

Office of the Attorney General
Commonwealth of Massachusetts



Maura Healey
Attorney General

Investigative Report Pursuant to
Commonwealth v. Cotto, 471 Mass. 97 (2015)

April 1, 2016

I. Introduction

In April 2015, the Massachusetts Supreme Judicial Court (“SJC”) published its decision in *Commonwealth v. Cotto*, 471 Mass. 97 (2015), finding that it was “imperative that the Commonwealth thoroughly investigate the timing and scope of [Sonja] Farak’s misconduct at the Amherst drug lab in order to remove the cloud that ha[d] been cast over the integrity of the work performed at that facility.” The Massachusetts Attorney General’s Office (“AGO”) undertook an investigation on behalf of the Commonwealth following the issuance of the SJC’s opinion. As part of the investigation, the AGO convened two grand juries and called as witnesses Sonja Farak (“Farak”) and three other chemists who worked in the state drug laboratories in Amherst (“Amherst Lab”) and elsewhere, and Nancy Brooks, a Massachusetts State Police (“MSP”) chemist who presently works for the two MSP drug labs which are accredited.¹ In addition, AGO investigators interviewed Annie Dookhan, a former state chemist at the state’s Hinton Lab in Jamaica Plain² who in 2013 was convicted on charges of misleading investigators, filing false reports, and tampering with drug evidence. This report is a summary of the AGO’s investigation.

II. Background Leading Up to the Investigation.

Farak was a chemist employed by the Massachusetts Department of Public Health (“DPH”) from July 2003 to July 2012 and by the MSP from July 2012 to January 2013.

During the first year of her employment, she worked at the Hinton Lab in Jamaica Plain.

¹ For information about the accreditation process and the two accredited MSP drug labs, see pp. 41-43, *infra*.

² Hinton Lab was one of eighteen different public laboratories run by the Department of Public Health (“DPH”) until then-Governor Patrick closed the Hinton Lab in 2012 (1 at 13). Hereafter, references to a volume of the transcript of the grand jury proceedings will be made as (Volume at Page).

Subsequently, she worked at the Amherst Lab. Her responsibilities involved testing, for authenticity, various controlled substances submitted by law enforcement agencies throughout the Commonwealth. Additionally, she was required to testify in court as to her test results, which served as evidence in criminal cases. On January 17, 2013, Sharon Salem ("Salem"), a chemist and evidence officer at the Amherst Lab, noticed some discrepancies in drug samples previously tested by Farak, including that two samples were missing. The following day, Salem notified her supervisor, James Hanchett ("Hanchett"), and they subsequently discovered various unlabeled drugs and paraphernalia at Farak's work station. They also located the evidence bags associated with the two missing samples. When they retested the samples, they noted that one of them did not contain a controlled substance, despite the fact that Farak had previously reported that sample as having tested positive for a controlled substance. Based on this finding, Hanchett and Salem suspected that Farak had removed some or all of the controlled substance and substituted counterfeit drugs in its place. Hanchett and Salem brought their suspicions to the MSP. Pursuant to further investigation, the MSP discovered that more drugs were missing and that Farak appeared to have replaced them with counterfeit drugs.

On January 18, 2013, the MSP ordered the Amherst Lab to close due to its suspicion that Farak had tampered with police-submitted drug evidence during the course of her employment.

On January 19, 2013, MSP investigators executed a warrant to search Farak's car. They found various materials from the Amherst Lab as well as what appeared to be Class A and B substances. Farak was arrested later that evening. A Special Statewide Grand

Jury in Suffolk County indicted Farak on April 1, 2013, and she was subsequently convicted in Hampshire Superior Court on January 6, 2014, of Tampering with Evidence, in violation of M.G.L. c. 268 § 13E; Larceny of Controlled Substances from a Dispensary, in violation of M.G.L. c. 94C§ 37; and Unlawful Possession of a Controlled Substance, in violation of M.G.L. c. 94C § 34.

Erick Cotto (“Cotto”) is a defendant whose conviction, upon a plea of guilty in Hampden County Superior Court in 2009, was based in part on an assumption that a drug certificate authored by Farak in his case was truthful and accurate. Cotto filed a motion to withdraw his guilty plea pursuant to Mass.R.Crim.P. 30(b) shortly after Farak was indicted. In April 2015, the SJC issued its decision in Cotto’s case, exercising its superintendence power to fashion a “workable approach” for giving defendants, in cases in which Farak had tested alleged controlled substances, identified them as controlled substances, and signed the certificates of drug analysis, “an opportunity to discover whether, in fact, their cases were affected by [Farak’s] misconduct.” The Court found it imperative for the Commonwealth to investigate the timing and scope of Farak’s misconduct and it directed the Commonwealth, within one month of the issuance of its opinion, to notify the judge below whether it intended to undertake such an investigation. In response to the Court’s ruling, the AGO informed the Hampden County Superior Court in June 2015 that pursuant to *Cotto*, it would undertake an investigation as to the timing and scope of Farak’s alleged misconduct.

III. Summary of the Post-*Cotto* Investigation

In September 2015, the AGO opened a grand jury investigation in Hampshire County, where the Amherst Lab was located. Farak testified at the grand jury on three

separate dates. Farak testified about her extensive drug use; her siphoning of drugs from the Lab's standards which were used to test drug samples, from police-submitted samples of drugs which were intended to be tested for evidentiary purposes in pending criminal cases, and from other chemists' samples; and her manufacturing in the Lab of crack cocaine for her own personal use.

In November 2015, the AGO opened up a grand jury investigation in Suffolk County, the location of the DPH, which was the agency that oversaw the Amherst Lab for the majority of the time that Farak had worked there, until the MSP took over its operation in the summer of 2012. Three chemists from the Amherst Lab testified in the grand jury: Hanchett; Salem; and Rebecca Pontes ("Pontes").

Hanchett, the supervisor of the Amherst Lab, testified that he did not know that Farak was stealing from the standards or the police-submitted samples. However, he noticed towards the end of Farak's tenure that her production had dropped and her habits were deteriorating. Hanchett also testified to the general DPH management of the Amherst Lab, including the lack of funds to buy standards for testing. Owing to lack of funds, Hanchett skimmed from the police-submitted samples to manufacture standards for the chemists' analytical use in the Lab. Although no one at the DPH directed him to do this, he thought that management knew that he was manufacturing standards.

Salem and Pontes, both chemists at the Amherst Lab during the same period of time, testified that they did not notice that Farak was ingesting narcotics. Both, however, knew that Hanchett was skimming off the police-submitted samples in order to create standards. Brooks, currently a chemist with the MSP, testified that manufacturing standards in a lab is not an acceptable practice.

During the course of the AGO investigation, the transcripts of the grand jury testimony were provided to defense counsel.

Lastly, the AGO interviewed Dookhan regarding her observations of Farak while they both worked at the Hinton Lab in 2003-2004. Dookhan testified that she and Farak were not close and only worked together for about six months. Both held positions as Chemist I and were assigned easier preliminary testing of drugs. Dookhan did not observe Farak use drugs and Farak never appeared to be under the influence of drugs.

IV. Details of the Investigation

The following sections provide the details of the investigation into the timing and scope of Farak's misconduct, as gleaned from the grand jury testimony and interview with Dookhan. These sections essentially outline, in a comprehensive fashion, what each of the five witnesses stated.

A. Sonja Farak, Chemist, Department of Public Health and Massachusetts State Police

1. Background Information

Farak, currently 37, resides in Northampton, Massachusetts (1 at 6). She is a graduate of Worcester Polytechnic Institute and received a degree in Biochemistry (1 at 10). In January 2002, she was hired by the DPH and began working in the Human Immunodeficiency Virus Testing Laboratory at the Hinton Lab. At the time, the Hinton Lab housed eighteen different DPH public laboratories prior to the closing of the drug lab in 2012 (1 at 13).³ Later, in May 2003, Farak applied for and obtained the position of

³The departments within the building include the disease-testing and former drug-testing labs; the DPH's Food Protection Program; the University of Massachusetts's New England Newborn Screening Program; the

Chemist I. The duties and responsibilities of a Chemist I in the DPH's drug testing laboratories were to perform chemical identifications of drugs, using standard operating procedures; to determine violations of narcotics and harmful drug laws; to operate and maintain complex chemical instrumentation and microscopes and interpret data from those instruments (Infrared, Ultra Violet, Gas Chromatograph/Mass Spectrometer); to carry out drug analysis; to give expert testimony in a court of law on matters relating to drug analysis; to work with evidence technicians in providing for security and integrity of samples, and in issuing reports pertinent to the analysis of such samples; to prepare and maintain records of test data; to maintain an inventory of laboratory supplies and chemicals; and to make recommendations to supervisors regarding methods and procedures to improve the quality of work.⁴ Farak was initially assigned to conduct what were considered simpler tests, for example on vegetable matter and small powder samples.⁵ Because of this assignment, she could analyze the samples more quickly and complete a higher number of tests than the more experienced chemists who were testing larger submissions (1 at 22, 2; 3 at 27-28; 4 at 79; 5 at 33, 72-73).

In 2004, Farak moved to the Amherst Lab and later, in June 2005, Farak applied for and obtained the position of Chemist II. As a Chemist II, Farak was assigned additional responsibilities such as analyzing larger and more complex samples at the Lab and repairing equipment at the Lab.

Infectious Disease Bureau; the State Racing Commission Laboratory; the National Laboratory Training Network; and the University of Massachusetts's Biologic Laboratories.

⁴ This Statement of Duties for a DPH Drug Chemist was taken from the personnel file of Sonja Farak (GJ. Exh. 19).

⁵ Until it can be confirmed scientifically, cannabis is frequently referred to as vegetable matter (1 at 19).

Prior to securing employment with the DPH and while attending graduate school at Temple University (in Philadelphia, Pennsylvania),⁶ Farak had become a recreational drug user. (1 at 55-56). She used cocaine, marijuana, and ecstasy (1 at 55-56; 2 at 13). She admitted to using heroin one time and “was nervous and sick and hated every minute of it [and had] no desire to use [it] again” (1 at 56-57).

After working at the Amherst Lab for approximately one year, Farak began to consume laboratory reference standards at the Lab itself (1 at 59). “Standards” or “primary standards”⁷ are known substances that a laboratory purchases from a drug or chemical company for use in the laboratory. The Amherst Lab used standards to set up the reference libraries on the Gas Chromatograph/Mass Spectrometer machines (“GC/MS”).⁸ A license from the federal Drug Enforcement Agency is required for the drug testing laboratories in Massachusetts to order these “standards” or “primary standards.” The individual lab supervisors apply for these licenses yearly. Hanchett, the supervisor of the Amherst Lab, was responsible for ordering, receiving, and inventorying the standards when he became Lab supervisor, shortly after Farak’s tenure began at the Amherst Lab.

⁶ Farak claimed that she had never used any controlled substances before her enrollment in graduate school (1 at 55).

⁷ There were two types of “standards” at the Amherst Lab: primary standards, as mentioned here, and secondary standards or working standards, which will be discussed later in this report.

