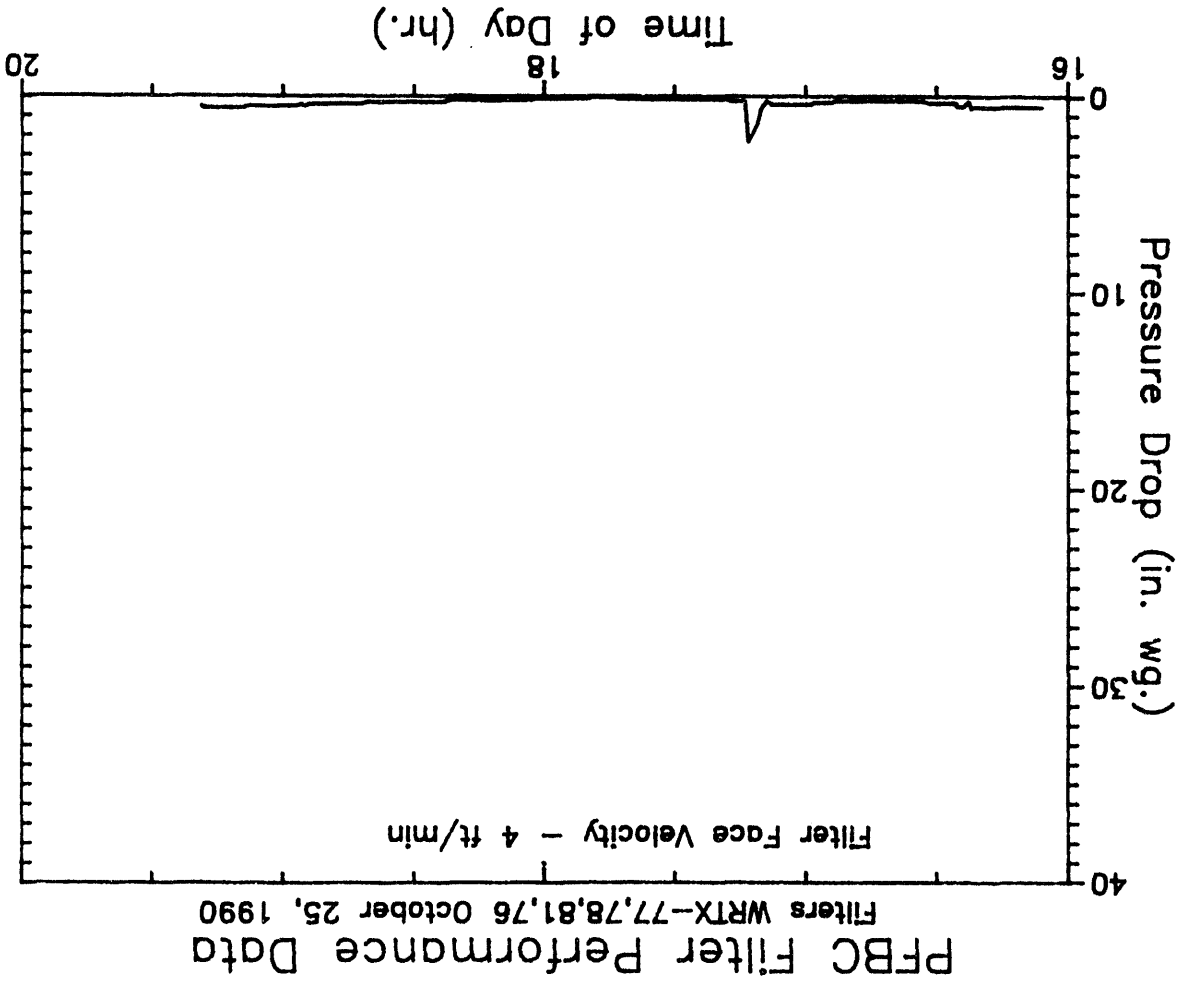


APPENDIX F

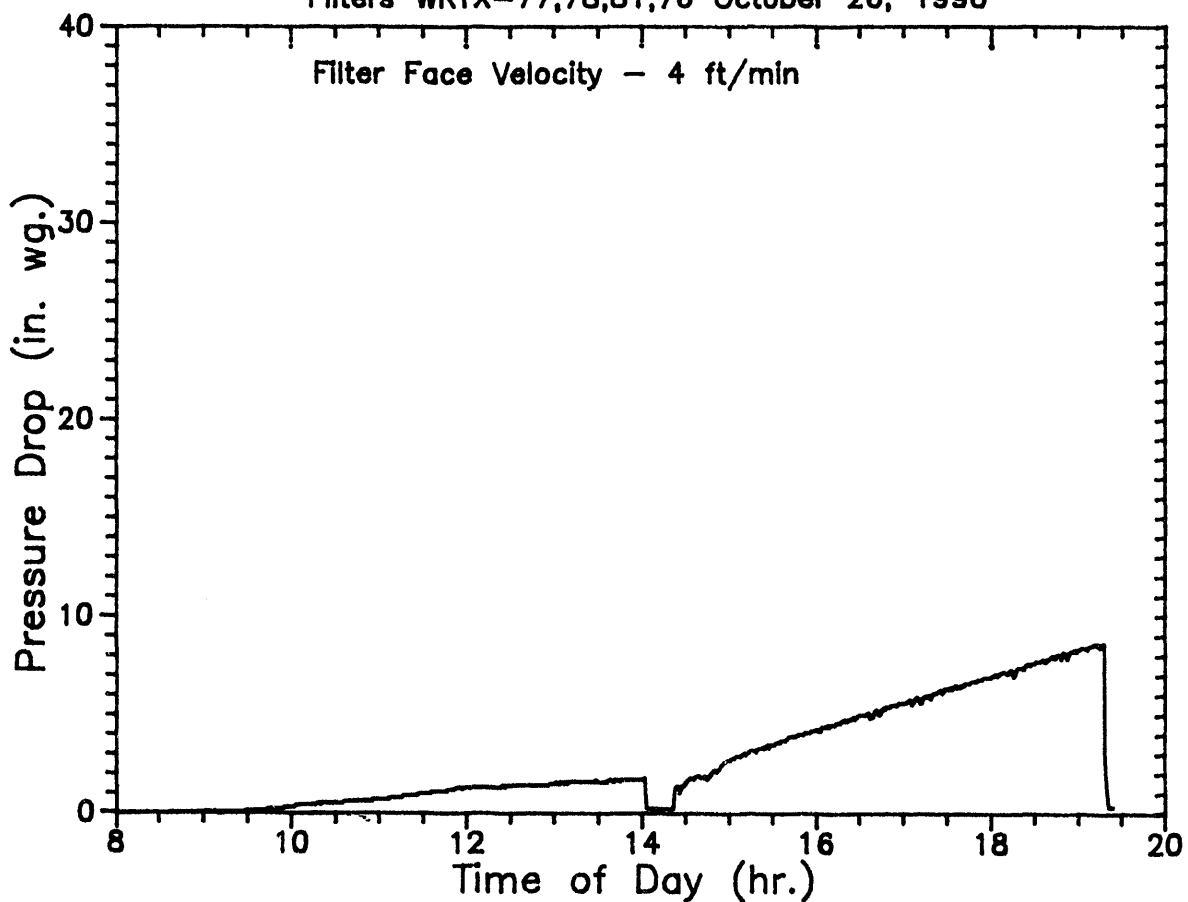
PRESSURE DROP AND GAS TEMPERATURE TRACES RECORDED DURING  
PFBC PLANT THERMAL TRANSIENT TESTING  
WRTX-76, WRTX-77, WRTX-78, WRTX-81 (WRTX-80, AND WRTX-84)

OPERATIONAL NOTES FOR  
OCTOBER 25, 1990  
4 NEW FILTERS  
PLENUM 1-TOP - WRTX-77  
Bottom - WRTX-78  
PLENUM 2-TOP - WRTX-81  
Bottom - WRTX-76  
COLD START  
INITIAL HEATUP



# PFBC Filter Performance Data

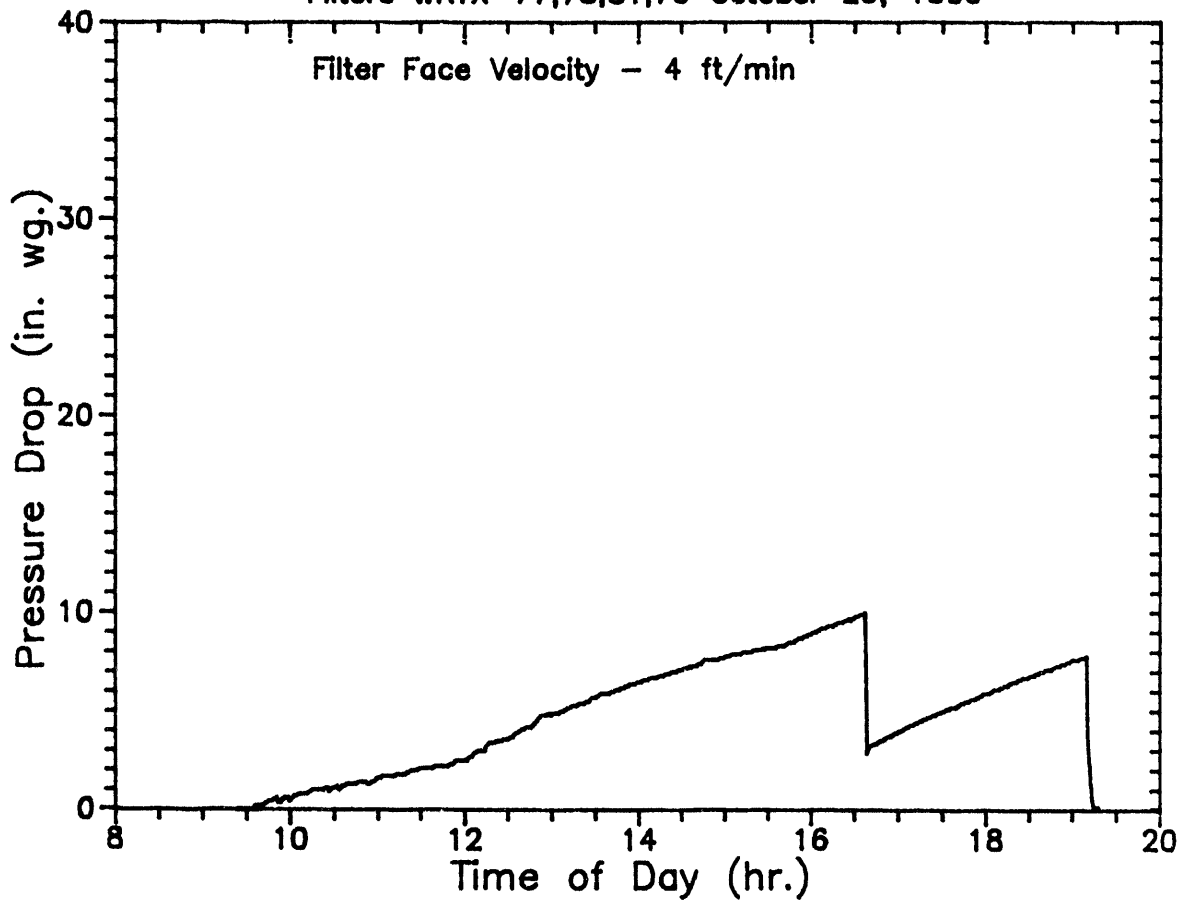
Filters WRTX-77,78,81,76 October 26, 1990



OPERATION NOTES FOR  
October 26, 1990  
12 hour test, includes  
start up and shutdown  
1400 FLAME OUT -  
RESTART UNSCHEDULED  
INITIAL CYCLE

# PFBC Filter Performance Data

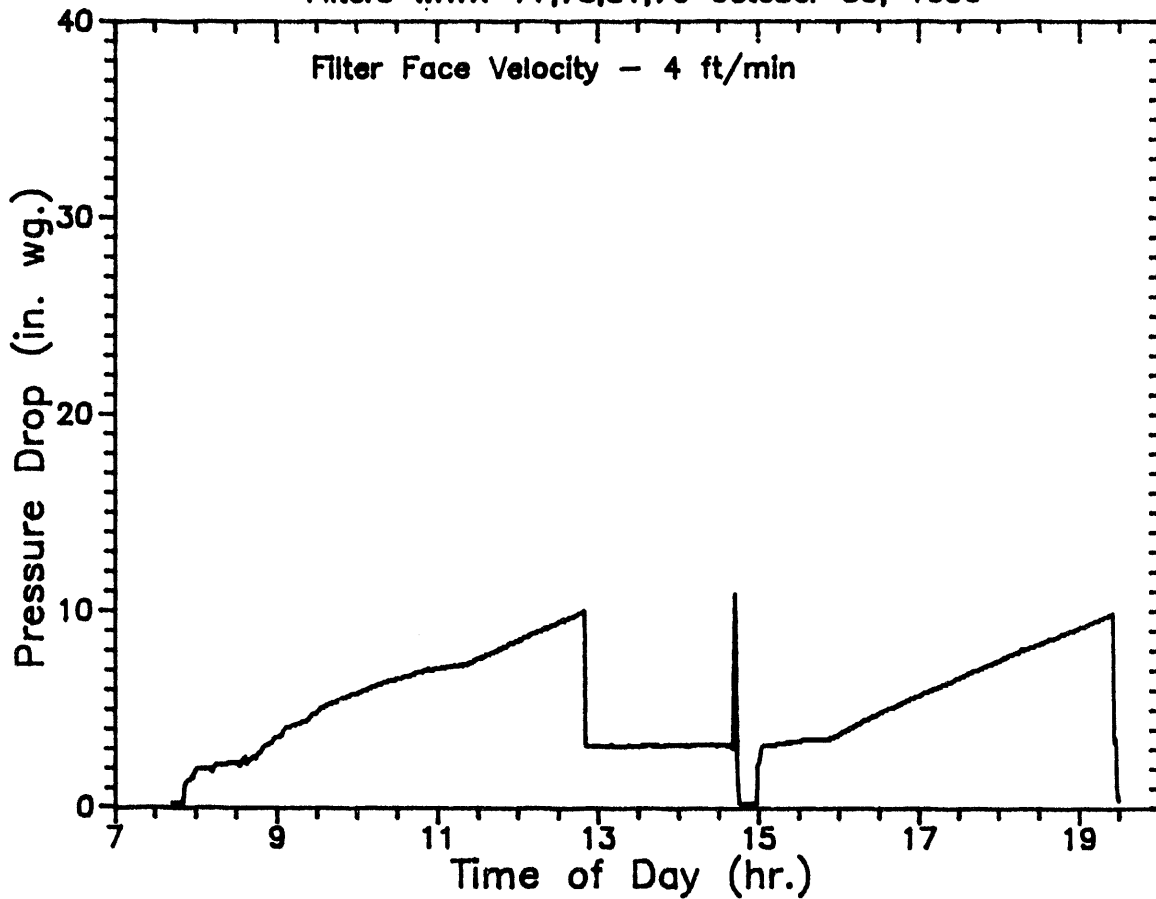
Filters WRTX-77,78,81,76 October 29, 1990



OPERATION NOTES FOR  
OCTOBER 29, 1990  
12 hour test, INCLUDES  
COLD startup and shutdown  
Δ P Trigger = 10" WC  
PULSE Cleaning = 295 psig/sec

# PFBC Filter Performance Data

Filters WRTX-77,78,81,76 October 30, 1990



Operation Notes for  
October 30, 1990

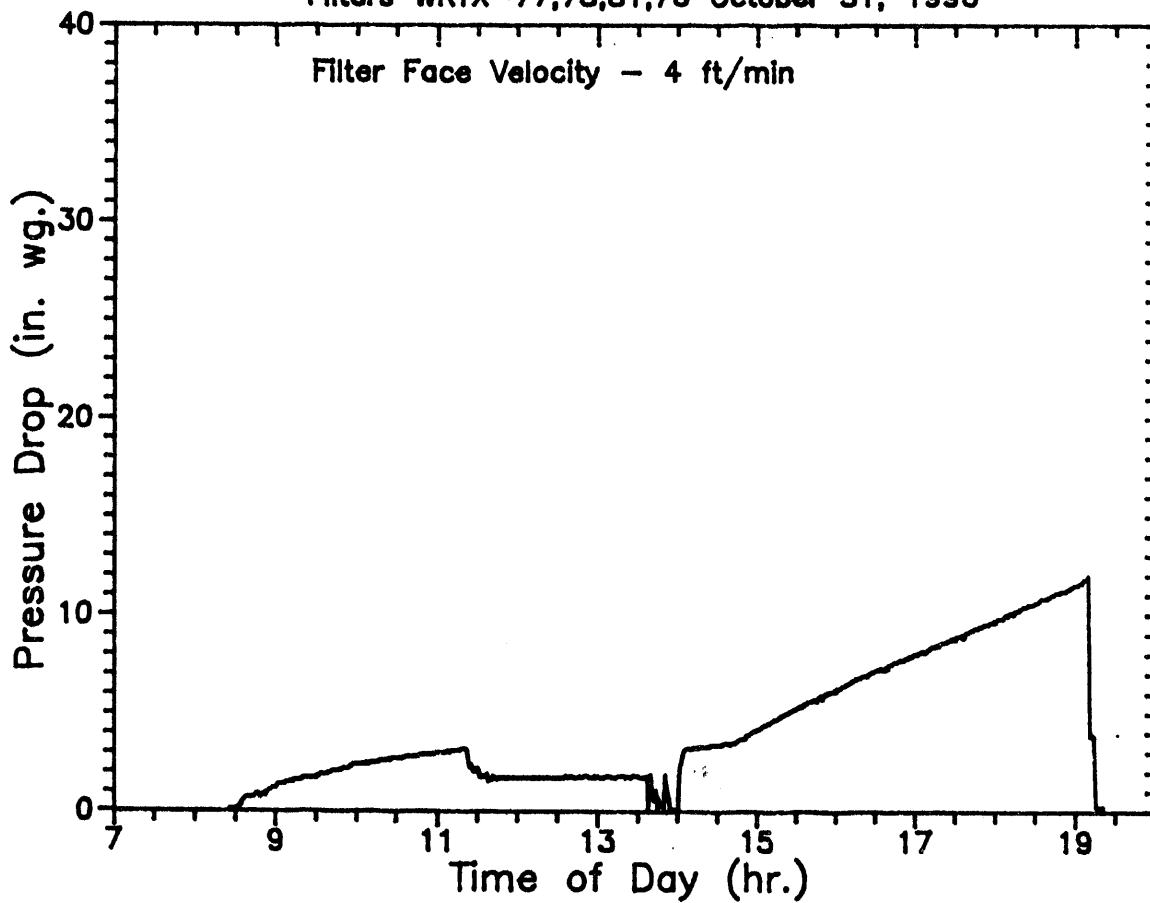
12 hour test, includes  
startup and shutdown

$\Delta P$  TRIGGER = 10" WC  
PULSE CLEANING - 300 psig/0.1sec

1430 Turbine trip SIMULATION  
ATTEMPT  
FLAME OUT - SCHEDULED  
RESTART

## PFBC Filter Performance Data

Filters WRTX-77,78,81,76 October 31, 1990



OPERATION NOTES FOR  
OCTOBER 31, 1990

12 hour test, includes  
Startup and shutdown

$\Delta P$  TRIGGER = 12" WC

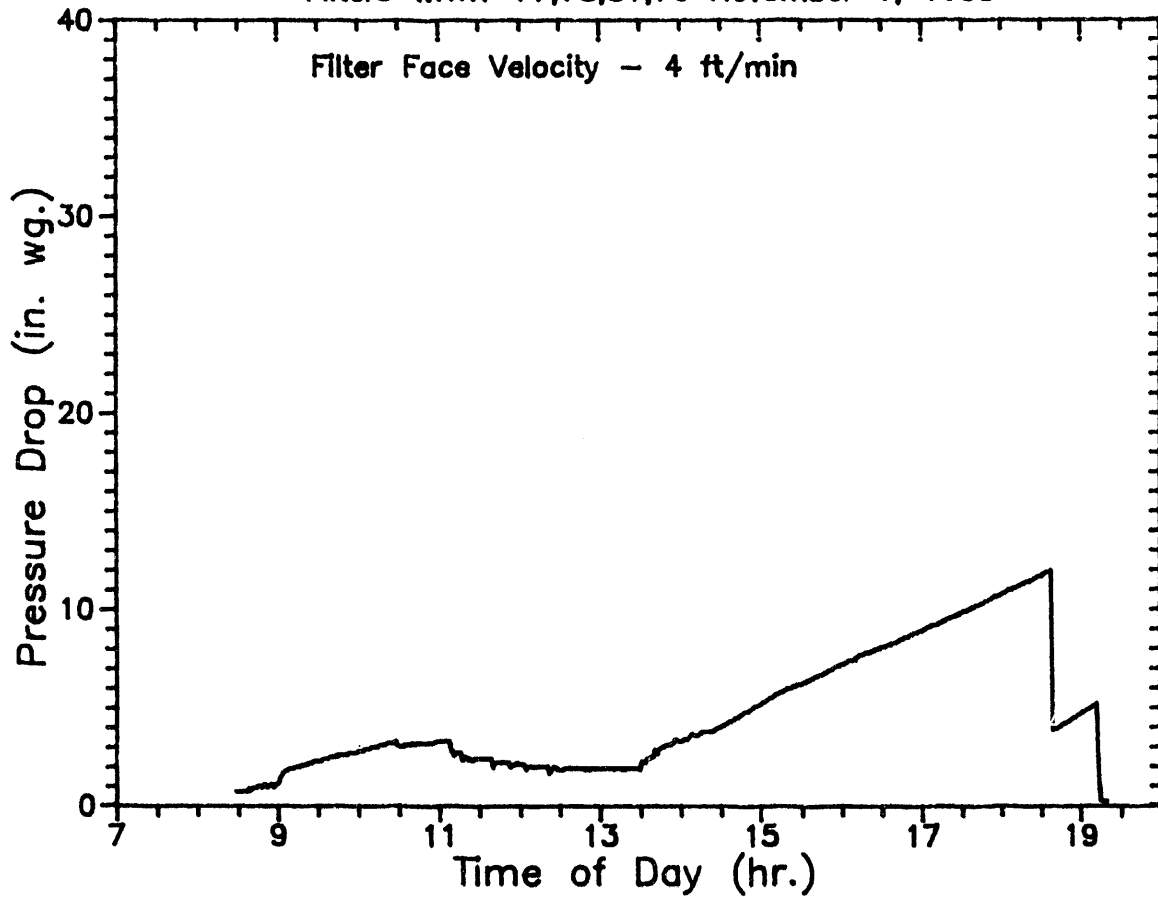
PULSE CLEANING = 300 psig/0.1 sec

1130 - Increased system pressure  
to 150 psig prior to

1340 TURBINE TRIP SIMULATION  
FLAME OUT - SCHEDULED  
RESTART

## PFBC Filter Performance Data

Filters WRTX-77,78,81,76 November 1, 1990



OPERATION NOTES FOR  
November 1, 1990

12 hour test, includes  
Startup and shutdown

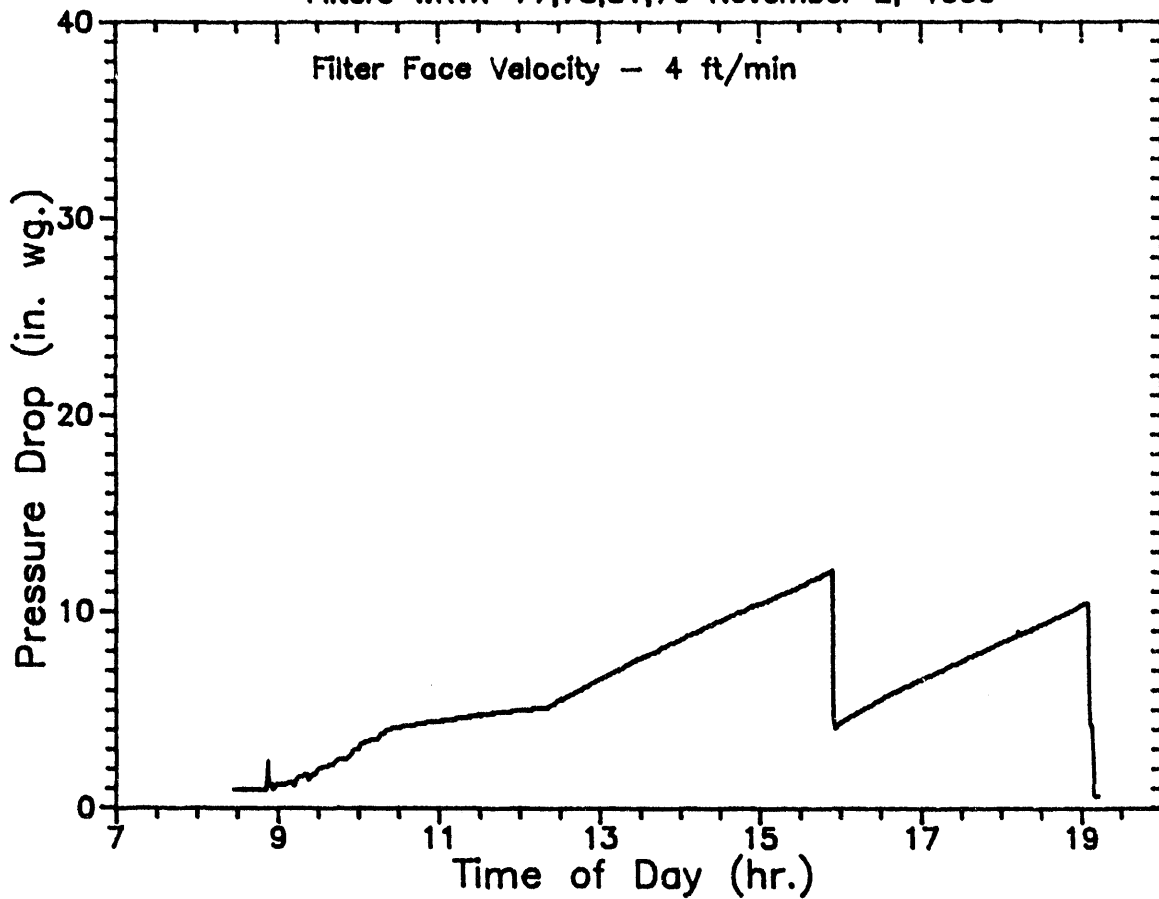
$\Delta P$  TRIGGER = 12" WC  
Pulse Cleaning - 300psi/1sec

1030-1330 - SYSTEM PRESSURE  
AT 150 PSIG

1330 - SYSTEM PRESSURE  
REDUCED TO 75 PSIG

# PFBC Filter Performance Data

Filters WRTX-77,78,81,76 November 2, 1990

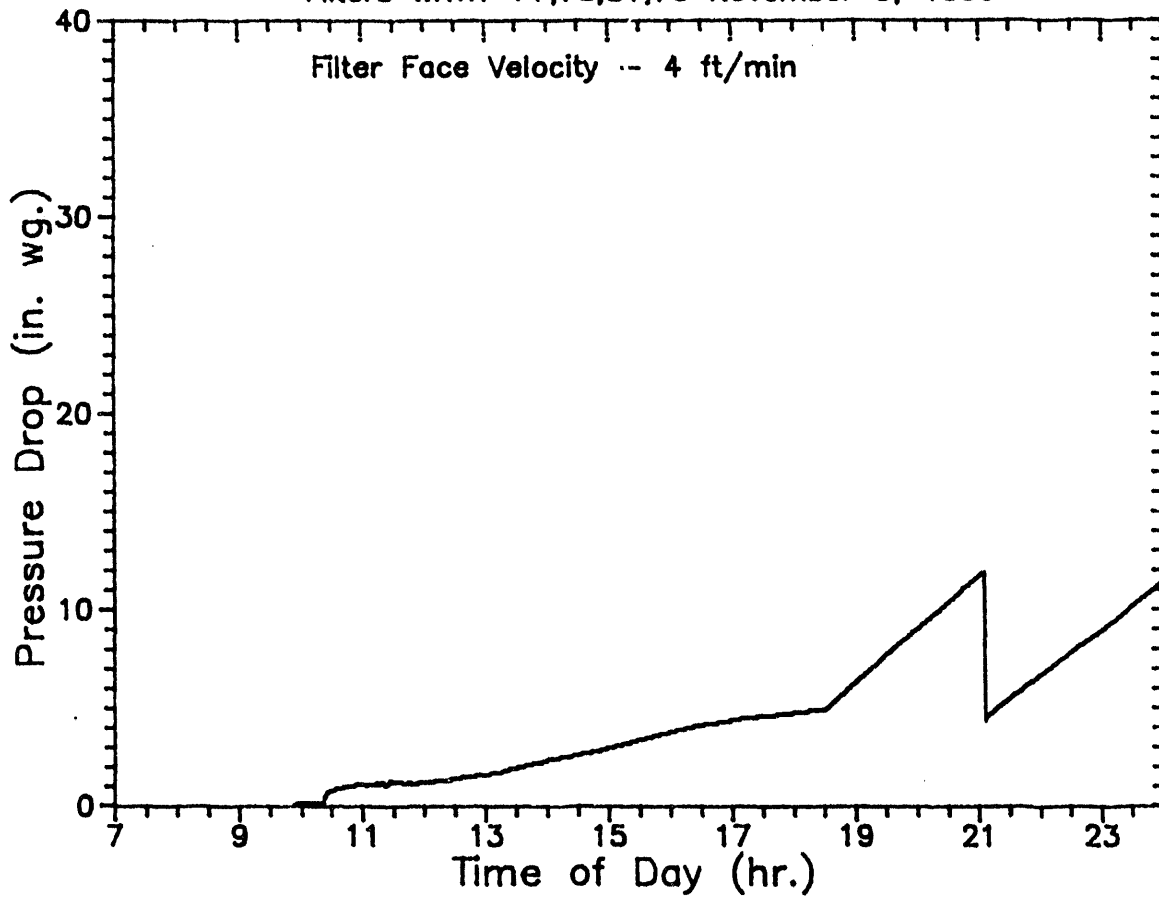


OPERATION NOTES FOR  
NOVEMBER 2, 1990  
12 hour test, includes  
startup and shutdown  
AP TRIGGER = 12"wc  
PULSE CLEANING - 300psig/0.1sec



# PFBC Filter Performance Data

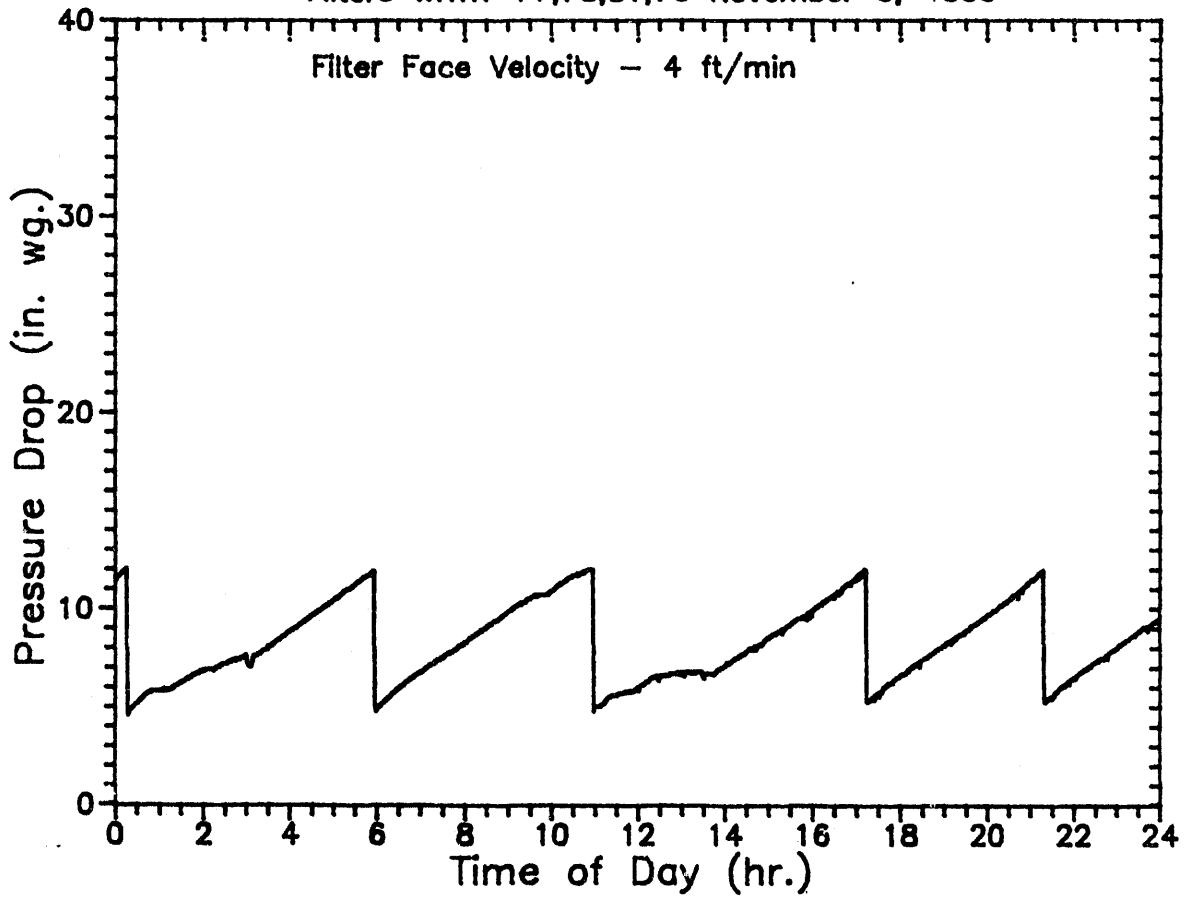
Filters WRTX-77,78,81,76 November 5, 1990



OPERATION NOTES FOR  
NOVEMBER 5, 1990  
START OF WEEK LONG TEST  
COLD START  
 $\Delta P$  TRIGGER = 12" WC  
PULSE CLEANING = 300 psig/0.1sec

# PFBC Filter Performance Data

Filters WRTX-77,78,81,76 November 6, 1990



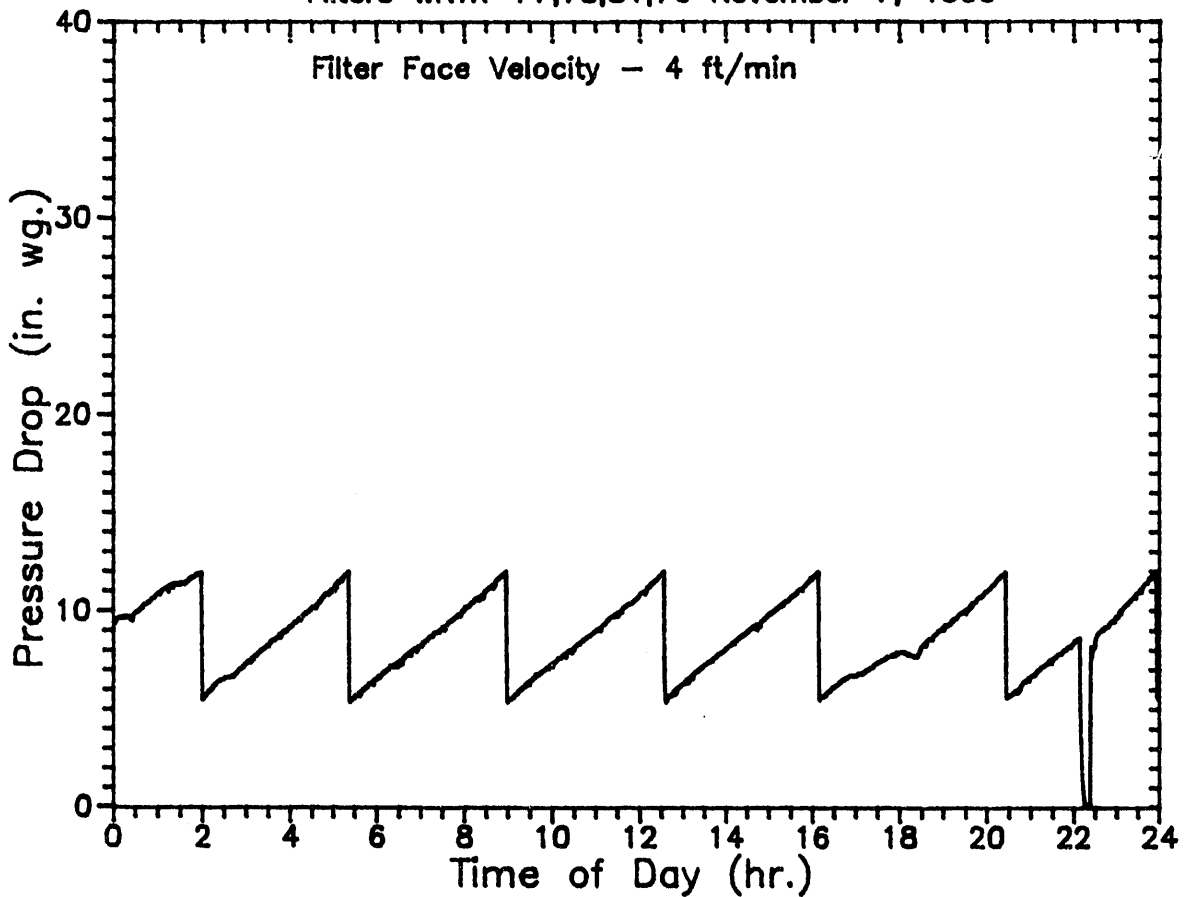
OPERATION NOTES FOR  
November 6, 1990

$\Delta P$  TRIGGER = 12" WC  
PULSE CLEANING = 320psig/0.1sec

1100 - 1345 - DUST FEED  
ERRATIC, DUST VESSEL  
DEPRESSURIZED and  
DUST STIRRED

# PFBC Filter Performance Data

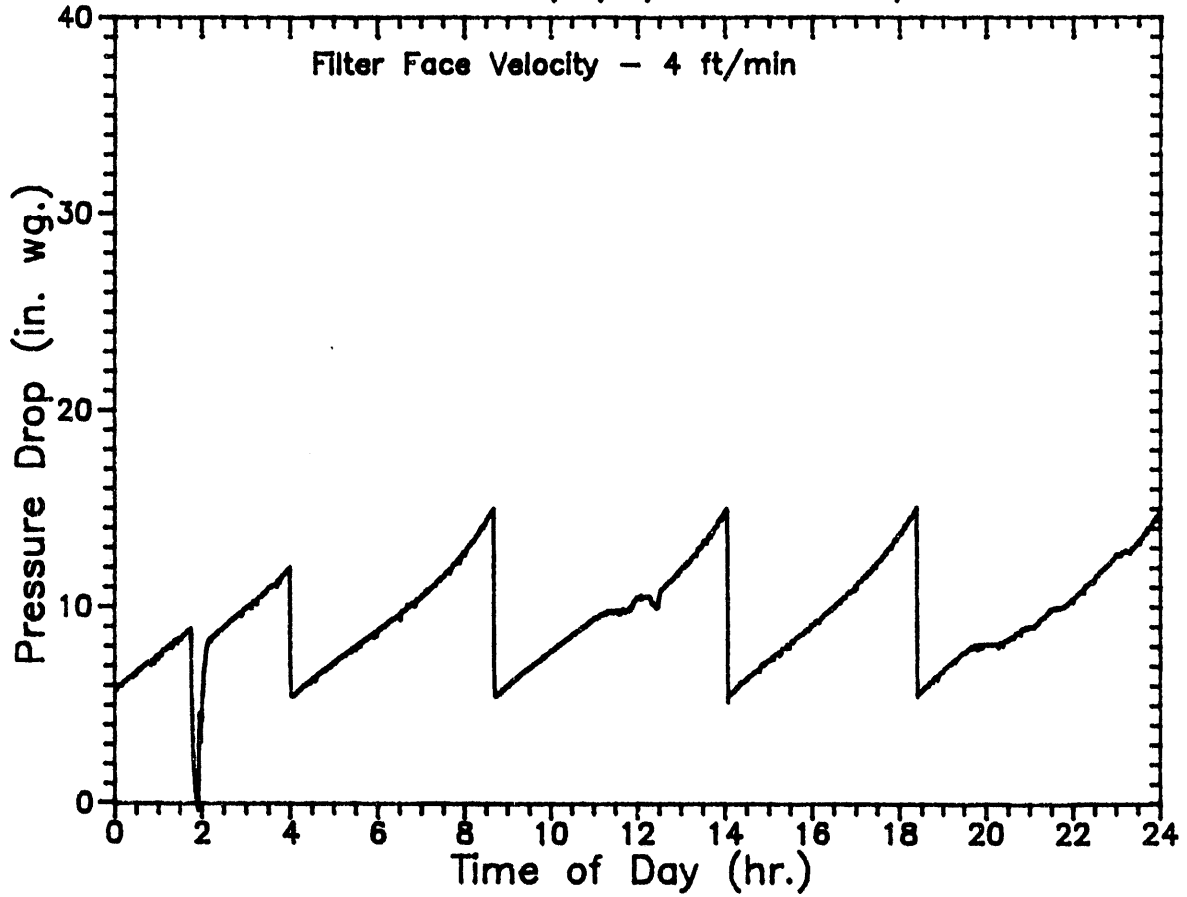
Filters WRTX-77,78,81,76 November 7, 1990



OPERATION NOTES FOR  
NOVEMBER 7, 1990  
Δ P TRIGGER = 12" WC  
PULSE CLEANING - 320 psig / 0.1 sec  
2210 FLAME Out -  
UNscheduled -  
RESTART

# PFBC Filter Performance Data

Filters WRTX--77,78,81,76 November 8, 1990



OPERATION NOTES FOR  
NOVEMBER 8, 1990

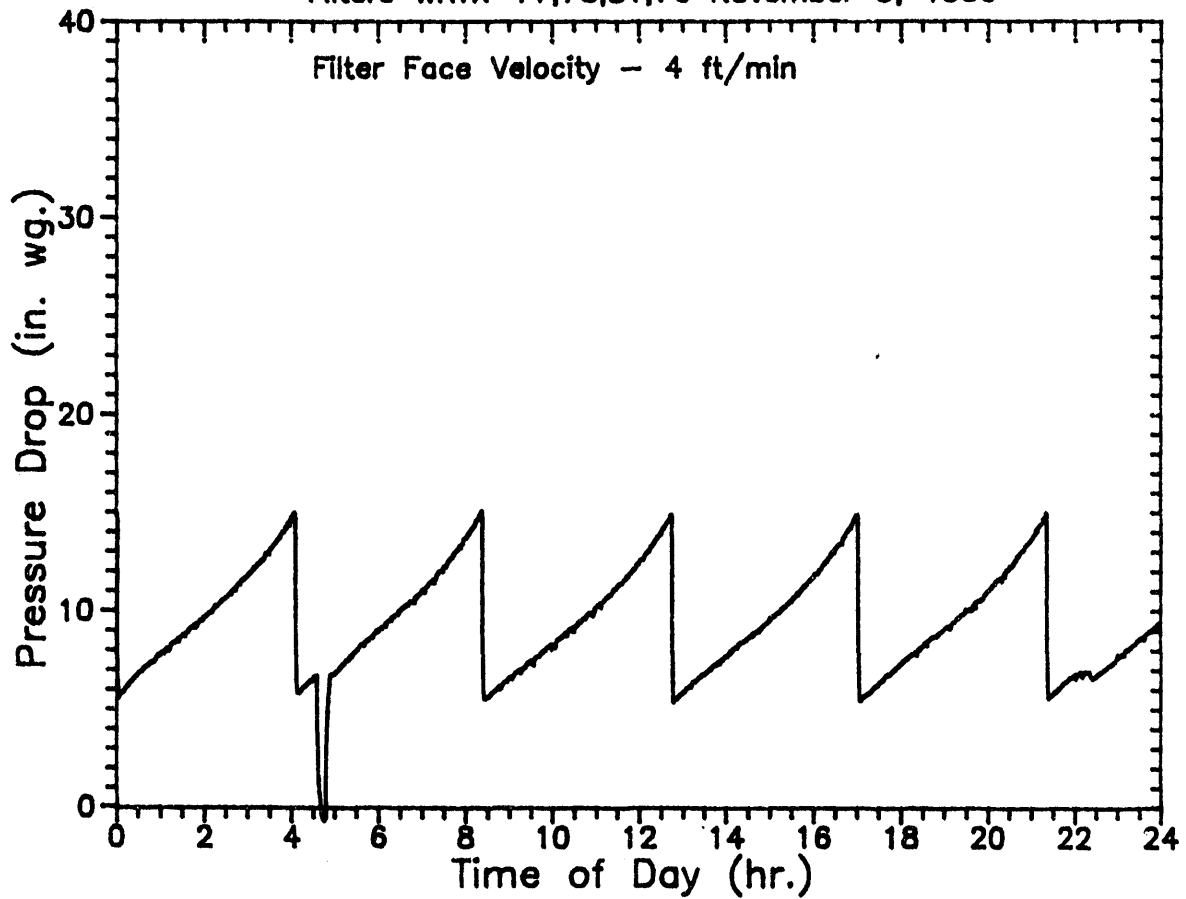
0145 FLAME OUT -  
UNSCHEДУLED  
RESTART

0840 CHANGED ΔP TRIGGER  
FROM 12" WC TO 15" WC

PULSE CLEANING - 320 pug/0.1sec

# PFBC Filter Performance Data

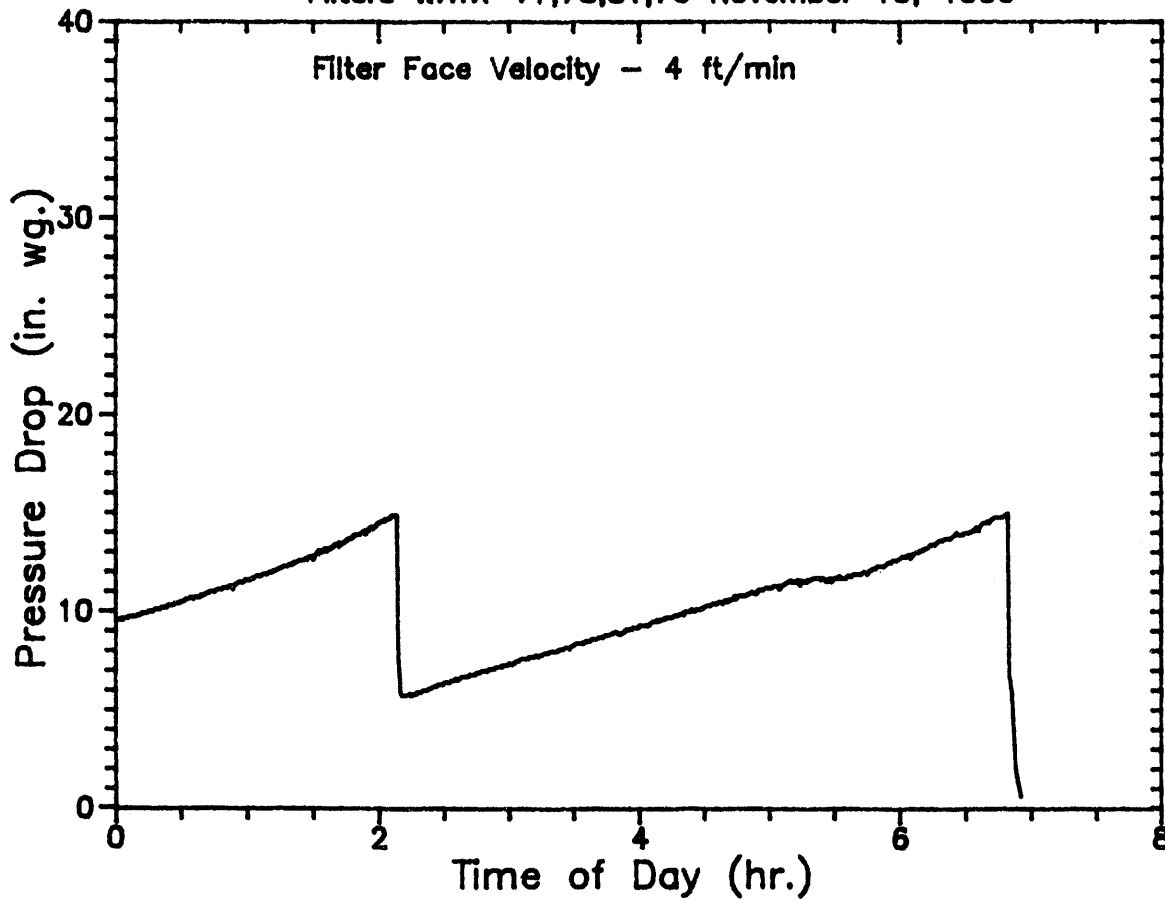
Filters WRTX-77,78,81,76 November 9, 1990



OPERATION NOTES FOR  
NOVEMBER 9, 1990  
0430 FLANG Out - UNSCHEDULED  
RESTART  
A P TRIGGER - 15. "wg  
PULSE CLEANING - 320psig/0.1sec.  
2200 - DUST LOADED

# PFBC Filter Performance Data

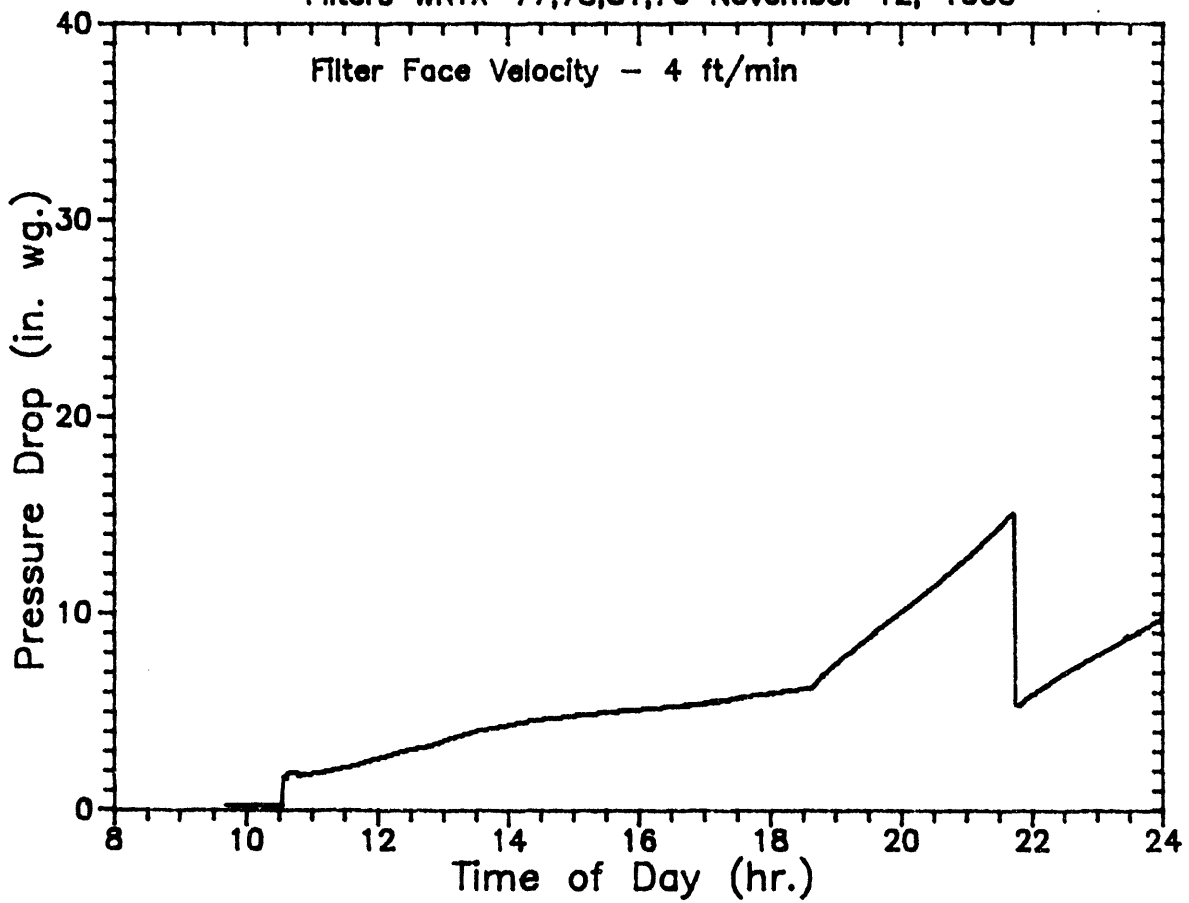
Filters WRTX-77,78,81,76 November 10, 1990



OPERATION NOTES FOR  
NOVEMBER 10, 1990  
END OF WEEK LONG TEST  
0650 SCHEDULED  
SHUTDOWN  
 $\Delta P$  TRIGGER = 15" WC  
PULSE CLEANING - 320psig/0.1  
sec

# PFBC Filter Performance Data

Filters WRTX-77,78,81,76 November 12, 1990

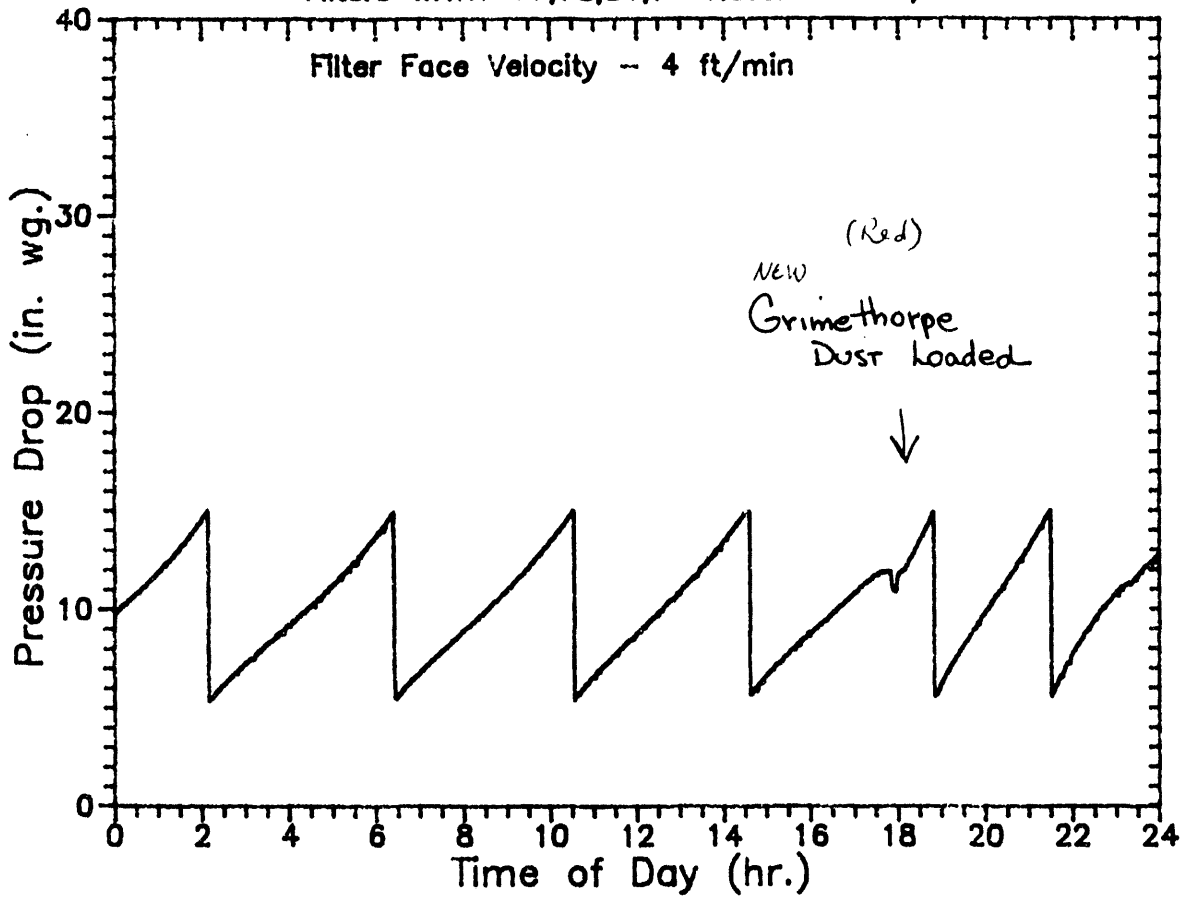


OPERATION NOTES FOR  
NOVEMBER 12, 1990  
START OF WEEK LONG TEST  
 $\Delta P$  TRIGGER = 15" WC  
PULSE CLEANING -  
320 psig/0.1 sec.

COLD START

# PFBC Filter Performance Data

Filters WRTX-77,78,81,76 November 13, 1990

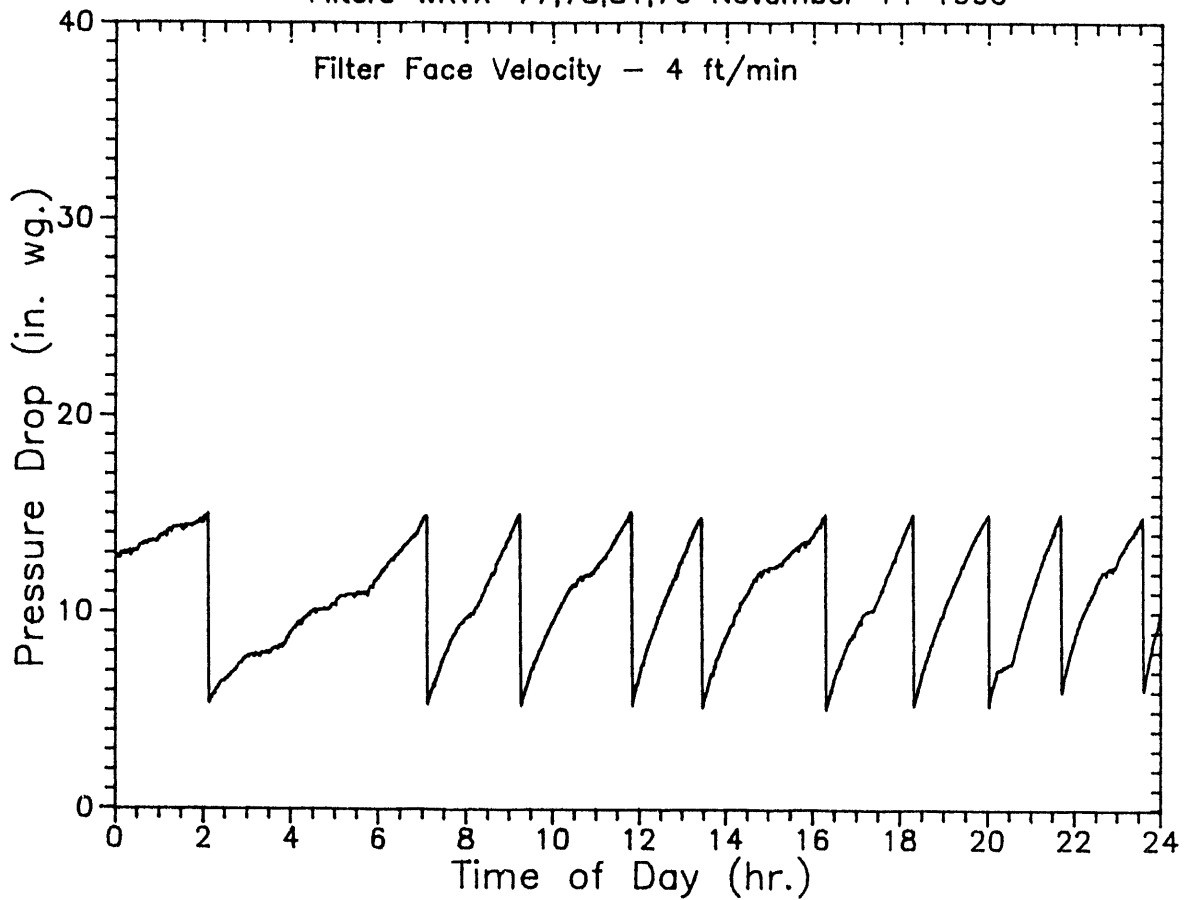


OPERATION NOTES FOR  
NOVEMBER 13, 1990  
Δ P TRIGGER = 15" WC  
PULSE CLEANING - 320psig/0.1  
sec  
1715 - DUST LOADED



# PFBC Filter Performance Data

Filters WRTX-77,78,81,76 November 14 1990



## OPERATION NOTES FOR

NOVEMBER 14, 1990

$\Delta P$  TRIGGER = 15 "WC

PULSE CLEANING - 320 psig/0.1 sec

DUST FEED ERRATIC

0200 - 0530

1030 - 1100

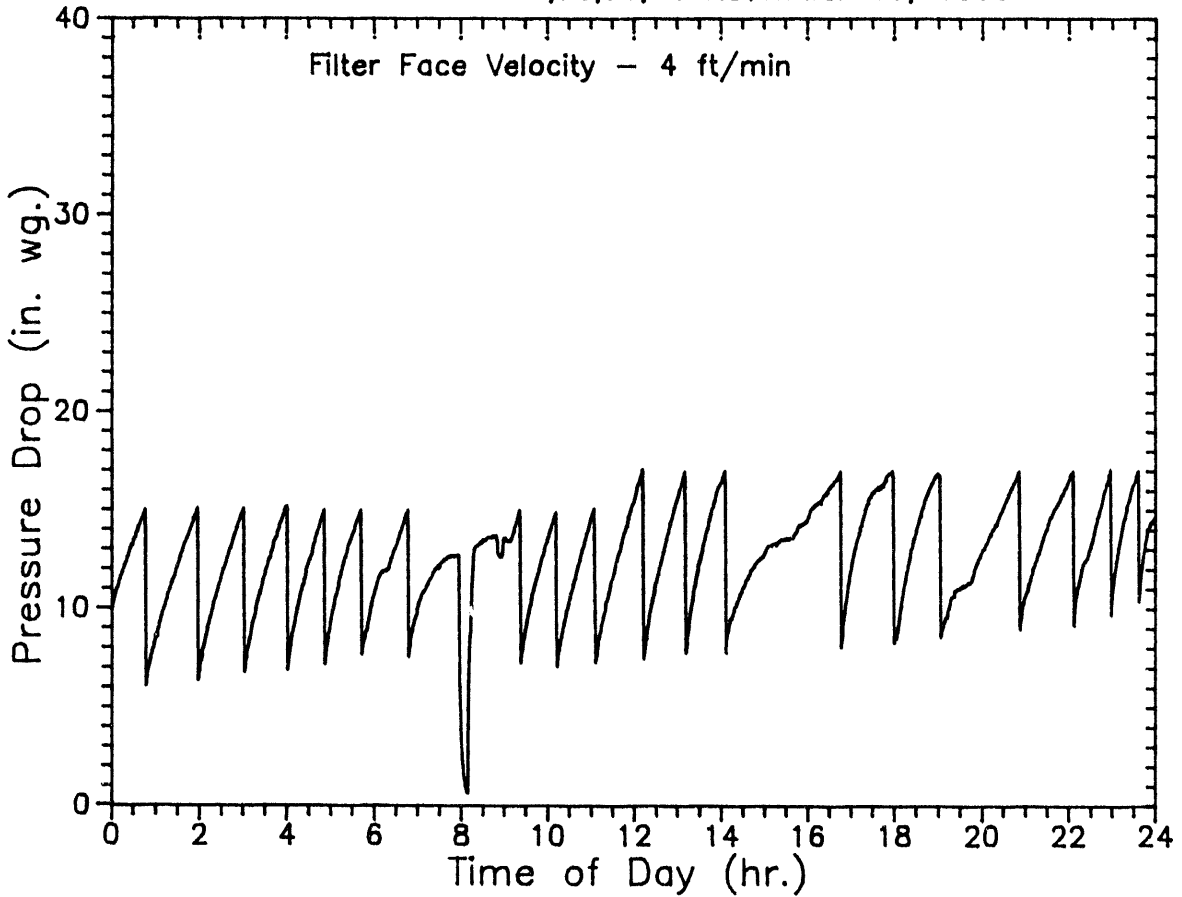
1430 - 1545

2000 - 2030

2230 - 2300

# PFBC Filter Performance Data

Filters WRTX-77,78,81,76 November 15, 1990



OPERATION NOTES FOR  
NOVEMBER 15, 1990

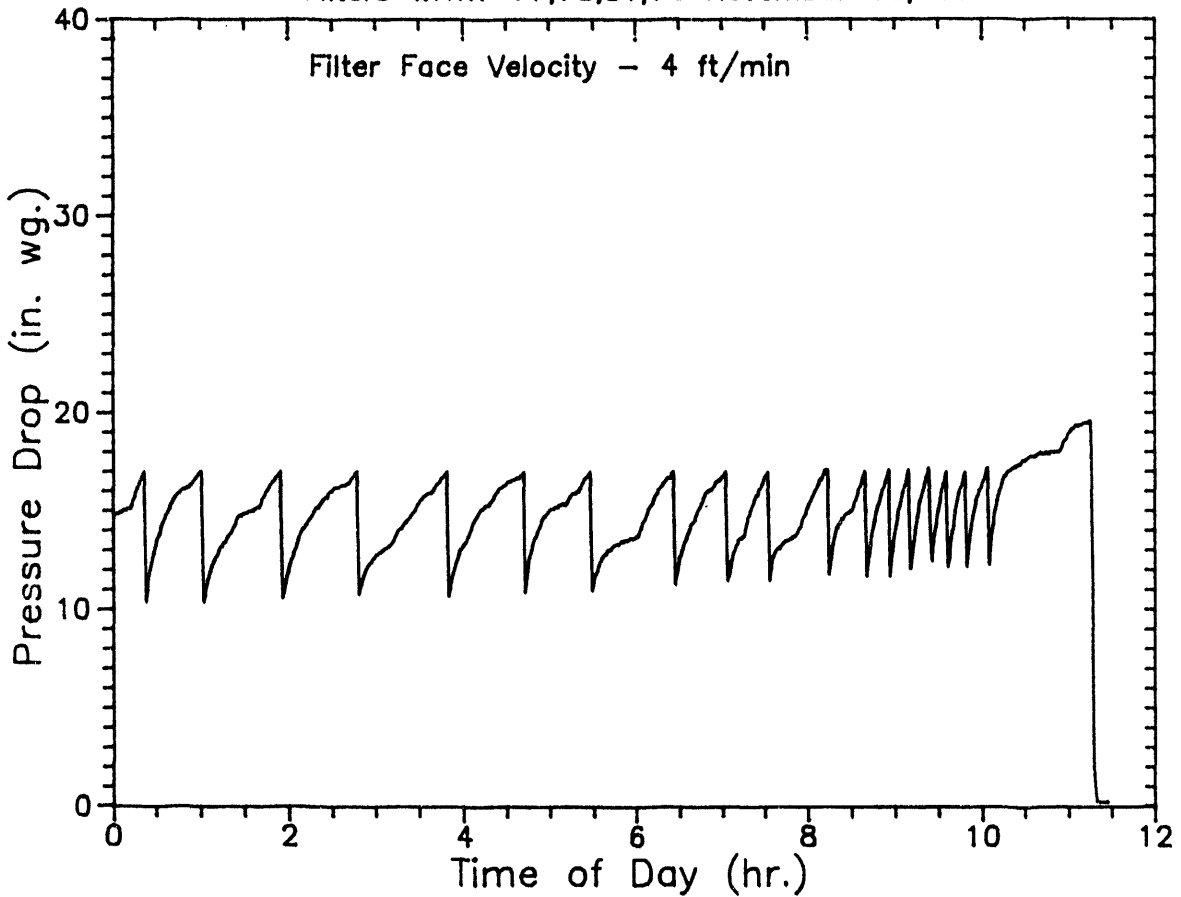
0800 FLAME Out-UNSCHEDULED  
RESTART  
0850 - DUST LOADED  
1210 - CHANGED ΔP TRIGGER  
FROM 15" WC TO 17" WC  
PULSE CLEANING:  
320 psig/0.1 SEC  
1010 330 psig/0.1 SEC  
1100 340 psig/0.1 SEC

Nov 15, 1990  
CONT.

