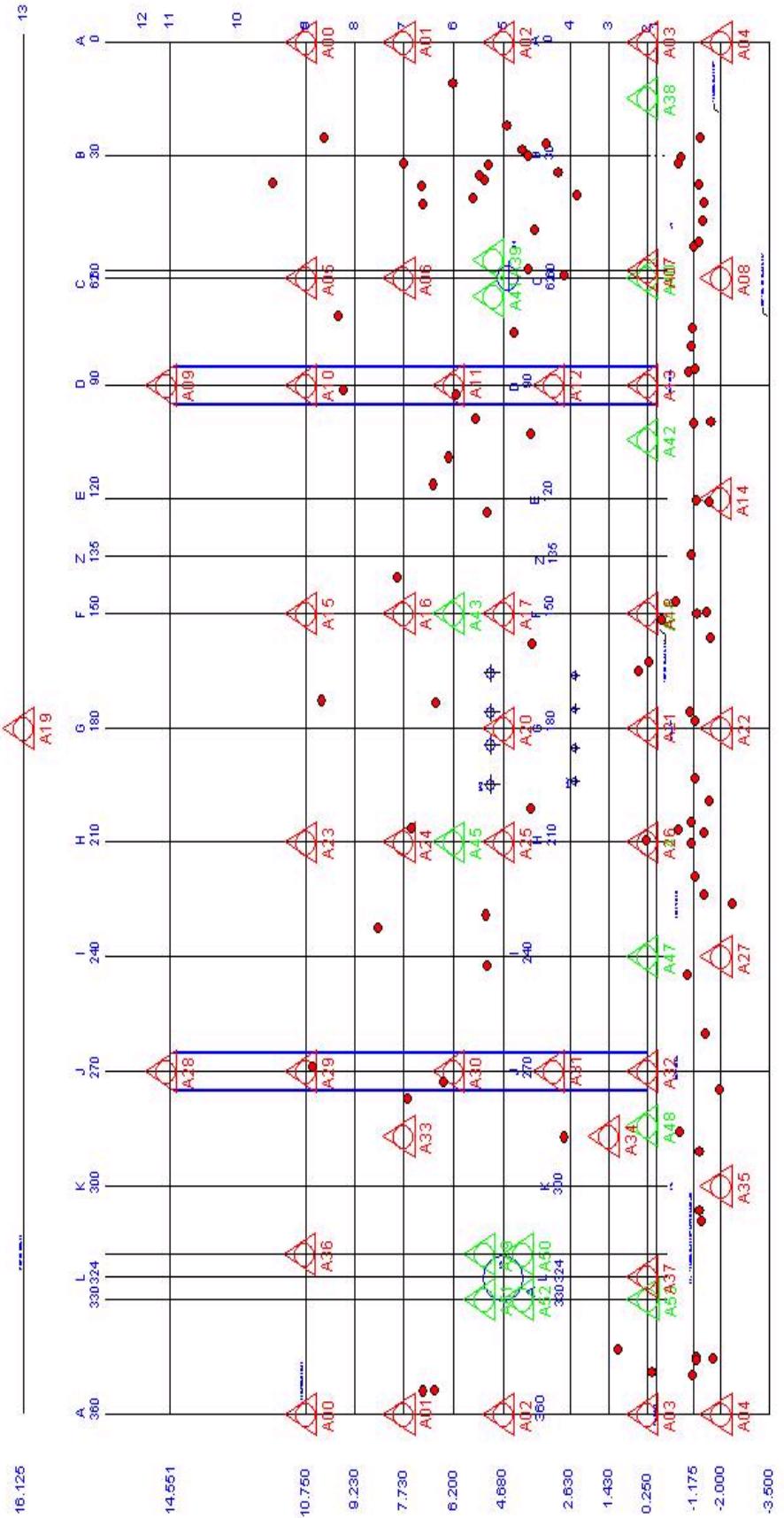
Events

No.	Date/Time	Classification	Location (m)
[1]	Sep/26/2000 20:43:28 UMST	Tendon Ping	A12(1.58) A11(2.00) A41(3.30)
[2]	Sep/26/2000 20:43:36 UMST	Tendon Ping	A41(1.20) A11(1.66) A39(2.11)
[3]	Sep/26/2000 20:43:40 UMST	Tendon Ping	A30(1.63) A31(1.64) A33(3.24)
[4]	Sep/26/2000 20:43:42 UMST	Tendon Ping	A30(1.34) A31(1.88) A33(3.02)
[5]	Sep/26/2000 20:44:18 UMST	Tendon Ping	A11(1.41) A12(1.70) A41(2.64)
[6]	Sep/26/2000 20:44:37 UMST	Tendon Ping	A11(1.28) A12(1.79) A41(2.15)
[7]	Sep/26/2000 20:45:16 UMST	Tendon Ping	A11(1.55) A41(1.56) A12(1.87)
[8]	Sep/26/2000 21:26:04 UMST	Tendon Ping	A33(1.26) A30(1.26) A29(3.44)
[9]	Sep/26/2000 21:26:07 UMST	Tendon Ping	A33(1.26) A30(2.13) A29(2.56)
[10]	Sep/26/2000 21:28:00 UMST	Tendon Ping	A11(0.73) A41(2.24) A12(2.34)
[11]	Sep/26/2000 21:28:36 UMST	Tendon Ping	A29(1.49) A33(2.00) A30(3.26)
[12]	Sep/26/2000 21:28:39 UMST	Tendon Ping	A29(1.72) A33(2.09) A30(2.83)
[13]	Sep/26/2000 21:51:11 UMST	Tendon Ping	A29(0.82) A33(3.26) A36(3.96)
[14]	Sep/26/2000 21:51:14 UMST	Tendon Ping	A29(0.53) A33(3.01) A30(4.02)
[15]	Sep/26/2000 21:51:59 UMST	Tendon Ping	A30(0.59) A33(2.30) A31(2.69)
[16]	Sep/26/2000 21:52:10 UMST	Tendon Ping	A30(0.65) A33(1.80) A31(3.68)