⁸ Gas Chromatography/Mass Spectrometry (GC/MS) is an analytical technique in which a Gas Chromatograph is used along with a Mass Spectrometer. The chemist injects a sample onto a heated column of a Gas Chromatograph. As the sample travels through the column, the compounds within the sample will separate and then elute from the column at different times (referred to as the “retention time”) based upon the molecular properties of its compounds. As these compounds elute from the column, they enter the Mass Spectrometer (MS) downstream. These compounds are ionized and fragmentation occurs. The resulting fragments have a molecular weight that is based on the chemical composition of the compound. The MS will sort these ions based on their mass (“weight”) and the distribution of ions is represented in the form of a mass spectrum which may be unique to that compound (similar to that of a “fingerprint”). The mass spectrum may thus illustrate the chemical composition of a sample, indicating the substance’s identity. Mass spectrums may also be compared to those of known reference materials for conclusive identification (1 at 70-71).

According to Hanchett, Lab employees tested all substances except THC⁹ using the standards (4 at 33). Therefore, the Amherst Lab kept on hand up to two hundred different types of standards, including heroin, cocaine, methamphetamine, oxycodone, and LSD, among others (4 at 33, 35-36).

2. Farak Begins to Ingest Lab's Drug Standards

Farak began to consume the Amherst Lab's standards on a fairly regular basis beginning in late 2004 or early 2005 (1 at 57-58). The first standard she admitted to using was the methamphetamine standard,¹⁰ which was the largest or most voluminous standard at the Amherst Lab. The methamphetamine standard was a base sample, meaning its form was oil base and it was not cut or diluted with any other substance, essentially making the standard the purest form of a controlled substance (1 at 50). Farak testified that her primary reason for first using the drug was "curiosity." She indicated that she had researched the drug in the past and "when she read about it," she concluded, "that's the one I am going to try if I am going to try it." Farak enjoyed what she called the "positive side effects" of the drug: it lasted a long time and was an "energy boost" (1 at 58). According to Farak, the "high" from the drug lasted approximately 8 to 10 hours. In addition, the drug gave her the desired effects that she had discovered in

⁹ THC is the principal psychoactive constituent of cannabis. Drug Enforcement Agency, *Drugs of Abuse, A DEA Resource Guide, 2015 Edition*, http://www.dea.gov/pr/multimedia-library/publications/drug_of_abuse.pdf#page=72 (last visited March 31, 2016).

¹⁰ Amphetamines, methamphetamine, and phentermine are similar to cocaine, but the stimulant onset is slower and the duration is longer. These drugs are stimulants that speed up the body's system. Many are legally prescribed and used to treat attention-deficit hyperactivity disorder (ADHD). Methamphetamine remains in the central nervous system longer, and a larger percentage of the drug remains unchanged in the body, producing prolonged stimulant effects. Such effects include: euphoria; increased alertness and excitation; restlessness; irritability; and anxiety. Chronic abuse produces a psychosis that resembles schizophrenia and is characterized by: paranoia; picking at the skin; preoccupation with one's own thoughts; and auditory and visual hallucinations. Violent and erratic behavior is frequently seen among chronic abusers of amphetamines and methamphetamine. http://www.dea.gov/pr/multimedia-library/publications/drug_of_abuse.pdf#page=46, 50-51 (last visited March 31, 2016).

her research: “I felt amazing. It gave me energy. I felt more alert. I did not wish it but it gave me the pep I was looking for.” Farak maintained that her work was not affected at the Lab but that the methamphetamine made her “more alert and more let’s get this done sort of thing.” She insisted that she “analyzed everything according to procedures”¹¹ and that she did all the testing required, in fact “double-check[ing] her work.”

In early 2005, Farak began to consume methamphetamine every morning and, over the course of the next four years, increased her usage to multiple times a day. Farak admitted in her testimony that, aside from a few days or a week of sobriety, she was under the influence of methamphetamine at the Lab nearly every day during that four-year period, and that not taking the drug resulted in severe lethargy, irritability, and lack of production and focus, to the point where she would have to call out sick (1 at 60-65).

By the beginning of 2009, Farak had nearly exhausted the Lab’s entire methamphetamine standard. As a result, she sought out similar standards that would both give her the same desired effect and help with her withdrawal symptoms. She discovered that the Lab also had bottles of amphetamine and phentermine. These two substances, like methamphetamine, gave Farak the stimulant effect that she was seeking. While the “high” did not last as long, the effects of increased energy, alertness, and focus were achievable. Throughout 2009, Farak continued to abuse these substances during work hours while she was testing alleged narcotics. She maintained that her productivity

¹¹ Stimulants are frequently taken to: produce a sense of exhilaration, enhance self-esteem, improve mental and physical performance, increase activity, reduce appetite, extend wakefulness for prolonged periods, and “get high.” http://www.dea.gov/pr/multimedia-library/publications/drug_of_abuse.pdf#page=44-45 (last visited March 31, 2016).

and accuracy in her testing still did not suffer (1 at 66-71), and that none of her fellow employees or superiors at the lab or the DPH ever commented on, or expressed concern about, her behaviors at the Amherst Lab (1 at 71-72). This assertion is supported by the testimony of her fellow employees at the Hinton and Amherst Labs (1 at 70-72; 4 at 102-10; 4 at 41-43; 4 at 104-105). Farak did, however, seek out substance abuse counseling of her own accord in January 2009, when attempts at self-control were not successful (1 at 73-74).

Farak's personal use of standards was not restricted to amphetamines. She testified that by 2009, she also began using other standards at the Amherst Lab including ketamine,¹² MDMA,¹³ MDEA,¹⁴ and LSD (including police-submitted evidence samples)¹⁵

¹² Ketamine's effects are rapid and often occur within a few minutes of taking the drug, though taking it orally results in a slightly slower onset of the effects. Users have reported flashbacks several weeks after using ketamine. Ketamine may also cause agitation, depression, cognitive difficulties, unconsciousness, and amnesia. A couple of minutes after taking the drug, the user may experience an increase in heart rate and blood pressure that gradually decreases over the next ten to twenty minutes. Ketamine can make users unresponsive to stimuli. When in this state, users experience: involuntarily rapid eye movement; dilated pupils; salivation; tear secretions; and stiffening of the muscles. This drug can also cause nausea. http://www.dea.gov/pr/multimedia-library/publications/drug_of_abuse.pdf#page=66-67 (last visited March 31, 2016).

¹³ MDMA causes changes in perception, euphoria, increased sensitivity to touch, energy, sensual and sexual arousal, a need to be touched, and a need for stimulation. Some unwanted psychological effects include: confusion; anxiety; depression; paranoia; sleep problems; and drug craving. All these effects usually occur within 30 to 45 minutes of swallowing the drug and usually last four to six hours, but they may occur or last weeks after ingestion. Users of MDMA experience many of the same effects and face many of the same risks as users of other stimulants such as cocaine and amphetamines. These effects include increased motor activity, alertness, heart rate, and blood pressure. Drug Enforcement Agency, Drugs of Abuse, A DEA Resource Guide, 2015 Edition, http://www.dea.gov/pr/multimedia-library/publications/drug_of_abuse.pdf#page=62-63 (last visited March 31, 2016).

¹⁴ MDEA is related to MDA, MDMA, amphetamine, and methamphetamine. Drug laws call MDEA a hallucinogen, but it has stimulant effects also. Those dual properties put it in the entactogen pharmacological group, a type of drug with both stimulant and hallucinogenic qualities. Effects are similar to MDA and MDMA. Richard Lawrence Miller, *The Encyclopedia of Addictive Drugs*, pg. 252 (2002).

¹⁵ LSD users may experience visual changes with extreme changes in mood. While hallucinating, the user may suffer impaired depth and time perception accompanied by distorted perception of the shape and size of objects, movements, colors, sound, touch and the user's own body image. The ability to make sound judgments and see common dangers is impaired, making the user susceptible to personal injury. It is possible for users to suffer acute anxiety and depression after an LSD "trip" and flashbacks have been reported days, and even months, after taking the last dose. The physical effects include: dilated pupils, higher body temperature, increased heart rate and blood pressure, sweating, loss of appetite,

while working. Frequently, Farak would use these standards in conjunction with the various amphetamine standards that she was using at the Lab. Farak also testified that she began to use the cocaine standard¹⁶ at the same time that she was using the amphetamine standards because the phentermine standard was not giving her a stimulant effect comparable to the previous standards that she had used (1 at 80, 85). Farak testified she did not use the cocaine standard daily, however, because given the higher frequency with which the cocaine standard was used as compared to the amphetamine standards, she was concerned she might get caught (1 at 77-78).

3. Farak's Use of Police-Submitted Evidence

Farak testified that she decided to begin using drugs from the police-submitted samples at the Amherst Lab as a direct result of the diminishing volume of standards at the Lab (1 at 65-68, 77-78, 84-85; 4 at 33-35, 110-11). At first, in early 2009,¹⁷ Farak took for her personal use a relatively small amount from police-submitted samples—what she termed “acceptable loss.” Acceptable loss, according to Farak, was approximately five percent of the sample that would take into account the testing and moisture loss due to

sleeplessness, dry mouth and tremors. Drug Enforcement Agency, *Drugs of Abuse, A DEA Resource Guide*, 2015 Edition, http://www.dea.gov/pr/multimedia-library/publications/drug_of_abuse.pdf#page=68 (last visited March 31, 2016).

¹⁶ The intensity of cocaine's euphoric effects depends on how quickly the drug reaches the brain, which, in turn, depends on the dose and method of abuse. Following smoking or intravenous injection, cocaine reaches the brain in seconds, with a rapid buildup in levels. This effect results in a rapid-onset, intense euphoric effect known as a “rush.” By contrast, the euphoria caused by snorting cocaine is less intense and does not happen as quickly due to the slower build-up of the drug in the brain. Users can snort or inject powdered cocaine into the veins after dissolving it in water. Cocaine base (crack) is smoked. Other effects include: increased alertness and excitation; restlessness; irritability; and anxiety. Tolerance to cocaine's effects develops rapidly, causing users to take higher and higher doses. Taking high doses of cocaine or prolonged use, known as binging, usually causes paranoia. The crash that follows euphoria is characterized by mental and physical exhaustion, sleep, and depression lasting several days. Following the crash, users experience a craving to use cocaine again. Physiological effects of cocaine include: increased blood pressure and heart rate; dilated pupils; insomnia; and loss of appetite. http://www.dea.gov/pr/multimedia-library/publications/drug_of_abuse.pdf#page=47-48 (last visited March 31, 2016).

¹⁷ In other testimony, Farak admitted that she was abusing standards every day during working hours at the Amherst Lab.

evaporation in storage (1 at 92). Farak admitted that at the end of 2009, she tampered with police-submitted evidence for her own personal use. She testified that the first sample she tampered with was in a case involving the United States Postal Service, although she could not remember the specific name of the defendant. She took a few grams from a cocaine sample that had been submitted and used the cocaine both at the Lab and also at home. The reason she took from that particular sample was that it registered positive for cocaine. Although using the cocaine resulted in the desired effect that she was seeking, she did notice there was a difference between the effects she achieved from the cocaine sample the police had submitted versus the effect she had achieved from the cocaine standard from the Lab. The cocaine sample did not give her the “initial buzz” that the cocaine standard did.