ERRATIC DUST FEED  
1500 - 1540  
1920 - 1945

# PFBC Filter Performance Data

Filters WRTX-77,78,81,76 November 16, 1990



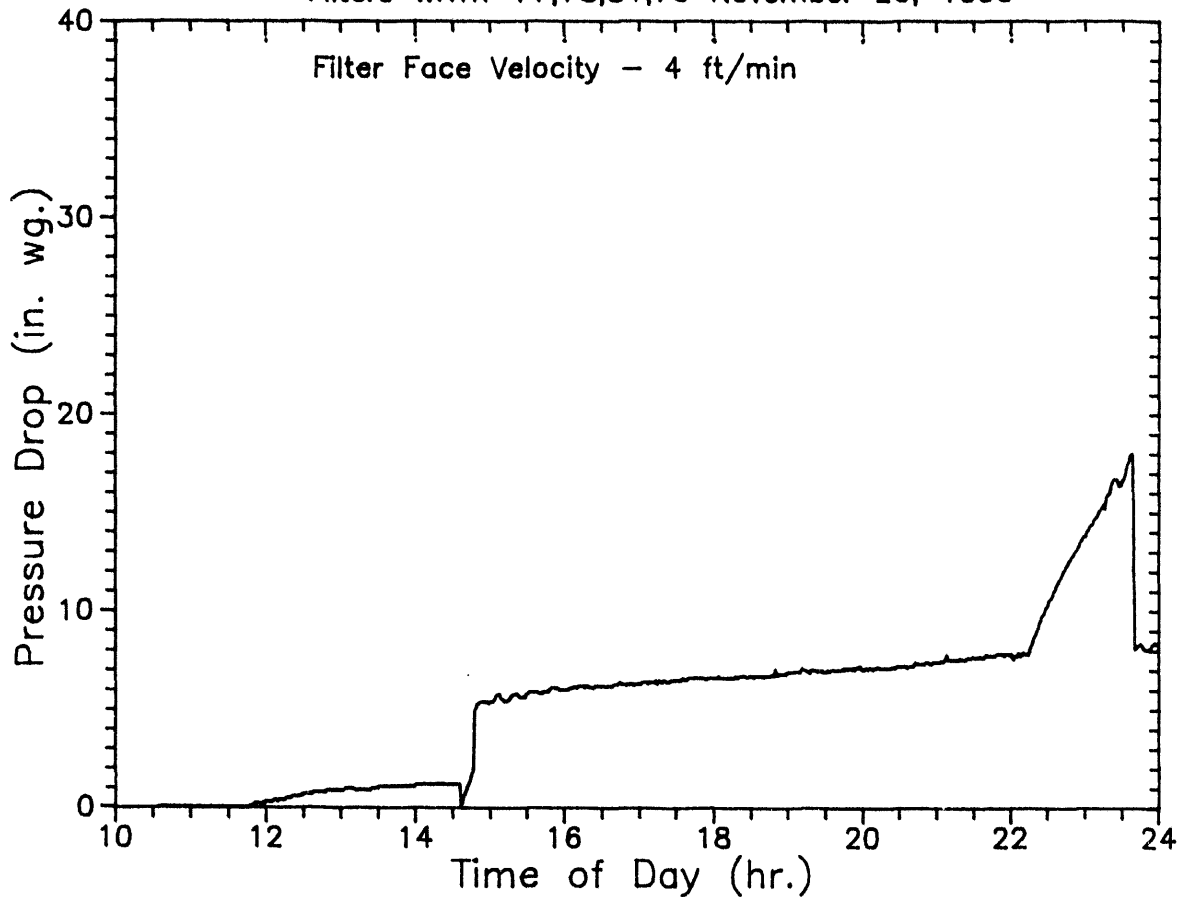
OPERATION NOTES FOR  
NOVEMBER 16, 1990  
1115 - UNSCHEDULED  
SHUTDOWN  
BACK PRESSURE CONTROL  
VALVE HOUSING LEAK  
END OF TEST  
1000 - CHANGE ΔP TRIGGER  
FROM 17"WC TO 19.5"WC

pulse cleaning - <sup>11-16-90</sup> CONT.  
340 psig to .1 sec

Dust Not Feeding  
PROPERLY  
0000 → 0830  
1000 → 1115

# PFBC Filter Performance Data

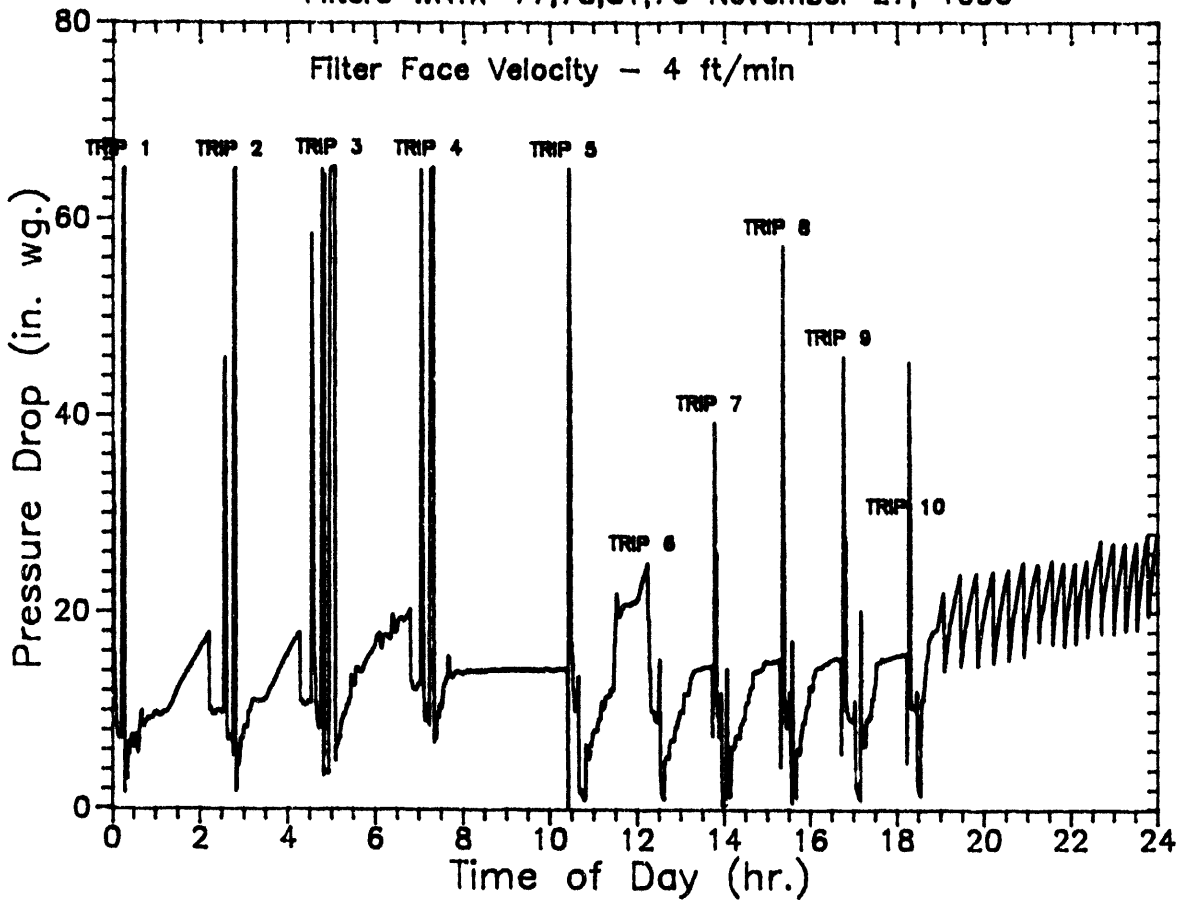
Filters WRTX-77,78,81,76 November 26, 1990



OPERATION NOTES FOR  
NOVEMBER 26, 1990  
START WEEK LONG TEST  
INCLUDING TURBINE  
TRIP SIMULATIONS  
A.P. TRIGGER = 18" WC  
PULSE Cleaning = 340 psig/0.1 sec

# PFBC Filter Performance Data

Filters WRTX-77,78,81,76 November 27, 1990



OPERATION NOTES FOR  
NOVEMBER 27, 1990  
TURBINE TRIP SIMULATIONS  
1-10

0645 change AP TRIGGER  
from 18" WC to 20" WC  
1210 change AP TRIGGER  
from 20" WC to 25" WC  
1830 - Decrease System  
Pressure to 75 psig

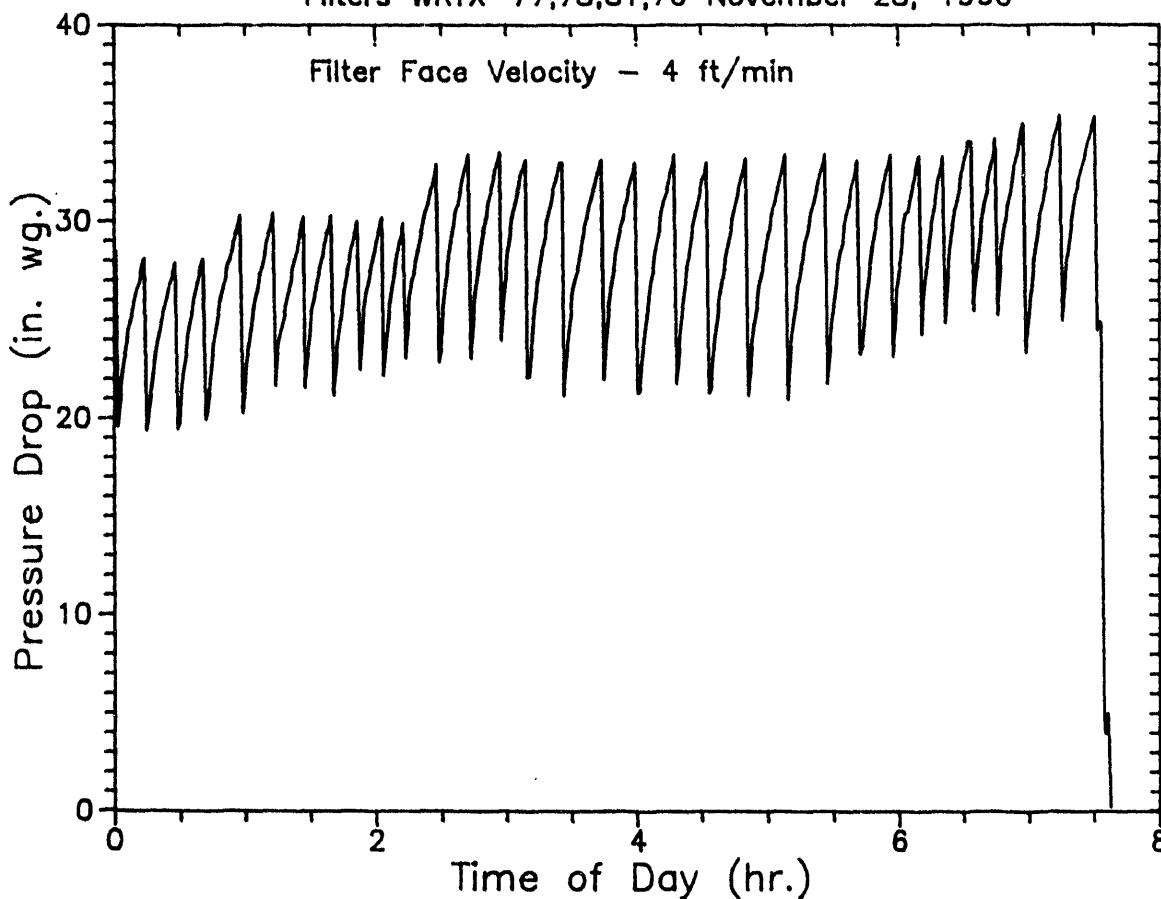
11/27/90  
CONT.

1900 change AP TRIGGER  
FROM 25" WC to 22" WC  
1925 change AP TRIGGER  
FROM 22" WC to 24" WC  
2100 change AP TRIGGER  
FROM 24" WC to 25" WC  
2230 change AP TRIGGER  
FROM 25" WC to 27" WC  
2330 change AP TRIGGER  
FROM 27" WC to 28" WC

11/27/90  
pulse cleaning - cont.  
340 psig/0.1sec

# PFBC Filter Performance Data

Filters WRTX-77,78,81,76 November 28, 1990



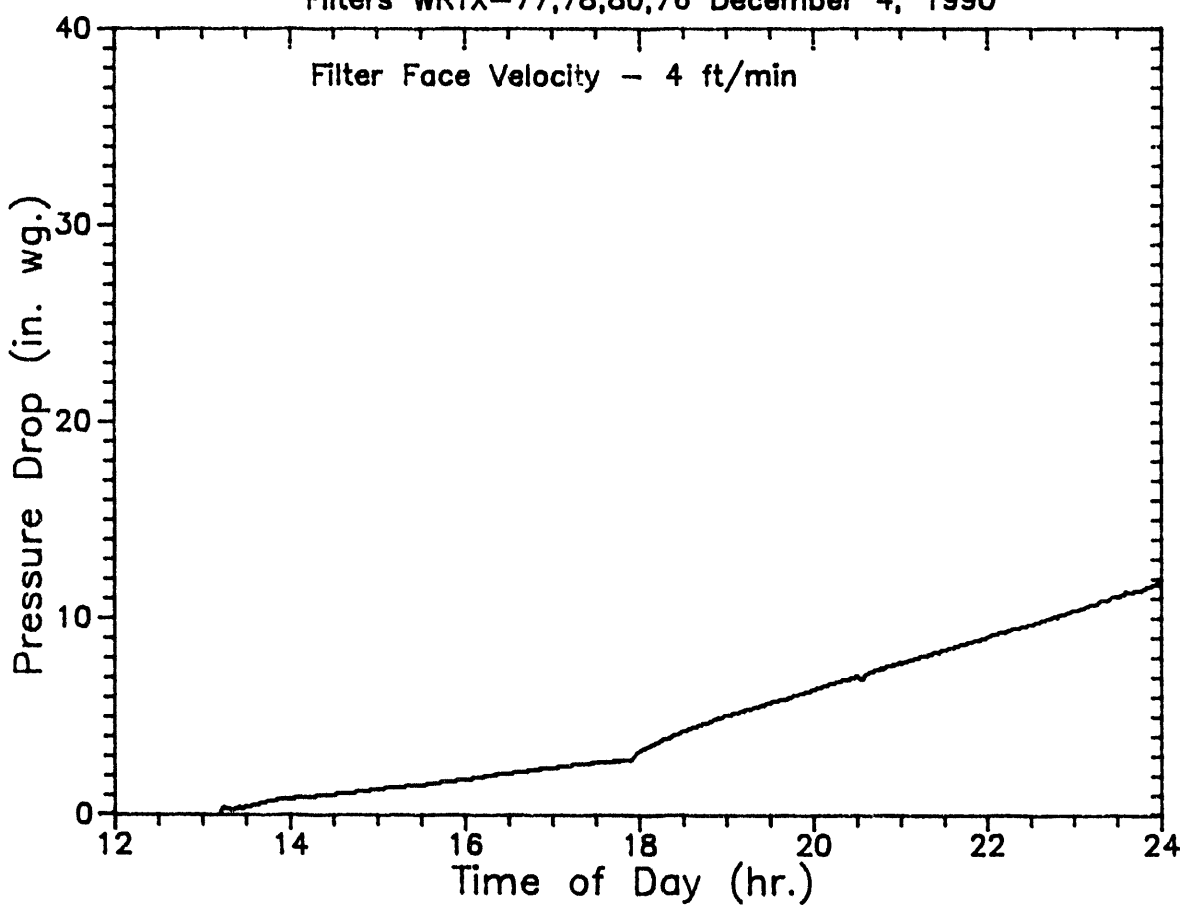
OPERATION Notes FOR  
November 28, 1990

- 0100 Change ΔP TRIGGER  
FROM 28" WC TO 30" WC.
- 0230 Change ΔP TRIGGER  
FROM 30" WC TO 33" WC
- 0630 Change ΔP TRIGGER  
FROM 33" WC TO 34" WC
- 0700 change ΔP TRIGGER  
FROM 34" WC TO 35" WC

- 11/28/90  
CONT.
- 0320 PULSE CLEANING  
CHANGED FROM 3:10 TO  
3:00 PSIG/0.1 SEC
  - 0540 PULSE CLEANING  
CHANGED FROM 3:00 TO  
3:10 PSIG/0.1 SEC
  - 0730 Dust Leak  
> 10ppm Concentration  
OUT  
SHUT DOWN FOR INSPECTION

# PFBC Filter Performance Data

Filters WRTX-77,78,80,76 December 4, 1990



OPERATION NOTES FOR

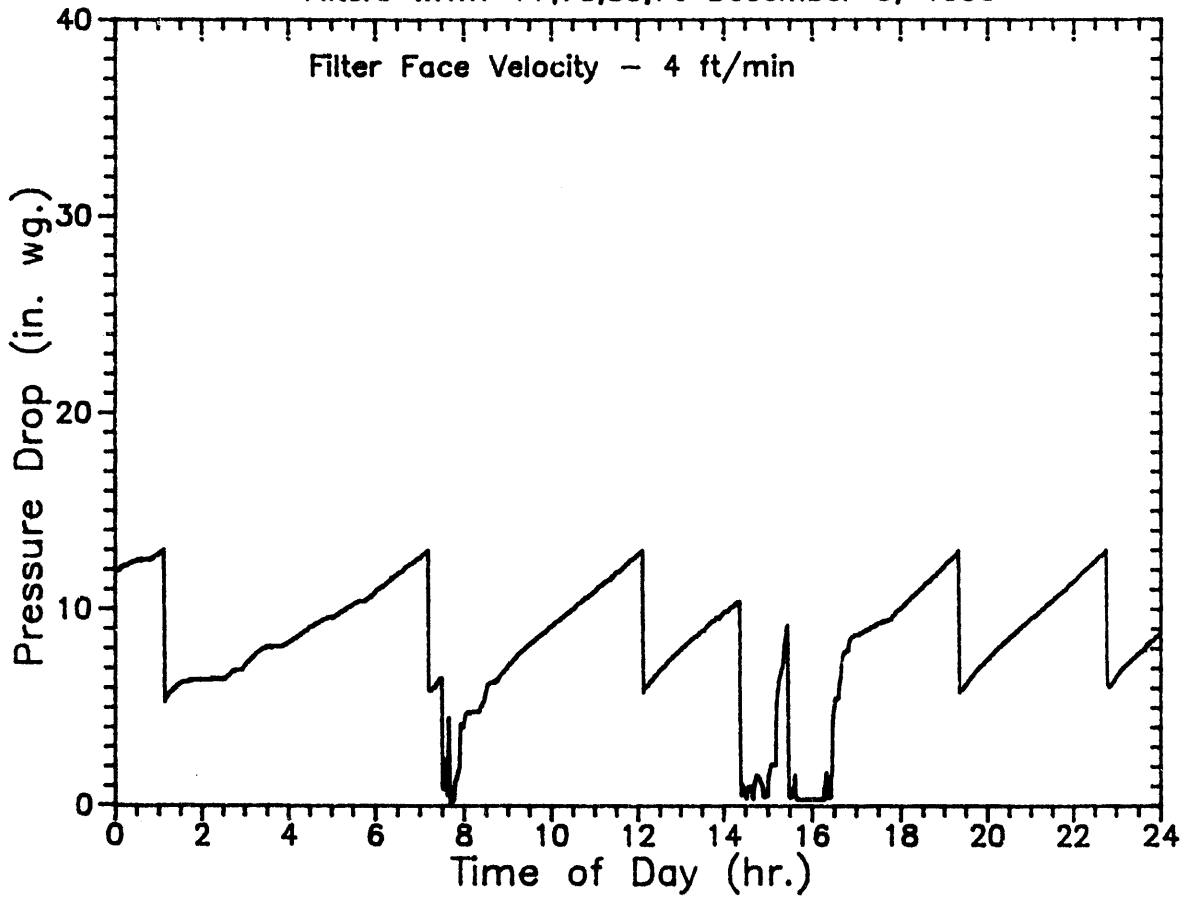
December 4, 1990

WRTX-81 REPLACED WITH  
WRTX-80

START WEEK LONG TEST  
1750 - DUST FEED ON  
ΔP TRIGGER = 13" WC.  
COLD START

# PFBC Filter Performance Data

Filters WRTX-77,78,80,76 December 5, 1990



OPERATION NOTES FOR  
DECEMBER 5, 1990

A P TRIGGER = 13" WC  
PULSE CLEANING - 310psig/0.1  
sec

ERRATIC DUST FEED  
0130 - 0400

0725 FLAME OUT-UNSCHEDULED  
RESTART

1420-FLAME OUT-UNSCHEDULED  
1500 RESTART

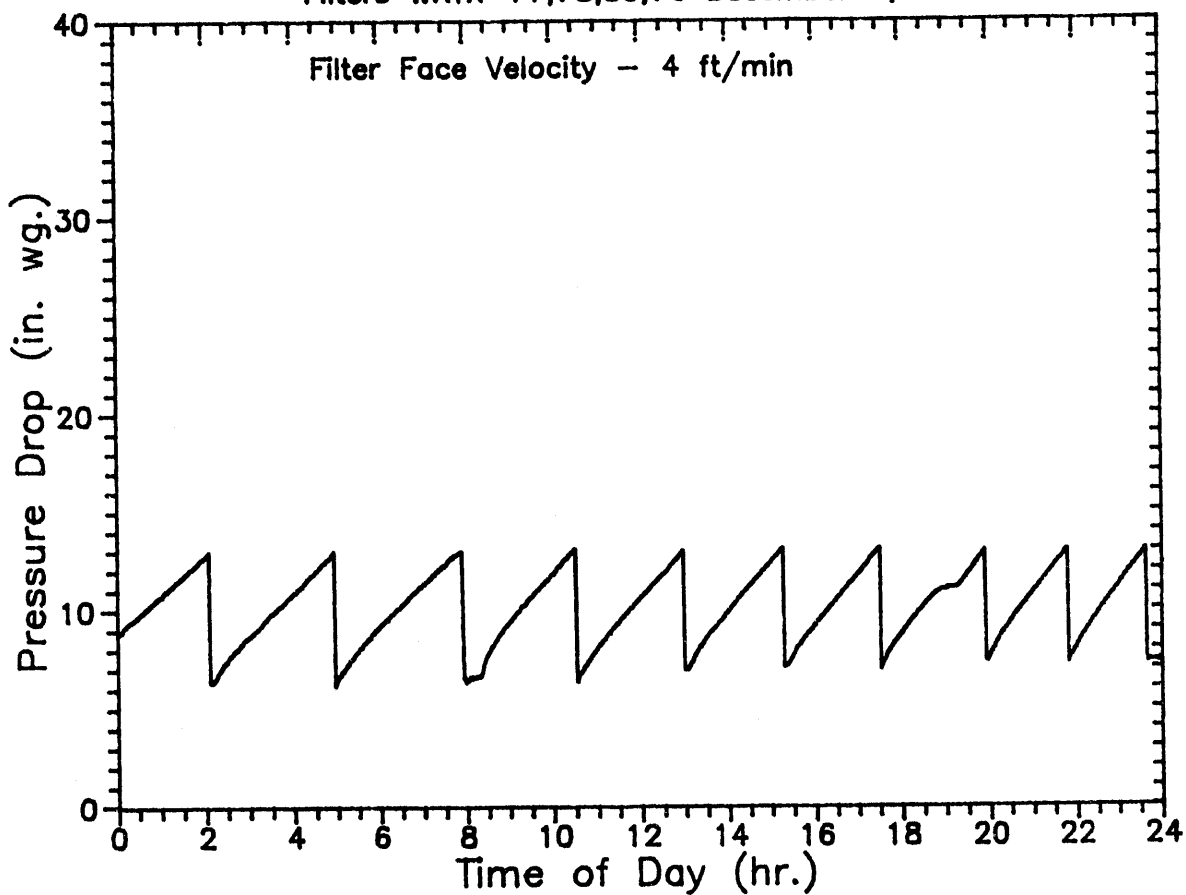
1525 FLAME OUT - <sup>12/5/90</sup>  
UNSCHEDULED CENT.

1615 RESTART



# PFBC Filter Performance Data

Filters WRTX-77,78,80,76 December 6, 1990



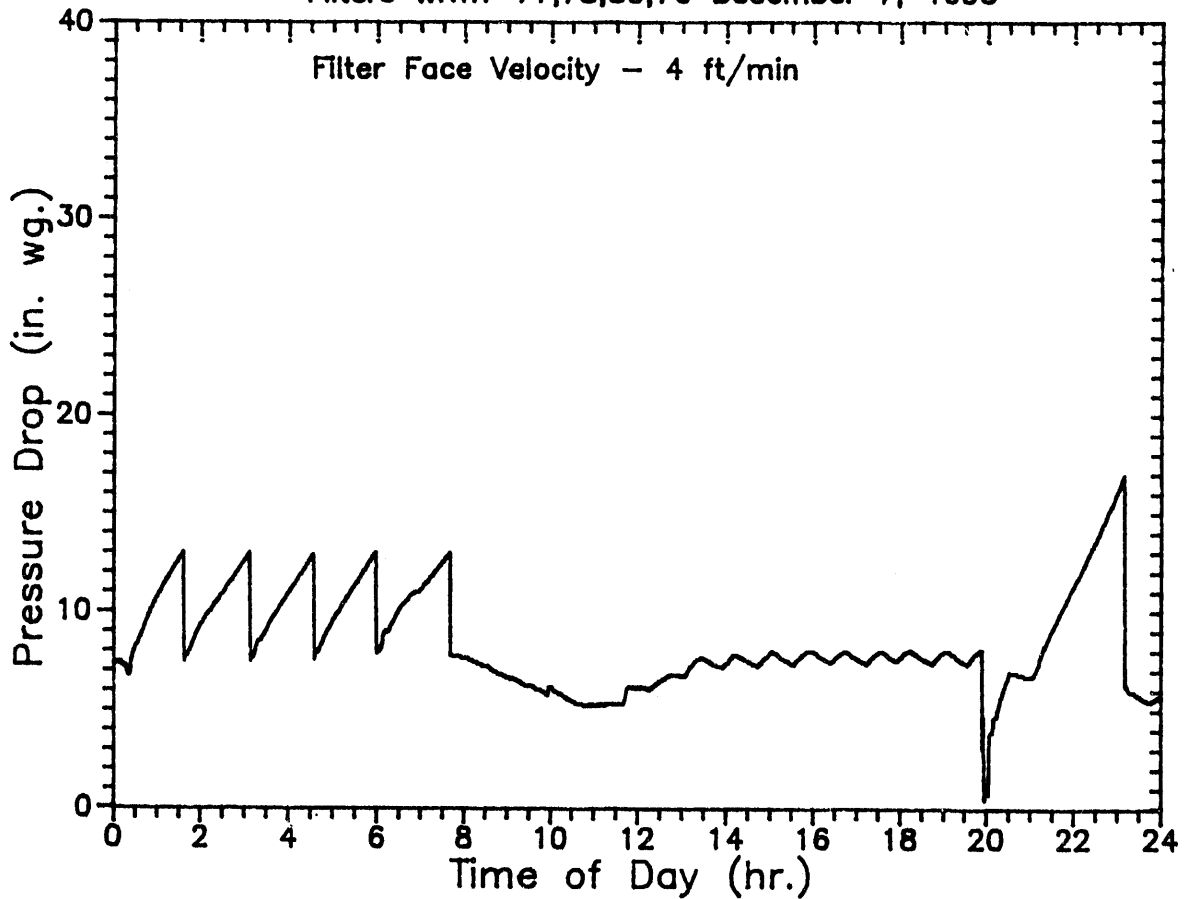
OPERATION NOTES FOR  
DECEMBER 6, 1990

$\Delta P$  TRIGGER = 13" WC

PULSE CLEANING - 310psig/0.1  
sec.

# PFBC Filter Performance Data

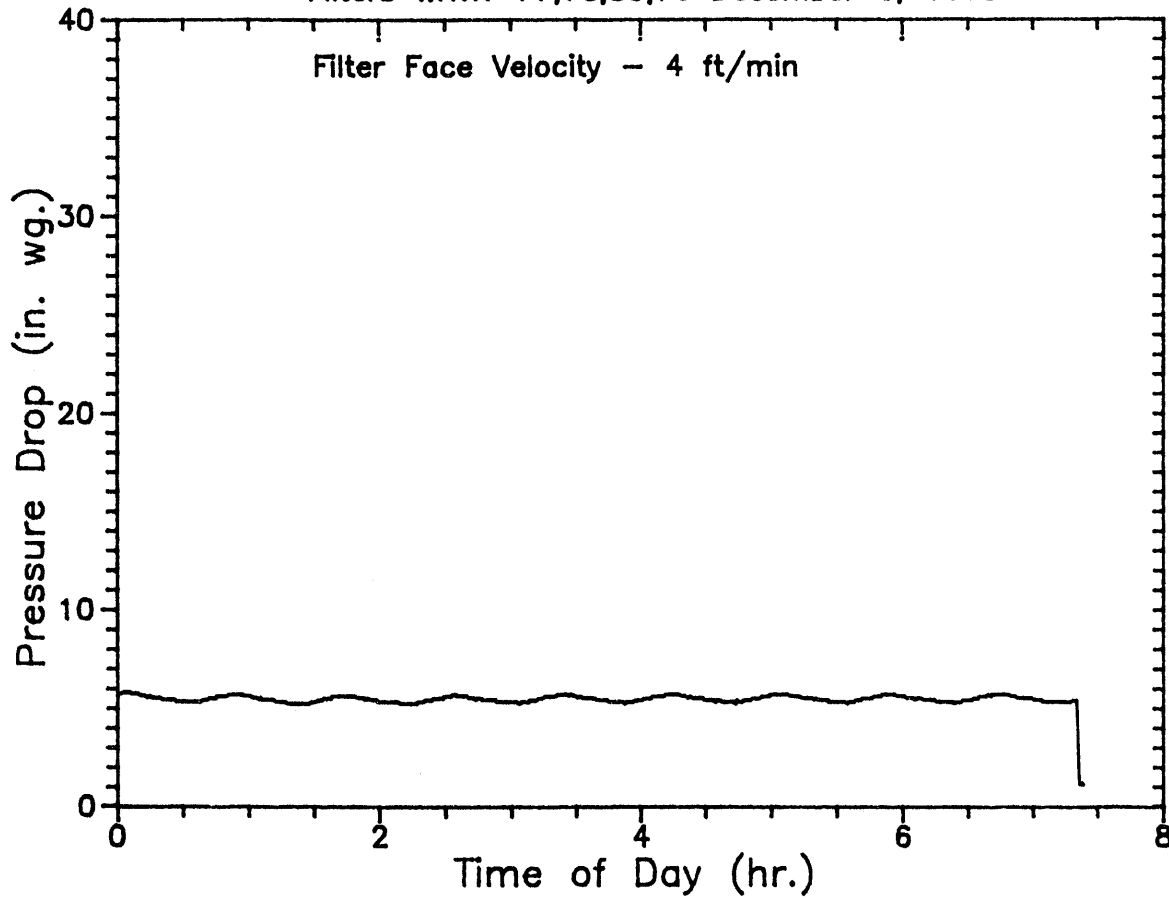
Filters WRTX-77,78,80,76 December 7, 1990



OPERATION NOTES FOR  
DECEMBER 7, 1990  
0800 - DECREASE FILTER  
TEMPERATURE TO 950°F  
1300-2100 TEMPERATURE  
RAMP CYCLES (950°F-1250°F)  
\* 1-10  
1950 FLAME OUT - UNSCHEDULED  
RESTART  
2300 CHANGE ΔP TRIGGER  
FROM 13" WC TO 17" WC.  
PULSE CLEANING - 310 PSIG/a. 1 sec.

# PFBC Filter Performance Data

Filters WRTX-77,78,80,76 December 8, 1990



OPERATION NOTES FOR  
DECEMBER 8, 1990

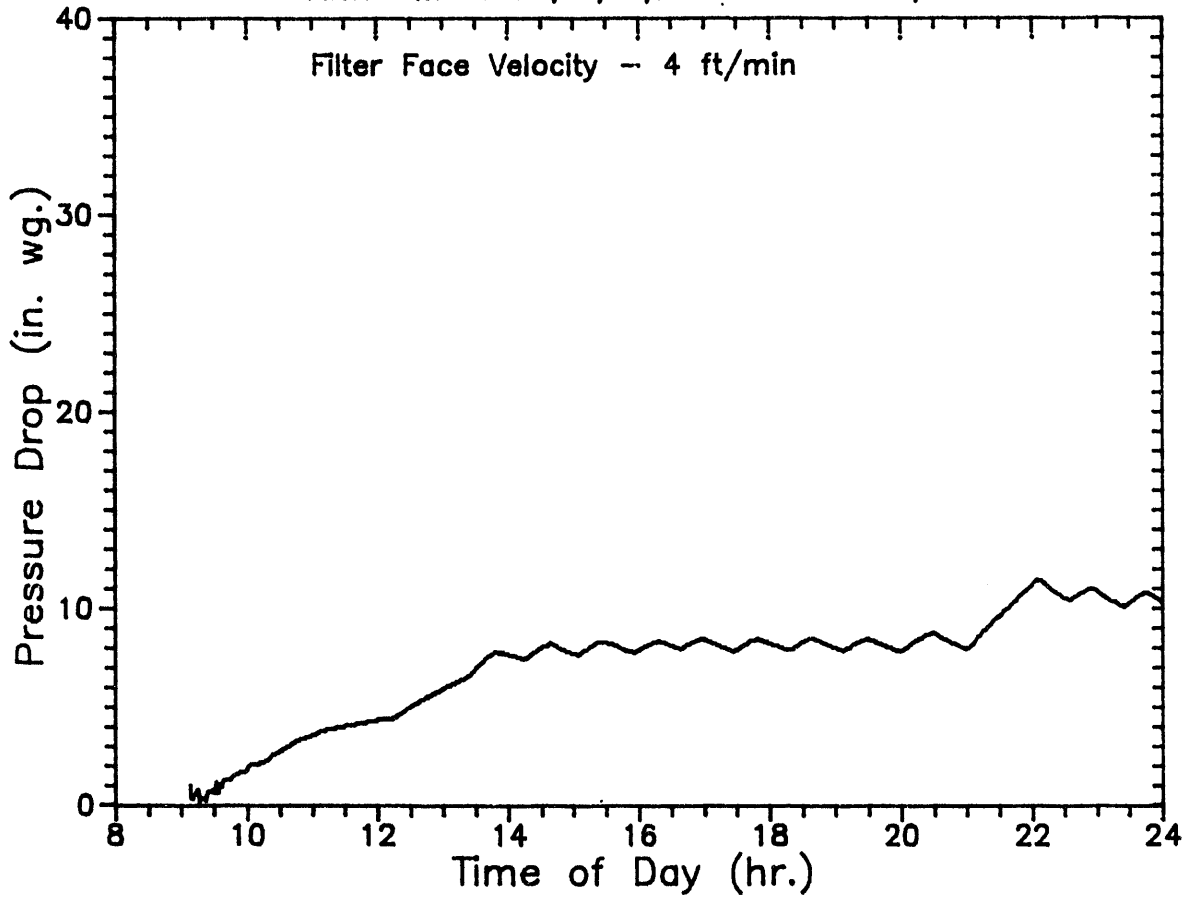
TEMPERATURE RAMP  
CYCLES 11-20 (950-1250°F)

0720 SCHEDULED  
SHUTDOWN

NO DUST FED

# PFBC Filter Performance Data

Filters WRTX-77,78,80,76 December 10, 1990



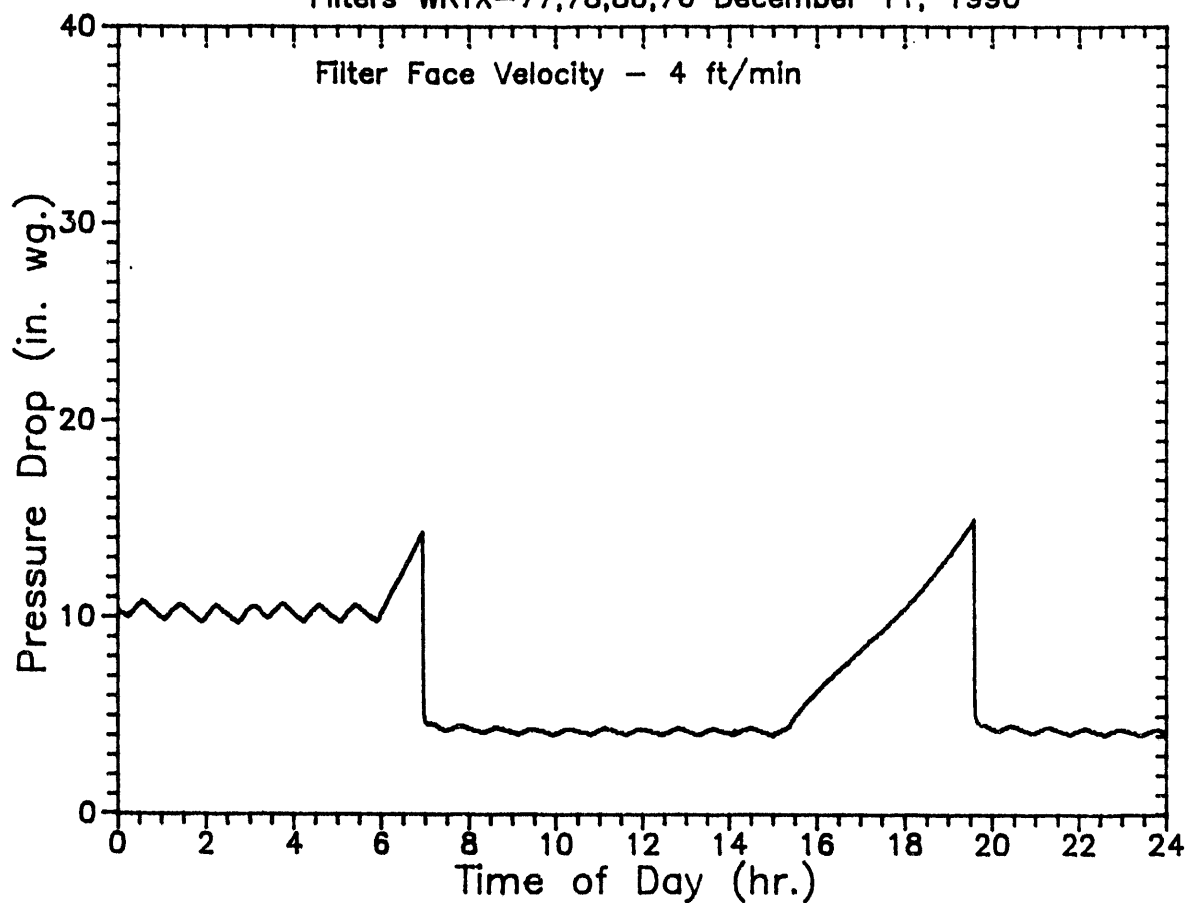
OPERATION NOTES FOR  
DECEMBER 10, 1990  
START WEEK LONG TEST  
TEMPERATURE RAMP CYCLES  
21-32 (950-1250°F)

DUST FED + SAMPLES  
1210 - 1320  
2100 - 2200

COLD START

# PFBC Filter Performance Data

Filters WRTX-77,78,80,76 December 11, 1990



OPERATION NOTES FOR  
DECEMBER 11, 1990

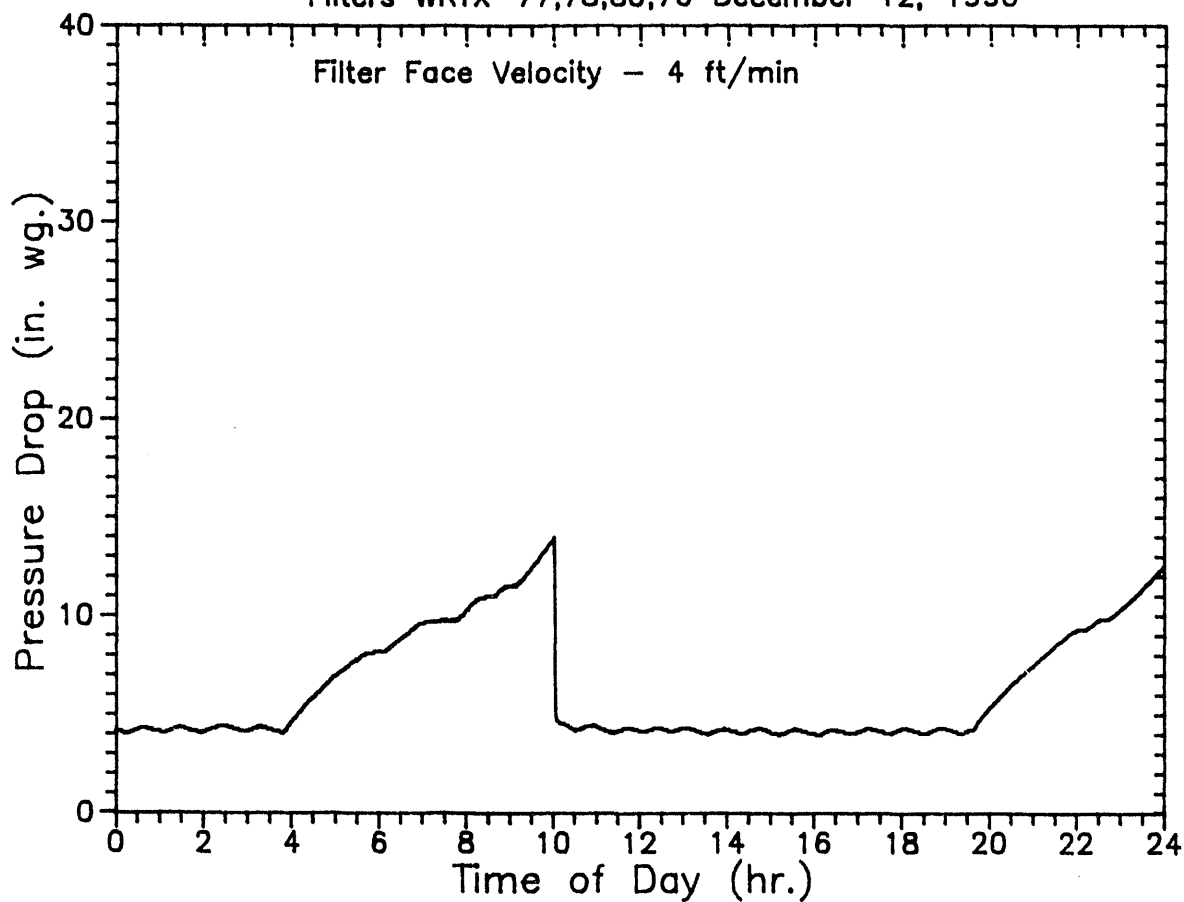
TEMPERATURE RAMP CYCLES  
33 - 55 (950-1250°F)

0650 ΔP TRIGGER = 14.3" WC  
PULSE CLEANING - 310PSIG/0.1  
SEC.

1930 ΔP TRIGGER = 15.0" WC  
PULSE CLEANING - 310PSIG/0.1  
SEC.

# PFBC Filter Performance Data

Filters WRTX-77,78,80,76 December 12, 1990



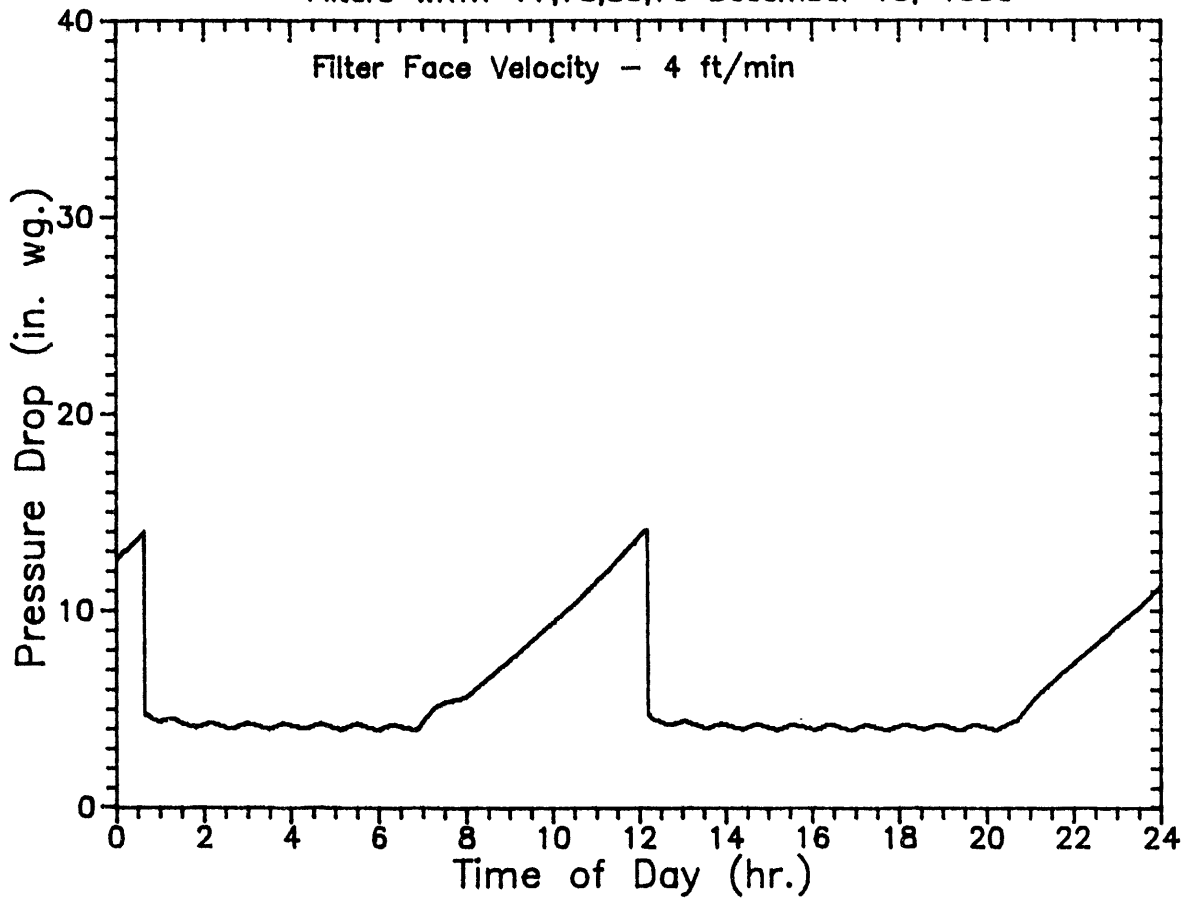
OPERATION NOTES FOR  
DECEMBER 12, 1990

TEMPERATURE RAMP  
CYCLES 56-72 (950-1250°)

AP TRIGGER = 14 "WC  
PULSE CLEANING - 310psig/0.1sec

# PFBC Filter Performance Data

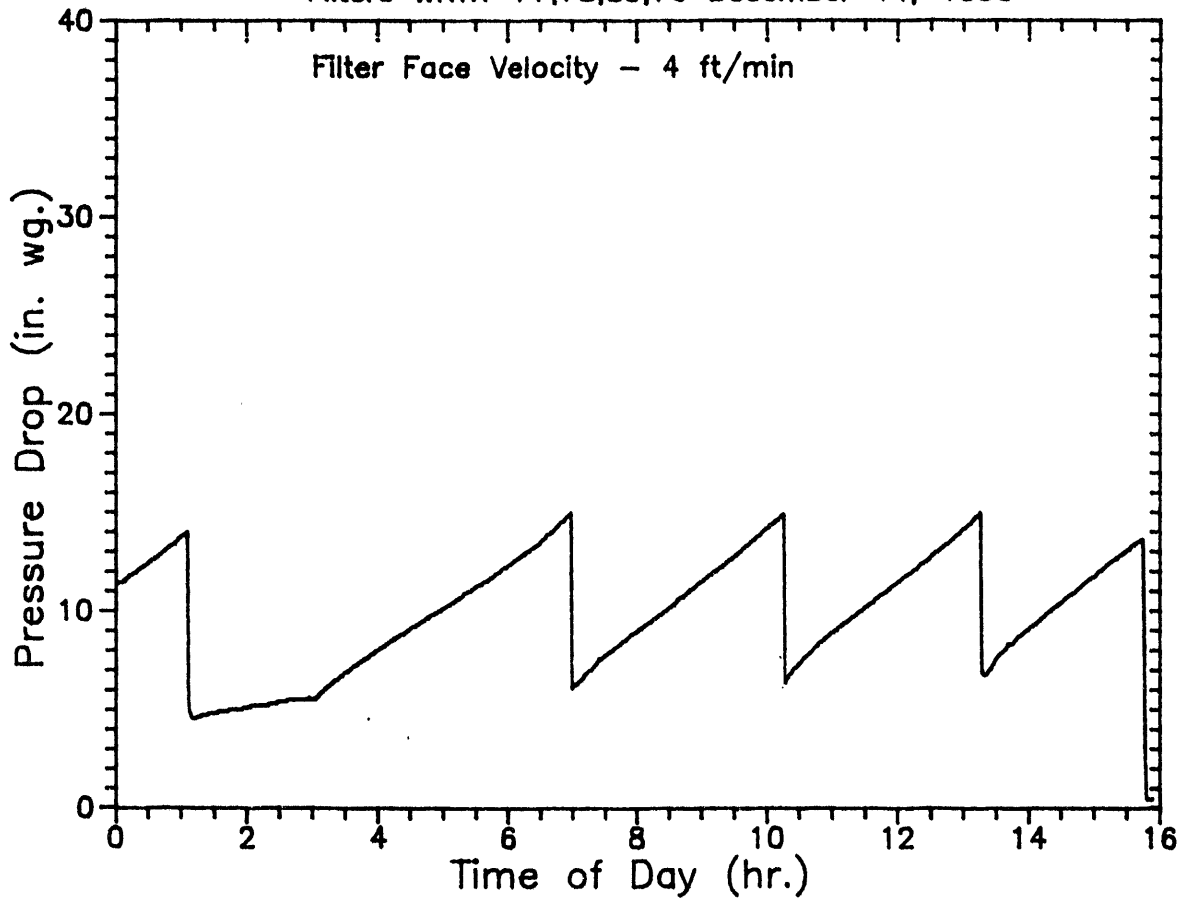
Filters WRTX-77,78,80,76 December 13, 1990



OPERATION NOTES FOR  
DECEMBER 13, 1990  
TEMPERATURE RAMP  
CYCLES 73-90 (950-1260°)  
A P TRIGGER = 14" WC  
PULSE CLEANING - 310 psig / 0.1 sec

# PFBC Filter Performance Data

Filters WRTX-77,78,80,76 December 14, 1990



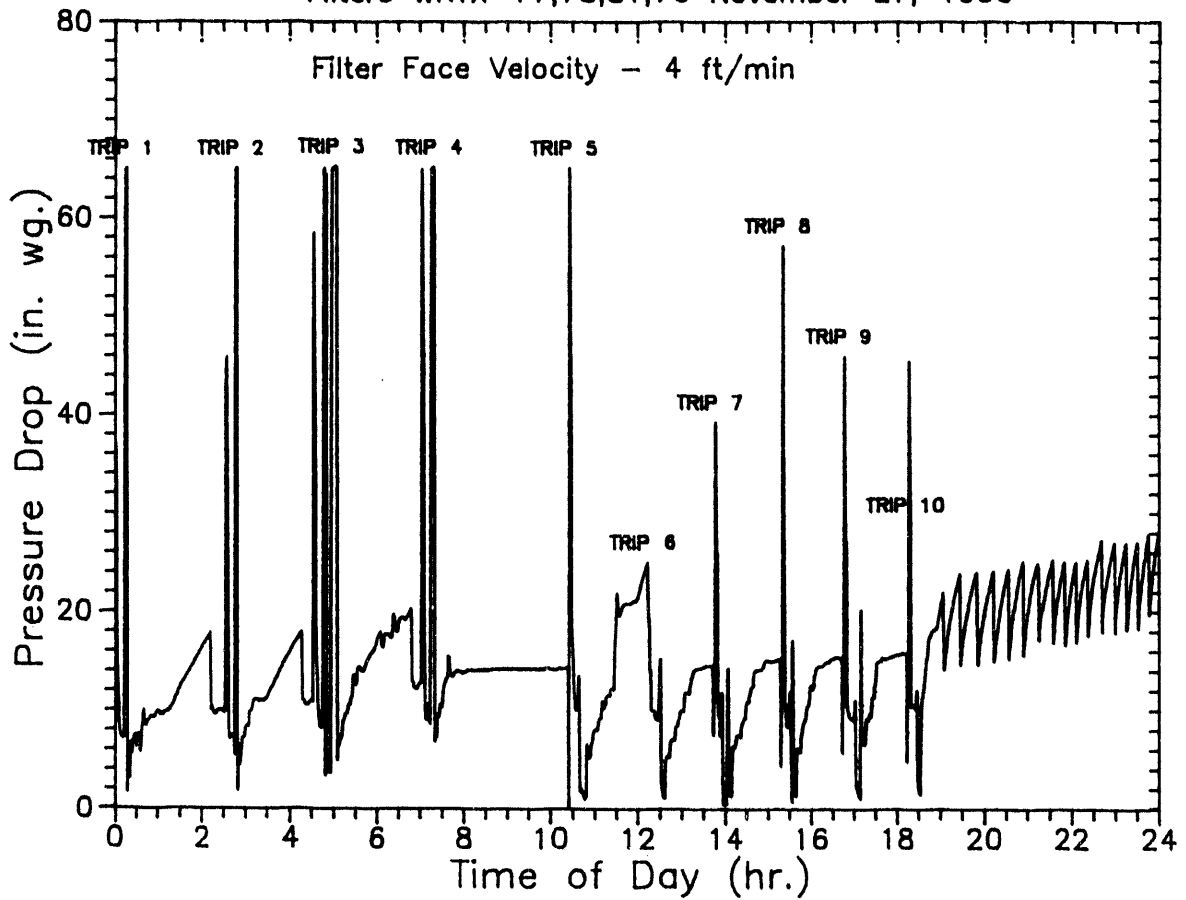
## OPERATION NOTES FOR DECEMBER 14, 1990

0100 INCREASE FILTER  
TEMPERATURE TO 1550°F  
0700 Change AP TRIGGER  
FROM 14" WC to 15" WC.  
PULSE CLEANING - 310 psig/0.1  
SEC.  
1540 DUST LEAK > 14 ppm  
CONCENTRATION OUT  
SHUT DOWN FOR INSPECTION



# PFBC Filter Performance Data

Filters WRTX-77,78,81,76 November 27, 1990

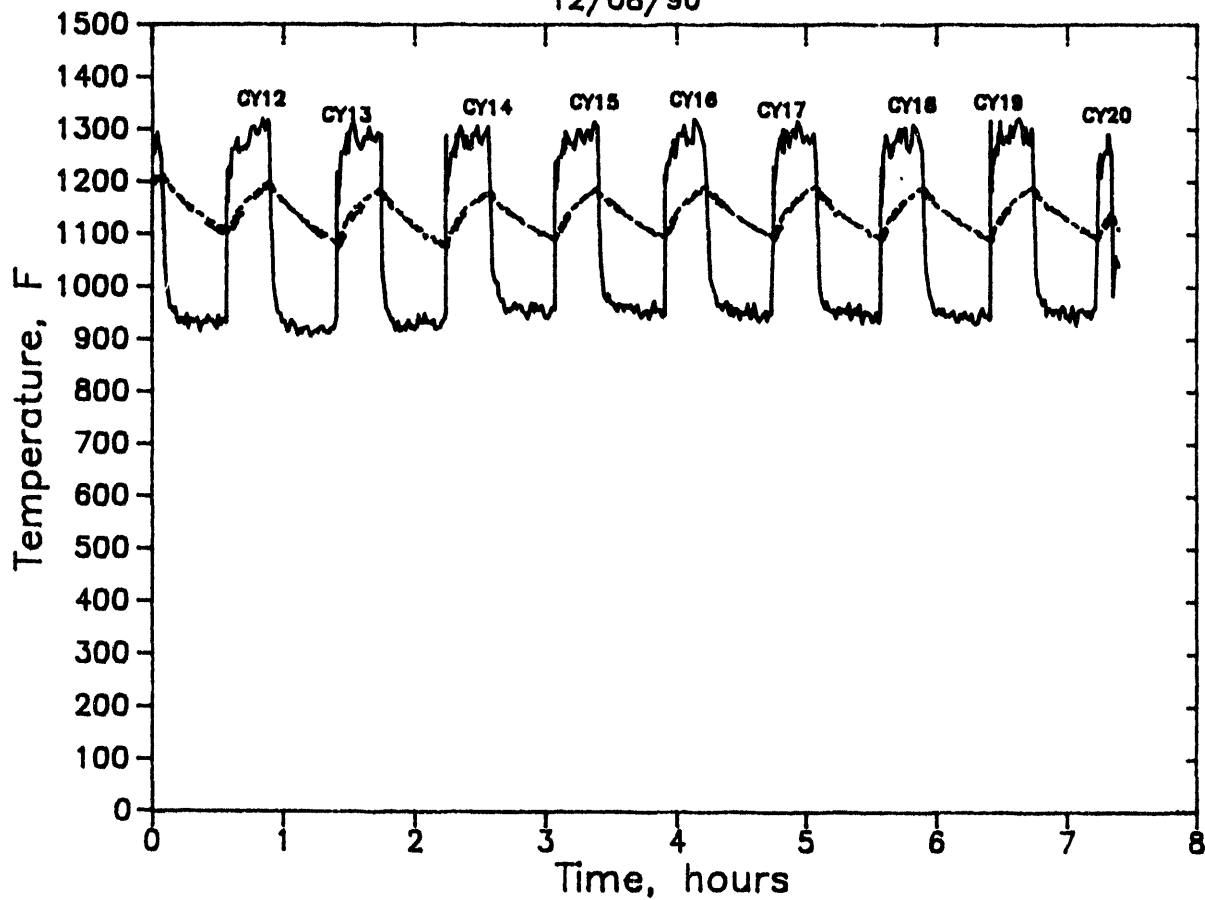


OPERATION NOTES FOR  
NOVEMBER 27, 1990

TURBINE TRIP SIMULATION  
#1 - #10

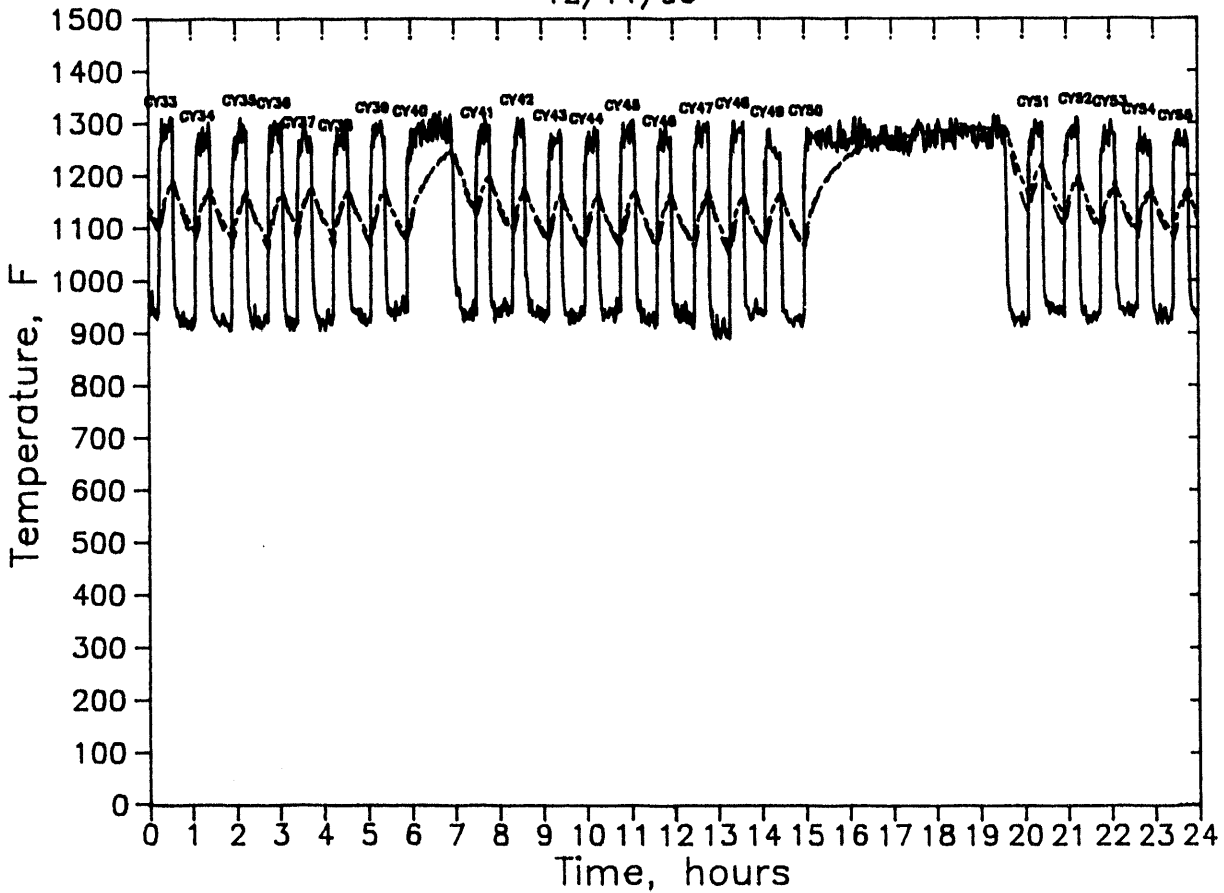
900 lb/hr passage flow  
150 psig system pressure  
1500-1550 °F - PASSAGE  
TEMPERATURE  
FLAME OUT FOR EACH  
SIMULATION

304 TEMPERATURE CYCLES 12-20  
12/08/90



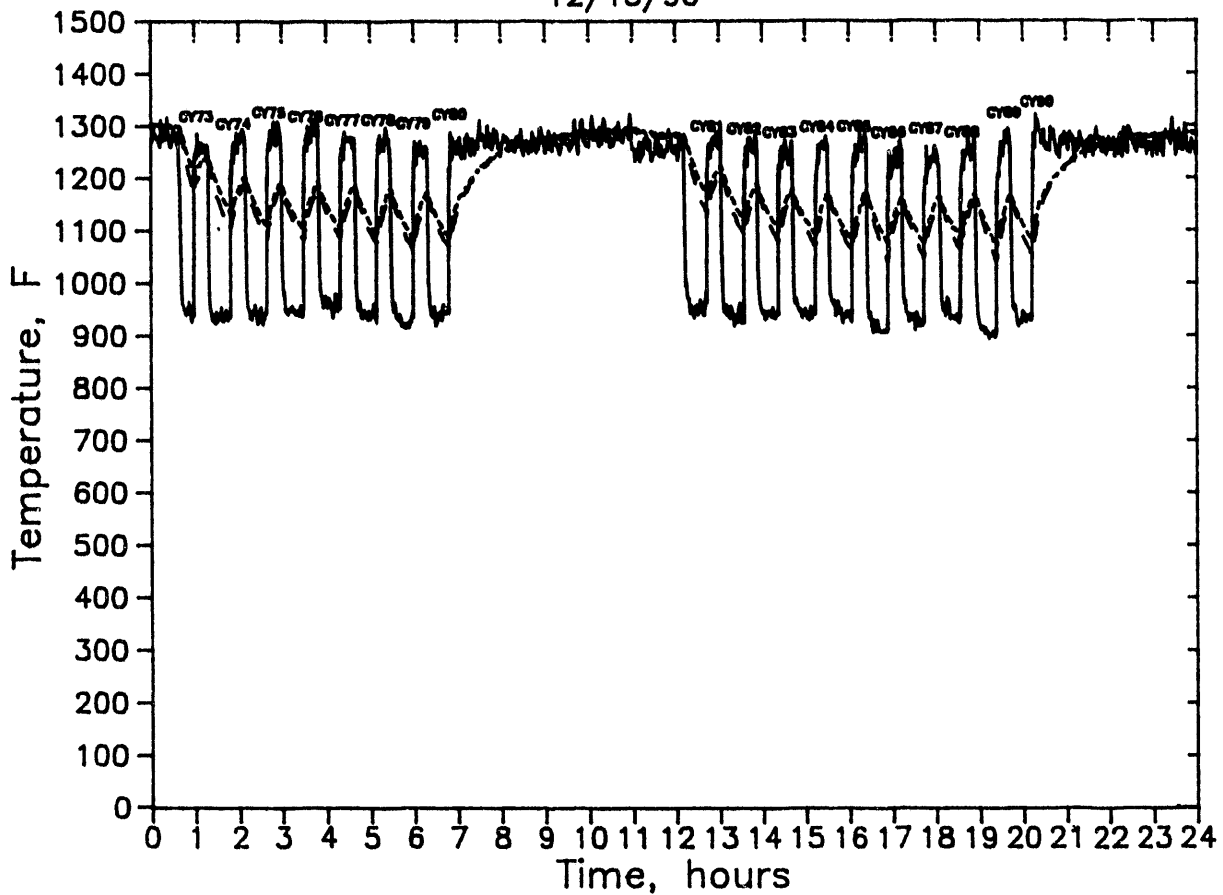
OPERATION NOTES FOR  
DECEMBER 8, 1990  
—— INLET TEMP.  
- - - FILTER TEMP.  
· · · VESSEL TEMP.  
TEMPERATURE RAMPS  
950°F to 1250°F  
0720 SCHEDULED SHUTDOWN

304 TEMPERATURE CYCLES 33-55  
12/11/90



OPERATION NOTES FOR  
DECEMBER 11, 1990  
 — INLET TEMP.  
 - - - FILTER TEMP  
 . . . . VESSEL TEMP  
 TEMPERATURE RANGES  
 950 °F - 1250 °F  
 Just Fed and samples taken  
 AFTER CYCLES 40 and 50

304 TEMPERATURE CYCLES 73-90  
12/13/90



OPERATION NOTES FOR  
DECEMBER 13, 1990

—— INLET TEMP.  
- - - FILTER TEMP.  
- - - - Vessel TEMP.

