COMMONWEALTH OF MASSACHUSETTS
SUPREME JUDICIAL COURT

SUFFOLK, ss. NO. SJ-2014-0005

KEVIN BRIDGEMAN,
and others

v.

DISTRICT ATTORNEY FOR THE SUFFOLK DISTRICT,
and others

Affidavit of Matthew R. Segal

I, Matthew R. Segal, state as follows:

1. I am legal director of the American Civil Liberties Union Foundation of Massachusetts (ACLUM).

2. I submit this affidavit to provide the Court with documents concerning investigations of drug lab scandals involving Annie Dookhan and Sonja Farak. These documents, in turn, contain information about the underlying misconduct.

3. ACLUM has participated in several cases concerning the Dookhan scandal. See Commonwealth v. Charles, 466 Mass. 63 (2013) (direct representation); Commonwealth v. Scott, 467 Mass. 336 (2014) (amicus participation); Bridgeman v. Dist. Atty. for the Suffolk Dist., 471 Mass. 465 (2015) (direct representation).

4. Since the Dookhan scandal was publicly disclosed in August 2012, ACLUM has fielded many calls and letters from people seeking information about

their rights as possible Dookhan or Farak defendants. The people making these queries often did not know what their rights were, or even whether Dookhan or Farak had in fact worked on their cases.

5. For nearly four years, ACLUM has also engaged in substantial non-litigation advocacy geared toward seeking a just and efficient approach to the Dookhan and Farak scandals.

6. For example, in October 2012 ACLUM joined with Families Against Mandatory Minimums to ask the Office of the Attorney General (OAG) and county District Attorneys to embrace alternatives to case-by-case litigation of Dookhan cases. See Exhibit 1.

7. Also in October 2012, ACLUM joined with the Massachusetts Bar Association, the Committee for Public Counsel Services, and the Massachusetts Association of Criminal Defense Lawyers to request an independent investigation of the Hinton Lab. See Exhibit 2.

8. The Office of the Inspector General (OIG) was then asked to conduct such an investigation.

9. The OIG produced a report on March 4, 2014, which described some of Dookhan's misconduct,[1] as well

[1] The OIG primarily focused on cases in which Dookhan allegedly added drugs to samples, which the OIG called "tampering." The OIG did not focus on the falsification of test results, known as "dry labbing." The term "dry labbing" appears only once in the OIG's March 2014 report. See Ex. 3 at 5.

as extensive failures in the Hinton Lab's management and oversight. See Exhibit 3.

10. Although the OIG report characterized Dookhan as the Hinton Lab's "sole bad actor," it also described other bad acts, including the silencing or ignoring of would-be whistleblowers. See, e.g., Exhibit 3 at 68, 70.

11. The OIG produced a supplemental report on the Hinton Lab on February 2, 2016. See Exhibit 4.

12. ACLUM and other organizations subsequently had extensive discussions with the OAG following this Court's decisions in Commonwealth v. Ware, 471 Mass. 85 (2015), and Commonwealth v. Cotto, 471 Mass. 97 (2015).

13. These discussions covered, among other topics, the investigation of the Amherst Lab, the need to identify and notify defendants, and alternatives to case-by-case litigation. See, e.g., Exhibit 5.[2]

14. It seems that this advocacy for alternatives to case-by-case litigation did not bear fruit.

14. The OAG did, however, undertake an investigation of the Amherst Lab. As part of that effort, it elicited testimony from Sonja Farak before

[2] Although this September 2015 letter is critical of the District Attorneys' approach to identification of and notice to Dookhan defendants, it has also come to my attention that one or more District Attorneys did, to their credit, send some case-specific notices to affected Dookhan defendants or their lawyers.

the grand jury. See Exhibits 6-1, 6-2, and 6-3.

11. On April 1, 2016, the OAG completed a report on the Amherst Lab, finding extensive misconduct and serious problems with oversight. See Exhibit 7.

SIGNED UNDER THE PAINS AND PENALTIES OF PERJURY THIS 29th DAY OF JUNE, 2016.

Matthew R. Segal
BBO #654489
Legal Director
AMERICAN CIVIL LIBERTIES UNION
FOUNDATION OF MASSACHUSETTS
211 Congress Street
Boston, MA 02110
(617) 482-3170

Bridgeman v. District Attorney for the Suffolk District
No. SJ-2014-0005

Exhibits to Affidavit of Matthew R. Segal
June 29, 2016
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EXHIBIT 1

ACLU
AMERICAN CIVIL LIBERTIES UNION
OF MASSACHUSETTS

October 11, 2012

Via Email and First-Class Mail

The Honorable Martha Coakley
Attorney General of Massachusetts
One Ashburton Place, 20th floor
Boston, MA 02108

County District Attorneys
(See below for full list)

Re: *The Hinton State Lab Scandal*

Dear Attorney General Coakley and County District Attorneys:

The American Civil Liberties Union of Massachusetts (ACLUM) and Families Against Mandatory Minimums (FAMM) write concerning the crisis arising from misconduct at the Hinton State Laboratory. The Commonwealth's current plan for addressing the crisis—adjudicating countless cases one by one—threatens instead to worsen it. We urge you to chart a better course, one that will restore the Commonwealth's damaged reputation.

The scandal will trigger an explosion of litigation. Chemist Annie Dookhan, who is accused of falsifying tests of drug samples, is now associated with 34,000 cases. But Dookhan also allegedly forged signatures and had not-by-the-rulebook communications with prosecutors and police officers. So it is unclear how far this scandal will reach.

It is clear, however, that tens of thousands of defendants could seek to vacate their convictions. Special courts have been constituted, and prosecutors estimate that a case-by-case approach will cost them $50 million. Defense and court costs figure to equal at least that much.

That expenditure of time and money would be a waste of both. Abundant evidence shows that drug prosecutions fail to reduce overall drug use even in cases that do *not* involve tainted evidence. Accordingly, it makes no sense to re-prosecute tens of thousands of cases that *do* involve tainted evidence.

The spectacular failure of the Hinton lab is thus a reason to dismiss cases, rather than to spend $100 million relitigating them. To that end, we propose that District Attorneys, in cooperation with the Attorney General, as the Commonwealth's chief law enforcement officer, jointly agree to dismiss *all* cases in any one of the following categories:

- cases that do not charge violent crime or weapons offenses;
- cases involving a police officer or prosecutor who, at any time, communicated directly with Annie Dookhan; or
- cases in which the defendant has served at least half of his or her sentence.

Endorsing this broad-based approach would enable prosecutors to repair the integrity of the Commonwealth's justice system, save taxpayer dollars, and assure a consistent statewide approach to these cases. It would also provide at least some justice to this scandal's victims. Dookhan's word has convicted literally thousands of people, who in turn have suffered unjust imprisonment and severe collateral consequences. They have lost jobs. They have been deported. They have lost custody of children.

In light of this scandal, it is time for the Commonwealth's leaders to demonstrate their commitment to justice and sound policy. It is not time for an expensive, misguided, and ill-fated do-over.

Discussion

The discussion below describes (1) the costs of the current plan, (2) the relatively low value of re-prosecuting drug cases, and (3) an alternative approach.

I. The Current Plan

We understand that the current plan is to litigate tainted drug cases one at a time, as if the Commonwealth had just indicted 34,000 drug cases. The costs and management problems of such an undertaking will be staggering.

The first step will be hearings, starting on October 15, to address the "immediate liberty interests" of roughly 1,140 people who are still "serving time in connection with a drug conviction stemming from a questionable drug analysis."[1]

But that is just the tip of the iceberg. Cases will next head toward full re-adjudication. Given that each of those cases lacks a trustworthy drug certification, full adjudication will be exceedingly complex, and perhaps impossible.

Defendants will first need full discovery on misconduct at the Hinton lab, including all of Dookhan's communications with prosecutors and police officers. Defendants will then file motions to set aside convictions and suppress evidence. Each one could require briefing, hearings, witness testimony, and court rulings.

Although the 1,140 cases involving incarcerated people will understandably go first, they represent only a fraction of the total caseload. Tens of thousands of other defendants may also file motions seeking to vacate their tainted convictions.

As evidenced by the recent $50 million estimate of prosecution costs,[2] the litigation will last years and explode budgets. Defense costs might be even higher than prosecution costs because, unlike prosecutors, defense attorneys represent different individual clients and cannot ask the police to do their investigations. Court costs, too, will be high.

Because the work is already underway, taxpayers will get the bill only *after* a lot of their money has been spent. Worse yet, the scandal might widen while the case-by-case approach is ongoing. For example, given that Dookhan allegedly forged signatures, she may have tainted more cases than those bearing her name.

The scandal could also generate more tainted cases by reaching additional people. For years, lab employees noticed that Dookhan "tested" more samples than seemed humanly possible. But when a supervisor learned of this problem, she merely gave Dookhan a "special project." Even in the fall of 2011, after Dookhan was finally

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[1] Supreme Judicial Court, Public Information Office, *Trial Court Designates Judges to Manage Drug Lab Cases* (Oct. 2, 2012), at http://www.mass.gov/courts/press/pr100212.html.

[2] John Ellement, *DAs say resolving tainted cases will cost $10 million a year*, Boston Globe, Oct. 5, 2012, at http://articles.boston.com/2012-10-05/metro/34259888_1_criminal-cases-drug-cases-district-court-cases.

banned from the lab, an employee found her at a lab computer with the door shut and the lights off.[3]

As Governor Patrick has noted, these facts raise the question: "Why would anyone do this?"[4]

Although the answer to that question is unknown, there are signs that Dookhan's conduct benefited others. She reportedly became a "go-to person" for lab results; prosecutors and police officers allegedly called Dookhan directly about drug samples, even though the proper procedure was to call the lab's evidence office. Possibly for that reason, Dookhan sought out samples from specific locations, such as Norfolk County.[5]

These facts should be thoroughly and independently investigated. For now, it suffices to say that current guesses about the scandal's costs, though astronomical, are probably too low.

II. The Limited Value of Drug Prosecutions

If drug cases uniformly produced useful results, then the cost of re-prosecuting 34,000 of them might be worthwhile. But the so-called war on drugs produces little discernible benefit. So this latest drug war catastrophe isn't a reason to relitigate tainted cases; it's a reason to clear the criminal records of people wrongly convicted based on falsified or tainted evidence.

The drug war means imprisoning people even when treatment or other forms of diversion might more effectively target the demand for drugs and prevent recidivism. In the Commonwealth, the prison population more than tripled between 1980 and

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[3] For information on these facts, see Massachusetts State Police Detective Lieutenant Robert Irwin's Reports on his interviews with Nicole Medina (Aug. 27, 2012), Peter Piro (Aug. 27, 2012), Charles Salemi (Aug. 22, 2012), and Elizabeth O'Brien (Aug. 7, 2012).

[4] Greater Boston, *More Lies from State Lab's Dookhan*, New England Cable News, Sept. 26, 2012, at http://www.wgbh.org/programs/Greater-Boston-11/episodes/Sept-26-2012-More-Lies-from-State-Labs-Dookhan-41490 (2 minutes and 15 seconds into video).

[5] For information on Dookhan's relationships with police officers and prosecutors, see Massachusetts State Police Detective Lieutenant Robert Irwin's Reports on his interviews with Daniella Frasca (Aug. 28, 2012), Nicole Medina (Aug. 27, 2012), Peter Piro (Aug. 27, 2012), Gloria Phillips (Aug. 22, 2012), Hevis Lleshi (Aug. 22, 2012), and Elizabeth O'Brien (Aug. 7, 2012).

2008, with drug arrests responsible for much of the spike.[6] By 2007, the Commonwealth was spending about as much on corrections as it was on higher education.[7] Yet in 2009, a state commission called addiction a "public health epidemic."[8] That same year, a Massachusetts Bar Association task force found that the Commonwealth had made "not a dent" in drug use.[9]

If the drug war cannot be won by prosecuting *typical* cases, it makes little sense to re-prosecute cases involving tainted evidence.

The impulse to re-prosecute those cases is understandable. Just because thousands of people were unjustly convicted does not mean they are all innocent. In fact, some people who now figure to be released may well commit drug offenses in the future.

But the evidence is clear: spending money on drug prosecutions reduces neither drug offenses nor drug abuse and addiction. Even assuming it makes sense to spend some of that money once, it makes no sense to spend it twice.

III. The Alternative to Case-By-Case Adjudication

Instead of litigating thousands of cases one at a time, prosecutors should work with defense attorneys, judges, and public officials to identify categories of defendants whose cases should be dropped entirely. That approach would deliver justice to the wrongly convicted and avoid needlessly spending taxpayer money.

A broad-based approach would also assure consistency. If each case is litigated one by one, defendants will inevitably be subject to different standards. The Attorney General and county District Attorneys, however, can assure both justice and consistency by agreeing on the groups of defendants who should receive relief.[10]

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[6] See Massachusetts Bar Association Drug Policy Task Force, *The Failure of the War on Drugs: Charting a New Course for the Commonwealth* (2009), at 15-16 ("MBA Task Force").

[7] Pew Center on the States, *One in 100: Behind Bars in America 2008* (2008), at Tables A-2 and A-3 ($1.14 billion in corrections versus $1.16 billion in higher education).

[8] Massachusetts OxyContin and Heroin Commission, *Recommendations of the OxyContin and Heroin Commission* (2009), at 5.

[9] MBA Task Force, *supra* n.6, at 14.

[10] See *Town of Burlington* v. *District Attorney for the Northern District*, 381 Mass. 717, 720 (1980) ("The Attorney General, however, as 'chief law officer of the Commonwealth' . . . having wide access to the courts in criminal matters, may supersede a district attorney as prosecutor, whether in the Superior Court or District Court.").

This letter proposes three groups. Although these proposals may seem to paint with a broad brush, that is the point.

First, prosecutors should agree to relief for all defendants in tainted drug cases who were not charged with violent crime or weapons offenses. They are the cases least likely to be worth litigating again because they are the cases least likely to have been worth litigating in the first place. This approach would track the Legislature's 2010 reforms, which allowed certain county prisoners serving mandatory minimum sentences for drug offenses to be eligible for parole if their offenses did not involve weapons or violence.[11] As Governor Patrick recently observed, "the warehousing of non-violent drug offenders has proven to be a costly failure."[12] The Commonwealth's response to this failure should not unduly repeat it.

Second, prosecutors should agree to relief in all cases involving a police officer or prosecutor who ever communicated with Annie Dookhan. Given the allegedly improper communications among Dookhan, prosecutors, and police officers, dropping those cases is necessary to ensure the integrity of the criminal justice system.

That approach would also be consistent with other responses to criminal justice scandals:

- In 2003, Texas Governor Rick Perry pardoned 35 of the 38 residents of the town of Tulia who were convicted on drug charges based on the testimony of a corrupt police officer. His pardons followed a unanimous recommendation by the Texas Board of Parole and Pardons. Although the convicted residents proclaimed their innocence, Perry focused on process: "Questions surrounding testimony from the key witness in these cases weighed heavily on my final decision. Texans demand a justice system that is tough but fair."[13]

- Similarly, following the police abuse and corruption crisis in Los Angeles in the late 1990s, "the Los Angeles County District Attorney decided that it

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[11] See G.L. c. 94C, § 32(c).
[12] Statement from Governor Patrick on Crime Bill, July 31, 2012, available at http://www.mass.gov/governor/pressoffice/pressreleases/.
[13] Office of the Governor press release, *Gov. Perry Grants Pardons to 35 Tulia Defendants*, at http://governor.state.tx.us/news/press-release/4995/.

would seek to set aside a person's conviction if it had lost faith in the conviction's integrity, regardless of the person's actual guilt or innocence."[14]

- Most recently, the San Francisco drug lab was closed down in 2010 due to a lab technician's theft of cocaine and possibly other drugs. The San Francisco County District Attorney dismissed at least 600 drug prosecutions, calling the lab's transgressions a "violation of the public trust."[15]

Here, the same commitment to the public trust means setting aside any conviction involving someone who is linked to Annie Dookhan.

Third, prosecutors should agree to post-conviction relief in all tainted cases involving defendants who have served at least half of their sentences. Dismissing these cases would acknowledge that each and every one of these defendants was convicted on possibly falsified or tainted evidence. It would also recognize the unfortunate reality that, simply by relitigating cases, prosecutors could run out the clock on tainted sentences.

Dismissing this third group of cases would also alleviate prison overcrowding. State prisons are operating, on average, at over 140 percent of capacity.[16] Some county facilities are far worse, such as the Bristol County Jail and House of Correction, which is operating at an appalling 384 percent of capacity.[17] One obvious way to ease that problem is to release people who have served substantial portions of tainted sentences. They should be permitted to clear their names and move on with their lives.

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[14] Blue Ribbon Rampart Review Panel, *Rampart Reconsidered: The Search for Real Reform Seven Years Later* (2006), at 71. The LAPD's Community Resources Against Street Hoodlums (or CRASH) anti-gang unit was found to have engaged in widespread planting of evidence, framing suspects and perjury, along with unprovoked beatings and shootings.

[15] San Francisco News, *Crime Lab Scandal Prompts Call for Independent Testing*, Apr. 23, 2010, at http://abclocal.go.com/kgo/story?section=news/local/san_francisco&id=7403326.

[16] Massachusetts Department of Correction, *Quarterly Report on the Status of Prison Overcrowding, Third Quarter 2011* (Oct. 2011), at 1-4.

[17] Emily Sweeney, *Making Room for Inmates*, Boston Globe, May 17, 2012, at http://www.boston.com/news/local/massachusetts/articles/2012/05/17/south_of_boston_prisons_and_jails_are_operating_beyond_capacity/.

Conclusion

A broad-based approach will enable the Commonwealth's leaders to turn the lab scandal into an example of a criminal justice system at its best. The wrongfully convicted will receive justice, the taxpayers will receive sound policy, and the Commonwealth's reputation for fairness and integrity in criminal justice can be restored. In contrast, a case-by-case approach will deliver only costly and protracted litigation.

We know this first-hand. ACLUM Legal Director Matthew Segal argued *United States v. Simmons*, 649 F.3d 237 (4th Cir. 2011) (en banc), a decision holding, in effect, that thousands of defendants had been unjustly convicted of or sentenced for federal crimes in North Carolina. Prosecutors opted for an adversarial case-by-case response. Now, more than a year later, the ensuing litigation continues to bog down courts and delay justice.

That should not happen here. Instead, justice and common sense should prevail.

Thank you for your attention to this matter.