Farak testified that throughout 2010, she was still using the standards heavily and performing work while under the influence of a variety of narcotics (1 at 96). However, she was receiving help for her drug addiction, switched programs to have more intense therapy (1 at 93), and managed to abstain from siphoning from police-submitted samples, with the exception of LSD, for most of the year (1 at 96). Farak maintained that no one, not fellow employees nor defense counsel, had ever questioned her analyses up to that point and never while working at both the Hinton and Amherst Labs, despite the fact that she was under the influence both at work and while testifying in court (1 at 113-114).

Farak admitted that in early 2011, she frequently siphoned from powder cocaine samples submitted by police departments to the Amherst Lab and, as a result of that frequency, by the middle of 2011, her drug use increased. She also continued to consume the standards available to her at the Lab (1 at 135). By the fall of 2011, Farak had

exhausted the methamphetamine, amphetamine, and ketamine standards. Although the cocaine standard was not entirely depleted at that point, it was substantially diminished. She grew concerned due to a decrease of cocaine samples coming into the Amherst Lab for testing and she was worried she would not have a source to feed her habit (1 at 137-139). As a result, by the fall of 2011, Farak had begun taking from samples and standards of base (crack) cocaine at the Lab. From that point on, she admitted, she became heavily addicted to base cocaine. This addiction resulted in her using base cocaine during work hours not only throughout the building in which the Lab was housed at UMass, but also in the Lab itself, including at her workstation. She also used drugs when no one was present or even while her fellow employees were at the Lab. Farak admitted to being totally controlled by her addiction at that time, but still maintained that there were no inaccuracies in her testing (1 at 122-126,142-143). She conceded, however, that during this time period, if anyone had retested the weights of the samples, they would weigh less than the submitted weight (1 at 126-127).

One specific date that Farak mentioned in her testimony was January 9, 2012. She testified that on that day, she performed some tests in the morning and “pulled some reports off the machine” (1 at 149-152), and later, consumed a police-submitted sample that was a liquid form of LSD (including crack cocaine, which she was using on a daily basis). She was “very impaired” and could not operate an automobile, perform any tests, or attend a therapy appointment. Farak claimed that she did not perform any tests, however, Farak’s lab notebook and endorsed certificates of analysis for approximately

eleven drug samples suggest that she, in fact, ran several tests on the GC/MS and otherwise performed drug testing that day and night on a variety of drug samples.¹⁸

Farak's use of drugs at the Amherst Lab and at home continued in early 2012. Farak's attempts at sobriety failed and she admitted that her theft and consumption of police-submitted samples began to rapidly increase by April 2012 (1 at 128-129). She recalled a specific instance of tampering, which occurred at the end of 2012, involving a sample that the City of Chicopee Police Department had submitted. She estimated that the sample was one kilogram of powder cocaine, and that she took approximately 100 grams from the sample and used it to manufacture base cocaine--at this point, Farak's drug of choice - - at the Amherst Lab (1 at 145-148).

Farak testified that generally, she made efforts to take drugs from police-submitted samples assigned to herself for analysis rather than samples submitted to other chemists because of "how it would look" (1 at 159). But early in the summer of 2012 Farak began stealing from other chemists' samples too, specifically those of Hanchett and of her fellow Chemist II, Pontes.

With regard to Hanchett's samples, Farak would take empty evidence bags Hanchett had initialed and left on his desk, wait until she came across a sample of his that she wanted to consume, open the bag containing the sample, manipulate the drugs in the sample, and then repackage the remaining contents in one of Hanchett's previously initialed bags (1 at 155-158). Farak indicated that she manipulated approximately one

¹⁸ This evidence was originally provided by the Hampden County District Attorney's Office pursuant to Motions for Post Conviction Relief (Mass.R.Crim.P. 30) that were heard in Hampshire Superior Court beginning in September 2013. It was subsequently provided by the MSP in November 2015 in an AGO review of documents from the Amherst Lab.

half dozen of Hanchett's samples, all base (crack) cocaine. For example, she tampered with one sample submitted by the Northampton Police Department that was approximately 3.5 grams, taking from the sample, but not replacing what she took with either actual or counterfeit cocaine. Similarly, she tampered with a 24.5-gram sample of base cocaine that had been submitted by the Pittsfield Police Department (1 at 154-157), continually accessing the sample during both work hours and at night and repackaging it with one of Hanchett's pre-initialed evidence bags.¹⁹

With regard to samples belonging to Pontes, Farak admitted to taking one of the samples Pontes had already analyzed, and resealing it (1 at 155). Farak maintained that she had only tampered with one of Pontes's samples, admitting that the reason she was only able to steal one pre-initialed bag from Pontes's workstation was that Pontes very rarely, if at all, pre-initialed her bags (1 at 155-156). Farak recalled that the sample was approximately 73 to 74 grams of cocaine, she took about 30 grams of it, and she replaced what she had taken with a counterfeit substance (1 at 155-156). Farak also admitted to practicing Pontes's initials, but she did not think that she was able to "believabl[y]" replicate Pontes's initials and so, she did not end up forging her initials on an actual sample (1 at 156).

Farak testified that fellow employees and law enforcement agents never questioned Farak about any of these aforementioned samples nor commented to her about any discrepancies concerning the integrity of the evidence. As to these samples, she removed the narcotics after the police-submitted samples were analyzed so that any

¹⁹ Farak did not believe that she had ever forged Hanchett's initials and had only used his pre-initialed bags to manipulate samples (1 at 159).

certificates originally generated were still accurate (1 at 157-158). Farak admitted that if these samples were re-tested, they most likely would have come back as counterfeit substances (1 at 169).²⁰ In conjunction with this scheme, she would frequently go back into the drug vault, take from cocaine samples that she already had tested, ingest the cocaine, and then reseal the evidence bags. In some instances, Farak would go into the safe and take out samples that had not yet been tested and take from them. She manipulated those samples in the drug vault to ensure that she would receive the same samples to test so that her fellow chemists and law enforcement officers would not notice that their weights were inaccurate (1 at 160-161).

4. Manufacturing Base (Crack) Cocaine

Farak manufactured crack cocaine at the Amherst Lab. She started engaging in this activity because of a lack of crack cocaine samples coming into the Lab. During mid to late 2012, she would enter the Lab after hours or when she was working overtime, remove powdered cocaine from samples, and cook it to produce crack. Specifically, Farak would dissolve the powdered cocaine in water, add baking soda, and heat up the mixture so that the moisture would dissipate and form crack. She then dried the substance by bringing it to the part of the Lab that contained the fume hood and placing it in drawers under the hood. Farak did not engage in this process to produce small batches --she only manufactured crack "maybe three or four times" (1 at 146) - - when there was a big enough submission of powdered cocaine to "make a quantity worth [her] time" (1 at 146-

²⁰ Farak was using counterfeit substances to mask her theft of standards and police-submitted samples at the lab. If the drugs were powdered substances, she would sometimes replace what she stole with baking powder/baking soda or sodium sulfate; if base (crack) cocaine, she would use soap chips, candle wax, and hardened modeling clay; if a clear liquid, she would use water (1 at 66-65, 85, 153).

148, 152-153). Farak also admitted to smoking crack throughout the entire day: “smoking at work, smoking at the lab, smoking at home . . . smoking and driving.” All told, she estimated that she was smoking crack ten to twelve times a day (1 at 144). Farak testified that the other Lab employees never discovered what she was doing (1 at 144-145).

5. Manipulation of Computer Inventory

In her testimony, Farak admitted to manipulating the computer inventory used to track drugs in the Amherst Lab. She testified that, at certain points, she would check the computer evidence inventory to learn which samples were in the safe and which ones might be assigned to her in the future (1 at 136-137, 143, 161). Her manipulation of the inventory tended to focus on the samples to which she expected she would be assigned. On some occasions, when the opportunity arose, she would record the original gross weight as she received it from the evidence officer and take an amount from that sample for her personal use, but record the weight in her own lab notebook as the original weight. On other occasions, she would indicate in her lab notebook that the weight of the sample when she received it for testing was less than the weight recorded in the computer inventory. This enabled her to conceal her theft from the samples as a mere discrepancy and/or an acceptable loss. In addition, she sometimes accessed the computer system and simply changed the gross weights on the drug receipts, as had been recorded by the evidence officer. Then, if the sample was assigned to another chemist, the weight listed in the inventory would be the same as the sample’s actual weight, so that the chemist analyzing the drugs would not know the difference. If that situation presented itself, she would always go back to the evidence computer and change the weight back to its original weight from its submission so no one would know there had

been tampering. Farak indicated that she would do her best to manipulate the order of the samples to make sure that she would be assigned the samples that she wanted. However, there were occasions when the expected samples did not actually get assigned to her and she would take the precautions she described in her testimony. (1 at 162-166).

6. Springfield Police Department Drug Evidence

According to Farak, the Springfield Police Department frequently submitted drug samples she was “interested” in taking. The drug samples submitted by the SPD presented her with a unique opportunity for tampering because the SPD’s method of submission was different than the method used by other departments which submitted drugs to the Lab.²¹ Every Wednesday, an SPD detective would bring in “a lot” of submissions in open evidence bags. When the bags arrived at the Lab, they would be heat sealed with the Lab’s heat sealer, before being formally submitted to the Lab and placed in the vault for analysis. Frequently, Farak would target these evidence bags for drugs for her own use, either because the seal of the bag was weak, or by purposefully reducing the temperature of the heat sealer in the evidence room so that the bags were easier to open without causing damage to the bag. Farak would then access the SPD

²¹ Kevin M. Burnham, a former narcotics evidence officer at the Springfield Police Department, has been charged by the AGO for the alleged theft of nearly \$400,000 from the evidence room. Burnham was arraigned in Hampden County Superior Court on the charges of Larceny Over \$250 (6 counts), in violation of M.G.L. c. 266 § 30, and Larceny Under \$250 (1 count), in violation of M.G.L. c. 266 § 30. Burnham was the narcotics evidence officer at the Springfield Police Department from approximately 1984 until his retirement on July 25, 2014. Burnham oversaw the storage and safekeeping of drugs, drug paraphernalia, and cash seized in drug cases. Burnham was also in charge of the disbursement of money when a case ended. The AGO investigation revealed that between December 2009 and July 2014, Burnham allegedly stole cash, totaling almost \$400,000, from evidence envelopes in more than 170 drug cases. The investigation also uncovered more than 160 empty evidence envelopes in which seized money should have been found. Press Release, Office of the Attorney General, Former Springfield Police Officer Arraigned for Allegedly Stealing Nearly \$400,000 from Evidence Room (January 11, 2016) (on file with AGO).

samples at a later time. This method was Farak's preferred method of taking drugs from the SPD samples because she did not have to worry about damaging the evidence bag - - she could pull the bag open, remove the drugs, and then heat seal it again over the original seal mark (1 at 166-168; 2 at 102).

