



STATE OF NEW YORK
OFFICE OF THE STATE INSPECTOR GENERAL
Final Report
December 22, 2009

SUMMARY OF FINDINGS/RECOMMENDATIONS

The Inspector General found that on February 27, 2009, Forensic Chemist Kelly McHugh of the Erie County Department of Central Police Services Forensic Laboratory (ECL), failed to perform a required chemical screening test during controlled substance testing and then falsely reported in the case file that she had in fact performed the test. As a result of these actions, ECL immediately removed McHugh from all case-related duties and subsequently terminated her employment. ECL properly reported the incident and commenced a review of a portion of McHugh's past casework to determine the scope of her malfeasance. Based upon her misconduct detailed in this report, on December 17, 2009, McHugh pleaded guilty to the crime of Attempted Tampering with Public Records in the Second Degree, a B misdemeanor.

The ECL review uncovered, among other things, that McHugh falsely reported a positive result in one case and intentionally reported, and later testified to, misleading information to obfuscate her error. Although, her report and testimony were arguably technically accurate, by intentionally omitting mention of relevant facts, she acted in a manner apparently calculated to avoid exposure of her error. Because internal laboratory technical review did not uncover this easily detected inconsistency, the Inspector General recommends that ECL consider additional training as to the particulars and importance of technical review.

Furthermore, because ECL's retesting of McHugh's past work focused primarily on cases producing negative results for controlled substances, the Inspector General recommends that additional retesting be conducted of McHugh's cases in which she reported a positive result to ensure that no individual has been prejudiced by a false positive result for a controlled substance.

ALLEGATION

On March 5, 2009, the Acting Laboratory Director for ECL reported a non-compliance incident in which ECL forensic chemist Kelly McHugh falsely reported that she had performed a required chemical screening test.

SUMMARY OF INVESTIGATION

Introduction

ECL receives funding as part of the Paul Coverdell Forensic Science Improvement Grants Program administered by the United States Department of Justice. The Coverdell program provides funds to state and local governments to improve the timeliness and quality of forensic science services and to eliminate backlogs in the analysis of forensic evidence.

Under the Federal Justice for All Act of 2004, entities applying for Coverdell funding are required to certify that “a government entity exists and an appropriate process is in place to conduct independent external investigations into allegations of serious negligence or misconduct substantially affecting the integrity of forensic results committed by employees or contractors of any forensic laboratory system . . . that will receive a portion of the grant amount.” The New York State Commission on Forensic Science, which oversees all public laboratories conducting forensic testing within the state, has designated the Inspector General as the governmental entity responsible for conducting independent external investigations, as required by the act.

In accordance with this protocol, John P. Simich, acting Laboratory Director of ECL, reported an incident, related to Forensic Chemist Kelly McHugh, to the Laboratory Accreditation board of the American Society of Crime Laboratory Directors (ASCLD/LAB), and the New York State Commission on Forensic Science. The Commission forwarded the complaint to the Inspector General on March 6, 2009.

The Non-Compliance Incident

ECL policy requires that all alleged controlled substances be maintained in a locked evidence room to preserve the chain of custody and ensure proper handling of samples. A forensic chemist may remove items for testing but must document the removal in ECL's computer system. Forensic chemists then cull a test sample from the alleged controlled substance and perform numerous tests to determine whether a controlled substance is present. At issue in the instant report are three analyses: the Cobalt color test which examines the presence of cocaine; the Marquis color test which examines the presence of heroin; and the gas-liquid chromatography/mass spectrometry (GC/MS), a more exacting test which determines the specific identity of a controlled substance. While the Cobalt and Marquis color tests are simple and quick procedures resulting in a forensic chemist's notation in the case file, the GC/MS produces an actual computer print out of the results to be placed in the case file.