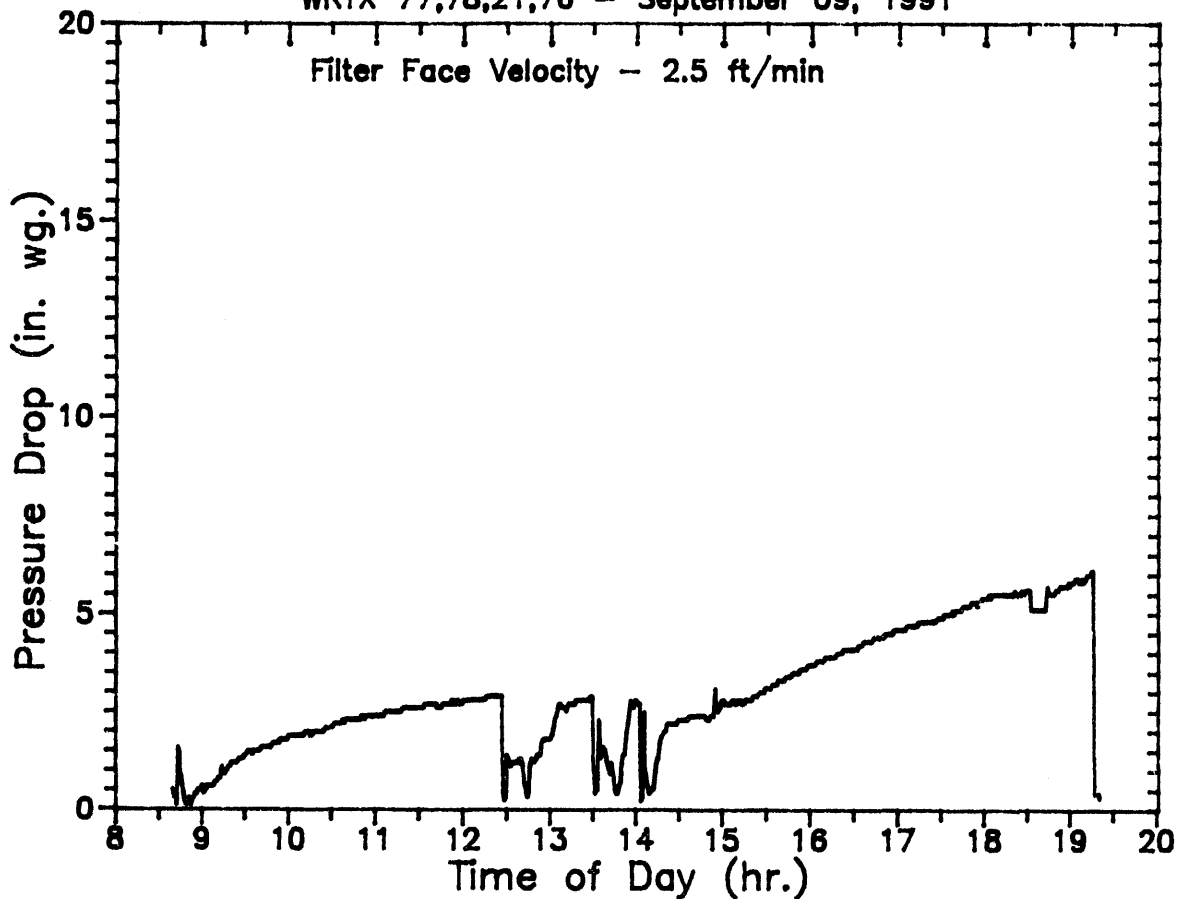
TEMPERATURE RAMP  
250°F - 1250°F  
Just Fed and samples  
taken after cycles 80 and  
90

**APPENDIX G**

**PRESSURE DROP TRACES FROM PFBC SIMULATOR FILTER TESTS  
WRTX-76, WRTX-77, WRTX-78 AND WRTX-21  
STEADY STATE OPERATION**

## Cross Flow Filter Performance Data

WRTX 77,78,21,76 - September 09, 1991



### Operation Notes for September 09, 1991

delta-P Trigger = 13 in wc

Pulse Cleaning - 300 psig/0.1 sec

0849 Flame On system to temperature and pressure

1225 Flame out - Unscheduled

1330 Flame out - Unscheduled

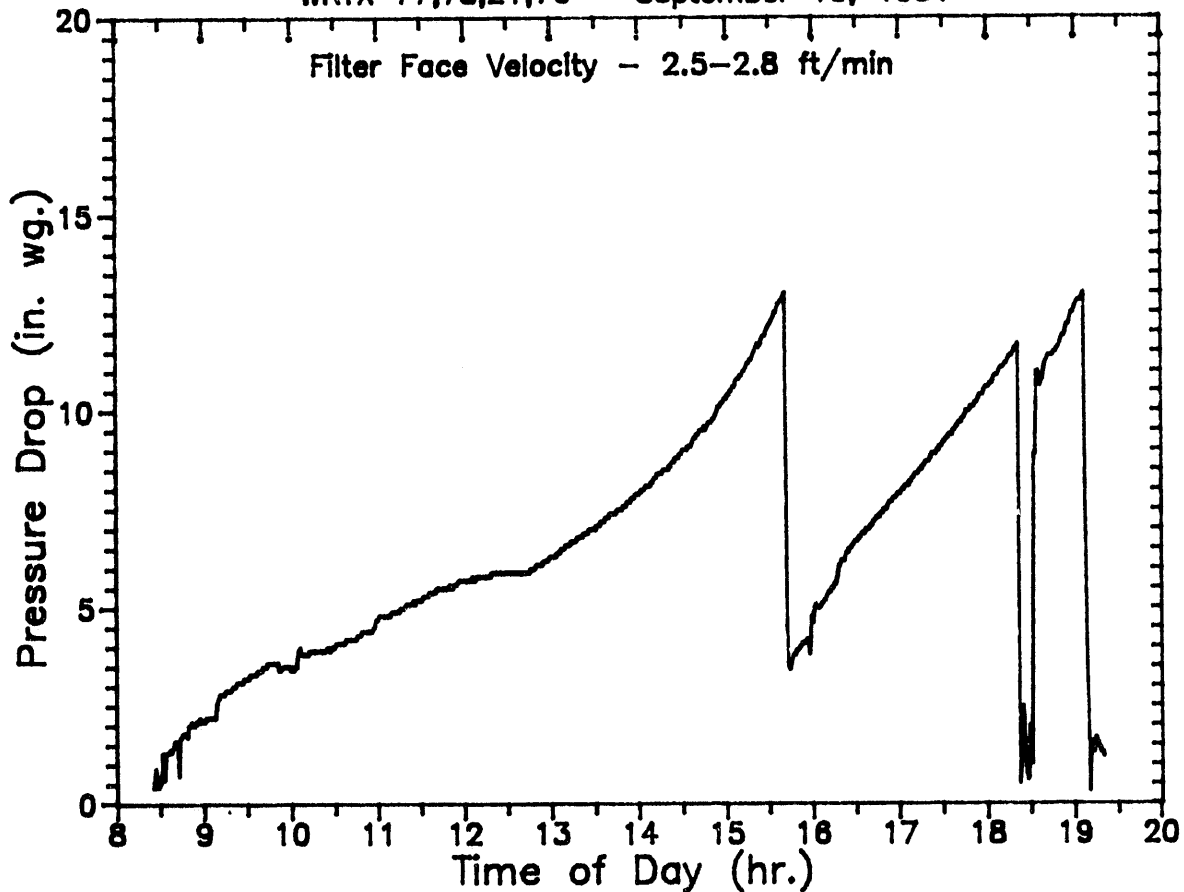
1402 Flame out - Unscheduled

1755 Dust off, dust covering funnel in dust vessel, corrected

1916 Scheduled Shutdown

## Cross Flow Filter Performance Data

WRTX 77,78,21,76 - September 10, 1991



### Operation Notes for September 10, 1991

delta-P Trigger = 13 in wc

Pulse Cleaning - 300 psig/0.1 sec

0825 Flame On system to temperature and pressure

1555 System Pressure lowered to 90 psig

1615 System Flow raised to 800 PPH

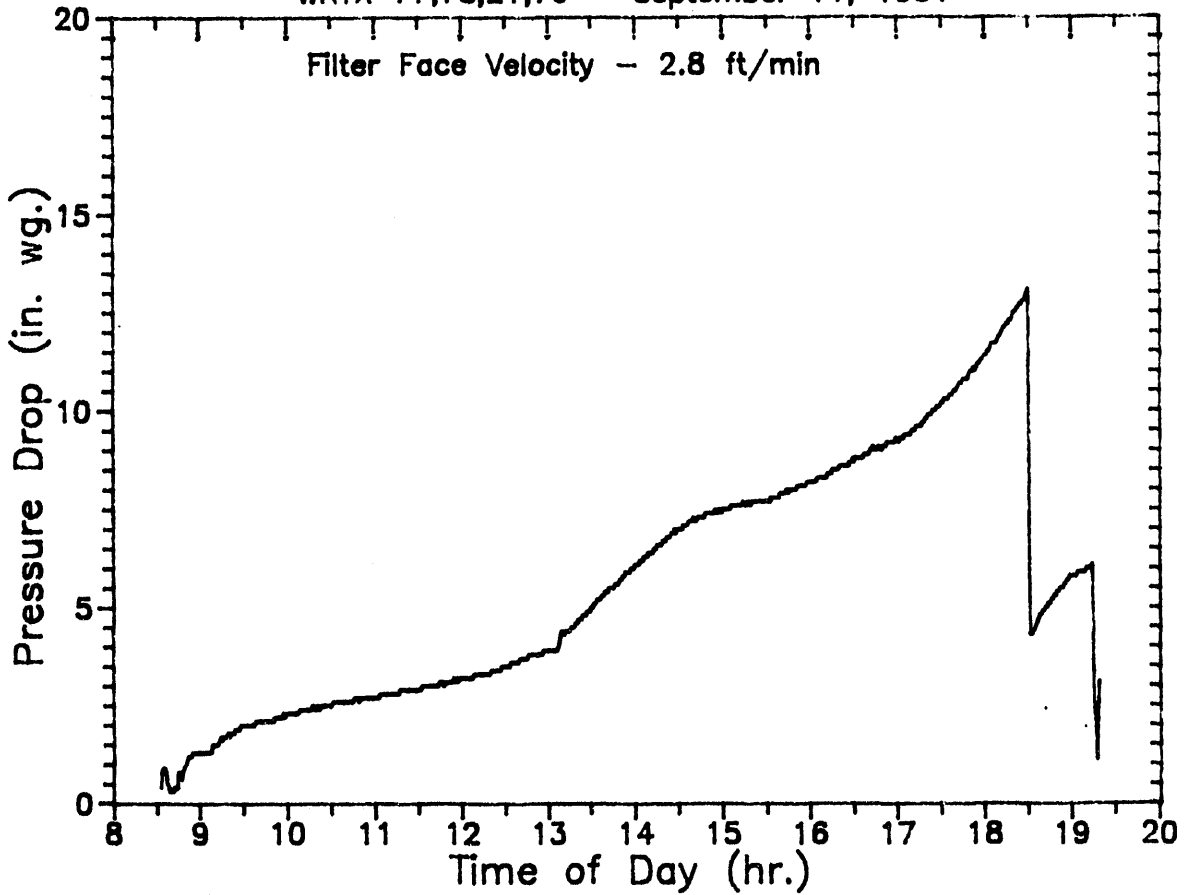
1820 Flame out - Unscheduled

1835 System Pressure raised to 95 psig

1908 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - September 11, 1991



## Operation Notes for September 11, 1991

delta-P Trigger = 13 in wc

Pulse Cleaning - 300 psig/0.1 sec

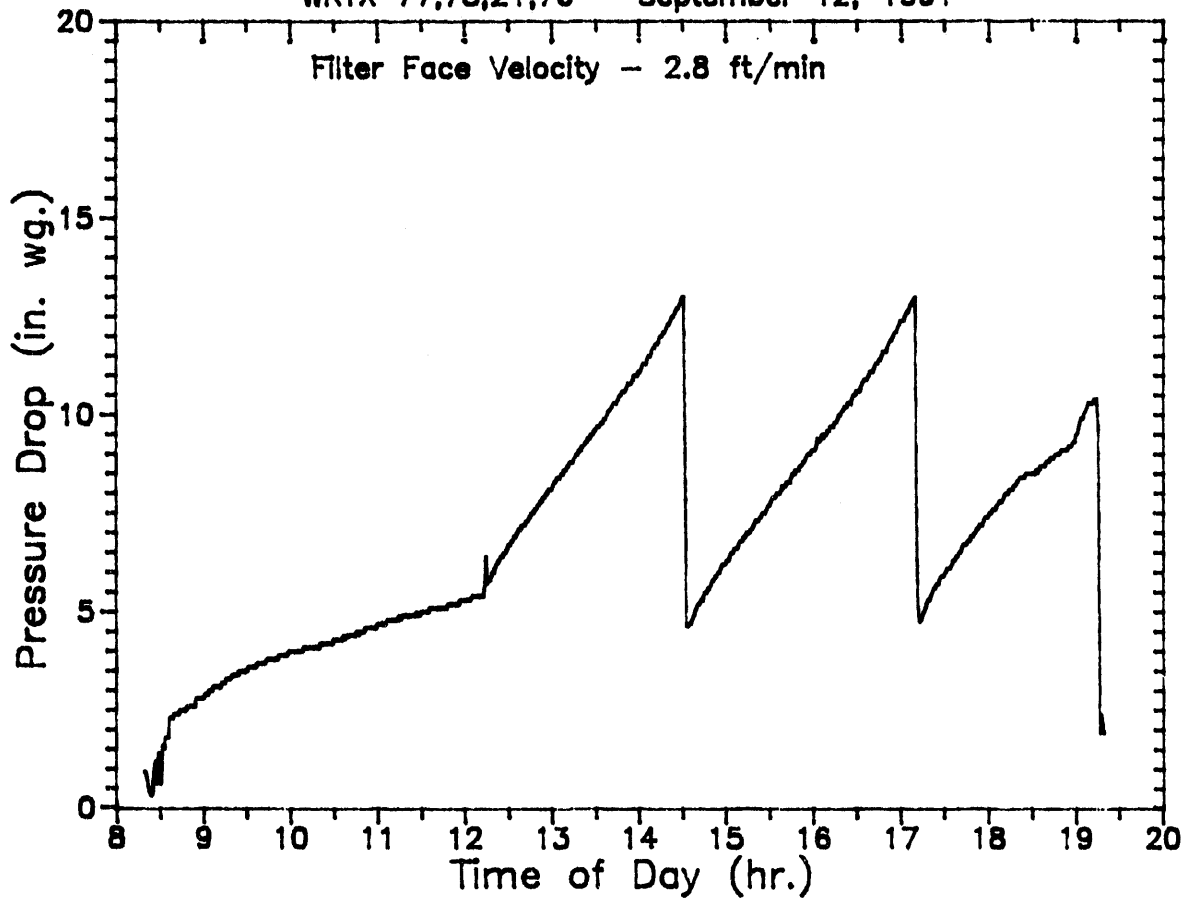
0835 Flame On system to temperature and pressure

1915 Scheduled Shutdown



# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - September 12, 1991



Operation Notes for September 12, 1991

delta-P Trigger = 13 in wc

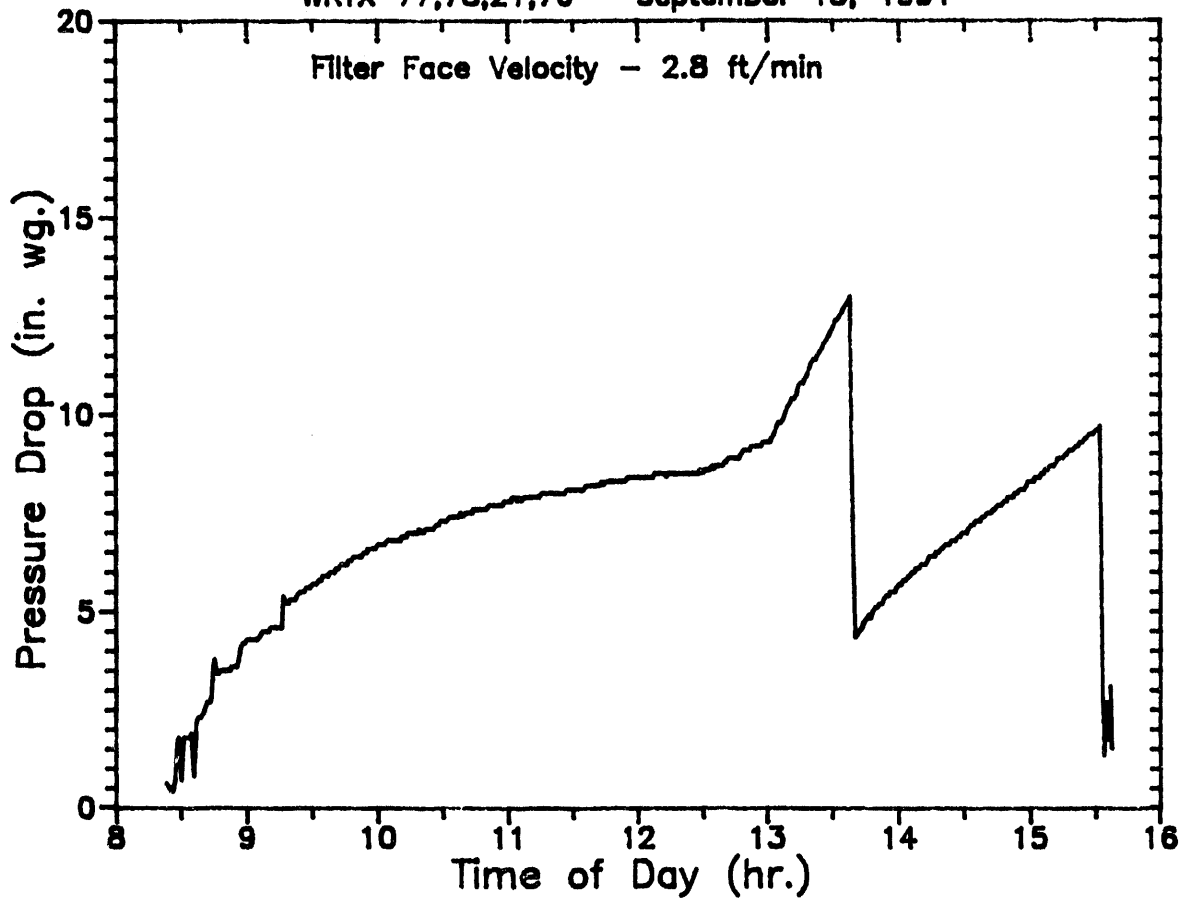
Pulse Cleaning - 300 psig/0.1 sec

0820 Flame On system to temperature and pressure

1916 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - September 13, 1991



## Operation Notes for September 13, 1991

delta-P Trigger = 13 in wc

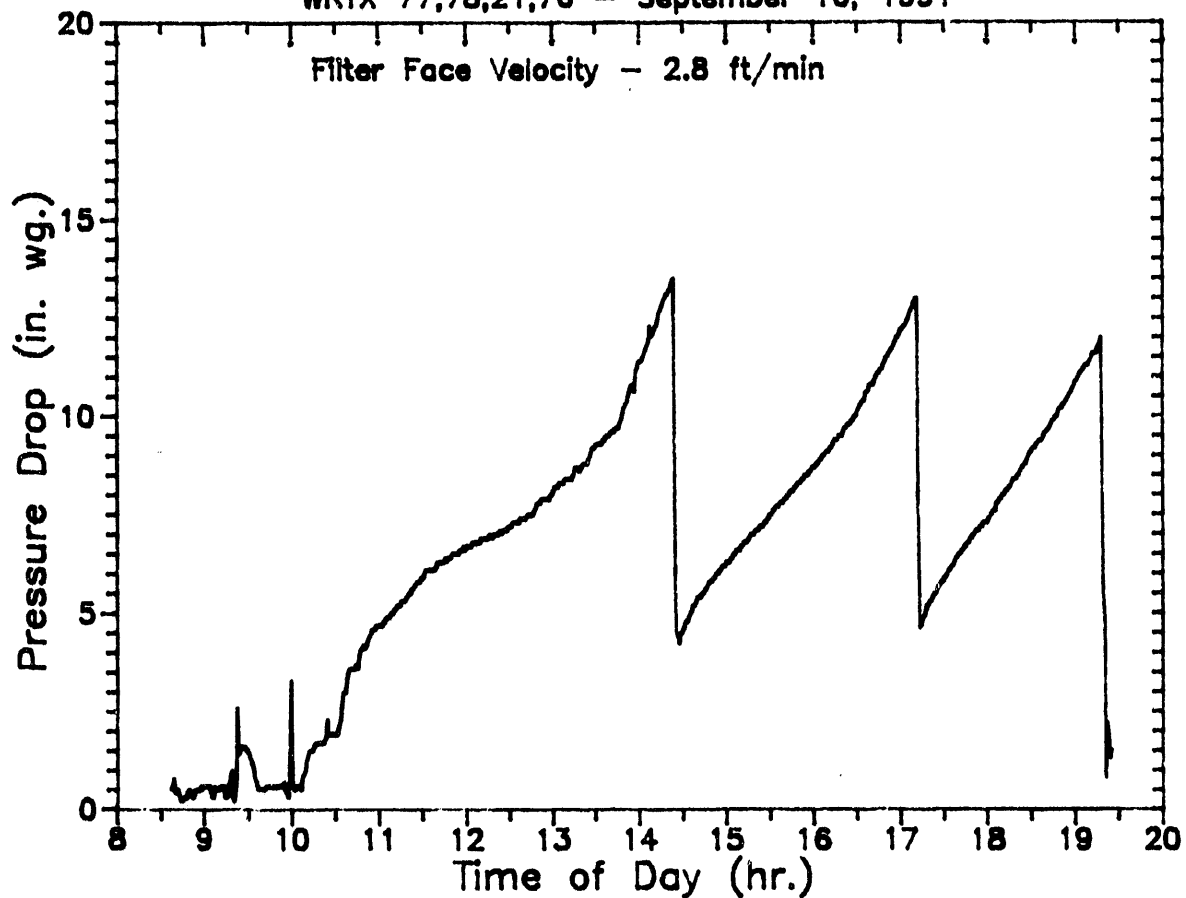
Pulse Cleaning - 300 psig/0.1 sec

0822 Flame On system to temperature and pressure

1533 Scheduled Shutdown

## Cross Flow Filter Performance Data

WRTX 77,78,21,76 - September 16, 1991



### Operation Notes for September 16, 1991

delta-P Trigger = 13 in wc

Pulse Cleaning - 300 psig/0.1 sec

0838 Flame On system to temperature and pressure

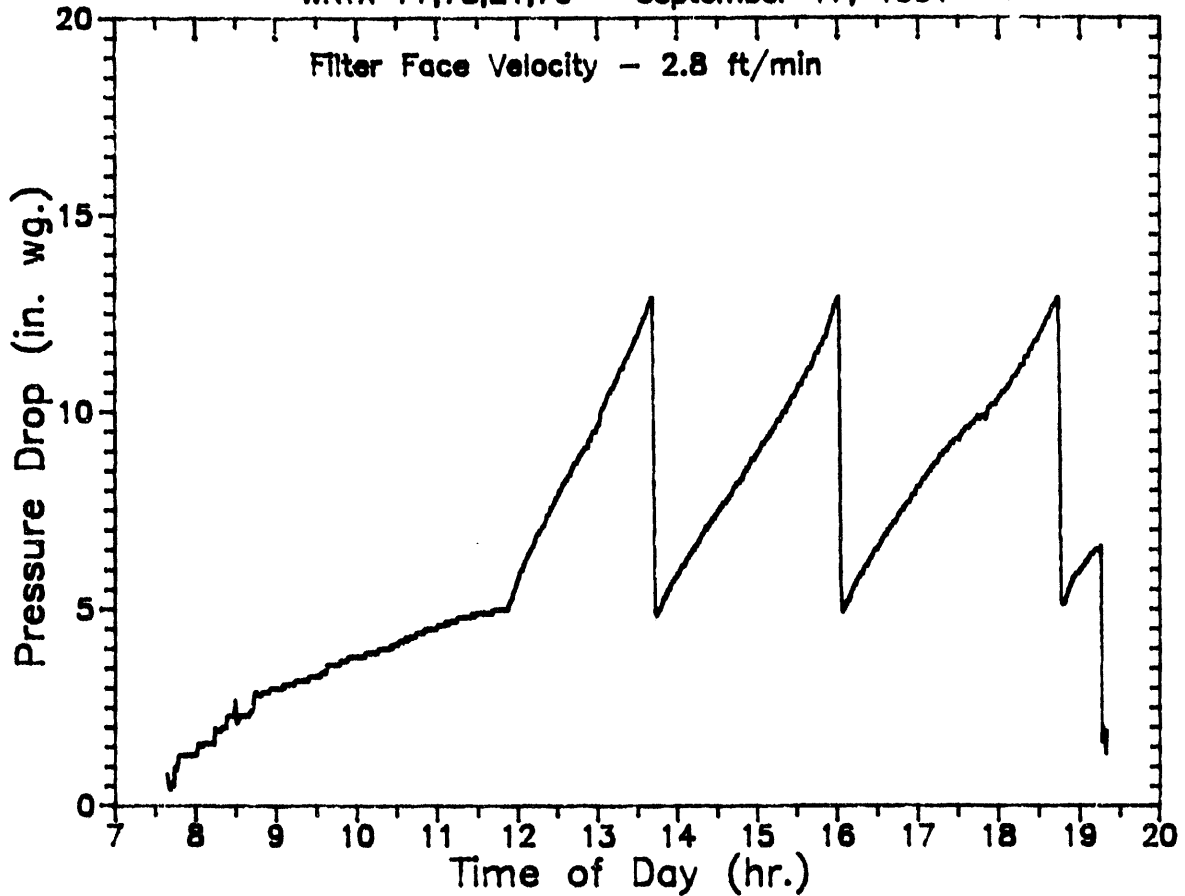
0920 Uncheduled Shutdown, main vessel gasket leak, bolts tightened

1000 Flame On

1920 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - September 17, 1991



## Operation Notes for September 17, 1991

delta-P Trigger = 13 in wc

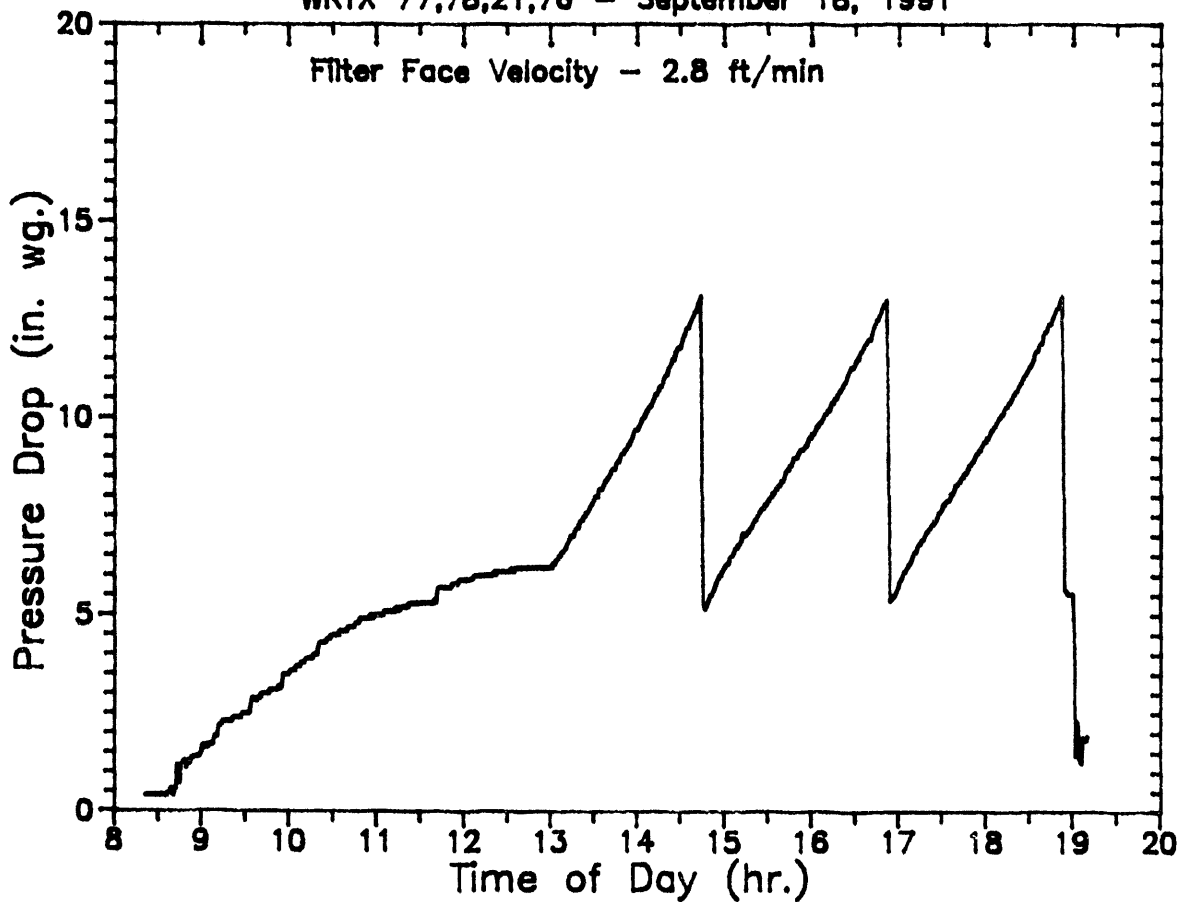
Pulse Cleaning - 300 psig/0.1 sec

0737 Flame On system to temperature and pressure

1915 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - September 18, 1991



## Operation Notes for September 18, 1991

delta-P Trigger = 13 in wc

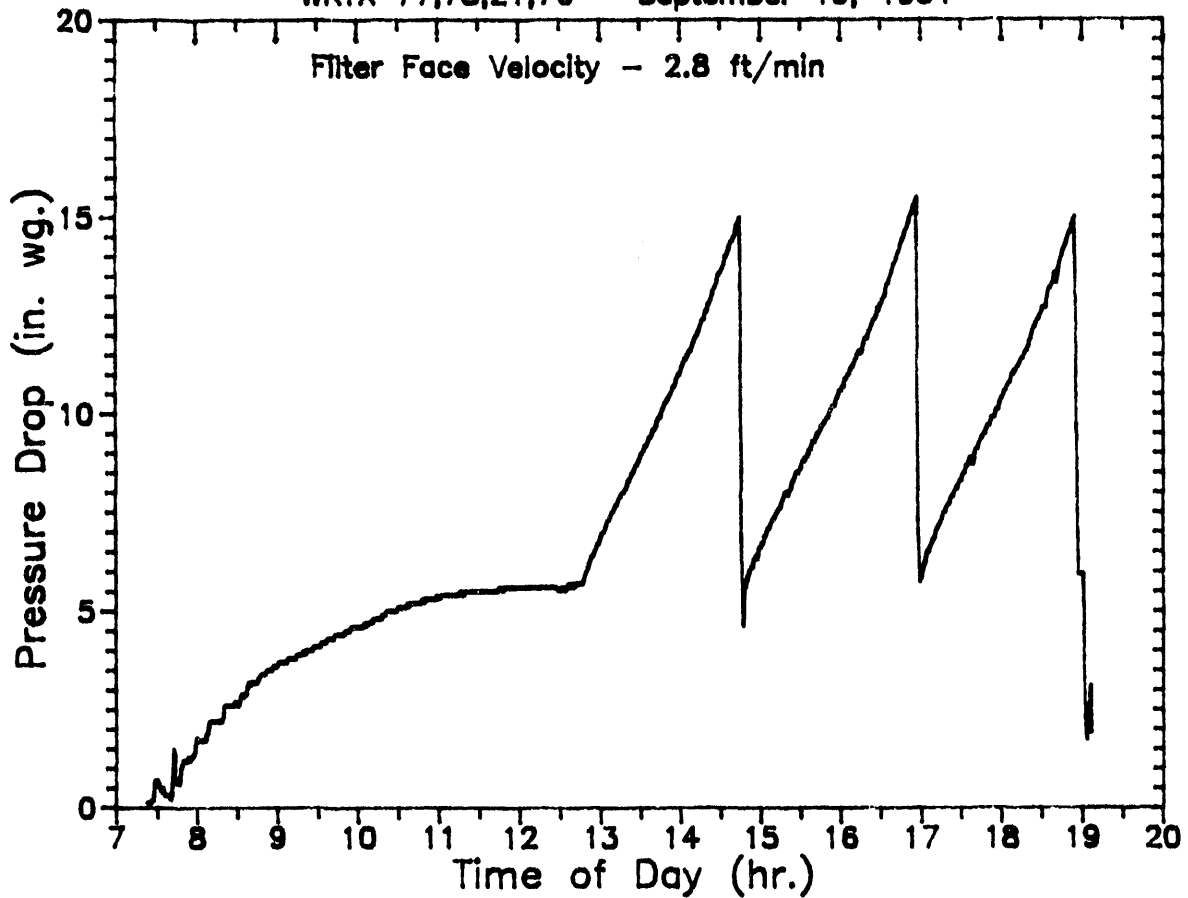
Pulse Cleaning - 300 psig/0.1 sec

0837 Flame On system to temperature and pressure

1901 Scheduled Shutdown

## Cross Flow Filter Performance Data

WRTX 77,78,21,76 - September 19, 1991



### Operation Notes for September 19, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 300 psig/0.1 sec

0728 Flame On system to temperature and pressure

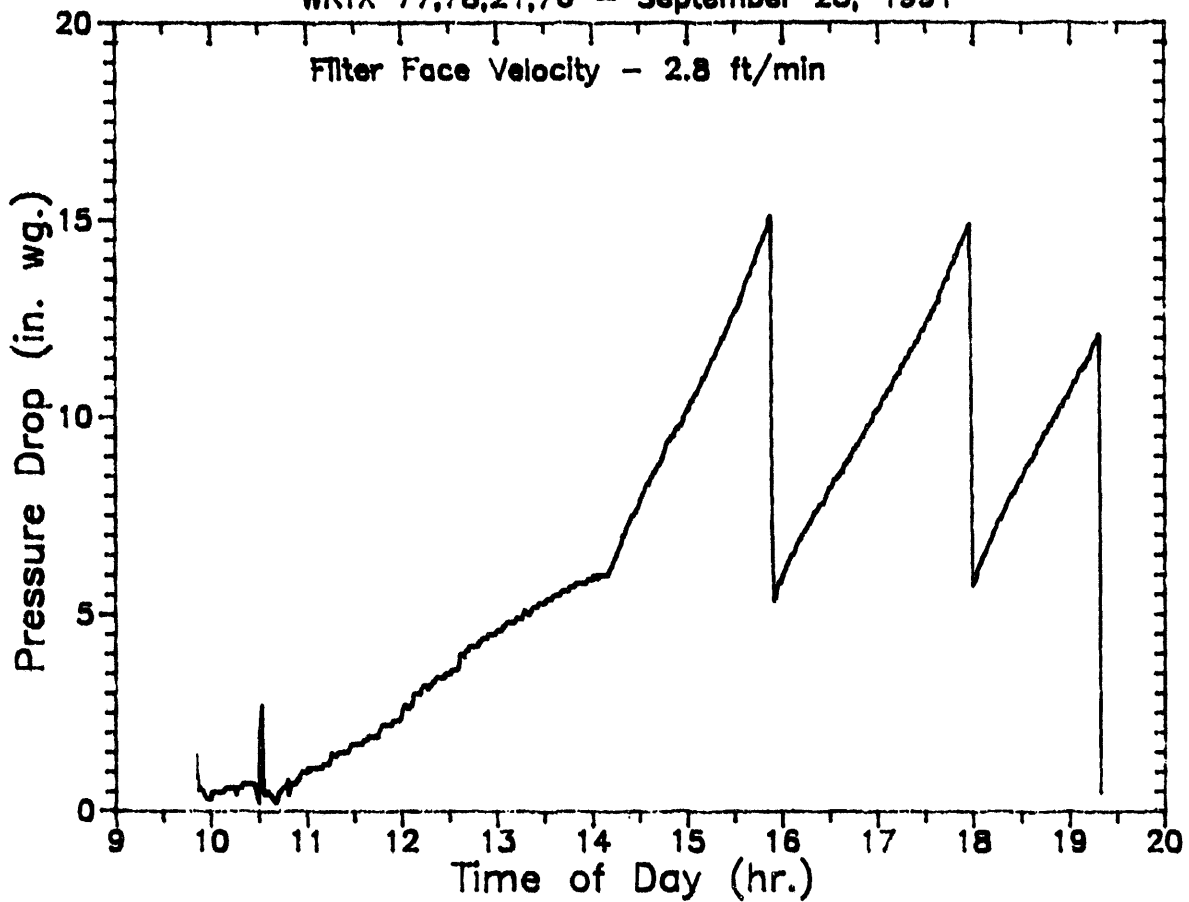
0739 Unscheduled Flame Out

0743 Flame On

1902 Scheduled Shutdown

## Cross Flow Filter Performance Data

WRTX 77,78,21,76 - September 23, 1991



### Operation Notes for September 23, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 300 psig/0.1 sec

0951 Flame On system to temperature and pressure

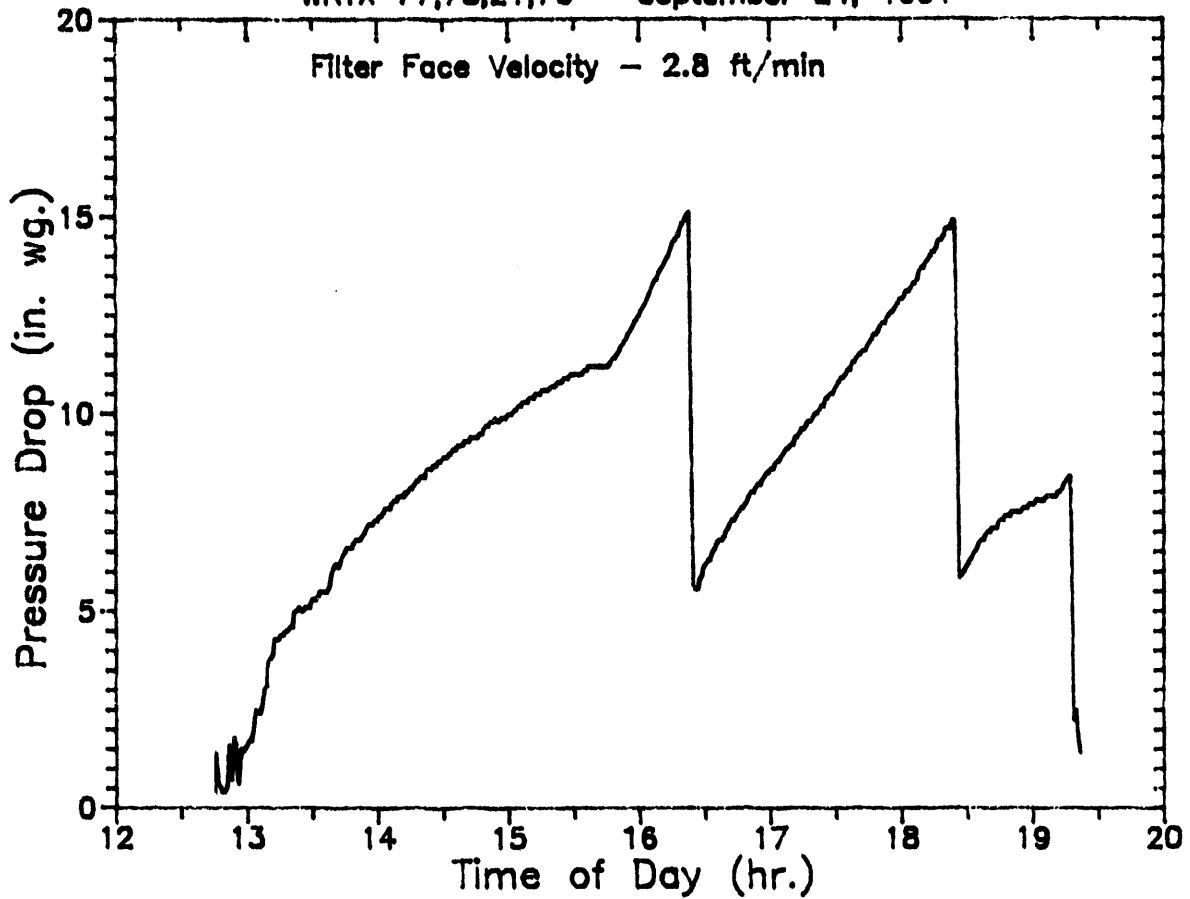
1027 Unscheduled Flame Out

1032 Flame On

1918 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - September 24, 1991



## Operation Notes for September 24, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 300 psig/0.1 sec

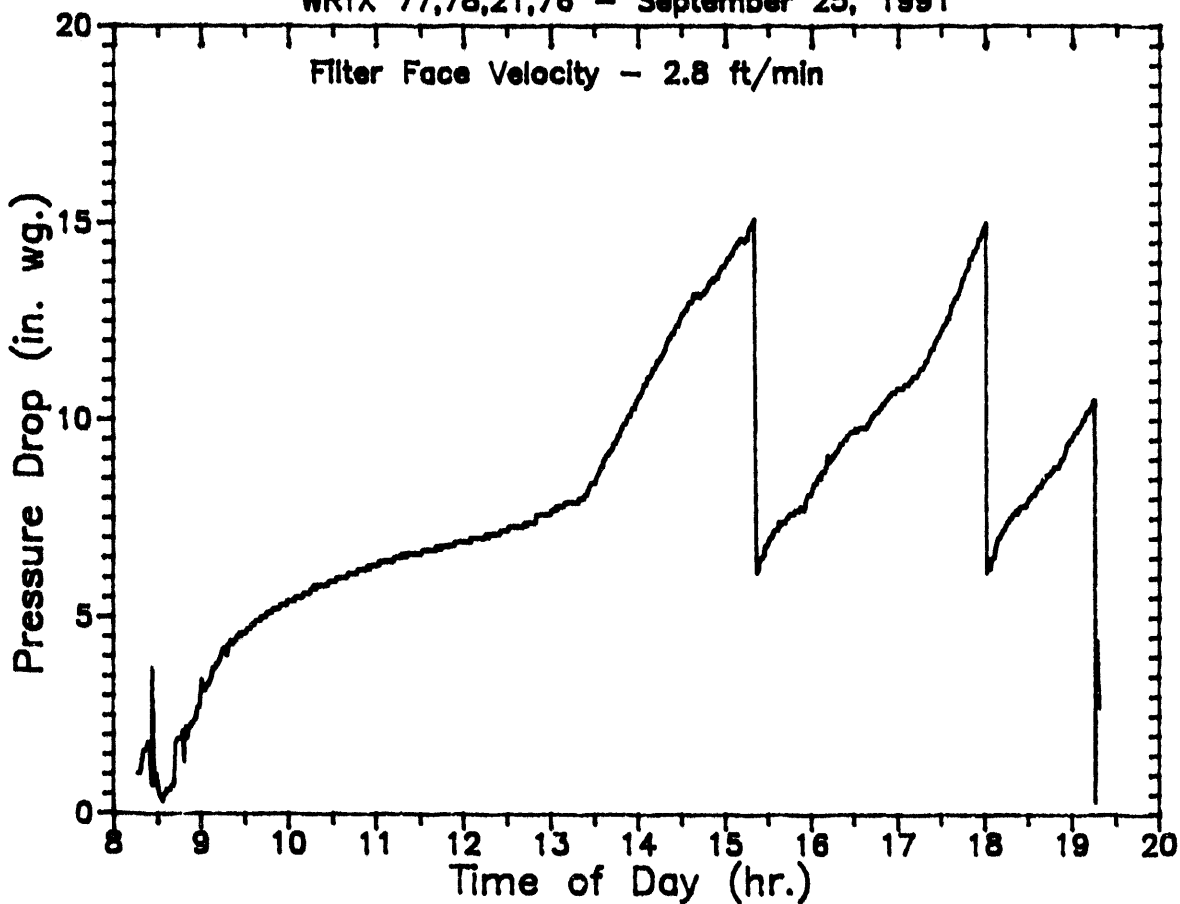
1245 Flame On system to temperature and pressure

1918 Scheduled Shutdown



# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - September 25, 1991



## Operation Notes for September 25, 1991

delta-P Trigger = 15 in wc

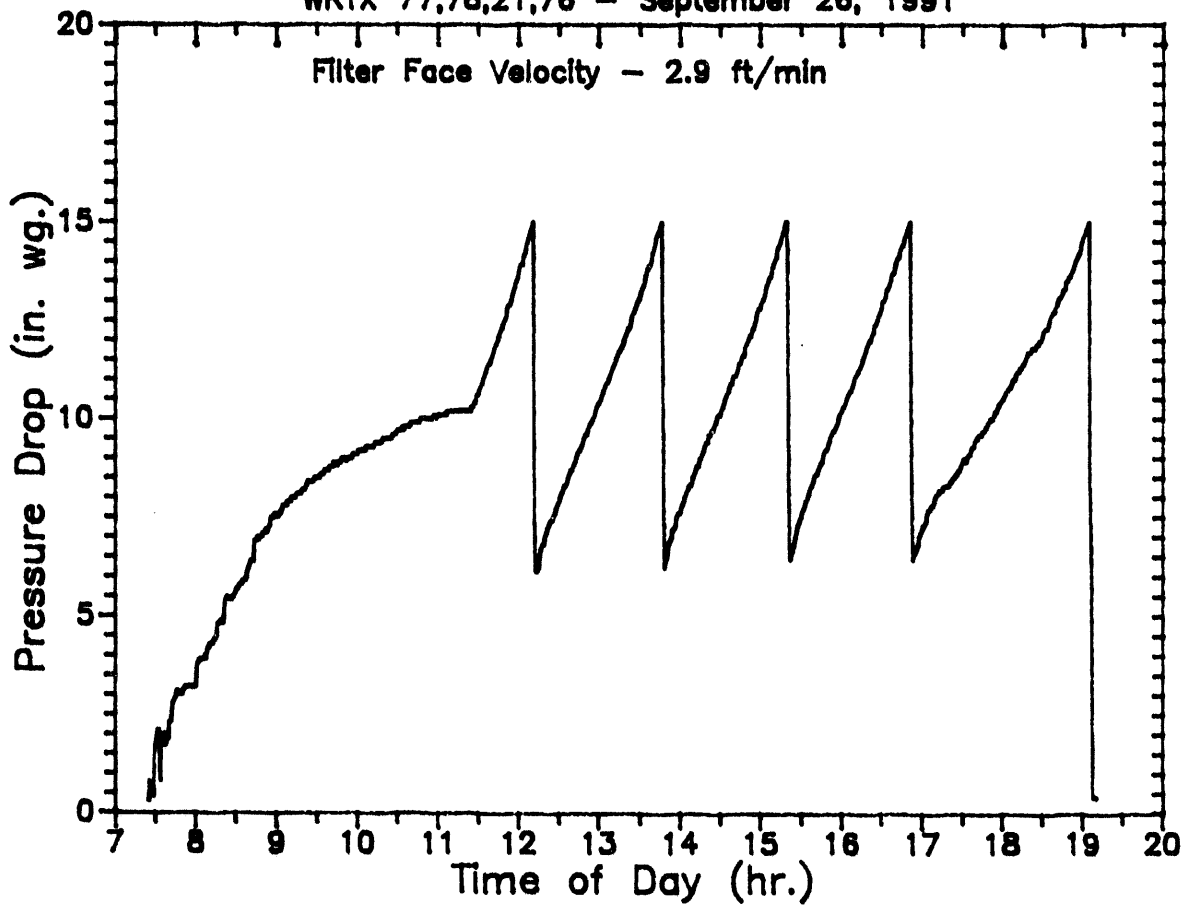
Pulse Cleaning - 300 psig/0.1 sec

0829 Flame On system to temperature and pressure

1916 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,78 - September 26, 1991