7. Farak's Interaction with Law Enforcement, October 2012

Farak's taking of standards and samples for her personal use continued into 2012. In the wake of the misconduct of a DPH Chemist, Dookhan, at the Hinton Laboratory, the MSP assumed control of the Amherst Lab on July 1, 2012 (3 at 27, 55). Then-Governor Deval Patrick ordered the Hinton Lab to be closed on August 30, 2012 (1 at 183).²² During this time, Farak was using crack cocaine heavily—multiple times per day while at the Lab and at home (1 at 148,159,174-175,185). In October 2012, the MSP inspected the Amherst Lab in order to assess the work of the Lab and move the Lab toward being fully accredited (1 at 185; 5 at 26). Members of the MSP interviewed Farak and the other chemists during their visit. During the recent AGO investigation, Farak testified that she smoked crack cocaine on the morning of the MSP inspection and then also at lunchtime, prior to her 1 p.m. interview. According to Farak, during the course of the fifteen to twenty minute interview, there were no suspicions ever raised about her use of drugs (1 at 185-187).

Farak had another close interaction with the MSP on January 18, 2013. Farak was scheduled to testify in a criminal trial at the Hampden County Courthouse. She indicated that she had a "pretty fair amount of crack in her car." Taking advantage of the

²² Glenn A. Cunha, Office of the Inspector General, Comm. of MA, Investigation of the Drug Laboratory at the William A. Hinton State Lab Institute 2002-2012, 1 (March 4, 2014).

opportunity during the lunch break, she went out to her car, ate lunch, and “got pretty high.” However, when MSP members spoke to her in the Hampden County Courthouse about the trial for which she was scheduled to testify, the police never suspected her of being under the influence nor made any comment about her appearance or demeanor (1 at 188-189).

8. Lab Personnel Discover Something is Wrong and Alerts Police; Farak is Arrested

On January 17, 2013, Chemist and Lab evidence officer Salem discovered that drug samples from two different SPD cases were missing.²³ The first sample had been assigned to Farak for testing. Farak had tested the sample on January 4, 2013 and had issued a certificate of analysis. However, there were no drugs. The second sample had also been assigned to Farak for testing. Farak had not yet issued the certificate of analysis. Salem looked through the rest of the SPD batch from the relevant date but did not find the drugs. Before Salem went home for the day, she looked through the other batches in the evidence safe but did not find the two missing samples. The next morning, Farak left the Lab around 8:00 a.m. to go to the Springfield District Court to testify at a trial. While Farak was gone, Salem, who had arrived at work around 8:30 a.m., told her supervisor, Hanchett, about the missing samples. Hanchett and Salem looked for the missing samples in other places in the Lab, including in the temporary safe where Farak and her

²³ Salem testified to the procedures that were in place in the Lab during the relevant time frame. When a police department brought drugs to the Lab to be tested, the samples were batched according to the department and date on which the samples were brought in. The samples were not returned to the submitting department until all of the samples in the batch were tested and a drug certificate was generated for each sample. Salem testified that consistent with the requirements of her job as the evidence officer, she normally collected all of the drug certificates for a batch, verified that they matched the appropriate drug samples, and then prepared the batch to be picked up by the submitting department (4 at 118-119).

colleague Pontes stored the samples that they were processing. Hanchett also checked the data from the mass/spec to confirm whether Farak had completed the analyses of both of the missing samples. Hanchett found that Farak, in fact, had tested both samples and that they were both positive for cocaine (4 at 98-99).

Hanchett went to Farak's work station to look for the samples. When he pulled open the first cabinet, Hanchett discovered a white plastic bin with a plastic bag of cocaine, chunks of waxy-like substance in a saucer, white chunks in another saucer, a pestle, and drug paraphernalia. Hanchett continued to look for the missing samples in Farak's workstation, where he found a manila envelope containing the packaging for the two missing samples. The samples were properly labeled with the appropriate sample number, but the heat-sealed packaging had been sliced open and the contents in the bags looked strange to him. Upon visual inspection of the bags, Hanchett noted that one sample appeared to be a half and half mixture of two different substances, and the other did not appear to be cocaine at all.

Hanchett called Major James Connolly of the MSP to notify him of what he had discovered. The Amherst Lab was immediately shut down, and Major Connolly and his team went to the Lab to investigate further. Once there, they instructed Hanchett to perform a preliminary drug analysis on the two drug samples and the bag of cocaine that had been found in the plastic bin. Hanchett then performed a more complete analysis of the samples (5 at 51). With regard to one of the samples, Farak had concluded in her lab notebook that the substance was cocaine in free-base form and had not noted any significant impurities in her analysis. However, upon re-testing, both samples were found not to be cocaine. (5 at 50-51).

As the investigation unfolded, it appeared that Farak had tampered with additional samples. Farak's car was located at the Hampden County Courthouse and, pursuant to a warrant, searched in the early morning of January 19, 2013. Several items were seized from the car, including controlled substances.

Farak was arrested later that day and was subsequently indicted by a Special Suffolk County Statewide Grand Jury on April 1, 2013. On January 6, 2014, Farak pleaded guilty to four counts of Tampering with Evidence, in violation of M.G.L. c. 268 § 13 E; four counts of Larceny of Controlled Substances from a Dispensary, in violation of M.G.L. c. 94C § 37; and two counts of Unlawful Possession of a Controlled Substance (Class B), in violation of M.G.L. c. 94C § 34. The Court, Mary-Lou Rup, J., sentenced her to a term of 2-½ years in the House of Correction, eighteen months to be served and the balance to be suspended for five years.

V. Testimony of Other Witnesses

In addition to Farak, other Amherst Lab employees testified before the grand jury. Each witness testified to his or her individual observations of Farak as well as various practices and procedures at the Amherst Lab. In addition, a witness from an MSP drug lab testified in regard to her observations of the Amherst Lab.

A. Testimony of Amherst Lab Supervisor, James Hanchett

1. Hanchett's Testimony about Farak

Hanchett testified that he worked alongside Farak after she transferred from the Hinton to the Amherst Lab in 2004. At that time, Hanchett was a senior chemist with a supervisory role over the less experienced chemists (although not yet the Lab's supervisor), so he was actively testing drugs in the Lab and sat approximately twelve feet

away from Farak. Hanchett described Farak as a “meticulous” employee and “dedicated to her work.” She handled all the evidence well. Everything was always “packaged neatly, [and] marked and labeled neatly.” She kept her workstation meticulous, she was “a smart girl [and] . . . a trusted employee,” and she “did a great job.” He explained that no police officer or Assistant District Attorney had ever complained about Farak’s work (4 at 86-87, 104).

Although Farak did some of the testing slightly differently than he and the other Amherst chemists, Hanchett did not see a need to offer her any additional training because she had been fully trained at the Hinton Lab. In any event, as her time at the Lab continued, Farak began to adopt the Amherst Lab’s methods, with the exception of how she kept her personal notes (4 at 75,78, 80-81).

Hanchett never noticed anything different about Farak until the last few months of her employment at the Lab (4 at 77-78). He testified that starting in the late summer or early fall of 2012, Farak’s production “dropped,” and he noticed other changes in her work, as well. “The condition of her laboratory bench was . . . [had been] very meticulous [but] it was . . . getting messy, . . . stacks of paper [were] not being filed properly[,] . . . [and he] could see something deteriorating in her habits.” (4 at 83). In addition, her physical appearance was “deteriorating” and “the way she was dressing . . . [was as though] she was letting herself go” (4 at 92). He “noticed [like] near the end [of her employment] she seemed to be awful nosey [sic] about what was coming in. She wanted to know large samples that were brought in . . . trafficking cases” (4 at 105). Hanchett would keep track of the number of samples that each chemist tested and the type of samples that they were testing on a monthly basis. These records were kept in-house at

the Amherst Lab and the overall testing numbers, but not each individual chemist's work, was reported to Hinton. Hanchett began to review all of Farak's output at the Lab and referred to Lab records to show her that her work was deteriorating in comparison to her output during prior months and years (4 at 84-85).

2. Hanchett Becomes Lab Supervisor in the Amherst Lab; Typical Procedures

In June 2008, Allan Stevenson ("Stevenson")²⁴ retired from his position as lab supervisor and Hanchett was promoted to Chemist III and the main supervisor of the Amherst Lab (4 at 11). Hanchett then undertook several new responsibilities. He was responsible for making sure all substances were analyzed properly, seeing that chemists followed certain drug protocols that were in place at the Amherst Lab, and ensuring that the Lab was adequately staffed during working hours. In addition, he was responsible for the maintenance of the drug testing instruments (GC/MS), this last responsibility occupying about 25% of his time (4 at 11-12).

There was an extremely high backlog of cases at the Hinton Lab and so once a month, Hanchett would drive from the Amherst Lab to the Hinton Lab and bring about two to three hundred drug samples, a majority of which had been submitted by various eastern counties of the Commonwealth, back to the Amherst Lab so that the Amherst Lab could conduct testing and help alleviate the Hinton Lab's backlog. There was a backlog at the Amherst Lab, too, but it was not as bad as the Hinton Lab's (4 at 13).

Upon arrival at the Hinton Lab, Hanchett would meet with the assigned evidence officer, who would give him a list of samples that he would bring back with him to the

²⁴ Stevenson, age 69, was interviewed by AGO investigators. Stevenson said Farak was well-qualified, there were no problems with her work and no one complained about her. He added that she was quiet and kept to herself.

Amherst Lab for testing. Hanchett would then go through each sample by hand to make sure that the samples that he had in his possession corresponded with the list that he had received. The Hinton Lab evidence officer would then “scan” all the samples to record which samples were leaving the Hinton Lab and being transferred into the possession of Hanchett, who, in turn, would sign a form acknowledging his receipt of them. Upon arrival at the Amherst Lab, personnel would enter the samples into the computer inventory and place the drugs in the vault for assignment to the individual chemists. Testing of the Hinton “overflow” had occurred for approximately fifteen to twenty years and was usually done during chemists’ overtime when the DPH budget allowed (4 at 14-16).

3. Hanchett’s Testimony about Laboratory Standards

Drug testing laboratories use drug “standards” in the GC/MS while testing to confirm whether the drug sample is a controlled substance under M.G.L. c. 94C.²⁵ Hanchett testified that a “primary standard is something purchased from a drug or chemical company [and that has] been certified as to what it is.” In other words, the primary standard was essentially a “known” substance that would be tested against the “unknown” police-submitted samples. Types of “standards” that the Lab would order for this purpose included heroin, cocaine, methamphetamine, oxycodone, and “just about everything.” The GC/MS instruments in the Lab each maintained an internal library that would record its analysis of the standard. That information would be retained within the instrument for future reference during substance analysis (4 at 33, 35, 60-61).

²⁵ Chapter 94C of the General Laws is the “Controlled Substances Act” of the Commonwealth of Massachusetts. This chapter sets out the applicable definitions, classifications, and criminal penalties for the possession, distribution and trafficking of prohibited (controlled) substances.

Hanchett, by then the supervisor of the Amherst Lab, was responsible for ordering all of the standards for the Lab. Before him, that responsibility had been Stevenson's (the previous supervisor's). A Drug Enforcement Agency ("DEA") license authorized the Lab to purchase these drugs from various companies. Hanchett testified that the Lab had approximately two hundred standards. There was never a regular audit of the standards at the Amherst Lab until the MSP took over the Lab in July 2012. Shortly thereafter, Hanchett prepared a new DEA license application to purchase standards, and was notified that certain regulations required the performance of two inventories a year and that the standards had to be stored in a drug vault. Prior to July 2012, however, the Lab had stored the standards in an unlocked metal file cabinet and refrigerator. The standards were refrigerated because they had a limited shelf life (4 at 38, 50). The refrigerator could not be locked, and it stored approximately 20 standards.