Respectfully submitted,

Carol V. Rose
Executive Director
American Civil Liberties Union
of Massachusetts

Matthew R. Segal
Legal Director
American Civil Liberties Union Foundation
of Massachusetts

Barbara J. Dougan
Massachusetts Project Director
Families Against Mandatory Minimums
(617) 543-0878

To: The Honorable Jonathan W. Blodgett, District Attorney of Essex County
The Honorable David F. Capeless, District Attorney of Berkshire County
The Honorable Daniel F. Conley, District Attorney of Suffolk County
The Honorable Timothy J. Cruz, District Attorney of Plymouth County
The Honorable Joseph D. Early, Jr., District Attorney of Worcester County
The Honorable Gerard T. Leone, Jr., District Attorney of Middlesex County
The Honorable Mark Mastroianni, District Attorney of Hampden County
The Honorable Michael Morrissey, District Attorney of Norfolk County
The Honorable Michael O'Keefe, District Attorney of Barnstable County
The Honorable David Sullivan, District Attorney of the Northwestern District
The Honorable C. Samuel Sutter, District Attorney of Bristol County

cc: The Honorable Deval L. Patrick, Governor of Massachusetts
Edward R. Bedrosian, Jr., First Assistant Attorney General
Anthony J. Benedetti, Chief Counsel, Committee for Public Counsel Services
Stephen M. Brewer, Chair, Senate Committee on Ways and Means
Miriam Conrad, Federal Public Defender, Districts of Massachusetts, New Hampshire, and Rhode Island
William Cowan, Chief of Staff, Office of the Governor
Cynthia Stone Creem, Senate Chair, Joint Committee on the Judiciary
Robert A. DeLeo, Speaker of the House
Brian S. Dempsey, Chair, House Committee on Ways and Means
Jay Gonzalez, Secretary, Executive Office for Administration and Finance
Mary Elizabeth Heffernan, Secretary, Executive Office of Health and Human Services
Elizabeth A. Lunt, Vice-President, Massachusetts Association of Criminal Defense Lawyers
Therese Murray, President of the Senate
Eugene L. O'Flaherty, House Chair, Joint Committee on the Judiciary
Carmen M. Ortiz, United States Attorney, District of Massachusetts
Mark A. Reilly, Chief Legal Counsel, Office of the Governor
Max Stern, President, Massachusetts Association of Criminal Defense Lawyers

EXHIBIT 2

October 24, 2012

The Honorable Martha M. Coakley
Attorney General of Massachusetts
One Ashburton Place
Boston, MA 02108-1518

Dear Attorney General Coakley:

We appreciate your willingness to address the unprecedented situation facing Massachusetts as a result of egregious staff misconduct and lack of appropriate oversight at the William Hinton State Laboratory in Jamaica Plain. However, we are concerned with the possibility that your office may assume responsibility for the broader investigation of the lab and its drug analysis unit.

In order for an expanded investigation to be deemed credible and beyond reproach, to truly expedite an incontrovertible resolution to this crisis, and to fully restore public confidence in our criminal justice system, the body that steers this investigation must be one that has not, and cannot be perceived as having, any stake in the outcome of the investigation.

As unimpeachable as the Office of the Attorney General is, an institution that prosecutes drug cases, supports the State Police unit that investigates drug cases and also supports drug prosecutions by District Attorneys will be perceived as having a stake in the investigation's outcome. Also, as late as May 2012, in response to discovery motions filed by defense attorneys in drug cases seeking information about Annie Dookhan and the lab, your office actively represented the lab in preventing information from being released.

Recent events heighten these concerns. For example, as your review got underway, both your office and prosecutor offices informed defense attorneys that they could receive relevant State Police investigative reports only under certain highly restrictive conditions claiming the reports were still under wraps and their release would damage the investigation. Subsequently, the Boston Globe reported details of these reports to the public. Rather than damage the investigation, the release of the information has in fact helped defense attorneys and the public understand crucial facts about the scandal.

Last week, the media released additional potentially exculpatory new information that was previously unknown to the defense community. This time, the *Globe* reported on inappropriate communications between Dookhan and a Norfolk County prosecutor. In addition to confirming that the misconduct warranting investigation extends beyond Dookhan potentially into a prosecutorial agency, this newly released information also raises questions about other possible misconduct. This news again highlights the difficulty and potential conflict of interest that the Attorney General's Office will face if it retains control of this investigation.

We urge that responsibility for this extraordinarily important investigation not be undertaken by the Office of the Attorney General. Instead, we urge you to appoint, or call for the appointment of, an independent investigator unencumbered by this potential conflict of interest, with complete control over the investigation's scope, taking it wherever the facts lead. Just as important, the investigator should be given all resources, including subpoena power, to fully and thoroughly do the job. Only a truly independent investigation will restore the public's confidence in the integrity of the criminal justice system which has been profoundly shaken by this crisis.

Sincerely,

Martin W. Healy
Chief Operating Officer & Chief Legal Counsel
Massachusetts Bar Association

Anthony J. Benedetti
Chief Legal Counsel
Committee for Public Counsel Services

Max D. Stern
Stern, Shapiro Weissberg & Garin, LLP

Matthew R. Segal
Legal Director
American Civil Liberties Union of Massachusetts

cc: His Excellency Deval Patrick, Governor of Massachusetts

EXHIBIT 3

Office of the Inspector General
Commonwealth of Massachusetts

Glenn A. Cunha
Inspector General

Investigation of the Drug Laboratory at the William A. Hinton State Laboratory Institute 2002 – 2012

March 4, 2014

One Ashburton Place, Room 1311 | Boston, MA 02108 | (617) 727-9140 | www.mass.gov/ig

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Executive Summary

The Forensic Drug Laboratory at the Hinton State Laboratory Institute ("Drug Lab") in Jamaica Plain was ordered closed by Governor Deval Patrick on August 30, 2012, after one of the lab's chemists, Annie Dookhan, admitted to tampering with drug samples, raising serious questions about the integrity of the testing performed at the Drug Lab. In November 2012, at Governor Patrick's request, the Office of the Inspector General ("OIG") agreed to conduct an independent, top-to-bottom review of the Drug Lab. The OIG's mission was to carry out a comprehensive investigation of the operation and management of the Drug Lab from 2002 to 2012, a period in which the Drug Lab was primarily overseen by the Department of Public Health ("DPH"), to determine whether any chemists, supervisors or managers at the Drug Lab committed any misfeasance or malfeasance that may have impacted the reliability of drug testing at the Drug Lab, and to make findings and recommendations following its review.

Over the course of fifteen months, the OIG carefully studied the Drug Lab's policies and procedures, identifying a number of deficiencies in its practices and protocols. With the support of experts in the field of forensic drug testing, the OIG reviewed more than 200,000 documents including, but not limited to, lab records, testing data and results, emails and internal memoranda. Further, in order to fully understand not only the technical shortcomings of the lab, but also the personal dynamics that led to such a failure, the OIG interviewed more than forty individuals associated with the Drug Lab, most of them under oath.

The OIG's review found that:

- Dookhan was the sole bad actor at the Drug Lab. Though many of the chemists worked alongside Dookhan for years, the OIG found no evidence that any other chemist at the Drug Lab committed any malfeasance with respect to testing evidence or knowingly aided Dookhan in committing her malfeasance. The OIG found no evidence that Dookhan tampered with any drug samples assigned to another chemist even when she played a role in confirming another chemist's test results.

- The management failures of DPH lab directors contributed to Dookhan's ability to commit her acts of malfeasance. The directors were ill-suited to oversee a forensic drug lab, provided almost no supervision, were habitually unresponsive to chemists' complaints and suspicions, and severely downplayed Dookhan's major breach in chain-of-custody protocol upon discovering it.

- DPH Commissioner John Auerbach and his staff failed to respond appropriately to the report of Dookhan's breach of protocol; the investigation DPH conducted was far too narrow and Auerbach and his staff failed to disclose another known act of malfeasance to prosecutors, defendants and other interested parties.

- The Drug Lab lacked formal and uniform protocols with respect to many of its basic operations, including training, chain of custody and testing methods. This lack of direction, caused in part by the Drug Lab's lack of accreditation, allowed chemists to create their own insufficient, discordant practices.

- The training of chemists at the Drug Lab was wholly inadequate. New chemists' training was limited and lacked uniformity, and DPH offered virtually no continuing education to experienced chemists.
- The Drug Lab failed to provide potentially exculpatory evidence to the parties in criminal cases by not disclosing information about additional, inconsistent testing results. The OIG is in the process of retesting approximately 2,000 of these drug samples to determine whether the results provided to prosecutors and defendants were accurate.
- The Drug Lab failed to uniformly and consistently use a valid statistical approach to estimate the weight of drugs in certain drug trafficking cases.
- The quality control system in place at the Drug Lab, which focused primarily on the functionality of the lab equipment rather than the quality of the chemists' work, was ineffective in detecting malfeasance, incompetence and inaccurate results.
- The security at the Drug Lab was insufficient in that management failed to appreciate the vulnerability of the drug safe, and did not do enough to protect its contents.
- There were no mechanisms in place to document discrepancies in chain-of-custody protocols or inconsistent testing results.

In consideration of the above findings, the OIG recommends that the Commonwealth undertake a number of measures designed to ensure that all parties in the criminal justice system, as well as the general public, can once again have the utmost confidence in the integrity of forensic drug testing performed in the state.

Specifically, the OIG recommends:

1. All state agencies must employ management practices that hold supervisors accountable for their employees. Managers must conduct comprehensive background checks and complete performance evaluations on an annual basis. In forensic drug labs, there must be a system to report deviations from policy, and all managers of forensic labs should be experts in their respective fields.
2. The Massachusetts State Police ("MSP") is the appropriate agency to handle the forensic drug testing that the Drug Lab conducted before its closure. MSP's infrastructure and financial resources, including the accreditation of its drug lab, make it the agency best equipped to handle the forensic drug testing formerly conducted at the Drug Lab.
3. The Legislature should mandate that all forensic laboratories in Massachusetts be accredited and sufficient funding should be appropriated for that purpose.
4. Forensic drug chemists should receive extensive, theory-based training prior to analyzing any drug samples. Additionally, all chemists should take part in expert witness training and a mock trial program prior to testifying in court, and should be provided ethics training to ensure they remain unbiased in their forensic science responsibilities.

5. All forensic drug labs in Massachusetts must make it a practice to provide the results from all analytical tests run on each sample when providing discovery information to interested parties.

6. Quality controls at all forensic drug labs in Massachusetts should focus on both the functionality of equipment and the integrity and accuracy of the chemists' work product.

7. Every employee of a forensic drug lab with access to controlled substances should submit to periodic random drug testing and annual criminal record checks. Further, forensic drug labs should employ and appropriately manage advanced security measures such as biometric devices and closed-circuit televisions.

8. The OIG declines to provide an opinion on how the courts should resolve Drug Lab-related cases; however, based on its thorough review, the OIG can comment as follows:

    a. all samples in which Dookhan was the primary chemist should be treated as suspect and be subject to careful review;

    b. the OIG found no evidence to support treating cases in which Dookhan confirmed another chemist's results with any increased suspicion about Dookhan's involvement;

    c. the OIG found no evidence to support treating cases in which Dookhan had no known interaction with the drug sample in question with any increased level of suspicion related to Dookhan;

    d. for cases in which multiple tests were run, and the corresponding test results were not provided to the prosecutor or defendant in a criminal case, the OIG respectfully defers to the courts to determine whether such test results were exculpatory and material to the defendant's conviction;

    e. for trafficking cases in which the estimated weight of samples was determined without using a valid statistical approach and the weight finding is close to the statutory threshold for a trafficking charge, the OIG suggests that the cases be carefully reviewed;

    f. with respect to cases with samples that the OIG wanted to retest, but which no longer exist, the OIG suggests that the cases be evaluated with increased concern.

Finally, as mentioned above, the OIG, with the assistance of an independent, out-of-state laboratory, is in the process of retesting a number of samples that were found to be potentially problematic. The OIG will detail the results of the samples being retested in a supplemental report.

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I. The Emergence of the Drug Lab Crisis

A. Background

On July 1, 2012, the Massachusetts State Police ("MSP") took over from the Department of Public Health ("DPH") the Forensic Drug Laboratory at the William A. Hinton State Laboratory Institute ("Drug Lab"), pursuant to a legislative mandate passed in the prior fiscal year. At the time, the Drug Lab was one of three entities in the Commonwealth that analyzed drug samples in connection with criminal prosecutions.[1] Within days of taking over, on July 3, 2012, a senior chemist and a lab supervisor from the Drug Lab asked the Director of the MSP Forensic Services Group to speak with them in private. The two Drug Lab employees indicated that there were significant issues related to a former chemist at the Drug Lab, Annie Dookhan, which had not been previously disclosed.[2] Dookhan had resigned from the Drug Lab in March 2012 after Department of Public Health ("DPH") officials revealed that Dookhan had breached the Drug Lab's chain-of-custody protocols in June 2011. They informed the MSP Director that there were ethical and technical issues related to Dookhan, and that she had falsified her resume, taken shortcuts while testing, and forged certain lab documents. They also indicated that DPH had been enamored with Dookhan's productivity, and therefore ignored these issues.

The MSP Director immediately informed the Attorney General's Office ("AGO") of this information and a criminal investigation into Dookhan's conduct ensued. During the course of that investigation, the MSP officials spoke to more than thirty-five individuals, including chemists and evidence officers who worked at the Drug Lab during Dookhan's employment, employees at the DPH drug lab located in Amherst, and other DPH employees and administrators. The MSP officials spoke directly with Dookhan on August 28, 2012. In response to their questioning, Dookhan admitted to "dry-labbing," or failing to conduct all of the required tests on drug samples that she analyzed, and also to tampering with drug samples to make negative findings into positives. This confession was the catalyst for what has become one of the biggest criminal justice crises in the Commonwealth's recent history, threatening to undermine the integrity of criminal drug convictions in both state and federal courts in Massachusetts.

On August 30, 2012, Governor Deval Patrick closed the Drug Lab, and all Drug Lab employees were placed on paid administrative leave.[3] The Governor approached the Executive Office of Health and Human Services ("EOHHS") – the secretariat under which the Drug Lab existed prior to its transfer to the MSP – and asked how the Dookhan situation could have happened. In response, EOHHS, in conjunction with its agency, DPH, produced an "Internal Inquiry" report that outlined its understanding of the "root causes" that may have allowed Dookhan to commit

[1] The other two were the MSP, which primarily analyzed substances seized by the MSP and also served municipal law enforcement entities in Middlesex County (starting in 2009), and the University of Massachusetts Medical School Drugs of Abuse Laboratory, which primarily served municipal public safety entities in Worcester County.

[2] *See* Section XII for more detail.

[3] By this point, the Drug Lab chemists had already been transferred to the MSP.

her malfeasances.[4] Within weeks of the Drug Lab's closure, DPH personnel responsible for the Drug Lab – DPH Commissioner John Auerbach; Director of DPH's Bureau of Laboratory Sciences ("BLS"), Dr. Linda Han; and Director of the Division of Analytical Chemistry, Julianne Nassif – either were asked to resign or resigned of their own volition.

On September 20, 2012, the Governor established a task force headed by Attorney David Meier ("Task Force") in an attempt to identify all criminal defendants whose drug samples Dookhan tested during her nine-year tenure at the Drug Lab. Almost immediately, criminal defendants began filing motions for new trials and to withdraw their guilty pleas in courts around eastern Massachusetts, seeking release from incarceration pending a determination of whether Dookhan's conduct had violated their constitutional rights. In response, in October 2012, the Chief Justice of the Superior Court Department and the Chief Justice of the District Court Department each designated a number of judges throughout the state to sit in special drug lab court sessions to help manage the influx of cases stemming from the Dookhan situation. On November 26, 2012, the Chief Justice of the Superior Court Department appointed five retired Superior Court judges as Special Judicial Magistrates to preside over Drug Lab cases.

Meanwhile, Dookhan was arrested on September 28, 2012, and charged with obstruction of justice and falsely claiming to hold a degree from a college or university. The AGO ultimately indicted Dookhan on twenty-seven counts, including tampering with evidence (seventeen counts), obstruction of justice (eight counts), perjury (one count) and falsely claiming to hold a degree from a college or university (one count). At the outset, the AGO also began the process of conducting a broad investigation into the Drug Lab to determine whether the malfeasance at the Drug Lab had an impact on any other defendants, beyond the ones to be identified by the Task Force.

In the months that followed, the Legislature conducted hearings in a further attempt to answer the Governor's question of how the Dookhan situation could have happened and to determine the expected financial impact on the criminal justice system and the Commonwealth in general. Public figures – including the Secretary of EOHHS, JudyAnn Bigby, and the Secretary of the Executive Office of Public Safety and Security ("EOPSS"), Mary Elizabeth Heffernan – testified at legislative hearings. In February 2013, the Legislature passed a budget that included the "Hinton Lab Reserve Fund," consisting of $30 million to address the anticipated demands on the Massachusetts criminal justice system that would flow from the Dookhan crisis.[5]

In March 2013, the Essex County District Attorney's Office brought an appeal before the Supreme Judicial Court ("SJC"), challenging the authority of the courts, and particularly the Special Magistrates, to allow a defendant's motion to stay execution of his sentence pending

[4] DPH, Hinton Laboratory Drug Lab Internal Inquiry (2012) ("Internal Inquiry"). The Internal Inquiry report found that there were: (1) insufficient safeguards related to the evidence room and drug safe; (2) a need for surveillance cameras to at least deter "grossly inappropriate or negligent activities;" (3) inadequate mechanisms to detect adverse events; (4) inadequate oversight and supervision; (5) inadequate quality control within the Drug Lab; and (6) poor judgment related to the response of protocol violations because the former director of the Drug Lab "did not recognize the significance of the breach and its impact on court cases." *Id.* at 1.

[5] The Hinton Reserve Fund became law on February 15, 2013 as part of a supplemental budget that also included other appropriations. *See* 2013 Mass. Acts c. 3, § 2A.

disposition of the defendant's motion for a new trial, among other issues.[6] In response, the American Civil Liberties Union of Massachusetts ("ACLU") and members of the defense bar argued that the SJC should order the release of all Drug Lab defendants waiting for hearings on their motions for new trials. In January 2014, in a separate appellate case, the ACLU asked the SJC to order prosecutors to notify all Drug Lab defendants whether they intend to re-prosecute them; the ACLU further asked the SJC to vacate with prejudice the convictions of all defendants who the District Attorneys did not notify.[7]

On November 5, 2012, the Governor asked the Office of the Inspector General ("OIG") to conduct an independent, comprehensive review of the Drug Lab. The OIG's agreement to investigate was publicly endorsed by both prosecutors and leaders of the defense bar, including the Committee for Public Counsel Services ("CPCS"), the Massachusetts District Attorneys' Association ("MDAA"), the Massachusetts Bar Association and the ACLU. The OIG determined that its mission was to conduct a comprehensive investigation of the operation and management of the Drug Lab from 2002 to 2012,[8] to determine whether any chemists, supervisors or managers at the Drug Lab committed any misfeasance or malfeasance that may have impacted the reliability of drug testing at the Drug Lab, and to make findings and recommendations following its review.

B. Process of the Investigation

The OIG's first order of business was to hire the necessary professionals and experts to conduct an investigation of this magnitude. The OIG engaged a consulting firm with litigation support and "e-discovery" experience for purposes of identifying, collecting and preserving potentially relevant electronically stored information ("ESI") and creating a searchable database of all of the potentially relevant documents and electronic data related to the Drug Lab.

After a competitive bidding process, the OIG retained Navigant Consulting, Inc. ("Navigant"), a highly reputable firm that the Commonwealth's Information Technology Department had vetted. Navigant subcontracted with Document Technologies, Inc. ("DTI") to scan and digitize all of the hardcopy documents into a database, with Kensium LLC to categorize the hardcopy documents and capture key information and with RenewData to restore and extract electronic data from backup tapes. Under the direction of the OIG, Navigant and DTI scanned all Drug Lab-related documents stored at the following locations: the Drug Lab, the offices of Nassif and Han (which were also in the building of the William A. Hinton State Laboratory Institute ("SLI"), but outside

[6] *See Commonwealth v. Charles*, 466 Mass. 63 (2013). On July 22, 2013, the SJC held in *Charles* that Superior Court judges "[i]n exceptional circumstances … have the authority to allow a defendant's motion to stay the execution of his sentence, then being served, pending disposition of the defendant's motion for a new trial, but a special magistrate … does not have such authority." *Id*. at 79. Individuals previously incarcerated on drug charges could, therefore, be released from jail while their motions for a new trial were pending based on the SJC's finding that the interests of justice would not be served by the continued imprisonment of a defendant who may be entitled to a new trial.

[7] Brief for Petitioner at 3, *Bridgeman v. District Attorney for Suffolk County*, SJ-2014-0005 (Mass. Jan. 2014).