## Operation Notes for September 26, 1991

delta-P Trigger = 15 in wc

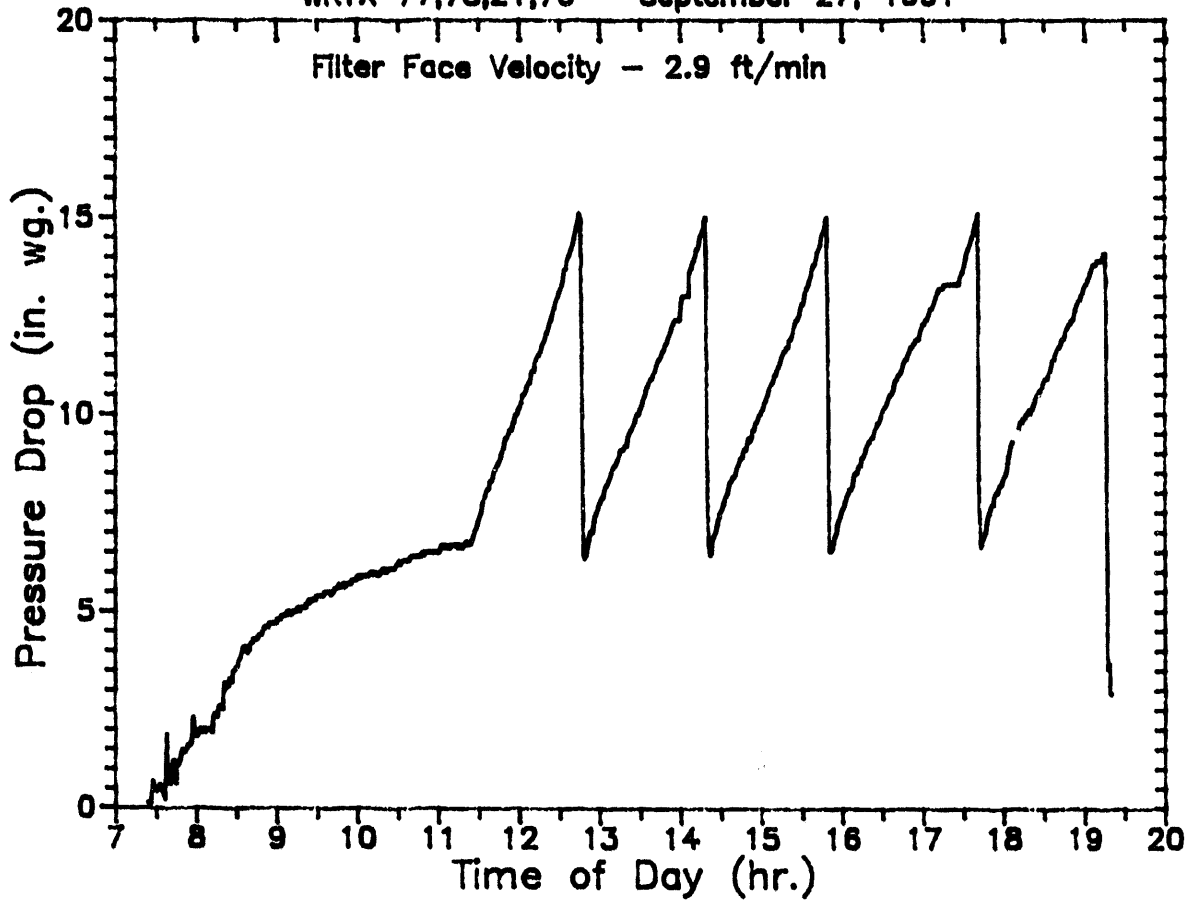
Pulse Cleaning - 300 psig/0.1 sec

0724 Flame On system to temperature and pressure

1906 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - September 27, 1991



## Operation Notes for September 27, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 300 psig/0.1 sec

0725 Flame On system to temperature and pressure

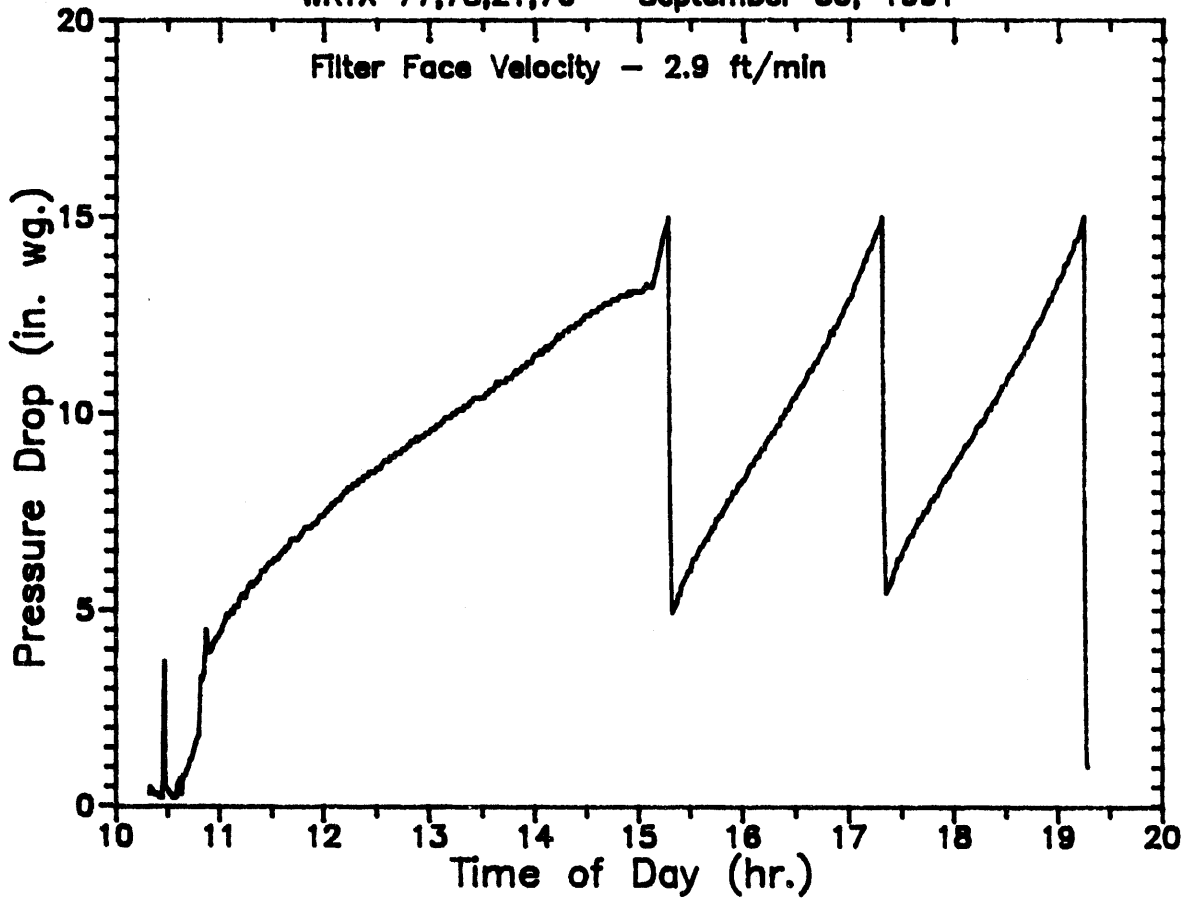
0732 Flame Out, Unscheduled

0738 Flame On

1916 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - September 30, 1991



## Operation Notes for September 30, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 325 psig/0.1 sec

1020 Flame On system to temperature and pressure

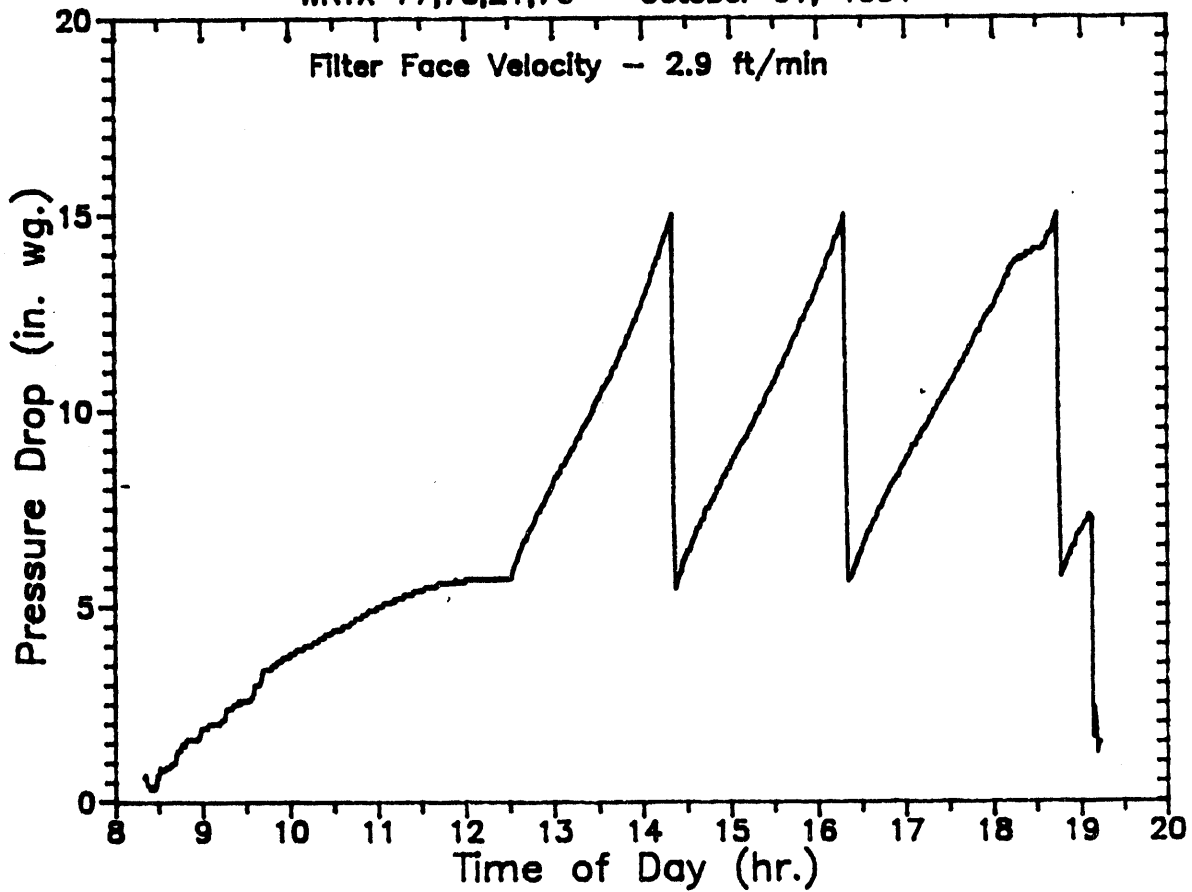
1026 Flame Out, Unscheduled

1027 Flame On

1916 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 01, 1991



Operation Notes for October 01, 1991

delta-P Trigger = 15 in wc

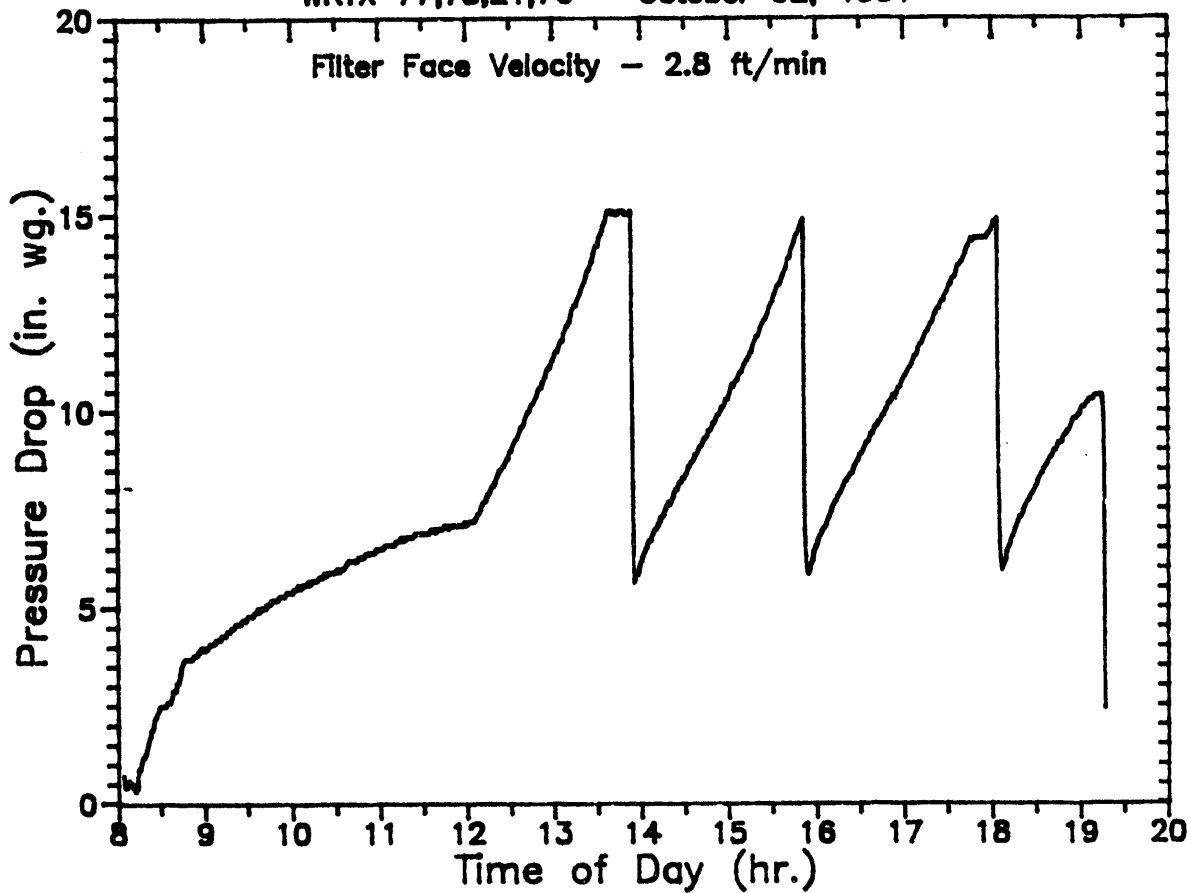
Pulse Cleaning - 330 psig/0.1 sec

0819 Flame On system to temperature and pressure

1907 Scheduled Shutdown

## Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 02, 1991



### Operation Notes for October 02, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 330 psig/0.1 sec

0802 Flame On system to temperature and pressure

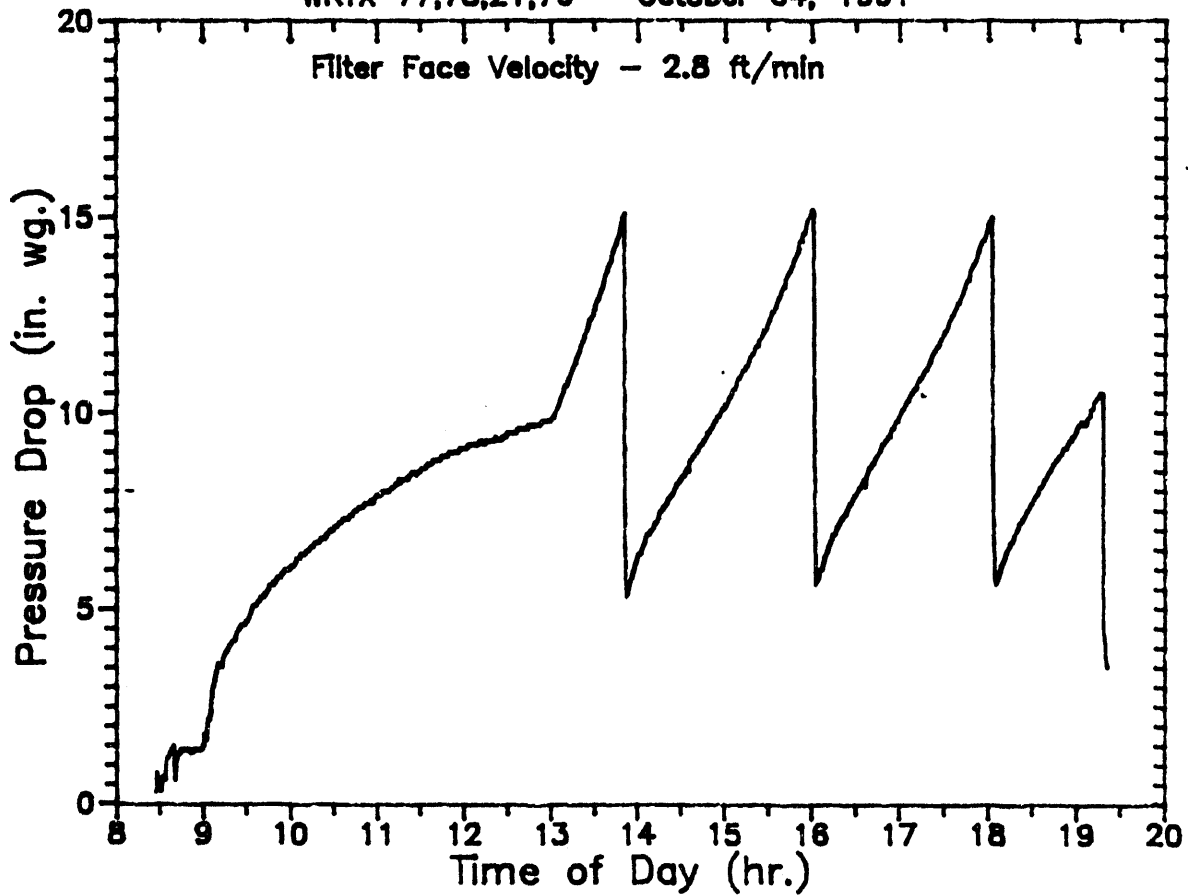
1337 Pulse Blowback pressure stabilizing

Initially low, adjusted - Pulse Cleaning at 340 psig/0.1 sec

1917 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 04, 1991



## Operation Notes for October 04, 1991

delta-P Trigger = 15 in wc

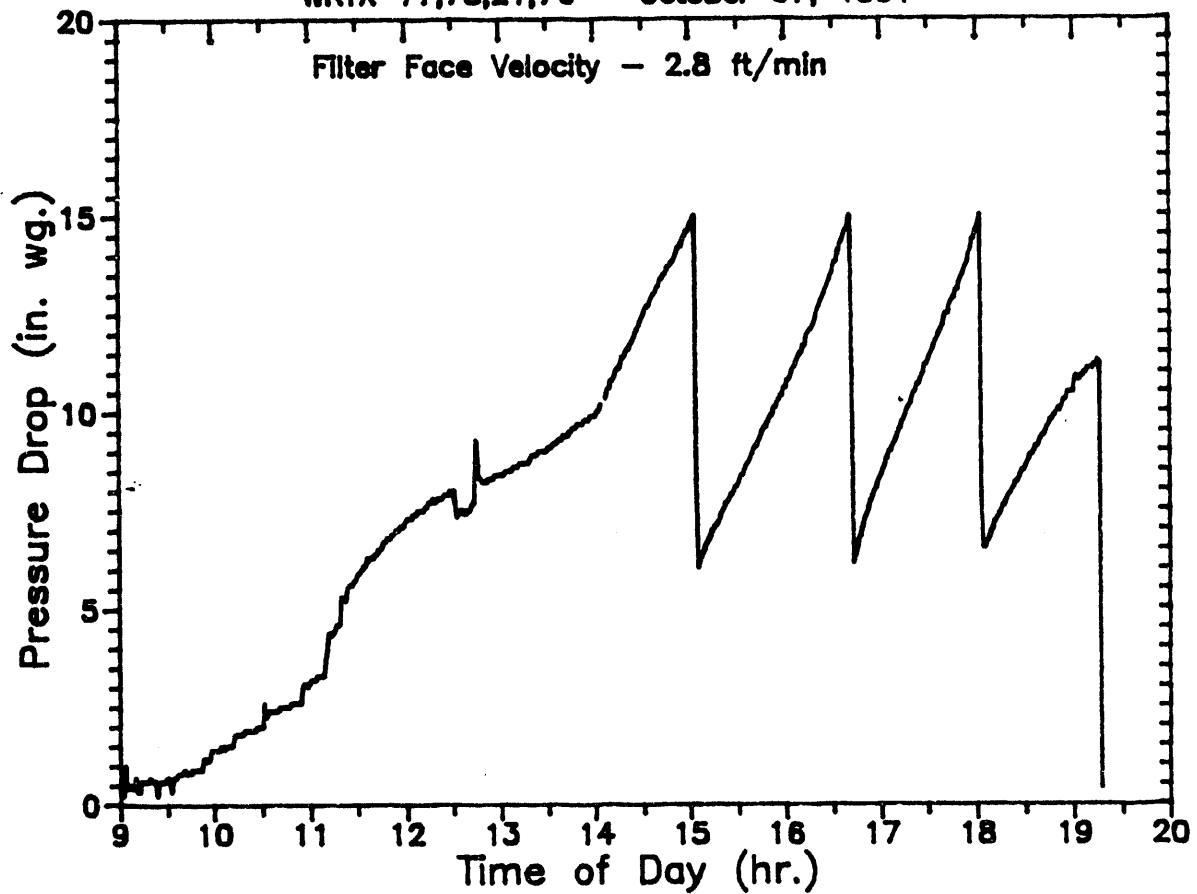
Pulse Cleaning - 330 psig/0.1 sec

0827 Flame On system to temperature and pressure

1917 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 07, 1991



## Operation Notes for October 07, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 300 psig/0.1 sec

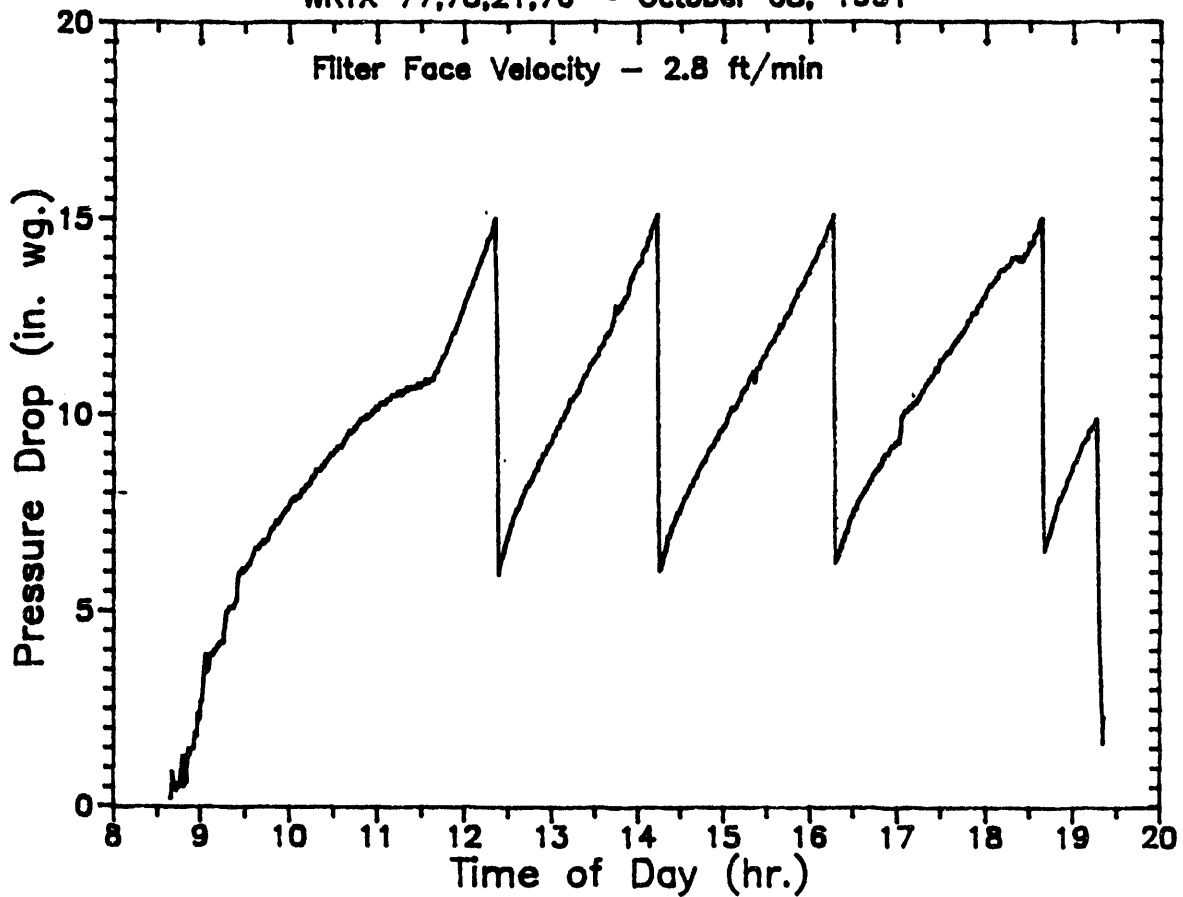
0902 Flame On system to temperature and pressure

1915 Scheduled Shutdown



## Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 08, 1991



### Operation Notes for October 08, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 310 psig/0.1 sec

0839 Flame On system to temperature and pressure

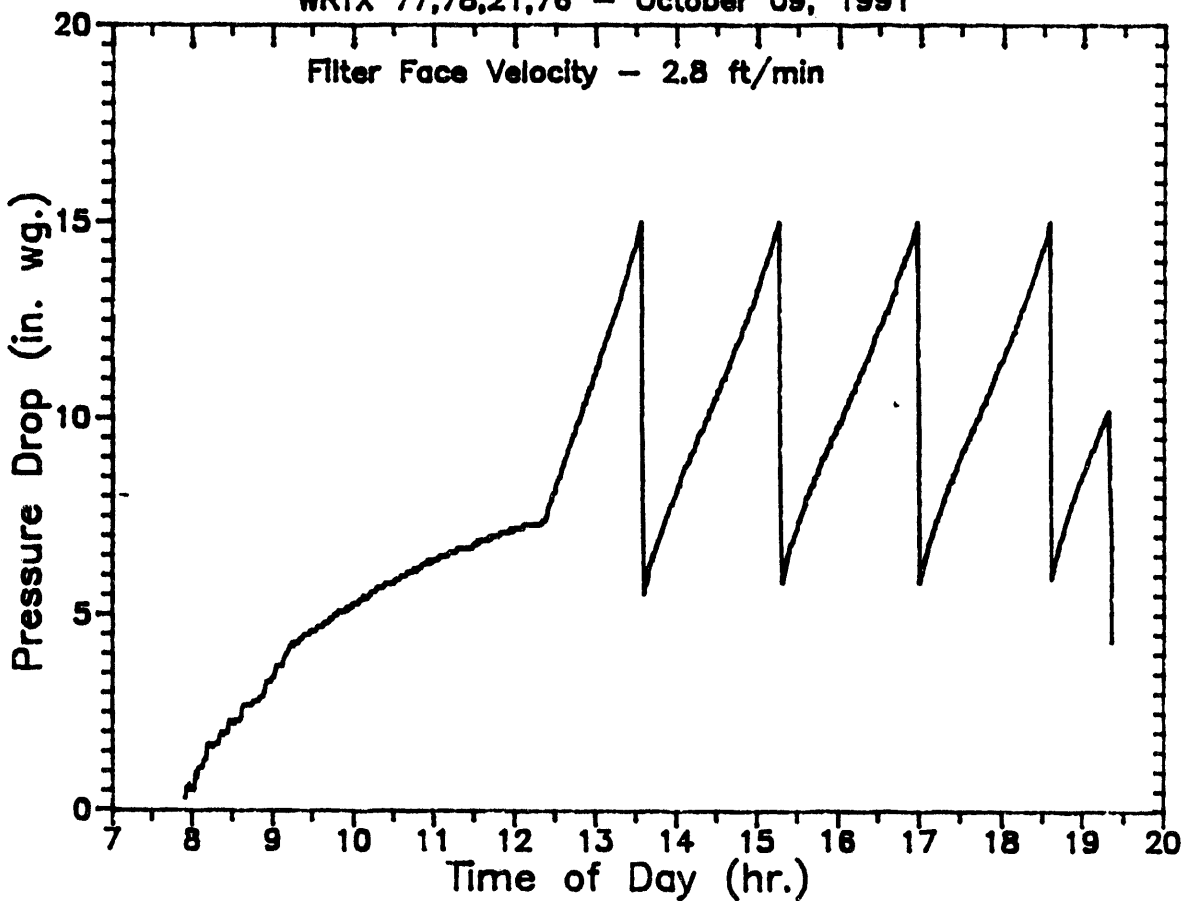
1614 Pulse Cleaning - 300 psig/0.1 sec

1701-1716 Dust feeder speed reset, vibrator on

1916 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 09, 1991



Operation Notes for October 09, 1991

delta-P Trigger = 15 in wc

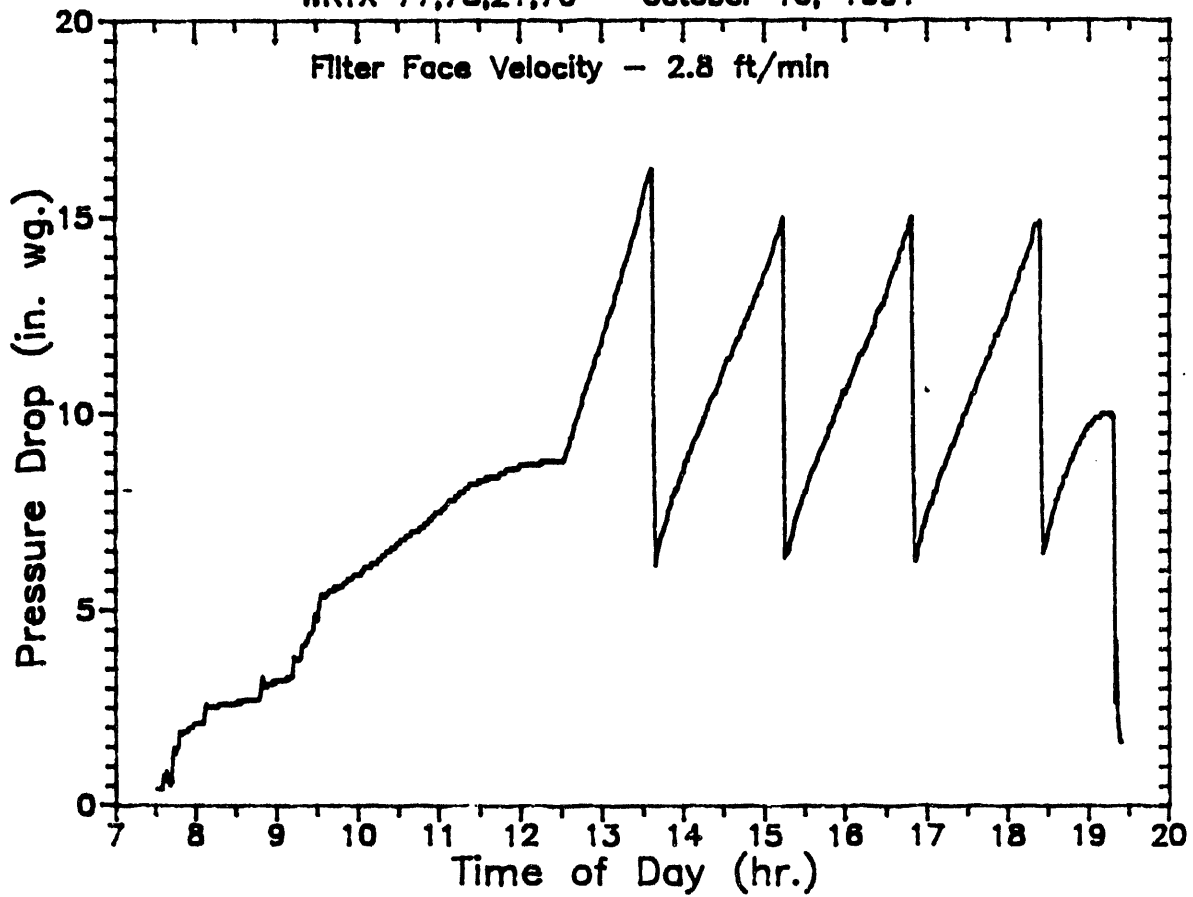
Pulse Cleaning - 300 psig/0.1 sec

0754 Flame On system to temperature and pressure

1920 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 10, 1991



Operation Notes for October 10, 1991

delta-P Trigger = 15 in wc

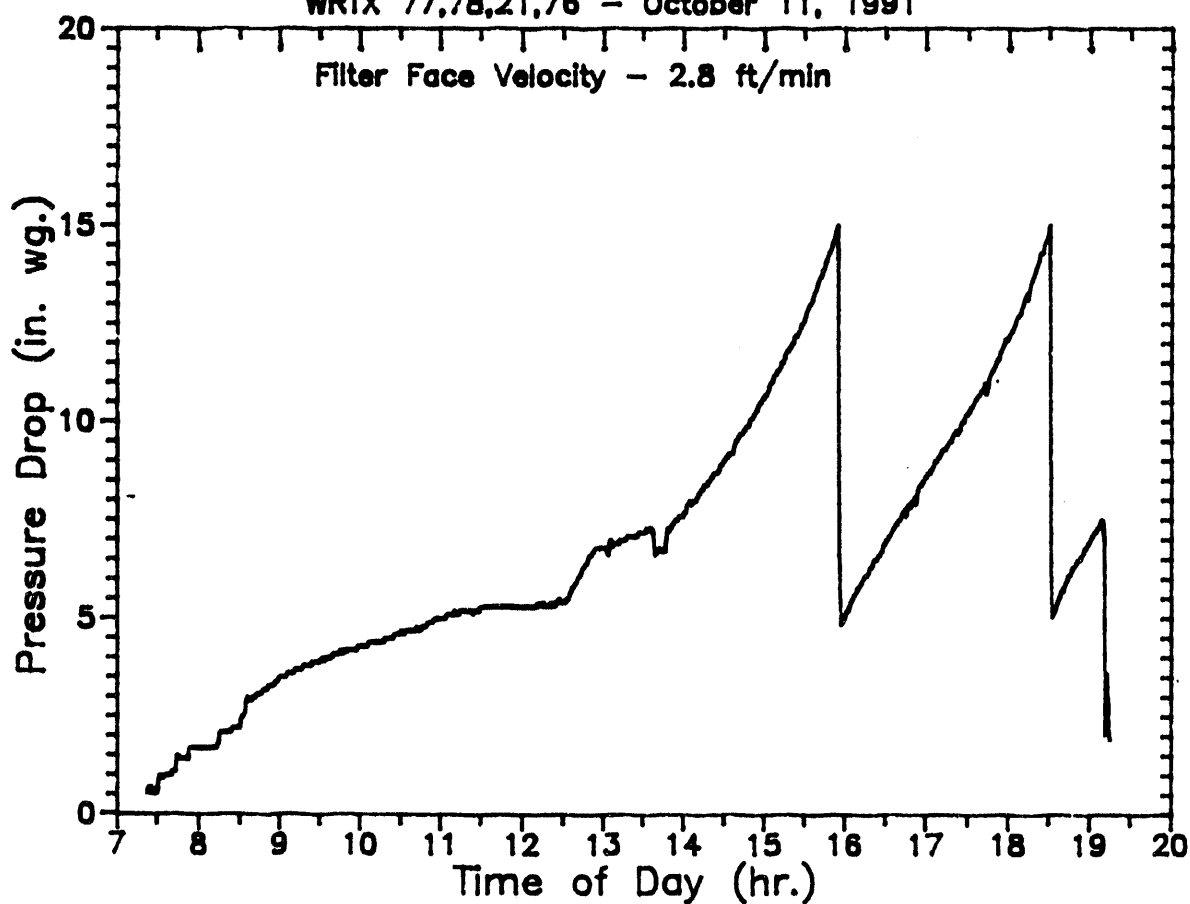
Pulse Cleaning - 315 psig/0.1 sec

0734 Flame On system to temperature and pressure

1920 Scheduled Shutdown

## Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 11, 1991



### Operation Notes for October 11, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 320 psig/0.1 sec

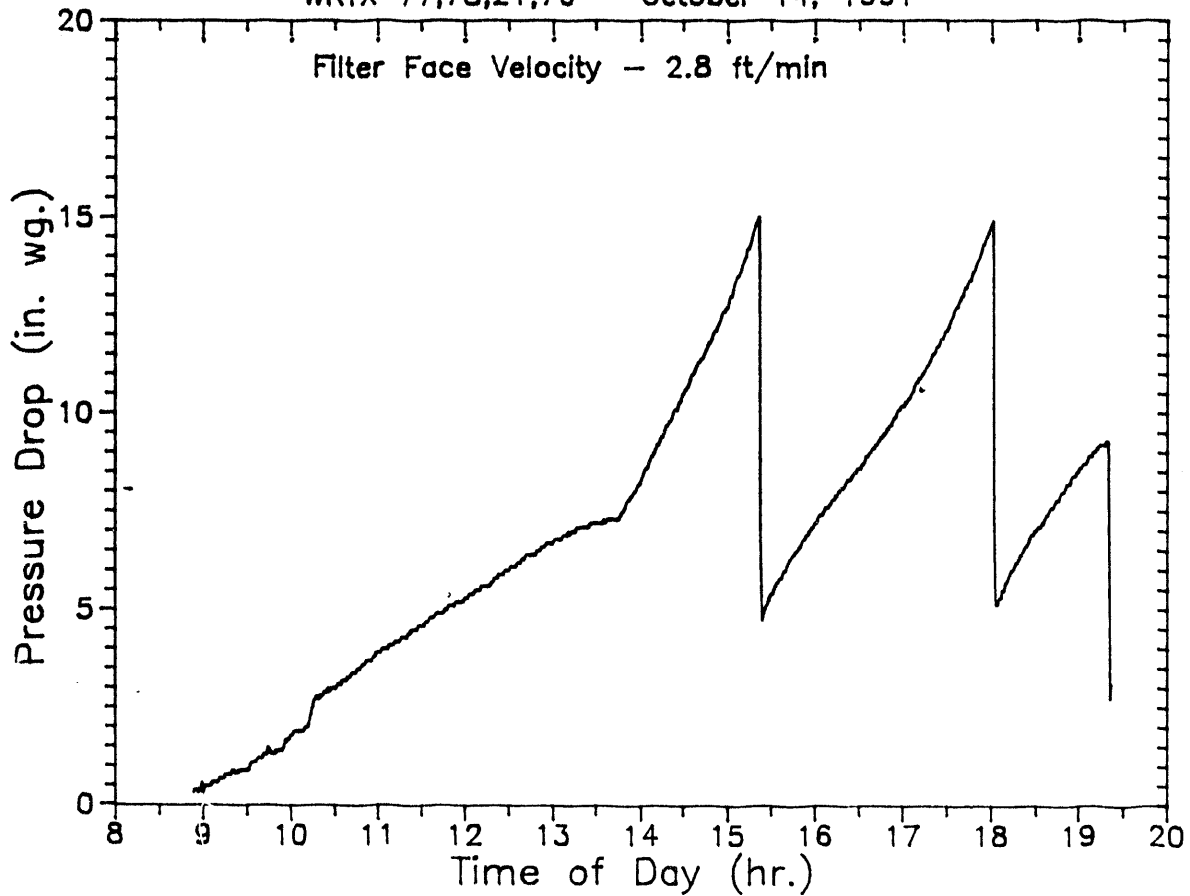
0723 Flame On system to temperature and pressure

1301 Dust not feeding due to electrical service disruption

1911 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 14, 1991



Operation Notes for October 14, 1991

delta-P Trigger = 15 in wc

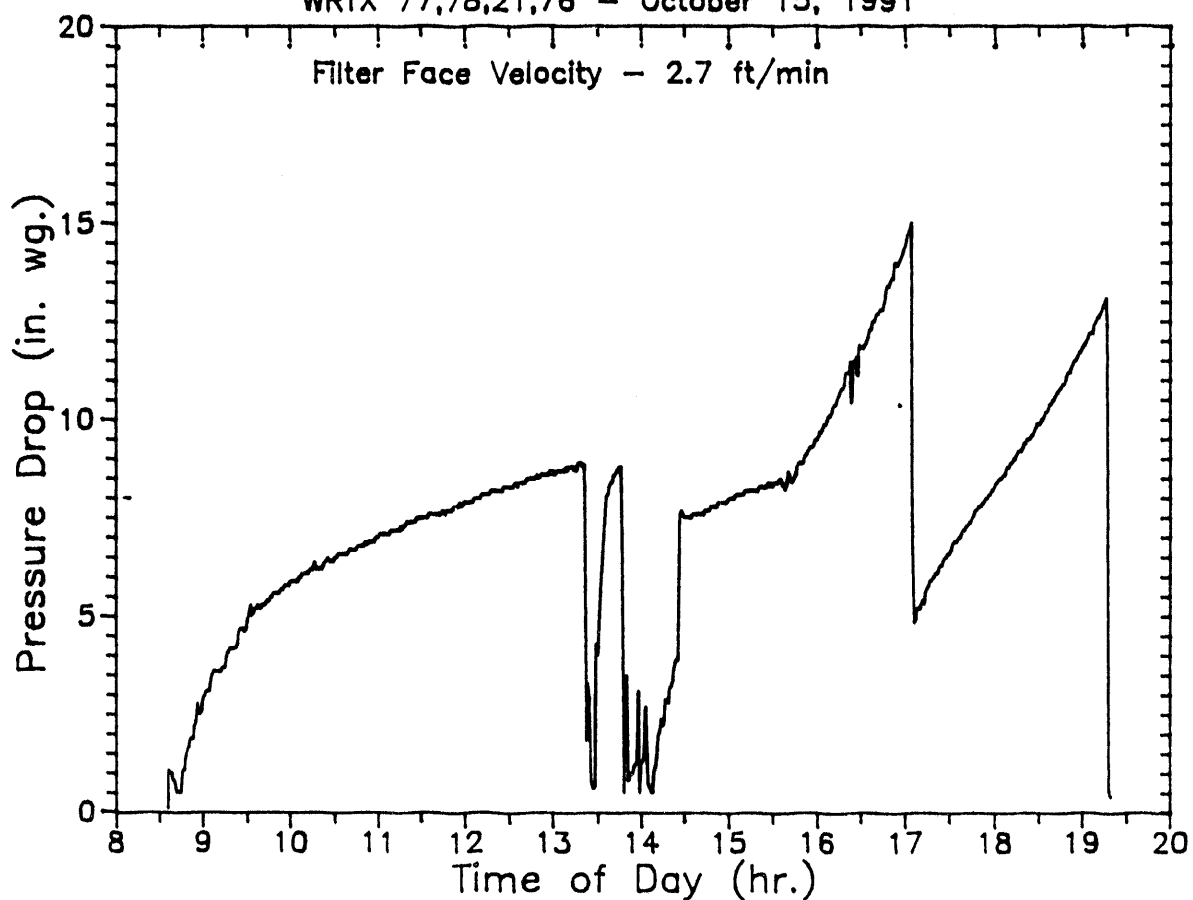
Pulse Cleaning - 310 psig/0.1 sec

0849 Flame On system to temperature and pressure

1920 Scheduled Shutdown

## Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 15, 1991



### Operation Notes for October 14, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 320 psig/0.1 sec

0835 Flame On system to temperature and pressure

1320 Flame Out, Unscheduled

1323 Flame On

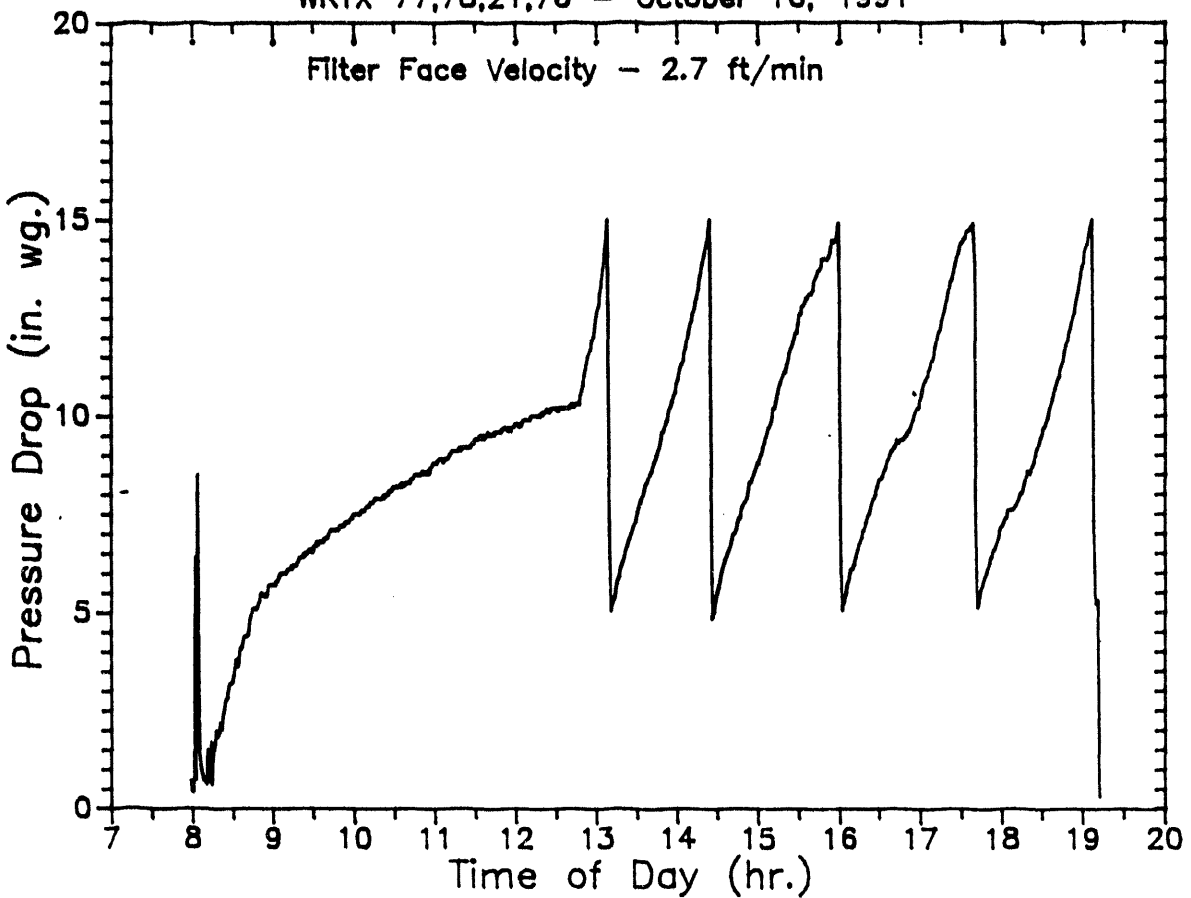
1346 Flame Out, Unscheduled, Fire Eye Cleaned

1402 Flame On

1915 Scheduled Shutdown

## Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 16, 1991



### Operation Notes for October 16, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 318 psig/0.1 sec

0756 Flame On system to temperature and pressure

0801 Flame Out, Unscheduled

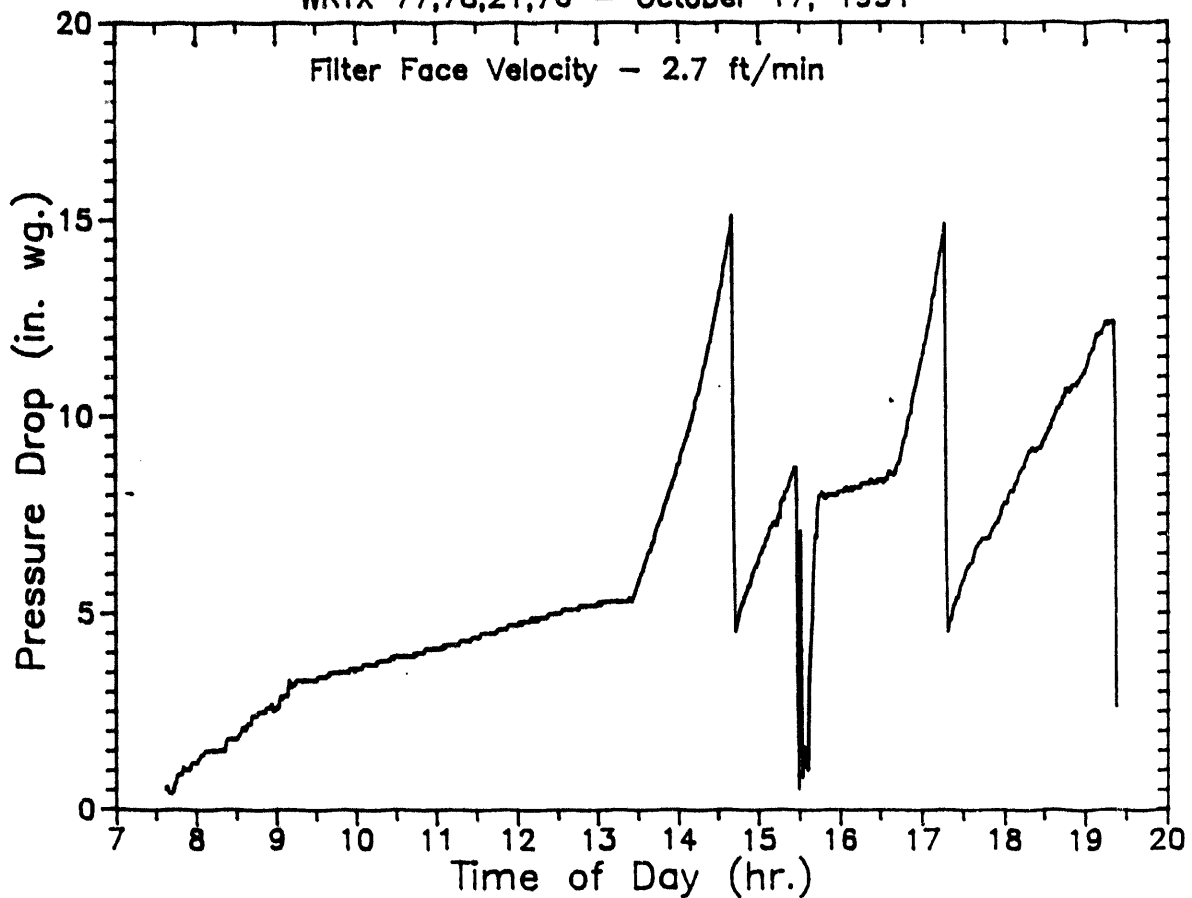
0803 Flame On

1258 Dust Feed increased to 2000 ppm Concentration In

1910 Scheduled Shutdown

## Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 17, 1991



### Operation Notes for October 17, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 320 psig/0.1 sec

0732 Flame On system to temperature and pressure

1526 Flame Out, Unscheduled

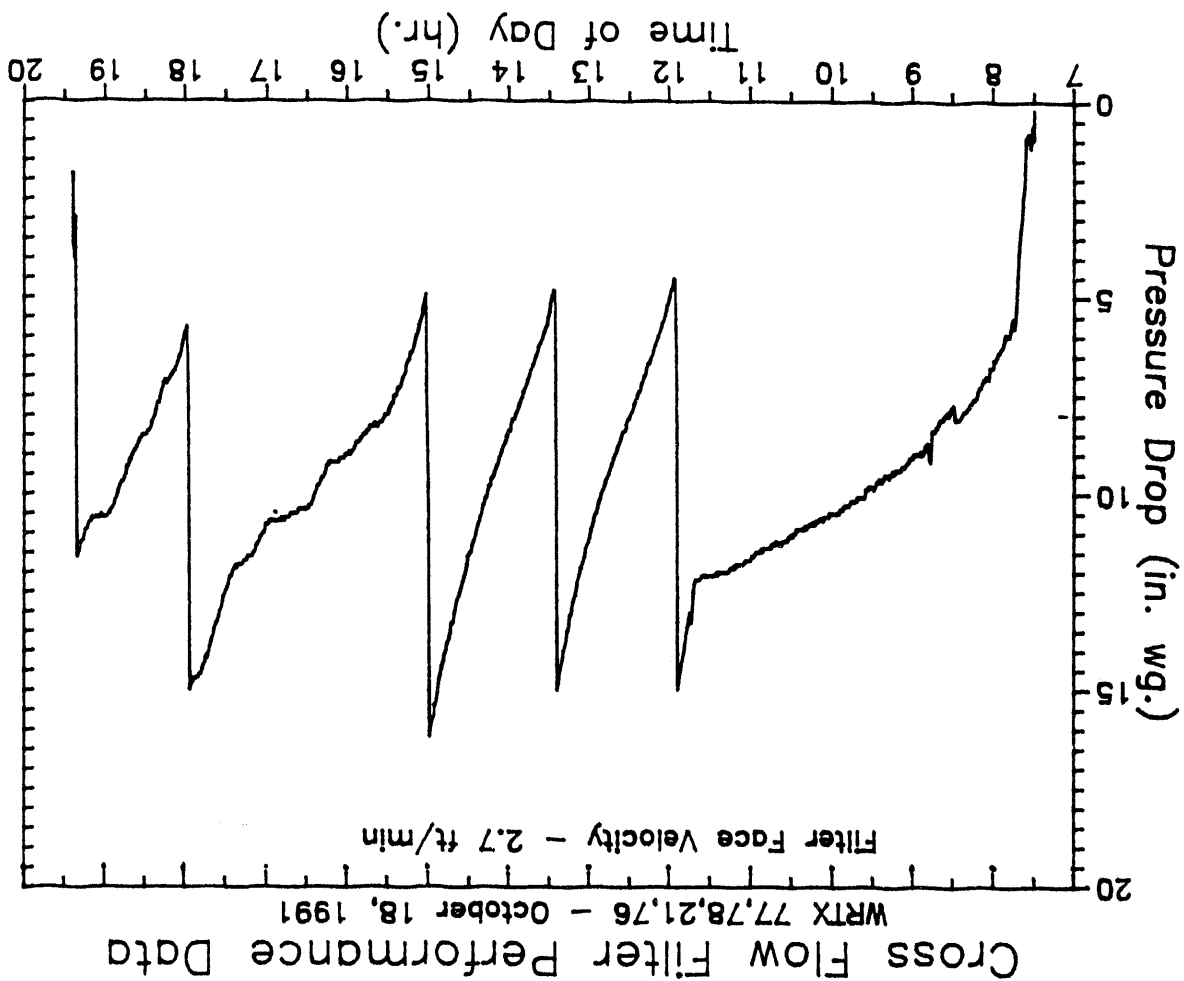
1530 Flame On

1716 Dust not feeding properly

1920 Scheduled Shutdown

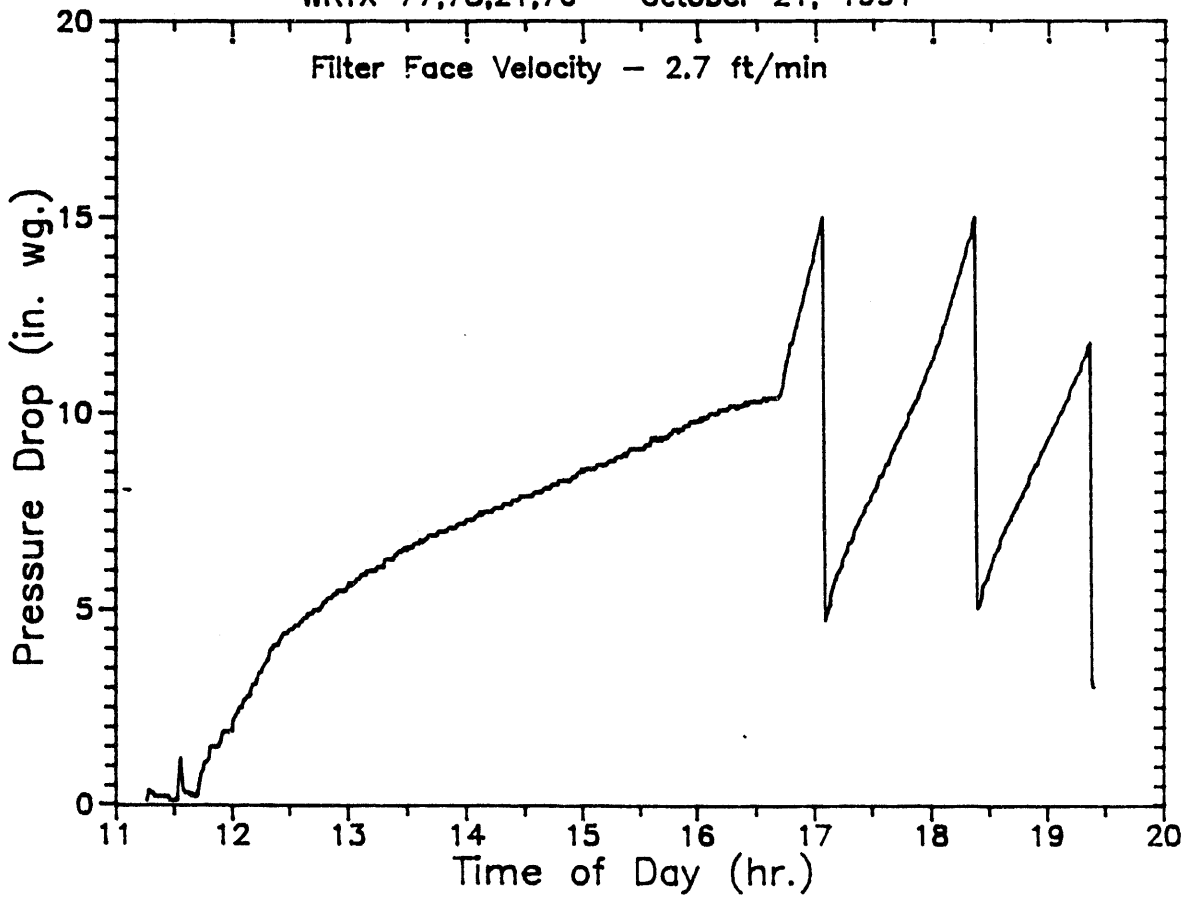


Operation Notes for October 18, 1991  
delta-P Trigger = 15 in wc  
Pulse Cleaning - 320 psig/0.1 sec  
0730 Flame On system to temperature and pressure  
1457-1920 Dust not feeding properly  
1920 Scheduled Shutdown



# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 21, 1991



## Operation Notes for October 21, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 320 psig/0.1 sec

1114 Flame On system to temperature and pressure

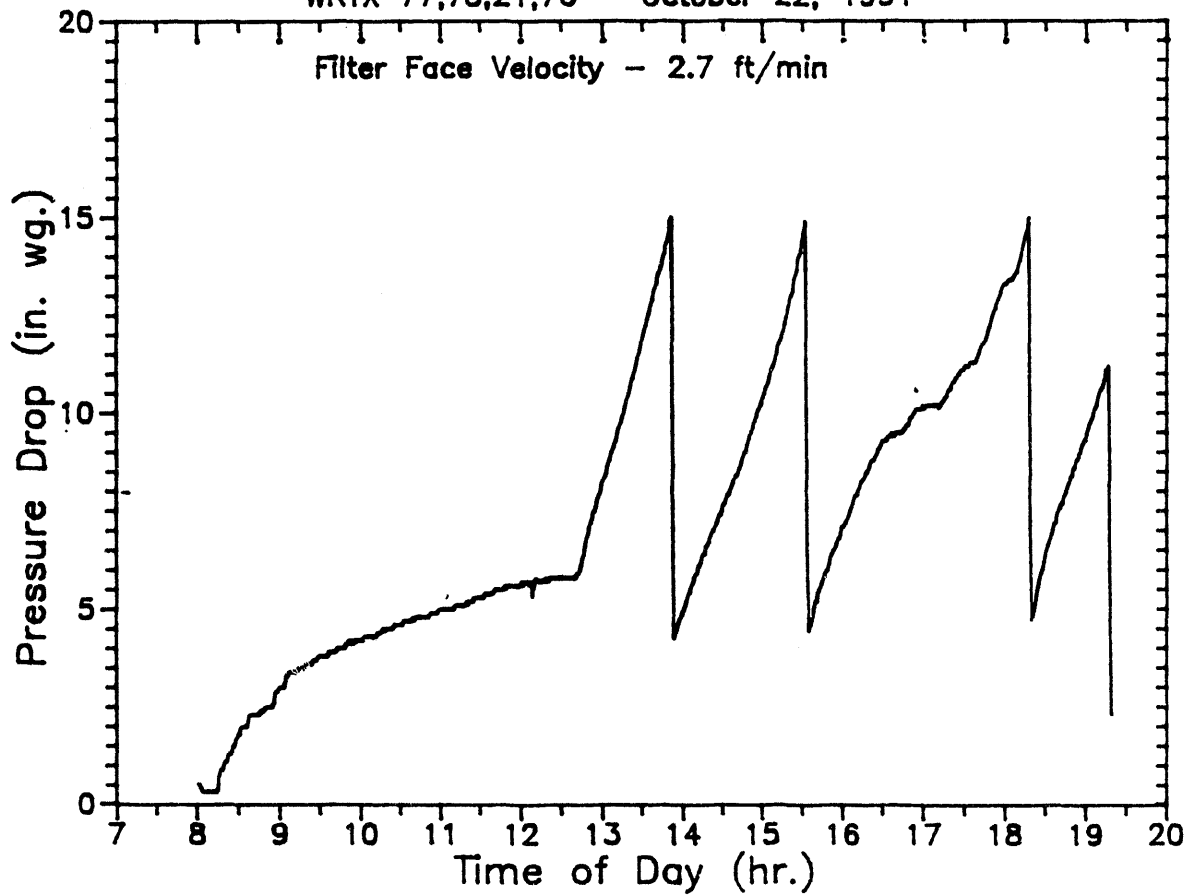
1129 Flame Out, Unscheduled, over pressure

1132 Flame On

1920 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 22, 1991



Operation Notes for October 22, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 320 psig/0.1 sec

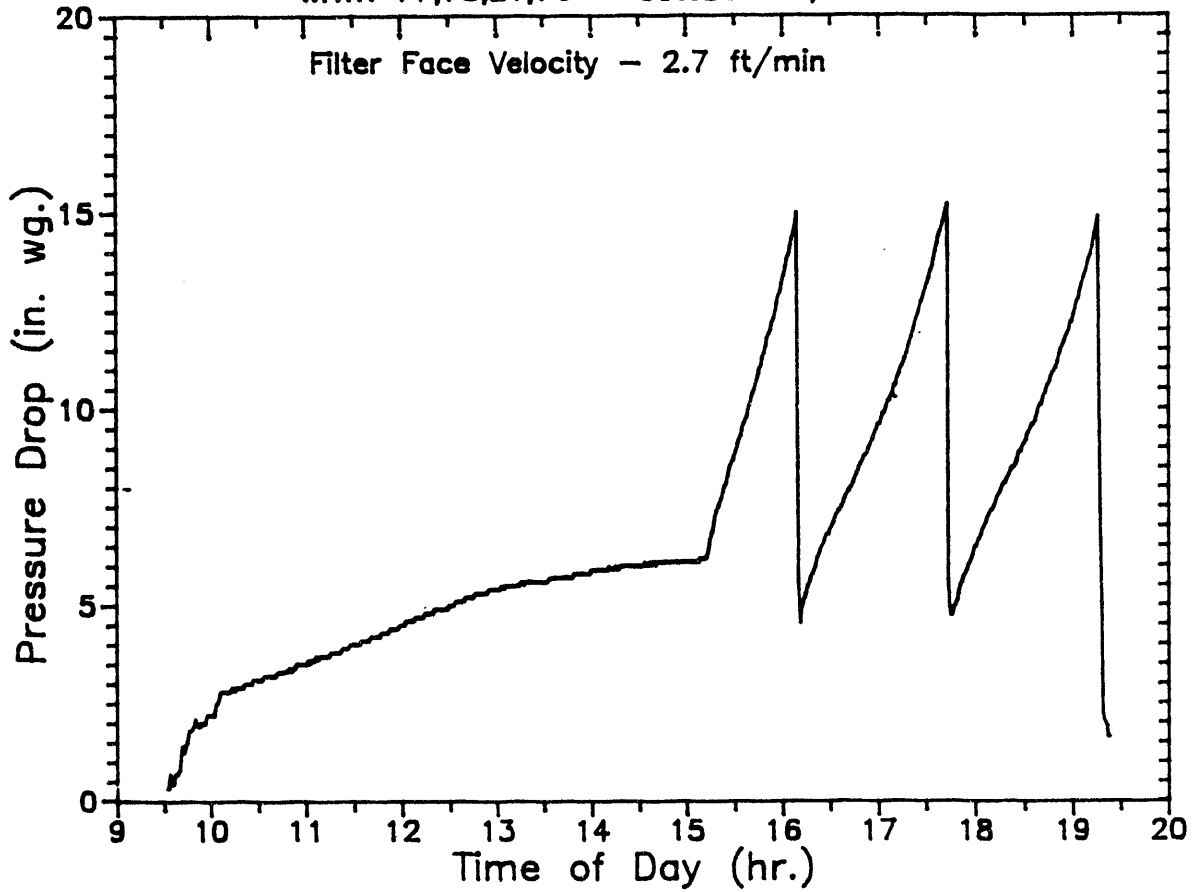
0758 Flame On system to temperature and pressure

1633-1800 Dust not feeding properly

1918 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 23, 1991



## Operation Notes for October 23, 1991

delta-P Trigger = 15 in wc

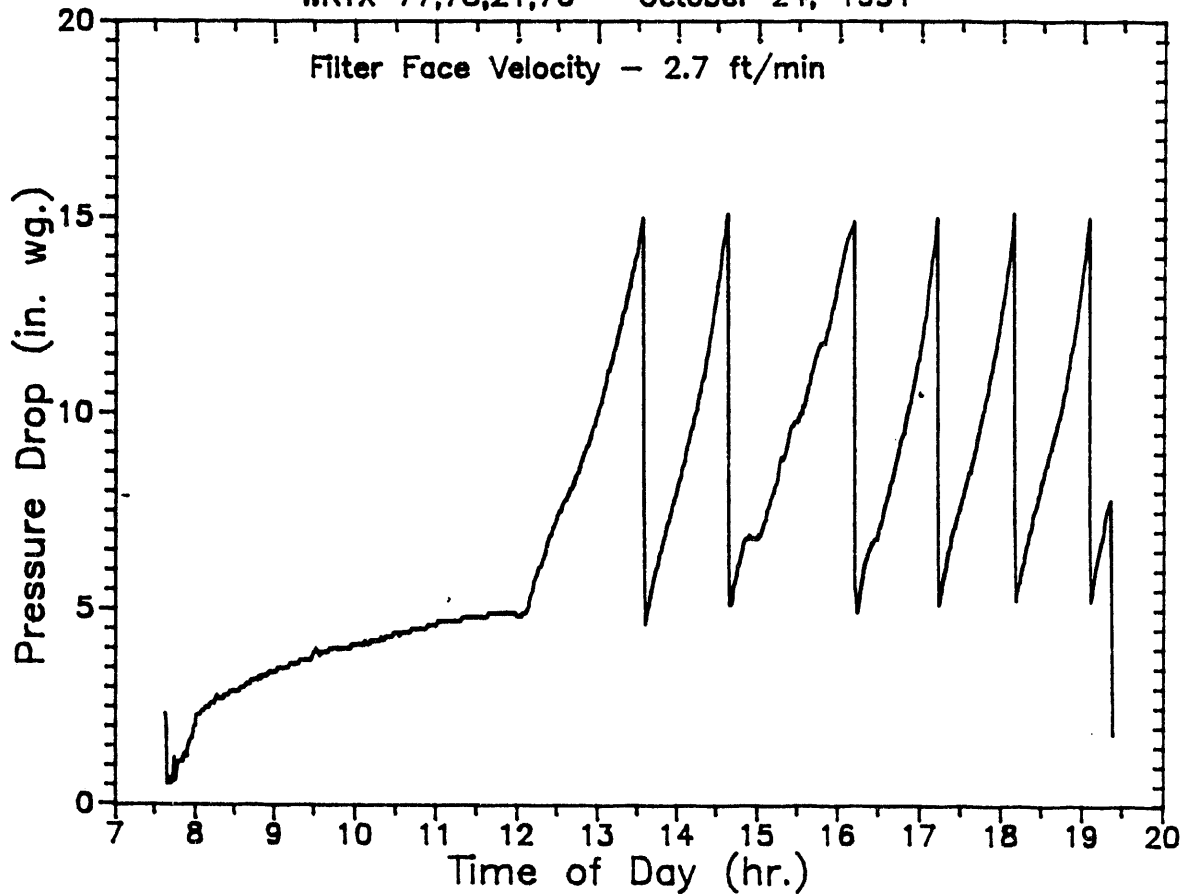
Pulse Cleaning - 320 psig/0.1 sec

0930 Flame On system to temperature and pressure

1919 Scheduled Shutdown

## Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 24, 1991



### Operation Notes for October 24, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 330 psig/0.1 sec

0735 Flame On system to temperature and pressure

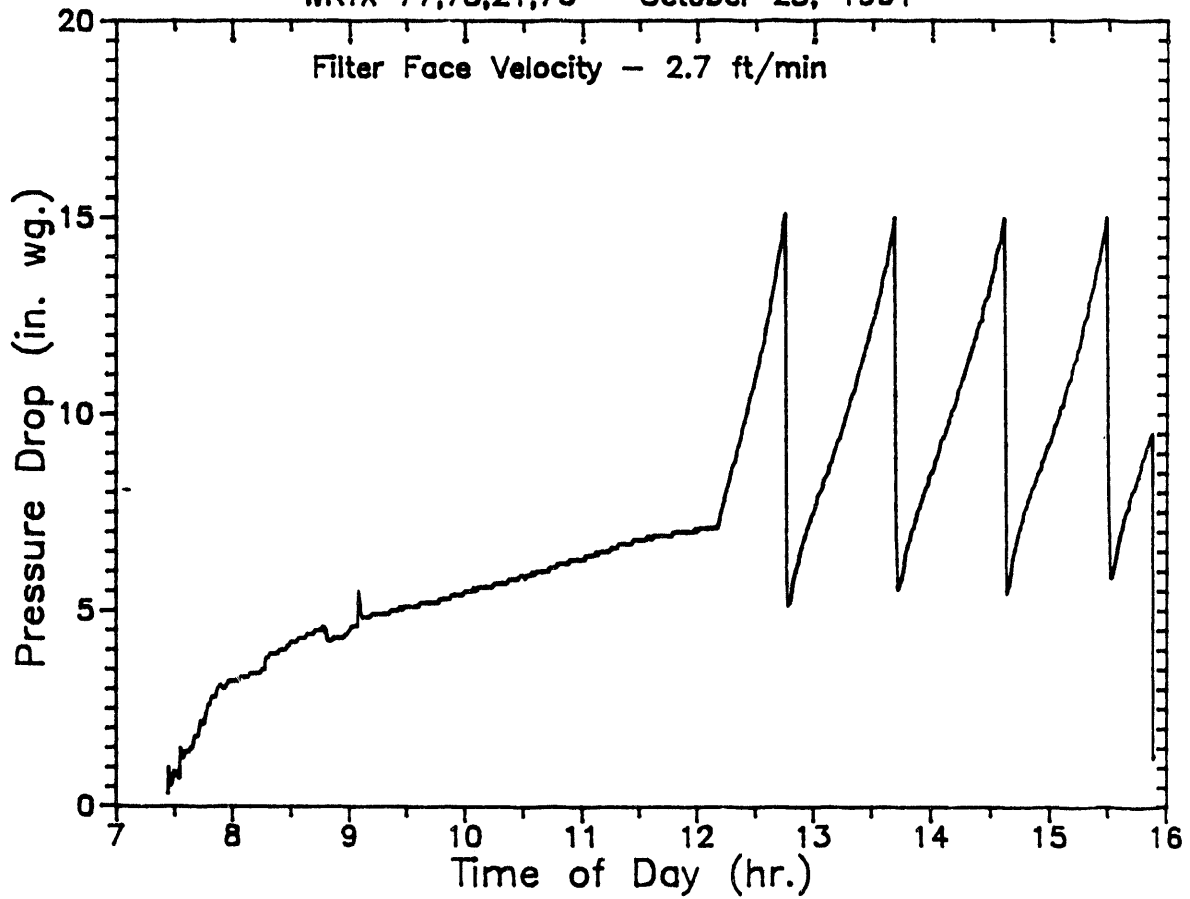
1334 Dust Concentration in increased to 3000 ppm