Before July 2012, everyone had access to these standards, according to Hanchett. The storage cabinet was located on the far side of the laboratory, away and not readily visible from the testing benches. Although the cabinet was locked, the key was accessible by all Lab employees. The standards were in both liquid and powder form, but Hanchett estimated that approximately 95% of them were in powder form (4 at 32-37). The price of standards varied based upon the state-authorized vendor and the laboratory. Frequently, there were budget problems at the Amherst Lab and the DPH would resist requests to order certain supplies, including standards (4 at 23, 35).

In those instances, Hanchett explained, it was necessary to "make . . . new standards" (4 at 38). Frequently, he would make "secondary standards" when the Lab ran out of the primary standard that had been purchased from an outside vendor (4

at47). He manufactured these secondary standards by taking an “excess sample from a large trafficking case.” He would complete an “extraction process where he would take the excess sample, mix it with hydrochloric acid and chloroform extract to get rid of the contaminants . . . back extract it to purify it up and then crystallize it out” (4 at 48). The goal of that process would be to remove all adulterants or “cutting agents” from the police-submitted sample in order to produce the purest form of the drug for use as a standard. Hanchett would always run this “secondary standard” through the machines to confirm that the new standard was in the purest form possible. He admitted that sometimes there were “co-contaminates [that they] couldn’t get rid of all the time but it wasn’t a problem because it never interfered with the sample itself.” He was confident that these secondary standards were almost as good, or the same as, the primary standards (4 at 49).

Hanchett would make only small amounts of these “secondary standards,” however, because they were not as stable as the standards purchased from various outside vendors and laboratories, and they always needed to be stored in the refrigerator. The other Lab employees were aware that Hanchett was manufacturing the secondary standards but they did not do so themselves (4 at 48-54, 111). Sometimes, the other chemists at the Lab would alert Hanchett when the secondary standard was “breaking down” or was “running out,” and he would then take it upon himself to make more (4 at 112). He would “put aside two to three hundred milligrams of heroin or cocaine [from police-submitted samples] . . . and ke[ep] it in the refrigerator . . . sealed in plastic. [He] had a backlog of it so [he] would be ready to go if [he] needed to make the next standard” (4 at 112-113). If he was planning in advance to make the secondary

standard, he would leave it out “on top of [his] bench sealed in a plastic container.” He took this step so that the substance would “come to room temperature and [be] a little easier to weigh” (4 at 113).

In his testimony, Hanchett maintained that, when he joined the Lab in 1977, the creation and use of these so-called secondary standards was a regular and accepted practice. He believed that the Hinton Lab was producing secondary standards as well. He testified that, at some point, he had even made a heroin standard for the Hinton Lab (4 at 54). He had never had a particular conversation with anyone at the Hinton Lab about the use of secondary standards, but he assumed that the supervisor of the Hinton and Amherst Labs, Julianne Nassif (“Nassif”), was aware of the practice: “I’m sure she [knew], yes. . . I, you know, sometimes we told her we couldn’t, you know, couldn’t purchase drugs so used secondary standards.” In describing her reaction, Hanchett said she conveyed her acceptance of the practice. (4 at 55).

4. Hanchett’s Testimony about the Amherst Lab’s Protocols and Security

The Amherst Lab was not an accredited forensic laboratory under the DPH (4 at 29). It was not until the MSP took over the Amherst Lab in July 2012 that the Lab began to move toward full-accreditation (4 at 108-109). Although Hanchett had made attempts to seek accreditation for the Amherst Lab earlier, he was told by the DPH that there was not enough money in the budget to carry out the process (4 at 29). Although Hanchett did attempt to follow the standards set forth by the Scientific Working Group for the Analysis of Seized Drugs (“SWGDRUG”),²⁶ he admitted in his testimony that the Lab did

²⁶ SWGDRUG works to improve the quality of the forensic examination of seized drugs and to respond to the needs of the forensic community by supporting the development of internationally accepted minimum

not meet the SWGDRUG criteria in areas such as its paperwork maintenance or processing, and its storage and receipt of various substances. He acknowledged that the Lab was “weak” in some of these areas but said that the Lab “just didn’t have the manpower or the time to handle it all, or the money to” satisfy all of the SWGDRUG requirements (4 at 29-30).

Hanchett also testified regarding “blanks.” “Blanks” are solvents that the Lab ran through the GC/MS in order to clean out any traces of containments or remaining drug residue after a test had been performed. Failure to take this step would frequently result in “carry over”²⁷ from the previous test(s), which would have to be distinguished by the individual chemist (4 at 114). After the MSP assumed control of the Amherst Lab, the MSP required that a blank be run after every sample was tested (4 at 108). The previous procedure at the Amherst Lab had been to run a blank after every five to ten samples that were tested, but it was largely left to the discretion of the individual chemist doing the test (4 at 74).

Hanchett testified that the Lab did have a model Standard Operating Procedure (“SOP”) in place. It was developed in the mid-1980s by a professor from Northeastern University who went to both the Amherst and Hinton Laboratories to set up procedures for analyzing drugs. The Amherst Lab “more or less followed the[] procedures that [were] recommended.” Those procedures included a preliminary test and a confirmational test . . . [and] put[ting] it all into documentation” (4 at 30-31). Hanchett

standards, identifying best practices within the international community, and providing resources to help laboratories meet these standards. <http://www.swgdrug.org/>.

²⁷ “Carry over” is residue from a previous test that remains in the GC/MS unless a “blank” is run through to “clean” the machine(s) and not allow it to affect the results on a subsequent test.

recalled that since he had begun working at the Lab in 1977, the Northeastern professor had been the only individual who had visited the lab to set any type of policy or procedure for analyzing suspected narcotics (4 at 31). Hanchett indicated that the Amherst (and Hinton) Labs were in “deplorable condition.” He said, “It was not a good environment to be working under. Equipment hoods were broken, not fixed, [and] not replaced . . . [The DPH] just let it go for so long . . . they didn’t have the money” (4 at 28).

Security at the Amherst Lab was non-existent, and Hanchett indicated that he had voiced concerns to the DPH about this lack of security (4 at 24-25). In fact, the building that housed the Lab (the Morrill Building) also contained an “auditorium that was used by UMass students that was on the next floor. So between the main office and the laboratory was a corridor that everyone had access to” (4 at 25). Access to the Lab was possible by use of a key or a swipe card that was given to each employee. Employees could use the key or swipe card interchangeably and the swipe card did not keep a record of the employees who entered or their entry times (5 at 17). Further, there were no cameras located in the Lab (4 at 90). Every chemist had access twenty-four hours a day and seven days a week. Every chemist also had access to all the work stations, the work station safe (where the Lab kept samples overnight if they were still being tested), the drug vault, the standards cabinet, the standards refrigerator, and the computer inventory system. Hanchett stated that the Lab employees were forbidden from doing any type of testing when there was only one person at the Lab, but that it was possible to break that rule when “nobody’s there” to enforce it or report the misconduct (4 at 90-91). The offices of both Hanchett and Salem were located across the hall from the Lab and there was no way they could monitor the testing (4 at 91). Hanchett admitted that although

the chemists were not supposed to assign samples to themselves for testing, the practice was possible due to the unfettered access all employees had to the different areas of the Lab (4 at 104-105).

5. Hanchett's Testimony about the Testing of Class E Substances at the Amherst Labs

Hanchett testified to the manner in which chemists at the Hinton and Amherst Labs would test and classify substances that were believed to fall within the definition of a Class E substance as set forth in M.G.L. c. 94C § 32, namely substances in pill form.²⁸ He explained that the Lab did not perform a chemical analysis of most Class E substances. Instead, any analysis was simply done visually (4 at 63). Essentially, the chemists identified the samples by relying on the colors and markings on the individual pills and comparing those to their desk reference materials. Hanchett explained that where the chemist was not able to identify the pill by any individual markings, the pill would be run through the Gas Chromatograph and if that produced a result, the pill would then be run through the Mass Spectrometer and compared to that machine's library of substances. Hanchett testified that this procedure usually would be adequate to determine the chemical make-up of the individual pill (4 at 64).

²⁸ State law defines a Class E substance as “(a) Any compound, mixture, or preparation containing any of the following limited quantities of narcotic drugs, which shall include one or more non-narcotic active medicinal ingredients in sufficient proportion to confer upon the compound, mixture, or preparation valuable medicinal qualities other than those possessed by the narcotic drug alone: (1) Not more than 200 milligrams of codeine per 100 milliliters or per 100 grams; (2) Not more than 100 milligrams of dihydrocodeine per 100 milliliters or per 100 grams; (3) Not more than 100 milligrams of ethylmorphine per 100 milliliters or per 100 grams; (4) Not more than 2.5 milligrams of diphenoxylate and not less than 25 micrograms of atropine sulfate per dosage unit; (5) Not more than 100 milligrams of opium per 100 milliliters or per 100 grams; (b) Prescription drugs other than those included in Classes A, B, C, D, and subsection (a) of this Class.” M.G. L. c. 94C § 31 (2016).

Hanchett also indicated that there would be frequent discussions between chemists at both the Hinton and Amherst Labs if an unknown pill was submitted to the Lab. Oftentimes, chemists would classify a pill as a Class E drug based simply upon those conversations (as opposed to any actual testing), or based upon a belief that the pill may have been, or was, a “prescribed” drug under Chapter 94C § 32(1)(d).²⁹ Hanchett testified that listing all of the Class E drugs covered by the statute would have been impossible; he estimated that there may be at least 10,000 Class E drugs in existence (4 at 67).

In addition, Hanchett noted that “it took a lot longer to analyze Class E drugs because [there were usually] a lot of them,” because they were “not easy to test,” and because they required “more complicated tests.” At the same time, however, there were countervailing “time constraints.” So, visual identifications were “just easier.” Possibly for those reasons, Hanchett testified, someone “up top” in the Lab—though not Hanchett himself—had “decided that . . . [the chemists] were going to analyze Class Es by visual examination only” (4 at 63-66).

B. Testimony of Sharon Salem, Chemist and Evidence Officer

Salem, who had worked at the Amherst Lab for 25 years, is currently employed by the MSP in the Criminalistics and Crime Scene Units, based in Springfield, Massachusetts. She holds a bachelor’s degree in chemistry from the University at Massachusetts, Amherst. She began her career in the DPH as a chemist assigned to the Amherst Lab (5 at 8). At the time of the closing of the Amherst Lab, her title was Forensic Chemist III and she was the evidence officer for the Lab. In that capacity, she did not analyze any

²⁹ The Lab utilized the Physician Desk Reference (“PDR”) to identify pills in the Lab. If a pill was listed as a prescribed drug in the PDR it meant that at “one time or another it was controlled under the Federal DEA Act . . . [and therefore would be] considered a Class E” (4 at 66).

substances. She held the position of evidence officer for approximately seven years and continued in that role after the MSP took over the Amherst Lab in July 2012 (5 at 5-6).