[8] The OIG chose a ten-year time frame to gain a thorough understanding of the practices of the Drug Lab as they evolved over time. The years 2002 through 2012 encompassed, but were not limited to, the years of Dookhan's employment at the Drug Lab.

of the Drug Lab), the AGO,[9] the MSP and the State Archives. In total, the OIG caused to be scanned approximately 3.5 million pages into the consolidated review database, and thereafter, each document was coded and made searchable to facilitate review. In addition, Navigant collected and processed more than 3,417 gigabytes of ESI. This data, collected from the Drug Lab, DPH and EOHHS, included all available internal and external email communications received and transmitted by Drug Lab employees, as well as structured databases that the Drug Lab used. Navigant also imported drug sample analysis data stored by the lab testing equipment into the consolidated review database. Furthermore, over 1,000 backup tapes of electronic data that DPH and EOHHS had archived were restored and imported into the consolidated review database. Navigant then removed the duplicates of all of the documents and electronic media to make a single, secure, web-based database.

The OIG supervised the creation and maintenance of the consolidated review database (and entered into the contract for services with Navigant), but the end product – the repository of the previously described documents and electronic data – was created for the benefit of the following six entities: (1) DPH; (2) the MSP; (3) the Governor's legal staff, including the Special Assistant Attorney General appointed to represent DPH and the MSP in Drug Lab discovery matters; (4) the Task Force; (5) EOHHS; and (6) the AGO. The consolidated review database was created in such a way that each agency has its own separate review platform that is secure and protected from being seen by the other entities. At the conclusion of the OIG's investigation, the OIG will assign the Navigant contract to another government agency, which will be responsible for the contract from that point forward.

In addition to retaining an e-discovery firm, the OIG sought forensic expert services to aid in its investigation. After a separate competitive bidding process, the OIG retained the firm of Marcum LLP. The Marcum team included individuals who were uniquely qualified to advise the OIG in its investigation based on their years of experience and commitment to the integrity of forensic science. The team included Frank Rudewicz, Jack Mario and Michael Wolf.

Rudewicz is a Principal and Counsel for Marcum LLP with a practice area in forensic, investigative and advisory services. He has more than twenty-six years of experience investigating fraud in the public and private sectors. Both federal and state agencies have appointed Rudewicz to conduct independent investigations related to allegations of improper conduct in police departments, public universities, public housing departments and federal agencies, including the Department of Defense.

Mario is a chemist with more than thirty years of experience analyzing seized drugs, including over ten years supervising drug analysts in an accredited crime laboratory in Suffolk County, New York. He has published several papers, and is a recently retired member of the Core Committee of the Scientific Working Group for the Analysis of Seized Drugs ("SWGDRUG"), as well as a member of the Northeastern Association of Forensic Scientists, the American Academy of Forensic Sciences, the American Society for Testing and Materials, and the International Association for Identification. Mario has provided presentations on drug testing to the forensic community for several decades.

[9] In connection with its criminal investigation of Dookhan, the AGO had seized Dookhan-related documents from the Drug Lab.

Wolf is the former interim Director of Scientific Services for the state of Connecticut, and before that, was a member of the Governor's Forensic Laboratory Working Group for the state of Connecticut, which developed and implemented constructive reforms following the revocation of the Connecticut Forensic Science Lab's accreditation. Additionally, Wolf acted as a special investigator for the North Carolina Attorney General's Office in the investigation of a North Carolina forensic lab that had been the subject of alleged wrongdoing after a defendant's murder conviction was overturned. Wolf has a long history of public service as a former Assistant Director with the Federal Bureau of Investigation ("FBI"), where he managed large-scale investigations of fraud and other criminal activities, and headed remedial actions that shepherded initial accreditation of the FBI Laboratory by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board ("ASCLD/LAB").

The OIG started its investigation by embedding itself in the Drug Lab to gain a comprehensive understanding of its layout and inventory. The OIG inventoried all of the equipment, instruments, supplies, books and documents within the Drug Lab. The OIG opened every drawer, cabinet and recycling bin to review their contents. In addition to being scanned into the consolidated review database, documents reflecting a change in protocol or policy were photocopied and set aside for review over the course of the investigation.[10]

Over the course of many months, the OIG reviewed over 200,000 documents, including emails, memoranda, policies, personnel records, discovery packets, budgetary materials, security records, chain-of-custody records, chemists' handwritten notes, lab analysis documents and instrument-generated data.[11] The OIG also reviewed numerous transcripts and audio recordings from District and Superior court trials where Drug Lab chemists testified under oath in criminal proceedings.

The OIG followed numerous investigative leads. The OIG sent document requests and summonses to eleven separate entities[12] and conducted numerous field interviews with individuals who were directly or indirectly involved with the operations of the Drug Lab, including DPH employees, employees at the SLI, temporary employees, security personnel, interns, college personnel and police officers.

In October 2013, the OIG began its formal interview process, as provided for under the OIG's enabling statute, M.G.L. c. 12A. The OIG interviewed twenty-four individuals under oath in "private sessions." The OIG is grateful to the Comptroller's Office for its assistance with these

[10] It became apparent at the outset of the investigation that the Drug Lab only had one twenty-four page document from 2004 reflecting its official policies. Drug Lab staff updated many policies and procedures by email and/or memoranda. Sometimes, handwritten notes from internal Drug Lab meetings reflected policy changes.

[11] Consistent with its enabling statute, the OIG will only cite to documents that are already in the public domain.

[12] As of March 2014, the OIG continues to receive documents in response to outstanding requests. In fact, despite DPH's efforts to review the enormous quantity of electronic data from the years 2002 through 2012 to ensure that they are not releasing to the OIG records related to another DPH laboratory or that are subject to its claim of attorney-client privilege, DPH still has over 200,000 electronic documents to review. According to DPH, the documents to be reviewed are extremely unlikely to contain information that is of significance to the OIG's investigation.

interviews, as the OIG's statute requires a representative from the Inspector General's Council to be present at each session.

From the beginning of the investigation to its conclusion, the OIG made every effort to meet with the numerous stakeholders in the criminal justice community to gather facts and understand different positions, while maintaining its status as an independent neutral fact-finder. The OIG met with members of the judiciary, the MDAA, CPCS, "point prosecutors" from every District Attorney's Office that had cases stemming from the Drug Lab issue, the United States Attorney's Office, the Federal Defender's Office, the ACLU, the Massachusetts Association of Criminal Defense Lawyers, the Massachusetts Bar Association and the Massachusetts Organization of State Engineers & Scientists. In addition, in an effort to coordinate with other agencies, the OIG met with DPH, EOHHS, the MSP, the Executive Office of Administration and Finance, the Information Technology Division, the Governor's Legal Office and members of the Task Force. The OIG also met with a representative from the Texas Forensic Science Commission, an organization that was handling a similar situation related to wrongdoing committed by a forensic chemist in Texas. OIG staff also attended Forensic Science Advisory Board meetings held in Massachusetts.

From the outset of its investigation, the OIG contemplated the possibility of retesting drug samples still in existence (that is, those samples that had not been destroyed by court order when a case was concluded). At the beginning of its investigation, the OIG sent letters to all of the police departments that had drug samples analyzed at the Drug Lab asking them not to destroy the drug samples in their possession pending the OIG's investigation. As will be explained in greater detail in Section XVIII below, the OIG ultimately performed preliminary retesting on certain identified drug samples and has started the process of sending a subset of those samples in need of further testing to an independent, accredited laboratory out of state. When testing is complete, the OIG will issue a supplemental report concerning the results of the retesting.

As the OIG releases this report, the repercussions of Dookhan's malfeasance continue. Drug Lab-related criminal cases are being litigated on a case-by-case basis. In state and federal courts around the Commonwealth, well over 1,000 motions for new trial related to Dookhan's criminal behavior have been filed since September 2012. Approximately 500 defendants have been released, some of whom have reoffended. Certain defendants have been tried or retried on drug cases in which Dookhan was the primary chemist and have been convicted.

The SJC has not yet ruled on, among other things, whether the courts should adopt a global resolution to the Drug Lab cases. Trial court judges have postponed rulings in a large number of cases in anticipation of the SJC's rulings and/or this report. Other post-conviction motions have not yet been brought forward, as CPCS is still attempting to identify all Dookhan-related defendants. Meanwhile, the backlog at the MSP Crime Lab Drug Unit – caused by (1) the substantial volume of cases transferred from the shuttered Drug Lab,[13] as well as the DPH Drug Lab in Amherst;[14] and (2) retesting due to Dookhan's transgressions – is so high that district

[13] The MSP inherited 14,228 samples from the Drug Lab. Included in that figure were samples not connected to any case.

[14] On July 1, 2012, all forensic drug labs formerly under DPH were consolidated under the MSP, including the drug lab located in Amherst. In January 2013, Amherst lab chemist Sonja Farak was charged with removing drugs from

courts are routinely dismissing drug cases.[15] Furthermore, as a result of the moratorium on drug destruction, many police department evidence vaults are filled to capacity.

On November 22, 2013, Dookhan pleaded guilty to all twenty-seven counts, and was sentenced to a term of not more than five years, nor less than three years, in state prison, along with two years of probation. Despite the resolution of Dookhan's criminal case, the fallout from the Drug Lab crisis continues to affect the criminal justice system.

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the Amherst lab, purportedly for her personal use, and was charged with four counts of theft of a controlled substance from an authorized dispensary, four counts of tampering with evidence and two counts of possession of cocaine. On January 6, 2014, Farak pleaded guilty and was sentenced to 2 ½ years in the house of correction, with eighteen months to serve and the balance suspended for five years.

[15] As of January 24, 2014, there was a backlog of over 15,000 drug cases at the MSP Crime Lab Drug Unit.

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II. Drug Lab Situated Within DPH

As previously mentioned, DPH was one of three entities within the Commonwealth that provided federal, state and local law enforcement agencies with drug testing services and resulting certificates of analysis ("drug certificates") related to seized controlled substances.[16] Of the three entities, the Drug Lab conducted the majority of drug testing for law enforcement agencies across the Commonwealth, and had been authorized to do so from the early part of the twentieth century.[17] For several decades, the Drug Lab was located at the State Laboratory Institute at 305 South Street in Jamaica Plain (later renamed the "William A. Hinton State Laboratory Institute"), along with seventeen other DPH laboratories. These other laboratories focused on public health issues such as lead poisoning in children, influenza, rabies, tuberculosis and sexually transmitted diseases.

As DPH evolved, the inclusion of a forensic drug laboratory with the other DPH labs was somewhat ill-suited. DPH administrators viewed the Drug Lab's mission as different from DPH's mission, which is to "prevent illness, assure access to high quality public health . . . and to promote wellness and health equity for all people in the Commonwealth."[18] As a consequence of this perceived difference, DPH treated the Drug Lab differently from its other laboratories. For example, as of 2012, the Drug Lab was the only one of the eighteen DPH laboratories in the BLS that was not yet accredited by its field's accrediting body.[19] The employees of the Drug Lab felt neglected by DPH management and considered themselves the orphans of the SLI building. This feeling was exacerbated by the fact that, for years, DPH administrators contemplated transferring the Drug Lab to a "more appropriate agency" when reviewing budgets and balancing demands for limited resources among the laboratories in the SLI building. Indeed, over the course of many years, EOHHS and DPH had ongoing discussions with EOPSS and the MSP regarding a possible transfer.

[16] Drug certificates are notarized documents signed by the chemists who analyze suspected controlled substances and make findings related to the substance's identity and weight.

[17] 1910 Mass. Acts c. 495, § 1, mandated that the State Board of Health (the predecessor to DPH) "shall make, free of charge, a chemical analysis of . . . [controlled substances] . . . when submitted to it by police authorities …."

[18] *See* http://www.mass.gov/eohhs/gov/departments/dph/welcomewel2.html.

[19] Two other laboratories under the BLS were also not accredited: the Rabies Laboratory and BioWatch. However, neither field of science had an available external accrediting body.

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III. Lack of Resources

A lack of resources hindered the Drug Lab's ability to fulfill its statutory duty to analyze controlled substances free of charge for most municipalities throughout the Commonwealth of Massachusetts.[20] The Drug Lab was funded for the most part through DPH's State Laboratory and Communicable Disease Control Services Account. This account provided funding for the administration of the Center for Laboratory and Communicable Disease Control, including the Division of Communicable Venereal Diseases, the Division of Tuberculosis Control and the State Laboratory Institute ("SLI"). From this account, the director of the Bureau of Laboratory Sciences ("Director of the BLS"), who oversaw the SLI, decided how much funding to provide to each of the eighteen DPH labs, including the Drug Lab. From fiscal year ("FY") 2008 through FY12, the director of BLS authorized $930,550, $815,594, $1,036,268, $1,024,497, and $1,021,064, respectively, to the Drug Lab.[21] Beginning in FY02 and continuing to FY12, language in this account mandated that DPH give "priority to the analysis of samples used in the prosecution of offenses involving controlled substances," that is, to the Drug Lab.[22] DPH appeared to comply with that mandate.

In addition, the Drug Lab received funding from other sources. In 1989, the Legislature established the Drug Analysis Fund,[23] which provided up to $100,000 annually to the Drug Lab to help cover costs associated with drug analysis, such as training, equipment and overtime. Court fees assessed against criminal defendants in drug cases financed this fund. In 2003, the Legislature abolished the Drug Analysis Fund and redirected those fees to the general fund.

Federal grants became a funding source for the Drug Lab in 2009. The Drug Lab received some funding from the federal government through a Project Safe Neighborhood ("PSN") grant. The PSN grant provided the Drug Lab with $10,000 in FY10 and $20,000 in FY11 for overtime to reduce the backlog and expedite sample analysis for federal cases. More significant was the Paul Coverdell Forensic Sciences Improvement Grant, which provided much-needed federal funding to the Drug Lab and is addressed in detail in Section XIV of this report.

Financial constraints over the years limited the Drug Lab's ability to keep pace with the increasing number of illicit drugs submitted for testing, as well as the complexity in the types of drugs submitted. In 2006, the Drug Lab tested 43,092 samples, an increase of 29% since 1995. Often, staffing vacancies were not timely filled, resulting in a reduction in the number of chemists available for sample analysis. The growth in sample submissions and the need for more complex and time-consuming analyses on more complicated drug submissions, coupled with a stagnant level of staff, resulted in a growing backlog of samples to be analyzed and an ever-increasing turn-around time. At the same time, during the financial recession starting in 2008,

[20] *See* M.G.L. c. 111, §12 (repealed 2012).

[21] In FY08 through FY12 the SLI was funded the amounts of $6,502,149, $6,534,838, $5,510,785, $5,147,031, and $5,232,557 respectively.

[22] Han worked with Grace Connolly, Director of Administration and Finance for the Bureau of Laboratory Sciences, to try to protect the Drug Lab from funding reductions.

[23] *See* M.G. L. c. 10, § 51 (repealed 2012).

DPH was confronted with increasingly difficult decisions about which programs to reduce or eliminate.[24]

Limited financial resources further impacted the Drug Lab's ability to purchase new laboratory instruments or to upgrade or repair existing instruments. Chemists reported taking time away from testing in order to repair instruments, including printers and other hardware. The Director of the Division of Analytical Chemistry, Julianne Nassif, kept a "wish list" of equipment to be purchased in the event that funding became available on short notice. At one point in 2009, three out of five of the chemical fume ventilation hoods in the Drug Lab were out of service, with one hood inoperable for several years because it was too costly to repair. In June 2007, the evidence safe used to secure samples was filled beyond capacity; it became a safety hazard for evidence officers trying to maneuver within the safe to access samples for assignment or return to police departments. Following this, Nassif acquired the shelving materials and labor necessary to renovate the evidence safe into a more efficient and organized storage space.

The lack of financial resources meant that there was little overtime available to pay chemists who were willing to work extra hours to reduce the backlog of samples. The overtime policy at the Drug Lab required the presence of three chemists in the Drug Lab as a safety precaution. Overtime money was not allocated to the Drug Lab until April or May of each fiscal year, when a determination was made that the funds were not needed to cover other costs throughout all of the SLI laboratories. Since the state's fiscal year runs from July 1 to June 30, this meant that no overtime money was available throughout most of the year to address the Drug Lab backlog.

The impact of these limited financial resources became more glaring after the United States Supreme Court case of *Melendez-Diaz v. Massachusetts*,[25] in which the Court held that the admission of drug certificates for drug samples without supporting testimony from the chemists violates the Confrontation Clause of the Sixth Amendment to the United States Constitution.[26] As a result of the Court's ruling, chemists spent time away from analyzing samples to testify in court and to collect the data and paperwork to provide to the parties in the criminal cases for samples they analyzed.

The Drug Lab implemented several strategies to lessen the impact of *Melendez-Diaz*. Samples were assigned to chemists based on geographic location to shorten travel time for chemists going to testify in court. The Drug Lab stopped performing analyses on undercover and probable cause buys and Evidence Office Supervisor Elisabeth O'Brien maintained open lines of communication with District Attorneys' Offices in an attempt to identify cases that had been resolved before trial so the samples did not need to be tested. Some samples were also transferred to the UMass and the MSP laboratories for analysis.

[24] The DPH drug testing lab in Amherst faced closure in 2009 and 2011, but was never closed by DPH.

[25] *See Melendez-Diaz v. Massachusetts*, 557 U.S. 305 (2009).

[26] The Sixth Amendment provides in relevant part that "[i]n all criminal prosecutions, the accused shall enjoy the right . . . to be confronted with the witnesses against him . . ." U.S. Const. amend. VI.

After *Melendez-Diaz*, Nassif repeatedly advocated for additional resources for the Drug Lab in discussions with both Director of the BLS Linda Han and DPH Commissioner John Auerbach, and at meetings of the Forensic Science Advisory Board ("FSAB").[27]

Auerbach was aware of the need for additional resources in the Drug Lab from his meetings with Han, during which they frequently discussed the backlog and turn-around time for drug analysis. Han also prepared written budget proposals for Auerbach each year beginning in October, expressing the need for additional resources and voicing concern about the impact of likely budget cuts. This was especially true during the recession of 2008 when 9C budget cuts[28] were implemented outside of the normal budget process. Auerbach's response to the growing backlog and turn-around time at the Drug Lab was to advocate for its transfer to EOPSS. EOHHS Secretary JudyAnn Bigby joined Auerbach in supporting the Drug Lab's transfer. Both Bigby and Auerbach believed it was the right move given DPH's inability to provide resources comparable to those available at the Executive Office of Public Safety and Security and their belief that drug testing for forensic purposes was not a public health function.[29] While situated under DPH, the Drug Lab remained underfunded, understaffed and unable to adequately fulfill its mission of delivering free-of-charge forensic analysis of samples submitted by law enforcement agencies in the Commonwealth.

[27] The FSAB was established by M.G.L. c. 6, § 184A, to "advise the secretary of EOPSS on all aspects of the administration and delivery of forensic sciences in the Commonwealth."

[28] M.G.L. c. 29, § 9C, allows the Governor to make cuts to the budget during the course of the fiscal year based on the financial condition of the state.

[29] During Bigby's time as Secretary, the number of employees at EOHHS shrank from 22,000 to roughly 19,000 due to the recession and subsequent budget constraints. Though Bigby did not specifically monitor the Drug Lab, she was aware of its backlog and need for additional resources.

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IV. Lack of Accreditation

One of the Drug Lab's greatest drawbacks was its lack of accreditation.