1450 Dust not feeding properly

1920 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 25, 1991



Operation Notes for October 25, 1991

delta-P Trigger = 15 in wc

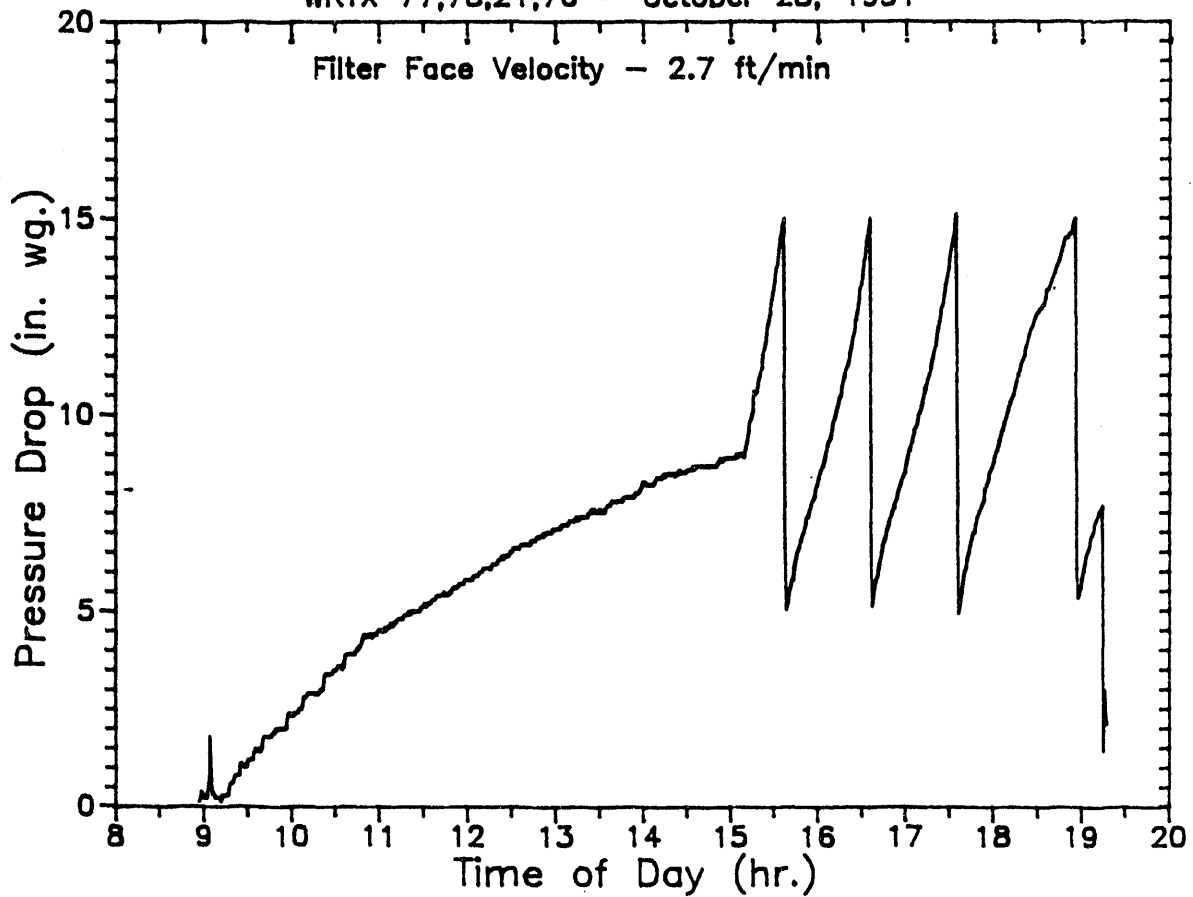
Pulse Cleaning - 320 psig/0.1 sec

0724 Flame On system to temperature and pressure

1550 Scheduled Shutdown

## Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 28, 1991



### Operation Notes for October 28, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 320 psig/0.1 sec

0858 Flame On system to temperature and pressure

0903 Flame Out, Unscheduled

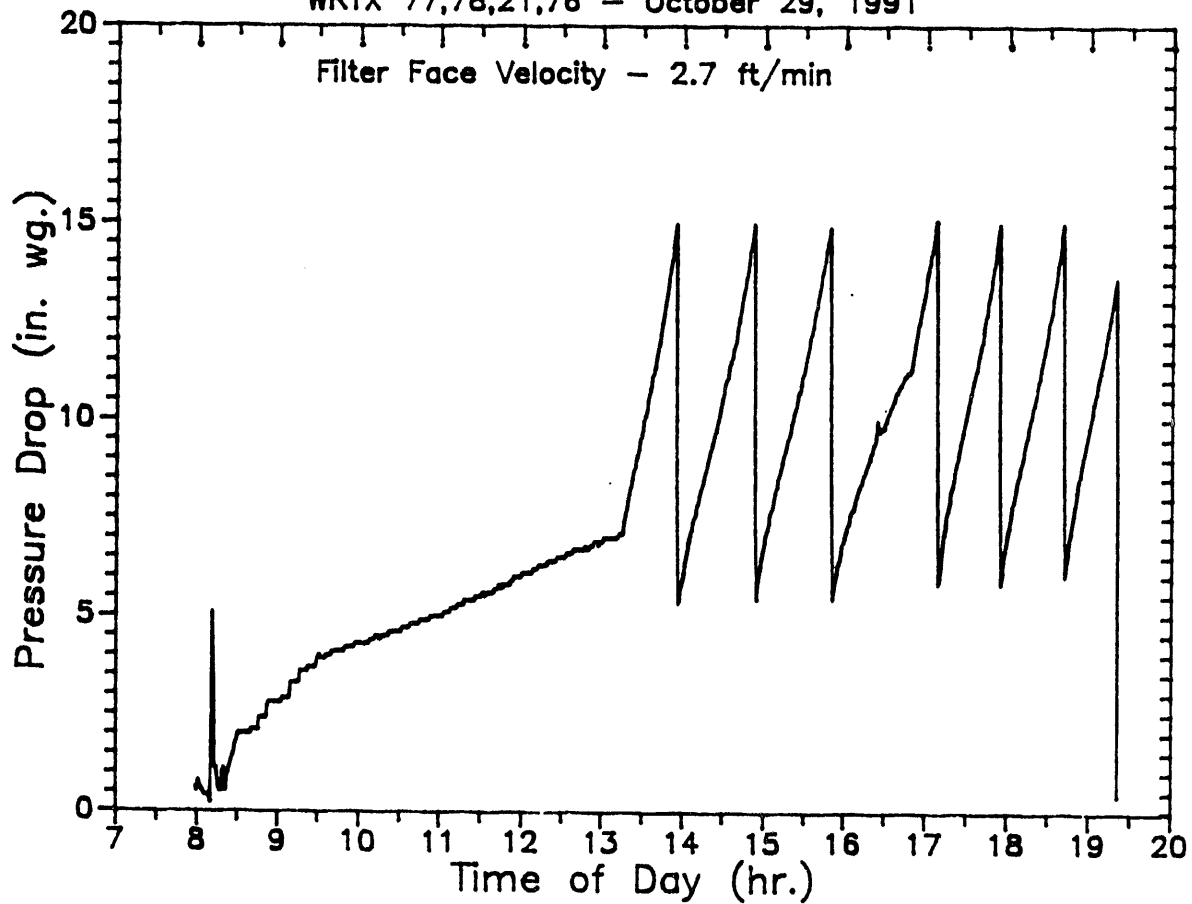
0905 Flame On

1835 Dust not feeding properly

1915 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 29, 1991



Operation Notes for October 29, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 320 psig/0.1 sec

0759 Flame On system to temperature and pressure

0810 Flame Out, Unscheduled

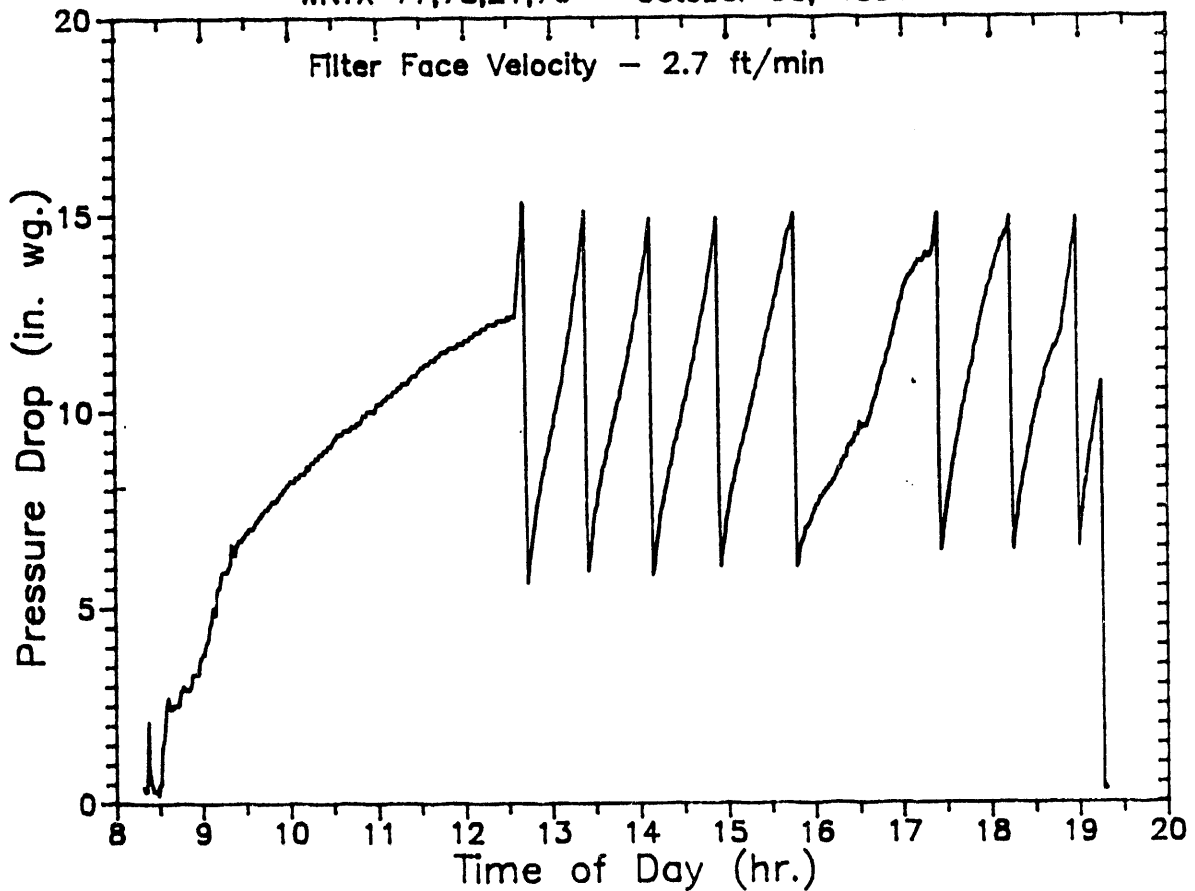
0813 Flame On

1920 Scheduled Shutdown



# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 30, 1991



## Operation Notes for October 30, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 325 psig/0.1 sec

0816 Flame On system to temperature and pressure

0821 Flame Out, Unscheduled

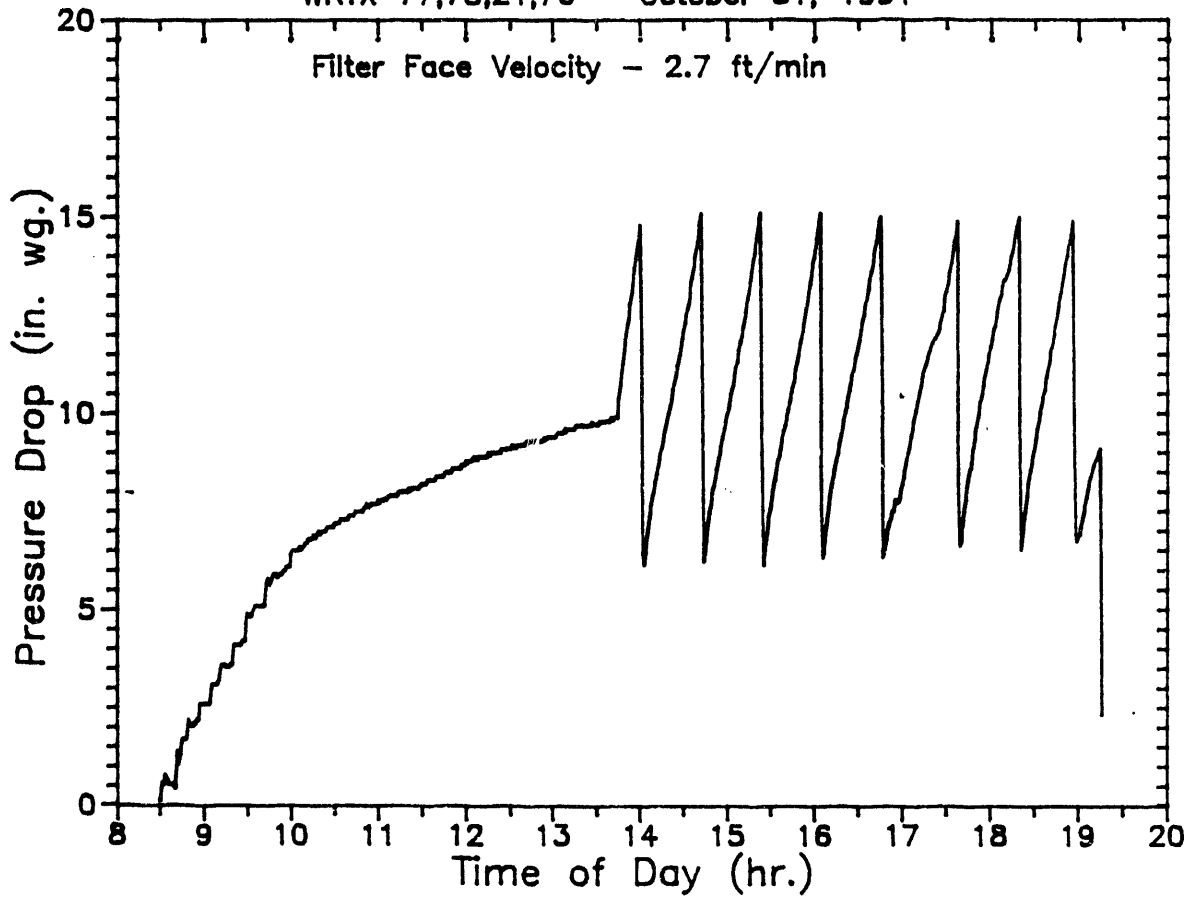
0823 Flame On

1630 Dust not feeding properly

1916 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - October 31, 1991



Operation Notes for October 31, 1991

delta-P Trigger = 15 in wc

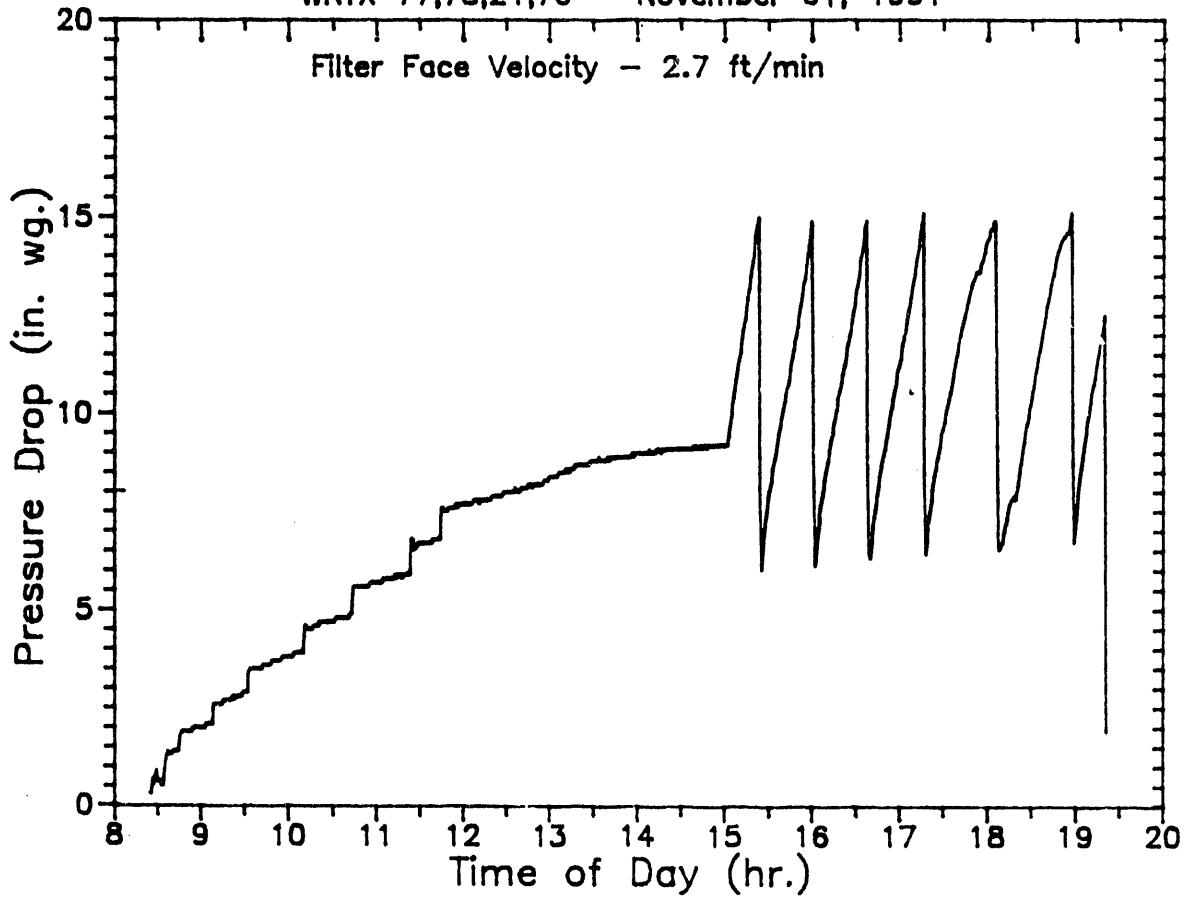
Pulse Cleaning - 328 psig/0.1 sec

0831 Flame On system to temperature and pressure

1916 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - November 01, 1991



Operation Notes for November 01, 1991

delta-P Trigger = 15 in wc

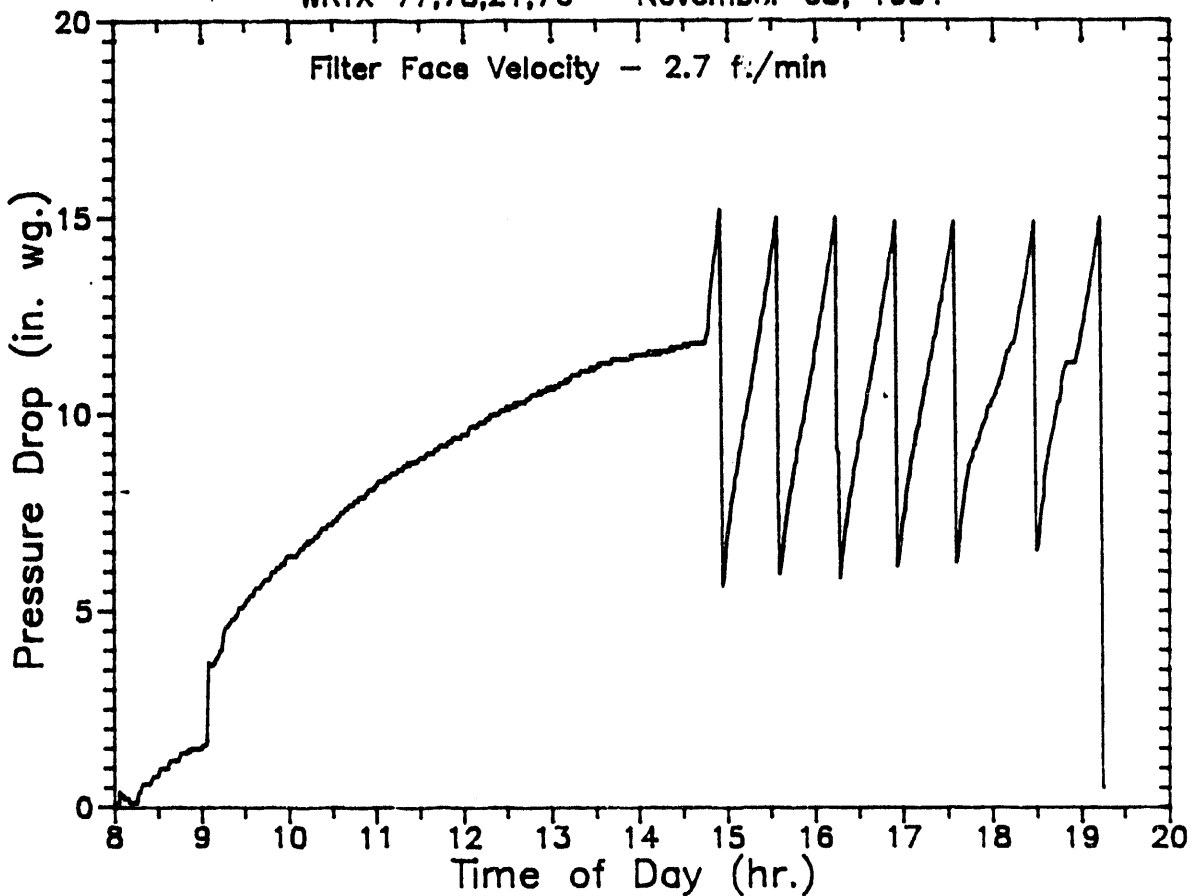
Pulse Cleaning - 330 psig/0.1 sec

0826 Flame On system to temperature and pressure

1920 Scheduled Shutdown

## Cross Flow Filter Performance Data

WRTX 77,78,21,76 - November 05, 1991



### Operation Notes for November 05, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 305 psig/0.1 sec

0803 Flame On system to temperature and pressure

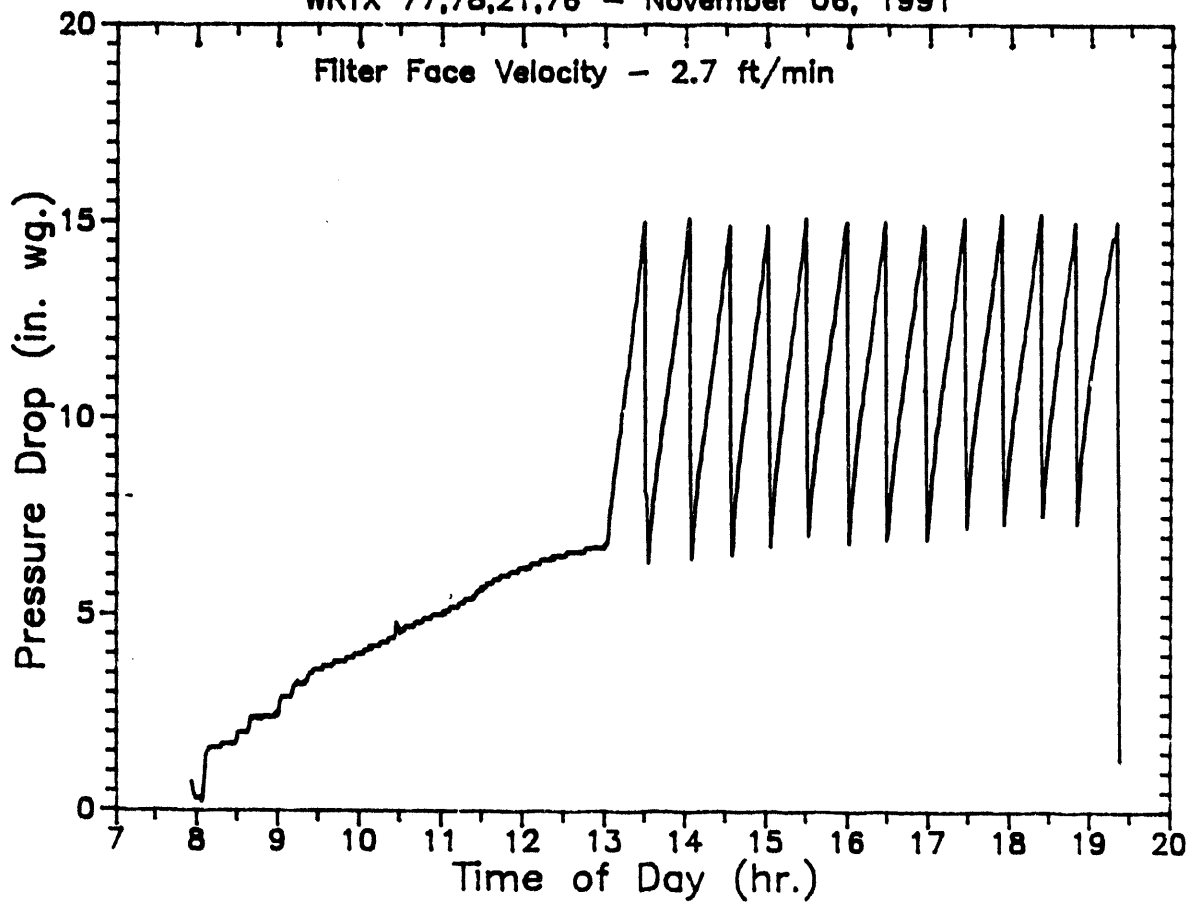
1813 Dust not feeding properly

1855 Dust not feeding properly

1913 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - November 06, 1991



Operation Notes for November 06, 1991

delta-P Trigger = 15 in wc

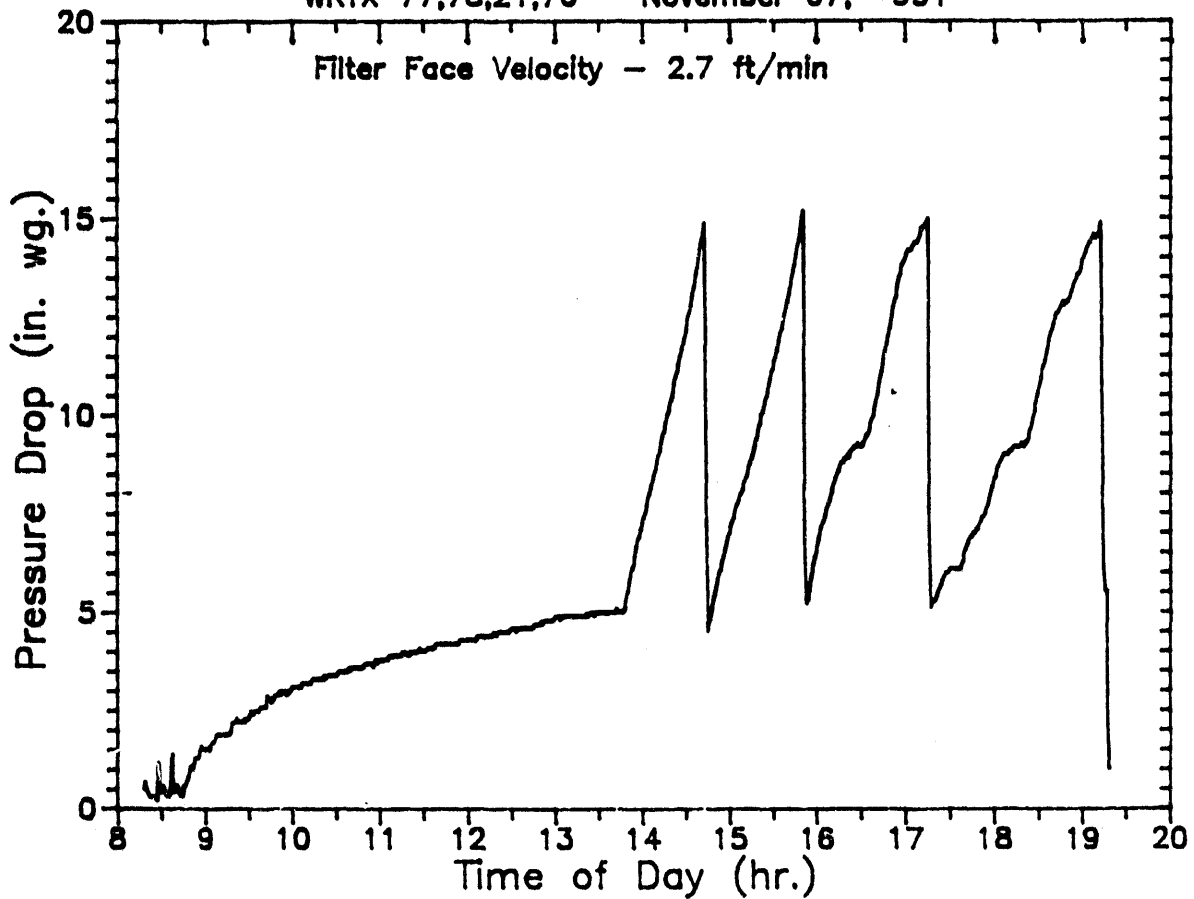
Pulse Cleaning - 305 psig/0.1 sec

0755 Flame On system to temperature and pressure

1922 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - November 07, 1991



Operation Notes for November 07, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 317 psig/0.1 sec

0818 Flame On system to temperature and pressure

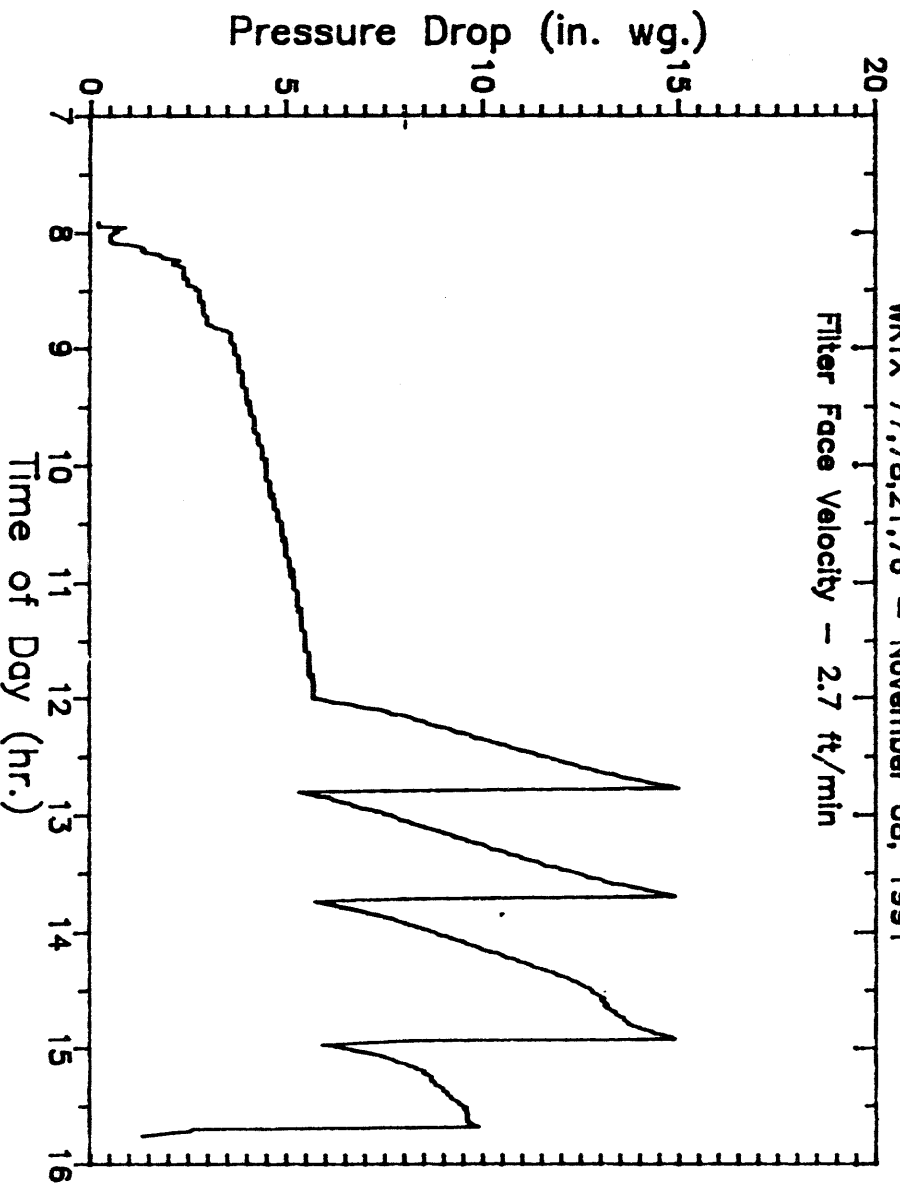
1551 - 1913 Dust not feeding properly

1917 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - November 08, 1991

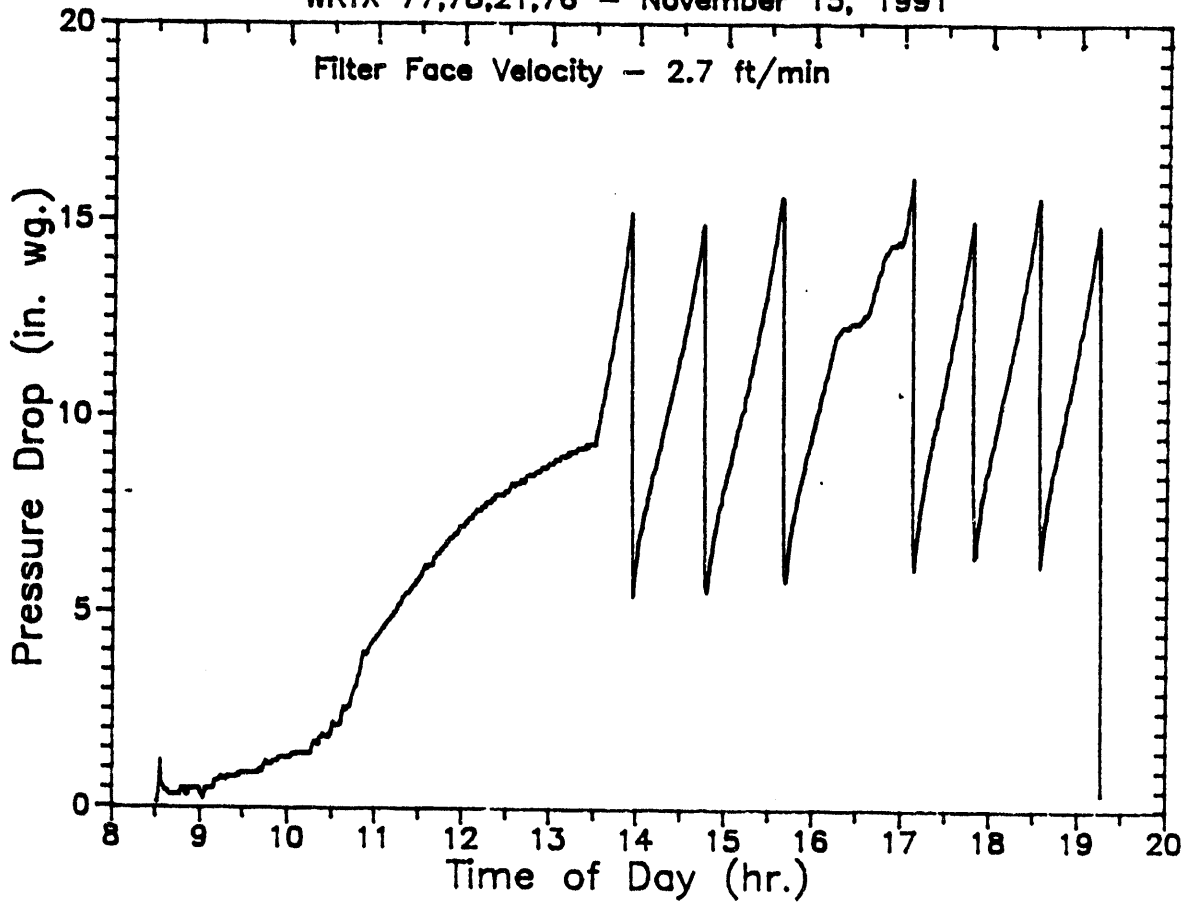
Filter Face Velocity - 2.7 ft/min



Operation Notes for November 08, 1991  
delta-P Trigger = 15 in wc  
Pulse Cleaning - 315 psig/0.1 sec  
0755 Flame On system to temperature and pressure  
1438 - 1542 Dust not feeding properly  
1542 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - November 15, 1991



## Operation Notes for November 15, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 305 psig/0.1 sec

0832 Flame On system to temperature and pressure

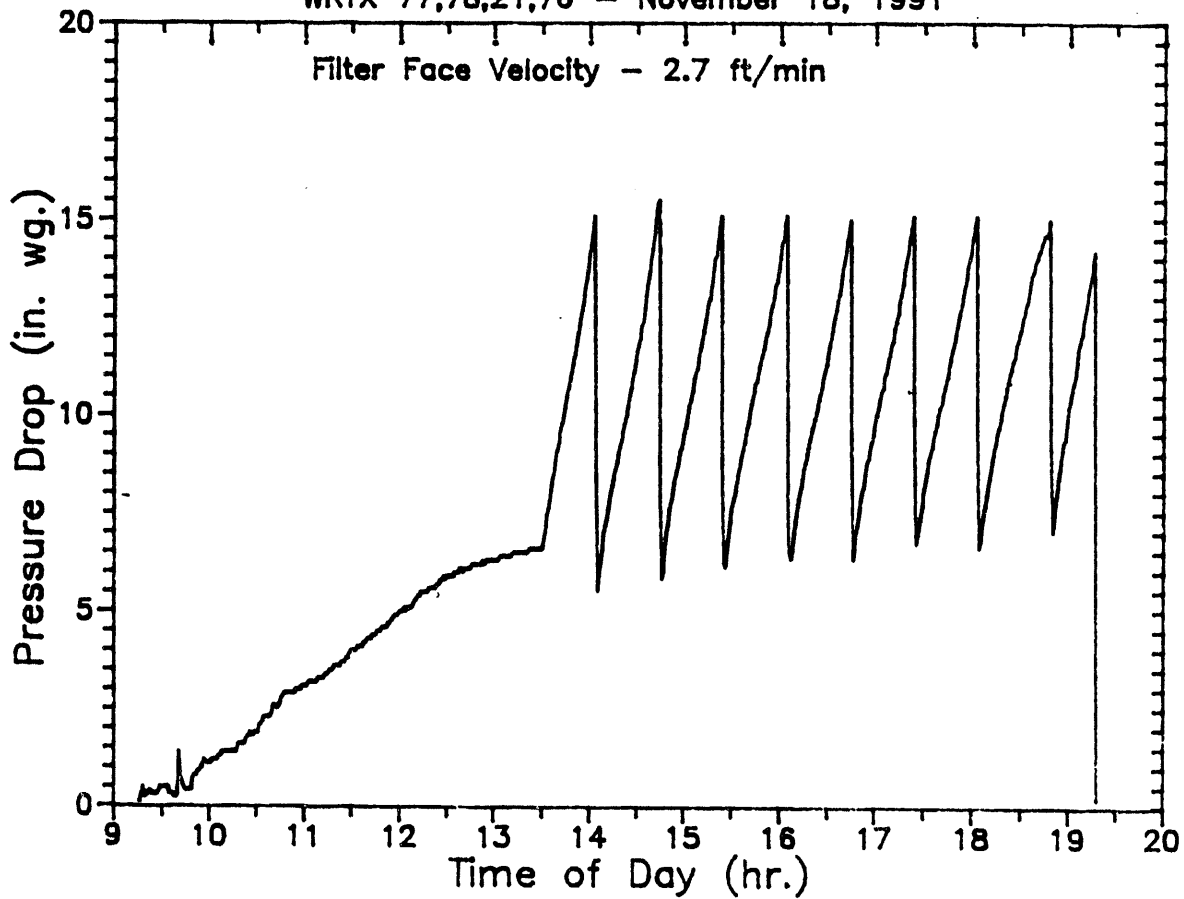
1550 Dust not feeding properly

1912 Scheduled Shutdown



# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - November 18, 1991



## Operation Notes for November 18, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 305 psig/0.1 sec

0916 Flame On system to temperature and pressure

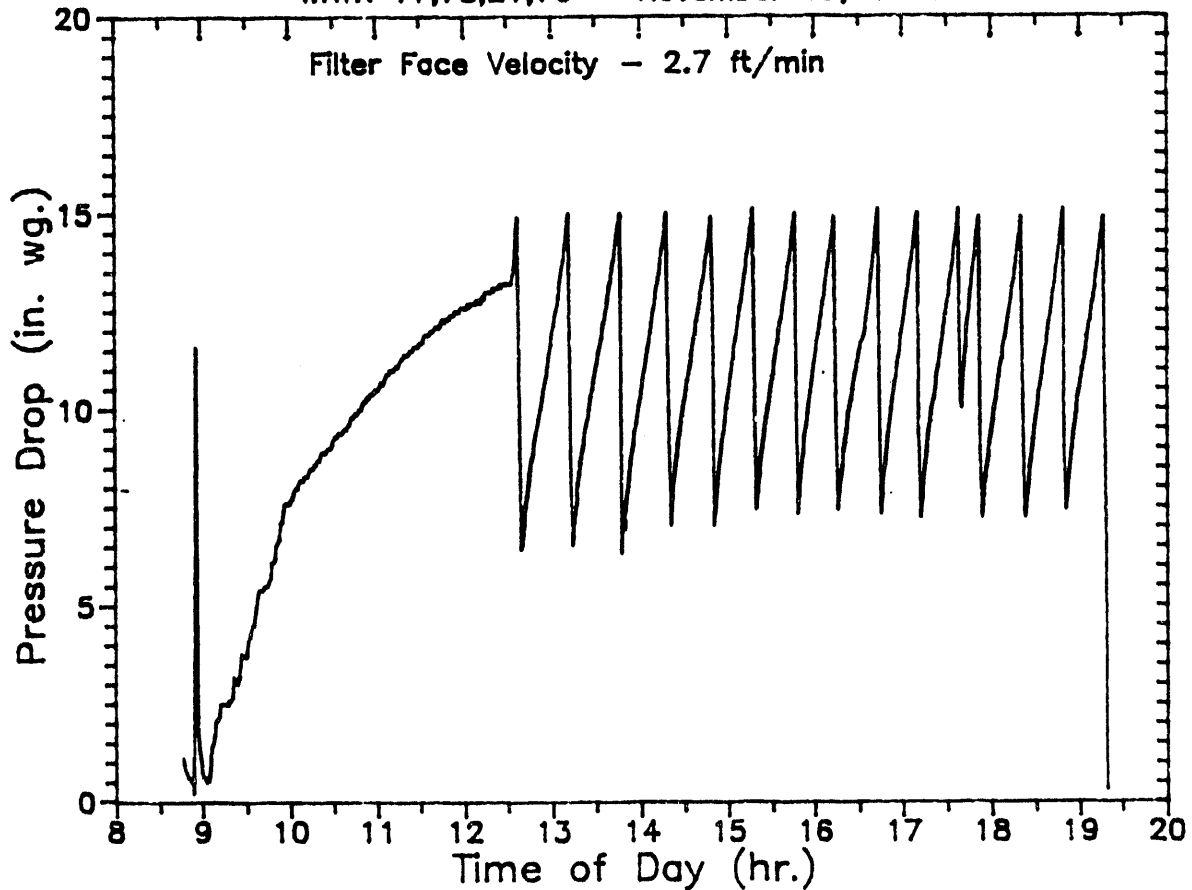
0935 Flame Out, Unscheduled

0938 Flame On

1916 Scheduled Shutdown

## Cross Flow Filter Performance Data

WRTX 77,78,21,76 - November 19, 1991



### Operation Notes for November 19, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 305 psig/0.1 sec

0842 Flame On system to temperature and pressure

0852 Flame Out, Unscheduled

0855 Flame On

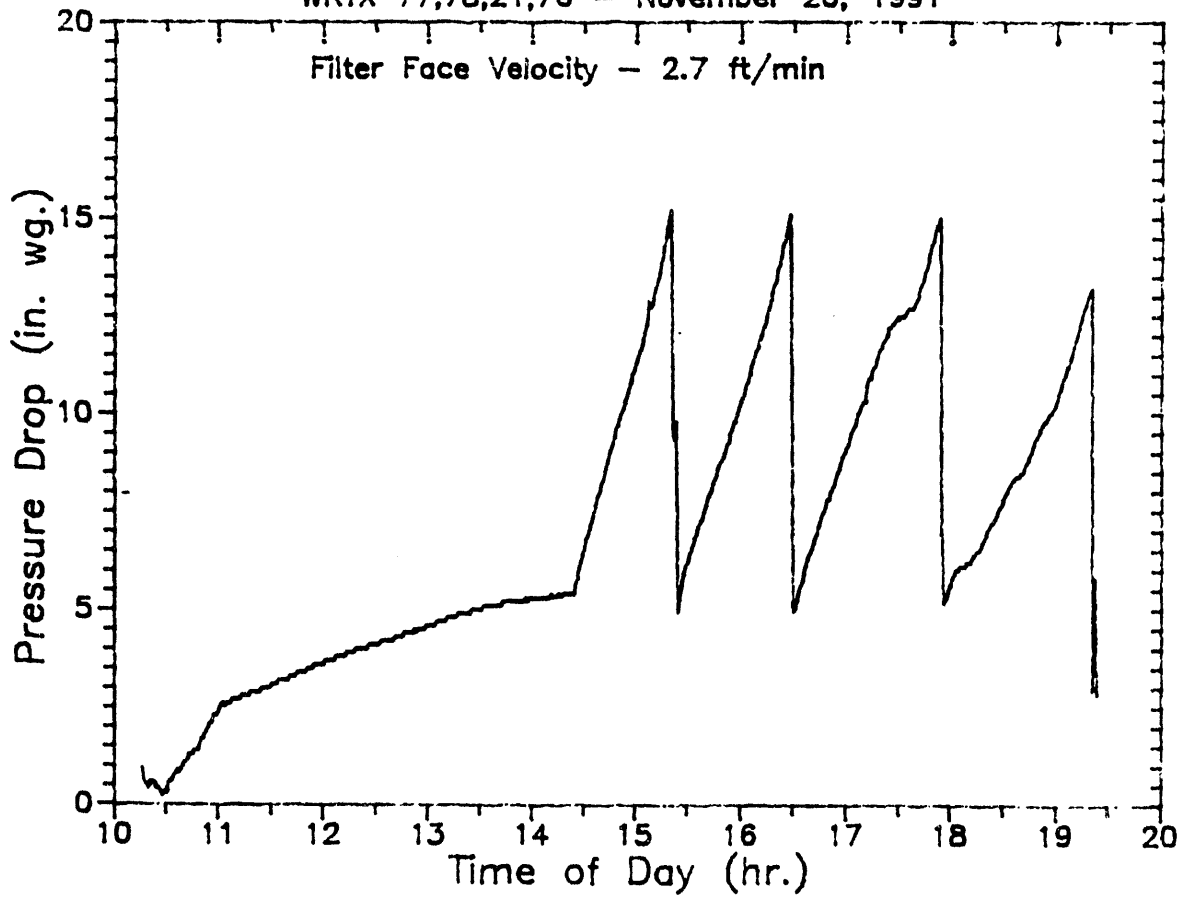
1630 Blow back tank pressure increased to 320 psig

1736 Plenum selector switch did not completely engage

1916 Scheduled Shutdown

# Cross Flow Filter Performance Data

WRTX 77,78,21,76 - November 20, 1991



Operation Notes for November 20, 1991

delta-P Trigger = 15 in wc

Pulse Cleaning - 320 psig/0.1 sec

1014 Flame On system to temperature and pressure

1018 Flame Out, Unscheduled

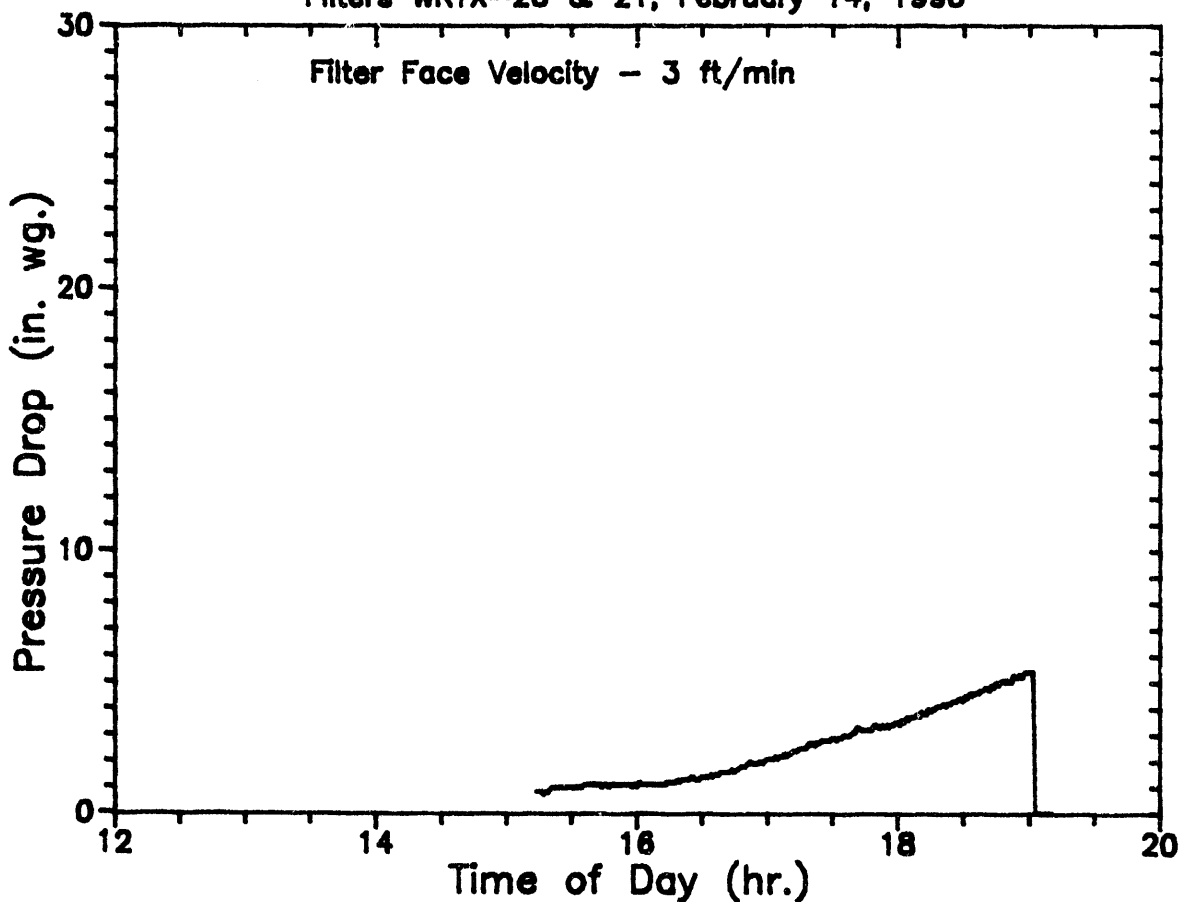
1020 Flame On

1920 Scheduled Shutdown

APPENDIX H

FILTER PRESSURE DROP TRACES FROM SELECTED  
TEST PERIODS DURING GASIFIER SIMULATOR TESTING

Filter Performance Data  
Filters WRTX-20 & 21, February 14, 1990



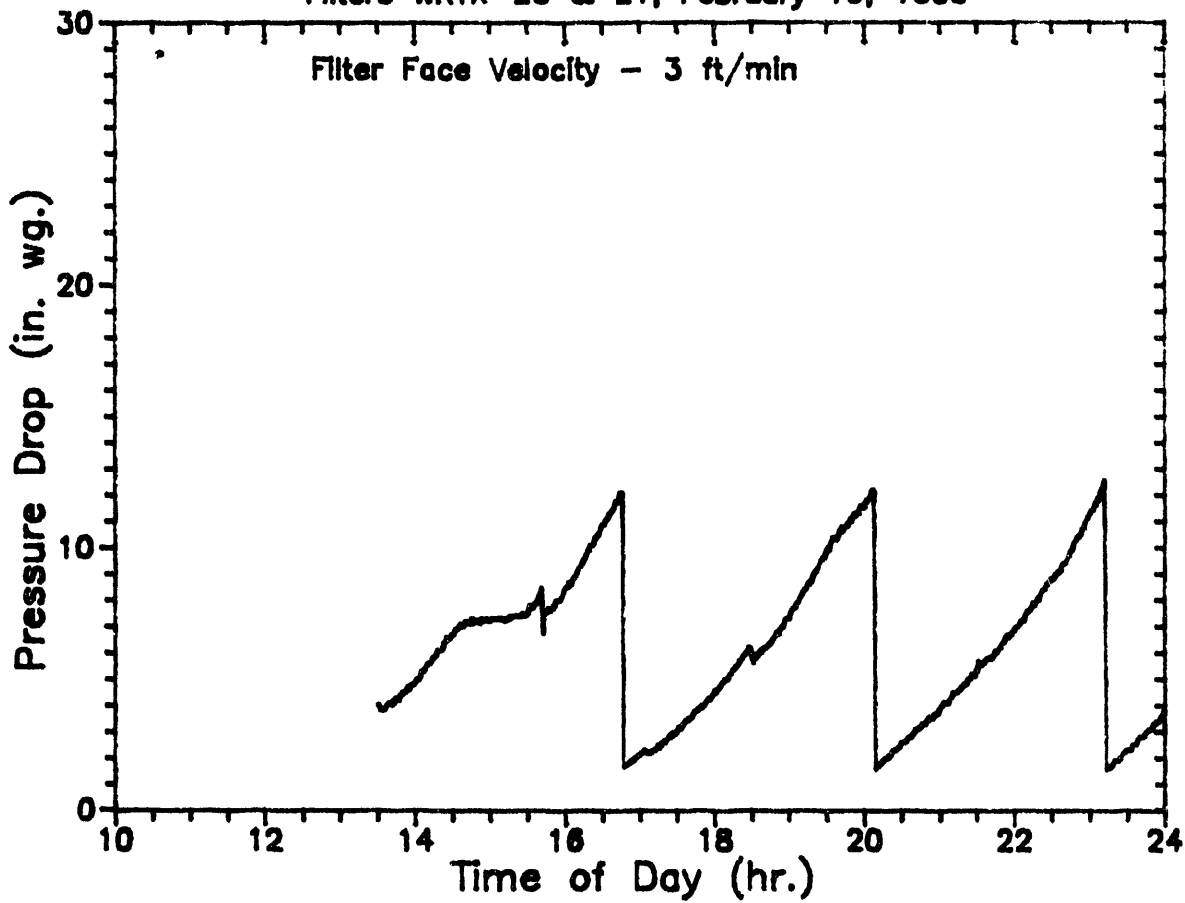
Operation Notes for February 14, 1990:

Start of testing in recirculating gas test loop

Dust - Texaco Char

Pulse Cleaning - 200 psig/0.1 sec

Filter Performance Data  
Filters WRTX-20 & 21, February 19, 1990



Operation Notes for February 19, 1990:

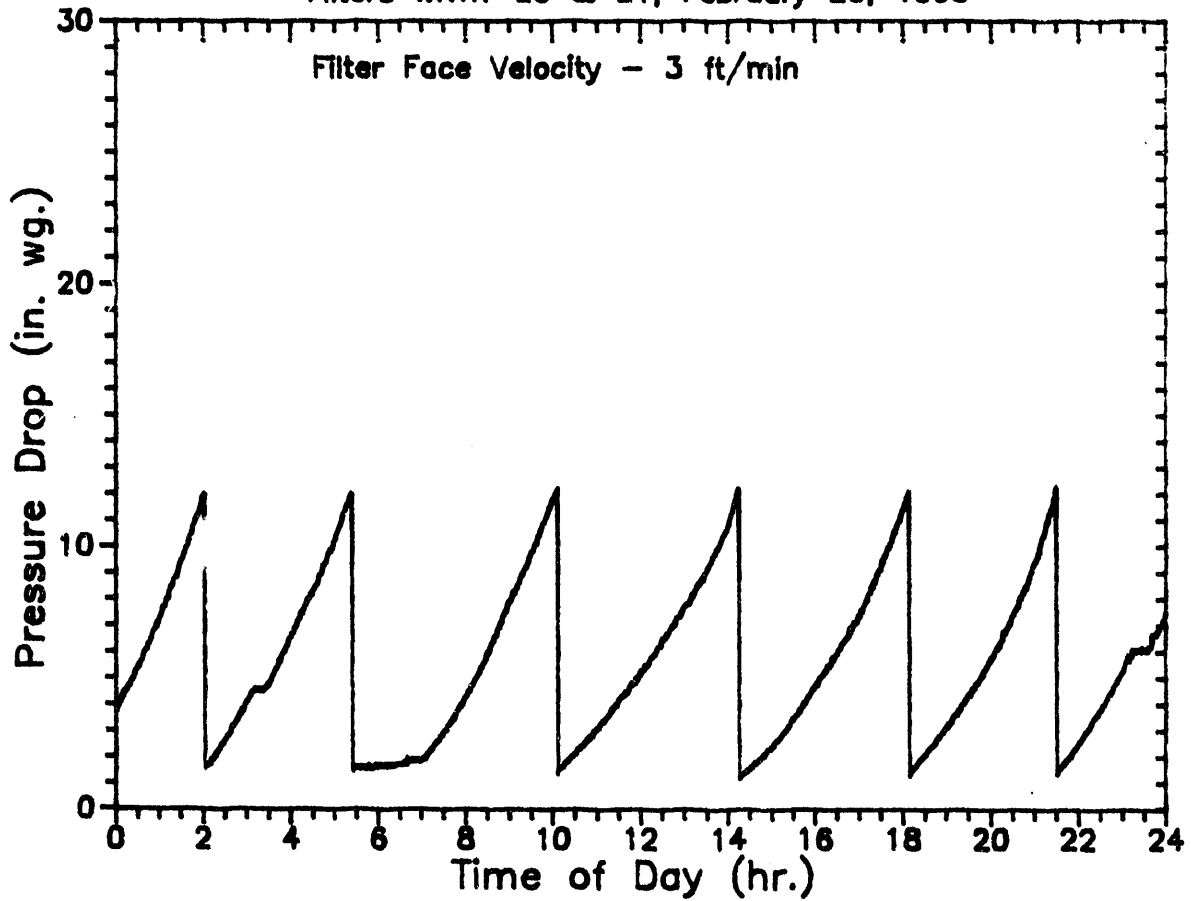
Start of week long test

$\Delta P$  Trigger = 12.0" WC

Pulse Cleaning - 198 psig/0.1 sec

# Filter Performance Data

Filters WRTX-20 & 21, February 20, 1990



Operation Notes for February 20, 1990:

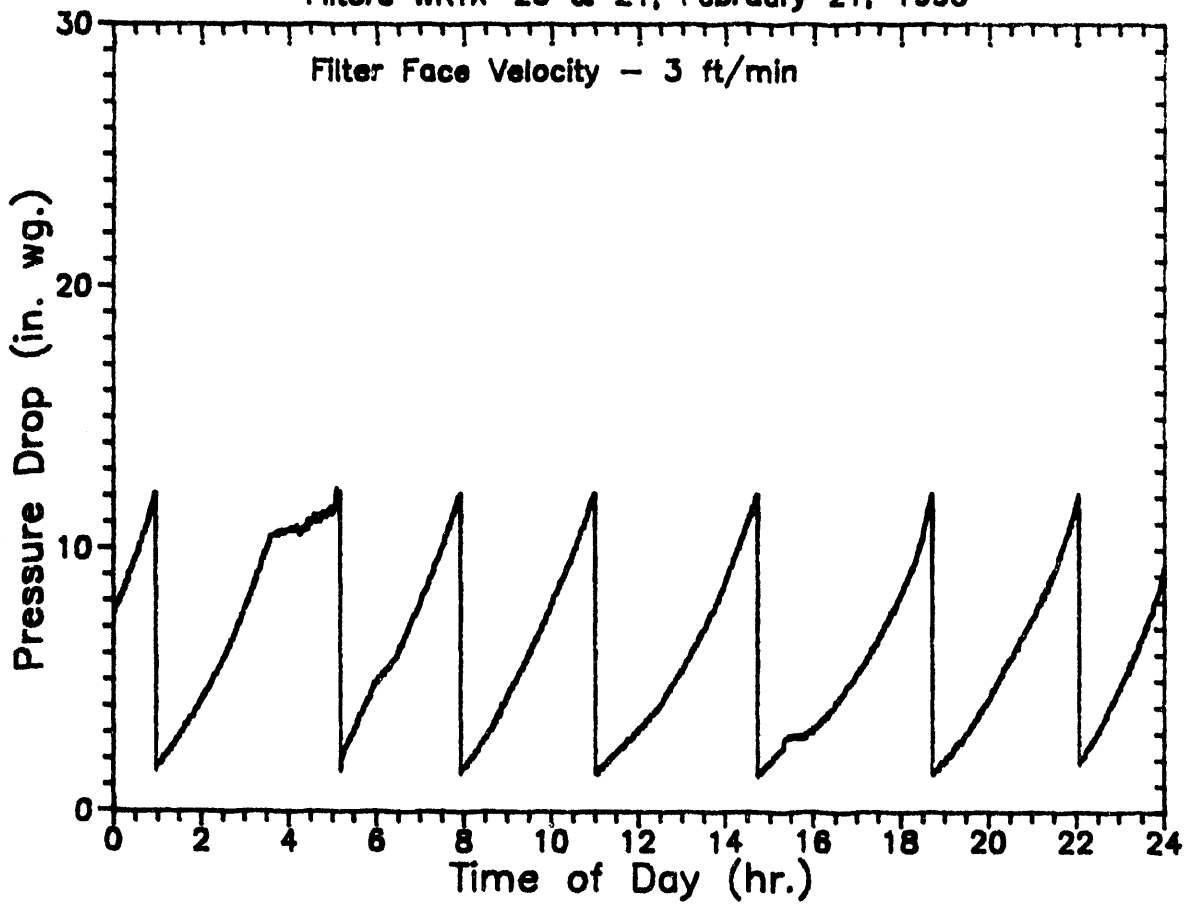
0600 Dust Added

$\Delta P$  Trigger = 12.0" WC

Pulse Cleaning - 195 psig/0.1 sec

# Filter Performance Data

Filters WRTX-20 & 21, February 21, 1990



Operation Notes for February 21, 1990:

