Alaska DMT Software Revision 3.00 Evaluation

December 3, 2013

100397 was used in the evaluation

1. Loaded 3.00 software and verified it can be pushed through the modem lines.
    a. Took ~4.5 minutes to push through the modem lines
    b. When poll disconnected the DMT restarted status was "VOC required"
    c. Started VOC test with Operator password
2. VOC ran successfully
    a. #5 from request list and email 5/21/2013
       tank pressure in psi printed under expiration date
    b. #6 from request list
       barometric pressure calculation of target value changed to round to the
       third digit instead of truncating
           psi 30.53/29.92= 0.0816
           VOC listed target at 0.082 correctly
    c. Verified software was 3.00
3. #12 from request list – verified in software "about" the next scheduled VOC date
   was listed and was correct at 12/12/2013 12:00:00
    a. Ran a second VOC and ensure the next scheduled VOC was still correct
       at 12/12/13
    b. Changed the date of the DMT to 12/12/2013 manually to allow the
       regularly scheduled VOC to start. DMT started the VOC. The scheduled
       VOC was updated in the software to the 1/4/2014 date correctly.
4. From email dated 3/22/2013 verified that "supervisor test" is no longer an option
   in the software with a supervisor password and set up menu options have also
   been removed from the supervisor password. Verified that lab personnel have
   access to supervisor test option.
5. Ran a non-drinking complete subject test.
    a. #7 from request list the volume printed on the subject sample line
    b. #9 from the request list the minimum flow line was printed at 3.00 L/min
6. #2 4th bullet from request list. Ran a non-drinking subject test with 10 attempts.
   The test stopped after the 10th attempt was made.
    a. Confirmed the wording of the status message "Maximum Attempts
       Exceeded" and the wording "The test has been aborted due to too many
       attempts. Instruct the subject to provide a sample with one long, steady
       breath."
7. # 3 from the request list - Any time a status message occurs generate a pop up
   window immediately the status message pop up box that says "A status message
   has occurred and the test is not complete. Would you like to test the subject

again?" Then have a yes or no box. If yes is selected print the test strip and return to the data entry screen with the previous data entered. If no is selected print the test strip and return to the home screen.

    a. Confirmed with maximum number of attempts – yes and returned to data entry screen

    b. Confirmed with incomplete – no and returned to home screen

    c. Confirmed with RFI triggered during the subject sample, confirmed status message box, no, confirmed signature box and driver's license card reader.

    d. Confirmed with RFI triggered after subject sample, confirmed status message box, no, confirmed signature box.

    e. Confirmed with Invalid subject sample, confirmed status message box, confirmed "XXX" was subject test result on screen.

8. # 4 from request list if the subject test does not complete after the subject has blown the test strip will print with a subject test result of "XXX"

    a. Confirmed with an RFI triggered after the subject sample was accepted.

    b. Confirmed with a blank error after the subject sample was accepted.

9. # 2 1st bullet from request list. Ran Interference detected on the subject sample. Confirmed the status message box and confirmed "XXX" result.

10. #2 3rd bullet from request list. Triggered RFI during the subject sample. Confirmed status message box.

11. #2 2nd bullet from request list.

    a. Triggered a blank error and confirmed the status message box.

    b. Triggered an Interference Detected during the subject sample and confirmed status message.

2/5/2015

VERIFICATION OF CALIBRATION REPORT

of DataMaster dmt Breath Test Instrument
State of Alaska
Scientific Crime Detection Laboratory - Statewide Breath Alcohol Program

Serial #: 100397   Date: 12/03/2013

External Standard Test Values

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 30.53: 0.082 2b
LOT #: 22612080A1
EXPIRATION: 09/01/2014
TANK PRESSURE: 678 psi 2a

BLANK TEST	0.000	09:11
INTERNAL STANDARD	VERIFIED	09:11
EXTERNAL STANDARD	0.080	09:12
BLANK TEST	0.000	09:12
EXTERNAL STANDARD	0.080	09:13
BLANK TEST	0.000	09:14
EXTERNAL STANDARD	0.080	09:14
BLANK TEST	0.000	09:15
EXTERNAL STANDARD	0.080	09:15
BLANK TEST	0.000	09:16
EXTERNAL STANDARD	0.080	09:16
BLANK TEST	0.000	09:17

Average = 0.0800
Std Dev = 0.0000

Diagnostic Check

VERSIONS
DMT: 3.00 2c
PIC: 3.02
Modem: 2.6
Questions: 2.2

TEMPERATURES

Sample Chamber = 48.8°C	PASSED
Breath Tube = 44.2°C	PASSED

PUMP INFO
Flow Rate = 4.238 L/M	PASSED

DETECTOR INFO
PUMP ON	PASSED
PUMP OFF	PASSED

FILTER INFO
Filter 1	PASSED
Filter 2	PASSED
Filter 3	PASSED

INTERNAL STANDARD	PASSED

I, Nita J. Bolz, after being first duly sworn, depose and state as follows:

(1) I am a Forensic Scientist IV at the State of Alaska Scientific Crime Detection Laboratory.

(2) The Alaska Scientific Crime Detection Laboratory is an entity within the Department of Public Safety.

(3) I am the Scientific Director of the State Breath Alcohol Program.

(4) In that capacity, I am responsible for overseeing the Breath Alcohol Program, which includes assuring that instruments are calibrated and maintaining program records.

(5) The above is a true and accurate verification of calibration, which is performed by the instrument's software, as specified by the State Breath Alcohol Program. Verification of calibration is a regularly conducted and regularly recorded activity of the State Breath Alcohol Program.

(6) The referenced instrument is certified for evidentiary use in the State of Alaska.