Laboratory accreditation provides a means for continuous quality assurance and improvement through periodic reviews performed by an external and independent accrediting body.[30] Accrediting bodies review a laboratory's management, operations, personnel, procedures, equipment, physical plant, security and health and safety procedures to assure that a laboratory is complying with established best practices in the industry.[31] Accreditation also provides a benchmark for measuring and maintaining a laboratory's competence.[32] Though a voluntary process, a laboratory seeks accreditation to assure all stakeholders that it produces reliable and accurate data.[33]

The State Laboratory Institute housed the various DPH laboratories, the large majority of which were accredited by an independent accrediting body. In fact, by the time the Drug Lab was transferred to MSP in 2012, it was the only DPH lab not accredited that had an external accrediting body available to do so.[34] The lack of accreditation caused the Drug Lab to be isolated from its peers in the forensic community, making it difficult for the Drug Lab to improve its practices and respond to new developments in forensic analysis of seized drug evidence.

A call for the Drug Lab to gain accreditation was by no means a recent development. In 2004, a report released by the Governor's Commission on Criminal Justice Innovation ("Governor's Commission") recommended the accreditation of the Drug Lab, citing a national trend in forensic science towards accreditation of forensic laboratories.[35] The Governor's Commission also found that accreditation would allow the Drug Lab greater access to federal grants.[36] Without accreditation, the Governor's Commission noted, the results the Drug Lab produced could be undermined and criticized in court, adding an extra hurdle to the prosecution of drug cases.[37]

Following the Governor's Commission's report, the Drug Lab's management discussed accreditation as a long-term goal; however, little was done to achieve this goal. The Governor's

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[30] ASCLD/LAB, *How to Become an Accredited Lab*, *available at* http://www.ascld-lab.org/how-to-become-accredited (last visited February 10, 2014).

[31] ASCLD/LAB, *Program Description* (2008), *available at* http://www.ascld-lab.org/documents/legacy_overview.pdf.

[32] International Laboratory Accreditation Cooperation, *Why Become an Accredited Laboratory*? (2011), *available at* http://www.ascld-lab.org/wp-content/uploads/2013/05/Why-become-an-acredited-lab.pdf.

[33] ASCLD/LAB, *supra* note 31.

[34] EOHHS Secretary Bigby and DPH Commissioner Auerbach did not know the Drug Lab lacked accreditation until the Drug Lab was closed in 2012.

[35] Governor's Commission on Criminal Justice Innovation, *Final Report*, 42 (2004).

[36] *Id.*

[37] *Id.*

Commission's report estimated it would cost between $10,000 and $25,000 annually to gain and maintain accreditation.[38] A substantial investment in personnel, training and equipment also would have been necessary. Although the Drug Lab updated protocols through memoranda, emails and meetings, it would have had to invest a significant amount of time to formally update procedures and policies to meet accreditation requirements.

The budget was consistently cited by Drug Lab employees as one of the main reasons the Drug Lab failed to move towards accreditation. In addition, the Drug Lab's Supervisor II, Charles Salemi, failed to appreciate and understand the benefits that would have come from accreditation, and stopped pushing for accreditation over the years. Drug Lab management was also too busy with the ever-burgeoning caseload to consider devoting substantial time to it. During the financial crisis and recession in 2008, when the state budget underwent severe cuts, accreditation remained only an idea and a long-term goal. When the Drug Lab closed in 2012, management had yet to take any significant steps toward initiating the process for accreditation.

[38] *Id.* at 43.

V. Lack of Oversight

A. Lack of Knowledgeable Oversight

One issue that significantly contributed to the problems in the Drug Lab was the lack of engaged and effective supervisory oversight.

1. Charles Salemi

From 2003 to 2012, Charles Salemi served as supervisor of the Drug Lab. Having worked in the Drug Lab since 1982, Salemi possessed an advanced understanding of forensic science, and of drug analysis in particular. Nevertheless, he generally operated as a "hands-off" supervisor. Salemi believed in allowing chemists to work independently and at their own pace, rarely questioning the amount or type of substances that individual chemists tested. For instance, a number of chemists tested only certain types of drugs based on their individual preferences. Furthermore, Salemi did not believe in monitoring chemists' productivity in terms of the number of samples tested or the percentage of each chemist's findings that were negative.[39]

Salemi's staff viewed him as a poor communicator who was uncomfortable with confrontation. Formal protocols were lacking and changes in practices were sometimes disseminated ineffectively. Often, procedures in the Drug Lab evolved and Salemi ultimately approved of such changes after the fact. Salemi tended to blame miscommunications in the Drug Lab on personality issues, when in reality, he could have prevented many of the conflicts that arose had he provided the chemists with clearer directives. Further, when Salemi had concerns about the quality of the work that certain chemists produced, his solution was to limit their responsibilities rather than require more training or additional supervision of their work.

Chemists in the Drug Lab understood that Salemi's primary focus was with the quality of the testing being performed at the Drug Lab. Nevertheless, he did little to actively monitor that testing. Instead, he trusted that chemists performed all tests accurately and honestly.

2. Julianne Nassif

From 2006 to 2012, Julianne Nassif was the Director of the Division of Analytical Chemistry, which was responsible for overseeing several labs in DPH's Bureau of Laboratory Sciences ("BLS"), including the Drug Lab, the Childhood Lead Screening Lab, the Chemical Terrorism Response Lab, the Environmental Chemistry Lab and the Forensic Drug Lab in Amherst. Nassif had no academic or work experience in forensic chemistry prior to becoming the director. Nassif

[39] A review of chemists' negative findings indicates that they ranged from 2.2% to 8.5% (for a chemist who mainly analyzed pharmaceuticals, which have a higher prevalence of counterfeit drugs). Notably, Dookhan's negative findings fell in the middle of the range of the nineteen chemists who worked in the Drug Lab between 2002 and 2012, with eight chemists producing lower percentages of negatives and ten chemists producing higher percentages of negatives. Dookhan found 3.8% of her samples to be negative.

holds a Bachelor of Arts degree in Environmental Health from Quinnipiac University (1981) and a Master of Science degree in Environmental Science from the University of Massachusetts at Boston (1990). Nassif began working for DPH in 1984 as an analytical chemist in the Environmental Chemistry Lab. In 1986, she was appointed supervisor of the Organics Lab, and in 1990, she became the director of the Environmental Chemistry Lab. In 2006, Nassif was promoted to Director of the Division of Analytical Chemistry, a position she held until 2012.

The Drug Lab employees universally believed that Nassif had no interest in supervising the Drug Lab, nor interest in learning about the Drug Lab's functions. Even after becoming director of the division that oversaw the Drug Lab, there was no evidence that Nassif participated in any training or took any continuing education courses in forensic chemistry or forensic drug testing. Throughout her career, Nassif was actively involved in at least six professional associations, none of which were related to forensic chemistry or forensic science.

3. Linda Han

Dr. Linda Han was the Director of the BLS from 2009 to 2012. As Director, Han oversaw the eighteen distinct laboratories making up the BLS, including the Drug Lab. Like Nassif, Han had little relevant background to qualify her to oversee a forensic drug lab. Han earned multiple degrees, including a Bachelor of Science degree in Molecular Biology from Princeton University (1988), a Medical Doctor degree from Harvard Medical School (1992) and a Master of Public Health degree from the Harvard School of Public Health (2003). Upon graduating from medical school, Han spent roughly twenty years working in clinical pediatrics. In fact, while the director of the BLS, Han continued to work one overnight shift per week as a pediatrician at South Shore Hospital until June 2011.

Han began working at DPH in 2003 as a contractor working on tuberculosis drug-resistance research. After spending approximately one year as a contractor, Han began working full-time at DPH in 2004 as the director of the Microbiology Division. Han remained in that position until 2009 when she became the interim director of the BLS, before officially being appointed the director in 2010.

4. Other Former BLS Directors

Han's lack of forensic background was not unique among those who had held the BLS Director position in the past. Between 2002 and 2009, directors Ralph Timperi,[40] Dr. Alfred DeMaria and Dr. Mary Gilchrist all had public health and medical backgrounds. None had any significant experience with forensic sciences, including drug analysis.

[40] In 2003, DPH was involved in a scandal when Ralph Timperi acknowledge that he had obtained a doctorate degree from an online university, reportedly for $500, which turned out to be a hoax. There is no evidence that he suffered any consequence from this gaffe.

B. Lack of Management

1. No Managerial Presence

Both Han and Nassif failed to regularly visit and interact with the employees of the Drug Lab. During her time as director, Nassif rarely scheduled meetings with Drug Lab supervisors, and even when she did, she often ended up canceling them. Furthermore, Nassif rarely took the time to meet with chemists, many of whom viewed her as disinterested and unresponsive. Han had almost no interaction with employees of the Drug Lab to the point that some employees did not know who she was until the meeting when she announced the transfer of the Drug Lab to the MSP.

In fact, Nassif and Han typically only visited the Drug Lab when giving tours to DPH, EOPSS, or other state officials. Though the Drug Lab aimed to have monthly staff meetings to address changes in the protocols or other concerns, these meetings occurred far less frequently once Nassif became the director. In short, Nassif acted in a way that suggested that the Drug Lab was not a priority for her.

2. Nassif's Relationship with Salemi

As supervisor of the Drug Lab, Salemi reported to Nassif. Despite the fact that Salemi and Nassif supposedly had a very good relationship before she took over as director, their relationship quickly deteriorated when Nassif became Salemi's direct supervisor.

Many in the Drug Lab recognized that there was a communication breakdown between Nassif and Salemi. More specifically, several chemists felt that Nassif ignored and marginalized Salemi, causing him to gradually withdraw from his position of leadership and to be less willing to make meaningful decisions. This rift caused certain people in the lab to question to whom they reported – Salemi or Nassif. Salemi ended up handling the Drug Lab's technical issues and Nassif handled the personnel issues, creating a disconnect in the lab. As a result, chemists tended to bypass Salemi, instead bringing their concerns directly to the habitually unresponsive Nassif. Many of the Drug Lab's communication issues can be attributed to the vacuum in leadership created by this dynamic.

C. Lack of Oversight of Chemists

1. Inadequate Supervision of Testing Areas

Due to its physical layout, chemists performed preliminary tests in a number of different rooms throughout the Drug Lab. Typically, a testing room accommodated up to three chemists, one of whom was a Chemist III and the *de facto* team leader of that room. Team leaders were experienced chemists available to answer questions and offer advice to the less experienced chemists in their room. However, the team leaders' priority was not to supervise the work of the other chemists in their room, but rather to complete their own work. Once a new chemist

completed training, he was expected to conduct preliminary tests independently. Aside from Salemi's limited quality control checks, no supervisor or peer reviewed the chemists' work.

In 2008, the team leader in Dookhan's testing room, Elisabeth O'Brien, was promoted to Supervisor I of the evidence office. Once O'Brien transitioned out of the testing room, her position as team leader was never filled, leaving Dookhan and another chemist alone for years. Many in the Drug Lab were troubled by the fact that there was no team leader present during testing in that room. Despite the noticeable lack of supervision in the room, Salemi rejected an offer from Della Saunders, a Chemist III and team leader in the room next to Dookhan's, to monitor that room as well. Later, toward the end of Dookhan's time in the Drug Lab, Nassif rejected Salemi's suggestion that he place Michael Lawler, also a Chemist III, in the room as team leader.

2. No Performance Evaluations

Prior to 2007, chemists had regular Human Resources Division Employee Performance Review System ("EPRS") evaluations that their supervisors completed. EPRS evaluations assisted supervisors in making decisions regarding: salary and step increases, employee development needs, promotions, transfers, discipline and other personnel matters. Furthermore, every state agency, including DPH, requires EPRS evaluations and the chemists' collective bargaining agreement required them as well. However, after Nassif became director, the practice of completing EPRS evaluations ceased, a change of which DPH Commissioner Auerbach was unaware.

3. No Oversight of Chemists' Court Testimony

Despite the regularity with which chemists were called to testify after *Melendez-Diaz*,[41] supervisors did not attend trials to assess and critique chemists' testimony. This lapse in oversight likely contributed to the inconsistent and sometimes inaccurate testimony by the various chemists. For instance, multiple chemists testified to being 95% confident that their analytical results were correct in situations in which there was no statistical support for those statements. Chemists also described significant aspects of the testing process differently from one another and often in ways that the forensic drug analysis community would not support.

Though there were issues with the testimony many of the chemists gave, Dookhan's was by far the most troubling. For example, Dookhan fabricated her credentials in a number of ways, testifying on multiple occasions to having received specialized training from the Drug Enforcement Administration ("DEA"), Food and Drug Administration, FBI and Homeland Security. Dookhan also testified that the Drug Lab purchased certain drug standards used in the testing process directly from the DEA – a statement that appears to be false. These are the types of false statements under oath that a supervisor would have caught and questioned had he been present in the courtroom or reviewed testimony transcripts after the fact.

[41] *Melendez-Diaz v. Massachusetts*, 557 U.S. 305 (2009).

4. Failure to Check Academic Credentials

During its investigation, the OIG reviewed the application materials and curriculum vita ("CVs") of all chemists employed by the Drug Lab. The OIG found that during the hiring process, the Drug Lab failed to confirm the academic credentials of applicants, but rather relied on the representations on an applicant's CV and Drug Lab employment application. If management had taken steps to confirm credentials, they would have uncovered that: (1) chemist Kate Corbett did not earn a Bachelor of Science degree in Chemistry; and (2) chemist Annie Dookhan had never entered into a Master's Degree program in Chemistry.

a. Kate Corbett's Credentials

The OIG's review and verification of chemists' education credentials revealed a discrepancy with chemist Kate Corbett's CV. Corbett indicated on her CV and application that she earned a Bachelor of Arts degree in Sociology from Merrimack College in May 2001, as well as an additional Bachelor of Science degree in Chemistry from Merrimack College in May 2003. Corbett had in fact only earned a Bachelor of Arts degree in Sociology from Merrimack College on May 20, 2001. Upon further investigation, the OIG found that while Corbett took all required coursework to complete a major in Chemistry, she was not awarded a second Bachelor's degree in chemistry in 2003.

b. Annie Dookhan's Credentials

In 2003, when Dookhan first applied to work at the Drug Lab, she represented on her CV and during an interview that she was attending the University of Massachusetts at Boston ("UMass Boston") in pursuit of a Master of Science degree in Chemistry.[42]

In January 2012, Drug Lab employees reported to Salemi (who reported to Nassif) that Dookhan maintained two different CVs – one representing that she had earned her Master's degree, and another representing that her Master's degree coursework was in progress. Ultimately, the MSP's investigation of Dookhan revealed that she had never enrolled in or taken part in a Master of Science program at UMass Boston.

Dookhan not only misrepresented her academic credentials on her CV that she regularly provided to prosecutors for use as discovery in drug cases, she also testified under oath in court proceedings to holding a Master's degree in Chemistry.

5. Failure to Review Discovery Packets

Further, after *Melendez-Diaz,* Salemi found it impossible to enforce his own policy, instituted in 2003, which required that a supervisor or team leader review all discovery packets before being

[42] When Dookhan was hired, chemists did not need a chemistry or science degree; they only needed to meet the civil service requirements. It was not until 2005 that the Drug Lab required newly-hired chemists to have taken courses in analytical chemistry.

sent to an outside agency.[43] Had Salemi kept up with this policy, he or another senior chemist likely would have noticed that Dookhan had been sending out two different CVs.

[43] A discovery packet consisted of Drug Lab documents that were provided to prosecutors for use in criminal cases.

VI. Lack of Training

The Drug Lab provided its chemists with inadequate training. These deficiencies in training related to the initial chemist training, continuing education requirements, courtroom testimony and supervisor training.

A. SWGDRUG Training Recommendations

In 1997, the DEA and the Office of National Drug Control Policy formed the Technical Working Group for the Analysis of Seized Drugs – later renamed the Scientific Working Group for the Analysis of Seized Drugs ("SWGDRUG"). The SWGDRUG mission is "to recommend the minimum standards for the forensic examination of seized drugs."[44] SWGDRUG, with input from the forensic science community around the world, has developed the accepted minimum standards of educational and professional development, quality assurance and drug identification methods for forensic drug analysis practitioners. Between 2002 and 2012, the Drug Lab did not comply with many of these SWGDRUG recommendations.

According to SWGDRUG training recommendations, drug labs must have a documented training program approved by lab management.[45] Training should focus on "the development of theoretical and practical knowledge, skills and abilities necessary to examine seized drug samples and related materials."[46] The training program should include a period of supervised casework, and the individuals leading the training should have demonstrated competence in the analytical methods the laboratory uses and should be trained in the delivery of training.[47]

Additionally, SWGDRUG emphasizes that all forensic chemists have an ongoing responsibility to remain current in their forensic science field and that laboratories should provide support and opportunities for continuing professional education.[48] More specifically, SWGDRUG recommends that chemists attend twenty hours of training every year and that continuing education be documented.[49]

B. New-Chemist Training

At the Drug Lab, training for new chemists lasted approximately six to eight weeks. Chemists received individual training, typically by the Drug Lab's Supervisor II, Charles Salemi, and a Chemist III or team leader[50] in the new chemist's bench area[51] of the Drug Lab. Each new

[44] SWGDRUG Recommendations, *Introduction*, vii. (2011), *available at* http://www.swgdrug.org/Archived/SWGDRUG%20Recommendations_070711.pdf.

[45] SWGDRUG Recommendations, *Part II: Education and Training*, § 4.2 (2003).

[46] *Id.*

[47] *Id.* §§ 4.2.3, 4.4.

[48] *Id.* § 3.1.

[49] *Id.* § 3.1.1.

[50] The team leader was the highest-level chemist, typically a Chemist III, in each work room of the Drug Lab.

chemist was taught about the sample submission process and evidence office procedures. After 2005, new chemists also received a copy of training guidelines; however, as will be discussed in Section VII, the training guidelines were never officially approved and therefore remained in "draft" form.[52] Additional training included observing the work of another more experienced chemist, although the Drug Lab did not provide any training to experienced chemists on how to train new chemists.

Before new chemists completed their training, the Drug Lab required them to pass a written exam to ensure that they understood the initial chemical analysis testing process. Finally, the Drug Lab required new chemists to initial a training checklist found in the back of the training guidelines acknowledging that their instructor had covered each topic in the training process. Salemi kept records of the new chemists' written exams and the training checklists; however, it is unclear if he did so for all chemists, as the OIG was unable to find records for the majority of chemists at the Drug Lab.

In general, the initial training of chemists at the Drug Lab was relatively brief, overly focused on the preliminary testing process, lacked sufficient emphasis on chemical theory and failed to instruct new chemists on many techniques used at the Drug Lab. For instance, the initial training did not expose new chemists to the Gas Chromatography and Mass Spectrometry ("GC/MS") instrument[53] which was used on many samples tested at the Drug Lab. Prior to working in the GC/MS section of the Drug Lab, chemists needed to complete a separate GC/MS training.[54] Following the initial training, it remains unclear whether new chemists had restrictions on which types of samples they were allowed to test independently. Some chemists started out analyzing only marijuana samples, while others tested all types of samples (other than samples involved in trafficking cases)[55] once they completed their training. If a new chemist had a question related to the testing process, he was instructed to ask a senior chemist for guidance. Regardless, a senior chemist was supposed to check all the work that a new chemist conducted for only two to three weeks after their training had ended.

C. Continuing Education at the Drug Lab

Also, contrary to SWGDRUG recommendations, the Drug Lab did not have continuing education requirements or provide internal trainings. Occasionally, Salemi provided chemists with forensic journal articles by placing copies near employee time sheets with the expectation

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[51] A bench area refers to an individual work station where a chemist conducted preliminary testing.

[52] Attached to the training guidelines as Addendum A was a copy of the SWGDRUG Code of Professional Practice for Drug Analysts; however, it was unclear whether the Drug Lab taught the SWGDRUG Code of Professional Practice during new-chemist training or promoted it throughout the Drug Lab.