On February 27, 2009, Forensic Chemist Kelly McHugh informed Michelli Schmitz, Acting Supervisor of the Controlled Substance Section of ECL, that she had received conflicting results from two of the tests she had performed on a sample: the Cobalt color test indicated that a sample was positive for the presence of cocaine, but this result laid in direct contradiction with the broader negative results of GC/MS. As a result

of this discrepancy, McHugh informed Schmitz that she believed that she might have to reopen the case and resample it. As ECL policy and procedure requires that when a negative result is obtained from the GC/MS, both the Cobalt and Marquis color tests be performed,¹ Schmitz informed McHugh that she was now required to conduct the Marquis color test. McHugh acknowledged the necessity to conduct the additional analysis and subsequently reported in her case notes that she had conducted the Marquis test as directed by Schmitz.²

Later that day, as per ECL policy, McHugh submitted the case at issue for technical review, an evaluation by a fellow chemist of the case notes, data, and other documents (including documentation of the chain of custody) to ensure appropriate conclusions supported by sufficient scientific bases and proper documentation in the laboratory case file. ECL requires that chemists submit at least 20% of their cases for technical review, unless specifically instructed otherwise. At the time, McHugh's work was subject to 100% technical review because her case work was reportedly habitually "sloppy."

Schmitz, herself, conducted the technical review of this case file which included verifying the chain of custody data on ECL's computer system. Upon reviewing ECL's computer chain of custody records, Schmitz noticed that according to these records McHugh had not removed the substance from the evidence room subsequent to being directed to perform the additional test. In fact, to the contrary, the data indicated that the item had not been removed since the previous day. Initially, Schmitz speculated that McHugh may have simply failed to properly document her removal of the item for testing in the ECL computer system. Schmitz then questioned McHugh about the chain of custody to which McHugh admitted that she had failed to perform the Marquis test, and exclaimed, "Shit, I knew you'd be the one to catch it." Schmitz then instructed McHugh to retrieve the evidence and perform the Marquis test. After doing so, McHugh stated, "Gee, let me guess, there is not going to be a color change." Schmitz responded, "Kelly, that doesn't matter. It needs to be done. You put me in a very difficult position and honestly, I don't like having to fill out incident reports. This is dry-labbing."³ McHugh stated, "I know and I meant to do it [the Marquis color test] but the evidence was already put away."

¹ See ECL Chemistry Manual p. 24. Schmitz further explained to the Inspector General that if the GC/MS had reported a positive result for cocaine consistent with the Cobalt test, there would have been no reason or requirement to perform the Marquis test.

² Schmitz advised the Inspector General that although ECL's requirement to conduct the color tests after obtaining the more specific data from the GC/MS may be considered "a little redundant," they act to confirm the negative result for controlled substances from the GC/MS test. Schmitz added that conducting the Marquis test merely takes about one minute. The Inspector General queried Schmitz about the initial positive result for cocaine by the Cobalt color test. She posited that in this particular case the initial test probably indicated a false positive as a result of a "cutting agent" present in the sample, results which are not uncommon as these color tests only provide chemists with "indications" which must be confirmed using other methods, generally the GC/MS.

³ "Dry-labbing" is a term denoting when a scientist bypasses an analysis required by forensic center protocols and then creates data to give the appearance of having conducting an analysis not actually performed.

After this conversation, Kaitlin Bailey, another Forensic Chemist in the section, asked McHugh, "So you did not do the Marquis test?" McHugh replied, "No, it was a stupid color test," and noted that she had already returned the evidence to the evidence room. When Bailey responded to McHugh that she was required to perform the color test anyway pursuant to ECL policy, McHugh questioned the efficacy of the requirement to perform a test she knew would produce a negative result. McHugh then performed the Marquis test and received the anticipated negative result. Schmitz explained that if the Marquis test had been positive, McHugh would then have needed to take an additional sample from the evidence and retest it.