_____
Nita J.Bolz
Scientific Director
State Breath Alcohol Program

Subscribed and sworn before me this _____ day of _____, 20 _____

SUBJECT TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100397

Date: 12/03/2013
Time: 09:57:32

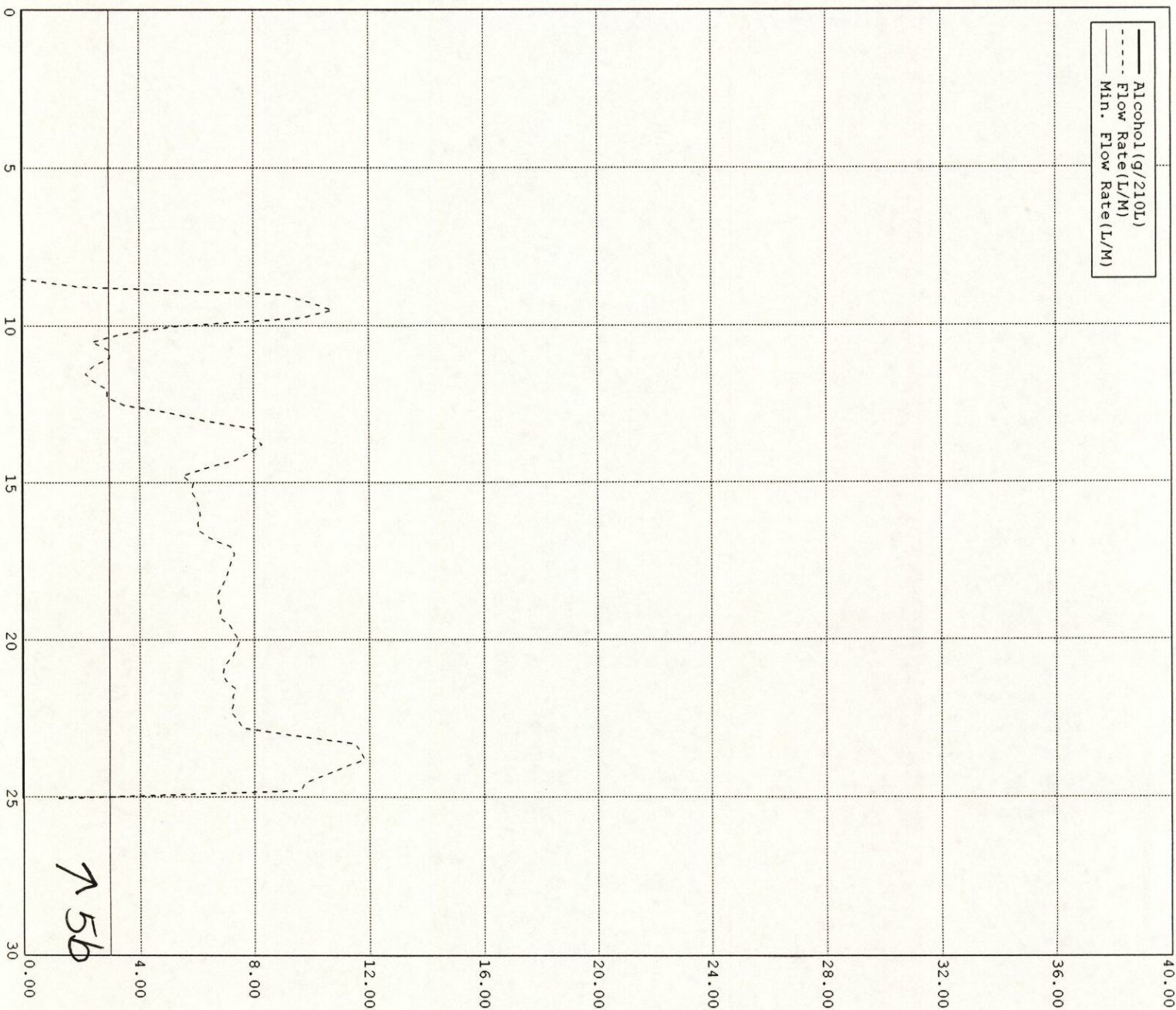SUBJECT NAME:
TEST TEST
LICENSE #: NONDRINKING

OPERATOR NAME:
BRANDI BARNETT
OPERATOR'S #: 7038

DEPT/AGENCY:
AAA1
CASE/REPORT: XXXX
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 30.54: 0.082
LOT #: 2261208OA1
EXPIRATION: 09/01/2014

DIAGNOSTIC CHECK	PASSED	09:58
BLANK TEST	0.000	09:58
INTERNAL STANDARD	VERIFIED	09:58
EXTERNAL STANDARD	0.080	09:58
BLANK TEST	0.000	09:59
SUBJECT SAMPLE (Vol=1.56L)	0.000	10:00
BLANK TEST	0.000	10:01
EXTERNAL STANDARD	0.080	10:01
BLANK TEST	0.000	10:02

Legend:
—— Alcohol(g/210L)
----- Flow Rate(L/M)
······ Min. Flow Rate(L/M)

Alaska Department of Public Safety
DATAMASTER dmt: 100397

Date: 12/03/2013
Time: 10:11:25

SUBJECT NAME:
TEST TEST
LICENSE #: MIN # ATMPTS

OPERATOR NAME:
COLLEEN S OBRYANT
OPERATOR'S #: 6237

DEPT/AGENCY:
AAA1
CASE/REPORT: 13-1234
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 30.54: 0.082
LOT #: 2261208OA1
EXPIRATION: 09/01/2014

DIAGNOSTIC CHECK	PASSED	10:12
BLANK TEST	0.000	10:12
INTERNAL STANDARD	VERIFIED	10:12
EXTERNAL STANDARD	0.080	10:12
BLANK TEST	0.000	10:13
SUBJECT SAMPLE	XXX	10:14

Maximum Attempts Exceeded

(handwritten: 4a)

Handwritten notes:
- confirmed slow Attempt message
- confirmed not completed test message
- confirmed signature box present
- confirmed press [OK] to test subject again takes you to data entry screen
- confirmed status message triggered after 10 attempts

(handwritten initials: CB)

Legend:
—— Alcohol(g/210L)
- - - - Flow Rate(L/M)
· · · · Min. Flow Rate(L/M)

(graph with handwritten markings 1 through 10)

