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Press Release
August 22, 2016
Two Pages

For Immediate Release

Contact: Maria Miller
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**MSP Forensic Science Division has Calibration Error in 4001
Analyzed Alcohol Cases Across the State
89 Wayne County Prosecutor's Office Cases May be Affected**

On July 1, 2016, the Prosecuting Attorneys' Association of Michigan (PAAM) sent out a letter notifying prosecutors' offices across the state that Michigan State Police Forensic Science Division (MSP) would send a list to each prosecuting agency of their affected cases. (See attachment.) The letter informs PAAM that: "4001 items (statewide) of its most recently analyzed alcohol cases had been processed in part using an incorrect calibration model." MSP has reportedly reprocessed those 4001 statewide cases using the "correct quadratic, inverse calibration model."

On August 8, 2016, after having not yet received a list of affected Wayne County cases, my staff took proactive measures and directly contacted the Michigan State Police Forensic Sciences Division. On August 9, 2016, the Michigan State Forensic Sciences Division sent us a list of 402 cases that "involved Wayne County police departments."

After an extensive review by my office, it is our best determination at this time that approximately 89 of the 402 cases on MSP's list are being or were prosecuted by the Wayne County Prosecutor's Office. It is important to note that because many alcohol-related cases are prosecuted by local city attorneys the municipalities in Wayne County, they will have to determine if their cases could be similarly affected. We are currently in the process of locating the municipal attorneys and will be sending out the list to city attorneys and Detroit Corporation Counsel.

-more-

On August 16, 2016, my office received a copy of the original report and corrected report on these cases. Today, Letter A has been sent out to attorneys representing defendants with corrected results from MSP along with the original report, and the MSP Toxicology Unit Letter. (See attachment.) Letter B will go to attorneys that had cases that MSP determined has unchanged results along with the original report, the reprocessing letter indicating the results were unchanged, and the MSP Toxicology Unit Letter. (See attachment.) Since we are prohibited from directly contacting represented individuals, attorneys should share this information their clients.

Prosecutor Kym Worthy said, "We will work cooperatively to resolve any issues that arise from the information received from the Michigan State Police Forensic Services Division. If you have any questions or concerns please contact our Appellate Division at [313-224-5790](tel:313-224-5790)."

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STATE OF MICHIGAN
DEPARTMENT OF STATE POLICE
FORENSIC SCIENCE DIVISION

RICK SNYDER
GOVERNOR

COL. KRISTE KIBBEY ETUE
DIRECTOR

June 30, 2016

Ms. Cheri Bruinsma
Assistant Executive Director
Prosecuting Attorneys Coordinating Council
116 West Ottawa Street
Lansing, Michigan 48913

Dear Ms. Bruinsma:

In April 2016 during a routine case review, the Michigan State Police Forensic Science Division (FSD) Toxicology Unit discovered that 4,001 items of its most recently analyzed alcohol cases had been processed in part using an incorrect calibration model. Further review and examination showed that the results for some cases were incorrect by a range of -0.002 g/dL to +0.004 g/dL.

It is important to note that none of the cases originally reported near Michigan's legal Blood Alcohol limit of 0.080 g/dL have amended results that move them across this threshold in either direction. It's also worth noting that none of the cases had to be reanalyzed, as in all instances the existing raw data was accurate and available. Nonetheless, amended reports will be issued to customer agencies and prosecutors for any cases where a change occurred to ensure our customers have the most accurate results available.

The instrumental data from the involved alcohol cases which are from 12/14/2015 to 4/13/2016, were re-processed in June 2016 and encompass sequential lab numbers TX15-14740 to TX15-15694 and TX16-01 to TX16-4440. Not all cases in these ranges are affected and any cases outside these ranges were not affected. Amended reports will only be distributed for those cases where there is a correction of the result. A summary of the results of the data reprocessing is attached to this document as Appendix A.

Review of Cases

Reported Values with No Corrections Required – (1,994 results)

- 1,253 of the cases were reported with values of 0.000 g/dL alcohol; those results do not require correction.
- 741 cases were reported with a non-zero/positive result that does not require correction. The review of these samples resulted in the same value as that which was originally reported.

Reported Values Requiring Correction – (2,007 results)

Originally Reported Below 0.060 g/dL

- 65 of the results with alcohol values below the value of 0.060 g/dL were originally reported with values **higher** than what is supported by the data (see Table 1).

Table 1: Summary of Values Originally Reported Below 0.060 g/dL

| Result Change (Difference, g/dL) | # of Results |
|-------------------------------------|--------------|
| -0.001 | 59 |
| -0.002 | 6 |

Originally Reported 0.060 g/dL or higher

- 1,941 of the results with alcohol values above the threshold of 0.060 g/dL were originally reported with values **lower** than what is supported by the data (See Table 2).
- 1 of the results was originally reported with a value **higher** than what is supported by the data. (See Table 2).