1. Salem's Duties Regarding Police-Submitted Samples

Salem testified that as police officers brought evidence to the Lab, she would log the evidence into the evidence computer. In making these entries, she would "rely on what the police were telling [her] for the most part." She would "eyeball" the sample "but for the most part [she] had to take their word" for it (5 at 15). Salem further indicated that in her experience as an evidence officer, there were never any large discrepancies between the quantity that the police reported as coming in and the quantity that the chemists ultimately determined (5 at 16).

Salem testified that she sometimes also picked up samples of suspected narcotics from the Hinton Lab and transported them back to the Amherst Lab for testing. According to Salem, the Hinton Lab frequently gave the Amherst Lab more simple cases to test and stayed away from the more difficult or "trafficking" cases. According to Salem, the Hinton Lab made this choice so that the Amherst Lab "could do more of them" (5 at 33).

2. Salem's Duties Regarding Security at the Lab

As for security, Salem indicated that Lab employees could access the Lab and the drug vault by either a key or swipe card given to them. She indicated that the key could bypass the swipe card and vice versa. Furthermore, any employee could access the Lab and all secured areas within the Lab, day or night, without being detected (5 at 43-44). Salem had never seen any type of log recording the names of those who had entered the Lab but she noted that the University of Massachusetts was the entity that was

responsible for the “alarm system and the card swipes” (5 at 17). Adding to what Salem saw as a lack of security, was what she also believed to be a lack of oversight by the DPH in regard to the Amherst Lab. She was of the view that there was never a requirement to submit reports of any type to the DPH regarding the work at the Amherst Lab.

Furthermore, in the course of Salem’s employment, supervisors from the DPH would visit the Amherst Lab infrequently. Salem recalled that they had visited only “once or twice” in her years at the lab (5 at 60).

Salem testified that chemists at the Amherst Lab could assign samples to themselves but it was “frowned upon” (5 at 20). Every chemist had access to the computer inventory system and, as Salem admitted, someone could manipulate the drug inventory on the computer system (5 at 63). Frequently, Farak or Pontes would approach either Hanchett or Salem for the assignment of samples. Occasionally, according to Salem, Hanchett would assign samples to himself because he was in the Lab before anyone else (5 at 21). Salem stated that if a batch of samples was assigned to a particular chemist and that chemist was unable to finish the testing, the protocol was to store the samples in a shared safe at the work stations. Both Farak and Pontes had access to that safe, which was secured only by an “old-fashioned combination lock” (5 at 22-23).

3. Salem’s Testimony Regarding Standards at the Lab

Salem testified that everyone also had access to the standards at the Amherst Lab and that the Lab stored the standards in a locker that was out of view from the chemists’ workstations (5 at 25). She also noted that “working standards” were kept in a refrigerator in the Lab (5 at 26).

Salem described working standards or secondary standards as those that were “made from samples that were submitted by police departments.” Typically, “any leftover sample would be utilized to be made into a standard” (5 at 27). She further indicated that only Hanchett would make the secondary or working standards and the Lab would usually store them in the refrigerator (5 at 27-28). Salem stated that after a formal MSP audit, the use of “secondary standards” stopped (5 at 37). At a certain point, Salem stated, Hanchett noticed that some of the standards that had been acquired from outside labs were at lower levels than “he thought they should be” (5 at 33). Hanchett was concerned about this discrepancy and first brought it to the attention of Salem. He confronted both Farak and Pontes about the issue. They denied any knowledge of the problem and Hanchett did not pursue the matter further. Salem stated that Hanchett was concerned about “wrongdoing” but did not have any proof that misconduct had occurred. This incident occurred “sometime after the state police audit of [the] lab in October of 2012, but before the DEA came to inspect [the Lab] for [its] licensure under the State Police” (5 at 34).

4. Salem’s Testimony Regarding Evidence Bags

Salem also testified about the chemists’ initializing of evidence bags. When she was analyzing drugs prior to becoming the evidence officer at the Amherst Lab, her own practice was to initial the bags only after they were sealed (5 at 54). Salem was not aware of the specific practices of the other chemists at the Lab, or whether any other chemist would initial a bag before or after the substance to be placed in the bag had been analyzed. She conceded the possibility that some of the chemists may have been

initialing empty evidence bags so that when they finished their analysis, they could seal right through the initials,³⁰ but she was not certain.

5. Salem's Testimony About the Testing of Class Es

Salem indicated that the certification of Class E substances was done visually using the PDRs. If the substance remained unknown after visual inspection, it would be run through the GC/MS in an attempt to discover its properties. Salem was not sure whether the individual chemists had any particular practices as to how they would test Class E drugs. She acknowledged that a substance could be classified as a Class E drug by mistake, but did not believe that a lab employee would deliberately misclassify a substance (5 at 56-57).

6. Salem's Testimony about Accreditation

Salem testified that the Amherst Lab was not accredited. Although there had been some discussion about having the Lab accredited, the funding was never in place to take the steps needed to do so and the DPH "never made it a priority." One of the Lab's shortcomings, for accreditation purposes, was that the DPH never had any formal, written policies or procedures in place (5 at 30). Salem testified that there were no set drug protocols at the Amherst Lab and that any policy or procedure was conveyed or learned "by word of mouth" (5 at 9). "[A]n accredited lab," Salem explained, "follows a strict guideline as to what is standard practice, what [an analyst's] paperwork w[ould] show, [and] what testing [would be] done on a particular item" In an accredited lab, "everyone [would be] on the same page and doing the same type of testing and working

³⁰ Salem was the only chemist from the Lab that mentioned this practice.

towards the same goal.” In short, “[a]ccreditation standardizes all the practices” (5 at 30).³¹

7. Salem’s Testimony Regarding her Observations about Farak

Salem testified that she did not notice any problems with Farak until the last few months that Farak worked in the Lab. She noticed that Farak was losing weight, was “moody,” and was leaving the Lab more frequently during the day, but she did not observe any other “dramatic changes.” She did not note how frequently Farak was not present in the Lab. Salem stated that there was positive feedback about Farak’s testimony from various Assistant District Attorneys and nothing negative (5 at 42-43).

C. Testimony of Rebecca Pontes, Chemist

Pontes had worked at the Amherst Lab for eight and one half (8-½) years. She is currently employed by the MSP in the Criminalistics Unit in Springfield. She holds a bachelor’s degree in biology from the University at Massachusetts, Dartmouth. She began her career in the DPH as a chemist assigned to the Amherst Lab. At the time of the closing of the Lab, her title was Forensic Chemist II and she was one of the main chemists analyzing substances that police submitted to the lab. She continued in that role after the MSP took over the Amherst Lab in July 2012 (5 at 65-66).

1. Pontes’s Testimony about Drug Testing

When Pontes arrived at the Amherst Lab in May 2004, she was trained by Hanchett. She described the training as “individualized on-the-job training.” She had

³¹ In addition, the policies and procedures at the Amherst Lab differed somewhat from those followed at the Hinton Lab (5 at 31). Salem testified that the testing at the Hinton Lab “was a lot more complicated,” referring to the two-chemist system that was in place (5 at 32). The two-chemist system required the first chemist to do preliminary testing without the use of any machinery. The second chemist would perform all the confirmatory testing on the GC/MS. This requirement became more difficult after chemists became required to testify in court as to their work, and as a result, the Hinton Lab ceased that procedure.

previously worked at an environmental lab (a company named Rhode Island Analytical), where she used instrumentation similar to that at the Amherst Lab to test environmental samples. Hanchett walked Pontes through the steps of receiving the samples, weighing them, sampling them, and running them on the GC/MS (5 at 70-71). At the beginning of her employment, she was only allowed to test vegetable matter until she was deemed to be “proficient,” a designation that allowed her to test powders and other substances (5 at 71-72). Pontes stated that it was possible to complete many marijuana tests on an average work day, at least in part because those tests were simple. By contrast, with powdered samples, (e.g., cocaine), the weighing, sampling and actual testing would take a lot longer, “from half an hour to forty minutes” (5 at 72-73). Pontes stated that Farak and she did the vast majority of the testing at the Lab. Hanchett did test some substances, but only the larger and more complicated ones (5 at 73-74). Pontes testified that Salem was the evidence officer at the Amherst Lab and assigned the samples to each chemist for testing (5 at 76).

2. Pontes’s Testimony about Security at the Lab

Pontes testified that, for the majority of the time she was at the Lab, employees accessed the Lab by key or swipe card and only one of the two had to be used. Pontes did not know if there was a mechanism by which entry into the Lab was tracked. She added that there was an alarm system in the Lab that was set at night and which had to be disarmed with a security code in the morning. Employees were able to enter the Lab at any time of the day or night, twenty-four hours a day (5 at 77-78). The drug locker or vault that contained all the police-submitted drug samples was in an area near Hanchett and Salem’s offices, across the hallway from the Lab. Employees could access the drug

vault in this area by using the same swipe card or key that employees also used to gain access to the Lab area (5 at 78). There was no written or spoken policy concerning who could or could not enter the safe (5 at 79). There was also another safe located in the Lab itself. It was used for overnight storage of any samples that the chemists had not finished testing. That safe was located along a wall in the middle of the Lab and had a dial combination to secure it at night. All employees at the Lab had the combination to the safe (5 at 81-82). Pontes testified that she never left an open bag in the “overnight” safe. Instead, she used the safe for samples that she had not yet opened or that she had “completed” and had “sealed up already” (5 at 82). Pontes also noted that there was a computer in the evidence room, and that everyone had access to it through the entry of a single pass code that was the same for every employee. She indicated that someone could possibly change the weights of the submitted samples in the evidence computer (5 at 100).

3. Pontes’s Testimony about Standards

Pontes indicated that the Lab used both primary and secondary or “prepared standards.” The primary standards were “known manufactured, known standards that [the Lab] would get from a manufacturer and ke[ep] in a locked storage area” (5 at 85). A chemist would use these standards as a benchmark “to test against unknown substances” (5 at 85). They were in both powder and liquid form. Pontes did not recall how many such standards were on hand at the Amherst Lab (5 at 85). These primary standards were kept along with the “prepared standards” in a refrigerator in the Lab that was closest to Hanchett’s work station. (5 at 85-86).

Pontes explained that a “prepared standard” is “a standard that was [a powder that is] diluted in liquid form to be used on the instrumentation.” Hanchett made these prepared standards at his workstation in the Amherst Lab (5 at 86-87). Hanchett would make these prepared standards by using a small sample from known substances that the police had submitted for testing (5 at 89). Pontes testified that if she noticed a prepared standard running low in the refrigerator, she would tell Hanchett (5 at 88). She recalled Hanchett confronting her and Farak about missing standards at the Amherst Lab - - he expressed concern about these missing standards and wondered what could have happened to them. He also asked Pontes if she was making her own standards. Both chemists denied going into the standards cabinet and refrigerator and Pontes denied ever making her own standards. She was trying to “wrap her brain” around how standards could go missing (5 at 110-111).