SUBJECT TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100397

Date: 12/03/2013
Time: 10:17:00

SUBJECT NAME:
TEST TEST
LICENSE #: INCOMPLETE

OPERATOR NAME:
COLLEEN S OBRYANT
OPERATOR'S #: 6237

DEPT/AGENCY:
AAA1
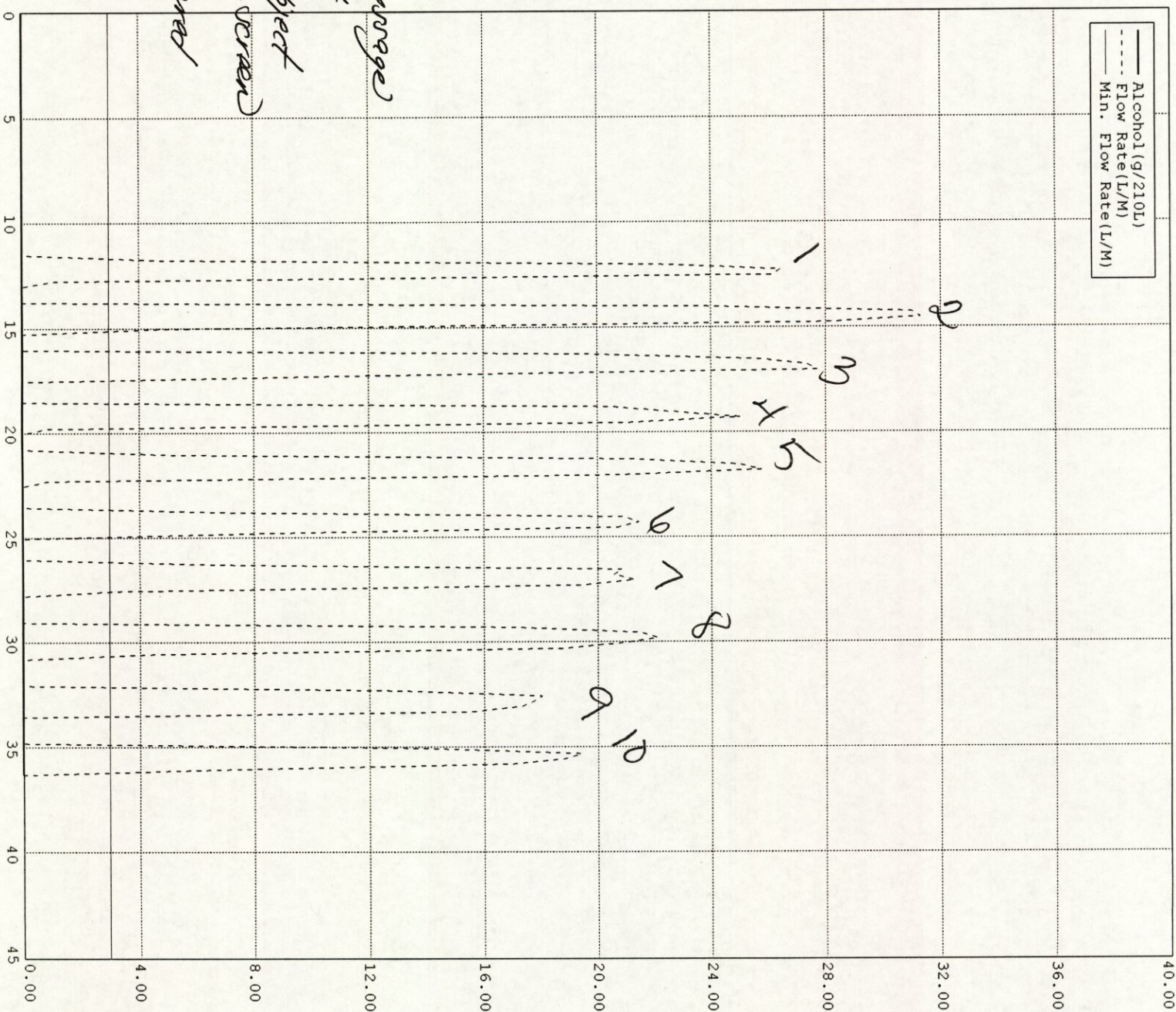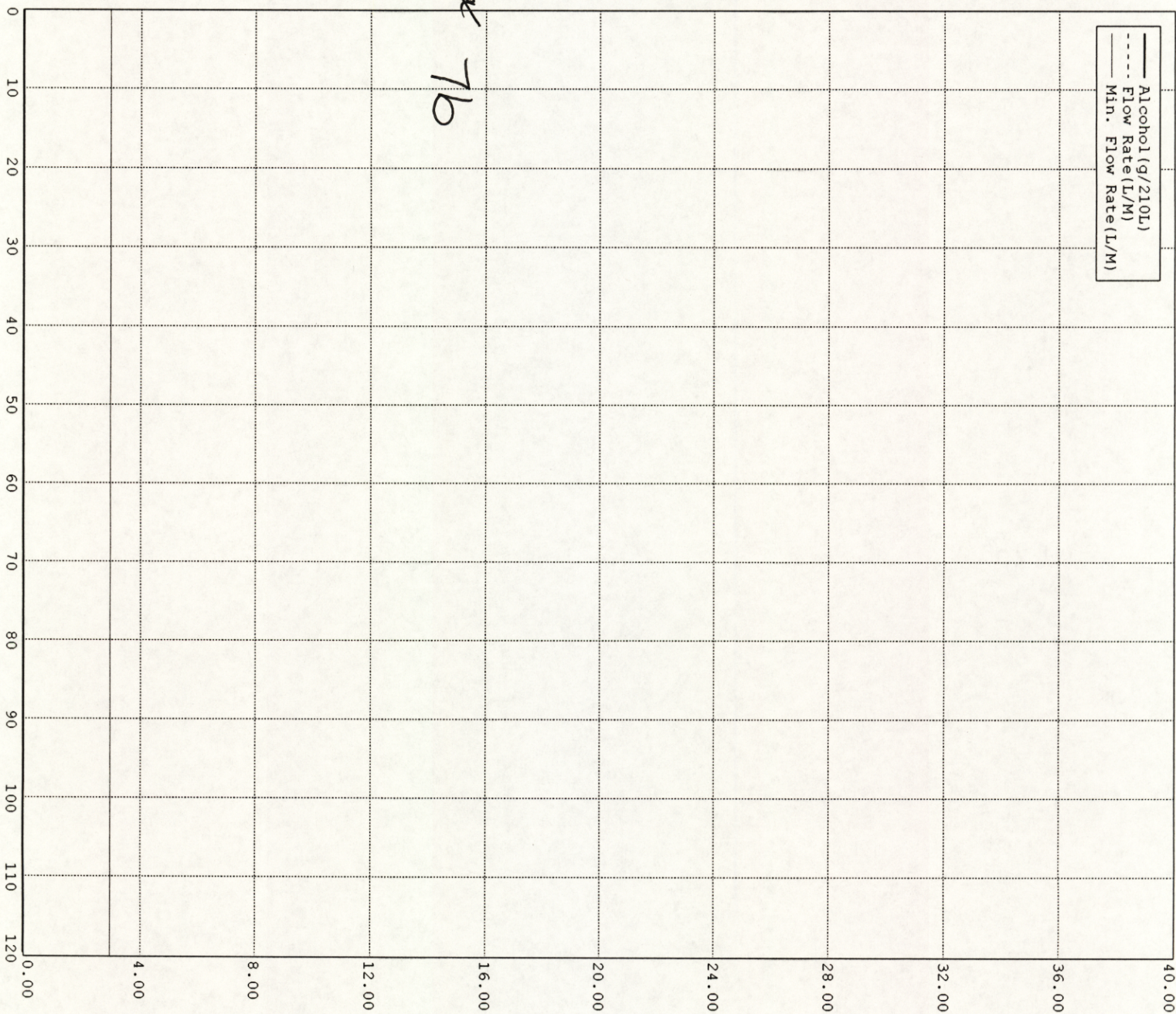CASE/REPORT: 13-1234
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 30.54: 0.082
LOT #: 22612080A1
EXPIRATION: 09/01/2014

DIAGNOSTIC CHECK   PASSED   10:17
BLANK TEST   0.000   10:18
INTERNAL STANDARD   VERIFIED   10:18
EXTERNAL STANDARD   0.080   10:18
BLANK TEST   0.000   10:19
SUBJECT SAMPLE   INCOMPLETE   10:21

Confirmed status message box
(no change to wording)

Confirmed press NO to not
test the subject again.

CMB

Alaska Department of Public Safety
DATAMASTER dmt: 100397

SUBJECT TEST
TEST TEST
Time: 10:44:42
Date: 12/03/2013

SUBJECT NAME:
TEST TEST
LICENSE #: AK7298726

OPERATOR NAME:
BRANDI BARNETT
OPERATOR'S #: 7038

DEPT/AGENCY:
RFI BEFORE SUBJECT SAMPLE
CASE/REPORT: XXXX
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 30.54: 0.082
LOT #: 2261208OA1
EXPIRATION: 09/01/2014

DIAGNOSTIC CHECK	PASSED		10:46
BLANK TEST	0.000		10:46
INTERNAL STANDARD	VERIFIED		10:46
EXTERNAL STANDARD	0.081		10:46
BLANK TEST	0.000		10:47