[17]	Sep/26/2000 21:52:18 UMST	Tendon Ping	A33(1.86) A29(1.92) A30(2.65)
[18]	Sep/26/2000 21:52:20 UMST	Tendon Ping	A31(0.51) A34(2.42) A30(2.77)
[19]	Sep/26/2000 21:52:41 UMST	Tendon Ping	A29(0.23) A33(3.26) A30(4.40)
[20]	Sep/26/2000 21:52:43 UMST	Tendon Ping	A29(1.47) A33(2.01) A30(3.43)
[21]	Sep/26/2000 21:52:43 UMST	Tendon Ping	A10(1.58) A11(3.02) A06(3.44)
[22]	Sep/26/2000 21:52:46 UMST	Tendon Ping	A29(1.54) A33(1.96) A30(3.44)
[23]	Sep/26/2000 21:52:53 UMST	Tendon Ping	A29(0.43) A33(3.33) A28(4.27)
[24]	Sep/26/2000 21:53:08 UMST	Tendon Ping	A30(0.65) A33(2.39) A31(2.59)
[25]	Sep/26/2000 21:53:11 UMST	Tendon Ping	A30(1.79) A33(2.38) A31(2.71)
[26]	Sep/26/2000 21:53:11 UMST	Tendon Ping	A33(2.03) A30(2.18) A49(2.68)
[27]	Sep/26/2000 21:53:28 UMST	Tendon Ping	A31(1.71) A30(1.98) A34(3.16)
[28]	Sep/26/2000 21:53:30 UMST	Tendon Ping	A11(0.61) A41(2.02) A12(2.81)
[29]	Sep/26/2000 21:53:39 UMST	Tendon Ping	A11(1.81) A06(2.37) A10(2.82)
[30]	Sep/26/2000 21:54:16 UMST	Tendon Ping	A31(1.09) A30(1.97) A34(3.36)
[31]	Sep/26/2000 21:54:18 UMST	Tendon Ping	A31(0.99) A30(2.09) A34(3.30)
[32]	Sep/26/2000 21:55:21 UMST	Tendon Ping	A33(1.15) A30(2.16) A29(2.59)
[33]	Sep/26/2000 21:55:36 UMST	Tendon Ping	A41(1.49) A11(1.71) A12(1.80)