[53] The Drug Lab used the GC/MS instrument to confirm the identity of substances tested at the lab. GC/MS analysis is a two-stage process that separates a sample into its molecular components; this structural information is then compared to a reference database or library. Identification of a drug was based on comparison of the chromatographic retention time and mass spectra of a case sample to that of a drug standard run contemporaneously.

[54] The lack of exposure to the GC/MS instrument in their initial training affected the chemists' understanding of the total process of analyzing a sample and their ability to adequately testify in court.

[55] *See* Section XVI regarding trafficking cases.

that chemists would read the articles at their leisure. At times, Salemi required chemists to acknowledge that they had received and read the documents, but this practice occurred sporadically.

The Drug Lab did not require chemists to become members of forensic professional organizations that provide continuing education opportunities, and neither DPH nor the Drug Lab paid for membership dues. Still, some chemists joined forensic professional organizations of their own volition and at their own expense. Salemi encouraged all chemists to join the Northeastern Association of Forensic Scientists ("NEAFS"), but of the five chemists who joined NEAFS, few actually attended meetings or otherwise actively participated. Some chemists also joined other professional groups including the American Chemical Society, the International Association of Forensic Toxicologists, and the New England Microscopy Association.

Due to financial constraints, chemists' requests for funding to attend external meetings and trainings were repeatedly denied. Commonly, when a chemist attended an outside training, the training was free or the chemist paid for it at his or her own expense. After the Drug Lab started to receive federal Coverdell grant funding in 2009, it sent some chemists to a DEA forensic chemist training each year. Many chemists wanted to attend this training, but the Drug Lab did not have enough funding to pay for flights and hotel rooms for every interested chemist. Several chemists attended the DEA training using Coverdell grant funding, and in one instance, a chemist paid for her own expenses to attend this training. In short, the Drug Lab did not comply with the SWGDRUG recommendation that chemists attend twenty hours of training each year.

D. Lack of Instruction on Legal Issues

When there were changes to state or federal laws related to the Drug Lab's work, the Drug Lab did not seek assistance from DPH counsel or experienced criminal law practitioners to help explain the impact of the changes to the chemists at the Drug Lab. On occasion, the Attorney General's Office sent legal updates to EOPSS, which would eventually forward the updates to the MSP and the Drug Lab. However, Salemi and other Drug Lab supervisors took it upon themselves to stay current on the law and to interpret changes to laws.

The Drug Lab's leadership, however, failed to adequately communicate to chemists how changes in the law should impact Drug Lab practices. For example, after Massachusetts decriminalized the possession of less than one ounce of marijuana in January 2009, Salemi circulated an internal memorandum addressing how chemists were supposed to weigh marijuana samples. According to several chemists, after the law had changed, there was confusion about whether they were expected to weigh up to one ounce of marijuana or use a sampling approach to determine if the net weight of the sample exceeded one ounce of marijuana.

The Drug Lab failed to provide adequate training on how to testify in court. Few chemists had a mock trial training opportunity to help them to prepare to testify. Several chemists attended a mandatory expert witness training between 2001 and 2003. Additionally, in 2007 or 2008, a few chemists sought out a free courtroom testimony training offered by the federally funded High Intensity Drug Trafficking Area program. However, after *Melendez-Diaz* in 2009, DPH did not provide expert-witness training to the chemists in the Drug Lab despite the increased likelihood that chemists would be required to testify at trial regarding their procedures and results. Prior to

Melendez-Diaz, chemists rarely testified at trial, but after the Court's decision, chemists began to testify on a frequent basis. Because DPH did not provide expert witness training or guidelines, individual chemists began drafting their own sample courtroom questions and instructions on how to prepare for a court appearance. As a result, chemists testified inconsistently and, at times, chemist testimony revealed an insufficient understanding of the preliminary testing process and other techniques used at the Drug Lab. For example, the OIG uncovered instances of chemists bolstering testimony by providing statistical support for preliminary testing results when no such statistical support existed. The OIG found that chemist testimony demonstrated a failure to appreciate the chemical theory behind forensic drug analysis as a result of inadequate chemist training.

E. Supervisor Training

Once a chemist was promoted to supervisor, the Drug Lab did not provide any training on the role and responsibilities of a supervisor. DPH provided free monthly supervisor trainings, but due to the extensive backlog at the Drug Lab, new supervisors did not have the opportunity to attend.

VII. Lack of Protocols

When the Drug Lab closed in 2012, its most current standard operating procedures manual, *Policies and Procedures – Drug Analysis Laboratories*, was dated September 29, 2004 (the "2004 *Policies and Procedures*" or "2004 policy manual"). This twenty-four page document addressed: (1) the submittal of evidence; (2) chain of custody; (3) analysis procedures; (4) drug certificates; and (5) testimony.[56] There were no other formal documents to supplement the 2004 *Policies and Procedures*, and this document alone lacked specific directives and uniform protocols for the Drug Lab staff to follow.

A. SWGDRUG's Recommended Protocols[57]

According to the 2003 SWGDRUG recommendations that were in effect before the creation of the Drug Lab's 2004 policy manual, drug labs were supposed to have written analytical procedures.[58] A laboratory's analytical procedures were supposed to include protocols for the sampling of evidence,[59] work practices that prevent contamination,[60] criteria for the acceptance and interpretation of data[61] and casework documentation.[62] They were also supposed to have a documented quality management system that was established and maintained by "the highest level of management concerning laboratory policy."[63] This documented quality management system was supposed to "cover all procedures and reports associated with drug analysis."[64] Laboratories were also supposed to have and to follow a documented evidence control system to ensure the integrity of physical evidence.[65]

Between 2002 and 2012, the Drug Lab did not comply with the majority of these SWGDRUG recommendations.

B. 2004 *Policies and Procedures*

Most concerning, the 2004 *Policies and Procedures* failed to provide detailed and documented procedures related to analytical testing, with the exception of a brief section on pharmaceuticals

[56] There was a total of six pages addressing the submittal of evidence, three pages addressing chain of custody, eight pages of analysis procedures (five pages were appendices addressing the defense analysis procedures and SWGDRUG recommendations, respectively), and two pages addressing certificate reports and testimony.

[57] SWGDRUG is an organization that recommends minimum standards for the forensic examination of seized drugs.

[58] SWGDRUG Recommendations, *Part IV: Quality Assurance/General Practices*, § 5.1.1 (2003).

[59] *Id.* § 5.1.2.

[60] *Id.* § 5.1.3.

[61] *Id.* § 5.1.5.

[62] *Id.* § 8.1.

[63] *Id.* § 1.1.

[64] *Id.* § 1.1.1.

[65] *Id.* § 4.

and representative sampling.[66] The "Analysis Procedures" section of the 2004 *Policies and Procedures* states that "[t]he Laboratory has established policies and guidelines to standardize analytical testing,"[67] and asserts that the Drug Lab follows SWGDRUG's 2003 recommendations for the methods used in the identification of seized drugs. The Drug Lab attached a copy of these SWGDRUG recommendations to the 2004 *Policies and Procedures* as an appendix. The SWGDRUG recommendations are the minimum standards for drug analysis, but are not themselves established procedures. In fact, the SWGDRUG *Method of Analysis* section attached to the 2004 *Policies and Procedures* recognized that "it is up to the individual laboratory's management to determine which combination of analytical techniques best satisfies the requirements of its jurisdiction."[68]

Even though the Drug Lab did not update the 2004 *Policies and Procedures* document after September 29, 2004, in practice, the protocols at the Drug Lab appeared to change and evolve over time. Chemists regularly received internal memoranda and emails, and attended internal meetings, in which their supervisors updated laboratory protocol. However, the additional policies that the Drug Lab management disseminated over the years through email, memoranda and meetings were never added to the 2004 policy manual as addenda, nor did the supervisors keep the updates in one centralized location for Drug Lab personnel to review or consult when needed. Additionally, GC/MS Supervisor Peter Piro developed written procedures for the GC/MS instrument but it is not clear whether Salemi or Nassif ever approved them. Furthermore, some procedures, related to documentation or testing practices, were developed and adopted by the chemists and then presented to Salemi for his approval.

At times, Nassif, Salemi and some of the chemists cited another Drug Lab document, the *Training Guidelines for New Chemists* ("*Training Guidelines*"),[69] as the main source of laboratory protocols.[70] However, no one at DPH had ever adopted or approved the *Training Guidelines* as the Drug Lab protocol for drug analysis. The *Training Guidelines* remained in draft form until the Drug Lab closed in 2012. Notably, the first page of the 2009 version of the document specifically indicates that it is not the Drug Lab protocol.

In July 2009, Nassif acknowledged that the Drug Lab did not have documented standard operating procedures and recognized the need to produce and regularly review written protocols. Over the next three years, Nassif attempted to create standard operating procedures, relying on text from the Drug Lab's training manuals and copies of the standard operating procedures from the MSP and the Drugs of Abuse Laboratory at UMass Medical School. Ultimately, in July 2011, Nassif enlisted Dookhan's help to draft the Drug Lab's standard operating procedures after

[66] *See* Section VIII below addressing the use of visual identification of pharmaceuticals. Also see Section XVI related to the Drug Lab's use of representative sampling.

[67] *Policies and Procedures – Drug Analysis Laboratories*, updated Sept. 29, 2004.

[68] *Policies and Procedures*, Appendix IV, at pp. 21-22.

[69] There were two drafts of *Training Guidelines for New Chemists*; one from 2005 and another from 2009.

[70] When asked by prosecutors, the defense bar and other external agencies for a copy of the Drug Lab's standard operating procedures, Nassif, Salemi and the other chemists commonly responded that either: (1) the Drug Lab followed SWGDRUG recommendations for the analysis of seized drugs; or (2) the specific Drug Lab protocols could be found in the various training materials circulated throughout the Drug Lab.

Nassif removed Dookhan from most of her testing responsibilities due to her breach in chain-of-custody protocols the previous month.

In short, from July 2009 until its closure in August 2012, the Drug Lab failed to update its written standard operating procedures. The failure of the Drug Lab's management to have formal, updated policies and procedures allowed for inconsistencies among the chemists' practices, including with regard to sample analysis. Furthermore, the lack of formal protocols demonstrates a lack of leadership and professionalism in the Drug Lab.

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VIII. Inconsistent Testing Practices

During the period of the OIG's review, 2002 to 2012, the Drug Lab had a practice for testing drug samples, referred to as the "two-chemist system," in which a "primary chemist" conducted preliminary bench tests and a "confirmatory chemist" received the sample into the GC/MS section, operated a GC/MS testing instrument and confirmed the preliminary finding on the GC/MS testing instrument. The OIG found, however, that chemists often deviated from that practice. These deviations included instances in which: (1) a chemist other than the confirmatory chemist operated the GC/MS instrument, thereby involving three chemists in the process; (2) the primary chemist operated the GC/MS instrument; (3) the primary chemist "received" his own sample into the GC/MS section; (4) multiple confirmatory chemists were involved in the analysis of a sample because the first GC/MS run failed to confirm the primary chemist's preliminary finding; and (5) the primary chemist was also the confirmatory chemist – analyzing the GC/MS results – for his own sample.

In addition, chemists failed to follow the Drug Lab's practices by failing to consistently complete documentation on powder sheets and by failing to have two chemists properly initial tune sheets.

A. Overview of Drug Testing Policies and Procedures

The Drug Lab used a variety of common forensic drug identification techniques to determine whether a given sample contained a controlled substance, as defined by M.G.L. c. 94C. With some exceptions, drug-testing protocols at the Drug Lab surpassed SWGDRUG's minimum standards of drug-testing methods for identification, in that the Drug Lab conducted more than two independent and validated tests for most samples.[71] To accomplish SWGDRUG's recommendations for forensic drug analysis, the Drug Lab used a two-chemist system.

1. The Preliminary Testing Phase

The role of the primary chemist was to conduct a series of preliminary tests to establish a presumptive identification of an unknown substance. According to practices at the Drug Lab, the primary chemist first needed to determine the net weight of the sample. Then, the chemist would complete preliminary bench tests – also known as screening tests – such as color tests, microcrystalline tests, gas chromatography, infrared spectroscopy, ultraviolet spectroscopy, and macroscopic and microscopic examinations.

The primary chemist was supposed to test one sample at a time. As each preliminary test was performed, the primary chemist was expected to manually record the test results on one or two standardized documents – either a "powder sheet" or a "pharmaceutical analysis sheet" – and, if possible, make a preliminary identification of the substance. On each powder sheet and pharmaceutical analysis sheet, the primary chemist was required to record a sample's identifying

[71] According to SWGDRUG, the use of the GC/MS instrument alone is sufficient to determine whether a tested substance is a particular controlled substance when a chemist uses the Gas Chromatography and the Mass Spectrometry as two independent and validated methods. In addition to the GC/MS instrument, the Drug Lab chemists used preliminary bench tests.

information, physical condition, gross and net weights, the results of each preliminary test, the preliminary identification and, ultimately, the final GC/MS results. The primary chemist was also required to write the preliminary identification of the sample on the control card.[72]

Once the primary chemist documented a preliminary identification of an unknown substance, he next prepared an "aliquot" for GC/MS analysis. An aliquot is a small portion of a sample (3 to 5 mg) that the chemist places in a small glass vial (1.8 to 2.0 ml) and dissolves in a solvent such as methanol, ethanol or methylene chloride. The primary chemist was supposed to label the vial with the corresponding sample number and then fill out a "GC/MS control sheet." The GC/MS control sheet listed the samples submitted to the GC/MS section and served as the Drug Lab's primary means of both conveying the primary chemist's preliminary findings to the chemists in the GC/MS section and tracking drug samples through the confirmatory testing phase.[73] The primary chemist was then supposed to transfer the aliquot, the GC/MS control sheet and the control card to the GC/MS section. The primary chemist maintained custody of the sample in the locker next to his testing space during the confirmatory testing phase, when the primary chemist sent the aliquot to the GC/MS section.

2. The Confirmatory Testing Phase

The confirmatory testing phase involved three steps. First, a confirmatory chemist "received" the vials directly from a primary chemist and confirmed that the numbers on each vial matched the numbers on the accompanying control card and GC/MS control sheet. This receiving chemist then dated and initialed the GC/MS control sheet to acknowledge receipt of the vials submitted for confirmatory testing. Finally, the receiving chemist placed the vials on a rack in the GC/MS section in anticipation of GC/MS analysis.

The next step in the confirmatory testing phase involved the use of a GC/MS instrument. Chemists were assigned weekly rotations to work in the GC/MS section. Drug Lab practice provided that a chemist would be assigned to a specific GC/MS instrument, and that chemist was responsible for quality checks and test preparation for each run on that instrument.

GC/MS test preparation required the confirmatory chemist to set up a GC/MS run by placing the aliquots, blanks,[74] a QC standard mix[75] and standards[76] into the appropriate positions on the

[72] Each sample had a control card that the chemists used to record information about the sample as it went through the analytical process. The information included the sample's analytical results, net weight, and the identities of the primary and confirmatory chemists.

[73] The primary chemist was responsible for completing the first portion of the GC/MS control sheet by indicating the following: the date and the "Drug Lab Assignee" (the primary chemist); a list of samples submitted in numerical order; the submitting police department; the preliminary findings; and any comments that could inform or help the confirmatory chemist with his analysis (*e.g.*, requesting that the confirmatory chemist run a sample on a specific GC/MS method or an indication that a sample had particularly weak preliminary test results).

[74] A blank is run between vials (both standards and samples) to ensure that there is no contamination during a GC/MS run. The blank is typically made up of the solvent that the sample is dissolved in. In the case of a sample with multiple subsamples, Drug Lab practice was for a blank to be inserted after every fifth sample.

[75] A QC standard mix is a prepared vial consisting of a codeine and cocaine mix used to ensure that the GC/MS instrument is working properly.

autosampler of the GC/MS instrument.[77] To aid this process, the GC/MS operator would complete an internal handwritten document called a "batch sheet," which was numbered from one to 100, with the numbers representing vial locations on the autosampler. The confirmatory chemist used the batch sheet to record the location of each sample, blank and standard to confirm that he placed each sample in the correct vial location in the GC/MS instrument.

Additionally, the GC/MS operator was required to ensure that the instrument was "qualified," or fit for operation. For the GC/MS operator to consider the instrument qualified, he was responsible for: tuning the instrument to ensure the mass spectrometer was working properly; confirming that the GC/MS instrument properly identified the QC standard mix as codeine and cocaine; and ensuring that the first few blanks and standards produced satisfactory GC/MS data. If the GC/MS instrument was not fit for operation, the GC/MS operator was required to terminate the GC/MS run and restart the GC/MS analysis.

In the final step of the confirmatory testing process, the confirmatory chemist reviewed all the GC/MS data for the entire GC/MS run, and if possible, made a final identification of the samples based on his interpretation of the GC/MS data – the retention times[78] and mass spectral fragmentations patterns.[79] If the retention time of the sample matched within 1.5% of the corresponding standard, the identity of the sample could be confirmed. Additionally, the confirmatory chemist needed to make sure that each blank was free of carryover from prior GC/MS runs to ensure there was no cross-contamination. If the confirmatory chemist made an identification, he manually wrote the findings on the front of the control card and also on the GC/MS control sheet. When there was an inconsistency between the primary testing results and the confirmatory testing results, the confirmatory chemist returned the vial, the control card and the GC/MS control sheet to the primary chemist for further analysis (*e.g.*, microcrystalline tests) or the preparation of a new aliquot.

3. Exceptions to the Two-Chemist System

For certain types of substances, the Drug Lab did not use a two-chemist system. When testing most Class E pharmaceutical samples that had been commercially produced by a licensed manufacturer, a single chemist could identify the substance by conducting a visual inspection of the sample's appearance and labeling.[80] Similarly, for marijuana samples, a single primary

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[76] A standard is an aliquot of a known controlled substance and is used to provide a base retention time and spectrum for comparison with unknown substances that are tested on the same GC/MS run. Tested samples were bracketed by standards to ensure that the GC/MS instrument was operating properly at the beginning, middle and end of the testing sequence. At the Drug Lab, standards were used after every tenth sample when possible.

[77] The GC/MS instrument has an autosampler that holds the vials during a GC/MS run and is programmed by a computer to make an injection into a vial in a specific location in the autosampler's vial tray.

[78] The retention time is the time it takes the molecules of a substance to travel through the column in the gas chromatography part of the instrument.

[79] A mass spectral pattern is a two dimensional mass of ions produced by a substance processed by a mass spectrometer. It looks like a series of peaks.

[80] According to SWGDRUG recommendations, identification of an unknown substance based solely on pharmaceutical identifiers does not satisfy minimum standards for forensic identification.

chemist could identify the substance using macroscopic and microscopic inspections and a positive marijuana chemical test (referred to as a Modified Duquenois-Levine test). Outside of these limited exceptions, all other samples tested at the Drug Lab were supposed to comply with the two-chemist system.

In 2012, due to the demands of court appearances imposed by *Melendez-Diaz*, the Drug Lab gradually transitioned from a two-chemist system to a "single chemist system" for all samples, regardless of the type of substance in question, so that only one chemist had to testify.

B. Failure to Adhere to the Two-Chemist System

Chemists in the Drug Lab consistently represented that the Drug Lab utilized the two-chemist system. However, the chemists did not view the two-chemist system as a requirement. As a result, the testing process at the Drug Lab operated as a "two-phase system," involving four distinct steps. The first phase of this two-phase system included the entire preliminary testing phase, in which a single primary chemist completed screening tests and made a preliminary identification of an unknown sample. The second, confirmatory phase involved three separate steps: (1) the receipt of samples into the GC/MS section; (2) the operation of the GC/MS instrument; and (3) the analysis of the GC/MS data and confirmatory identification of the tested sample. Even though the Drug Lab held itself out as having a two-chemist system, the OIG found that oftentimes more than one chemist participated in the three-step confirmatory phase. Also, on rare occasions, a single chemist completed both the preliminary and the entire confirmatory phases.