Later that day, McHugh again admitted to Schmitz that she fraudulently reported a result to create the impression that she had conducted the Marquis test. McHugh now claimed that she intended to perform the test later that day, but then recalled that she had returned the item to the evidence room the day before. She further maintained that she did not retrieve the sample because she purportedly could not remember its lab number. McHugh apologized for her misconduct which she characterized as an isolated incident. Schmitz nevertheless advised McHugh that she intended to report the falsification to the Acting Laboratory Director John Simich.

Schmitz completed an incident report of the event and on the following Monday morning presented it to McHugh to read and sign. McHugh signed the document and confessed to Schmitz, "I am sorry I reacted that way initially, it was just that I was embarrassed in front of all of you." She added, "I know I could have taken the few minutes to look up the lab number and do the color test." Schmitz replied, "The issue is not the outcome of the color test; it is that you lied about doing it." McHugh responded, "I know and I am sorry." The Inspector General attempted to interview McHugh but she refused.

ECL's Response

After Schmitz notified Simich, ECL immediately removed McHugh from casework duties. After an administrative hearing, McHugh was terminated from her employment for the falsification of her report and insubordination for refusing to answer questions at the hearing. McHugh has appealed the termination, and the appeal is currently pending resolution.

On December 17, 2009, McHugh pleaded guilty in Buffalo City Court to Attempted Tampering with Public Records in the Second Degree, a B misdemeanor. Sentencing was scheduled for May 14, 2010.

ECL also advised the prosecutorial agencies which had submitted cases for analysis to ECL of McHugh's identified non-compliance and subsequent termination. Specifically, ECL informed the Erie County District Attorney, the New York State Attorney General and the United States Attorney and asked the agencies to identify any pending cases in which controlled substance analysis was conducted by McHugh so that ECL could retest the items. ECL also notified, as required, ASCLD/LAB and the New York State Commission on Forensic Science. ECL then commenced a review of

McHugh's past casework to determine if her failure to follow accepted lab procedures occurred in other cases.

ECL's Review of McHugh's Casework

ECL identified and examined McHugh's casework between 2007 and her termination in 2009 resulting in a report entitled "Final Report on the Falsification of Laboratory Notes." Simich explained that the review was conducted in three phases: Phase I consisted re-testing of cases by ECL at the request of the prosecutorial agencies; Phase II consisted of reviewing a set number of McHugh's case files and selecting a portion of those cases for re-testing and/or re-inventory based on the finding of the case file review; and, Phase III consisted of reviewing a random number of other forensic chemists' case files to determine if non-compliance was systemic and not isolated to McHugh.

Ultimately, ECL reviewed 564 of McHugh's total 1,402 cases completed during the established period. Of those cases, ECL re-analyzed 47 and re-inventoried 92. During this process, ECL found a number of issues with 35 of the cases reviewed, the results of which are discussed later in this report. In addition to that review, the Erie County District Attorney also requested that ECL review the finding in four cases in which McHugh testified.

In one of the four cases, it was determined that McHugh initially falsely reported a positive result for cocaine for one of many tested items. In that case, three separate items were submitted for analysis: item one consisted of a large bag containing two small bags and 50 smaller Ziploc bags of suspected controlled substances found in a bedroom heat vent; item two consisted of a plastic bag of a suspected controlled substance found on the defendant's person; and, item three consisted of suspected marihuana found in a locked box. McHugh initially reported the presence of cocaine in one of the smaller bags submitted in item one. She also tested only five of the 50 bags from the same item and reported a negative result for controlled substances. McHugh reported that the substance in item two, the bag found on the defendant's person, contained cocaine and that item three contained marihuana.

Subsequently, the Erie County District Attorney requested that the two items containing cocaine be quantified to determine whether 500 milligrams or more of cocaine was present in each of the exhibits as required to sustain the charge of New York State Penal Law § 220.06-5, Criminal Possession of a Controlled Substance in the Fifth Degree. Quantification is performed by taking two additional samples from different locations within the substances. The chemist then determines the percentage of the sample that contains cocaine in each of the two samples and multiples the lower of the two percentages by the aggregate weight of the substance to determine a total weight, or quantification, for the cocaine in the submitted substance.