0340 Dust Feed off

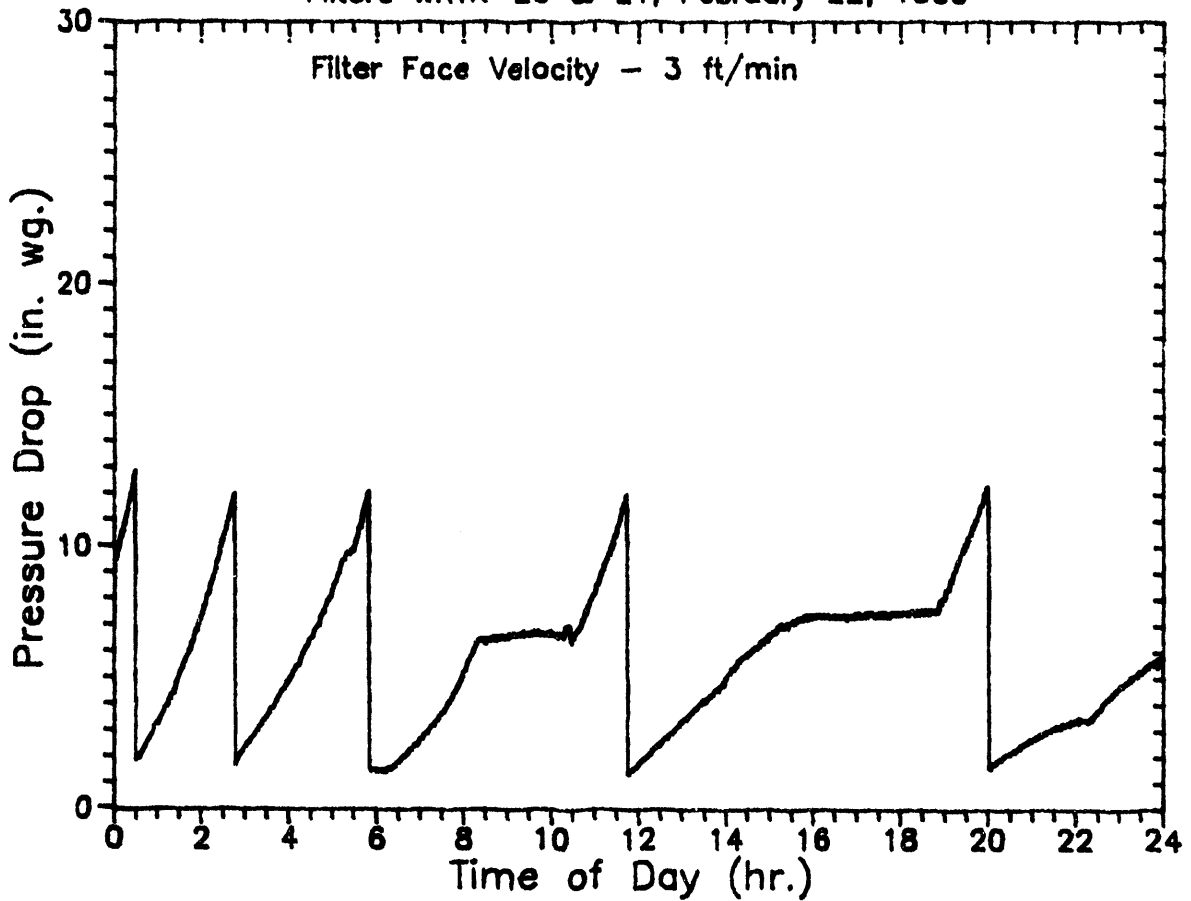
0430 Dust Feed on

$\Delta P$  Trigger = 12.0" WC

Pulse Cleaning - 198 psig/0.1 sec



Filter Performance Data  
Filters WRTX-20 & 21, February 22, 1990



Operation Notes for February 22, 1990:

0830 Dust Added

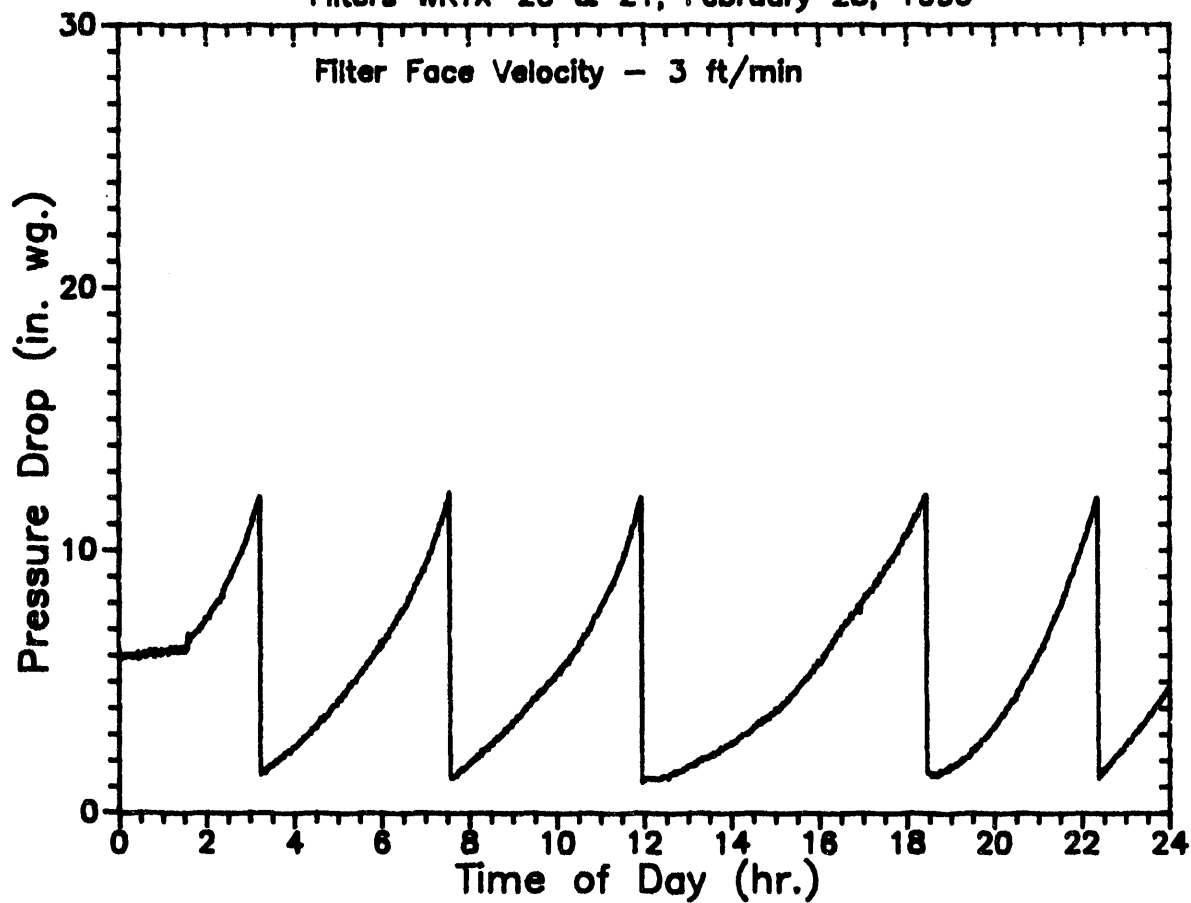
1530 Dust Feed Motor failure

$\Delta P$  Trigger = 12.0" WC

Pulse Cleaning - 195 psig/0.1 sec

# Filter Performance Data

Filters WRTX-20 & 21, February 23, 1990



## Operation Notes for February 23, 1990:

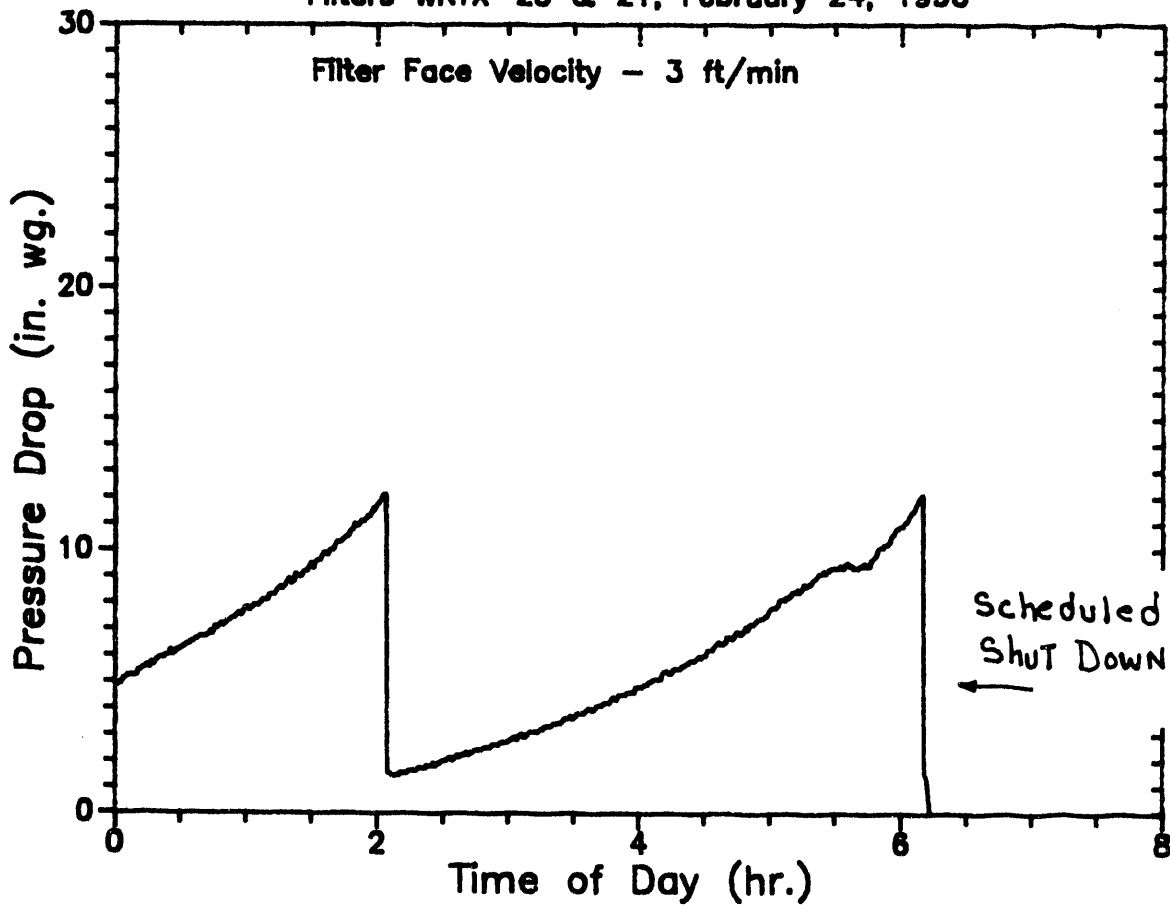
0130 Dust feed restarted

$\Delta P$  Trigger = 12.0" WC

Pulse Cleaning - 195 psig/0.1 sec

# Filter Performance Data

Filters WRTX-20 & 21, February 24, 1990



### Operation Notes for February 24, 1990:

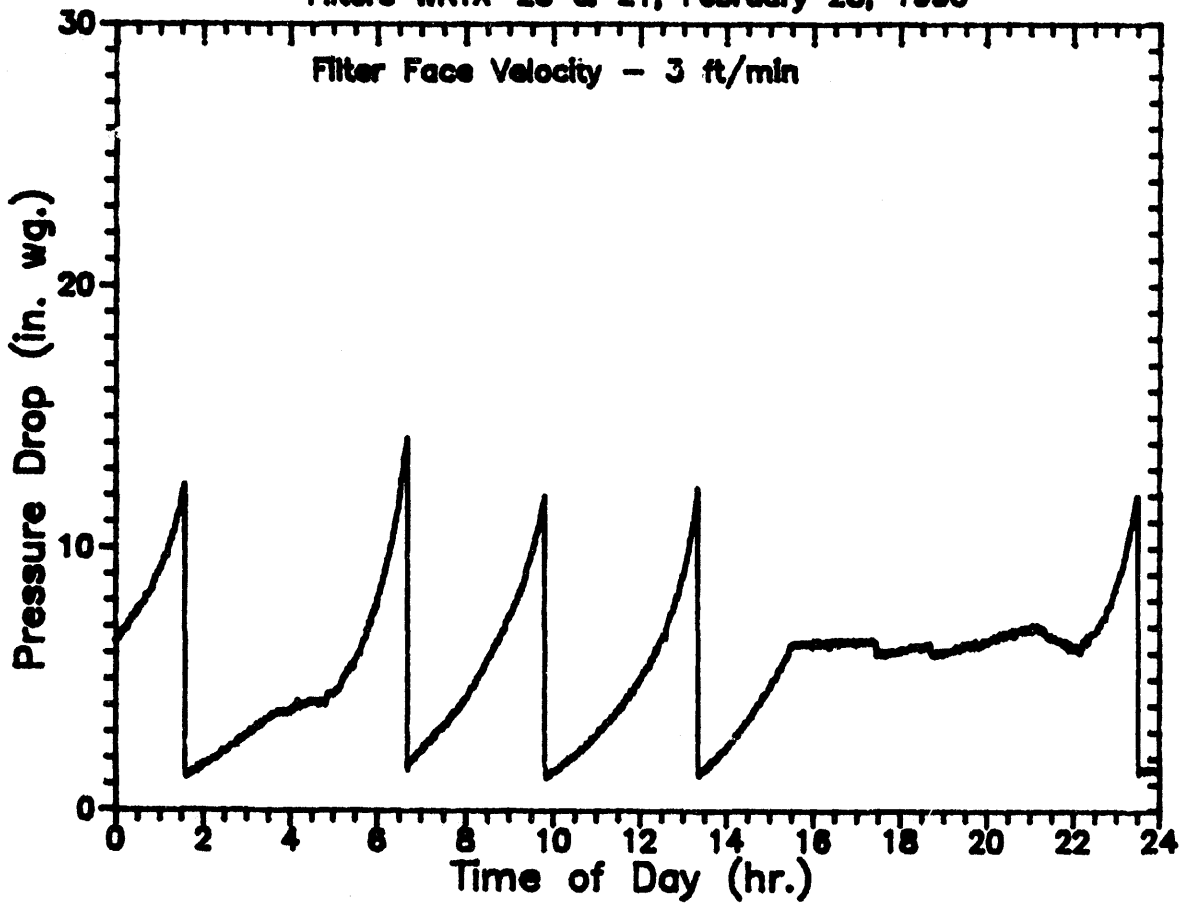
0615 End of week long test scheduled shut down

$\Delta P$  Trigger = 12.0" WC

Pulse Cleaning - 195 psig/0.1 sec

# Filter Performance Data

Filters WRTX-20 & 21, February 28, 1990

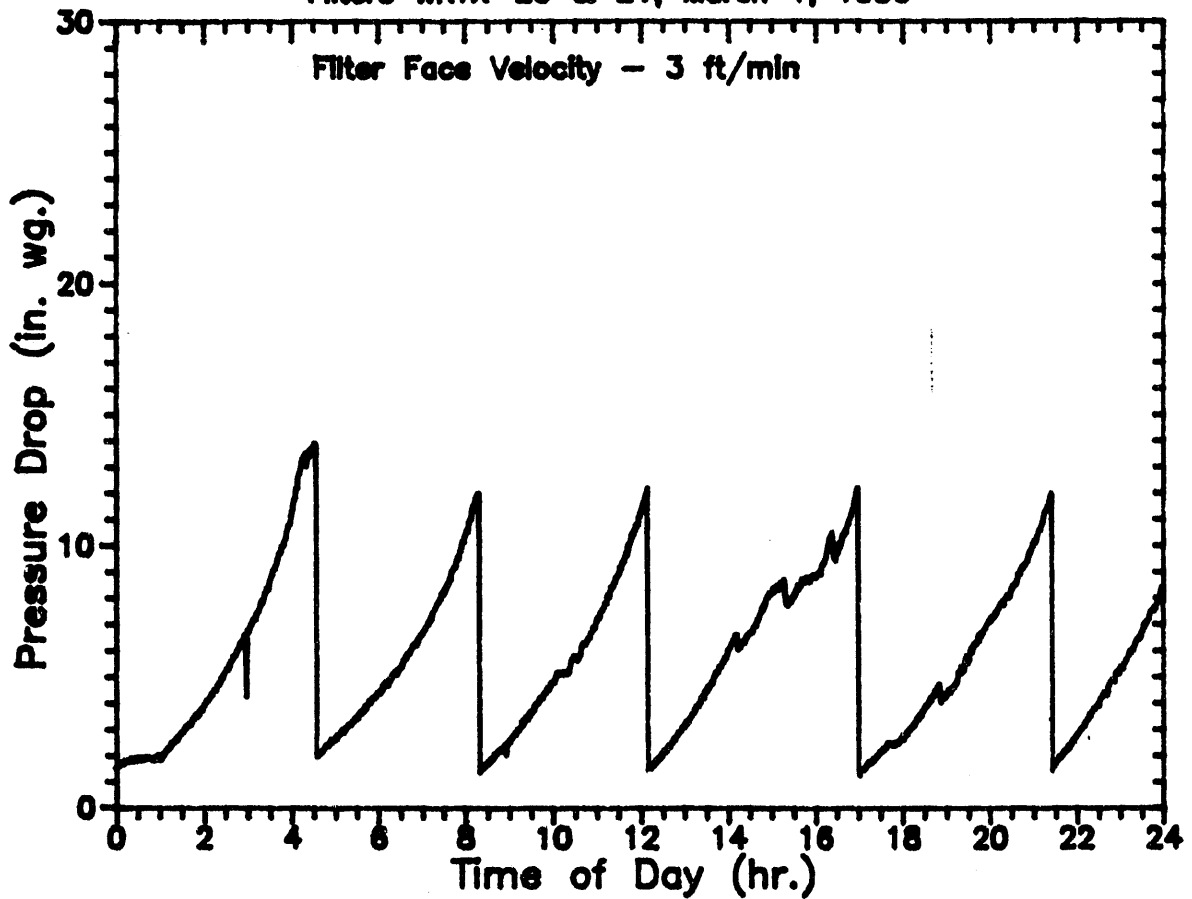


## Operation Notes for February 28, 1990:

- 0345 Loaded dust
- 1530 Dust Feed Motor Failure
- 2215 Restarted Dust Feed
- AP Trigger = 12.0" WC
- Pulse Cleaning - 200 psig/0.1 sec

## Filter Performance Data

Filters WRTX-20 & 21, March 1, 1990



### Operation Notes for March 1, 1990:

0000 Load Dust

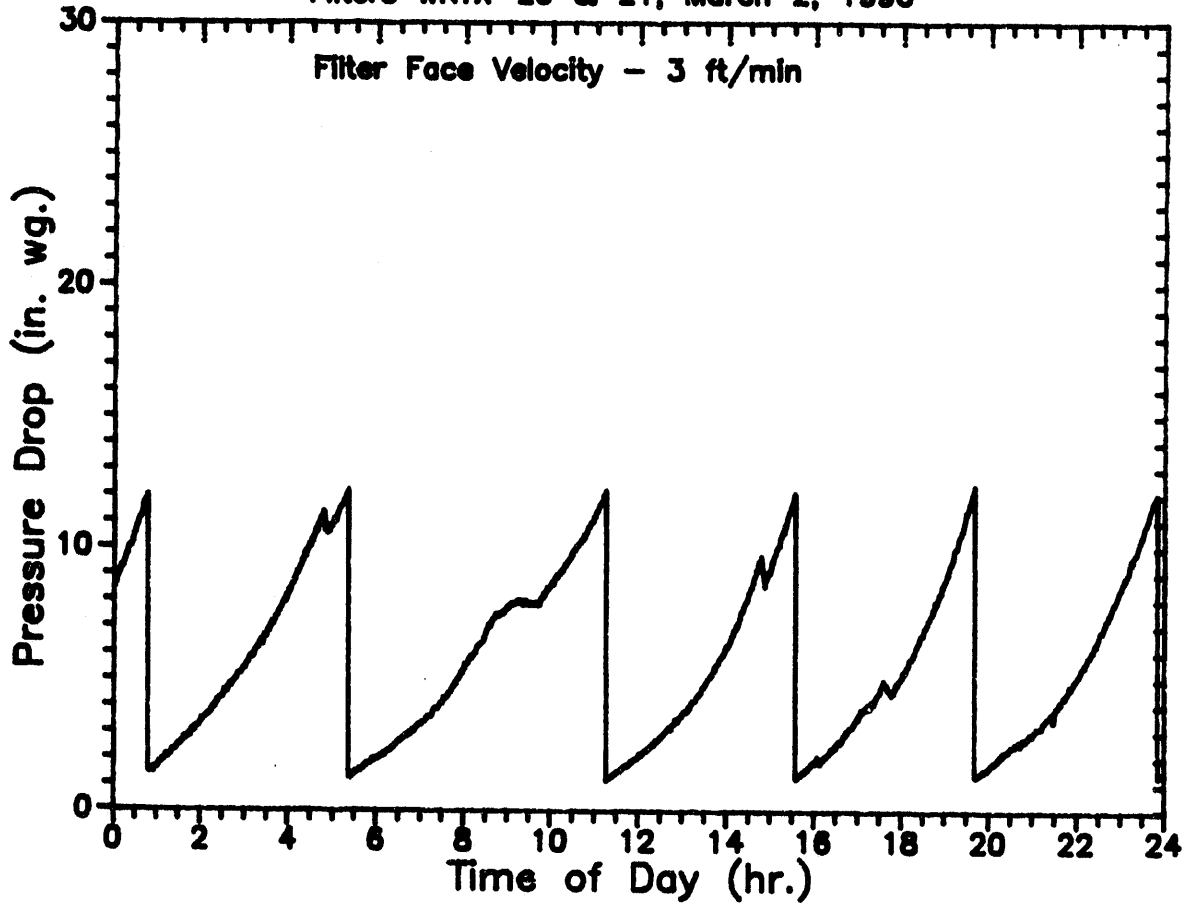
1400-1900 Pressure fluctuations

$\Delta P$  Trigger = 12.0" WC

Pulse Cleaning - 200 psig/0.1 sec

# Filter Performance Data

Filters WRTX-20 & 21, March 2, 1990



## Operation Notes for March 2, 1990:

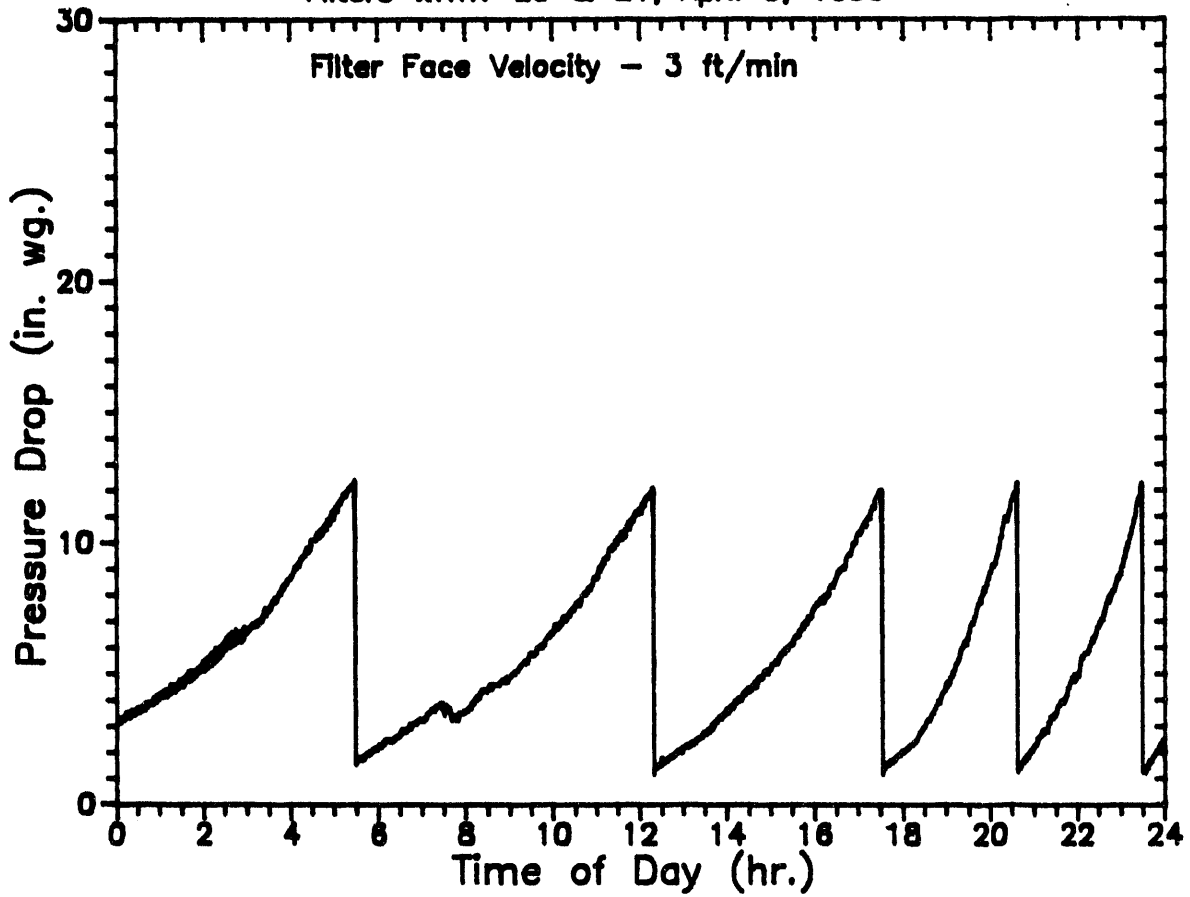
0900 Dust loaded

$\Delta P$  Trigger = 12.0" WC

Pulse Cleaning - 200 psig/0.1 sec

# Filter Performance Data

Filters WRTX-20 & 21, April 3, 1990



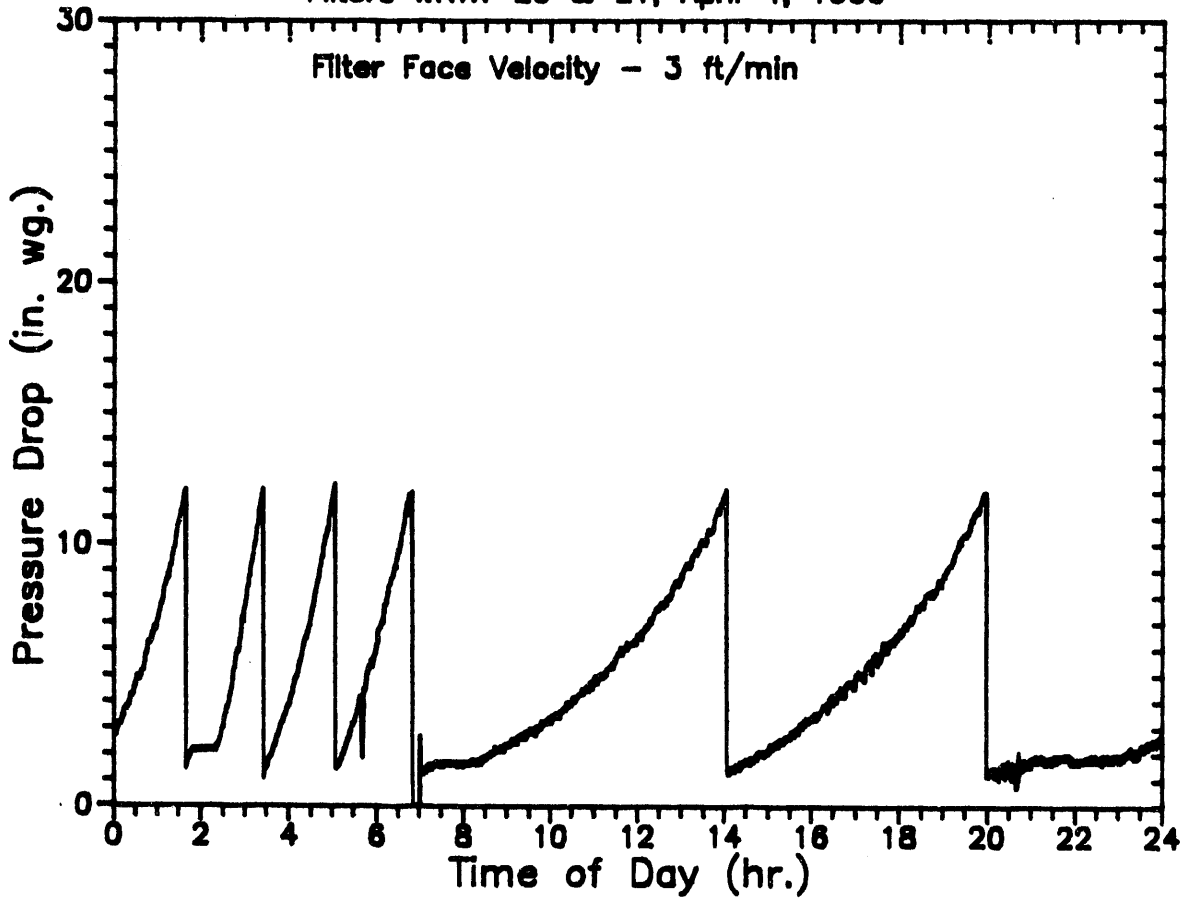
Operation Notes for April 3, 1990:

$\Delta P$  Trigger = 12" wc

Pulse Cleaning - 200 psig/0.1 sec

# Filter Performance Data

Filters WRTX-20 & 21, April 4, 1990



## Operation Notes for April 4, 1990:

0700 Load Dust

2030 Dust feeder failed

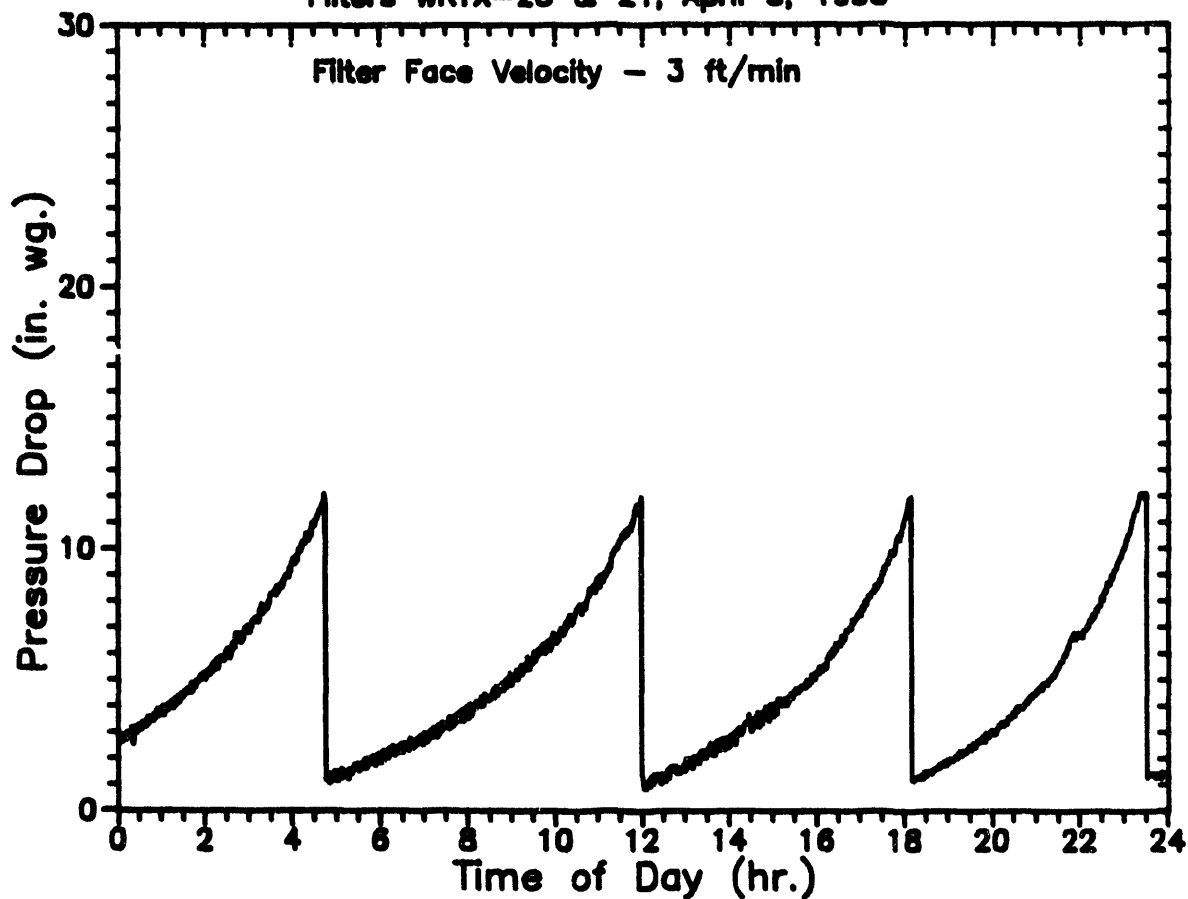
$\Delta P$  Trigger = 12" wc

Pulse Cleaning - 200 psig/0.1 sec



# Filter Performance Data

Filters WRTX-20 & 21, April 5, 1990



## Operation Notes for April 5, 1990

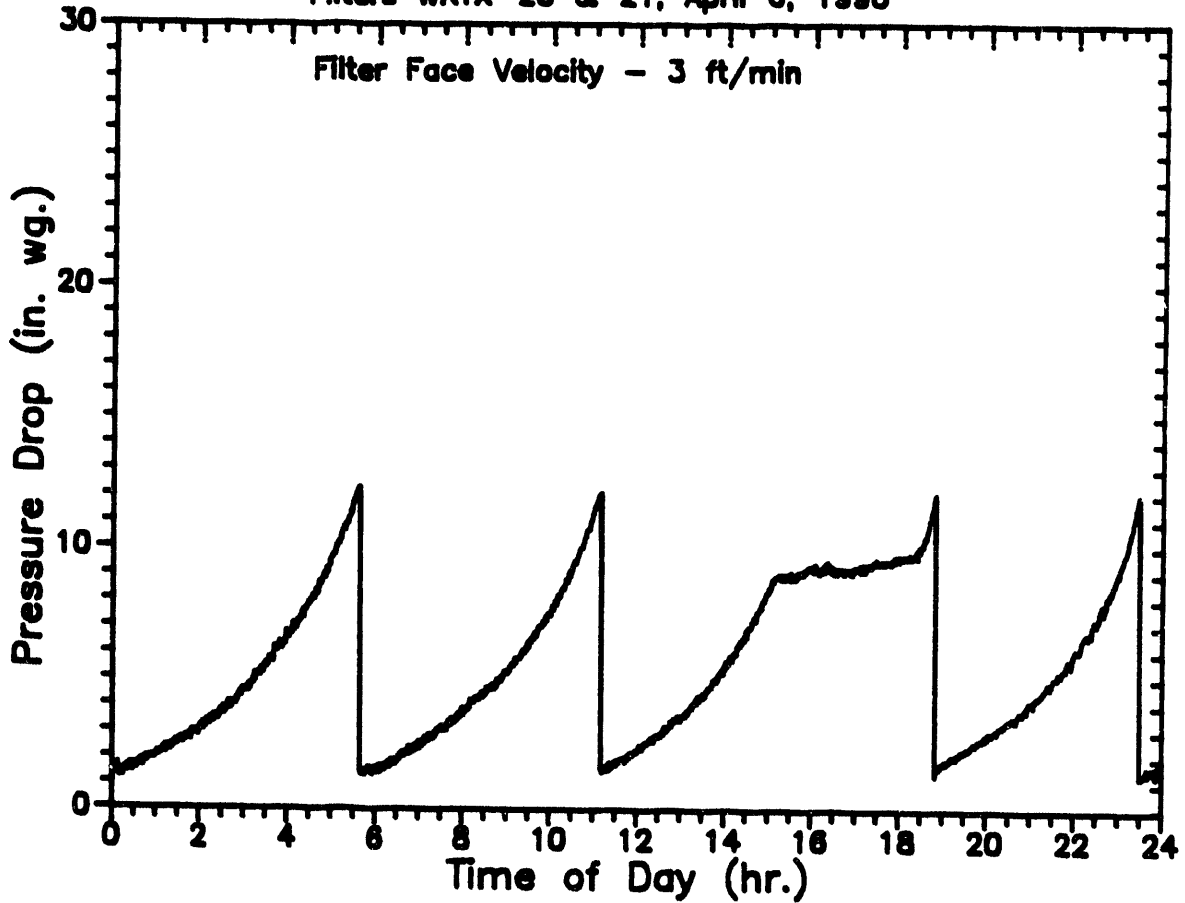
2153 Changed Process Gas make-up to N<sub>2</sub>

$\Delta P$  Trigger = 12" wc

Pulse Cleaning - 200 psig/0.1 sec

# Filter Performance Data

Filters WRTX-20 & 21, April 6, 1990



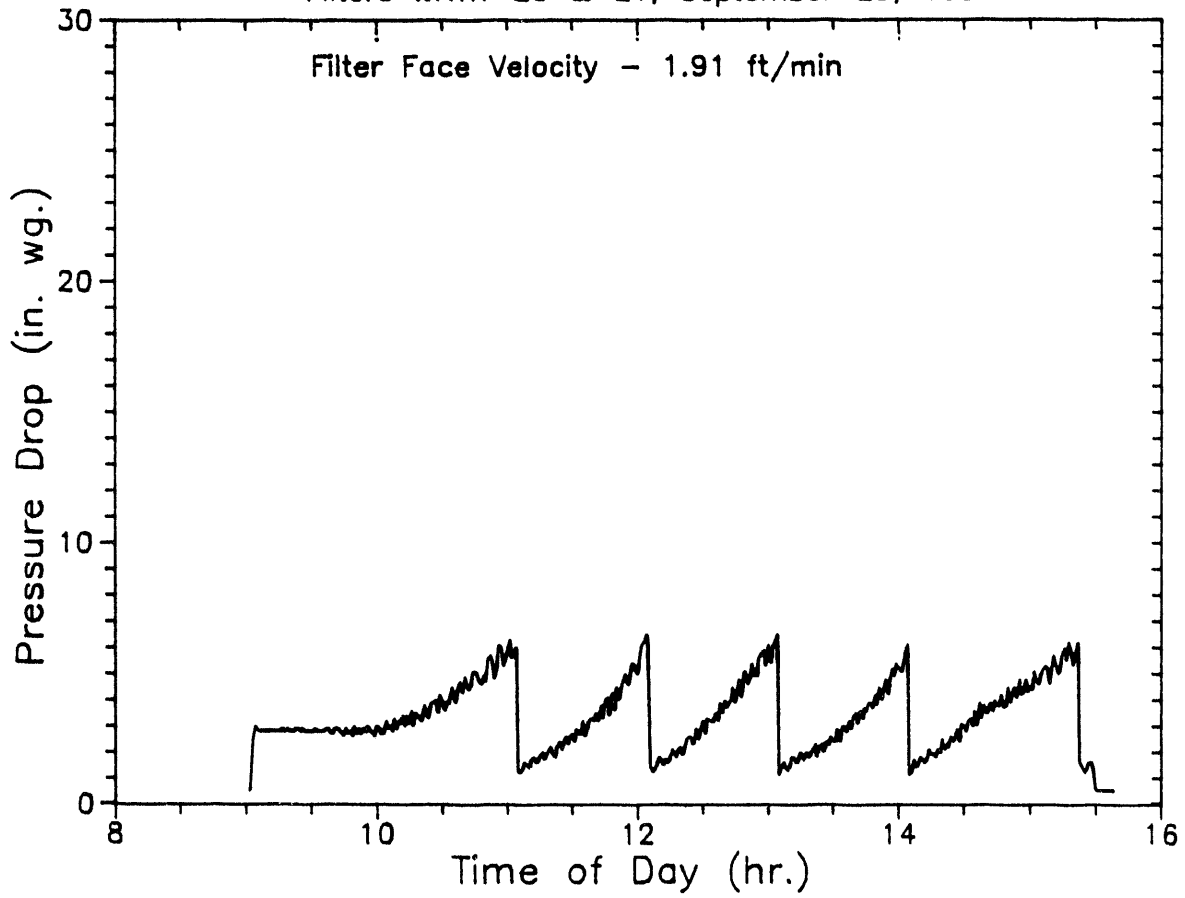
## Operation Notes for April 6, 1990:

1500 Load dust

$\Delta P$  Trigger = 12" wc

Pulse Cleaning - 200 psig/0.1 sec

Recirc Filter Performance Data  
Filters WRTX-20 & 21, September 25, 1990



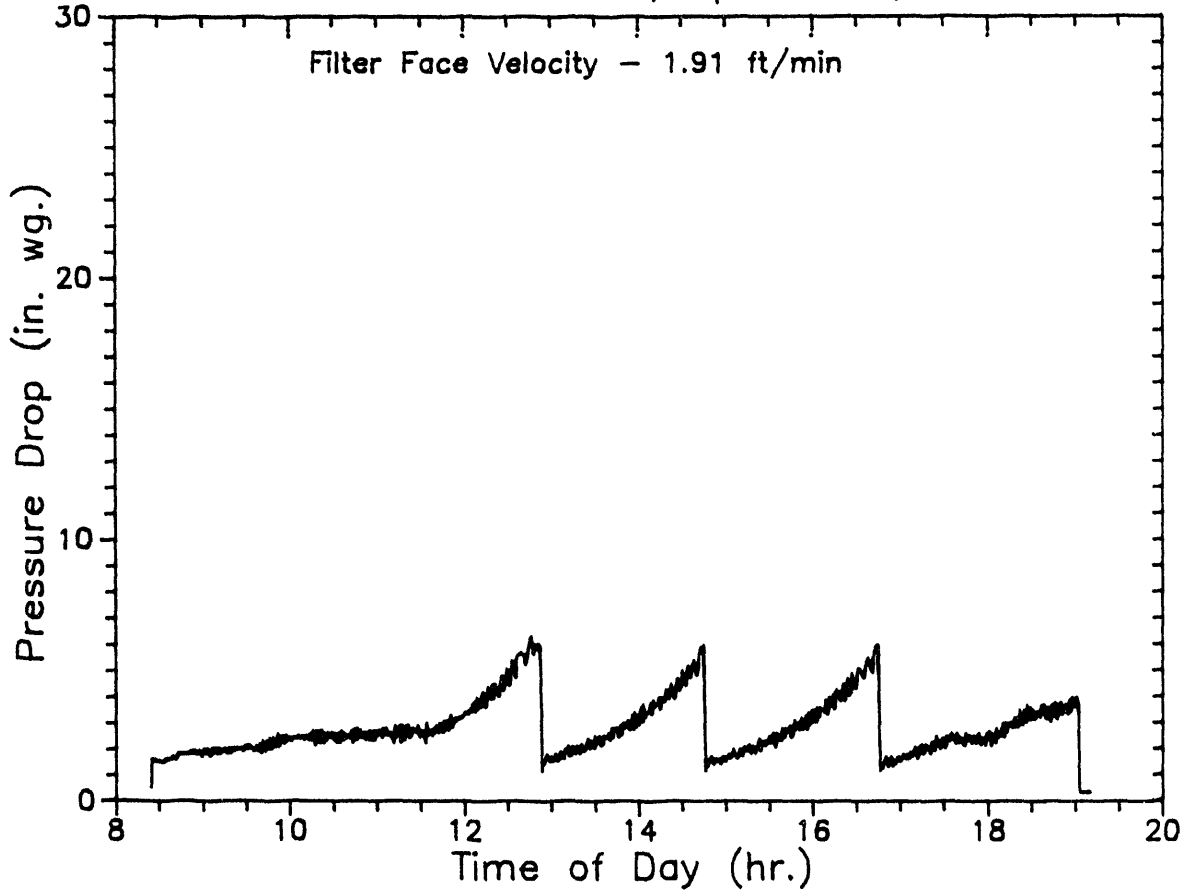
Operation Notes for September 24, 1990:

8 hour test

$\Delta P$  Trigger = 6" wc

Pulse Cleaning - 300 psig/0.1 sec

Recirc Filter Performance Data  
Filters WRTX-20 & 21, September 26, 1990



Operation Notes for September 26, 1990:

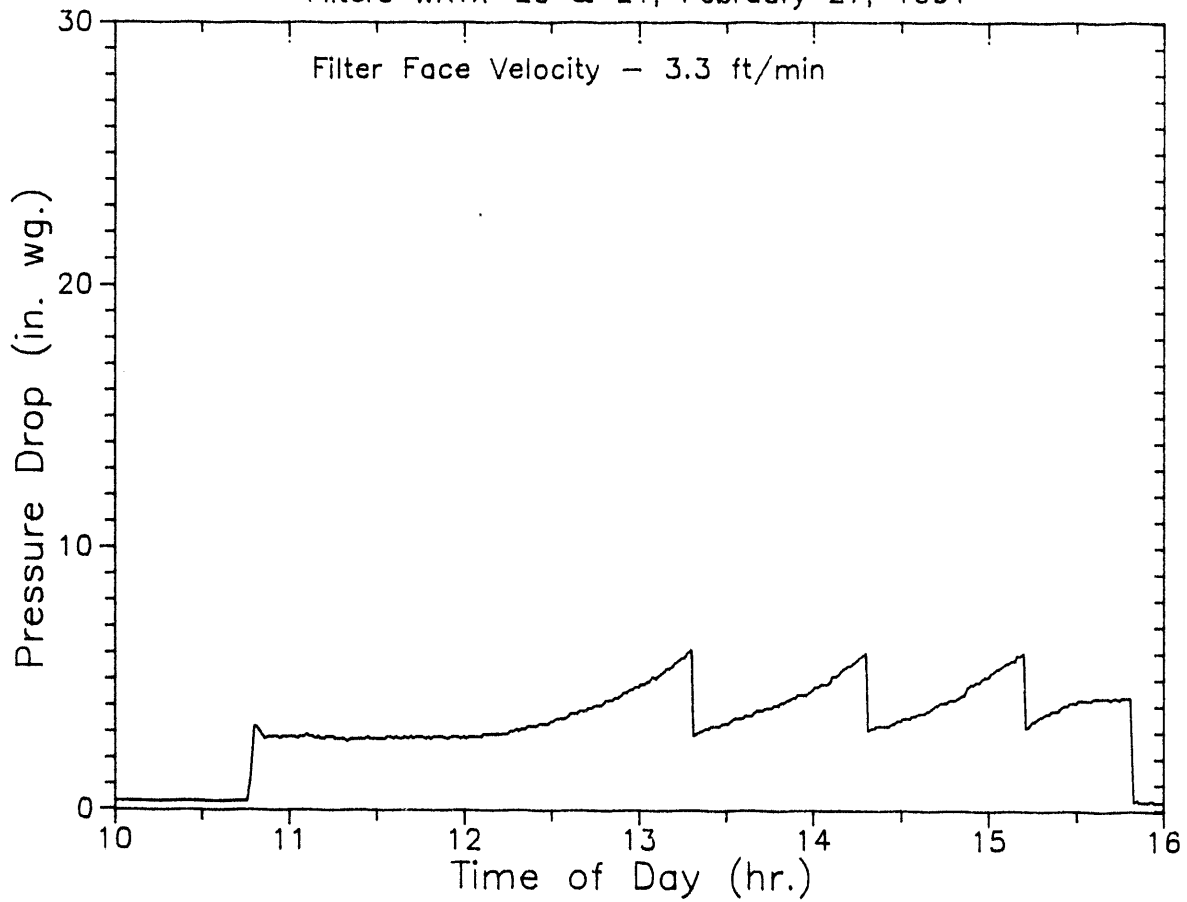
12 hour test

$\Delta P$  Trigger = 6" wc

Pulse Cleaning - 300 psig/0.1 sec

# Recirc Filter Performance Data

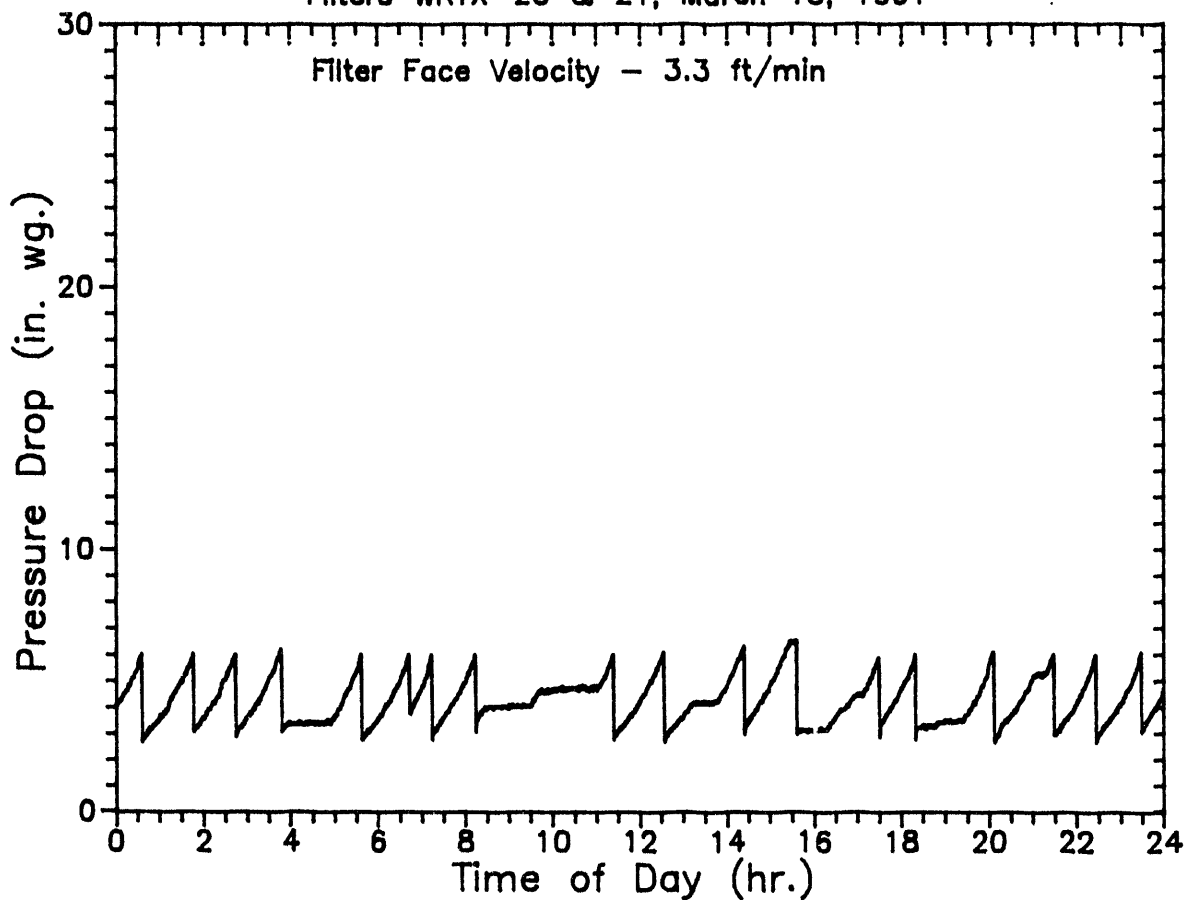
Filters WRTX-20 & 21, February 27, 1991



Operation Notes for February 27, 1991  
1500 lb/hr. flow, 132 psig system pressure  
Texaco char  
delta-P Trigger = 6 in. wc  
Pulse Cleaning - 300 psig/0.1 sec  
1550 Scheduled Shutdown

# Recirc Filter Performance Data

Filters WRTX-20 & 21, March 13, 1991



## Operation Notes for March 13, 1991

delta-P Trigger = 6 in wc

Pulse Cleaning - 300 psig/0.1 sec

2127 Pulse Cleaning changed - 310 psig/0.1 sec

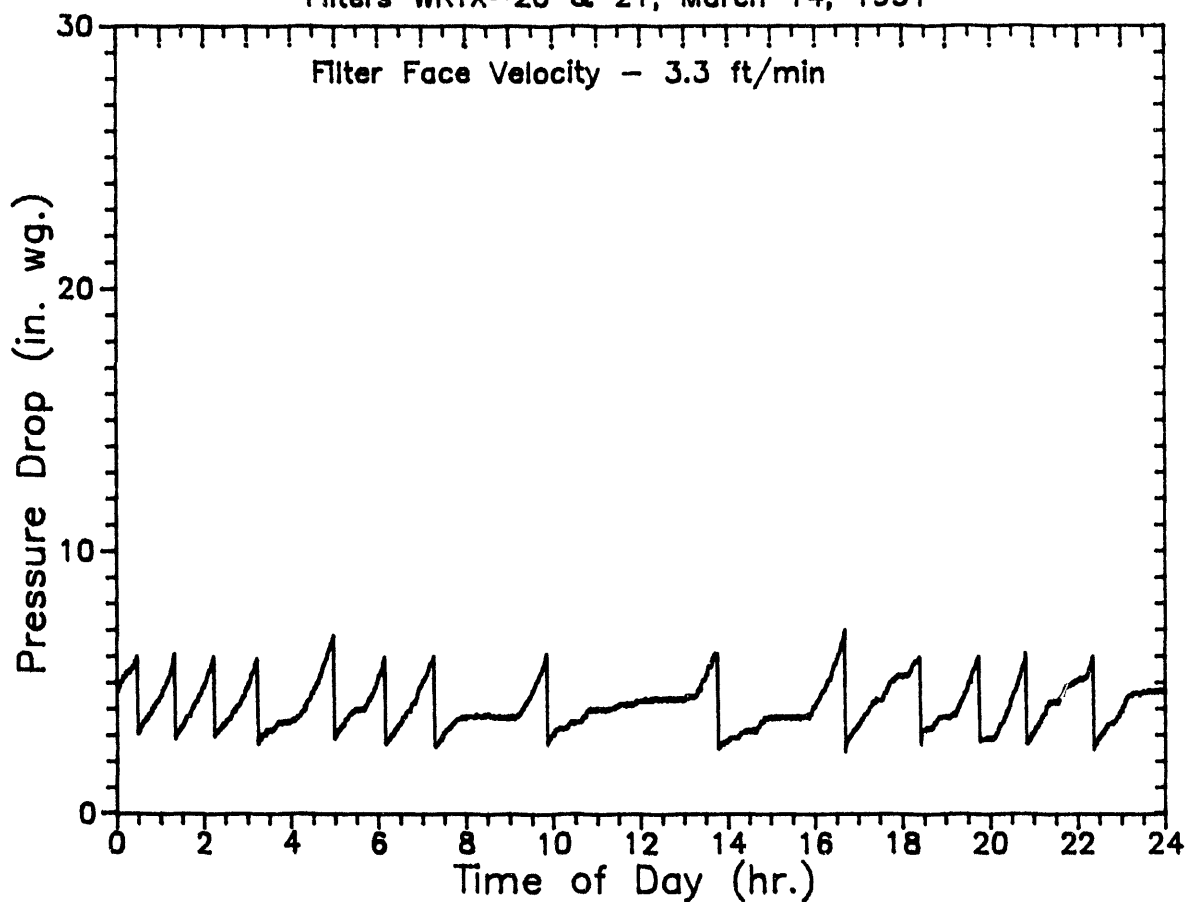
0430 - 0450 Char loaded

0940 - 1100 Char loaded

1850 - 1920 Char loaded

# Recirc Filter Performance Data

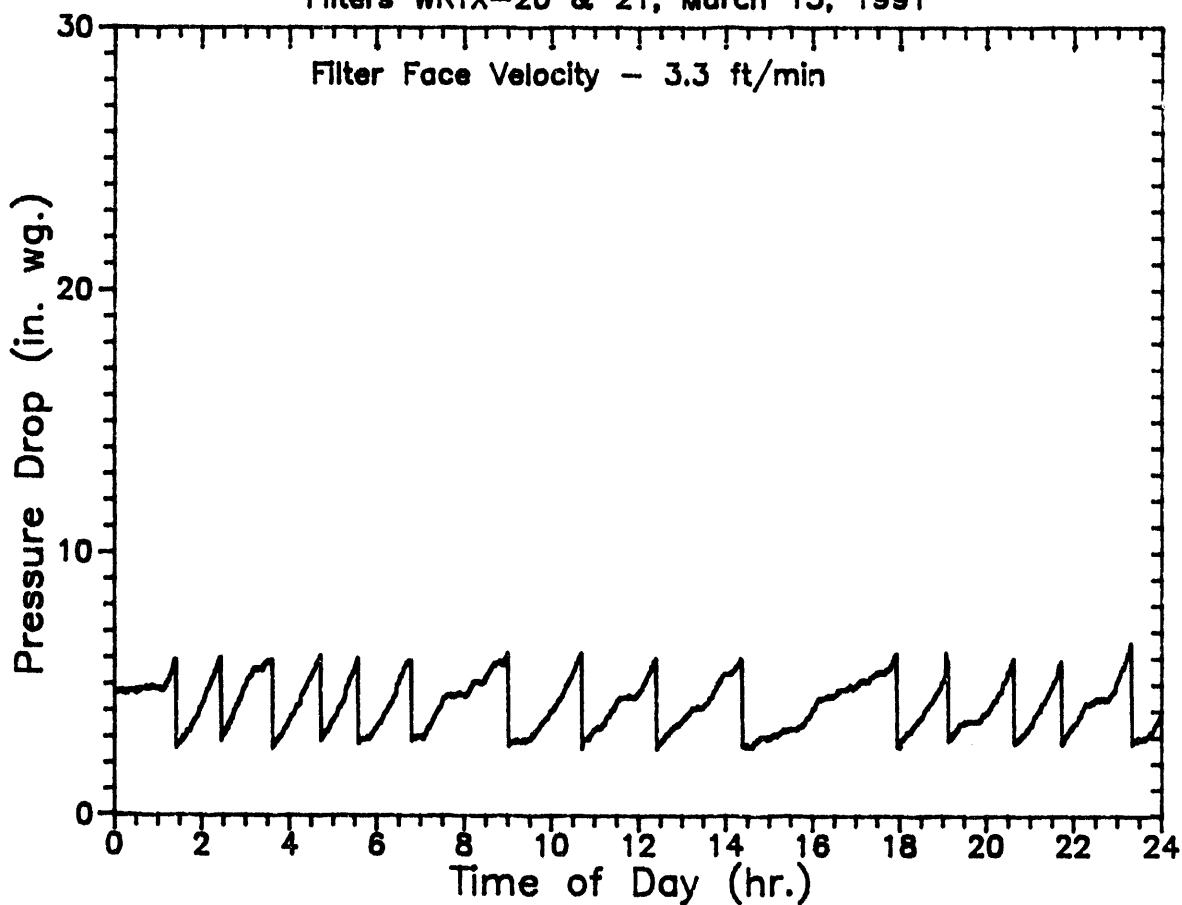
Filters WRTX-20 & 21, March 14, 1991



Operation Notes for March 14, 1991  
delta-P Trigger = 6 in wc  
Pulse Cleaning - 310 psig/0.1 sec  
0340 - 0404 Char loaded  
1236 - 1314 Char loaded

# Recirc Filter Performance Data

Filters WRTX-20 & 21, March 15, 1991

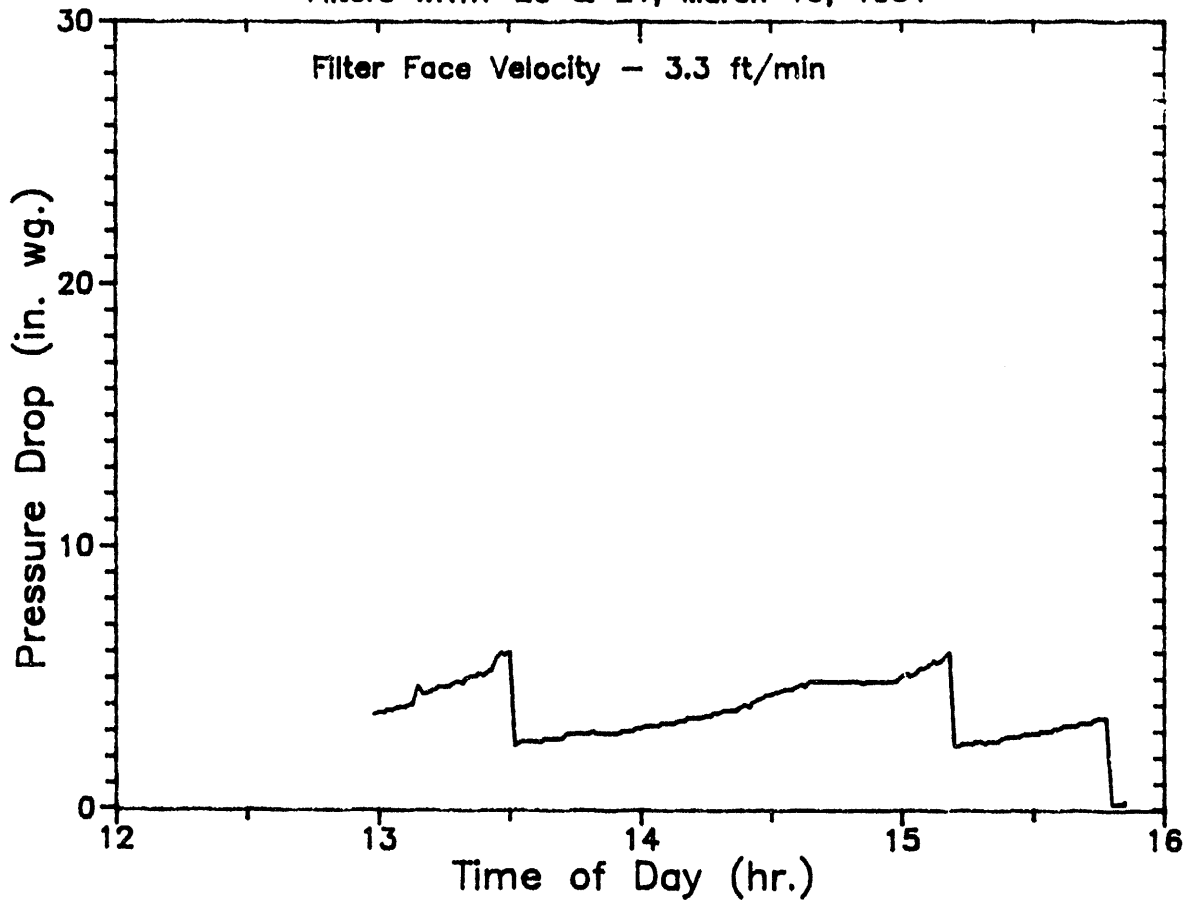


Operation Notes for March 15, 1991  
delta-P Trigger = 6 in wc  
Pulse Cleaning - 310 psig/0.1 sec  
0022 - 0107 Char loaded  
0900 - 0928 Char loaded  
1722 - 1741 Char loaded