1. The GC/MS Operator Was Different from the Confirmatory Chemist

It was common practice in the Drug Lab for one chemist to complete the first two steps of the confirmatory phase by receiving the sample into the GC/MS section and running the samples through the GC/MS instrument while another chemist completed the third step by interpreting the GC/MS data. Chemists at the Drug Lab did not consider it a requirement that the GC/MS operator and the confirmatory chemist be the same person. They believed that as long as the confirmatory chemist actually viewed the location of the vials in the GC/MS autosampler, any chemist assigned to the GC/MS section could confirm the results, provided he was not analyzing a sample for which he had served as the primary chemist.

In November 2011, GC/MS Supervisor Peter Piro created a policy requiring GC/MS operators to use the GC/MS instrument only for the samples they intended to analyze; the policy cited the logistical problems that were created by having shared responsibilities among the GC/MS operator and the confirmatory chemist. Even after Piro disseminated this policy, it still happened that the GC/MS operator would be different from the chemist who confirmed the GC/MS data.

On occasion, a Drug Lab confirmatory chemist testified at trial that he had completed every step of the confirmatory testing phase even when the sample's underlying documents indicated that another chemist had received the samples into the GC/MS section and/or had served as the GC/MS operator.

2. The Primary Chemist Prepared and Operated the GC/MS Instrument for His Own Samples

A related deviation from the two-chemist system involved the regularly occurring situation in which the primary chemist also operated the GC/MS runs for his own samples. Generally, when this occurred, a separate GC/MS chemist analyzed the GC/MS data and made a final identification of the substance. In fact, chemists appeared to believe that it was acceptable for primary chemists to be the GC/MS operator for their own samples in a two-chemist system, provided that the primary chemists did not conduct the final analysis of the GC/MS data for these samples.

3. The Primary Chemist "Received" His Own Samples into the GC/MS Section

Furthermore, there were instances in which a primary chemist "received" his own samples into the GC/MS section for confirmatory testing. By doing so, the primary chemist eliminated the quality assurance mechanism of having a separate chemist confirming that the number on each vial matched the number on the accompanying control card and the control sheet.

These situations were a natural outgrowth of the lack of any written protocol or consistently followed procedures for the transfer of aliquots to the GC/MS section. Primary chemists would hand their GC/MS aliquots to any available chemist who was a trained GC/MS operator, regardless of whether they were assigned to (or physically sitting in) the GC/MS section. If the receiving chemist was working outside the GC/MS section, the primary chemist would have the receiving chemist sign the "vials received" portion of the GC/MS control sheet. Then, either the receiving chemist would bring the vials to the GC/MS section, or sometimes the primary chemist would deliver his own samples to the GC/MS section. Some primary chemists would physically observe the receiving chemist complete his review of the sample numbers and acknowledge receipt of the samples on the control sheet, while others would hand over their vials and do nothing more.

4. More Than One Confirmatory Chemist Involved Due to Multiple GC/MS Runs

Another deviation from the two-chemist system involved having multiple confirmatory chemists run the same sample through the GC/MS instrument. In these instances, a primary chemist completed the preliminary testing phase and a GC/MS chemist conducted the confirmatory testing phase. If the GC/MS operator reviewed the GC/MS data and made a subjective determination that the retention time and mass spectra were insufficient to confirm the sample's identity, he would return the aliquot to the primary chemist. The primary chemist, relying on the first GC/MS operator's notes, might strengthen or dilute the concentration of the aliquot or conduct additional preliminary tests. The primary chemist would then return the vial to the GC/MS section for further analysis. At that point, it was often the case that another GC/MS chemist would complete the second GC/MS data analysis, thereby involving additional chemists in the process.

In these instances, the Drug Lab rarely, if ever, disclosed the involvement of all three chemists to the parties in the criminal case. Rather, the drug certificate listed only the names of the primary chemist and the GC/MS chemist who made the final identification.

5. One Chemist Performed All of the Testing

The OIG found unexplained examples in which the primary chemist improperly conducted each step of both the preliminary testing phase and the confirmatory testing phase.

This deviation from the two chemist system would sometimes occur when the samples were "expedited" for analysis or were resubmitted to the Drug Lab for additional testing.[81] There is no evidence, however, of any policy that would allow a single chemist to conduct the entire analysis in these circumstances.

In addition, there were instances in which the primary chemist acted as a single chemist when analyzing Class B, C and D pharmaceuticals by either: (1) viewing label and appearance alone and without a GC/MS analysis conducted by a second chemist;[82] or (2) conducting both the preliminary testing phase and the confirmatory testing phase, violating the "two-chemist" protocol.

Finally, at times, a single, primary chemist tested steroids. Chemists believed that a single chemist could test steroids because steroids were considered particularly challenging to identify and only a few chemists were trained to analyze the GC/MS data for steroid samples.

C. Other Deviations from Drug Lab Testing Protocols

1. Incomplete Powder Sheets and Control Cards

As noted above, a primary chemist was expected to record his bench notes contemporaneously on a powder sheet or pharmaceutical analysis sheet. The primary chemist was to include on these documents: (1) a physical description of the sample; (2) the results of each separate preliminary test conducted on the sample; (3) gross and net weights of the sample; (4) the presumptive identification of the sample; and (5) the ultimate GC/MS results. The OIG investigation found inconsistent use of powder sheets and pharmaceutical analysis sheets among the chemists at the Drug Lab. In some instances, a sample's powder sheet contained incomplete information; still others were left entirely blank without any notations or preliminary test results.

[81] Resubmitted samples were samples that law enforcement agencies returned to the Drug Lab for additional testing. They were assigned a new evidence control number, which was the original evidence control number plus the letter "R."

[82] In 2005, the new chemist training guidelines referenced the use of GC/MS analysis for pharmaceutical samples preliminarily identified as containing a Class A or B substances. Additionally, the chemists needed to chemically analyze a representative sampling of Class C pharmaceuticals if a sample contained thirty or more specimens. According to the 2005 training guidelines, a single chemist could identify Class D or E substances using the appearance and labeling technique. In 2009, the Drug Lab changed its training guidelines, now referencing the use of a GC/MS analysis for all Class A, B, C and D pharmaceuticals; a single chemist could identify only Class E pharmaceuticals using the appearance and labeling technique. For drug classes, *see* M.G.L. c. 94C, § 31.

At times, chemists would record their bench notes on the control card itself rather than using the required powder sheet or pharmaceutical analysis sheet.

Furthermore, the primary chemist did not always write the sample's preliminary identification on the control card. Additionally, there were instances when a primary chemist would cross out and change a preliminary identification after a GC/MS result found an inconsistent result.

2. Tuning Reports

The Drug Lab policy required the GC/MS operator to complete a tune test of the GC/MS instrument before every run of the instrument. The purpose of the tune test was to ensure that the GC/MS instrument's mass spectrometer was working properly. If the tune test was satisfactory, the Drug Lab policy required the GC/MS operator and a second chemist assigned to the GC/MS section to fill out a Drug Laboratory GC/MS daily QC check form ("QC check form") by placing a check mark on the form and initialing the bottom of the form. According to Piro's GC/MS policy, the GC/MS operator had to report an unsatisfactory tune report to Piro. In 2012, this policy changed to require the GC/MS operator and Piro to complete the QC check form.

Despite these policies, on occasion only one chemist recorded that the GC/MS instrument was properly tuned by initialing the QC check forms. Other times, chemists would start a GC/MS run before a second chemist had both reviewed the tune report and initialed the QC check form.

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IX. Ineffective Quality Control Measures

Between 2002 and 2012, the Drug Lab had numerous quality control ("QC") measures in place to locate problems, defects and other instances where quality might be lacking.[83] However, many of the Drug Lab's quality control measures were limited in their effectiveness because supervisors simply signed a form filled in by a chemist attesting that the chemist had performed a necessary quality control task. The supervisors did not typically review objective data to confirm that the chemist had in fact performed the task, or had performed it correctly. Furthermore, most of the quality control measures focused on whether the instruments were working properly as opposed to focusing on the accuracy of the chemists' testing.

A. Internal Quality Control in the Drug Lab

1. Daily Quality Control Measures

Each chemist in the Drug Lab was responsible for certain daily quality control measures. For primary chemists, the Drug Lab required them to check their balances[84] and conduct negative control tests on their reagents.[85] The chemists recorded their compliance with these measures on various records where they handwrote either checkmarks or the weight obtained from their balance checks. The chemists performed these quality control checks independently, without supervisor or peer oversight.

The Drug Lab also required GC/MS operators to conduct daily quality control measures, including tuning the GC/MS instruments[86] and running a QC standard mix[87] on each GC/MS run. The GC/MS operators recorded their compliance with instrument tuning with their signature along with a second chemist's signature on the tune results printed from the instruments. For the QC standard mix, the GC/MS operators would handwrite the details of the cocaine and codeine results on a form called the "GC/MS Daily Injector/Column Check."

Additionally, GC/MS operators recorded their compliance with the QC standard mix and the GC/MS tunes on a form called the "GC/MS Daily Quality Control Check" form. On this form, chemists wrote checkmarks indicating the date and instrument which they tuned and on which

[83]Quality control focuses on finding problems and defects. Quality control does not ensure quality; it is designed to find instances where quality is lacking. It is a reactive process.

[84] A balance is a scale. The chemists used the balances to weigh samples.

[85] A reagent is a substance or compound used in tests that chemists perform to preliminarily identify substances. Chemists conduct negative control tests by applying a reagent to a non-controlled substance; if the reagent reacts, it is no longer effective and cannot be used. Negative control tests help prevent false positives.

[86] A tune ensures that the GC/MS instrument is operating within acceptable parameters. The OIG reviewed tune reports from 2009 to 2012. The OIG did not locate any tune reports indicating that the GC/MS instrument was not operating within parameters. However, the OIG found that occasionally, a second chemist did not sign the tune report and in many instances, the second chemist signed the tune report days after the instrument was tuned.

[87] The QC standard mix is a combination of cocaine and codeine, which chemists run through the GC/MS instrument to ensure it can acceptably distinguish between two compounds.

they ran a QC standard mix. As with the primary chemist, the GC/MS operator was not observed or supervised while completing these tasks.[88]

2. Monthly Quality Control Measures

The Drug Lab also had monthly quality control measures, including balance checks and the review of records related to the reagent preparation book, the standard preparation book,[89] and the GC instrument and GC/MS instrument maintenance books. Moreover, Salemi conducted monthly random quality control audits of previously analyzed samples to evaluate the accuracy of chemists' test results and the completeness of their paperwork. Salemi would tell chemists which samples he intended to audit before he removed them from the safe. Salemi then had the chemist preliminarily re-analyze the samples in his presence. With the exception of the control sheet, Salemi did not routinely review the GC/MS data from the chemist's original analysis and did not note whether the chemist ran the sample more than once on the GC/MS instrument. Salemi handwrote the results of his audits on a form.

Salemi "audited" between five and ten samples per month, less than one percent of the total number of samples the Drug Lab analyzed each month. For instance, chemists analyzed 23,322 samples in 2009, an average of 1,943 samples per month. Based on the OIG's review of the records, Salemi "audited" sixty-one samples in 2009, an average of five samples per month.

Notably, without any review of confirmatory GC/MS test data, Salemi could not uncover multiple GC/MS runs or any discrepancies between the primary chemists' preliminary findings and the confirmatory chemist's associated GC/MS findings, rendering his monthly audits largely ineffective.[90]

3. QC and Quality Assurance ("QA")[91] Reviewers

Most of the quality control forms had a space for the signature of a "QC Reviewer" and a "QA Reviewer." The QC Reviewer's job was to collect the quality control records from the chemists and various areas of the lab, ensure that the chemists had filled in the records, sign them, and

[88] In March 2012, the Drug Lab instituted a "technical review" process. In a "technical review," a reviewer checked copies of documents for each sample related to the chain of custody, preliminary and confirmatory testing, quality control and reporting, among other things. For example, the "technical reviewer" checked the data for the GC/MS run, including the tune report and the QC standard mix report.

[89] A drug standard is a controlled substance against which a chemist compares a submitted sample. For instance, when a chemist tested a sample that was suspected to be cocaine, he would also run a standard of cocaine (*i.e.*, a product known to be cocaine) through the GC/MS instrument. He could then compare the two results to help identify the submitted sample.

[90] The OIG found that certain of the samples that Salemi reviewed during his monthly audits were run multiple times on the GC/MS instrument as a result of inconsistencies among testing results. *See* Section XVII for more information on samples run multiple times on the GC/MS instrument.

[91] Quality Assurance refers to a set of policies than focus on preventing quality problems and defects before they develop rather than identifying them after the fact.

present them to the QA Reviewer. QA/QC Technical Supervisor Peter Piro,[92] or in the alternative, Dookhan, signed the forms as QC Reviewer. Nassif signed records as QA Reviewer. Han also signed monthly QA reporting cover sheets for the quality control records.

The QC and QA Reviewers' signatures were practically meaningless in attesting to the validity of the quality control process. Their signatures only documented that the reviewer had looked at a list of checkmarks on a completed form created by a chemist indicating he or she had performed one of the necessary quality control tasks. In addition, supervisors did not witness chemists performing the quality control measures, nor did the Drug Lab require peers to observe each other when performing these tasks. Similarly, supervisors did not routinely review underlying objectively reviewable data. Instead, the Drug Lab only required chemists to note that they performed quality control tasks on a form, in a book, or on their powder sheets.

B. External Quality Control Oversight

Until 2007, the Drug Lab was subject to at least some form of external quality control oversight. Every DPH laboratory in the State Laboratory Institute ("SLI"), including the Drug Lab, was required to participate in a quality control and quality assurance group ("QA/QC Group" or "Group").

The Group was responsible for overseeing all quality assurance and quality control protocols and methods for all eighteen DPH laboratories at the SLI. One specific function of the QA/QC Group was to ensure that all the DPH laboratories complied with their respective accrediting bodies' requirements and the recommendations from periodic audit findings. Almost all of the other DPH laboratories at the SLI were accredited and went through routine audits with their accrediting bodies.[93] After those audits, the Group would help them implement any necessary changes. But because the Drug Lab was not accredited and did not undergo routine audits, the Group had difficulty structuring a suitable quality control plan for the Drug Lab. For the Drug Lab, all the Group could do was to require it to produce its quality control records on a monthly basis, discuss defects or issues detected and propose changes and improvements. Ultimately, the Group's oversight was ineffective because it did not conduct any independent audits of chemists' test results and did not ensure that the Drug Lab was meeting SWGDRUG's minimum recommendations for seized drug analysis.[94]

Due to budget restraints, DPH dissolved the QA/QC Group in 2007 and delegated the oversight of the Drug Lab's quality control functions to Nassif. Nassif did not make quality control at the Drug Lab a priority. As a result, after the Group dissolved, the Drug Lab no longer had routine monthly quality control meetings. Nassif cancelled the monthly meetings with Piro so often that within a few months, Piro began leaving the quality control records on Nassif's desk. She signed

[92] In addition to the position of GC/MS Supervisor, Piro was appointed the QA/QC Technical Supervisor in approximately 2007.

[93] *See* Section IV for information regarding accreditation of the Drug Lab.

[94] *See, e.g.*, Section XVI.

them at a later date, sometimes weeks or months later.[95] In most instances, Nassif did not review the underlying records, such as the QC standard mix reports, before signing off on quality control; she merely reviewed a list of checkmarks or handwritten notations on a form.

Nassif also gave quality control cover sheets to Han, who sometimes signed them months later. In one instance, Han signed a cover sheet six months after Piro had signed it. Further, even though Han approved these cover sheets, she was not involved in either creating or performing the underlying quality control procedures. She also did not review the underlying quality control records. Rather, Han reviewed lists of checkmarks or other handwritten forms indicating that each aspect of the Drug Lab's quality control records was acceptable, a review that lacked any meaning. When news of Dookhan's confession to evidence tampering reached Han in August 2012, she expressed shock that nothing in the quality control reports she received had raised any red flags that there were problems in the Drug Lab. It is unclear how she thought she would have been able to detect any problems from the face of the check-marked QA cover sheets.

C. Dookhan's Role as a QC Reviewer

Between June 2011 and September 2011, Dookhan regularly signed QC reports – such as the GC/MS Daily QC Checks and Salemi's monthly random quality control audits – as the QC Reviewer. This means that even after her supervisors knew she had breached chain-of-custody protocols and they had removed her from most testing responsibilities, Dookhan continued to sign Salemi's audits and other quality control records. Further, in her role as a QC Reviewer, Dookhan signed off on audits that included her own samples. In other words, she "approved" the accuracy of her supervisor's audits of her own work, thereby negating the purpose of an audit.

Additionally, between May 10, 2011 and May 14, 2011, Dookhan falsified four days of quality control records for QC standard mix runs on the GC/MS instruments. The GC/MS reports for the four days indicate that the QC standard mix found that no drugs were present when it should have found the presence of cocaine and codeine. Yet Dookhan filled out the "GC/MS Daily Injector/Column Check" as if the instrument had performed adequately, and had found cocaine and codeine.

Even more egregious is the fact that Dookhan signed her own falsified QC standard mix records as the "QC Reviewer," indicating that she had reviewed and approved her own falsified quality control tests.[96] Nassif then signed the falsified QC standard mix records, indicating that she approved the records. Had Nassif reviewed the underlying GC/MS spectra, she likely would have discovered Dookhan's false records.

[95] Nassif resumed the quality control meetings with Piro only after Dookhan resigned, in March 2012, six months before the MSP took over the Drug Lab. After Dookhan's resignation, Nassif also began a more timely review of quality control records and making notes and comments about aspects of the records.

[96] After uncovering Dookhan's QC standard mix malfeasance, the OIG reviewed 3,930 QC standard mix results between 2005 (when the practice was implemented) and 2012. The OIG did not find any additional falsified records or evidence of any other wrongdoing with respect to the QC standard mixes.

In sum, the QC measures in place at the Drug Lab were insufficient to detect any malfeasance or issues related to chemist errors in drug analysis. Han and Nassif's approach to quality control highlights their disinterest in, and lack of oversight of, the Drug Lab.

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X. Lack of Heightened Security

Management at the Drug Lab failed to implement and maintain a system of heightened security in the Drug Lab, especially given the contents of the evidence safe. Despite the systems that were in place, such as an alarm system and biometric hand readers, supervisors did not properly manage or fully utilize the security resources. Supervision of keys and the alarm system lacked appropriate oversight, security policies were unenforced, and the evidence office database was accessible to individuals other than evidence officers.

The building housing the State Laboratory Institute ("SLI") had many layers of security through the years. The SLI building required that every visitor enter through the front entrance of the building, which was monitored by a guard and camera surveillance twenty-four hours a day. The guard verified the visitor's identity and required that an SLI building employee escort the visitor at all times. Originally, employees needed an identification card to gain access to the building. However, the SLI building's security was eventually upgraded to an electronic access system that required employees to swipe a pre-programmed proximity card[97] at a turnstile at the reception area of the main entrance. After passing through the turnstile, Drug Lab employees could take the elevator or the stairs to the third floor and swipe their proximity card to open the double doors that led to the west wing, where the Drug Lab was located.

