



STATE OF NEW YORK
OFFICE OF THE STATE INSPECTOR GENERAL
Final Report
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SUMMARY OF FINDINGS/RECOMMENDATIONS

The New York State Inspector General found that between April 2008 and August 2008, Forensic Chemist II Linda Teague of the Monroe County Public Safety Laboratory (MCPSL) failed to properly perform a required test when using the Gas Chromatograph/Mass Spectrometry Instrument (GC/MS) to analyze a substance for the presence of a controlled substance, reports of which are submitted to prosecutorial offices. The Inspector General also confirmed that Teague manipulated computer data to create the false impression that she had received results on these tests indicating the machine was working properly when in fact her results should have compelled her to seek lab intervention to ensure accuracy of the instrument and rule out contamination.

As a result of these improprieties, Teague was removed from all casework-related duties, and subsequently retired in lieu of termination. MCPSL properly reported the incident and reviewed and retested Teague's case work to determine the scope of her misconduct. The manipulation was discovered in 28 cases.

The retesting also found "significant" discrepancies, in a number of Teague's cases, between the weights of controlled substances reported by Teague and weights found during retesting. The Inspector General, however, determined that the discrepancies were most likely a result of Teague's failure to properly dry the substances and excessive consumption during testing.

ALLEGATION

On October 8, 2008, the Lab Director and Forensic Quality Assurance Coordinator for the MCPSL reported a non-compliance incident at the MCPSL wherein an analyst manipulated and misrepresented data from a GC/MS in violation of lab policy and procedures.

SUMMARY OF INVESTIGATION

Introduction

MCPSL 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 and medical examiner 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, Harry Van Hoven, Director of MCPSL, reported the instant allegation regarding Forensic Chemist II Linda Teague, to the Laboratory Accreditation Board of the American Society of Crime Laboratory Directors (ASCLD/LAB), the New York State Commission on Forensic Science and, on October 8, 2008, to the Inspector General.

As part of its analysis of submitted substances, MCPSL utilizes a Gas Chromatograph/Mass Spectrometry Instrument (GC/MS) to confirm the identity of a controlled substance. The GC/MS simultaneously measures the different charges of molecular fragments (ions), the mass spectrum, and the amount of time that a compound is retained in the instrument, the retention time. All compounds have unique combined specific mass spectra and retention times, so that by conducting an analysis of both, a chemist utilizing a GC/MS can identify, within a degree of scientific certainty, particular substances.

In order to perform the test using the GC/MS, a threshold, the minimum number of ions to be monitored, must first be set. The GC/MS threshold is predetermined and varies only slightly based on the sensitivity of an instrument. However, the sensitivity of a particular GC/MS can change over time and, therefore, a chemist must be cognizant of results that appear even somewhat abnormal. If the threshold is set too low, air or other interferences may be detected; too high a threshold, however, will decrease the sensitivity of the GC/MS and could result in no reading.

MCPSL requires that, prior to conducting each test on the GC/MS, chemists first conduct a solvent blank test, a test of a known solution which does not contain any controlled substances. The solvent blank test ensures that the instrument is working properly and is not contaminated prior to analysis of the actual controlled substance being tested. A positive result produced by a solvent blank test indicates that the instrument is either contaminated by a previous sample or is not operating properly; a negative result confirms that no contamination exists in the instrument and that it is operating properly. MCPSL policy and procedure require that the results of the solvent blank test be printed and included with the case file as proof that the test was conducted and that no contamination existed.

Teague’s Misconduct

The Inspector General’s investigation determined that between April 2008 and August 2008, Forensic Chemist II Linda Teague received a non-determinative result after performing the solvent blank test which should have impelled her to take action to correct possible instrument malfunction; instead, she manipulated the computer data to conceal the aberrant results on 28 occasions. When performing the required solvent blank test, the precursor to testing the substance in question, Teague received no reading. Lab policy required that Teague, upon receiving no reading, stop the analysis on the instrument and report the problem so that a diagnosis could be ascertained to explain the malfunction (i.e. contamination, faulty calibration). In point of fact, it was later determined that the threshold on the GC/MS was set too high. If

Teague had followed lab protocol and notified her supervisors of the finding, the instrument's threshold could have been reset and proper testing resumed. Indeed, the ability to detect issues with the instrument and promptly address them goes to one of the core purposes of performing the solvent blank test.