RFI DETECTED

7c & 10

RFI during subject test

° confirmed status message box

° confirmed status message box
and RFI status message wording

° confirmed signature box

° Confirmed drivers licence card reader
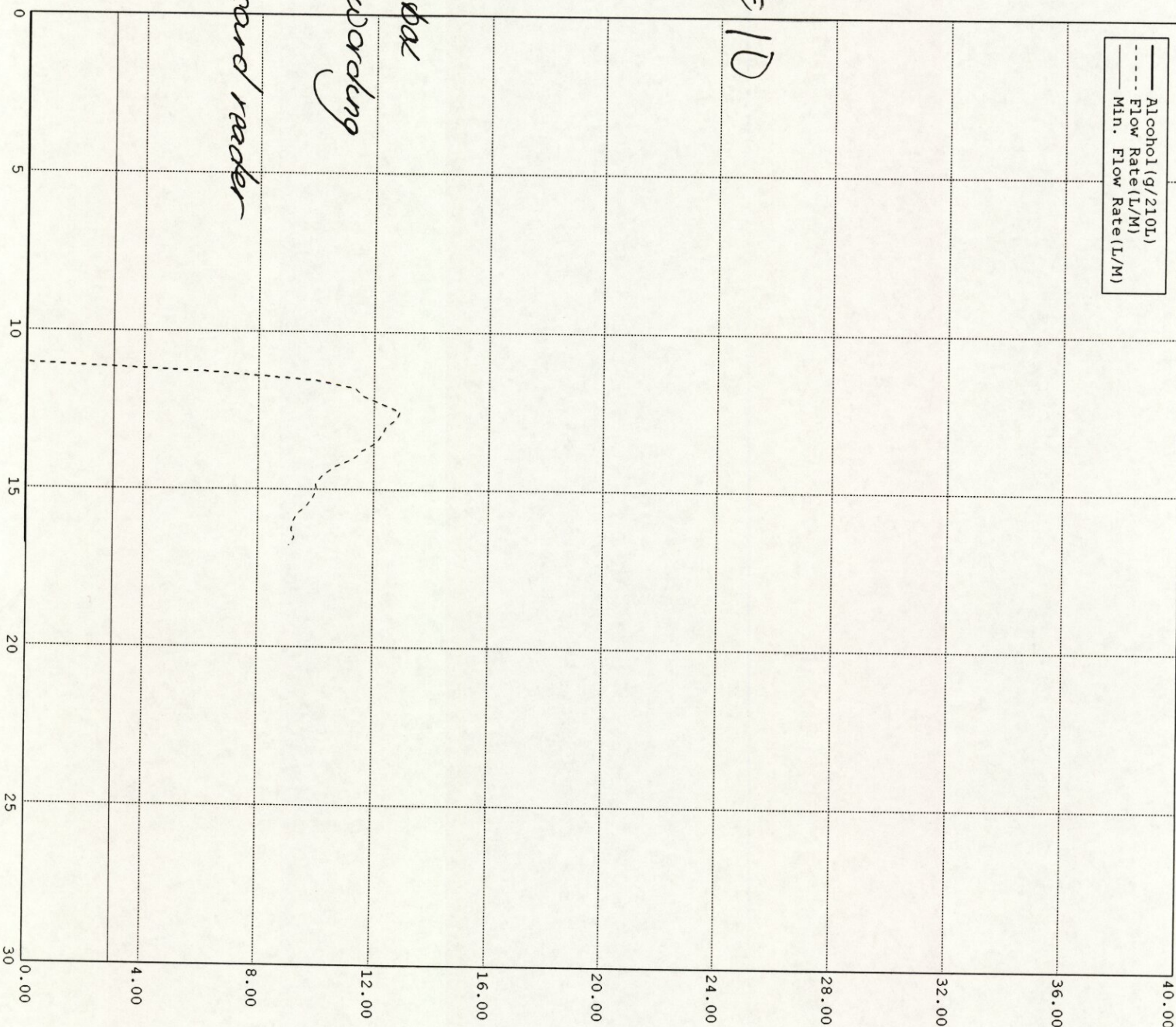
BMB

Alcohol(g/210L)
Flow Rate(L/M)
Min. Flow Rate(L/M)

SUBJECT TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100397

Date: 12/03/2013
Time: 10:52:15

SUBJECT NAME:
TEST TEST
LICENSE #: AK7298726

OPERATOR NAME:
BRANDI BARNETT
OPERATOR'S #: 7038

DEPT/AGENCY:
RFI AFTER SUBJECT SAMPLE
CASE/REPORT: XXXX
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 30.54: 0.082
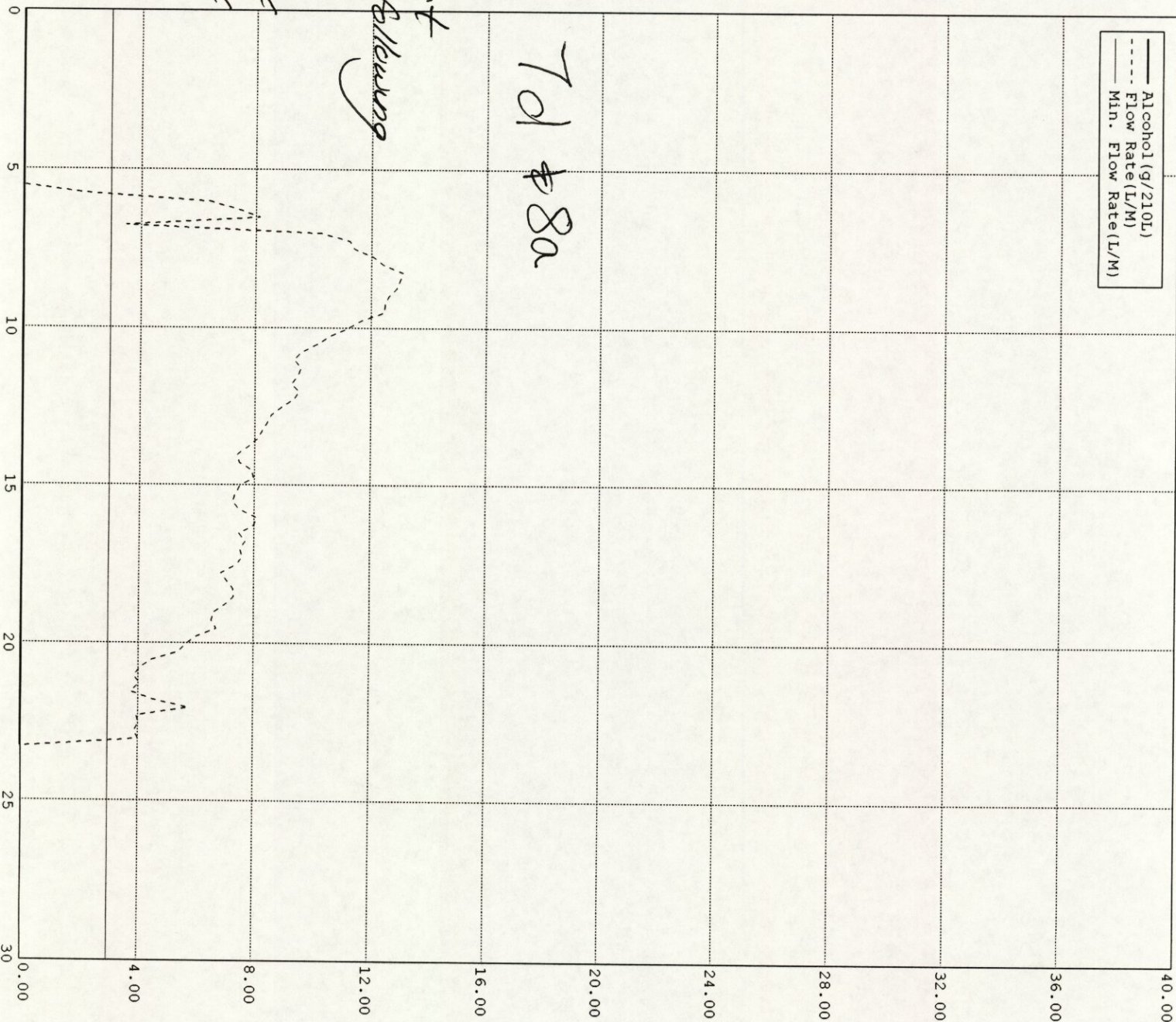LOT #: 22612080A1
EXPIRATION: 09/01/2014

DIAGNOSTIC CHECK   PASSED   10:53
BLANK TEST   0.000   10:53
INTERNAL STANDARD   VERIFIED   10:53
EXTERNAL STANDARD   0.080   10:54
BLANK TEST   0.000   10:54
SUBJECT SAMPLE (Vol=2.31L) XXX   10:55
BLANK TEST   0.000   10:56

RFI DETECTED

Confirmed xxx to subject test
on test with status msg following
accepted sample.