[34]	Sep/26/2000 22:22:46 UMST	Tendon Ping	A30(1.59) A33(2.06) A31(2.94)
[35]	Sep/26/2000 22:23:22 UMST	Tendon Ping	A12(0.53) A13(2.47) A42(2.71)
[36]	Sep/26/2000 22:23:36 UMST	Tendon Ping	A29(1.25) A33(2.59) A30(3.32)
[37]	Sep/26/2000 22:23:36 UMST	Tendon Ping	A30(1.45) A31(1.94) A33(2.95)
[38]	Sep/26/2000 22:23:38 UMST	Tendon Ping	A29(1.02) A33(2.47) A30(3.62)
[39]	Sep/26/2000 22:23:42 UMST	Tendon Ping	A12(1.18) A11(2.00) A41(2.86)
[40]	Sep/26/2000 22:23:49 UMST	Tendon Ping	A12(1.40) A11(2.20) A41(3.34)
[41]	Sep/26/2000 22:23:50 UMST	Tendon Ping	A33(1.40) A30(1.53) A29(3.07)
[42]	Sep/26/2000 22:24:08 UMST	Tendon Ping	A29(0.89) A33(2.92) A36(3.92)
[43]	Sep/26/2000 22:24:09 UMST	Tendon Ping	A10(1.50) A05(2.66) A06(2.78)

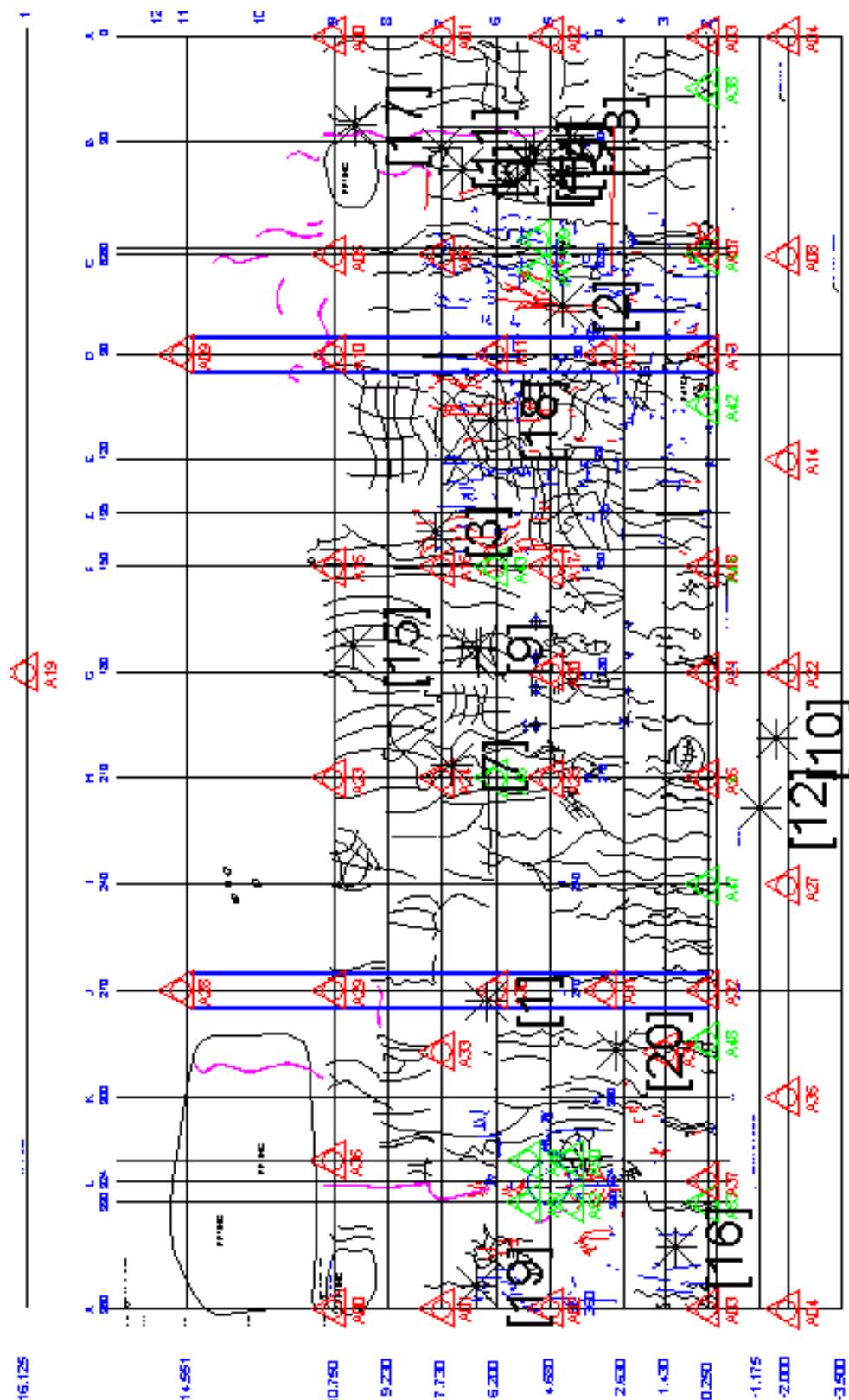
[44]	Sep/26/2000 22:24:10 UMST	Tendon Ping	A10(1.68) A06(2.73) A05(2.86)
[45]	Sep/26/2000 22:24:12 UMST	Tendon Ping	A29(0.88) A33(3.26) A36(3.90)
[46]	Sep/26/2000 22:24:28 UMST	Tendon Ping	A10(2.45) A11(2.92) A06(4.32)
[47]	Sep/26/2000 22:24:29 UMST	Tendon Ping	A11(1.17) A06(3.74) A41(3.77)
[48]	Sep/26/2000 22:24:42 UMST	Tendon Ping	A11(1.04) A12(2.02) A41(2.21)
[49]	Sep/26/2000 22:24:42 UMST	Tendon Ping	A11(1.30) A12(2.04) A41(3.00)
[50]	Sep/26/2000 22:24:58 UMST	Tendon Ping	A33(1.56) A30(1.76) A29(2.80)