Instead, Teague manipulated the computer data by adding ions to produce a reading that comported with a finding of no contamination. As Teague had worked at the lab for an extended period of time, she was familiar with the results generated by a correctly administered solvent blank test. She therefore, in lay terms, was able to manipulate the objectionable data results to mimic those of prior scientifically acceptable solvent blank tests indicating no contamination or potential instrument malfunction.

Teague then printed and included the manipulated false results in her case file. The only evidence that she had added the ions, a manipulation of data, was a small plus (+) sign on the printout which is automatically inserted by the instrument's software whenever something is added. Teague's addition of ions was contrary to accepted scientific methodology and practice which requires the documentation of any manipulation of data. While instances do exist where manipulation of data would be acceptable in the field, in this particular case, however, the manipulation was scientifically improper. In fact, adding ions to the computer data in no way cured the deficiencies in the instrument revealed by the solvent blank test. As noted by Laboratory Director Van Hoven, the absence of ions because of an incorrect threshold setting does not indicate that the instrument is free of contamination. Therefore, because no proper proof existed that the instrument was free of contamination or working properly, all subsequent tests of the controlled substances were not scientifically reliable.

Chemists' reports at MCPSL are all subject to technical review by a fellow chemist. A reviewer is responsible for confirming that, among other things, all the required testing steps were performed and documented, including the solvent blank test. After completing a technical review, the reviewer sends the case to Shelley Kriewall, Supervisor of the Controlled Substance Section, for a required administrative review.

Teague's manipulation of data was ultimately discovered by another chemist conducting a required technical review of Teague's work. On August 26, 2008, Forensic Chemist II Kathy Sear, while conducting a technical review of a number of Teague's cases, noticed plus signs on the printouts of the solvent blank tests. Sear reported that it appeared to her that "something was added when she saw the plus." She brought this anomaly to Kriewall's attention. Neither Sear nor Kriewall was certain of the meaning of the plus signs because neither had ever seen one before on a laboratory analysis.

Kriewall then inquired of Teague as to the meaning of the plus sign. Teague told Kriewall that upon receiving no reading while conducting the solvent blank test, she added ions to the computer data to produce a report of no contamination. Teague then showed Kriewall exactly what she had done at the instrument, telling Kriewall that she did not think there was anything wrong with her method. Teague also informed Kriewall that she engaged in this manipulation "all the time."

Kriewall acknowledged to the Inspector General that prior technical reviews of Teague's work had failed to discover Teague's manipulation of the data, probably because Teague falsely generated results were designed to mirror properly obtained ones. Sear noticed the manipulation because she was reviewing a number of Teague's reports at the same time and the repeated presence of the plus signs caught her attention. Kriewall advised that no scientifically valid

reason existed for manipulating data in this manner, and the only reason for doing so would be to deceive a technical reviewer into erroneously believing that a solvent blank test had been completed properly. Kriewall acknowledged that MCPSL has no specific policy requiring documentation of data manipulation. However, according to Kriewall, such documentation is required by accepted scientific practice and methodology.

MCPSL has two sets of applicable policies: (1) the MCPSL Quality Manual (QM) which included policies applicable to the entire lab and (2) the Controlled Substance Technical Manual (CSTM) which included standard procedures for conducting controlled substance testing. In this instance, Teague violated both Tech-04 from the CSTM which requires that a solvent blank test be run and QM-12 Protocol Title: Calibration and Maintenance of Equipment and Instrumentation Section 1.4 which requires personnel to report any equipment malfunction. As Teague was employed as a Forensic Chemist at the MCPSL for 17 years, she has received training and was aware of the policies and procedures of the lab.

Teague admitted to the Inspector General that she added ions upon receiving no reading on the GC/MS. She asserted that it was obvious that she had added ions because of the plus signs on the solvent blank test printouts. The Inspector General inquired of Teague as to when she began adding ions to misrepresent the results of the solvent blank test. She claimed, in direct contrast to documentary proof examined as part of this investigation, that she had been doing so just since the beginning of the month. In defense of her actions, Teague further posited that the GC/MS merely confirms the presence of a controlled substance within a degree of scientific certainty; information which has previously been established, albeit with less certainty, through other tests prior to conducting the GC/MS test.¹

Teague acknowledged the reason for conducting a solvent blank test was to test for contaminants. Nevertheless, she contended that adding ions did not affect the integrity of the test because, if an instrument were in fact contaminated, the computer data would reveal a “spike” of ions for the contaminant regardless of the addition. Kriewall, however, disclaimed this assertion explaining that, in fact, because, the instrument’s threshold had been set too high, it actually would produce no reading even in the face of a contaminant. Teague also claimed that most labs do not even conduct solvent blank tests. Van Hoven advised the Inspector General that this assertion is also inaccurate and that, to his knowledge, all other labs in the state run solvent blank tests to ensure against contamination and the accuracy of the controlled substances reports submitted to prosecutorial offices.