Table 2: Summary of Values Originally Reported at 0.060 g/dL or higher

| Result Change (Difference, g/dL) | # of Results |
|-------------------------------------|--------------|
| -0.001 | 1 |
| +0.001 | 1,422 |
| +0.002 | 429 |
| +0.003 | 80 |
| +0.004 | 10 |

Results Near Legal Thresholds

Of the cases originally reported near Michigan's legal Alcohol limit of 0.080 g/dL, none have amended results that move them across the threshold in either direction.

Of the cases originally reported near Michigan's legal Alcohol limit of 0.170 g/dL, eighteen have amended results that move them higher across the threshold (ten cases amend from 0.169 to 0.170 g/dL, four cases amend from 0.168 to 0.170 g/dL, two cases amend from 0.169 to 0.171 g/dL, one case amends from 0.167 to 0.170 g/dL and one case amends from 0.169 to 0.172 g/dL).

There are four cases originally reported at exactly the 0.020 g/dL threshold, which when amended fall below it (one case amends to 0.018 g/dL and three others amend to 0.019 g/dL).

Technical Explanation/Chronology

On June 5, 2015, the Toxicology Unit began using a new type of capillary column for alcohol testing in two gas chromatographs, GC #7 and GC #8. The capillary columns previously being used are no longer manufactured. Columns RTX-BAC 1 and RTX-BAC 2 were replaced with RTX-BAC Plus 1 and RTX-BAC Plus 2, respectively. As part of the implementation of the new columns, a method validation based on the Scientific Working Group for Forensic Toxicology (SWGTOX) Standard Practices for Method Validation in Forensic Toxicology was conducted.

That method validation was designed to determine the most appropriate parameters to use for casework testing, including the most appropriate calibration model. Upon conclusion of that validation, it was statistically determined that the linear, equally weighted calibration model that was used previously was no longer the most appropriate calibration model to use with the new capillary columns. Instead, a quadratic, inverse (1/x) calibration model was statistically determined to be the most appropriate model. On June 5, 2015, when the new capillary columns went live for casework, the new calibration model was employed as well.

On April 12, 2016, an issue with the processing method on GC #8 (a gas chromatograph being used for blood alcohol testing) was noticed by a scientist in the Toxicology Unit. Specifically, the calibration model being used within the processing method was incorrect. The calibration model was not the quadratic, inverse (1/x) model that was validated for use; instead, it was linear, equally weighted. A review of calibration and control pack data indicated that the processing method being utilized on (only) that instrument had been incorrect since December 14, 2015.

Notably, the FSD Toxicology blood alcohol analysis procedure calls for the averaging of results of two instruments with the average used as the reported result. The correct calibration model was used consistently on the BAC-Plus 1 instrument.

On April 12, 2016, a corrective action was initiated to determine the most appropriate measures to take to remediate the issue and ensure the incorrect calibration model could not be used again. The following steps were taken:

The processing method on GC #8 was immediately updated to reflect a quadratic, inverse (1/x) calibration model. All batches analyzed after April 12, 2016, use the correct calibration model.

A historic review of calibrator and control pack data was conducted on batches analyzed between May 2012 and May 2016, a four-year span. Overall, 176 randomly selected batches were reviewed, constituting approximately 17% of all batches run within that time period. Eleven different analysts on eight different instruments analyzed the batches. During this review, two additional batches (from June 2015) were found that required reprocessing. Those batches are included in the corrective action.

All affected batches were reprocessed using the correct quadratic, inverse (1/x) calibration model. The cases were not reanalyzed, as the existing raw data was accurate and available. That data was used in conjunction with the correct calibration model to determine the correct reportable value. The new chromatograms have been stored with the other data in the lab's electronic case record system. Analysts within the Lansing Laboratory Toxicology Unit reviewed all chromatograms from 4,001 items to determine whether the final reported result was affected. Of the total 4,001 items, 2,007 of them had final results that were affected. The new results (using the correctly processed chromatograms) ranged from -0.002 to +0.004 g/dL in difference. For each of those cases, a new report was issued. There were 1,994 cases in which the final reported result was not affected; no new reports will be issued for those cases. See Appendix A for a more detailed accounting of the results.

Toxicology protocol 2.1, Determination of Ethanol (Ethyl Alcohol), was updated to ensure that the calibration model will be reviewed for accuracy for each batch that is analyzed. The specific change says, "The analyst shall verify that all of the parameters listed in 2.1.5 are correct in the processing method being used. Any parameter not consistent with the information in 2.1.5 shall result in the analyst notifying the unit supervisor of the discrepancy." The information in 2.1.5 indicates that the calibration model that shall be used is a quadratic, inverse (1/x) model. Only after reviewing the processing method parameters, which includes calibration model information, and ensuring that they are correct, should the analyst print reports.