4. Pontes’s Testimony about Evidence Bags

Pontes testified that she never pre-initialed her bags before completing her analysis on the substances. She would always reseal the evidence bag with the police-submitted sample, and then initial and date the bag (5 at 82-83). She further indicated that the Lab required all the chemists to date and initial the evidence bags. She observed Farak adhere to this procedure and did not recall if she ever observed her pre-initial evidence bags (5 at 83). Pontes described the evidence bags or “KPAC” bags as “heavy plastic type bags that you would . . . heat seal” (5 at 83).³²

In addition, Pontes would occasionally act as the evidence officer for the Amherst Lab. She recalled that some police departments would deliver samples to the Lab in open

³² KPAC is a brand that is frequently used in the food and drug industry for packaging.

evidence bags. She remembered that the police departments from East Longmeadow and Springfield followed this practice, and that the bags from Springfield, in particular, had to be resealed at the Lab (5 at 98-99).

5. Pontes's Testimony about Lab Protocol

Pontes testified that when she first started working at the Amherst Lab, part of her training involved writing notes based upon her observations of Hanchett's analysis of the substances. Because she had experience (from her prior employment) writing standard operating procedures, Hanchett had asked her to "write an SOP³³ for each controlled substance that [the Lab] came across" (5 at 103), although there may have been some informal or unwritten SOPs already in place at the time Pontes started working at the Amherst Lab. However, Pontes believed that the SOPs that she drafted were very close in their terms to those that would be found in an accredited laboratory (5 at 103). She indicated that the policies set forth by SWGDRUG were available to her at the Lab for her review, if necessary (5 at 104).

6. Class E Substances

Pontes testified to the classifications of certain types of substances at the Lab, specifically Class E drugs. She indicated that Class E drugs were identified by visual inspection only (5 at 112). The substances "would come in as tablets and they would have identifying marks on them" (5 at 113). A chemist would identify a given pill by consulting a reference guide. On the infrequent occasions when a police department submitted a pill or substance that was not in the reference guide, the chemist would run the substance through the GC/MS (5 at 113). Pontes recalled one specific drug named

³³ SOP or standard operating procedure.

“BZP.”³⁴ She recalled that BZP was a federally controlled substance but not controlled under the state drug laws. “It could have been classified at a Class E . . . or reported that it was not classified with a note that it was federally controlled. The Lab had no policies set in place concerning the classification of BZP.” However, Pontes was certain that she had a discussion with Hanchett regarding that issue (5 at 114-115).

7. Pontes’s Testimony Regarding Her Observations of Farak

Pontes testified that she worked alongside Farak daily for over eight years. Pontes maintained that she did not find anything unusual about Farak’s demeanor or physical appearance. Although Pontes considered Farak to be “odd,” “there wasn’t anything that stood out.” She thought Farak was odd because Farak would finish Pontes’s sentences and was just “quirky” (5 at 95). Pontes indicated that towards the last few months of Farak’s employment, Farak was leaving the Lab frequently for long periods of time. However, Pontes would never question Farak about where she went. Pontes assumed that “she may have gotten a coffee or went to the bathroom” (5 at 96). Pontes recalled that no member of law enforcement had ever made a comment to her regarding Farak’s work (5 at 105).

She described Farak’s work as “very good,” noting that “[h]er notes [were] very neat and methodical, [and] she kept everything organized as far as her case files went” (5 at 96). Pontes said that Farak’s workstation was “neat” but her desk area was “a little messier” (5 at 97). Occasionally, Farak would show interest in the types of samples or the quantity of samples that Pontes was testing (5 at 96-97).

³⁴ “BZP” is discussed at length in the testimony of MSP Crime Laboratory Manager of Forensic Chemistry, Brooks.

D. Testimony of Nancy Wong Brooks, Massachusetts State Police

Brooks is employed at the MSP Crime Laboratory and is the Manager of the Forensic Chemistry Section, overseeing several units: the Drug Identification Unit; the Office of Alcohol Testing; and the Post-Mortem Toxicology Unit. Before managing the aforementioned divisions, she was the Supervisor of the Drug Identification Division of the MSP, located in Sudbury, Massachusetts. She received a Bachelor of Science degree in Chemistry from the University of Wisconsin, Madison. She is a member of the Clandestine Laboratory of Investigating Chemists and a member of the New England Association of Forensic Scientists. In addition, she has been qualified as an expert in the state of Wisconsin and testified in the states of New Hampshire, Vermont, and Massachusetts. In her 20 years as a bench chemist, she has examined over 30,000 samples and authored 10,000 reports. She currently oversees all forensic units located at the MSP drug labs in Sudbury, Maynard, and Springfield, Massachusetts (6 at 4-8).

1. Brooks's Testimony Regarding the Amherst Lab

The MSP had recently taken over control of the Amherst Lab from the DPH on July 1, 2012 when Brooks first had the opportunity to visit the Amherst Lab in October 2012. The purposes of her visit were to conduct a cursory audit or site assessment of the Lab; to review protocols; to evaluate some of the case work that the chemists performed; to evaluate the instrumentation in the Lab; and to discover what would "need to be obtained in order for [the Lab] to become accredited . . . [because the Lab] w[as] not accredited at that time" (6 at 26-28).

Brooks testified that there were a lot of steps that the Lab needed to take to become accredited (6 at 28). There were few written protocols in place at the time (6 at

27). She was of the opinion that the Lab's GC/MS instrument "was of an older generation. Some of it was at least five years old. The laboratory itself was definitely reminiscent of an academic laboratory" (6 at 28). Brooks added that "as a former chemistry major, [she] didn't see too much difference between when [she] was in a chemistry lab twenty years ago and in the Amherst lab" (6 at 29). Brooks noted, for example, that there were deficiencies such as "hoods being out of order at the time" (6 at 28).³⁵ She indicated that there were two safes in the Amherst Lab: one for temporary storage and another larger, secured evidence storage room safe in the administrative area of the Lab (6 at 30).

2. Brooks's Testimony about Accreditation

Brooks stated that a lab becomes accredited through a multi-step process. The lab first submits an application to an accrediting body for forensic drug laboratories, the American Society of Crime Laboratory Directors Accreditation Board, also known as ASCLD/LAB³⁶ (6 at 8-9). The ASCLD/LAB reviews the submitted application along with the submitting lab's written drug protocols. Members of ASCLD/LAB do an on-site review of the lab, including a review of protocols and case files and they make a site facility assessment. The members seek to determine whether the lab has adequate space to perform analytical examinations; mechanisms for tracking evidence throughout the

³⁵ A "hood" is used during chemical extractions for safety reasons. The hood ventilates the area where the extraction is occurring so that any fumes or dust are carried out. The extraction would take place under the protection of safety glass. Examples of typical extractions include taking components out of tablet or the evaporation of a substance using a heating element (6 at 29).

³⁶ ASCLD/LAB offers accreditation programs in which any crime laboratory (including crime scene and computer forensics programs) or forensic science breath alcohol calibration program providing covered services may participate in order to demonstrate that their technical operations and overall management system meet ISO/IEC 17025:2005 requirements and applicable ASCLD/LAB-*International* supplemental requirements. American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB): <http://www.ascl-d-lab.org/how-to-become-accredited/> (last visited March 31, 2016).

laboratory; and a safe environment for analysts to work. In addition, they review lab protocols to ensure that the methods being used, as well as the conclusions being formed by the analysts, are scientifically sound; inspect the instrumentation and assess how well it has been maintained; and review security protocols.

A lab seeking accreditation must also have a DEA license in order to handle and acquire controlled substances for testing. Aside from that license, the lab should also have a DPH registration (6 at 8-10).

The ASCLD/LAB offers two different types of accreditation programs: the ASCLD/LAB Legacy Program and the ASCLD/LAB International Accreditation under the ISO 17025 Supplemental Guidelines³⁷ (6 at 8-10). Brooks indicated that the “International Supplements were far more comprehensive. Under the original Legacy Program there were one-hundred and fifty (150) criteria that were reviewed for a lab. Under the International Program Supplemental, [a lab is] reviewed on . . . approximately four-hundred (400) criteria . . . all of which [the lab] must pass” (6 at 11).

3. Brooks’s Testimony about the Massachusetts State Police Laboratories in Sudbury and Springfield

The two MSP drug labs, located in Sudbury and Springfield have been accredited since 2002. The labs first were accredited under the ASCLD/LAB Legacy Program. The ASCLD/LAB subsequently awarded the labs the International Accreditation under the ISO 17025 Guidelines, both described above (6 at 10). Brooks explained the general layouts of the two labs and their features. In the Sudbury lab, there are approximately ten to

³⁷ American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB) <http://www.ascl-d-lab.org/international-testing-program/> (last visited March 31, 2016).

twelve chemists and four supervisors. In the Springfield lab, there are two chemists, with an additional one in training and one supervisor.

When evidence is brought into the Sudbury or Springfield drug lab for testing, the individual or entity that seeks the testing must complete certain paperwork. Evidence control personnel will receive both the paperwork and the substance, and log the sample into the lab's Laboratory Information Management System. The system records the name of the submitting agency, any agency case numbers, and any subject names. The evidence officer also will record the gross weight of the sample and its packaging. The evidence officer does not "inventory" the samples because the bags are not opened. Instead, the officer visually verifies that the substance described by the agency "is pretty much consistent with what the [officer] see[s] in [the] sealed plastic bag" (6 at 16). The sample is then assigned a unique laboratory case number and a bar code is placed on the evidence bag. The purpose of that procedure is to track evidence throughout the laboratory (6 at 15). Each analyst has his or her own personal bar code so that the lab can track the progression of the sample from the submitting agency to the chemist and back to the vault (6 at 15). Every time a sample moves from one location to another, a lab worker must scan the sample. The lab retains electronic records regarding this movement (6 at 20).

Samples are stored in a drug vault. In the Sudbury lab, the drug vault is located in a secure area within the evidence control unit and there is a safe within the vault where the substances are actually kept. In the Springfield lab, the vault is secured within the laboratory. Both labs follow the exact same procedures for the storage, handling, and testing of all police submitted samples. Evidence control personnel at the lab must

retrieve any item that is ready for testing (6 at 13). If, for any reason, evidence personnel are not available to retrieve evidence from the vault, an analyst with authorization will enter the vault along with the primary chemist to remove the evidence bin using his/her swipe card. This procedure is known as “dual entry” and an electronic record is kept as to that entry and as to all other entries (6 at 31).

In the Sudbury lab, the samples are assigned and prioritized for testing based upon how soon the results of the tests are needed in court (6 at 15). When the lab assigns samples to a chemist for testing, the samples are taken from the vault and delivered to that chemist in a locked storage bin. The analyst compares the gross weight of the item to the gross weight recorded by the evidence room personnel. If there is a discrepancy, the lab will investigate (6 at 16). However, if there are no discrepancies, the analyst will open up the sample and begin the analysis. The analyst will then conduct a full inventory of the sample and weigh it to ensure that the same sample is in an identical form to when the lab received it from the submitting department or agency. The analyst then follows the testing protocol that corresponds to the nature of the item: powders, pills, vegetable matter, *et cetera* (6 at 17). The MSP drug lab chemists use various testing methods in order to identify potential controlled substances. Ultraviolet Visible Spectroscopy³⁸ is used as a screening tool for the substance. The labs also have Fourier Transform Infrared Spectroscopy (“FTIR”)³⁹ and the GC/MS. After the analyst finishes all

³⁸ The chemist performs this test by taking a small amount of a powder or tablet, dissolving it in an acidic solution and placing it under a beam of ultraviolet radiation. Depending on the components in the sample, a chemist may be able to identify what compounds are present. This method is used as a screening tool only (6 at 21).