Upon quantification, McHugh determined that the item found on the defendant's person contained more than 500 milligrams of cocaine, a felony amount. However,

contrary to the reported findings of her original analysis, she found that the two samples taken from the item one bag which she had initially reported as positive for the presence of cocaine, did not contain cocaine or any other controlled substances. McHugh accurately reported the results for item two in her quantification report. With regard to the bag from item one she tersely reported, “Further testing performed on the submitted evidence does not substantiate the presence of a *felony* amount of cocaine.” Notably, McHugh failed to report that the retesting had not only indicated less than felony weight but, in fact, the examination had determined that the bag did not contain *any* cocaine or controlled substance. This artfully worded quantification report was, therefore, at a minimum, disingenuous and misleading. No evidence exists that McHugh took any steps to determine the cause of this alarming discrepancy or to conduct additional testing at the time of the second report. As a result of the contradictory results, McHugh should have alerted a supervisor as to the results and tested additional samples. At the very least, her report should have clearly stated that no controlled substance was found in the samples tested.

Additionally, given the readily apparent contradictory findings of great significance, ECL technical review of the quantification testing should have discovered this obvious contradiction. The ECL chemist who performed the technical review of this report is deceased, and, therefore, the Inspector General could not obtain an explanation as to why this inconsistency was not detected and resolved. The Inspector General interviewed the Senior Forensic Chemist (now retired) who supervised McHugh and her technical reviewer at the time of the incident. The retired supervisor advised the Inspector General that the technical reviewer without question should have detected McHugh’s contradictory results. He also stated that the technical reviewer should have brought the matter to his attention, but failed to do so.

Compounding her misconduct, McHugh later testified, at the trial in the relevant matter, with regard to the bag from item one that, “Uh, well, [the bag from item one], uh, when it was first analyzed it appeared that a certain part of it was cocaine. Further testing issued – I issued a report stating that there was not enough cocaine present to substantiate felony weight, so there was a part – part of it was cocaine, and part of it wasn’t, and enough of it wasn’t to substantiate a charge.” Investigators from the office of the Erie County District Attorney interviewed McHugh and asked her to explain this testimony. McHugh claimed that she answered in this manner because she had obtained a positive reading for cocaine when she initially ran it on the GC/MS which caused her to believe a small amount of cocaine was present in the item.

After trial in this matter, the defendant was found guilty of the felony possession charge related to item two, the cocaine found in his pants, but was found not guilty of possession of the bag of cocaine found in the apartment heating vent which McHugh erroneously identified as containing cocaine. Although the defendant was ultimately found not guilty of possessing the substance erroneously identified as cocaine, McHugh’s conduct in this matter is inexcusable.

While upon retesting, ECL found that the bag from item one did not, in fact, contain cocaine, McHugh's case file includes a print out of a positive result from the GC/MS which supports the conclusion that she tested a sample from somewhere which did in fact contain cocaine. The most likely explanations for this discrepancy is either that McHugh mistakenly took both samples from item two, the item positive for cocaine, or that she in some way contaminated the sample from item one with material from item two. When she performed the quantification at a later date, this cross-contamination did not occur and she obtained the correct negative results.

Notably, not only did McHugh report a false positive in this case, she also failed to identify an item that was positive for cocaine. ECL policy and procedure requires that chemists test every container of a submission. McHugh, however, only tested five of the 50 smaller Ziploc bags also submitted as part of item one.⁴ The chemist who retested the items in this case tested the remaining 45 bags and determined that two of them contained cocaine.