Questions should be directed to Mr. Nicholas Fillinger, Toxicology Technical Leader at 517-819-4541.

Sincerely,



L. Scott Marier, Acting Commander
Forensic Science Division

Attachment

**Appendix A:
Result Change Trends
Grouped by Original Reported Result and by the Effective Change**

| Change to reported BAC level | Result Change Trend | Change after Reprocessing | No. of Cases Affected |
|--|----------------------------|---------------------------|-----------------------|
| - A) Reported as 0.000 | | | 1,253 |
| | + No Change | | 1,253 |
| - B) Reported positive, less than 0.020 g/dL | | | 48 |
| | + No Change | | 32 |
| | - Originally Reported High | | 16 |
| | | -0.002 | 2 |
| | | -0.001 | 14 |
| - C) Reported 0.020 g/dL to less than 0.060 g/dL | | | 107 |
| | + No Change | | 58 |
| | - Originally Reported High | | 49 |
| | | -0.002 | 4 |
| | | -0.001 | 45 |
| - D) Reported 0.060 g/dL to less than 0.080 g/dL | | | 96 |
| | + No Change | | 84 |
| | - Originally Reported High | | 1 |
| | | -0.001 | 1 |
| | - Originally Reported Low | | 11 |
| | | 0.001 | 11 |
| - E) Reported 0.080 g/dL to less than 0.100 g/dL | | | 141 |
| | + No Change | | 90 |
| | - Originally Reported Low | | 51 |
| | | 0.001 | 51 |
| - F) Reported 0.100 g/dL to less than 0.170 g/dL | | | 882 |
| | + No Change | | 251 |
| | - Originally Reported Low | | 631 |
| | | 0.001 | 515 |
| | | 0.002 | 103 |
| | | 0.003 | 13 |
| - G) Reported 0.170 g/dL to less than 0.200 g/dL | | | 459 |
| | + No Change | | 76 |
| | - Originally Reported Low | | 383 |
| | | 0.001 | 246 |
| | | 0.002 | 116 |
| | | 0.003 | 18 |
| | | 0.004 | 3 |
| - H) Reported 0.200 g/dL or higher | | | 1,015 |
| | + No Change | | 150 |
| | - Originally Reported Low | | 865 |
| | | 0.001 | 599 |
| | | 0.002 | 210 |
| | | 0.003 | 49 |
| | | 0.004 | 7 |
| Grand Total | | | 4,001 |



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Date

Attorney
Address

RE: Client's name
District Court # and District Court (if available)
Circuit Court # (if available)
Police Complaint # (if available)

Dear Counselor,

Enclosed please find a letter from the Michigan State Police Forensic Science Division (MSP) sent to the Prosecuting Attorney's Association of Michigan (PAAM). This letter informs PAAM that "4001 items (statewide) of its most recently analyzed alcohol cases had been processed in part using an incorrect calibration model." MSP has reportedly reprocessed those 4001 statewide cases using the "correct quadratic, inverse calibration model."

On July 1, 2016 PAAM sent out a notification to prosecutors' offices statewide indicating that MSP would send a list to each prosecuting agency of their affected cases.

On August 8, 2016 after having not yet received a list of affected cases my staff directly contacted the Michigan State Police Forensic Science Division. On August 9, 2016 the Michigan State Forensic Science Division sent us a list of 402 cases that "involved Wayne County police departments."

After an extensive review by my office, it is our best determination at this time that approximately 89 of the 402 cases on MSP's list are being or were prosecuted by the Wayne County Prosecutor's Office. As you know many alcohol-related cases are prosecuted by local city attorneys and not the county prosecutor.

On August 16, 2016 my office received a copy of the original report and corrected report on your case. Attached you will find a copy of the original lab report, the corrected lab report, and the MSP letter to PAAM explaining the reprocessing issue.

As we are prohibited from directly contacting represented individuals, please share a copy of this information with your client.

We will work cooperatively with you to resolve any issues that arise from the information received from the Michigan State Police Forensic Science Division. If you have any questions or concerns please contact our Appellate Division at 313-224-5790.

Thank you,

Honorable Kym L. Worthy
Wayne County Prosecutor

Encl.:

1. Original lab report
2. Corrected lab report
3. MSP Letter to PAAM



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On August 17, 2016 my office received a copy of the original report and the reprocessing results on your case.

Attached you will find a copy of the original lab report, an MSP letter detailing how the results remain unchanged after reprocessing, and the MSP letter to PAAM explaining the

reprocessing issue.

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Wayne County Prosecutor

Encl.:

1. Original lab report
2. MSP Letter about reprocessed, unchanged results
3. MSP Letter to PAAM