³⁹ “FTIR (or IR, for short) provides an alternate technique to mass spectroscopy for the identification of organic compounds. Recent improvements in the hyphenated technique, Gas Chromatography/Infrared Spectroscopy (GC/IR) may provide a simple alternative or supplemental approach to GC/MS for the

tests on a sample and has completed an analysis and formed a conclusion as to what that substance is, the findings are reviewed by a fellow chemist to ensure that the conclusion formed was scientifically supported (6 at 24).

4. Brooks's Testimony about Standards

Brooks testified that a standard is a substance "of a known origin or identity that . . . [an analyst uses] for comparative purposes" (6 at 24). Standards "maybe used for creating a spectrum in the FTIR library or they may be used to create a sample for the GC/MS" (6 at 33). Essentially, the standard is the known substance that the analyst tests against the substance that law enforcement submits to the drug testing lab (6 at 24). At the MSP drug labs, the standards are stored in a vault (6 at 13).

Brooks indicated that, in all drug testing laboratories, in order to procure standards from an authorized laboratory, the lab's DEA registration number assigned to the forensic laboratory must be produced. This registration number is located on the lab's DEA license, a credential that is applied for each year (6 at 12). These standards would be ordered by monitors in the unit who fill out the necessary forms, but a supervisor or manager must approve the purchase (6 at 13).

Brooks testified that there was sometimes difficulty ordering standards from the various labs that are authorized to produce and deliver them to the testing laboratories. This difficulty was due to some drugs being so "new" that some of the manufacturers had

identification of certain compounds. Routine analysis of drug mixtures by forensic labs can benefit from having the availability of the tandem analysis GC/IR as well as the customary method by GC/MS. As the complexity of the drug samples increases, there will be an ever increasing need to improve the analytical capabilities of the forensic laboratory to allow a positive identification of samples which may only differ by a small molecular change in structure. The GC/IR is another useful tool to allow a forensic drug chemist to make this difficult identification." Forensic Drug Identification by Gas Chromatography – Infrared Spectroscopy: Robert Shipman, Trisha Conti, Tara Tighe, Eric Buel (June 2013) <https://www.ncjrs.gov/pdffiles1/nij/grants/242698.pdf> (last visited March 31, 2016).

not yet begun the process of manufacturing standards. Since an accredited laboratory can only test with known standards, the inability to get standards for new drugs poses a problem (6 at 42).

Brooks did state, however, that she “occasionally had heard of laboratories using samples [that the labs themselves had created] from police-submitted evidence . . . as quality control samples or potential reference materials” (6 at 36). She noted that labs had utilized such samples “probably going back twenty (20) years . . . if labs weren’t able to procure a traceable reference material” (6 at 36). For a lab to produce its own standards, lab personnel would take a portion of a police-submitted sample and subject it to tests and procedures to ensure both that it had an adequate level of purity and that its properties adequately matched a known standard” (6 at 37).

5. Brooks’s Testimony about Class E Substances

Brooks testified concerning the protocol at the MSP drug labs for the identification of Class E substances. If a police department submitted a pill to the lab for testing and the pill had “specific markings,” those markings would be compared to the reference materials at the lab and the analysts would report that substance as a “particular known drug.” If, on the other hand, a police department submitted a pill that did not have any identifying features, the lab would conduct a chemical analysis and then compare the results to the same reference material so that the analyst would be able to identify the pill (6 at 37).

Brooks was familiar with the drug “BZP.”⁴⁰ “BZP” was the acronym for “benzylpiperazine” (6 at 48). She noted, “[i]t is a stimulant/hallucinogenic substance. It is federally scheduled one⁴¹ in the United States, I believe” (6 at 48).⁴² Brooks reported that the MSP drug labs’ policy regarding BZP is that if a substance were identified as BZP, it would be reported as such, but there would be no “reference to any federal or Massachusetts control status” and it would not be reported as a Class E substance (6 at 48). Prior policy had indicated that “if something was federally scheduled, however not listed under Mass General Laws, Chapter 94C, Section 31, [the MSP drug labs] would refer to it as a Class E substance” (6 at 48-49). Brooks indicated that she was aware that this practice was also in place at the Hinton and Amherst Labs.

E. Interview of Annie Dookhan, Chemist, Hinton State Laboratory

On March 3, 2016, Dookhan, accompanied by counsel and pursuant to a proffer agreement, spoke to an Assistant Attorney General and two members of the MSP assigned to the AGO’s Criminal Bureau.

Dookhan started as a Chemist I for the DPH at the Hinton Lab in 2003. Throughout her tenure there, Charles Salemi was the head of the Lab; Peter Piro was the head of the

⁴⁰ “Both animal studies and human clinical studies have demonstrated that the pharmacological effects of BZP are qualitatively similar to those of amphetamine. BZP has been reported as being similar to amphetamine in its effects on chemical transmission in brain . . . Subjective effects of BZP were amphetamine-like . . . BZP acts as a stimulant in humans and produces euphoria and cardiovascular effects, namely increases in heart rate and systolic blood pressure. BZP is about 10 to 20 times less potent than amphetamine in producing these effects.” Drug Enforcement Administration, Office of Diversion Control, Drug & Chemical Evaluation Section (N-BENZYLPIPERAZINE), March 2014, http://www.deadiversion.usdoj.gov/drug_chem_info/bzp.pdf.

⁴¹ Schedule I drugs, substances, or chemicals are defined as drugs with no currently accepted medical use and a high potential for abuse. Schedule I drugs are the most dangerous drugs of all the drug schedules with potentially severe psychological or physical dependence. Drug Enforcement Agency, U.S. Department of Justice, <http://www.dea.gov/druginfo/ds.shtml> (last visited March 31, 2016).

⁴² BZP was temporarily placed into schedule I of the CSA on September 20, 2002. (67 FR 59161) On March 18, 2004, the DEA published a Final Rule in the Federal Register permanently placing BZP in schedule I. *Id.*

GC/MS portion of the Lab; and Nassif was the Director of Chemistry for both the Hinton and Amherst Labs.

Dookhan told the interviewers that, as a Chemist I at the Hinton Lab, she was at first assigned marihuana samples to test. She described this type of testing as “easy” and powder samples as more difficult because they involved more steps and machinery. The marihuana tests only required one step (a simple color test) whereas the tests for other substances at the lab required multiple steps. “Trafficking” type cases were left to the more senior chemists at the Hinton Lab, usually a Chemist III.

The interviewers asked Dookhan about her observations and working relationship with Farak at the Hinton Lab. Dookhan said that she and Farak probably worked together for about six months, but they did not really have a close relationship at the Lab. They both held the position of Chemist I at the lab, so they were only doing the easier preliminary testing. Dookhan said she believed that Farak mostly tested marihuana samples at that time. Dookhan said she would occasionally shadow Farak and observe her substance analysis when a senior chemist was not available. Dookhan told interviewers that she did not notice anything unusual about Farak’s work or person. She stated that she thought Farak was “thorough” and that she was “productive” in her work, but she added that she only had the opportunity to shadow her on rare occasions. Dookhan said that Farak usually dealt with her team leader, Della Saunders, regarding work issues Farak may have experienced. According to Dookhan, any relationship between Saunders and Farak was limited to work issues.

Dookhan added that Farak was very quiet. According to Dookhan, she would sit down, do her work, and ask Dookhan questions, if she had any. There was never any talk

between the two about the recreational use of drugs. Dookhan stated that she never believed that Farak was under the influence of narcotics while working at the Hinton Lab, nor that Farak would ever have used any drugs, but Dookhan did not really socialize with Farak, either inside or outside of work.

Dookhan told interviewers that after Farak left the Hinton Lab to work at the Amherst Lab, the work communication between Dookhan and Farak continued. Dookhan would, on occasion, contact Farak or Hanchett at the Amherst Lab and ask one or the other how they would test certain drugs or if they were having a difficult time analyzing a particular substance. Supervisors would encourage reaching out to the Amherst Lab as a way of sharing information between the labs. Dookhan never had the opportunity to travel to the Amherst Lab, but she did meet both Hanchett and Salem when they came to the Hinton Lab to pick up Hinton samples for testing at the Amherst Lab.

Dookhan told interviewers about the standards used at the Hinton Lab. She indicated that she did not have direct access to the standards at the Hinton Lab - - that the standards were already checked out and placed in the MS/GC by the operator. Dookhan believed that either Charles Salemi or Peter Piro was responsible for ordering standards and she denied observing anyone at the Hinton Lab using, discussing, or manufacturing secondary standards.

As for Class E substances, Dookhan indicated that a substance would be identified a Class E substance if it was federally scheduled and could not be found in the PDR or lab-approved literature. The Hinton Lab made those decisions after consultation with other chemists and approval from the supervisors at the Lab.

“Dry-labbing” is identifying a drug sample as a narcotic by looking at it instead of testing it. Asked by the interviewers about “dry-labbing,” Dookhan said that she was the only person “dry-labbing” at the Hinton Lab and she did it alone. There were never any conversations about “dry-labbing” nor did she suspect anyone else did it. She and Farak never discussed “dry-labbing” during their time together at the Lab.

Concerning the lab policies at the Hinton Lab versus those at the Amherst Lab, Dookhan thought that the fact that the two labs did not follow the same protocols was strange. When the Hinton Lab was in the process of rewriting its own protocols and received a copy of the protocols being used at the Amherst Lab, Dookhan questioned why both labs did not use the same procedures. She heard that the reason was possibly that the Amherst Lab was a much smaller lab and did not have certain equipment. After hearing that explanation, Dookhan stopped raising the issue.

VI. Final Comments

The AGO has performed the investigation for which it assumed responsibility, that is, to investigate the timing and scope of Farak's misconduct at the Amherst drug lab.⁴³ *Cotto*, 471 Mass. at 115. The results of the Commonwealth's investigation⁴⁴ are now provided to the Court so that the Court can determine how to proceed in the matters before it. *Cotto*, 471 at 115 ("The results of the Commonwealth's investigation . . . will dictate how the judge shall proceed, and we leave that matter to the judge's discretion.")

Respectfully submitted
For the Commonwealth,

MAURA HEALEY
ATTORNEY GENERAL
By Her Assistant,

/s/ Thomas A Caldwell
Thomas A. Caldwell
Assistant Attorney General
1 Ashburton Place
Boston, MA 02108
(617) 727-2200
BBO# 651977

DATED: April 1, 2016

⁴³ The AGO has provided the facts gleaned from its investigation without evaluation, without any determination about the credibility of any of the witnesses, and without the drawing of any conclusions.

⁴⁴ The AGO is in the process of a review of recently received documents provided by the DPH pursuant to a court order. These documents include communications which contain potentially privileged information which a team of non-criminal AAsG are reviewing and will then report back to the investigation team. Upon completion of this review, the AGO will provide a supplemental report regarding the results, if necessary.