confirmed status message on
and RFI status message on

confirmed signature on

7d #8a

SUBJECT TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100397

Date: 12/03/2013
Time: 11:00:53

SUBJECT NAME:
TEST TEST
LICENSE #: AK7298726

OPERATOR NAME:
BRANDI BARNETT
OPERATOR'S #: 7038

DEPT/AGENCY:
INVALID
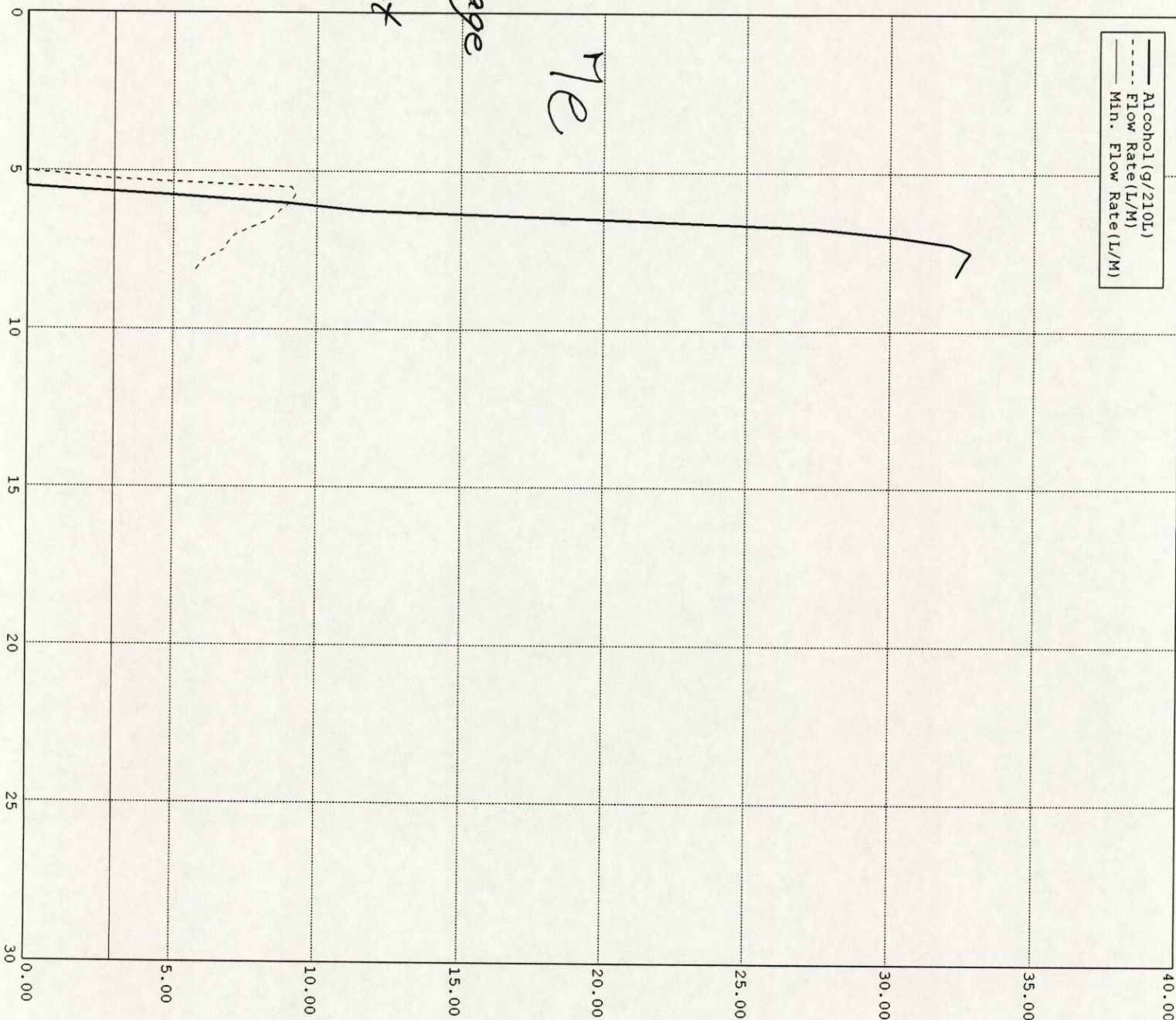CASE/REPORT: XXXX
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 30.54: 0.082
LOT #: 2261208OA1
EXPIRATION: 09/01/2014

DIAGNOSTIC CHECK	PASSED	11:01
BLANK TEST	0.000	11:02
INTERNAL TEST	VERIFIED	11:02
EXTERNAL STANDARD	0.080	11:02
BLANK TEST	0.000	11:03
SUBJECT SAMPLE	INVALID	11:03

° confirmed invalid status message
box + retest ending

° confirmed ttt for subject test
result on the screen.

° confirmed signature box

ME

Legend:
— Alcohol(g/210L)
---- Flow Rate(L/M)
— Min. Flow Rate(L/M)

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Alaska Department of Public Safety
DATAMASTER dmt: 100397
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Date: 12/03/2013
Time: 13:26:35

SUBJECT NAME:
TEST TEST
LICENSE #: XXXX

OPERATOR NAME:
BRANDI BARNETT
OPERATOR'S #: 7038

DEPT/AGENCY:
    BLANK ERROR AFTER TEST
CASE/REPORT: XXXX
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 30.52: 0.082
LOT #: 2261208OA1
EXPIRATION: 09/01/2014

DIAGNOSTIC CHECK       PASSED    13:27
BLANK TEST             0.000     13:27
INTERNAL STANDARD      VERIFIED  13:27
EXTERNAL STANDARD      0.080     13:28
BLANK TEST             0.000     13:29
SUBJECT SAMPLE (Vol=2.17L)  XXX  13:29