In addition to the aforementioned criminal case, only one other case was found in which retesting resulted in the issuance of a report which adversely affected a criminal charge. In that case McHugh reported that a submitted item contained cocaine. Later, she was requested to perform a quantification to establish that it contained more than 500 milligrams of cocaine. She performed the quantification and reported that the substance contained slightly over 500 milligrams. Retesting confirmed the presence of cocaine, but found that the quantity to be slightly below 500 milligrams. This minor difference may readily and credibly be explained by the consumption of substance during the first testing and quantification.

Other than the aforementioned two cases, the review process did not uncover any discrepancies which affected a pending or prior criminal charge. In fact, Simich advised the Inspector General that in the remaining cases in which errors were found, McHugh recorded negative results for controlled substances in cases where retesting in fact confirmed the presence of a controlled substance, thus improperly inuring to the defendant's benefit and allowing potential unlawful conduct to go unpunished. For example, in a 2007 case, McHugh originally reported a negative result for controlled substances for a bag containing white powder. Upon re-inventory of the items, the reviewing chemist found an additional small bag of white powder located inside the larger bag. This smaller bag had not been noted or tested originally by McHugh; it was analyzed and found to contain cocaine.

Simich also reported another 2007 case in which it was found that McHugh's "analytical work...did not correspond to the best practices." In that case, McHugh tested samples of an unidentified tablet through the GC/MS three times. On each occasion, the

⁴ ECL policy requires that "for similarly packaged materials, a 10% random sampling may be considered for analysis in submissions greater than 20 packages . . . When performing random sampling of similarly packaged items, if any selected item is inconsistent with the others (does not contain a controlled substance or contains a different controlled substance), then the random sampling plan is to be abandoned and all of the items must be tested."

GC/MS indicated the presence of a compound in the amphetamine family, but did not yield a definitive identification. McHugh subsequently reported that “the presence of controlled substance could not be confirmed.” Simich explained that McHugh should have taken the additional step of derivitizing (chemically altering a compound to distinguish closely related compounds) to obtain a better separation of compounds for testing. Retesting determined that the item was in fact a controlled substance.

Simich advised the Inspector General that the remaining issues found during the review and re-testing process were generally deficiencies in inventory procedures, labeling procedures, and minor discrepancies in weight. ECL found a number of cases in which McHugh did not count each item as required. For example, two cases were found in which items were submitted in numerous small bags contained in a larger bag. Upon re-inventory it was noted that the larger bags retained their initial seal, indicating that McHugh did not open and count each individual bag. McHugh also failed to label all submitted items as required.⁵ Simich advised the Inspector General that the discovered discrepancies in weight were “not significant” and were explainable as a result of natural evaporation of moisture from the samples and consumption during testing.

As part of the review process, ECL also randomly selected approximately 30 cases from each of the five remaining chemist for review. In addition, ECL selected three cases of each chemist for inventory and package verification and found no issues. Simich reported that this review revealed no problems with any of these cases.

Adequacy of Retesting Procedures

ECL’s final report delineates, among other things, its criteria for the retested and re-inventoried cases: “In particular, for reanalysis, we targeted those cases in which the substance was negative for controlled substance and the testing spanned more than one day, since this was the type of case which initiated the incident.” The Inspector General noted to Simich that this criterion for selecting cases for retesting and re-inventory appears to indicate that ECL focused on cases only with negative results. Simich acknowledged that while all the pending cases and cases in which McHugh had testified were positive result cases, most of the remaining re-tested cases had negative results. He added that ECL also focused on the multiple submission cases, regardless of results, because that type of case spawned the review.

Simich noted that it appeared that McHugh generally selected the single submissions, the easiest cases on which to work and, as a result, few multiple submission cases required review. However, he acknowledged that ECL did not retest all of McHugh’s multiple submission cases.

The Inspector General asked Simich if, in his opinion, additional retesting of multiple submission cases was needed to insure false positive results were not reported. Simich responded in the negative. He espoused ECL’s confidence in the results of its review process noting that ECL only found one case of a false positive which ECL

⁵ See ECL Chemistry Manual p. 15.

believes was a result of cross-contamination. Simich asserted that review of the videos of McHugh's work did not reveal any instances where McHugh worked on multiple cases concurrently. Therefore, contamination between cases was not, in his opinion, a concern. He further maintained that, other than the false positive case, the discovered flaws adversely affected the prosecution's case, not the defendant's.