[51]	Sep/26/2000 22:24:59 UMST	Tendon Ping	A33(1.64) A29(2.25) A30(2.33)
[52]	Sep/26/2000 22:25:02 UMST	Tendon Ping	A10(0.94) A05(3.36) A11(3.77)
[53]	Sep/26/2000 22:25:03 UMST	Tendon Ping	A30(1.16) A33(1.21) A29(3.64)
[54]	Sep/26/2000 22:25:06 UMST	Tendon Ping	A12(1.38) A11(1.67) A41(2.33)
[55]	Sep/26/2000 22:25:08 UMST	Tendon Ping	A12(1.48) A11(1.58) A41(2.50)
[56]	Sep/26/2000 22:25:08 UMST	Tendon Ping	A12(1.34) A11(1.72) A41(2.30)
[57]	Sep/26/2000 22:25:11 UMST	Tendon Ping	A10(1.61) A11(3.35) A05(3.92)
[58]	Sep/26/2000 22:25:44 UMST	Tendon Ping	A11(0.83) A12(3.16) A41(3.38)
[59]	Sep/26/2000 22:26:01 UMST	Tendon Ping	A12(1.38) A11(1.73) A41(2.07)
[60]	Sep/26/2000 22:26:08 UMST	Tendon Ping	A12(1.35) A11(1.73) A41(2.19)
[61]	Sep/26/2000 22:26:34 UMST	Tendon Ping	A29(0.89) A33(2.91) A30(3.70)
[62]	Sep/26/2000 22:27:04 UMST	Tendon Ping	A11(0.42) A41(2.98) A12(3.03)
[63]	Sep/26/2000 22:30:11 UMST	Tendon Ping	A12(1.23) A13(1.70) A42(2.34)
[64]	Sep/26/2000 22:30:12 UMST	Tendon Ping	A12(1.32) A13(1.74) A42(2.54)
[65]	Sep/27/2000 07:57:00 UMST	Tendon Ping	A31(0.86) A32(2.07) A34(2.08)
[66]	Sep/27/2000 07:57:06 UMST	Tendon Ping	A11(1.74) A10(2.86) A06(3.12)
[67]	Sep/27/2000 07:57:22 UMST	Tendon Ping	A11(1.15) A12(1.97) A41(2.64)