# Recirc Filter Performance Data

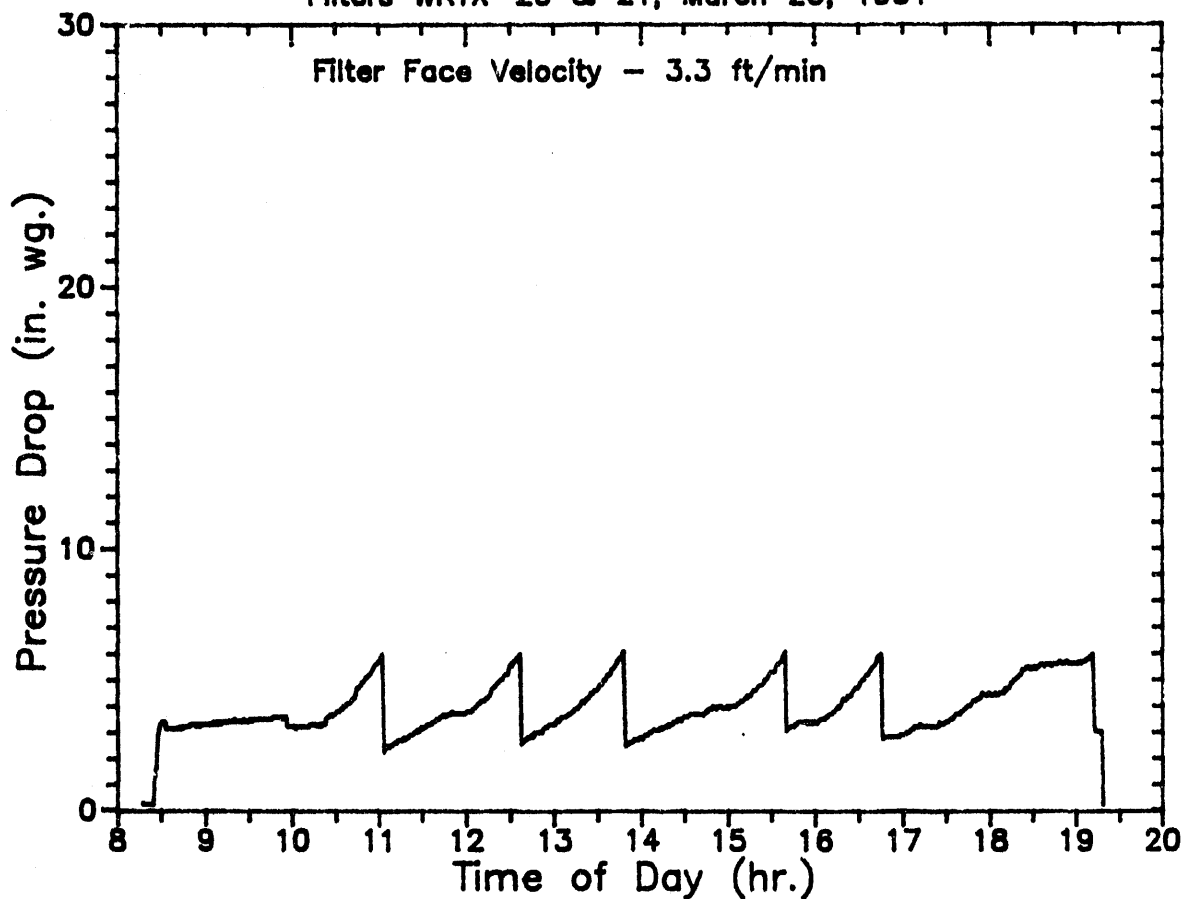
Filters WRTX-20 & 21, March 19, 1991



Operation Notes for March 19, 1991  
delta-P Trigger = 6 in wc  
Pulse Cleaning - 310 psig/0.1 sec

# Recirc Filter Performance Data

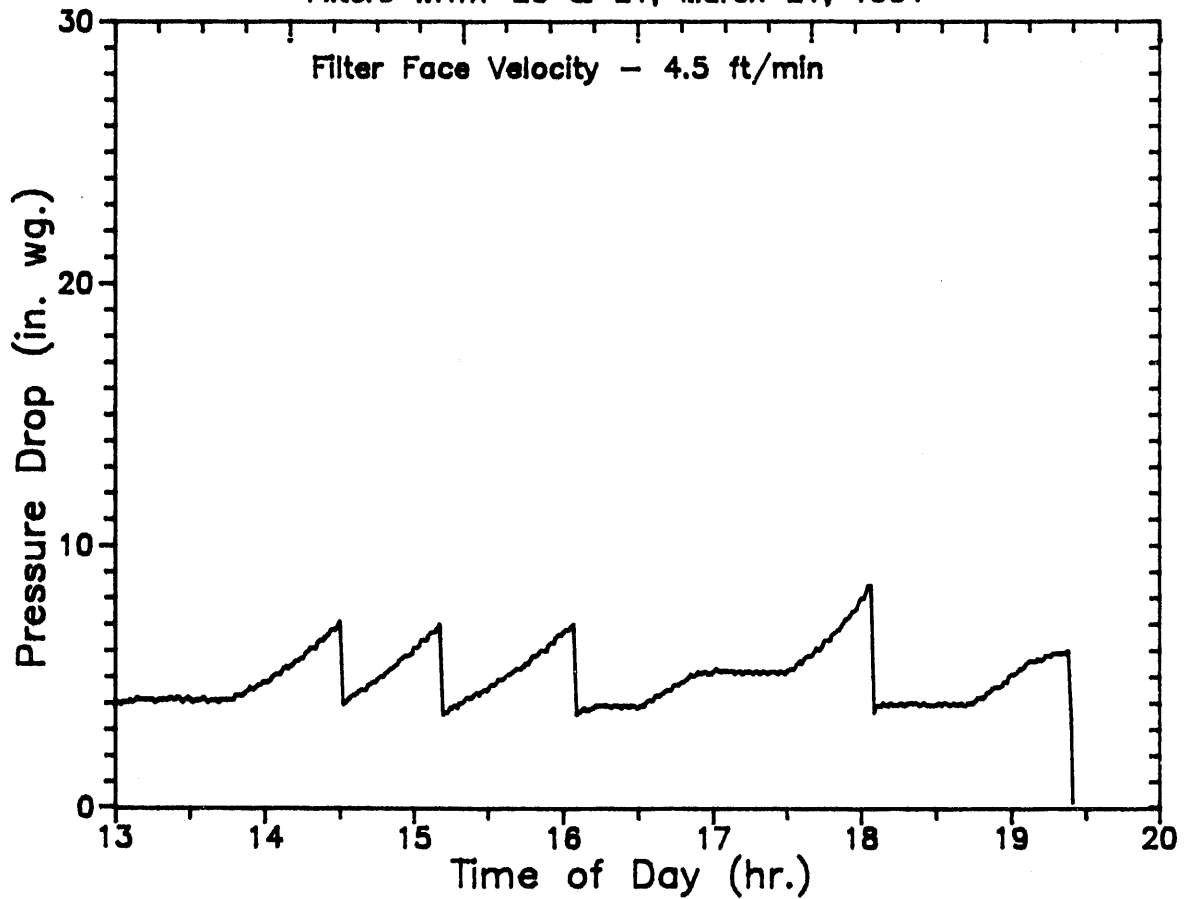
Filters WRTX-20 & 21, March 20, 1991



Operation Notes for March 20, 1991  
delta-P Trigger = 6 in wc  
Pulse Cleaning - 310 psig/0.1 sec  
1839 - 1908 Char loaded

# Recirc Filter Performance Data

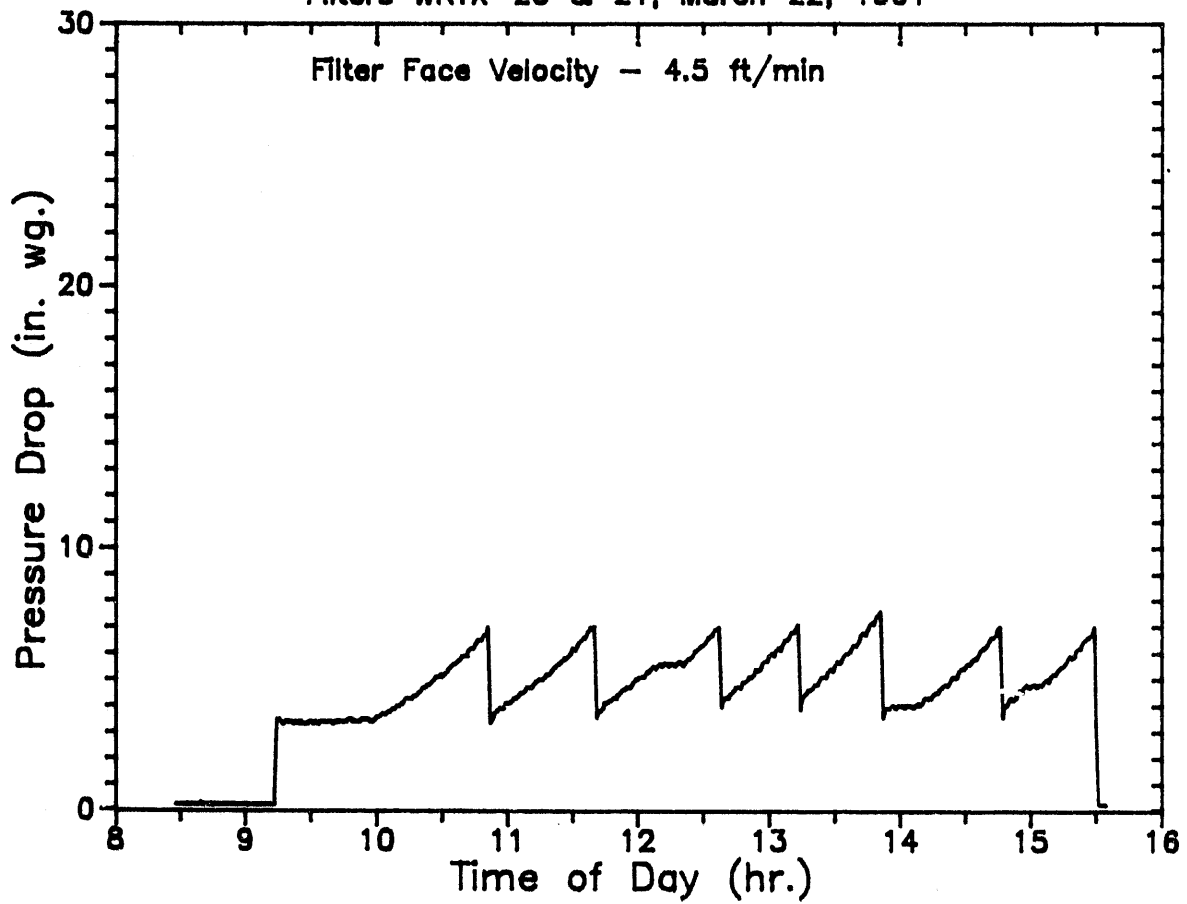
Filters WRTX-20 & 21, March 21, 1991



Operation Notes for March 21, 1991  
4.5 ft/min face velocity  
delta-P Trigger = 7 in wc  
Pulse Cleaning - 170 psig/0.1 sec

# Recirc Filter Performance Data

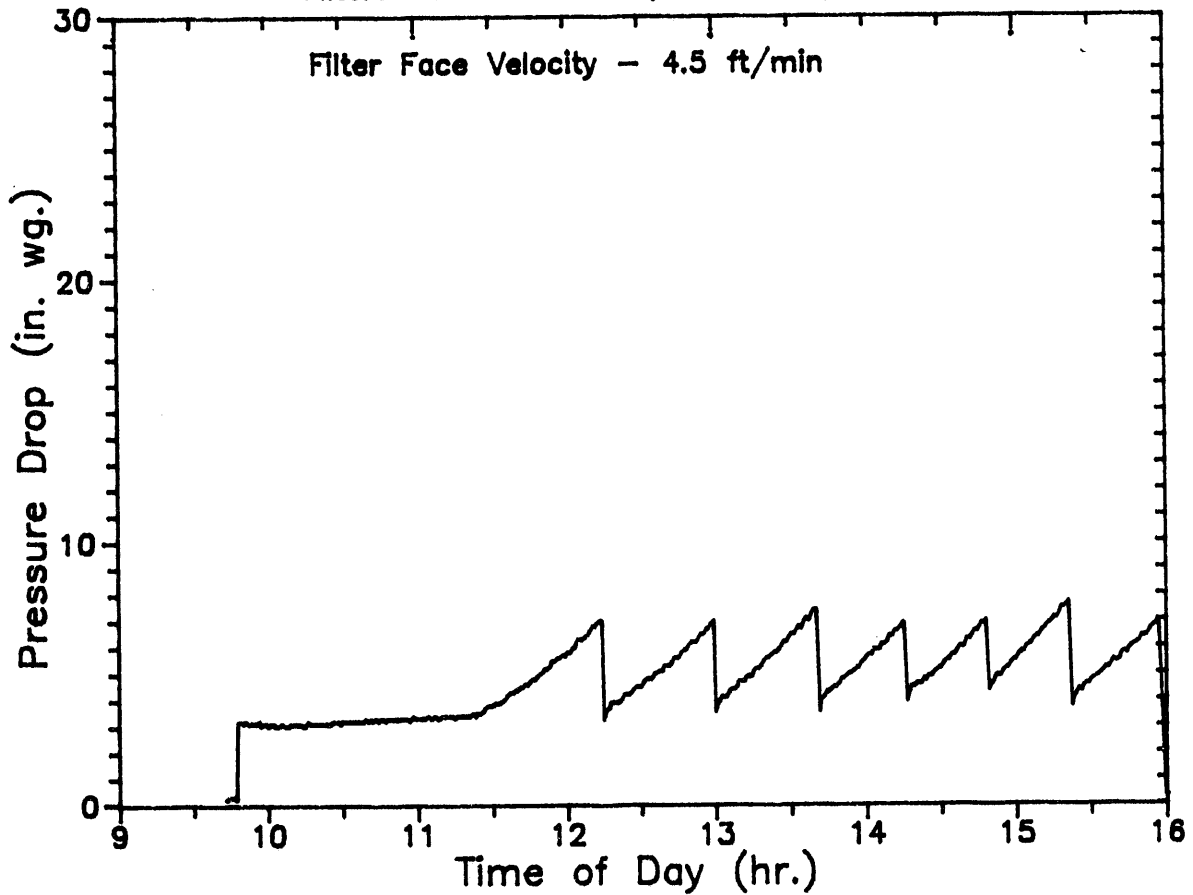
Filters WRTX-20 & 21, March 22, 1991



Operation Notes for March 22, 1991  
delta-P Trigger = 7 in wc  
Pulse Cleaning - 170 psig/0.1 sec

# Recirc Filter Performance Data

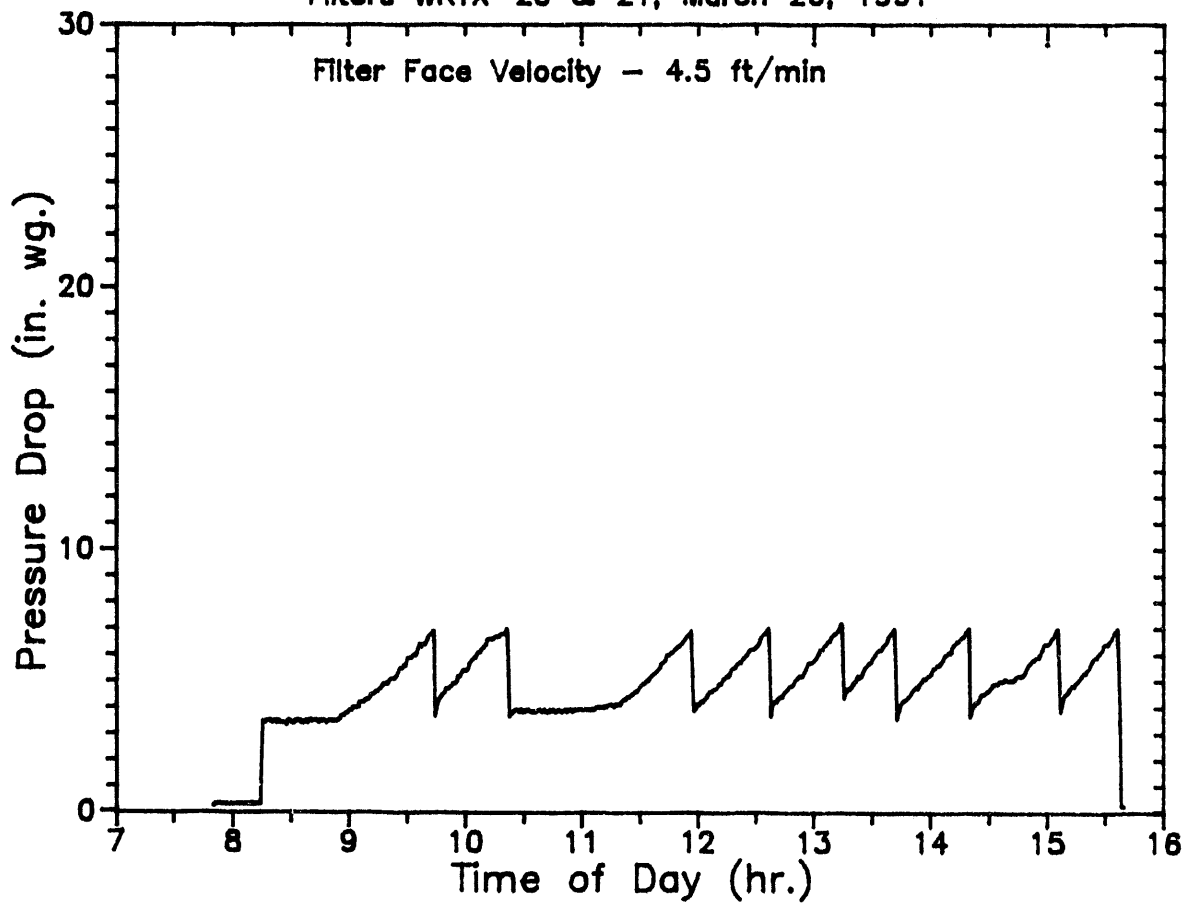
Filters WRTX-20 & 21, March 25, 1991



Operation Notes for March 25, 1991  
delta-P Trigger = 7 in wc  
Pulse Cleaning - 170 psig/0.1 sec  
1000 -1100 Char loaded

# Recirc Filter Performance Data

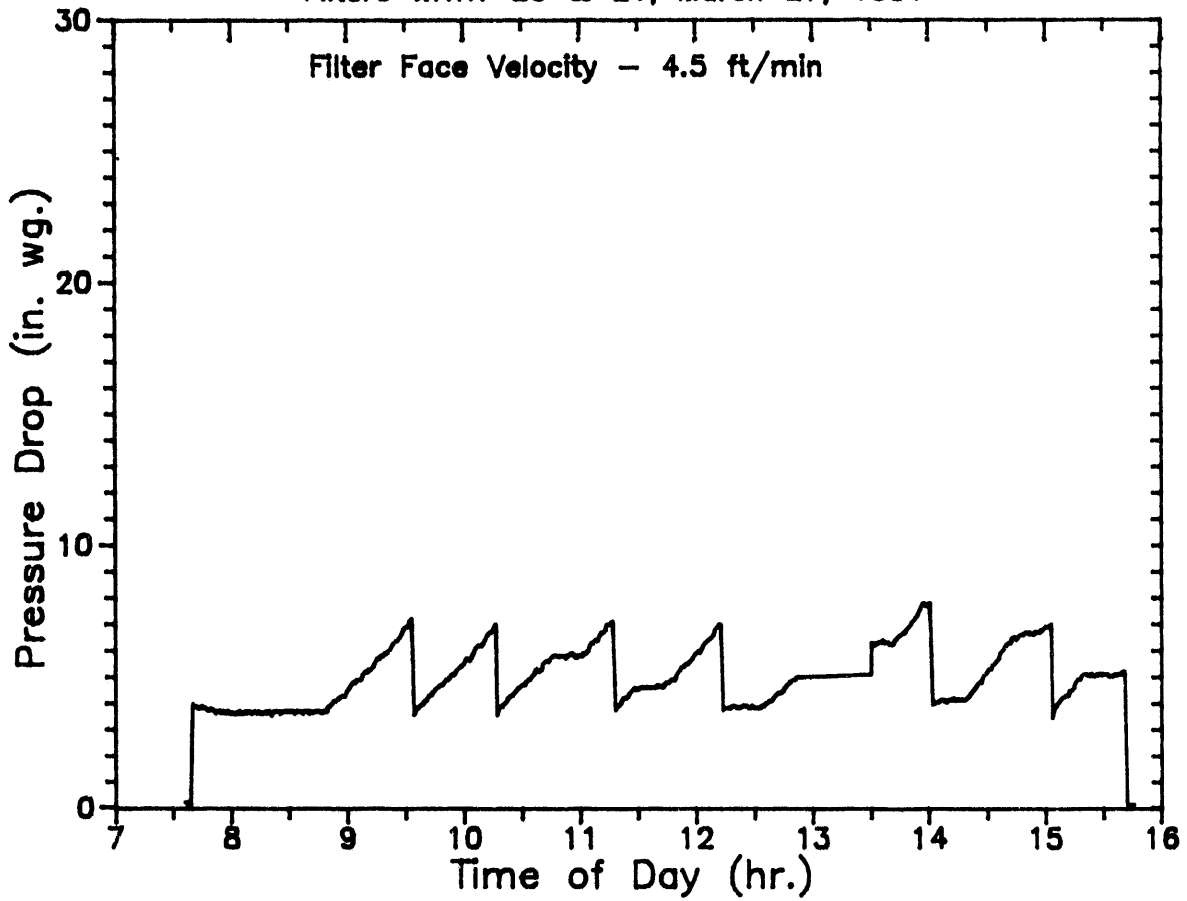
Filters WRTX-20 & 21, March 26, 1991



Operation Notes for March 26, 1991  
delta-P Trigger = 7 in wc  
Pulse Cleaning - 170 psig/0.1 sec  
1018 -1115 Char loaded

# Recirc Filter Performance Data

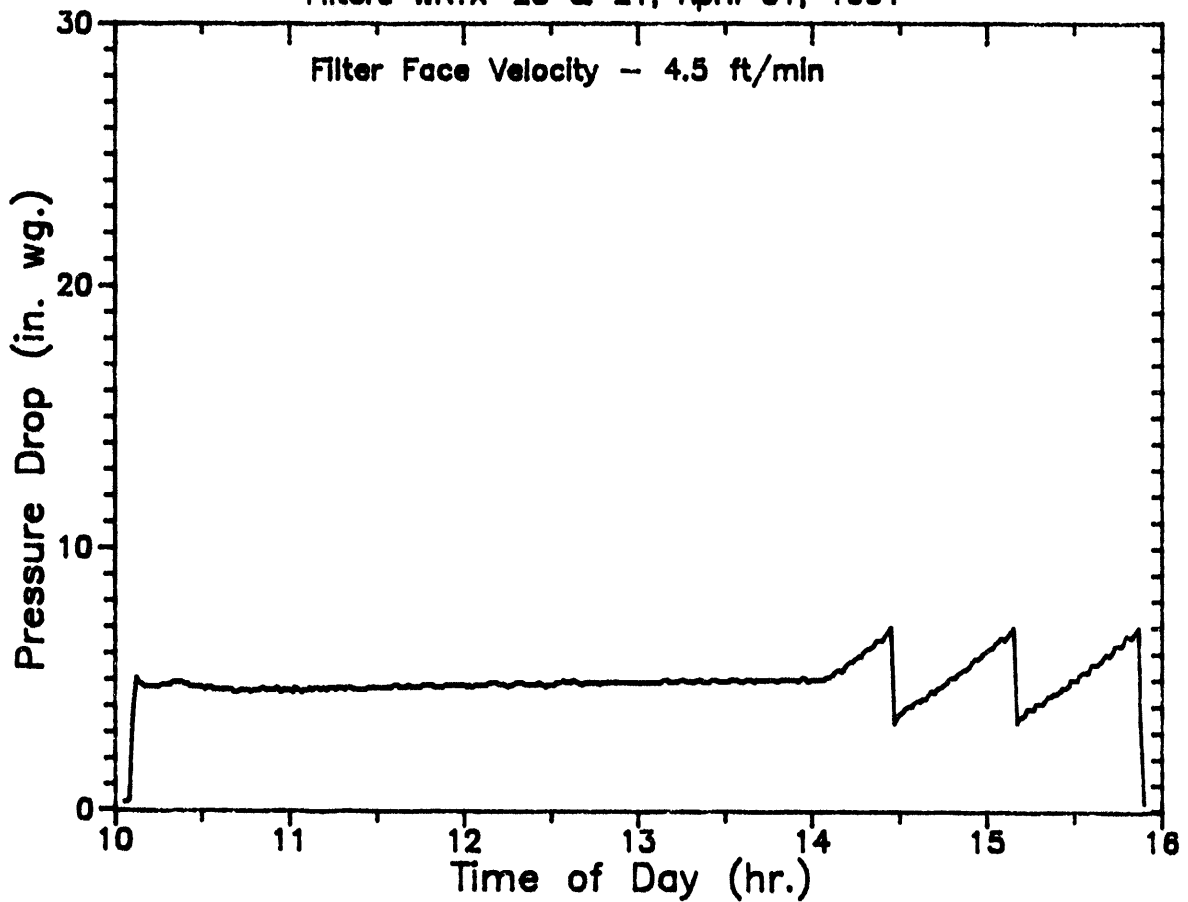
Filters WRTX-20 & 21, March 27, 1991



Operation Notes for March 27, 1991  
delta-P Trigger = 7 in wc  
Pulse Cleaning - 170 psig/0.1 sec  
1245 - 1330 Char not feeding properly  
1515 - 1538 Char not feeding properly

# Recirc Filter Performance Data

Filters WRTX-20 & 21, April 01, 1991



Operation Notes for April 01, 1991

delta-P Trigger = 7 in wc

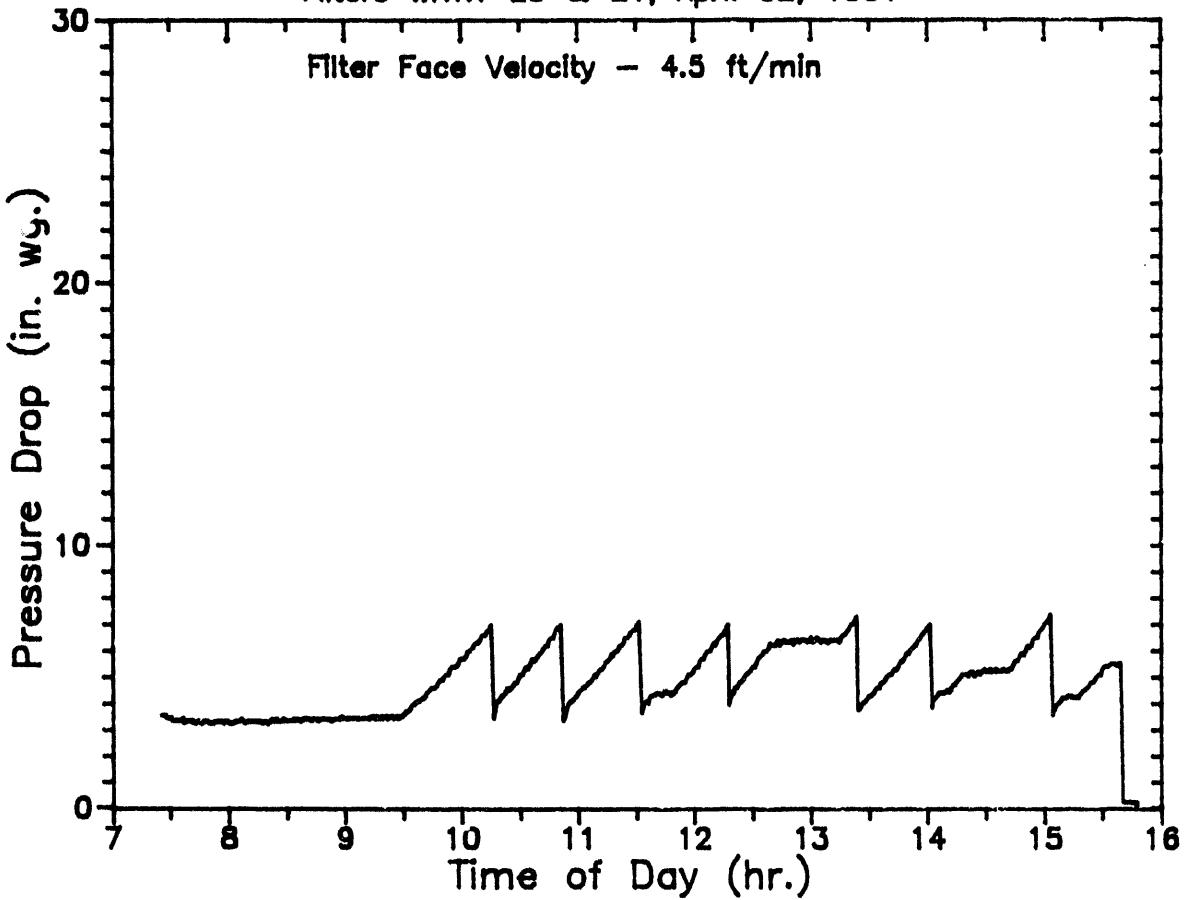
Pulse Cleaning - 170 psig/0.1 sec

0800 -1400 Char loaded and system to pressure and temperature



# Recirc Filter Performance Data

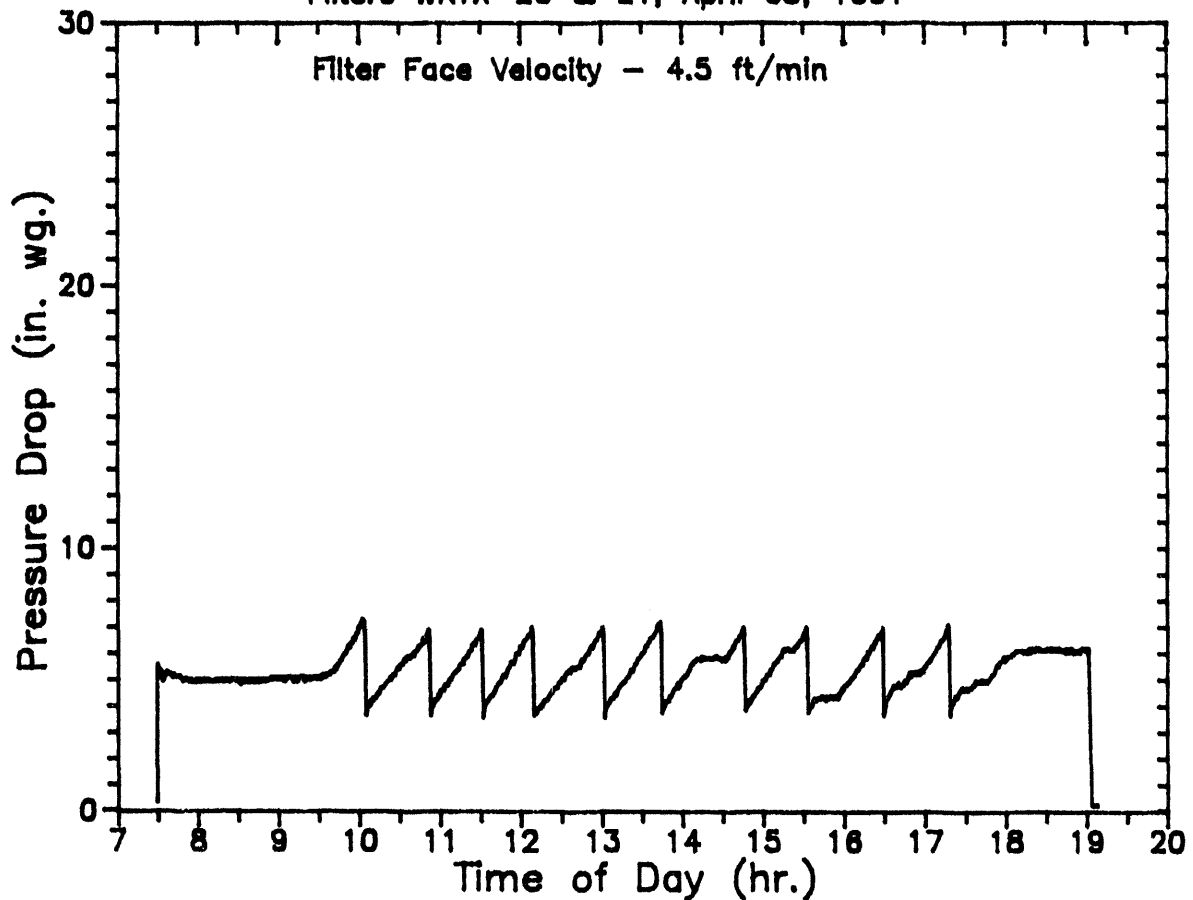
Filters WRTX-20 & 21, April 02, 1991



Operation Notes for April 02, 1991  
delta-P Trigger = 7 in wc  
Pulse Cleaning - 170 psig/0.1 sec  
0722 - 0925 system to temperature  
1132 - 1149 Char not feeding properly  
1245 - 1315 Char not feeding properly  
1420 - 1445 Char not feeding properly

## Recirc Filter Performance Data

Filters WRTX-20 & 21, April 03, 1991



### Operation Notes for April 03, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

0728 - 0935 Char added, system to temperature

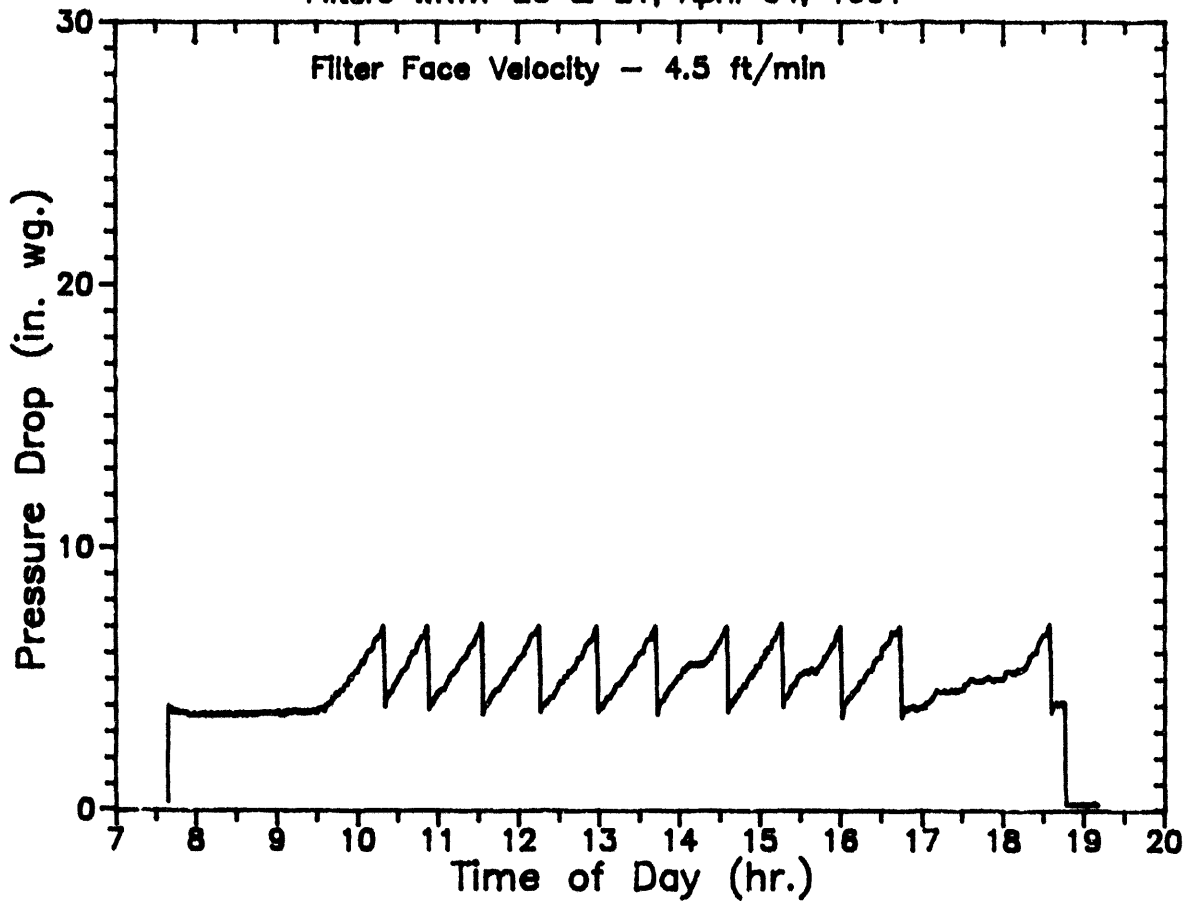
1405 - 1433 Char not feeding properly

1539 - 1555 Char not feeding properly

1812 - 1902 Out of Char

## Recirc Filter Performance Data

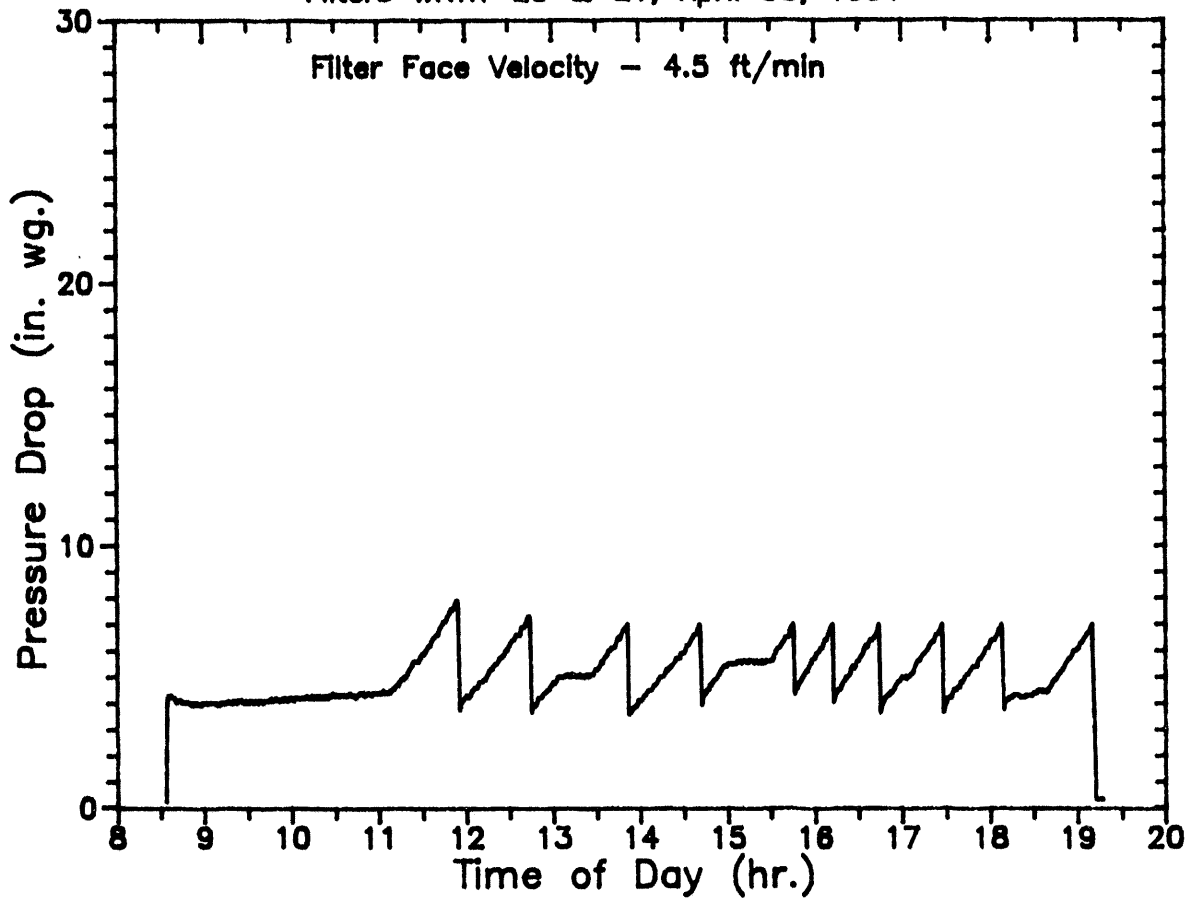
Filters WRTX-20 & 21, April 04, 1991



Operation Notes for April 04, 1991  
delta-P Trigger = 7 in wc  
Pulse Cleaning -- 170 psig/0.1 sec  
0736 - 0931 Char added, system to temperature  
1645 - 1815 Char not feeding properly

# Recirc Filter Performance Data

Filters WRTX-20 & 21, April 08, 1991



## Operation Notes for April 08, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

0835 - 1110 Char added, system to temperature

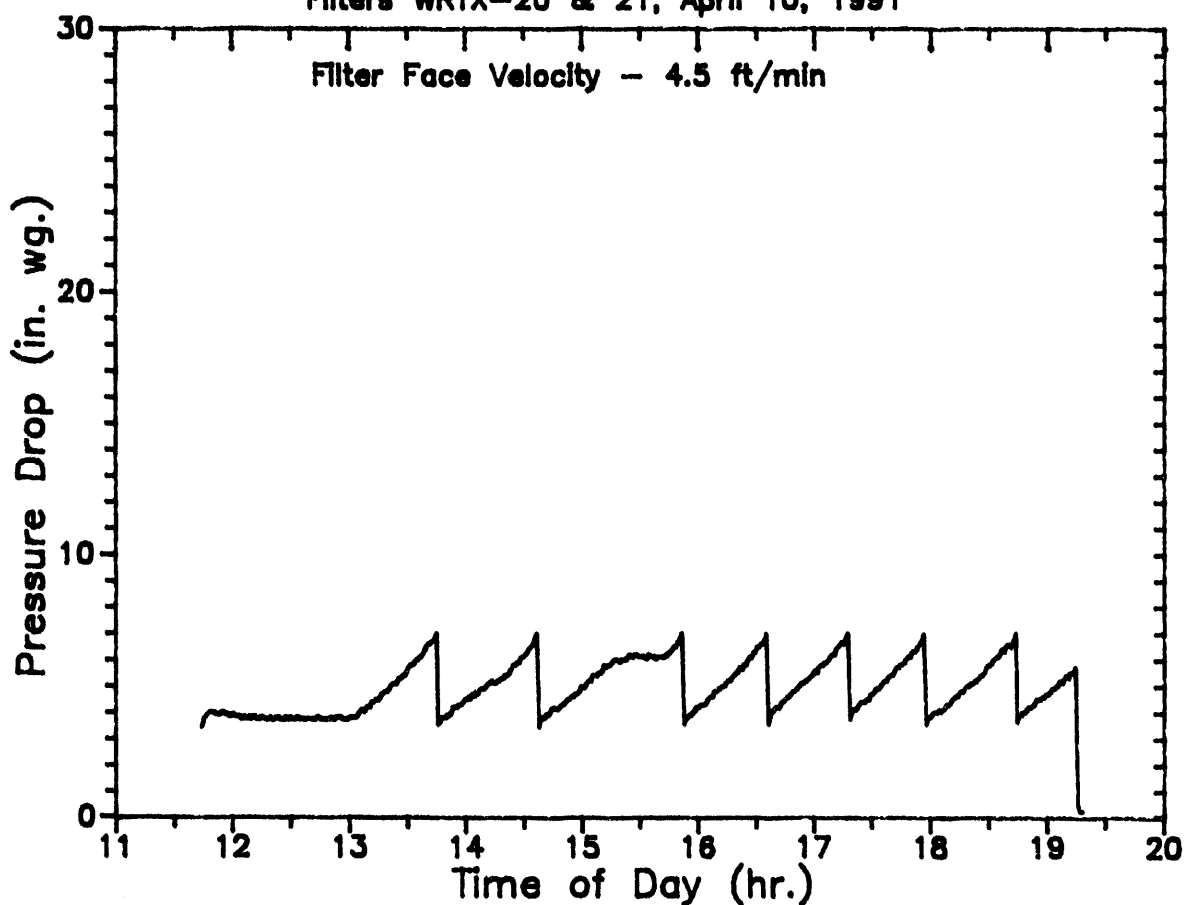
1300 - 1330 Char not feeding properly

1500 - 1530 Char not feeding properly

1810 - 1840 Char not feeding properly

# Recirc Filter Performance Data

Filters WRTX-20 & 21, April 10, 1991



## Operation Notes for April 10, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

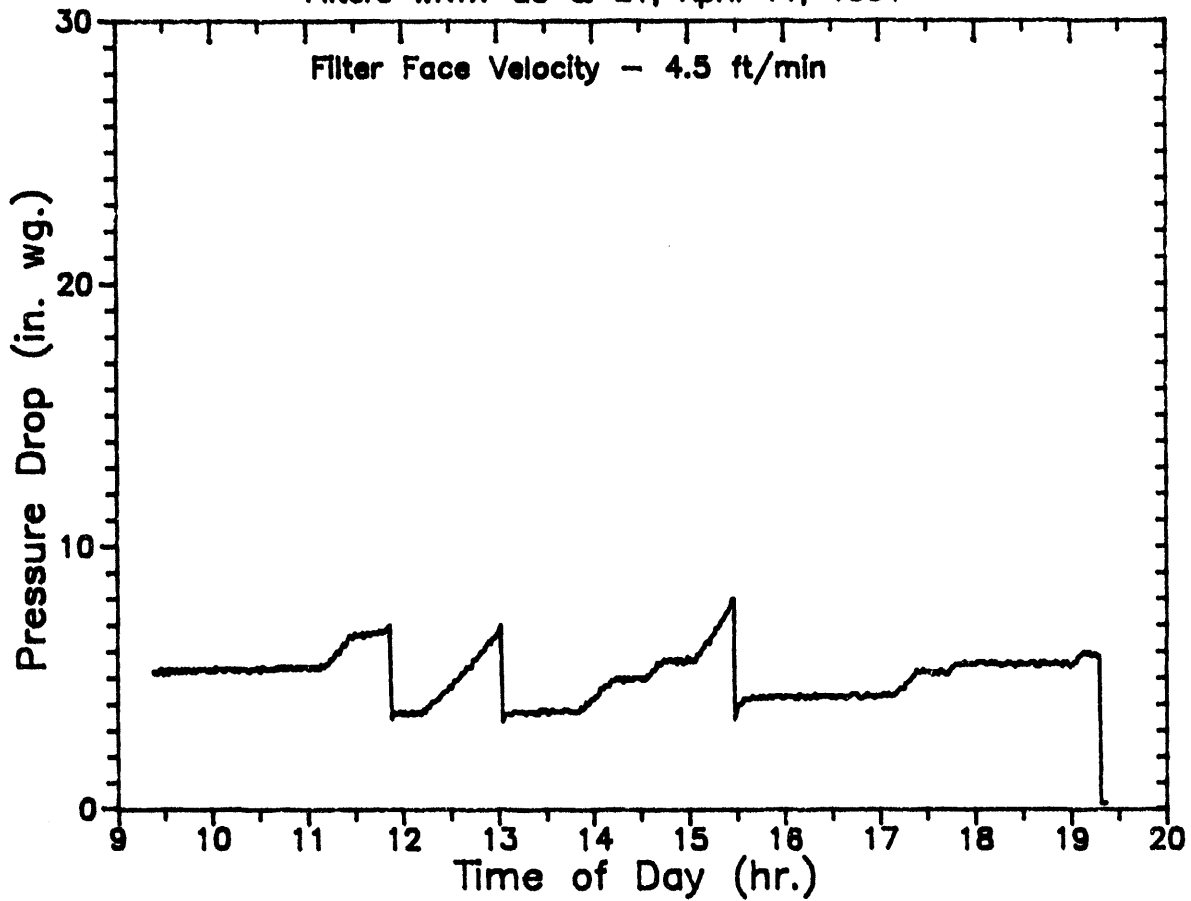
0730 - 1140 system emptied, refilled and repressurized

1140 - 1300 system to temperature

1510 - 1540 Char not feeding properly

# Recirc Filter Performance Data

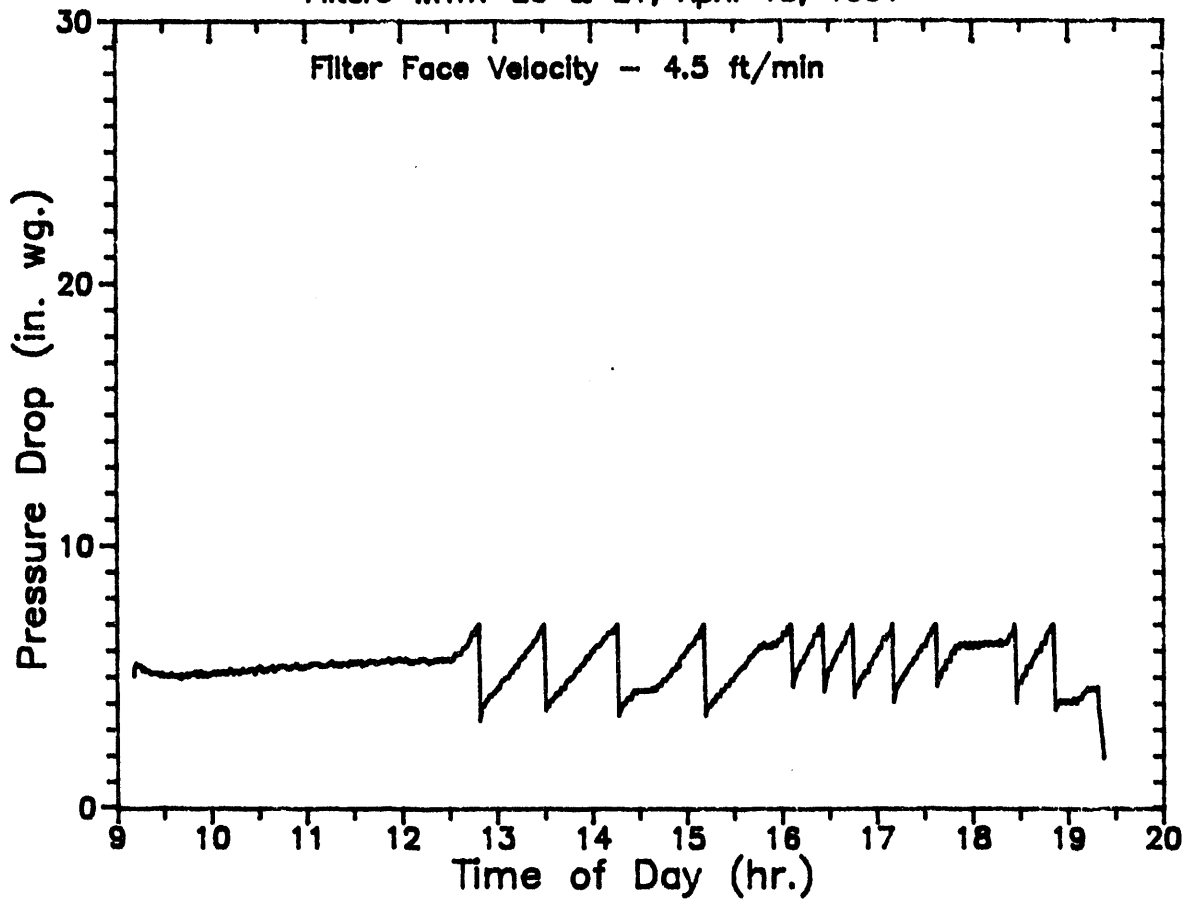
Filters WRTX-20 & 21, April 11, 1991



Operation Notes for April 11, 1991  
delta-P Trigger = 7 in wc  
Pulse Cleaning - 170 psig/0.1 sec  
0857 - 1109 system to temperature  
1300 - 1500 Char not feeding properly  
1530 - 1917 Char not feeding properly

# Recirc Filter Performance Data

Filters WRTX-20 & 21, April 15, 1991



Operation Notes for April 15, 1991

delta-P Trigger = 7 in wc

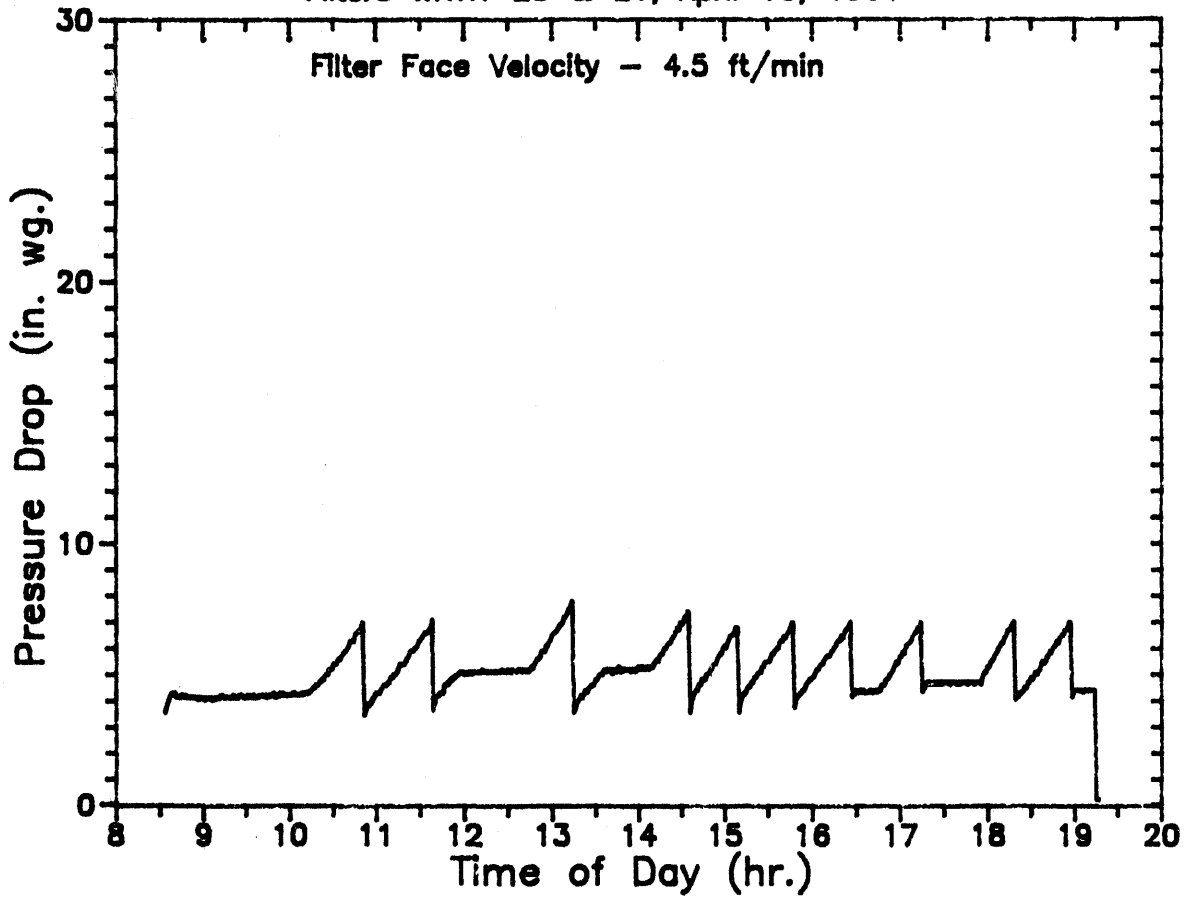
Pulse Cleaning - 170 psig/0.1 sec

0910 - 1230 Char loaded, system to pressure and temperature

1918 Scheduled Shutdown

# Recirc Filter Performance Data

Filters WRTX-20 & 21, April 16, 1991



## Operation Notes for April 16, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

0745 - 1013 Char loaded, system to pressure and temperature

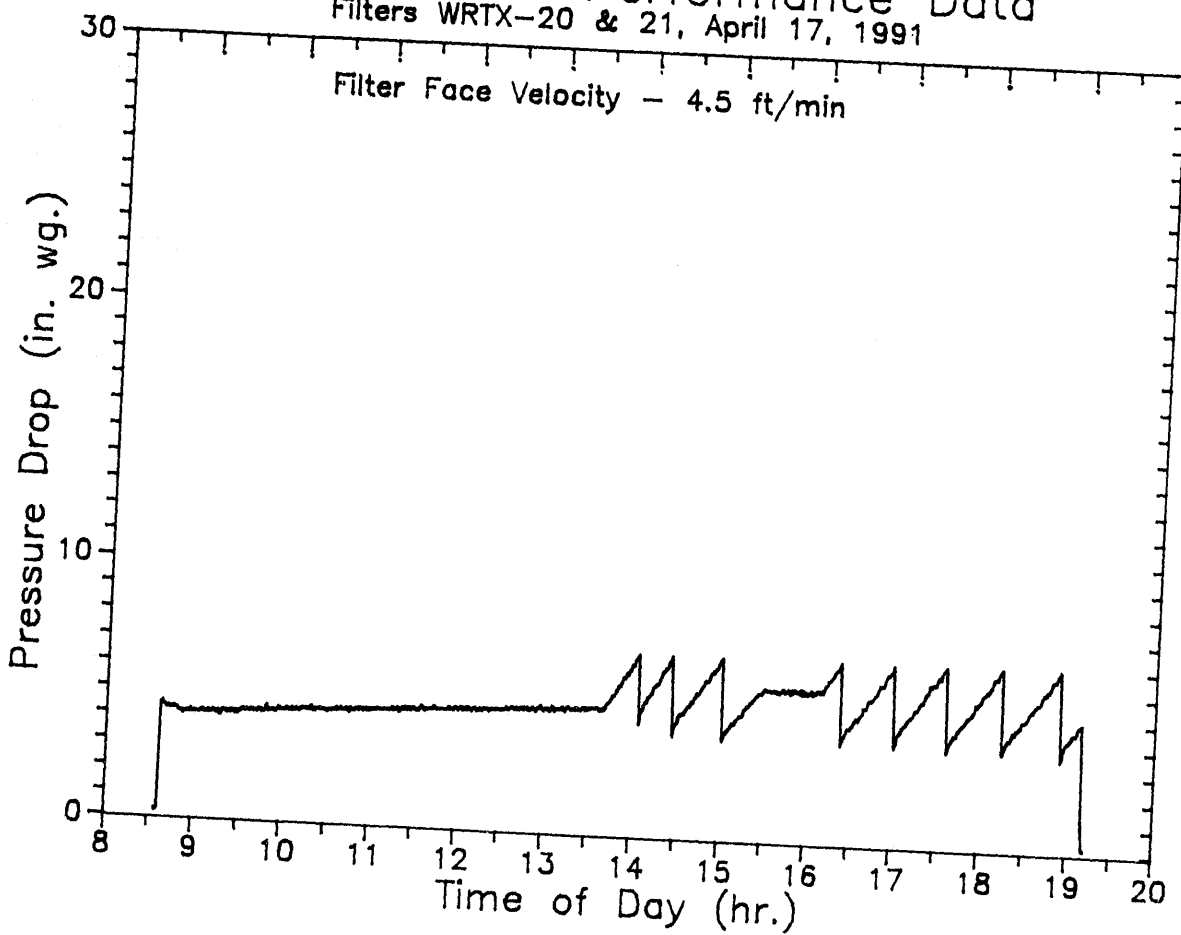
1913 Scheduled Shutdown

Plateaus in delta-P indicate dust feed malfunction



# Recirc Filter Performance Data

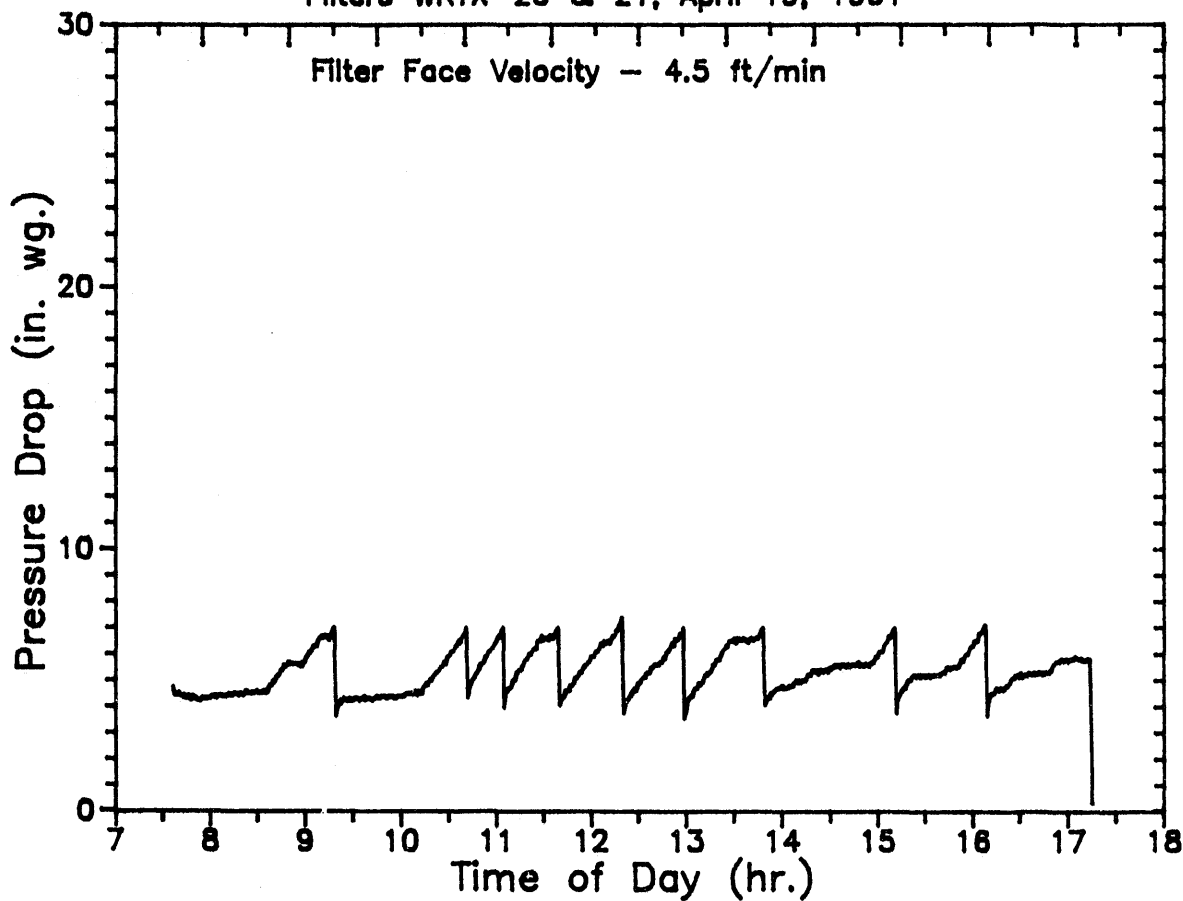
Filters WRTX-20 & 21, April 17, 1991



Operation Notes for April 17, 1991  
delta-P Trigger = 7 in wc  
Pulse Cleaning - 170 psig/0.1 sec  
0830 - 1340 Char loaded, system to pressure and temperature  
1910 Scheduled Shutdown  
Plateau in delta-P indicates dust feed malfunction