Simich stated that retesting of all of McHugh's casework would either be a two-to-four year process or require a fulltime chemist to work solely on retesting for over one year. Given the size of the ECL staff and workload, he asserted that neither option is practicable.

The Inspector General sought to ascertain whether there existed any accepted manner of sampling in the relevant forensic community that should be conducted in such instances. John Neuner, Program Manager for ASCLD/LAB International advised the Inspector General that no established standard or guideline exists for the amount of retesting to be conducted in any given non-compliance situation. He stated, "We don't specify corrective action," and that labs are responsible for demonstrating the sufficiency of their corrective actions. Tracy Cheaney-Plummer, Program Manager for ASCLD/LAB Legacy, agreed and stressed that random sampling should be sufficient if no additional issues are found but added that in determining the sufficiency of the retesting, each individual circumstance of non-compliance must be evaluated.

Policy Changes

As a result of this incident, ECL implemented a number of policy changes, the most significant of which is that ECL now requires forensic chemists to document in the chain of custody when they put an item in their personal evidence locker and when it is actually placed on their work bench. This documentation allows a reviewer to discern at what time and on which item a chemist worked on a given case. This specificity greatly enhances ECL's ability to review the digital video of the chemist's work should an issue arise.

ECL also now requires that all cases be technically reviewed by another forensic chemist. Previously, ECL required that chemists submit at least 20% of their cases for review, unless specifically instructed otherwise. In actuality, most of the chemists reported that they submitted more cases than required (close to 50%) because they believed in the importance of peer review.

ECL also reported the recent hire of a Quality Manager to assist in establishing policy and procedures to improve the quality of work at the lab and to implement internal controls to ensure that quality is maintained.

FINDINGS AND RECOMMENDATIONS

The Inspector General found that on February 27, 2009, ECL Forensic Chemist Kelly McHugh failed to perform the Marquis color test as required by ECL policy and

procedures under the circumstances and found that she falsely reported in her case file that she had in fact performed the test. As a result of these actions, ECL immediately removed McHugh from all case-related duties, and subsequently terminated her employment. ECL properly reported the incident and reviewed a portion of McHugh's past casework to determine the scope of her malfeasance.

ECL review uncovered, among other things, that McHugh falsely reported a positive result in one case and intentionally reported, and later testified to, misleading information to obfuscate her error. Although, her report and testimony arguably were technically accurate, they did not disclose relevant facts and appear to be specifically calculated to avoid exposure of her error. Because technical review did not uncover this easily detected inconsistency, the Inspector General recommends that ECL consider additional training as to the particulars and importance of technical review.

The Inspector General provided these findings to the Erie County District Attorney. On December 17, 2009, McHugh pleaded guilty in Buffalo City Court to Attempted Tampering with Public Records in the Second Degree, a B misdemeanor. Sentencing was scheduled for May 14, 2010.

Furthermore, because ECL's retesting of McHugh's past work focused on cases with negative results for controlled substances, the Inspector General recommends that additional retesting be conducted of McHugh's cases in which she reported a positive result to ensure that no individual has been prejudiced by a false positive result for a controlled substance.

Response of the Erie County Department of Central Police Services Forensic Laboratory

Erie County Department of Central Police Services Forensic Laboratory Director John P. Simich responded that the Inspector General's recommendation that additional retesting of McHugh's case be conducted had "merit." Simich added:

However, the logistics of determining the number of cases needed to be retested and finding the staffing resources to accomplish this, prohibit the ECL from moving forward on this aspect of the recommendation at this time. We will work with DCJS and the Commission to devise a strategy to address this concern.