[68]	Sep/27/2000 07:57:23 UMST	Tendon Ping	A11(0.99) A12(2.11) A41(2.57)
[69]	Sep/27/2000 07:57:33 UMST	Tendon Ping	A12(1.34) A11(1.95) A41(3.00)
[70]	Sep/27/2000 07:57:45 UMST	Tendon Ping	A11(0.46) A41(2.34) A12(2.61)
[71]	Sep/27/2000 07:57:49 UMST	Tendon Ping	A12(0.12) A13(2.81) A41(3.08)
[72]	Sep/27/2000 07:57:54 UMST	Tendon Ping	A10(2.00) A11(3.35) A05(4.38)
[73]	Sep/27/2000 07:57:55 UMST	Tendon Ping	A10(2.26) A11(2.37) A06(3.30)
[74]	Sep/27/2000 07:57:56 UMST	Tendon Ping	A10(1.47) A11(3.08) A05(3.24)
[75]	Sep/27/2000 07:57:58 UMST	Tendon Ping	A12(1.06) A11(2.29) A41(3.12)
[76]	Sep/27/2000 07:58:02 UMST	Tendon Ping	A12(0.94) A11(2.60) A41(3.33)
[77]	Sep/27/2000 07:58:03 UMST	Tendon Ping	A12(1.05) A13(2.52) A41(2.78)
[78]	Sep/27/2000 07:58:12 UMST	Tendon Ping	A10(1.78) A06(2.42) A05(2.48)
[79]	Sep/27/2000 07:58:16 UMST	Tendon Ping	A06(1.44) A11(1.78) A41(1.97)
[80]	Sep/27/2000 07:58:18 UMST	Tendon Ping	A11(1.87) A10(3.70) A06(4.27)
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[82]	Sep/27/2000 07:58:19 UMST	Tendon Ping	A29(2.14) A33(2.27) A30(2.46)
[83]	Sep/27/2000 07:58:20 UMST	Tendon Ping	A11(0.78) A12(2.27) A41(2.46)
[84]	Sep/27/2000 07:58:21 UMST	Tendon Ping	A11(1.99) A12(3.40) A43(4.00)
[85]	Sep/27/2000 07:58:22 UMST	Tendon Ping	A11(1.20) A12(2.17) A41(3.01)