The Drug Lab was responsible for its own security, separate from the SLI building security. For years, Charles Salemi, as the Drug Lab supervisor, oversaw all aspects of a security system he inherited from the former Drug Lab supervisor, Kevin McCarthy. Even after Julianne Nassif took over as the director of Analytical Chemistry in 2006, she did not involve herself in security matters; instead, she let Salemi maintain responsibility for this area.[98] Salemi's efforts, however, evidenced a lack of sufficient concern for potential threats to the Drug Lab's security. As a result, he failed to monitor which doors each key could access,[99] failed to require that the chemists use the hand readers, and failed to monitor the use of alarm codes. Furthermore, Salemi did not make a practice of updating the alarm codes and key locks in response to changes in personnel.

The double doors to the Drug Lab wing led to a hallway with two main secured areas: the evidence office and the chemists' testing area. Both the evidence office and the testing area were secured by a biometric hand reader, key lock and alarm system. The evidence safe, where drug samples were stored, was a separately secured room accessible from inside the evidence office. This safe could be opened with either a numeric punch code or a key.

[97] A proximity card is a plastic identification card that the user holds to an electronic reader unit affixed to the wall; the unit reads the card, produces an audible beep and unlocks the door.

[98] Nassif got involved in security policies and procedures in December 2011, six months after Dookhan breached chain-of-custody protocols as discussed in Section XII.

[99] Salemi never conducted a key audit. It was not until just prior to the transfer of the Drug Lab to the MSP in July 2012 that Linda Han, Director of Bureau of Laboratory Sciences, suggested a building-wide key inventory and requested that staff return keys that were no longer in use.

To access the chemist testing areas, there was a biometric hand reader, which required a unique four-digit identification number to be entered on the keypad and a hand to be placed at the base of the reader. The reader scanned the hand, compared it to the image in the system, and unlocked the door if there was a match.[100] The hand reader automatically downloaded and stored information memorializing who had accessed the secured area in a computer database.[101] Despite the biometric hand reader's utility as a security device to monitor who entered the secured testing areas at any given time, it was ineffective as all chemists were also provided with metal keys and were allowed to use the key instead of the hand reader to open the door.

In addition, an alarm system secured the door to the chemist testing area. The Drug Lab staff understood that only supervisors and Chemist IIIs were authorized to have the alarm code, and only for purposes of arming and disarming the door to the testing area at the beginning and end of a day. However, the OIG determined that at least three Chemist IIs Dookhan, Daniel Renczkowski and Mai Tran – also possessed the alarm code to the testing area. In addition, all of the chemists who had alarm access shared the same numerical code, so there was no way to definitively determine who had disarmed the alarm on any given day. Similarly, chemists shared the same verbal password[102] used to give notice to the alarm company that chemists would be working outside of normal work hours, making it impossible for Salemi to monitor who had accessed the testing areas off hours. The alarm company's authorized user list for the alarm system at the time of the Drug Lab's closure did not reflect which chemists actually possessed the alarm code. Drug Lab supervisors did not make a practice of updating the alarm company when they granted a new Drug Lab employee authority to use the alarm code.

Adjacent to each chemist's testing surface were individual drug lockers in which chemists secured their drug samples during testing. Chemists believed that drug lockers were only accessible by the individual chemist whose locker it was and Salemi. During the OIG's investigation, however, the OIG tested all of the chemists' locker keys that the MSP had in its possession and discovered that multiple keys could open some of the lockers. For instance, six different keys opened one locker in Room 362, where Dookhan and chemist Daniela Frasca had worked. Five keys opened another two lockers in Room 363 in which chemists Della Saunders, Lisa Glazer and Kate Corbett had worked.[103]

There was also a safety policy in place for the chemist testing areas that had security implications. Specifically, for safety purposes, three chemists had to be present when chemists were conducting drug analysis outside of normal work hours.[104] However, there was no policy to prohibit a Drug Lab employee from being in the lab alone. In fact, it appears that Dookhan

[100] The hand reader utilized infrared light to capture a three-dimensional image of the hand; the reader then converted the image and stored it in a database.

[101] Due to a computer malfunction, the Drug Lab's computer system lost all hand reader logs documenting who had gained access to both the evidence office and the testing areas. The only hand reader records that the OIG was able to obtain were directly from the hand readers themselves, which only went back to June 2012.

[102] The alarm company required the verbal password so the operator in the call center could authenticate the affiliation of the individual over the telephone.

[103] It is unknown whether the chemists used these particular lockers to secure drug samples.

[104] With authorization, chemists could work at night, weekends, or holidays.

obtained access to the chemist testing area on Saturday, October 1, 2011 by herself, months after she was supposedly removed from most testing responsibilities following her breach of chain-of-custody protocols for ninety samples in June 2011 ("June Breach").[105] Evidence suggests that Dookhan was gathering documents to provide to prosecutors in criminal cases on that date.

Much like the secured chemist testing area; a hand reader and an alarm secured the evidence office door, but it had the added security of a deadbolt. The only keys that worked in the evidence office deadbolt belonged to Evidence Office Supervisor Elisabeth O'Brien, Evidence Officer Shirley Sprague, Evidence Officer Gloria Phillips and Administrative Assistant Janice Zanolli. Salemi's key was not available for testing; however, evidence supports the conclusion that he had a master key that would have opened the deadbolt. The alarm for the evidence office was disarmed using a different code from the alarm designated for the testing area, but it was still a single code shared among those who possessed it. Even though chemists could access the evidence office with the hand reader, lab policy prohibited them from going inside the evidence office unless an evidence officer was present. When an evidence officer left the evidence office, they were supposed to deadbolt the door preventing access by a chemist or anyone else. Despite the policy, chemists occasionally entered the evidence office and found themselves alone because the evidence officer failed to secure the deadbolt. There were also instances in which an evidence officer specifically requested that the chemist stay alone in the evidence office (or the adjoining small office, which was open to the evidence office), while the evidence officer briefly stepped out.

The evidence office safe was used to secure storage of drug samples. Drug Lab staff understood the policy that only evidence officers were authorized to enter the safe to retrieve samples. However, despite this policy, there was an instance when Dookhan entered the safe unaccompanied to get a shelf item while evidence officers continued their work in the evidence office.[106] O'Brien allowed Dookhan to enter the safe alone to retrieve the shelf item and told others that it was not an issue. Evidence suggests that Dookhan also gained unauthorized access to the safe when she committed the June Breach.[107]

In December 2011, six months after the June Breach, supervisors discovered that Dookhan's key to the testing area could also open the evidence safe. This was a surprise to Salemi, who had neither inventoried the keys, nor determined which locks each key could open. Soon after discovering the capabilities of Dookhan's key, supervisors changed the evidence safe lock and combination, limiting access to only evidence office personnel and Salemi. The OIG tested all

[105] The OIG relied on proximity card records and payroll records which support a finding that Dookhan was the only person in the Drug Lab on that date, besides security and janitorial staff. In addition, alarm records show that on the prior night, a person identifying herself as "Annie" called to authorize access for follow day. Furthermore, records show that right after Dookhan used her proximity card to open the double doors to the Drug Lab, the alarm to the chemist testing area was disarmed.

[106] A "shelf item" is an item that is too big to be stored in the chemists' locker, and therefore is secured in the safe.

[107] Report of Interview by Detective Lieutenant Robert Irwin, Commanding MSP-AGO Detective Unit & Detective Captain Joseph Mason, of Annie Dookhan, Chemist (Aug. 28, 2012).

of the available chemists' keys[108] on the original drug safe lock and discovered that all available keys could open the lock.

In April 2012, nearly three months after supervisors changed the safe lock, Nassif changed the evidence office protocol as follows: first, only evidence office staff and the lab supervisor could access the evidence office; second, rare visitors to the evidence office, including the laboratory director, maintenance and computer technicians, were required to sign a bound logbook noting the date, time and purpose of their visit and be escorted by an authorized individual at all times; and third, chemists were required to receive and return samples for analysis through the evidence office window during designated times or by appointment.

The Drug Lab's evidence database, FoxPro, which evidence officers used to manage information pertaining to chain of custody and drug test results, also lacked appropriate security, in that it was accessible by Dookhan and other chemists. Dookhan could access FoxPro to obtain sample-related information for herself and other chemists upon request. Certain chemists were also allowed, on occasion, to enter control card information into FoxPro.

Security of the FoxPro database was lacking in an additional way. If a user attempted to edit any of the information pertaining to a locked sample record, such as information entered from the drug receipt or the control card (including test results), a warning appeared on the computer screen that read "Only a supervisor after making a log entry can continue." The OIG found that to edit data, the user simply needed to press "Yes" to continue; the warning did not actually present a hurdle that required an override or a password; nor was there a record of when these warnings were triggered.

Finally, DPH's security was lacking because the agency did not run regular criminal background checks, or CORI checks,[109] on Drug Lab employees after their initial hiring or required regular drug testing. DPH believed that it could not conduct such CORI checks based on the collective bargaining agreement in place with the chemists' union.

[108] The OIG tested all available keys in the MSP's possession. As noted in footnote 99 above, the MSP had a number of keys that were not designated as belonging to a particular employee. The OIG did not have access to all keys that were designated as belonging to Chemist Daniel Renczkowski, Evidence Officer Gloria Phillips and Chemist Mai Tran.

[109] CORI stands for Criminal Offender Record Information.

XI. Chain-of-Custody Concerns

A. Background

Based on a review of the Drug Lab's chain-of-custody records for the years 2006 through 2012, the OIG found a variety of deviations from established chain-of-custody practices and inadequacies in the system that the evidence office used to assign, track and document samples as they moved through the Drug Lab.

Chain of custody refers to tracking the location and transfer of a piece of evidence from the moment the Drug Lab received it until the moment the Drug Lab transferred it back to the submitting law enforcement agency. An unbroken chain of custody for a piece of forensic evidence verified that the Drug Lab restricted access to the evidence to only appropriate, authorized individuals and limited the likelihood that the evidence was compromised or altered.

The Drug Lab's 2004 *Policies and Procedures* state broadly that "written records of the chain of custody of a sample are maintained from the time the evidence is received into the laboratory through the time the evidence is returned to the submitting agency."[110] The protocols further state, without specifics, that "a record is kept of all transfers of evidence within the laboratory, as well as all transfers between the laboratory and the submitting agency."[111]

The Drug Lab's evidence office was the initial intake point for a high volume of substances submitted by law enforcement agencies for chemical analysis. The evidence office lacked a sufficient number of employees in the evidence office to manage the approximately 50,000 drug samples submitted to the Drug Lab each year. For most of the time between 2002 and 2012, the Drug Lab's evidence office was staffed by either two or three evidence officers with only one evidence officer present on some days. Often, there were lines of police officers at the evidence office window waiting to submit samples. Evidence officers closed the evidence office window for a two-hour time period in the middle of the day and an hour at the end of the day to complete all other evidence office tasks, including creating chain-of-custody records for the intake of samples, assigning samples to chemists, performing data entry of analysis results, and receiving and storing samples that chemists returned to the evidence office.

B. The Drug Lab's Chain-of-Custody Procedures

The evidence office was responsible for documenting the transfer of custody for each sample that entered the Drug Lab. The Drug Lab used two systems to document transfers of custody: an evidence logbook filled out by hand and FoxPro, a computerized database into which data was manually entered or scanned in with a barcode-scanning device. Specifically, transfer of custody occurred at four points: (1) from law enforcement to the evidence office (in FoxPro, called "Sample to Safe"); (2) from the evidence office to a chemist in the Drug Lab (in FoxPro, called "Sample to Lab"); (3) from the chemist in the Drug Lab back to the evidence office (in FoxPro,

[110] *Policies and Procedures – Drug Analysis Laboratories*, updated Sept. 29, 2004, at 8.

[111] *Id.* at 9.

called "Sample to Safe"); and (4) from the evidence office back to the submitting law enforcement agency (in FoxPro, called "Sample to External Location"). FoxPro recorded all transfers in custody; the evidence logbook recorded only internal transfers of samples to and from chemists.

1. Submission from Law Enforcement to Evidence Office

The initial transfer of evidence from a law enforcement agency to the evidence office followed strict submittal procedures that were documented both in FoxPro and with a hard copy of a completed drug receipt. Chain-of-custody practices for the submission of drug samples from law enforcement agencies to the evidence office appeared to have been consistently followed.

Upon receipt of evidence, an evidence officer weighed and examined each item in the presence of the submitting officer to ensure the proper packaging, labeling and submission procedures had been followed.[112] The evidence officer affixed a barcode sticker on a manila evidence envelope with a pre-generated unique identifier known as an "evidence control number" or "sample number" and placed the sample in the envelope. The evidence officer recorded the sample number on the drug receipt. The evidence officer then initialed and dated the drug receipt, keeping the original receipt and providing a copy to the submitting agency.

Next, the evidence officer entered the data from the handwritten drug receipt into the computer database, FoxPro, creating the first electronic chain-of-custody record and generating a "control card" from the data on the receipt. The evidence officer then placed a control card for each sample in the corresponding manila evidence envelope and stored the envelope in the evidence safe until the sample was assigned to a chemist for analysis. The control card stayed with the sample throughout both testing phases and the chemists used it to record the sample's analytical results.

2. Transfer from Evidence Office to Chemist

The chemists and evidence officers generally understood the protocols related to the transfer of samples from the evidence office to the chemists and back, but they did not uniformly adhere to them. When chemists received samples from the evidence office, both the chemists and evidence office staff understood that they had to document the transfer in both FoxPro and the evidence logbook. Evidence officers created a FoxPro chain-of-custody record by scanning the sample barcode and selecting a chemist's name from a dropdown menu. Scanning the samples memorialized in FoxPro their transfer to the selected chemist and also created a printed document that was known as a "batch sheet." This chain-of-custody batch sheet was similar to a receipt; its heading read "Samples to Lab" and it consisted of a list of all the assigned sample numbers, the assigning evidence officer's initials, the assigned chemist's initials and the date. The evidence officer gave the batch sheet to the chemist when the chemist picked up his samples from the evidence office. There was no policy for retaining the batch sheet; the Drug Lab did

[112] The Drug Lab would not accept items that were not properly packaged. However, packaging deficiencies would be remedied at the time of submission if possible.

not keep them as part of the formal chain-of-custody record. Sometimes chemists kept them for their own records, but more often they were discarded.

The evidence officer and the chemist were also supposed to make evidence logbook entries for each sample being transferred to a chemist. The evidence officer was supposed to record his initials, the date and the initials of the chemist to whom he was transferring the sample next to the corresponding sample number in the logbook before the samples left the evidence office with the designated chemist. The chemist was supposed to enter his initials next to the evidence officer's initials to acknowledge his receipt of the samples. Because multiple samples were stored within a single manila evidence envelope, the chemist was supposed to initial the logbook only after examining each sample inside the envelope to ensure that all the samples were intact, accounted for and properly signed out in the logbook. As will be set forth below, chemists did not consistently follow the practice of ensuring that they were signing for all samples they received.

The Drug Lab did not have a policy outlining how chemists should request samples from the evidence office, how frequently they could request samples or how many samples they could receive at one time. Chemists requested more samples whenever they were ready for them through informal methods of communication. This included the use of verbal requests or handwritten notes on scraps of paper or cut-up manila envelopes, which the evidence office threw away after fulfilling the request. In general, chemists set their own pace and specified how many samples they wanted to take and how frequently to take them. Despite the fact that FoxPro had the capability to generate reports detailing which chemist had which samples, neither the evidence office nor the Drug Lab supervisors kept track of which samples or how many samples each chemist had in his or her possession at any given time. Most chemists requested twenty-five samples at a time. However, based on Dookhan's requests, the evidence office often assigned her between sixty and eighty samples at a time, and as many as 119 samples per day. In June 2011, the evidence office assigned Dookhan eighty-three samples and then three days later, she was assigned eighty-four more.

When the chemists brought the samples to their bench space in the Drug Lab, they stored them in their own secure locker in their work area. After the complete analysis of a sample – including the preliminary and confirmatory phases – the chemist brought the control card back to the evidence office for data entry. The evidence officer would input the information from the control card into FoxPro, including the date of analysis, the identity of the confirmatory chemist, the net weight of the sample and the drug analysis results.

The evidence officer would not need to re-enter the name of the primary chemist at this point, as FoxPro would already contain that information if the evidence officer had properly scanned out the sample to a chemist. If the name of the primary chemist was missing at this point, it was a clear indication that the evidence officer had not properly scanned out the sample to the chemist. This happened repeatedly over the years, but there was no policy or practice for investigating or even documenting the discrepancy.[113] The evidence office supervisor, on the assumption that it

[113] The OIG did discover one five-page notebook that documented evidence office discrepancies from 2006 through 2012. The twenty-five entries in that notebook related to issues such as incorrect drug certificates or samples returned to the wrong police department, but did not include any entries related to breaches of chain-of-custody protocols within the Drug Lab.

must be caused by a computer glitch, instructed the evidence officers to input the primary chemist's name when this occurred and move on.

Entry of a sample's analytical results into FoxPro generated a printed drug certificate[114] for the primary and confirmatory chemists to sign in the presence of a notary public. Once the drug certificate was signed, the primary chemist placed it back in the corresponding sample's envelope and returned the envelope to the evidence office.

3. Transfer from Chemist Back to Evidence Office

After analysis, primary chemists could return their samples to the evidence office whenever it was convenient for them, as long as an evidence officer was present to ensure that samples were not left unattended.[115] Further, chemists were not required to document the transfer of samples back to the evidence office in any way. Rather, chemists simply dropped off their bin of samples in the evidence office and left.[116] Furthermore, until June 2011, the evidence officers were not expected to examine the contents of the evidence envelopes being returned by chemists to confirm that the samples inside corresponded to the sample numbers affixed to the outside of the evidence envelopes.[117] Throughout the years, however, the evidence officers were expected to record the transfer of samples from the chemists back to the evidence office both in FoxPro, by scanning the samples' barcodes, and in the evidence logbook.

Despite this expectation, some evidence officers would bypass the evidence logbook and only scan samples directly into FoxPro. The decision whether to fill in the "return to safe" column in the logbook appeared to depend on how busy an evidence officer was. Sometimes evidence officers would go back to the logbook and update the return column after they had already put the samples in the safe. Further, the OIG also found that evidence officers often did not process samples as soon as the chemists returned them; rather, the evidence officers would leave the samples out in the evidence office and check them back in when they had time.

FoxPro's chain-of-custody record feature was set up so that the evidence officers had to transfer a sample to and from the safe and throughout the lab in sequential order. Once the evidence officer received a sample into the evidence office and documented it in FoxPro as being in the safe, the next transfer for that sample had to be to a location outside of the safe (*e.g.*, to a chemist in the lab); a safe-to-safe transaction was not possible in FoxPro.

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[114] A drug certificate is a notarized document that reports and certifies the analytical results of a sample.

[115] The OIG discovered one occasion when an evidence officer returned to the evidence office to find a bin of samples left unattended.

[116] This policy changed in 2012 when chemists were then required to return samples through the evidence office window directly to an evidence officer, rather than enter the evidence office to drop off their samples.

[117] This policy changed in mid-June 2011 in response to an incident when a sample was sent back to the wrong police department; the new policy required chemists to get a member of the evidence office to verify and sign for each sample the chemist brought back to the evidence office.

4. Transfer from Evidence Office Back to Law Enforcement Agency

FoxPro recorded the transfer of custody back to the submitting law enforcement agency when the evidence officer scanned the samples, creating a "Police Pickup" sheet. The sheet listed the sample numbers, the submitting agency, the law enforcement officer picking up the samples, the evidence officer and the date. The evidence office printed two copies of this sheet, both were signed by the evidence officer and the police officer, and the evidence office retained one as part of the formal chain-of-custody record in the Drug Lab.