Blank Error
```
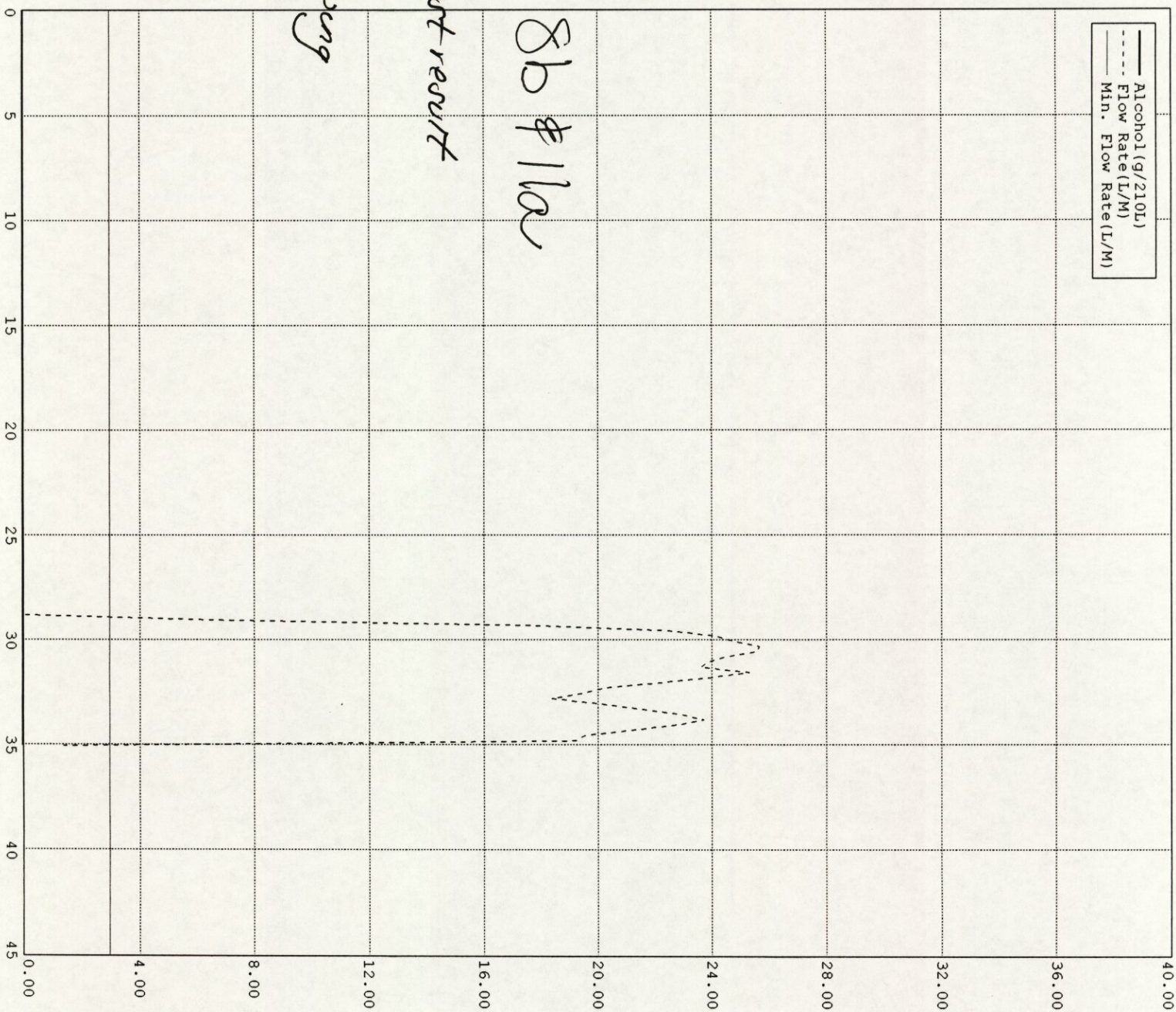
Handwritten notes:

Confirmed xxx test subject test result with non-completed test

Confirmed blank error following subject test

8b # 1a

Signature: BMB

Legend:
— Alcohol(g/210L)
---- Flow Rate(L/M)
···· Min. Flow Rate(L/M)

SUBJECT TEST

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Alaska Department of Public Safety
DATAMASTER dmt: 100397
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Date: 12/03/2013
Time: 13:20:46

SUBJECT NAME:
TEST TEST
LICENSE #: INTERFERENCE

OPERATOR NAME:
BRANDI BARNETT
OPERATOR'S #: 7038

DEPT/AGENCY:
AAA1
CASE/REPORT: XXXX
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 30.52: 0.082
LOT #: 2261208OA1
EXPIRATION: 09/01/2014

                              PASSED    13:22
DIAGNOSTIC CHECK
BLANK TEST          0.000   VERIFIED   13:22
INTERNAL STANDARD           VERIFIED   13:22
EXTERNAL STANDARD   0.080              13:22
BLANK TEST          0.000              13:23
SUBJECT SAMPLE      XXX                13:24

Interference Detected
```
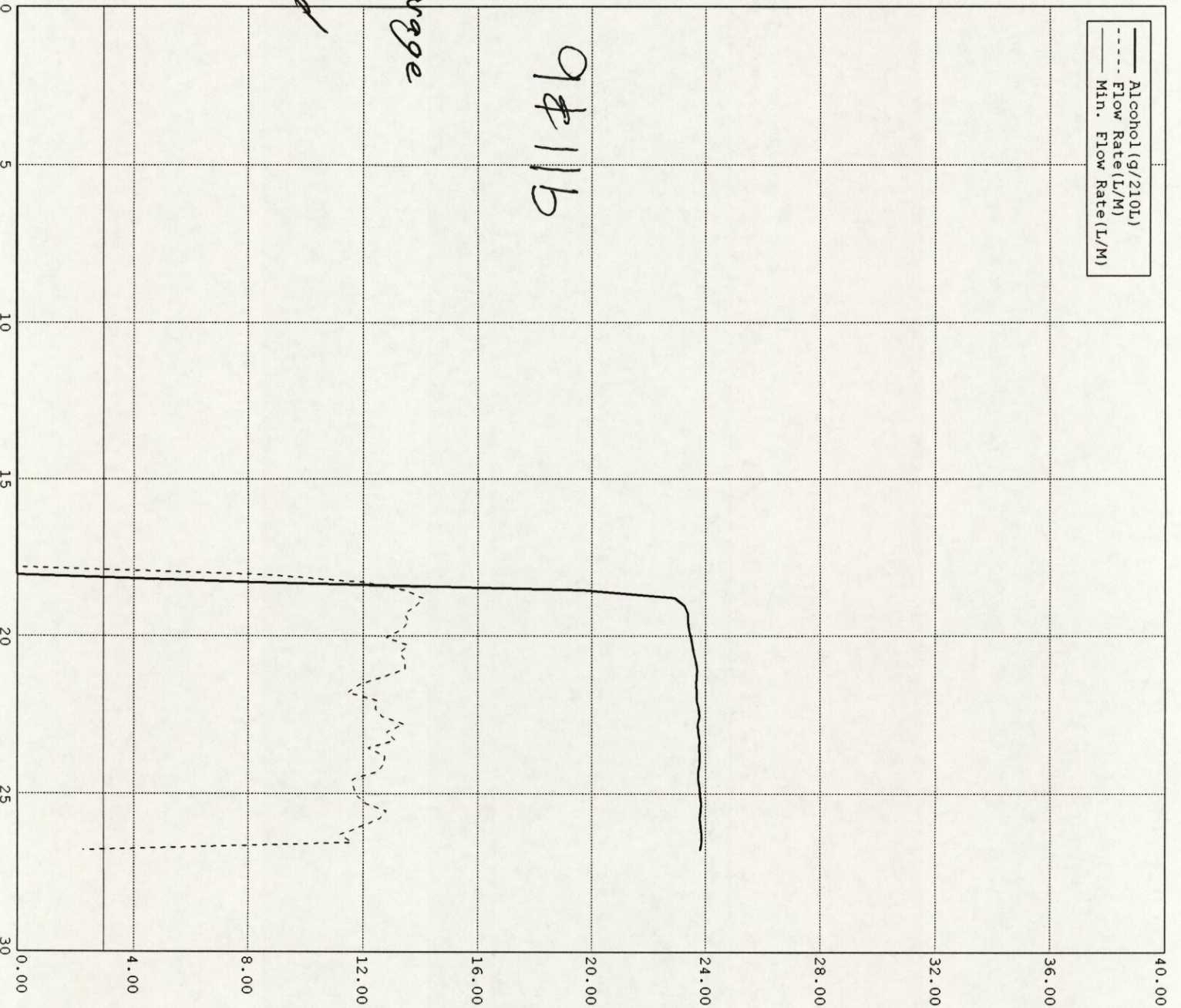
Handwritten annotations:

911 #9

- Confirmed Interference message
  by

- confirmed rx to non-completed
  subject tests

- confirmed signature block

(signature)

Graph legend:
— Alcohol(g/210L)
---- Flow Rate(L/M)
— Min. Flow Rate(L/M)