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[87]	Sep/27/2000 07:58:30 UMST	Tendon Ping	A11(2.19) A10(2.42) A06(3.24)
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[90]	Sep/27/2000 07:58:34 UMST	Tendon Ping	A10(2.23) A11(2.34) A06(3.08)
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[92]	Sep/27/2000 07:58:35 UMST	Tendon Ping	A31(0.26) A34(2.51) A30(2.82)
[93]	Sep/27/2000 07:58:36 UMST	Tendon Ping	A31(0.70) A30(2.51) A34(2.64)
[94]	Sep/27/2000 07:58:37 UMST	Tendon Ping	A30(1.77) A33(1.89) A29(2.79)
[95]	Sep/27/2000 07:58:37 UMST	Tendon Ping	A29(0.96) A33(3.74) A28(3.77)
[96]	Sep/27/2000 07:58:38 UMST	Tendon Ping	A29(0.54) A33(3.01) A30(4.01)
[97]	Sep/27/2000 07:58:39 UMST	Tendon Ping	A10(1.24) A05(2.62) A06(3.00)
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[99]	Sep/27/2000 07:58:41 UMST	Tendon Ping	A11(0.64) A12(2.52) A41(2.72)
[100]	Sep/27/2000 07:58:43 UMST	Tendon Ping	A11(0.19) A41(2.59) A12(2.86)
[101]	Sep/27/2000 07:58:53 UMST	Tendon Ping	A11(2.34) A12(3.42) A43(3.72)
[102]	Sep/27/2000 07:58:55 UMST	Tendon Ping	A10(1.71) A11(3.20) A05(3.94)
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[105]	Sep/27/2000 07:58:59 UMST	Tendon Ping	A06(2.19) A11(2.26) A10(2.49)