## Recirc Filter Performance Data

Filters WRTX-20 & 21, April 19, 1991



### Operation Notes for April 19, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

0734 - 0834 System to pressure and temperature

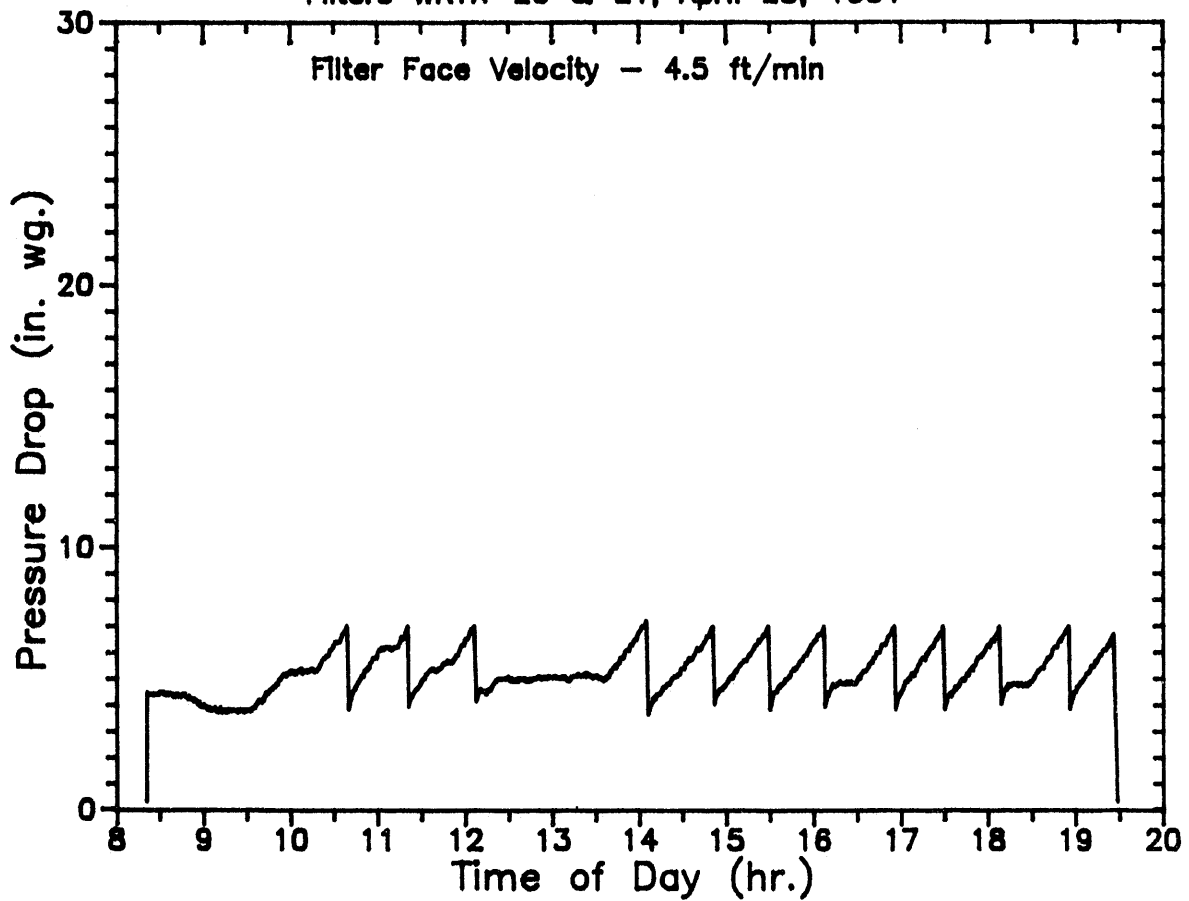
0922 - 1010 Char loaded

1713 Scheduled Shutdown

Plateaus in delta-P due to inconsistent dust feed

## Recirc Filter Performance Data

Filters WRTX-20 & 21, April 23, 1991



Operation Notes for April 23, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

0730 - 0930 System to pressure and temperature

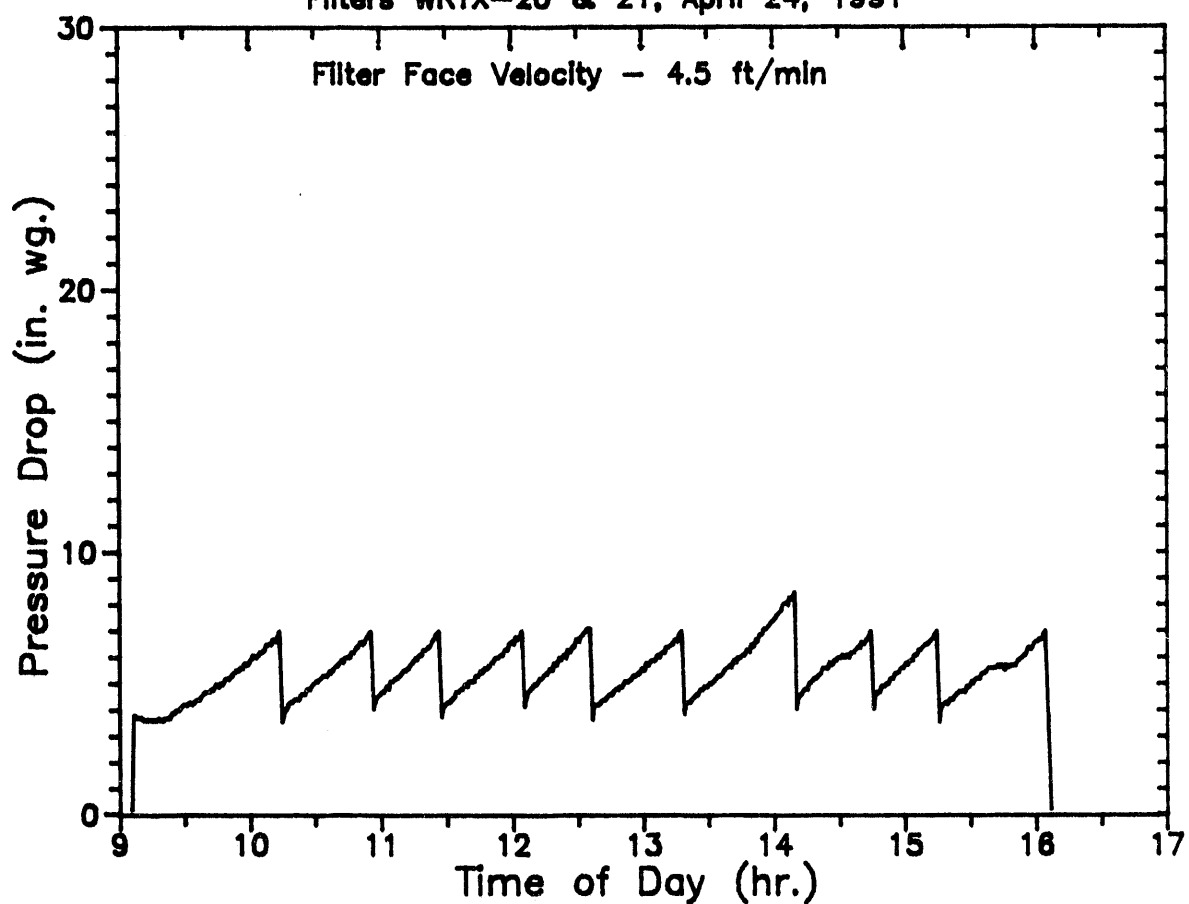
1227 - 1400 Char loaded

1928 Scheduled Shutdown

Plateaus in delta-P due to inconsistent dust feed

## Recirc Filter Performance Data

Filters WRTX-20 & 21, April 24, 1991



Operation Notes for April 24, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

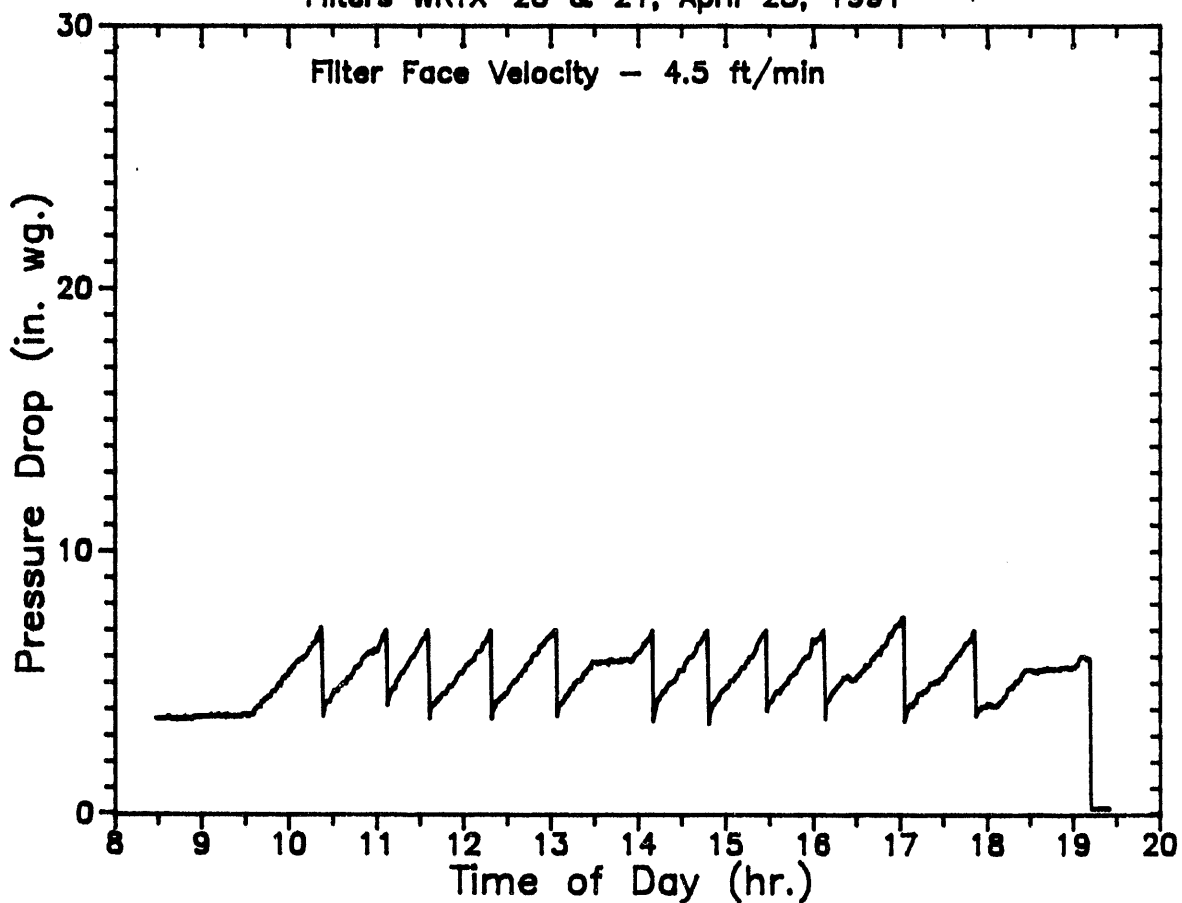
0730 - 0918 Char loaded, system to pressure and temperature

1603 Scheduled Shutdown

Plateaus in delta-P due to inconsistent dust feed

# Recirc Filter Performance Data

Filters WRTX-20 & 21, April 25, 1991



## Operation Notes for April 25, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

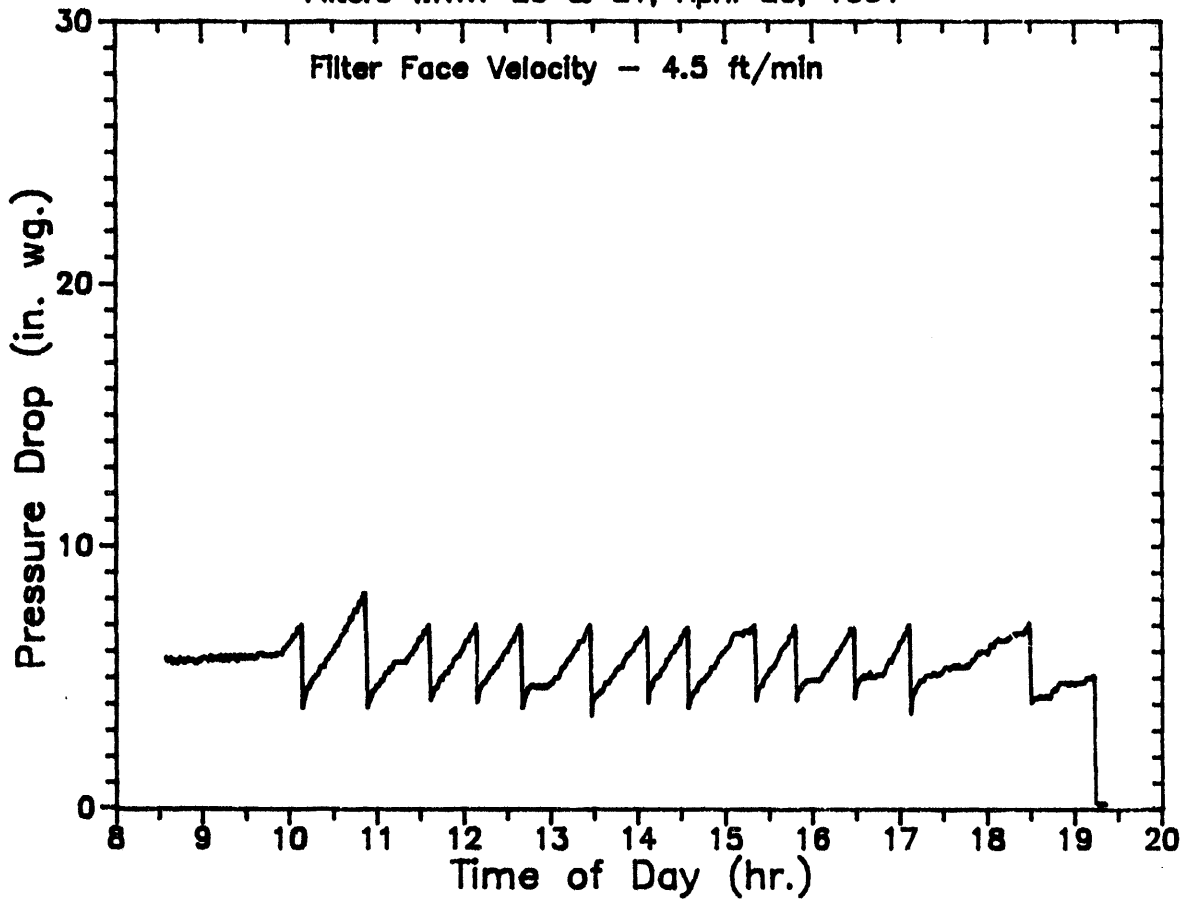
0810 - 0930 Char loaded, system to pressure and temperature

1910 Scheduled Shutdown

Plateaus in delta-P due to inconsistent dust feed, or low char level

# Recirc Filter Performance Data

Filters WRTX-20 & 21, April 26, 1991



## Operation Notes for April 26, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

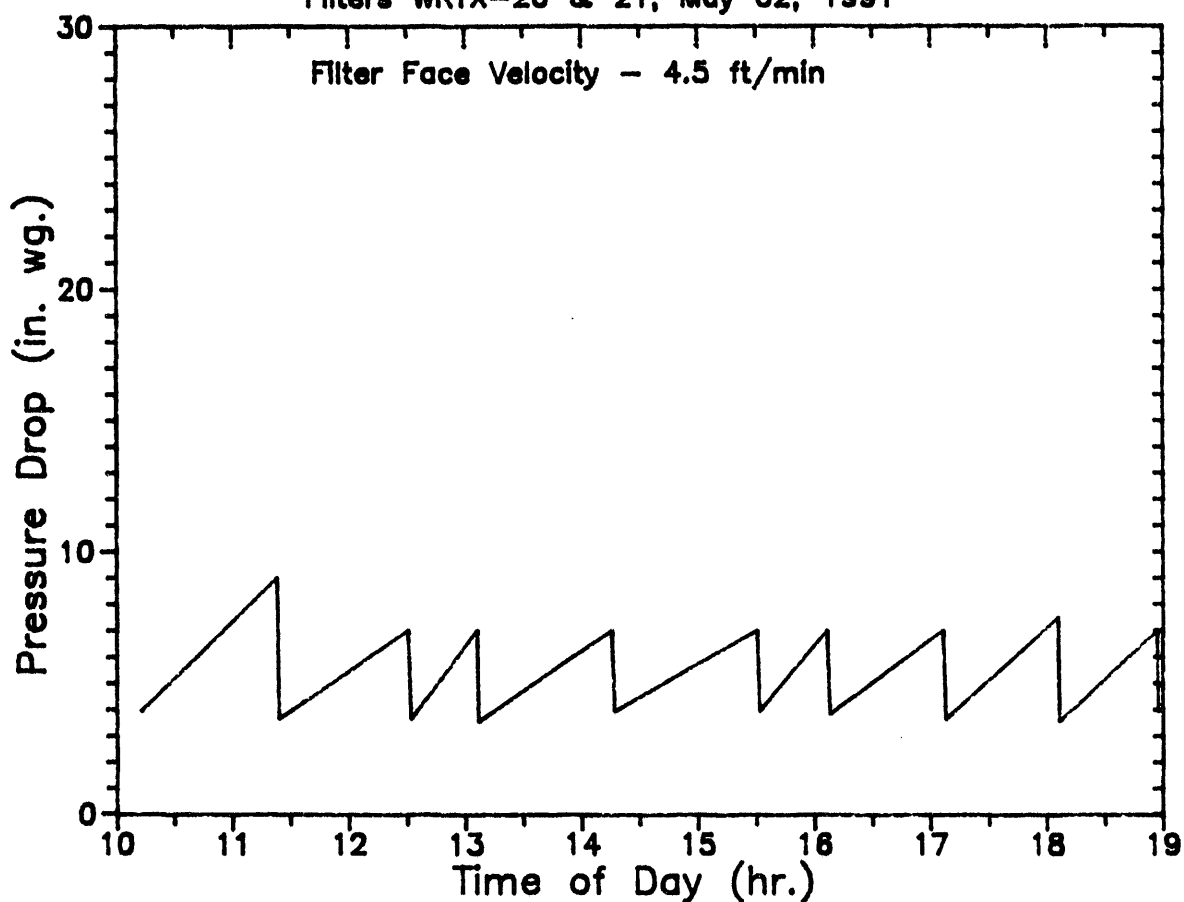
0831 - 0950 Char loaded, system to pressure and temperature

1911 Scheduled Shutdown

Plateaus in delta-P due to inconsistent dust feed, or low char level

# Recirc Filter Performance Data

Filters WRTX-20 & 21, May 02, 1991



## Operation Notes for May 02, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

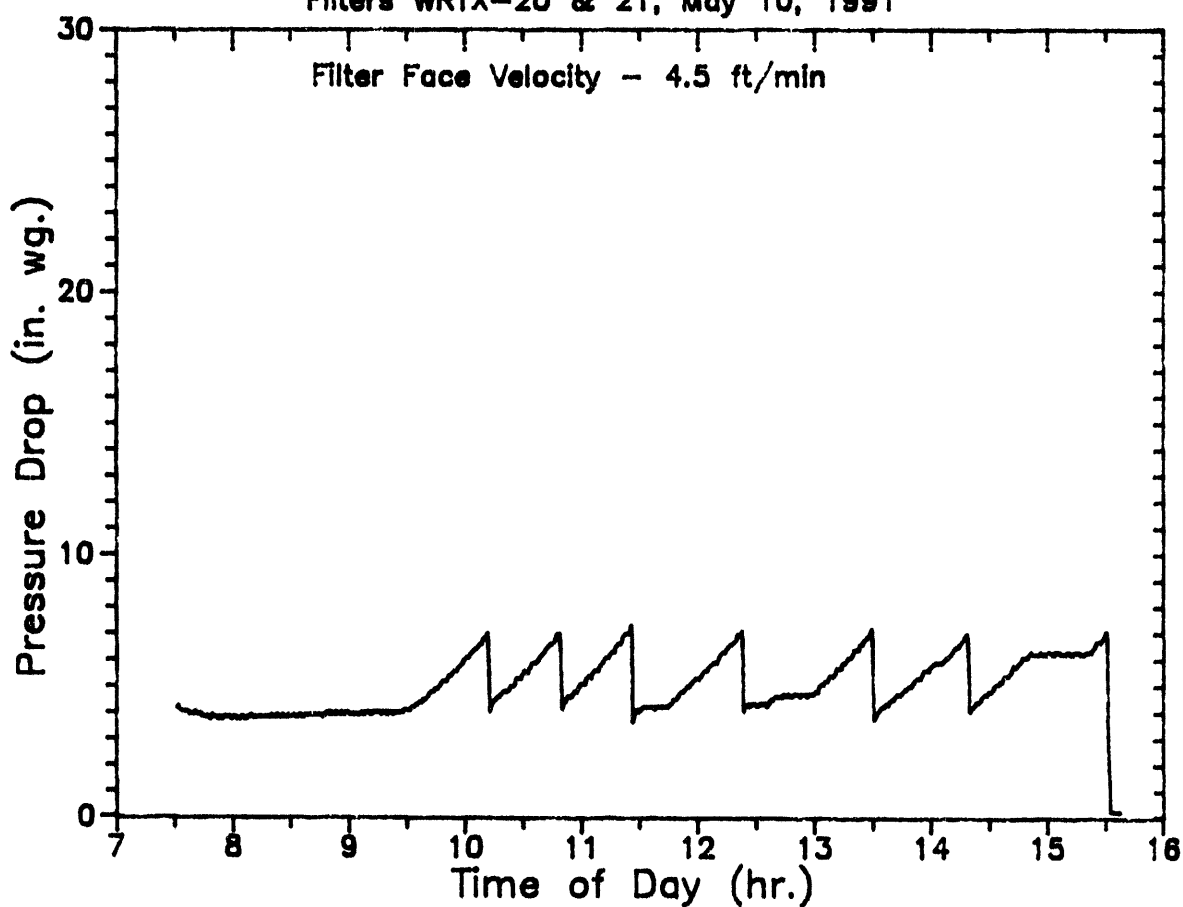
0850 - 1015 Char loaded, system to pressure and temperature

1857 Scheduled Shutdown

Plateaus in delta-P due to inconsistent dust feed, or low char level

## Recirc Filter Performance Data

Filters WRTX-20 & 21, May 10, 1991



### Operation Notes for May 10, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

0729 - 0930 Char loaded, system to pressure and temperature

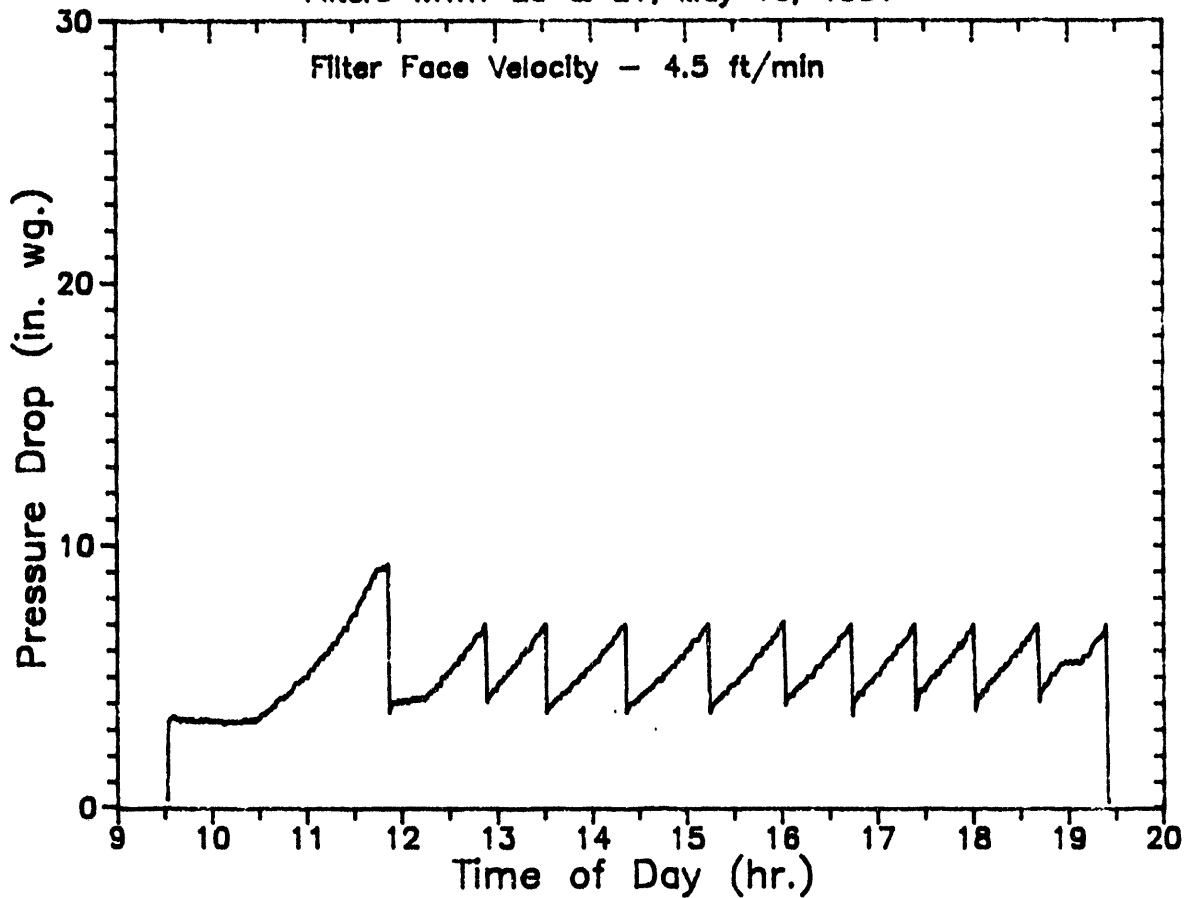
1532 Scheduled Shutdown

Plateaus in delta-P due to inconsistent dust feed, or low char level



## Recirc Filter Performance Data

Filters WRTX-20 & 21, May 16, 1991



### Operation Notes for May 16, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

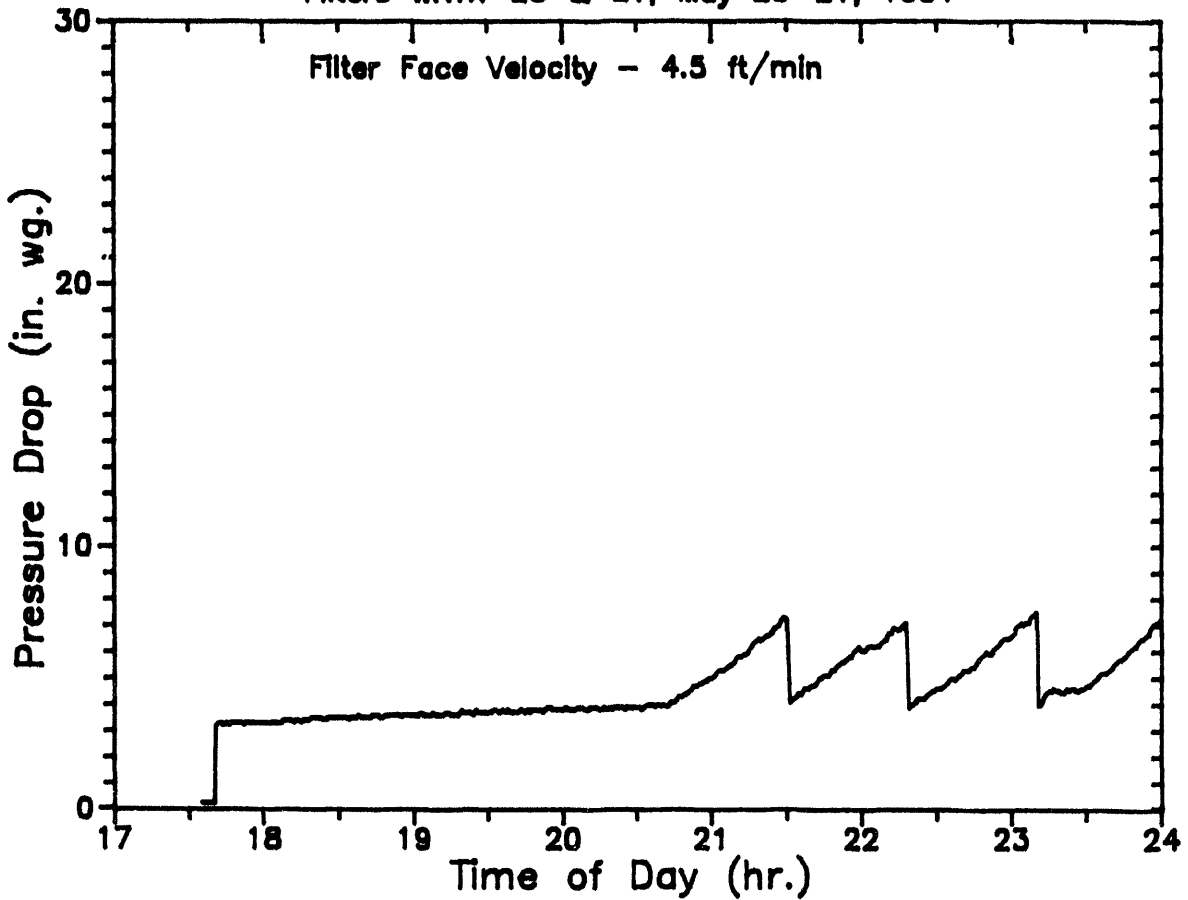
0930 - 1027 Char loaded, system to pressure and temperature

1923 Scheduled Shutdown

Plateaus in delta-P due to inconsistent dust feed, or low char level

# Recirc Filter Performance Data

Filters WRTX-20 & 21, May 20-21, 1991



## Operation Notes for May 20-21, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

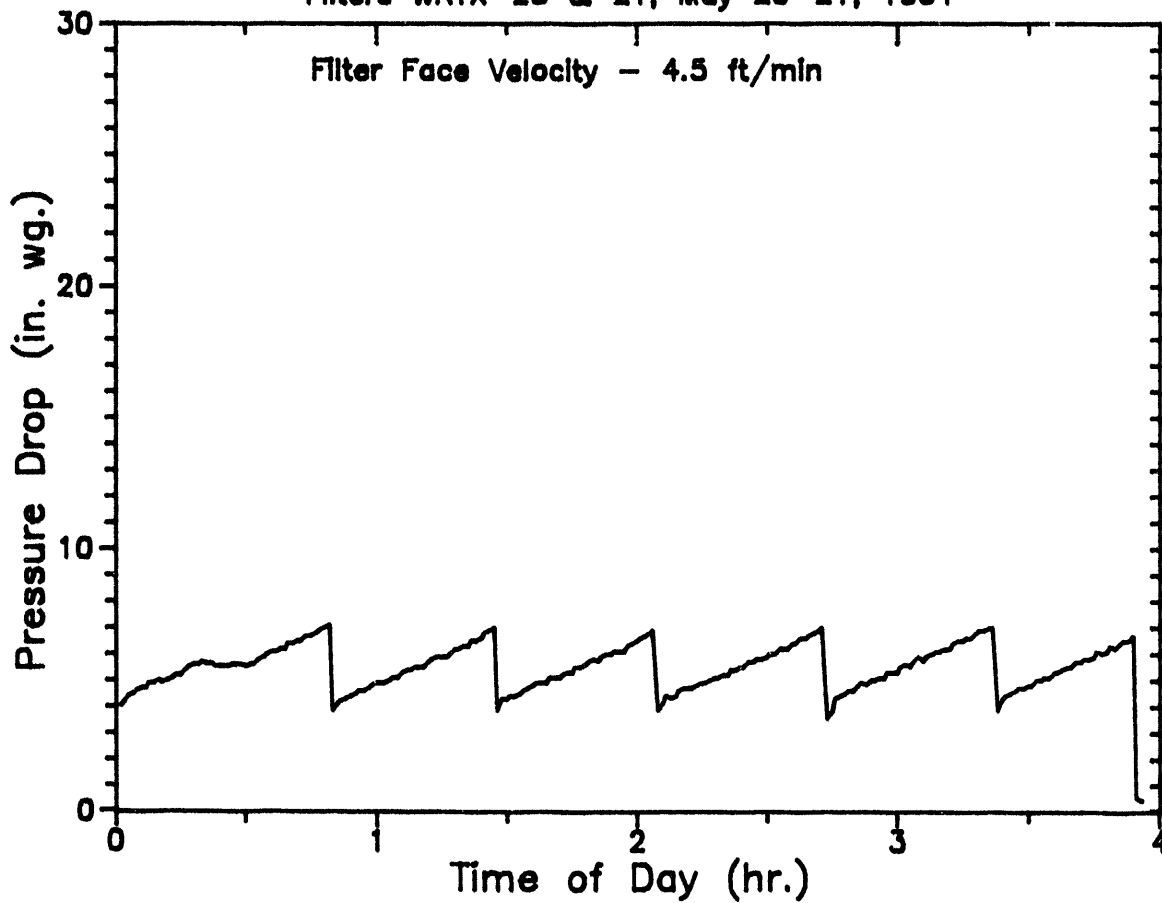
1739 - 2040 Char loaded, system to pressure and temperature

0353 Scheduled Shutdown (May 21, 1991)

Plateaus in delta-P due to inconsistent dust feed, or low char level

# Recirc Filter Performance Data

Filters WRTX-20 & 21, May 20-21, 1991



## Operation Notes for May 20-21, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

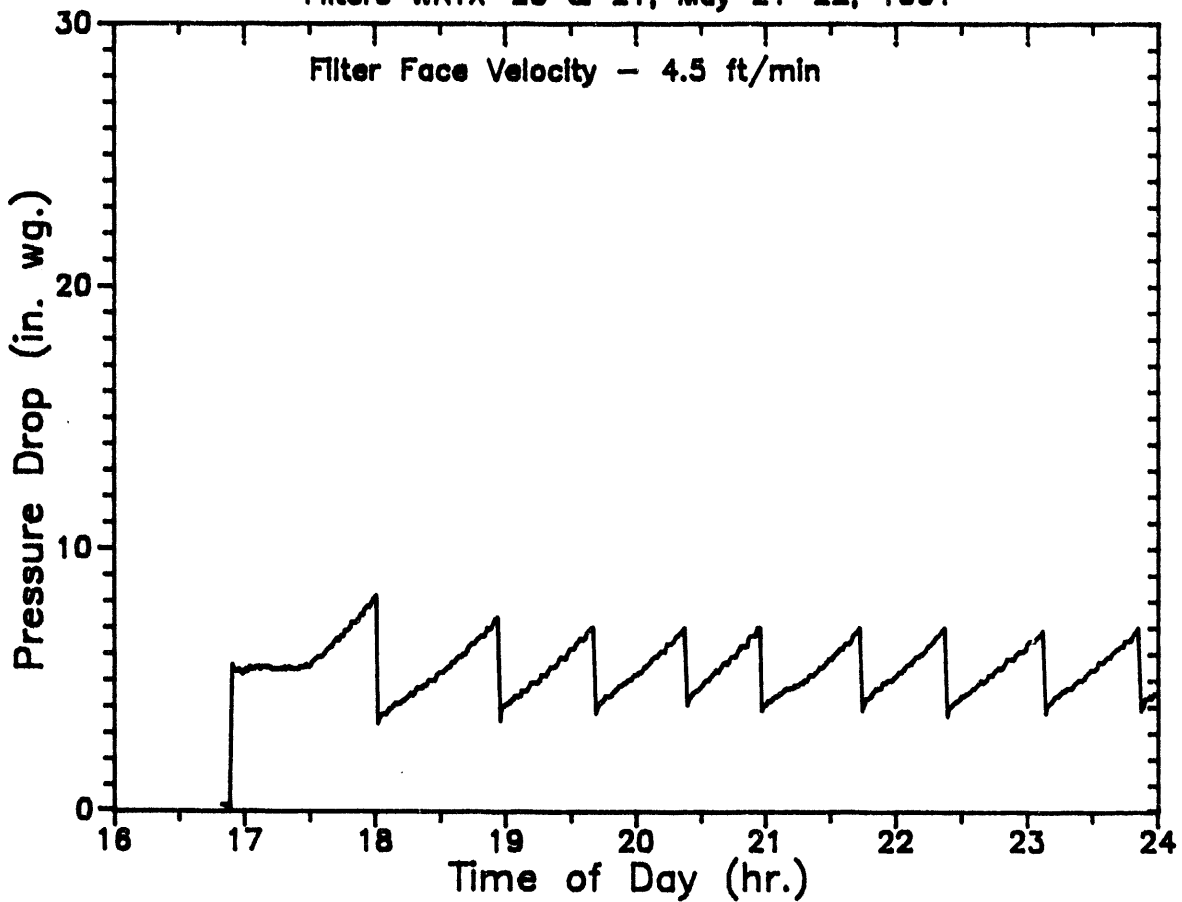
1739 - 2040 Char loaded, system to pressure and temperature

0353 Scheduled Shutdown (May 21, 1991)

Plateaus in delta-P due to inconsistent dust feed, or low char level

# Recirc Filter Performance Data

Filters WRTX-20 & 21, May 21-22, 1991



## Operation Notes for May 21-22, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

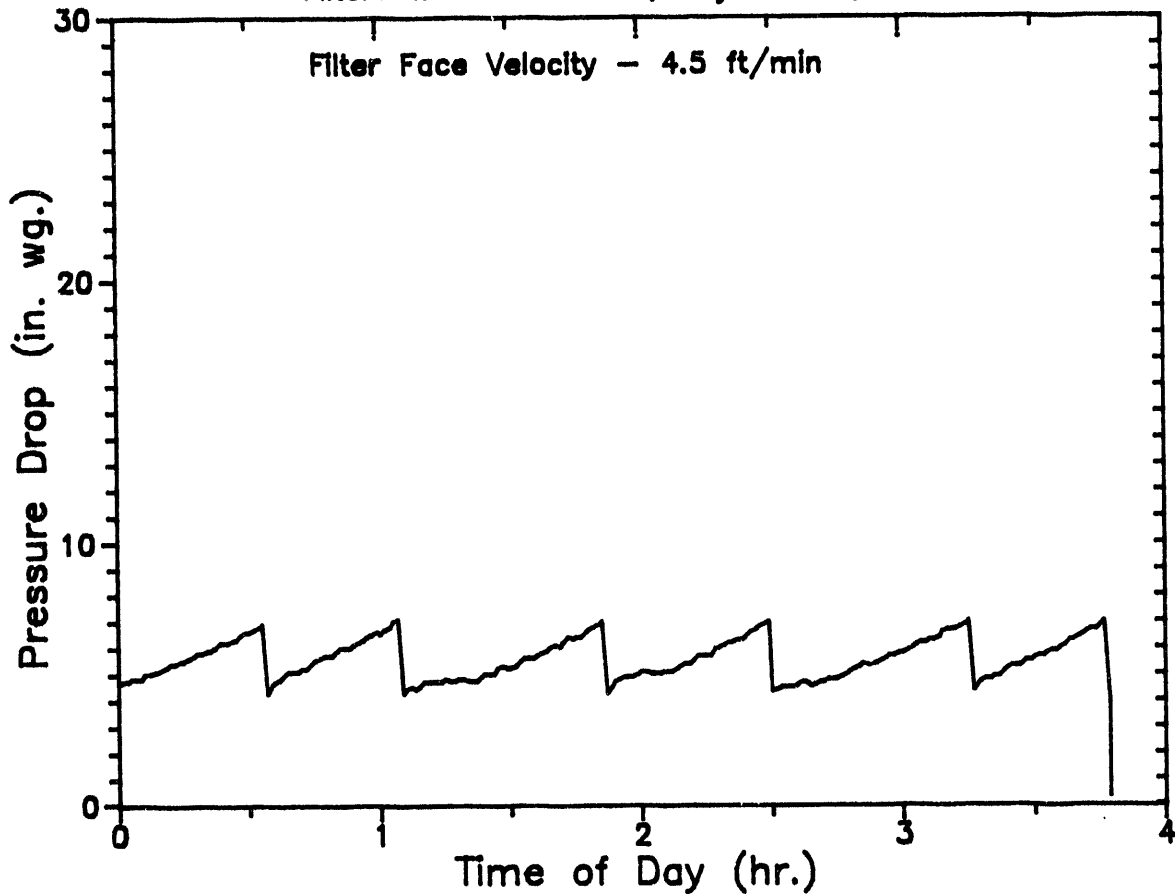
1652 - 1725 Char loaded, system to pressure and temperature

0347 Scheduled Shutdown (May 22, 1991)

Plateaus in delta-P due to inconsistent dust feed, or low char level

# Recirc Filter Performance Data

Filters WRTX-20 & 21, May 21-22, 1991



## Operation Notes for May 21-22, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

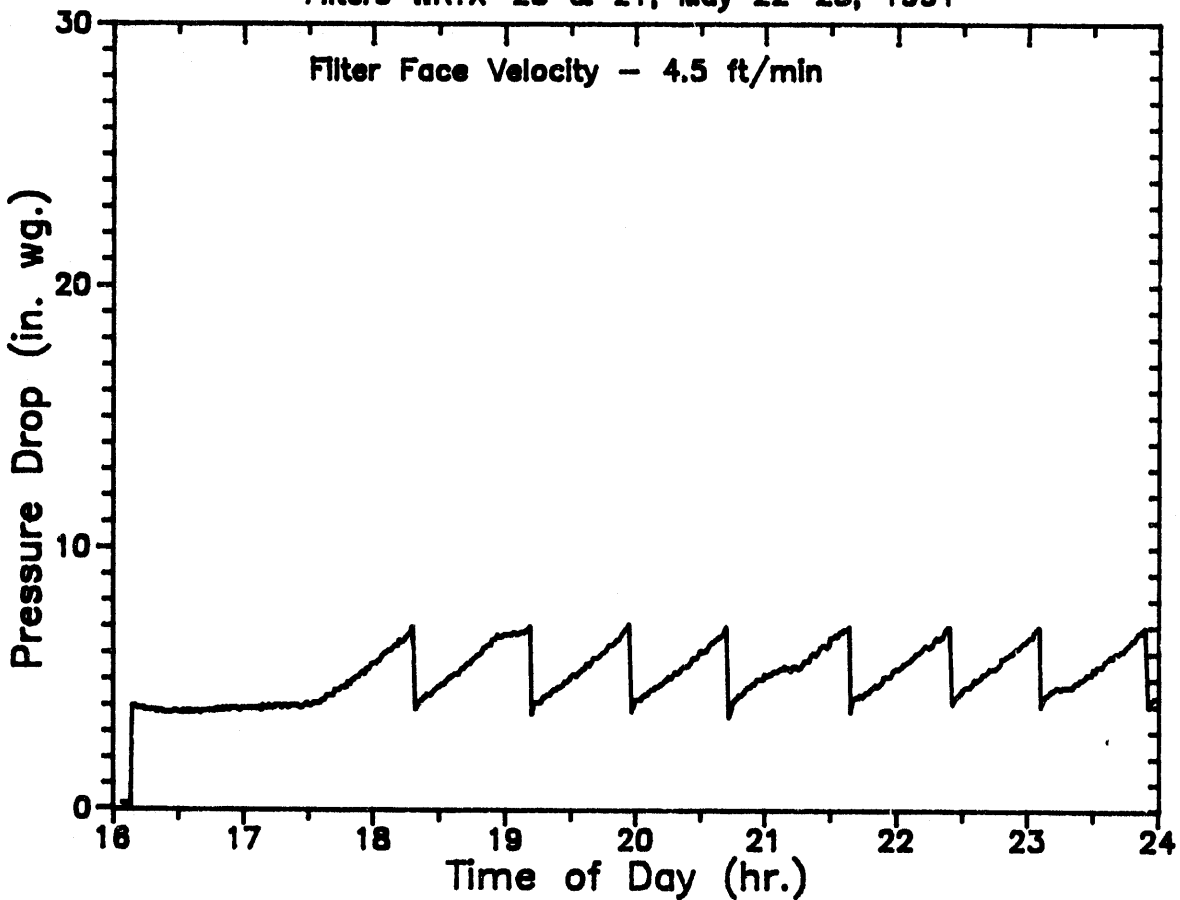
1652 - 1725 Char loaded, system to pressure and temperature

0347 Scheduled Shutdown (May 22, 1991)

Plateaus in delta-P due to inconsistent dust feed, or low char level

## Recirc Filter Performance Data

Filters WRTX-20 & 21, May 22-23, 1991



### Operation Notes for May 22-23, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

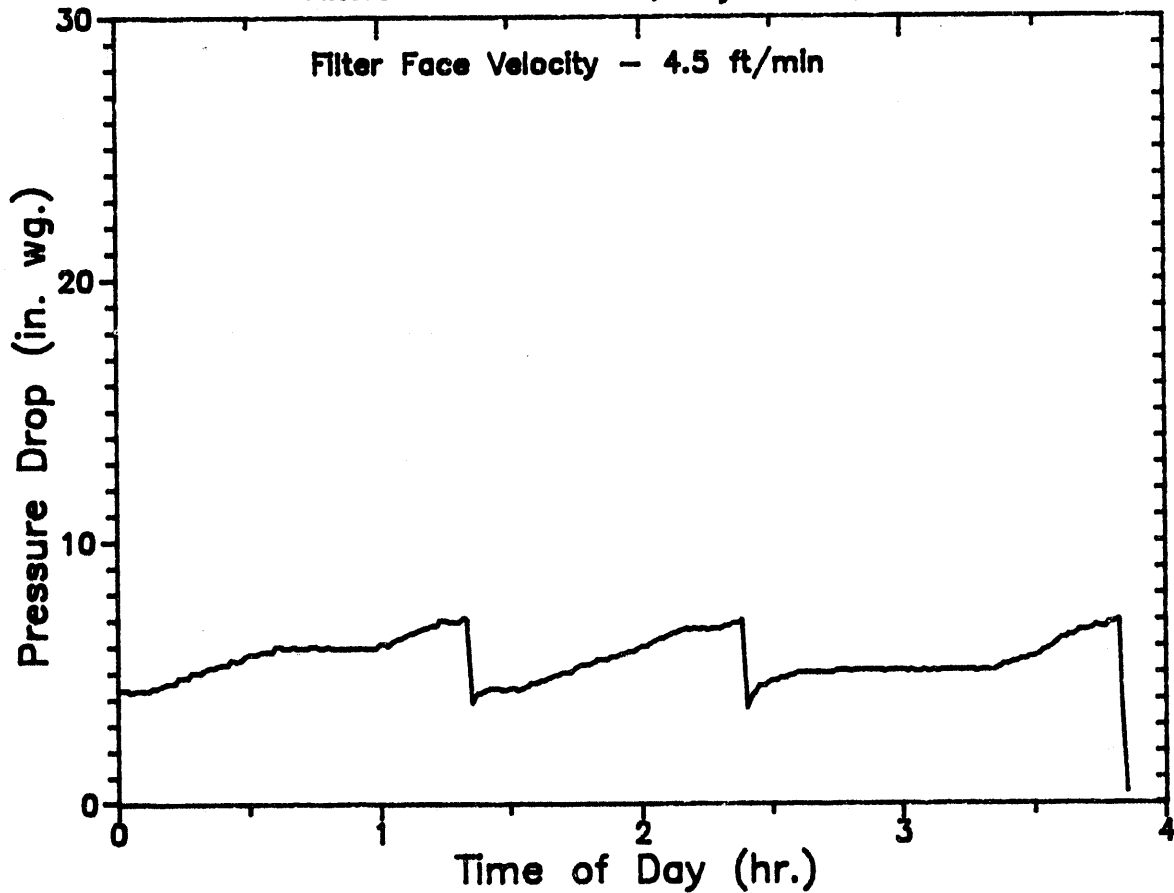
1607 - 1730 Char loaded, system to pressure and temperature

0349 Scheduled Shutdown (May 23, 1991)

Plateaus in delta-P due to inconsistent dust feed, or low char level

# Recirc Filter Performance Data

Filters WRTX-20 & 21, May 22-23, 1991



## Operation Notes for May 22-23, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

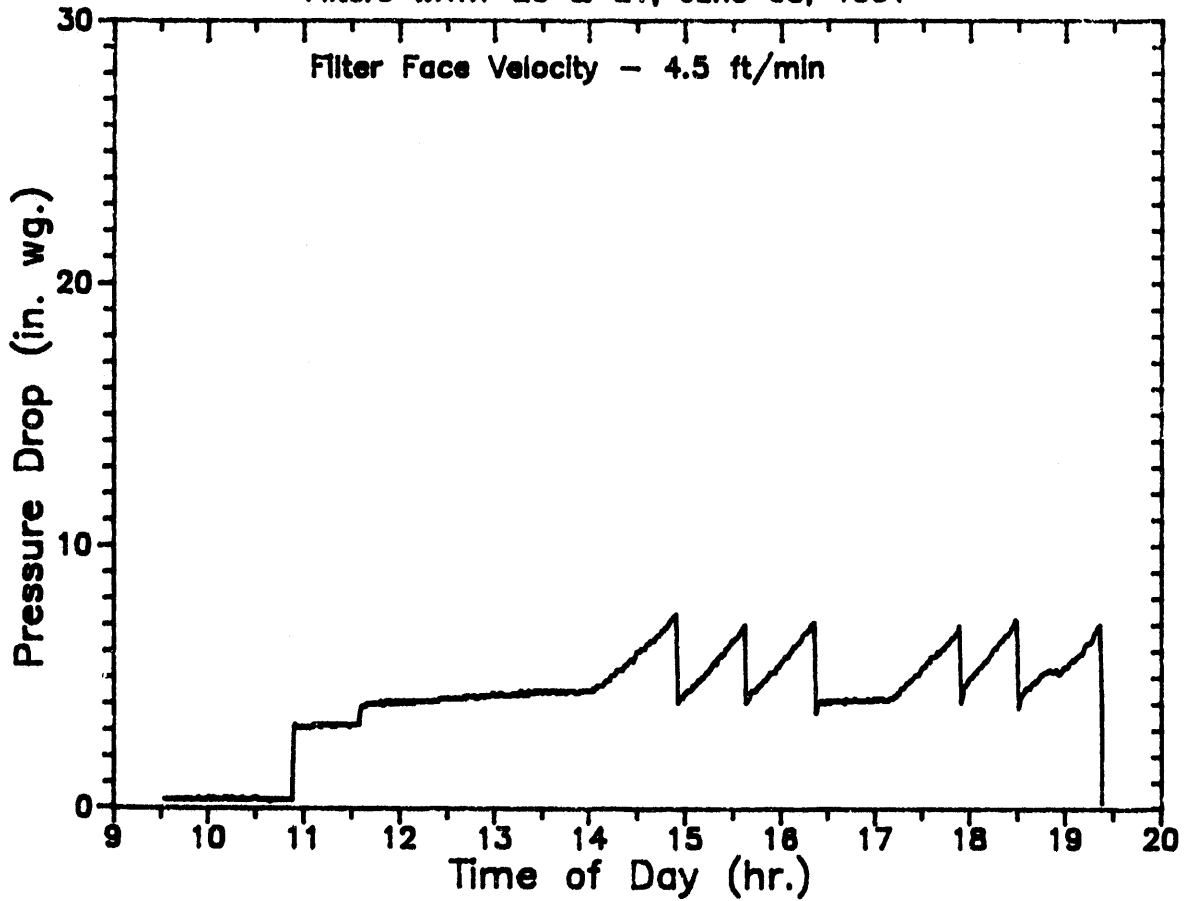
1607 - 1730 Char loaded, system to pressure and temperature

0349 Scheduled Shutdown (May 23, 1991)

Plateaus in delta-P due to inconsistent dust feed, or low char level

## Recirc Filter Performance Data

Filters WRTX-20 & 21, June 03, 1991



### Operation Notes for June 03, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

0730 - 1050 Char loaded, System to pressure and temperature

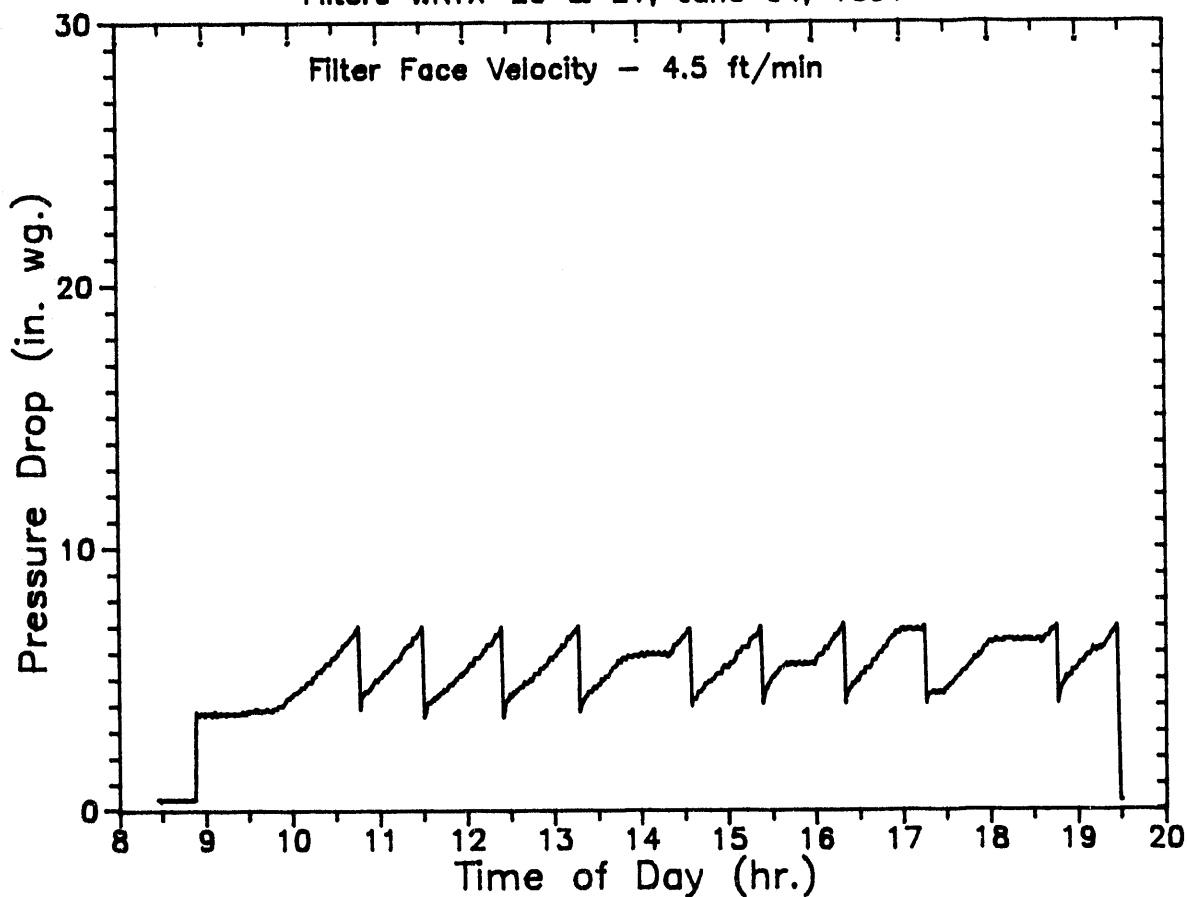
1920 Scheduled Shutdown

Plateaus in delta-P due to inconsistent dust feed, or low char level



## Recirc Filter Performance Data

Filters WRTX-20 & 21, June 04, 1991



### Operation Notes for June 04, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

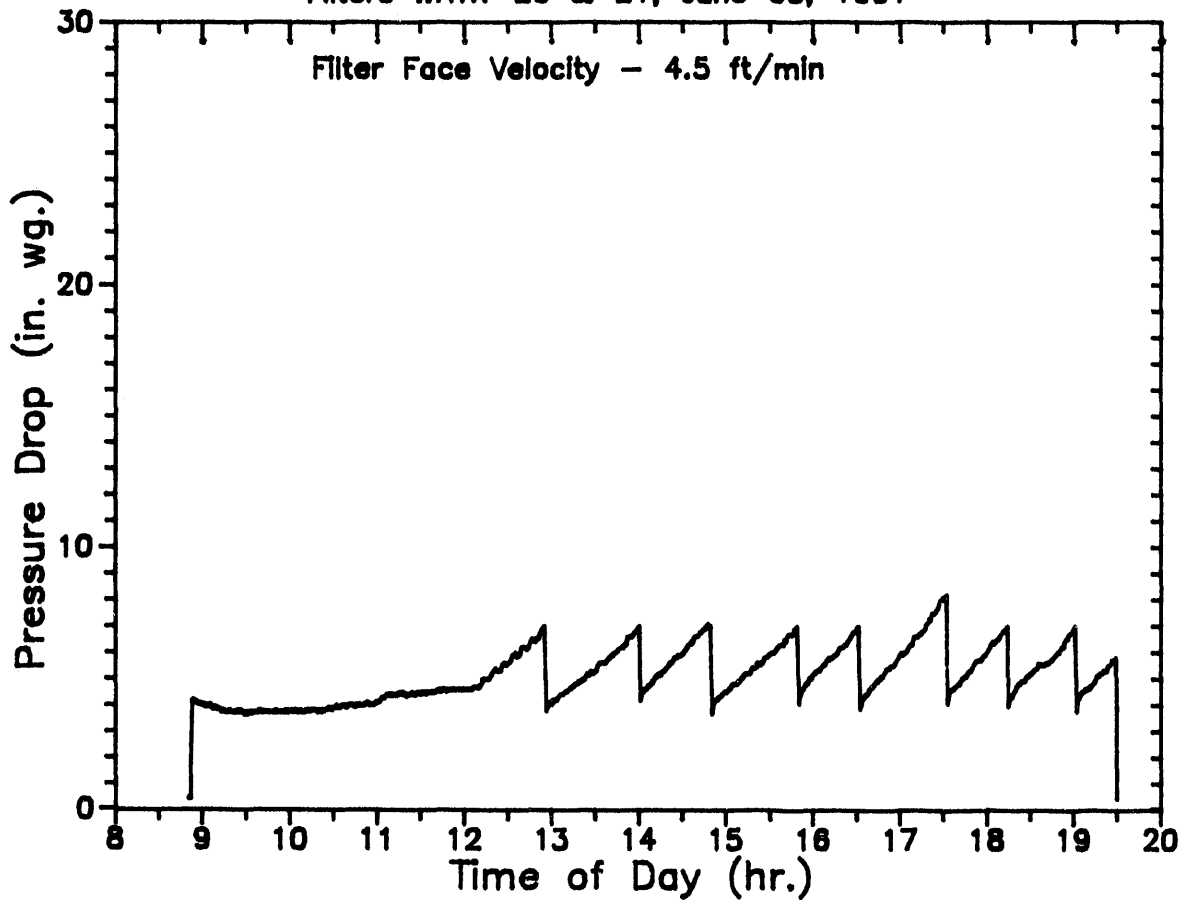
0730 - 0850 Char loaded, System to pressure and temperature

1926 Scheduled Shutdown

Plateaus in delta-P due to inconsistent dust feed, or low char level

## Recirc Filter Performance Data

Filters WRTX-20 & 21, June 05, 1991



### Operation Notes for June 05, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

0730 - 0850 System to pressure and temperature

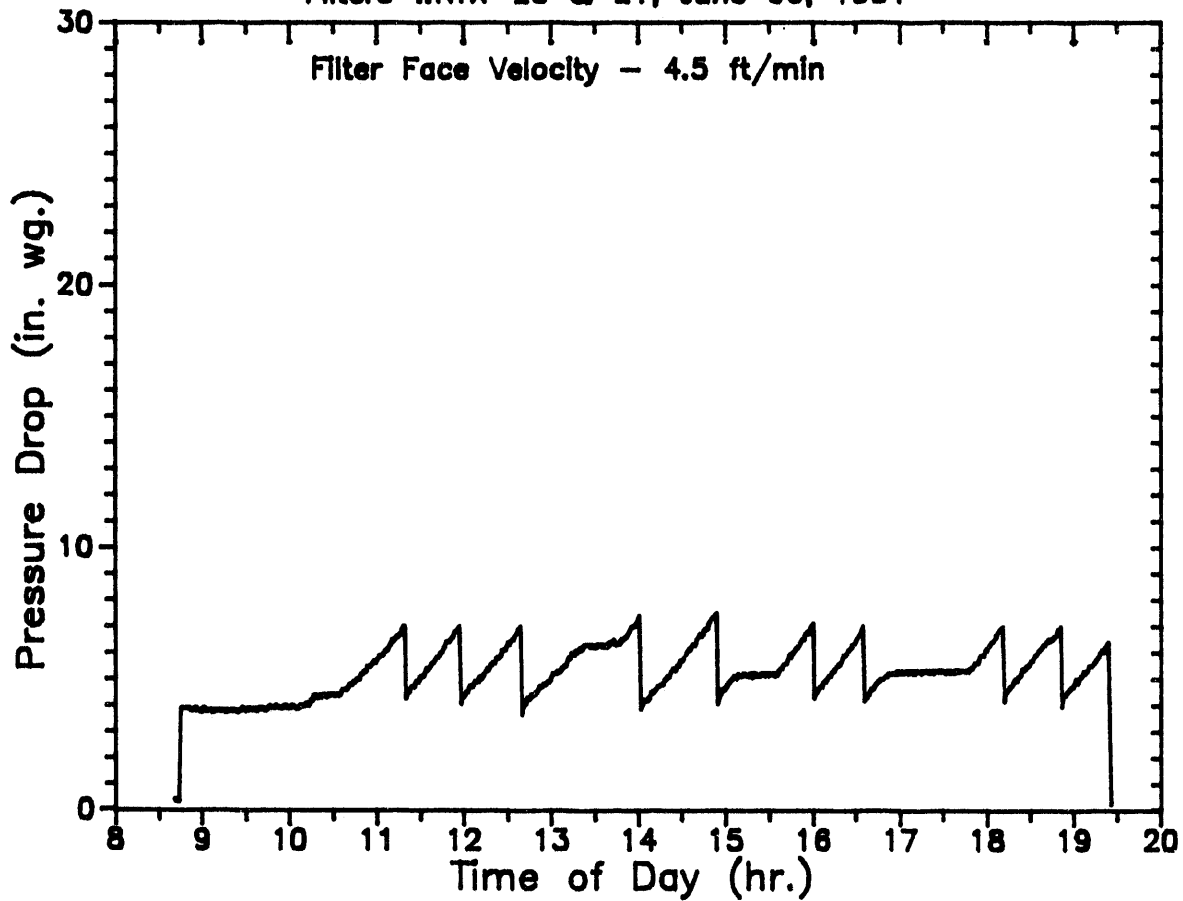
1112 - 1200 Char loaded

1927 Scheduled shutdown

Plateaus in delta-P due to inconsistent dust feed, or low char level

## Recirc Filter Performance Data

Filters WRTX-20 & 21, June 06, 1991



Operation Notes for June 06, 1991

delta-P Trigger = 7 in wc

Pulse Cleaning - 170 psig/0.1 sec

0841 - 1027 Char loaded, System to pressure and temperature

1923 Scheduled Shutdown

Plateaus in delta-P due to inconsistent dust feed, or low char level