Teague next claimed, “I never had any training in troubleshooting the GC/MS.” Van Hoven, however, reported that Teague had been trained on the instrument and attended a class on its use and maintenance. Teague’s training records reveal that she completed the Advanced Forensic Mass Spectrometry School at the Federal Bureau of Investigation Academy in 1998; and, courses in “Introduction to Mass Spectral Interpretation” and “Intermediate Mass Spectral Interpretation” in November of 2004. Furthermore, according to Van Hoven, Teague attended a GC/MS Seminar in August of 2005 which included training in GC/MS maintenance and troubleshooting.

Teague also complained that the GC/MS was not maintained regularly, specifically, that the ion source was never cleaned.² Teague stated that she indicated as much to Kriewall, but that Kriewall did not address the issue. Kriewall acknowledged Teague’s disclosure, but noted

¹ Prior to testing using the GC/MS, color and microcrystalline tests are performed which indicate the controlled substance to be further tested.

² The ion source is the mechanical device where ionization takes place.

that Teague's revelation occurred after Teague's manipulation was discovered. Kriewall, however, explained that if the ion source had needed cleaning, a diagnostic test would have so detected. As further proof that an unclean ion source was not the cause of the instrument's malfunction, Kriewall noted the immediate proper functioning of the GC/MS after the threshold was set correctly. Weekly diagnostic tests performed since the discovery of the malfunction confirm this analysis. The Inspector General reviewed these weekly reports which indicate that the instrument was operating properly after the adjustment of the threshold.

Lab Response

As a result of this incident, on August 25, 2008, Teague was immediately removed from all casework related duties. MCPSL also contacted the respective prosecutors' offices, the Monroe County District Attorney and the United States Attorney, and informed them of the situation. Similarly, MCPSL reported, as required, the incident to the Laboratory Accreditation board of the ASCLD/LAB, the New York State Commission on Forensic Science and the Inspector General.

MCPSL also referred Teague's conduct to the Monroe County Human Resources Department for disciplinary action. However, prior to the initiation of any proceedings, Teague retired in lieu of termination. Van Hoven reported to the Inspector General that in addition to this incident, Teague had a prior serious incident, in June of 2008, in which she had mixed the results of two cases. Technical review discovered the mistake, and Teague was placed on supervised case work for two months. A review of the incident report confirmed this event. No other serious incidents were documented.

MCPSL immediately commenced a review of Teague's case work to determine the number of cases Teague had failed to properly perform the solvent blank test. Ultimately, MCPSL identified a total of 28 cases, from April 2008 to August 2008, in which Teague manipulated data. The investigation determined that in 11 of the 28 cases MCPSL had already issued reports to prosecutor's offices. The 11 cases were recalled and retested. The remaining 17 cases in which no results had yet been reported were also retested. The retesting found no false negative or positive identifications of controlled substances.

MCPSL informed the submitting agencies that MCPSL would retest any of Teague's cases upon request. The Monroe County District Attorney's Office advised MCPSL that it would not allow Teague to testify in future controlled substance prosecutions. As a result, MCPSL received numerous requests for retesting of Teague's cases. Between August 2007 and August 2008, Teague had analyzed 693 cases. MCPSL ultimately re-analyzed 131 of those cases. To date, all re-testing has confirmed Teague's test results with regard to the identification of the substance in question.

Weight Discrepancies

Although retesting confirmed Teague's identifications of controlled substances, upon retesting it was discovered that in many of the cases the weight of the tested controlled substance was less than reported by Teague. By letter dated December 22, 2008, Van Hoven, Director of MCPSL, advised the appropriate parties of these discrepancies as follows:

During the course of the corrective action, it was noticed that in some cases there was a larger than expected discrepancy between the weights of the controlled substance initially

weighted by the analyst and by the reanalysis personnel. The laboratory is unable to determine if this was due to the analyst removing a portion of the substance for personal use, excessive sample used for testing or the item not being fully dry at the time of the initial weighing. This discrepancy has affected the charge for several of the cases that we have reanalyzed. In these cases the district attorney's office was notified.

The differences in weight affected the level of the criminal charge in three cases.