[106]	Sep/27/2000 07:59:00 UMST	Tendon Ping	A10(2.05) A06(2.37) A11(2.70)
[107]	Sep/27/2000 07:59:01 UMST	Tendon Ping	A12(0.78) A11(2.47) A41(3.05)
[108]	Sep/27/2000 07:59:02 UMST	Tendon Ping	A31(1.64) A30(2.21) A34(2.94)
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[112]	Sep/27/2000 08:00:47 UMST	Tendon Ping	A12(1.12) A13(1.81) A42(2.43)
[113]	Sep/27/2000 08:00:48 UMST	Tendon Ping	A12(1.43) A13(1.48) A42(2.01)
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[115]	Sep/27/2000 08:01:28 UMST	Tendon Ping	A12(1.32) A13(1.63) A42(2.34)
[116]	Sep/27/2000 08:01:38 UMST	Tendon Ping	A29(2.03) A30(3.16) A33(3.24)
[117]	Sep/27/2000 08:01:53 UMST	Tendon Ping	A12(0.69) A13(2.33) A42(2.91)
[118]	Sep/27/2000 08:02:46 UMST	Tendon Ping	A10(1.60) A09(3.96) A05(4.31)
[119]	Sep/27/2000 08:02:53 UMST	Tendon Ping	A10(1.02) A05(2.49) A09(3.42)
[120]	Sep/27/2000 08:04:32 UMST	Tendon Ping	A10(1.67) A09(2.63) A05(3.27)
[121]	Sep/27/2000 08:18:33 UMST	Tendon Ping	A10(1.74) A09(2.58) A05(3.46)
[122]	Sep/27/2000 12:39:29 UMST	Tendon Ping	A29(1.12) A33(2.71) A30(3.45)
[123]	Sep/27/2000 12:43:06 UMST	Tendon Ping	A12(0.95) A13(2.01) A42(2.63)
[124]	Sep/27/2000 12:43:37 UMST	Tendon Ping	A13(1.32) A12(1.60) A42(2.07)
[125]	Sep/27/2000 13:00:14 UMST	Tendon Ping	A12(1.61) A11(1.89) A41(3.21)