Alaska Department of Public Safety
DATAMASTER dmt: 100397

Date: 12/03/2013
Time: 11:05:26

SUBJECT NAME:
TEST TEST
LICENSE #: AK7298726

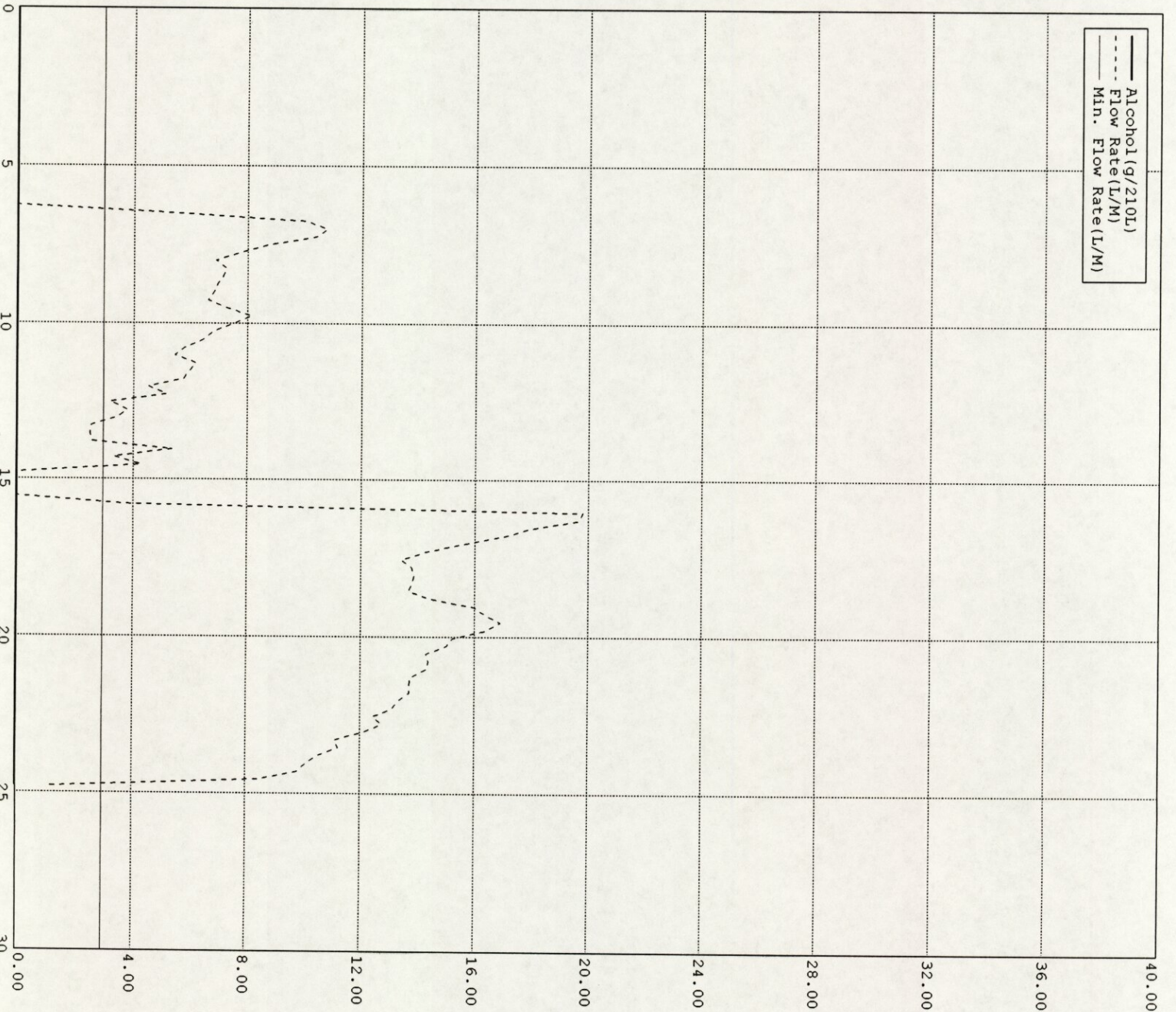OPERATOR NAME:
BRANDI BARNETT
OPERATOR'S #: 7038

DEPT/AGENCY:
STANDARD OUT OF RANGE AFTER
CASE/REPORT: XXXX
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 30.54: 0.082
LOT #: 2261208OA1
EXPIRATION: 09/01/2014

DIAGNOSTIC CHECK	PASSED	11:06
BLANK TEST	0.000	11:06
INTERNAL STANDARD	VERIFIED	11:06
EXTERNAL STANDARD	0.080	11:06
BLANK TEST	0.000	11:07
SUBJECT SAMPLE (Vol=2.07L)	XXX	11:08
BLANK TEST	0.000	11:09
EXTERNAL STANDARD	0.100	11:09

Standard Out of Range

SUBJECT TEST

Alaska Department of Public Safety
DATAMASTER dmt: 100397

Date: 12/03/2013
Time: 13:46:12

SUBJECT NAME:
TEST TEST
LICENSE #: XXXX

OPERATOR NAME:
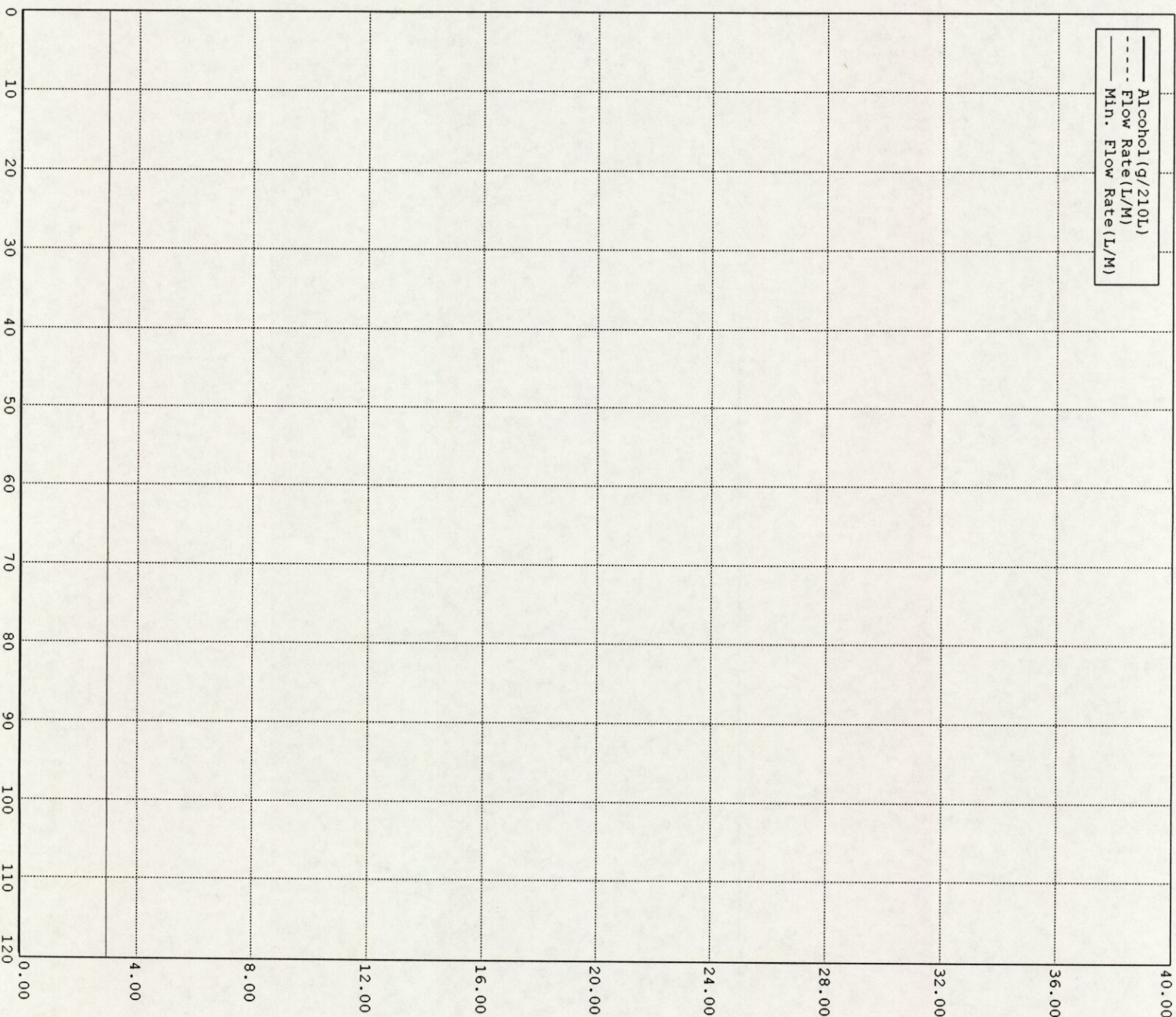BRANDI BARNETT
OPERATOR'S #: 7038