Van Hoven explained that many cases include submissions of alleged controlled substances in multiple containers. In such cases, the chemists are required to test samples from each individual container. A greater number of containers generally results in more substance being consumed during testing. MCPSL, therefore, reviewed each case and reweighed each container or bag. Van Hoven informed the Inspector General that anything over .04 grams difference per bag or container was, in his opinion, "significant." Applying this criterion, the re-analysis found "significant" discrepancies in the weights of 52 of the 131 retested cases.

The discrepancies in weight could be caused by a number of factors. The most likely causes are drying of the substance over time and excessive consumption of a substance during testing. MCPSL has no policy establishing guidelines which would indicate an acceptable amount of consumption of substances during testing. Van Hoven explained that it would be difficult to stipulate specific amounts to use per test because the substances submitted for analysis are extremely varied in content and manufacture. However, the accepted practice is to use only as much as needed.

The majority of the cases with significant discrepancies involved the testing of crack cocaine. Often crack cocaine is submitted with high moisture content. As the moisture decreases over time due to evaporation, the weight of the substance also decreases. Lab policy, CSTM CS-01(14), requires:

When a powder, caked powder, or rock-like material does not hold a constant weight, it shall be dried. An initial weight of the undried sample shall be recorded in the chemist's notes as well as the final weight after drying. Only the final weight shall be reported, unless requested otherwise.

Failure to dry crack cocaine pursuant to this policy could result in a higher weight being reported than was determined in later reweighing.

Lab personnel reported that Teague was MCPSL's "top producer" and completed more analyses than any other chemist at the lab. As one chemist posited, Teague was a "work horse" who "moved more cases than any other FCII." Kriewall opined that Teague's desire to complete work caused her to be sloppy. Kriewall speculated that Teague may have skipped drying the crack or just used too much of a sample. Kriewall and Van Hoven both stated that they believed that the discrepancies were due to this type of "sloppy work" and not consumption or misappropriation of any of these controlled substances by Teague.

The Inspector General interviewed Teague with regard to the weight discrepancies. Teague denied misappropriating any of the substances or using them for anything other than testing. When asked how much she would cull for a test sample, Teague stated, "I would take as much as I needed." She also explained that she would consume more of the substance during testing if the case involved multiple packages. Moreover, a large crack rock would often break into large chunks making it difficult to obtain small samples. Teague added, "I never really

worried about the amount I took” because “sometimes if I took too little I would have to go back then start all over again. I didn’t want to be slowed down.” Teague asserted that she dried the crack cocaine as required.

Although, it is impossible to determine definitively the cause of the weight discrepancies, evidence indicates that it was most likely caused by Teague’s failure to properly dry the substances and excessive consumption during testing. No evidence exists that she removed any of the substances from MCPSL. Indeed, had Teague wished to do so, she could have easily taken a portion of the substance prior to weighing it, in which case subsequent reweighing would not have uncovered a discrepancy. According to both supervisors and co-workers, it appeared that Teague was primarily motivated by her desire to complete cases as fast as possible. Both her failure to attempt to diagnose the problem with the GC/MS and her cavalier attitude regarding the amount of substance consumed in testing are consistent with that motivation.

FINDINGS/RECOMMENDATIONS

The Inspector General found that between April and August 2008, MCPSL Forensic Chemist II Linda Teague failed to properly perform the required solvent blank test when using the GC/MS to identify a controlled substance and then manipulated computer data to make it appear as though she had performed the test correctly.

As a result of these actions, Teague was removed from all casework-related duties, and subsequently retired in lieu of termination. MCPSL properly reported the incident and reviewed and retested Teague’s case work to determine the impact of her actions. The manipulation was discovered in 28 cases.

The MCPSL ultimately reanalyzed 131 of Teague’s 693 total cases between August 2007 and August 2008 including the 28 in which manipulation was discovered. Although the reanalysis confirmed Teague’s finding in each case as to the identification of the substances, in 52 of the cases, the MCPSL identified “significant” differences as to the weights of the substances reported by Teague. Of those 52 cases, three affected the level of the associated criminal charge. Evidence indicates that the weight discrepancies were most likely caused by Teague’s failure to properly dry the substances and excessive consumption during testing. No evidence exists that she removed any of the substances from MCPSL.

The Inspector General further determined that MCPSL does not have a specific policy requiring the documentation of data manipulation. Although, such documentation is required by scientific methodology and practice, the Inspector General recommended that MCPSL consider adding such a requirement to its policy and procedure manuals.

Response of the Monroe County Public Safety Laboratory

The Monroe County Public Safety Laboratory advised the Inspector General that, as recommended, it promulgated policy “requiring the documentation of data manipulation to prevent future instances of the type of misconduct carried out by Ms. Teague.”