[126]	Sep/27/2000 13:00:17 UMST	Tendon Ping	A11(1.54) A12(1.63) A41(2.76)
[127]	Sep/27/2000 13:04:22 UMST	Tendon Ping	A12(1.84) A42(2.21) A13(2.77)
[128]	Sep/27/2000 13:17:59 UMST	Tendon Ping	A12(1.99) A11(2.54) A42(4.02)
[129]	Sep/27/2000 13:58:55 UMST	Tendon Ping	A10(1.35) A11(3.32) A05(3.50)
[130]	Sep/27/2000 13:58:56 UMST	Tendon Ping	A10(1.19) A05(3.15) A11(3.37)
[131]	Sep/27/2000 14:16:51 UMST	Tendon Ping	A33(1.74) A29(1.79) A30(2.94)
[132]	Sep/27/2000 14:18:45 UMST	Tendon Ping	A29(1.04) A28(3.32) A33(4.26)
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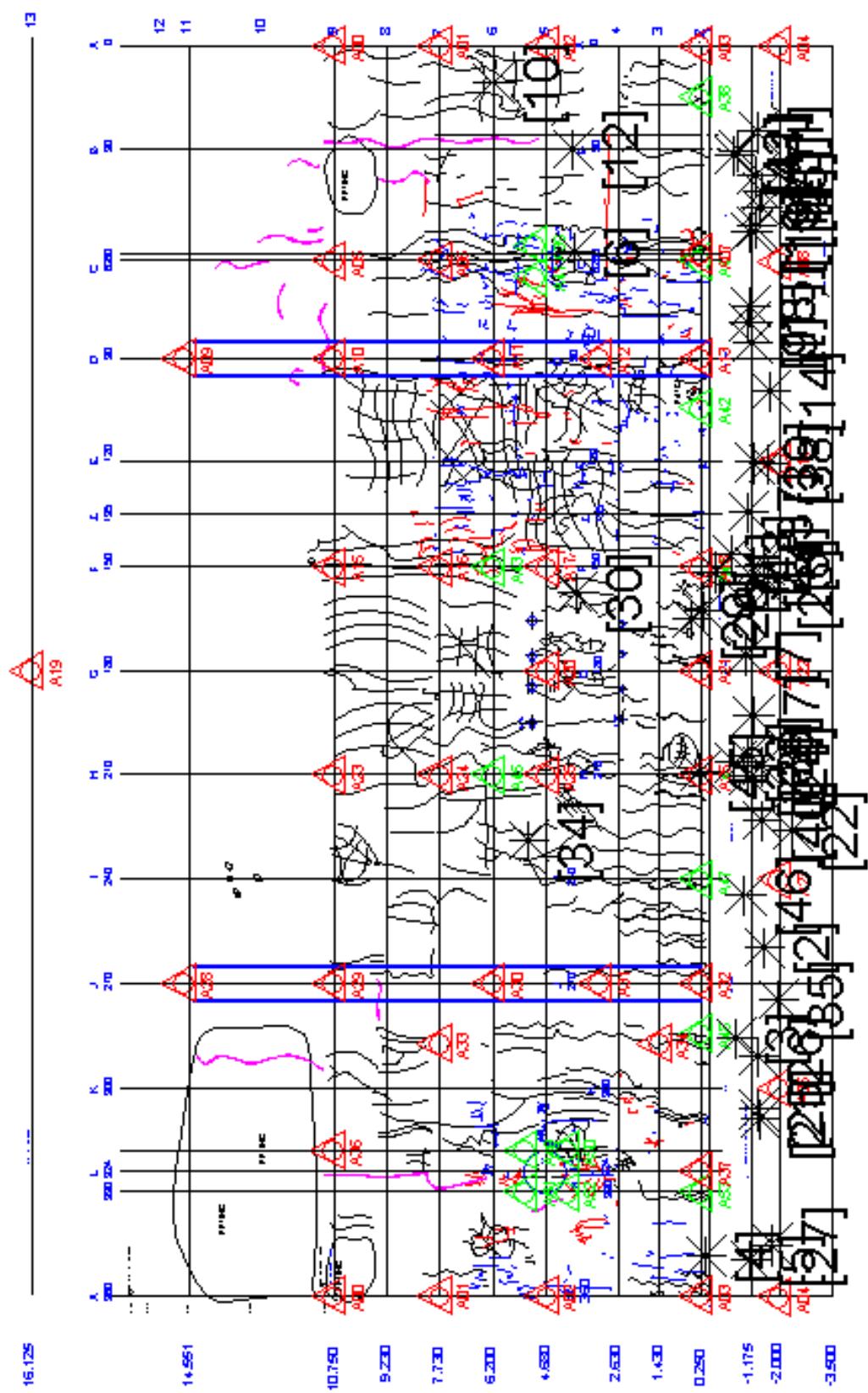
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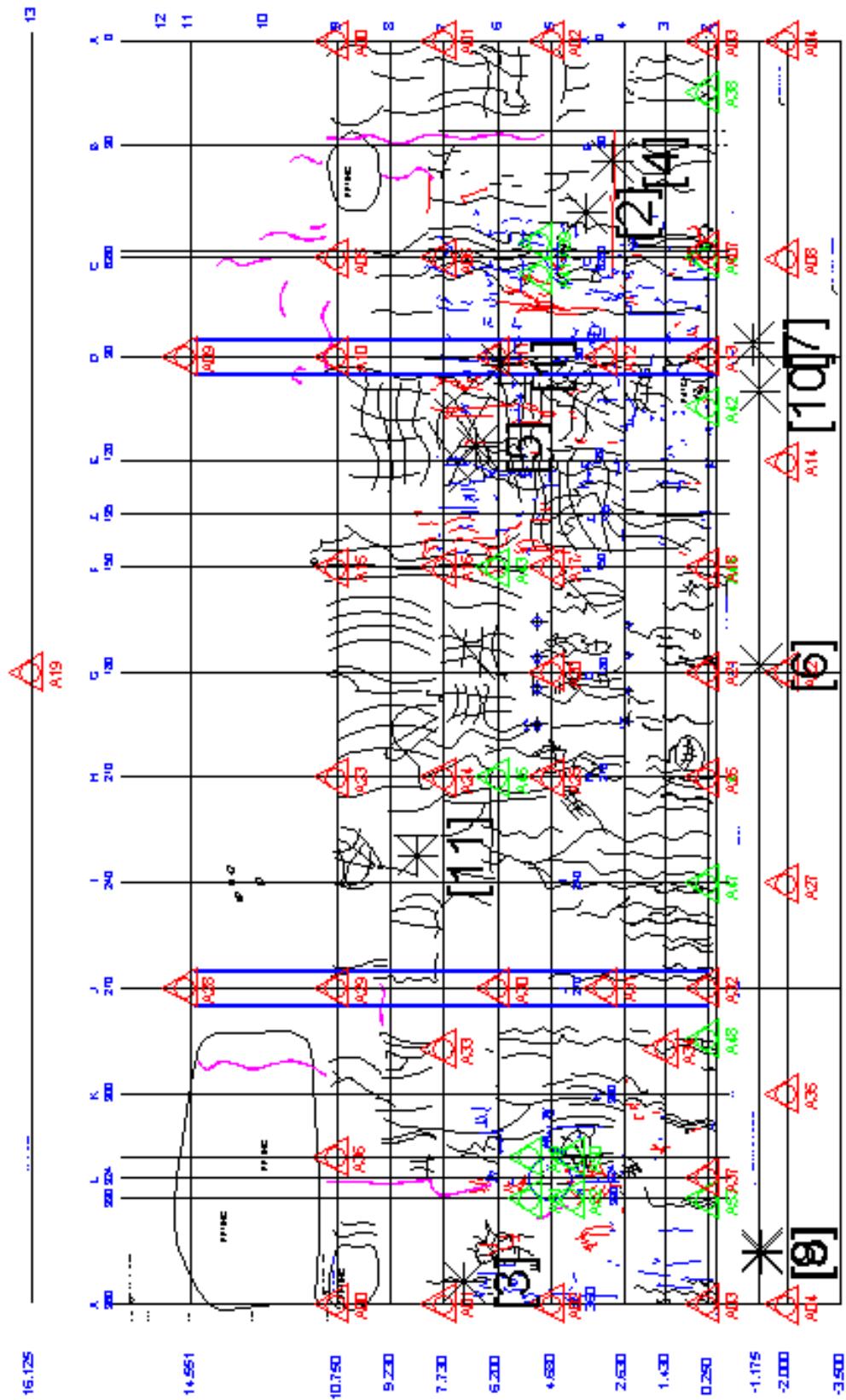


All 92 wire breaks before failure during test Nov. 14, 2001
 (Many contain multiple wire failures at one location)

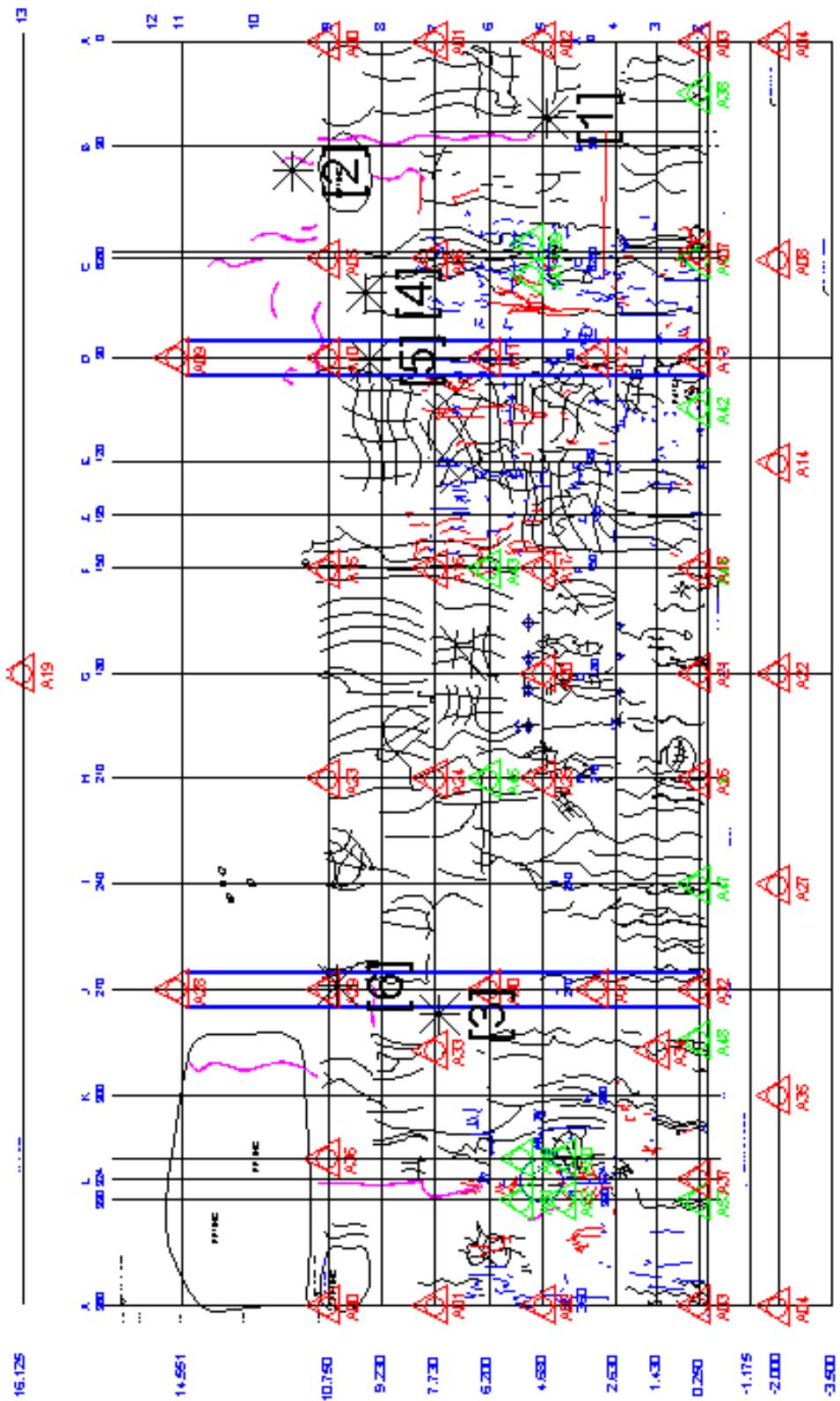


Wire breaks during the period of 10:45 AM to 10:47 AM
End at 10:46:12 (197 psi to 200 psi)

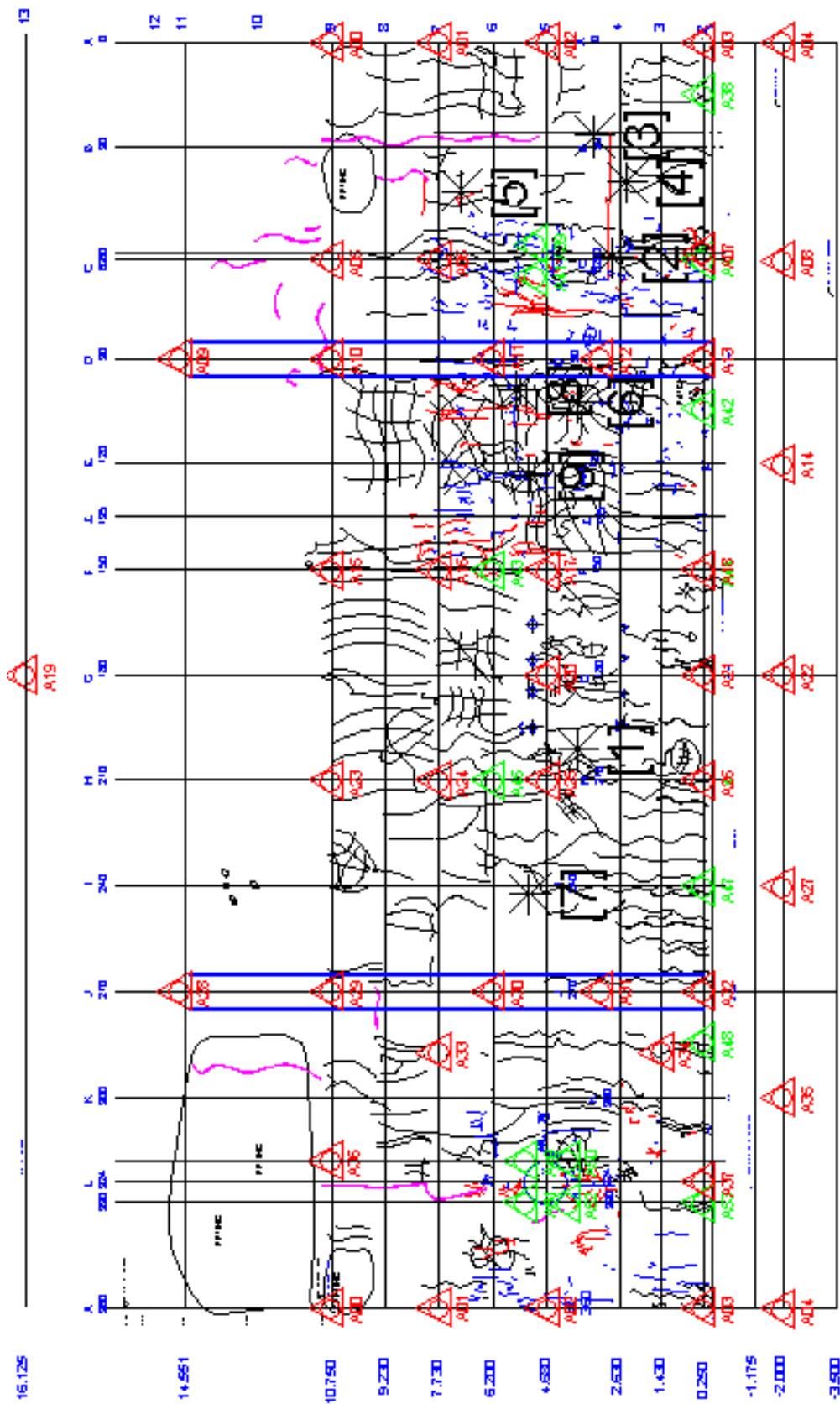




Wire breaks during the minute of 10:43 AM to 10:44 AM
192 PSI to 193 PSI



Wire breaks during the minute of 10:42 AM to 10:43 AM
188 PSI to 192 PSI



Wire breaks during the period 10:39 AM to 10:42 AM (First Breaks)
Approximately 188 PSI