DEPT/AGENCY:
REFUSAL QUERY
CASE/REPORT: XXXX
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 30.52: 0.082
LOT #: 2261208OA1
EXPIRATION: 09/01/2014

DIAGNOSTIC CHECK   PASSED   13:47
BLANK TEST   0.000   13:47
INTERNAL STANDARD   VERIFIED   13:47
EXTERNAL STANDARD   0.080   13:47
BLANK TEST   0.000   13:48
SUBJECT SAMPLE   INCOMPLETE   13:50

Refusal Query on
No to refusal
Confirmed result

[signature] BMB

Legend:
—— Alcohol(g/210L)
---- Flow Rate(L/M)
—— Min. Flow Rate(L/M)

SUBJECT TEST

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Alaska Department of Public Safety
DATAMASTER dmt: 100397
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Date: 12/03/2013
Time: 13:40:22

SUBJECT NAME:
TEST TEST
LICENSE #: XXXX

OPERATOR NAME:
BRANDI BARNETT
OPERATOR'S #: 7038

DEPT/AGENCY:
REFUSAL QUERY
CASE/REPORT: XXXX
TEST TYPE: TEST

EXTERNAL STANDARD INFORMATION
NOMINAL: 0.080
TARGET AT 30.52: 0.082
LOT #: 2261208OA1
EXPIRATION: 09/01/2014

DIAGNOSTIC CHECK             PASSED     13:41
BLANK TEST                   0.000      13:41
INTERNAL STANDARD          VERIFIED     13:41
EXTERNAL STANDARD            0.080       13:41
BLANK TEST                   0.000      13:42
SUBJECT SAMPLE              REFUSED      13:42
BLANK TEST                   0.000      13:43
```

Refusal Query on
Yes to refusal
confirmed result

Alaska Software Revision (3.00)

Scott below are the details that we have recorded included in the 3.00 Software change that we began with you in early 2013. We are now ready to finalize the software revision and are preparing to roll it into use in January of 2015. Can you please verify some parts of the software changes (areas in blue below) in writing for us since they are not things we can verify ourselves.

1. Change ambient fail parameters:
   a. Reduce allowable change at 2 and 20 seconds from 20 mV to 12 mV done
   b. Possibly change 20 second reading to later in purge not changed

   Were these two changes made to the ambient fail parameters?

2. When these status message occurs (at any time during the test sequence) , add a statement to the existing pop up box for the following:

   - Interference Detected on subject sample (not on the external stds)
     "Test subject a second time, if a second test results in an INTERFERENCE message, obtain a legal blood sample" done

   - Blank error and ambient fail
     "Move the subject and any source of air contamination away from the DMT. Ensure rear of the DMT is not blocked." done

   - RFI
     "Ensure all radios in the vicinity of the DMT are off" done

   - EXCEEDED ATTEMPTS
     After 10 attempts in the two minute window have a pop up with the wording " The test has been aborted due to too many attempts. Instruct the subject to provide a sample with one long, steady breath. " done

3. Any time a status message occurs generate a pop up window immediately the status message pop up box that says "A status message has occurred and the test is not complete. Would you like to test the subject again?" Then have a yes or no box. If yes is selected print the test strip and return to the data entry screen with the previous data entered. If no is selected print the test strip and return to the home screen. done

4. If the subject test does not complete after the subject has blown print the test strip with the subject test result as XXX . done

5. Add tank pressure to VOC – print under expiration date of cylinder done

6. barometric pressure calculation of target value change to round the third digit instead of truncate (all the time) done

   Is this change in place?

7. Print the volume on the subject sample done

8. Compare final result with last data point? done

   Was this change made and please detail the explanation? The last point on the graph and the static analysis reading are compared to see if they are within 0.005 of each other. If they do not agree then a Static Analysis Error occurs. (Status #40)

9. Graph with minimum flow line / change cutoff to 3.0 L/Min instead 2.78

Is the minimum rate 3.0 or 2.78? 3.0

10. Fix standard deviation to 0.0030
    Has this change been made? done
11. Fix user abort- modem issues Please remind me what this was
12. Add next VOC date into about done

Additional information that we also need:

Status code for "Exceeded Attempts" #101

Status code for "Datapoint comparison" is this Static Analysis Error? If so, then #40

Definition of an "attempt" 3 readings above 3L/M flow rate

Does the specific breath hose used affect the RFI sensitivity of that DMT? yes

Was there a printer driver update? The driver that permits pdf creation is the current one.

Bolz, Nita J (DPS)

From:	Barnett, Brandi M (DPS)
Sent:	Friday, March 22, 2013 9:44 AM
To:	eng@npas.com
Cc:	Bolz, Nita J (DPS)
Subject:	Software 3.00

Scott,

Would it be possible to remove the supervisor test menu options for the breath test supervisors in our software. We would like to gray out the setup option for them and not allow them to run one. We just taught a class and they are very confused by it because they don't use it.

Also, I was never able to get the remote DMT program to work on our computer so could we troubleshoot this next week. Monday is a holiday for the state but I will be in on Tuesday.

Brandi Barnett
Forensic Scientist III
Alaska Scientific Crime Detection Laboratory
(907)269-5695 Phone

From:	Barnett, Brandi M (DPS)
Sent:	Tuesday, February 05, 2013 12:33 PM
To:	eng@npas.com
Cc:	Bolz, Nita J (DPS)
Subject:	Alaska Software Revision 3.00 Change

Scott,

I spoke with Nita and she decided that we will leave the averaging of linearity and supervisor test as it currently is where it averages from the three decimals.   Let me know if you have any other questions.

Brandi Barnett
Forensic Scientist III
Alaska Scientific Crime Detection Laboratory
(907)269-5695 Phone

From:	Scott Marhefka <eng@npas.com>
Sent:	Thursday, February 05, 2015 12:56 PM
To:	Bolz, Nita J (DPS)
Subject:	Re: Alaska 3.00 software

Yes, this is in the new software.

Scott

On 2/5/2015 4:47 PM, Bolz, Nita J (DPS) wrote:

> HI Scott,
>
> I am writing up my final paperwork on this software change and had one final question for you.
>
> On the "fix user abort-modem issue" this was about when we timed out using the modem lines sometimes it would cause a user abort. Just need confirmation this is in the new software.
>
> Thanks,
>
> Nita

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Scott Marhefka
National Patent Analytical Systems
2090 Harrington Memorial Road
Mansfield, OH 44903

email: eng@npas.com
phone: (419) 526-6727