C. Issues with Chain-of-custody Procedures

In its review, the OIG found multiple instances of missing or inaccurate chain-of-custody records as well as deviations from the Drug Lab's chain-of-custody procedures. The OIG also found that there was no mechanism in place for detecting, documenting and addressing chain-of-custody errors.

The OIG reviewed the evidence logbook entries for the years 2006 through 2012 to detect samples that lacked chain-of-custody documentation. The OIG then cross-referenced any samples that lacked transfer initials in the evidence logbook with FoxPro's chain-of-custody records and the sample's drug analysis documents to verify that a chemist had custody of the sample at some point.

Based on this review, the OIG found four types of circumstances in which the Drug Lab lacked chain-of-custody records: (1) situations in which the chain of custody was complete in FoxPro, but the logbook lacked the chemist's initials signifying receipt of the samples; (2) situations in which the chain of custody was complete in FoxPro, but the logbook lacked the evidence officer's initials signifying the transfer of the samples to a chemist; (3) situations in which the chain of custody was complete in FoxPro, but the logbook lacked both the evidence officer's and chemist's initials signifying transfer of the samples to the chemist; and (4) situations in which there were no entries in FoxPro and no chain-of-custody documentation in the logbook. In all cases in which chain-of-custody records were found to be lacking, the sample in fact did leave the evidence office, was tested by a chemist, was returned to the safe, and then was returned to the police department.

1. Logbook Lacking Chemist's Initials

The OIG found that chemists occasionally failed to initial the evidence logbook. Chemists often failed to contemporaneously record their receipt of a sample and would take their sample from the evidence office without writing their initials next to the sample's control number in the logbook.[118] Between 2006 and 2012, there were 769 samples which had proper FoxPro chain-of-custody entries but for which there were no chemists' initials in the evidence logbook. Some of these deviations were a result of the chemist taking samples with the intention of coming back

[118] On one occasion the evidence office did not have a logbook. During that timeframe, the evidence office kept copies of all "samples to lab" and "samples to safe" batch sheets to fill in the logbooks once the Drug Lab received a shipment of new logbooks.

later to fill in the logbook, despite the Drug Lab's policy of checking each sample at the time of transfer to ensure that the control number on the sample matched the control number in the evidence logbook. In other instances it appears that a chemist missed signing out one or two samples as a result of overlooking the very first or very last sample number in a long list of sample numbers.

In an effort to detect instances in which chemists' initials were missing, Evidence Officer Shirley Sprague would occasionally review the logbook. She would place a Post-it note on the page with the missing initials as a reminder to the chemist to sign the book after the fact. There was no policy requiring Sprague to conduct this review, to record her findings in any way or to report the deviations to a supervisor. In addition, Sprague performed this review sporadically, and only when she had downtime or happened to notice a blank place in the logbook. Besides that one informal check, there was no mechanism in place to detect logbook errors.

2. Logbook Lacking Evidence Officer's Initials

There were also instances when evidence officers failed to initial the appropriate place in the logbook to record their assignment of a sample to a chemist, even though the chemist placed his initials in the appropriate place in the logbook. The OIG found that, between 2006 and 2012, there were 294 samples that had proper FoxPro chain-of-custody records but were missing the evidence officer's initials in the evidence logbook. In certain instances, it is clear that these were transcription errors when the evidence officer initialed the wrong section (for example, the evidence officer filled out BXX-X1345 through BXX-X1350 instead of BXX-X2345 through BXX-X2350). Also, much like with the chemists, the lack of an evidence officer's initials may have been due to the evidence officer inadvertently skipping one or two samples in a large batch of samples (for example, the very first or very last number in a long list of samples). Another plausible explanation for the lack of an evidence officer's initials derives from the practice in which evidence officers would scan the samples out in FoxPro, then leave the samples out in a bin in the evidence office for a chemist to pick up. In certain instances, when the office was busy, an evidence officer would allow a chemist to sign for and take samples before the evidence officer properly initialed the logbook. It is possible that in some of these instances the evidence officer failed to go back and add her initials to the logbook.

Regardless of how these situations occurred, there was, again, no mechanism in place to detect the lack of evidence officer initials, to investigate the reason for its occurrence and to document the failure in the chain of custody.[119] Further, despite an expectation that the chemist would alert the evidence officer when his initials were missing, this did not always occur.

3. Logbook Lacking Both Chemist's and Evidence Officer's Initials

The OIG found that between 2006 and 2012, there were eighty-one samples in which FoxPro contained the proper chain-of-custody records, but neither the chemist nor the evidence officer had initialed the logbook. In general, this situation applied to one or two samples in a batch and

[119] Again, as noted in footnote 113, there was a discrepancy notebook in the evidence office but it was only used to document issues with drug certificates or the transfer of samples sent to police departments.

likely resulted from the evidence officer failing to initial every sample in an assigned batch and then the chemist signing for only the samples the evidence officer initialed. This is contrary to the Drug Lab's protocol, which required the chemist to check each sample in the evidence envelopes against the sample numbers in the logbook.

However, the OIG also found instances when neither the evidence officer nor the chemist recorded the transfer of larger quantities of samples in the logbook. The OIG found that in 2008, an evidence officer properly recorded FoxPro chain-of-custody records for a batch of seventeen samples transferred to a chemist, but both the evidence officer and the chemist failed to record the transfer in the evidence logbook. And in 2009, the same failure occurred for a batch of fifteen samples. Also in 2009, the evidence officer properly recorded chain-of-custody records in FoxPro for a batch of seven samples transferred to a chemist, but both the evidence officer and the chemist failed to record the transfer in the evidence logbook.

It is not clear why both the chemist and evidence officer would have failed to initial the logbook in instances involving large batches of samples. Additionally, as with all other deviations from chain-of-custody protocols, there was no documentation or reporting mechanism in place that would have triggered an investigation of or repercussions for these errors.

4. No Chain of Custody in FoxPro or the Logbook

The most egregious situations that the OIG uncovered were instances in which no chain-of-custody records existed in either FoxPro or the evidence logbook to indicate that the evidence officer had assigned samples to a chemist for analysis or that the chemist had returned them to the evidence office, despite the fact that the sample was analyzed. In FoxPro, these samples only had entries for a Sample to Safe (reflecting the receipt of the sample from the law enforcement agency) and a Sample to External Location entry (reflecting the transfer of the sample back to the law enforcement agency), without any entry for Sample to Lab (reflecting the transfer of the sample to the chemist) or Sample to Safe (reflecting the transfer of the sample from the chemist back to the evidence office). As will be set forth further in Sections XII and XIII, this very issue led to the discovery of Dookhan's acts of malfeasance; that is, Drug Lab personnel discovered that there were no chain-of-custody records in the logbook or FoxPro for ninety samples that Dookhan had custody of for testing in June 2011 ("June Breach"). In reviewing records for the years 2006 through 2012, the OIG found 196 samples that were missing every form of chain-of-custody documentation, including the June Breach[120] and the thirty samples that Dookhan took from the evidence office in May 2011 ("May Breach").[121] By reviewing the evidence logbooks and FoxPro, the OIG found an additional seventy-six samples that lacked chain-of-custody records, including samples for both Dookhan and other chemists.

With respect to the June Breach, all of the evidence suggests (and Dookhan did not deny) that she removed the samples from the safe without the assistance or knowledge of any evidence

[120] *See* Section XII.

[121] *See* Section XIII.

officer.[122] In other cases, however, the chain-of-custody records may have been missing in the logbook and in FoxPro because the evidence officer failed to properly scan all of the samples' evidence envelope barcodes. As a consequence, the resulting batch sheet would not have included all of the samples transferred to the chemist. The chemists would have detected such errors had they compared the sample numbers in the evidence envelopes with the samples signed out to them in the logbook. In practice, however, many of the chemists compared the sample numbers on the "Samples to Lab" batch sheet with the sample numbers in the logbook, creating a situation in which the chemist could receive samples that were not documented in FoxPro or the logbook.

When there was no chain-of-custody documentation in the logbook or FoxPro, it usually occurred with one or two samples at a time. This suggests that the problem occurred because the chemist had referenced a batch sheet to fill in the logbook as described above. However, the OIG found instances, in addition to Dookhan's May and June Breaches, in which Dookhan had larger groups of samples with no chain-of-custody records. Between mid-March and mid-April of 2010, Dookhan analyzed a total of twenty-four samples that had not been signed out of the evidence office in either FoxPro or in the logbook. There is no way of knowing if all twenty-four samples left the evidence office at the same time (as there are no chain-of-custody records for them), or if the samples left the evidence office in smaller groups over the course of the month-long timeframe. On three different days, however, Dookhan tested a group of five samples, six samples, and nine samples, respectively, suggesting at the very least that each of these groups of samples left the evidence office together.

In addition to the June Breach and the May Breach, Dookhan analyzed fifteen samples that lacked chain-of-custody records in 2011. The dates of analysis for these samples spanned mid-February through May 2011. Again, there is no way to know when these fifteen samples left the evidence office as there are no chain-of-custody records for them.

D. Failure to Act Upon Chain-of-Custody Breaches

When evidence officers used FoxPro, there were two points in time when they should have noticed breaches in proper chain-of-custody procedures: (1) when the evidence officer entered a sample's analytical results from the control card into FoxPro and the primary chemist's name did not automatically appear in FoxPro; and (2) when the chemist returned the sample to the evidence office and the evidence officer was unable to scan the sample back to the safe because FoxPro indicated that the sample was still in the safe and not yet assigned to a chemist.

The OIG found evidence that on several occasions, evidence officers entered control card results, noticed that FoxPro had no designation for the primary chemist, and brought the situation to Evidence Office Supervisor Elisabeth O'Brien's attention. Each time, O'Brien responded that it must be a computer glitch. There is no evidence that O'Brien took any steps to investigate the reasons for the missing information. The evidence officer would then manually enter the primary chemist's name for each of the control cards being entered into FoxPro.

[122] Such evidence includes the fact that Dookhan had previously requested Quincy samples from Sprague, who had denied the request, and the fact that Dookhan returned the samples from the June Breach in an evidence safe storage bin that was not used to transfer samples.

With respect to the second instance in which FoxPro would not allow an evidence officer to scan samples back into the safe, sometimes evidence officers assumed (because FoxPro showed that the sample was in the safe), that an evidence officer had already scanned the sample back in. The OIG did not find any evidence that evidence officers made further inquiries when this occurred; rather, the OIG found that the evidence officers would simply place the samples back in the safe to await pick-up from law enforcement.

In either of these instances, there was no mechanism for documenting the deviations from the chain-of-custody protocols. Nor is there any evidence that the Drug Lab reviewed its scanner to ensure that each time an evidence officer used it, FoxPro reflected the transfer of custody. There was no policy for routine review of chain-of-custody records at any time.

E. Failure to Inventory the Drug Safe

The OIG found that between 2002 and June 2012, the Drug Lab did not conduct inventories of the samples in the evidence safe. When the MSP took over the Drug Lab in the summer of 2012, eight members of the MSP Crime Lab Drug Unit, three Lieutenants from the MSP Narcotics Unit and two employees of the Drug Lab conducted an inventory of the safe. The audit inventory revealed that 157 samples were "missing" from the evidence safe, as FoxPro's chain-of-custody records listed the samples as still being in the safe.[123]

F. Lack of Policy for "Found" Drugs

The Drug Lab had no policy or protocol for handling those rare occasions when chemists would find loose items of drug evidence, such as a pill, in the Drug Lab. The practice for "found drugs" was to report them to a supervisor, who would secure the item and attempt to determine where it came from. This resulted in a number of miscellaneous items being stored in the evidence safe or in drawers or lockers within the Drug Lab without being associated with a particular case.

* * *

The various breaches in chain-of-custody policies and procedures at the Drug Lab led to many incomplete chain-of-custody records. These breaches were largely due to human error, lack of oversight, and inadequate mechanisms for detecting and preventing mistakes or malfeasance. When evidence officers detected instances of mistakes or malfeasance, however, there were insufficient protocols for addressing them. Many of the chain-of-custody errors were a product of the sheer volume of samples entering the evidence office. Nevertheless, gaps in policies and procedures, as well as failures to follow policies and procedures that were in place, allowed for such errors to go undetected and uncorrected.

[123] The evidence office called law enforcement agencies to determine whether the samples had, in fact, been returned. For most of the 157 samples, the police departments confirmed that the samples had been returned to them. When the Drug Lab closed in August 2012, however, the evidence office had not concluded making those calls.

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XII. Dookhan's Malfeasance

The issue that prompted the current criminal justice situation in Massachusetts stemmed from the malfeasance of one chemist – Annie Dookhan. Dookhan's malfeasance began to surface on June 16, 2011, when the Drug Lab's evidence office discovered that Dookhan had removed ninety samples from the office without following the Drug Lab's chain-of-custody protocols ("June Breach"). The June Breach consisted of ninety samples from Quincy police department and Wellesley police department.

A. Dookhan's High Testing Volumes

Before that time, however, Dookhan's activities were garnering increasing suspicion, beginning with her high testing volumes. From the start of her employment with the Drug Lab, Dookhan was testing (as the primary chemist) a larger than average number of samples compared to her peers. In 2004 and 2005, Dookhan's first two full years of employment, Dookhan analyzed 8,391 and 8,777 samples per year respectively, approximately 700 samples per month. Although certain chemists during that timeframe had months of high productivity (*e.g.*, 595 samples for a particular month),[124] the next highest-producing chemist analyzed an average of 3,640 samples per year.

Dookhan's high numbers became more apparent after *Melendez-Diaz*, when she was regularly called to testify in court proceedings and had much less time in the Drug Lab to complete her casework.[125] After *Melendez-Diaz*, the productivity of all of the chemists at the Drug Lab precipitously declined. However, unlike the other chemists, after a short period of declining productivity, Dookhan's numbers rebounded and again reached nearly twice that of the next highest-producing chemist. Specifically, during the first six months of 2009, before the Supreme Court issued *Melendez-Diaz* in June of that year, Dookhan tested 2,586 samples,[126] while the next highest-producing chemist for the same time period tested 1,584 samples. During the second half of 2009, after *Melendez-Diaz* was issued, Dookhan's numbers did decrease, but rebounded by December when they reached their highest point for 2009, at 617 samples. In 2010, Dookhan analyzed 6,466 samples, while the next highest-producing chemist analyzed 3,329 samples.

Elisabeth O'Brien, Evidence Office Supervisor I, first noted Dookhan's post-*Melendez-Diaz* high numbers in December 2009 and alerted Salemi. Before *Melendez-Diaz*, Salemi considered an average of 150 to 350 samples analyzed per month to be an acceptable range. Yet Dookhan

[124] Certain samples take longer to analyze than others. For instance, marijuana can be analyzed fairly quickly, while powders, such as heroin and cocaine, take longer. Dookhan's testing generally included a high number of powders. With respect to the 595 samples tested by another chemist referenced above, 525 were marijuana samples. In contrast, Dookhan's March 2004 sample volume of 902 included 384 marijuana samples, but also 420 powders.

[125] Dookhan had 91.7 hours of documented court appearances from June 29, 2009 through December 17, 2009. Dookhan had 201.5 hours of documented court appearances for the calendar year 2010.

[126] Specifically, Dookhan tested 517 samples in January, 472 in February, 467 in March, 267 in April, 455 in May and 408 in June.

processed 617 samples[127] in December 2009 (after *Melendez-Diaz*), eighty-seven of which were listed as "not tested."[128] Salemi was appropriately concerned.

In January 2010, Supervisor of the Drug Lab, Charles Salemi and O'Brien told Director of the Division of Analytical Chemistry, Julianne Nassif about their concerns with Dookhan's testing volume. The three spoke about Dookhan's eagerness to work extra hours without getting compensation and her general efficiency. Salemi reached the conclusion that Dookhan was trying to please people and was rushing her work in an effort to do so. Salemi suggested that they could transfer Michael Lawler, a more senior chemist (with the title of Chemist III) into Dookhan's lab room to serve as a team leader. Nassif and O'Brien disagreed with Salemi and Nassif denied the request. Rather than move a senior chemist into Dookhan's room, Nassif instructed Salemi and O'Brien to perform a paper audit of one month of Dookhan's work.

Salemi and O'Brien conducted an audit in January 2010 and focused on the paperwork associated with the analyses Dookhan performed in December 2009. Salemi and O'Brien also audited the paperwork of two other chemists so that Dookhan would not feel targeted. The audit revealed that Dookhan failed to report the GC/MS results on multiple powder sheets, but Salemi and O'Brien viewed this as a minor issue.[129] Salemi viewed it as another indication that Dookhan was rushing. Salemi gave Dookhan a copy of the audit and told her she needed to fill out her paperwork completely. After the paperwork audit, no further action was taken to monitor Dookhan or ensure the quality of her forensic results.

B. Other Concerns About Dookhan

In the months that followed, Lawler reported concerns to O'Brien and Salemi that Dookhan could not have possibly performed the number of analyses she claimed. Salemi informed Lawler that he had already spoken to Nassif regarding Dookhan's high numbers, and that if Lawler had any other concerns, he should take them directly to Nassif. In the spring of 2011, Lawler began secretly monitoring Dookhan's reagent mix levels and her discarded microscope slides, both needed for the microcrystalline test used to identify cocaine. He did so in an effort to determine whether Dookhan was actually conducting these time-consuming tests. Lawler also brought his suspicions to the chemists' union, Massachusetts Organization for State Engineers and Scientists ("MOSES"), but the union official warned Lawler against defaming a fellow union chemist and that so-called "hearsay" could damage a young woman's career. This encounter with the

[127] Of those 617, 365 were powders.

[128] A chemist to whom the evidence office has assigned samples for testing may enter "not tested" on a control card for a variety of reasons. Reasons for not testing a sample include instances in which the chemist is notified that the case has resolved and the sample no longer needs to be tested. It also includes instances in which the sample is assigned to the chemist who did the original analysis in order for the chemist to accompany a defense chemist in the Drug Lab as he reweighs and/or retests the sample.

[129] It is important to note that Salemi and O'Brien's audit was quite superficial, in that they failed to look at underlying testing documents. One of the residue samples analyzed by Dookhan that they "audited" was a sample that she preliminarily tested on the stand-alone GC instrument and for which Dookhan documented on her powder sheet a positive finding for cocaine. However, the first GC/MS run of that vial – which had been positive on the GC – failed to indicate the presence of cocaine. A second GC/MS run also failed to indicate the presence of cocaine. A third GC/MS run, however, generated a very strong peak, indicating a positive for cocaine.

MOSES official frightened Lawler into silence. During this same timeframe, GC/MS Supervisor Peter Piro also voiced his concerns to O'Brien and Salemi about Dookhan's high numbers and his suspicion that Dookhan was not performing the required analyses on all samples. O'Brien assured Piro that she had no doubts about Dookhan performing all of the necessary tests. Salemi told Piro that he had already discussed Dookhan's productivity with Nassif.

Another chemist, Daniel Renczkowski, noticed that since 2010, Dookhan had a higher than average number of "returns" on her GC/MS submissions due to discrepancies between Dookhan's preliminary testing results and the confirmatory chemist's results on the GC/MS instrument. He also noted that Dookhan was making transcription errors on the vials she submitted to the GC/MS section, including writing the same evidence sample number on multiple vials. When Renczkowski confronted Dookhan about the transcription errors, she changed the numbers on the spot, claiming that she remembered the correct sample number for each vial. Further, on several occasions dating back to 2009, Renczkowski noticed that Dookhan would line up several dozen uncapped GC/MS vials in a rack on her bench as she prepared them in a group fashion for submittal to GC/MS. Renczkowski questioned Dookhan about the vials because the practice at the Drug Lab was for chemists to analyze one sample at a time and because the sample numbers were not written on the vials. Dookhan responded that the vials were in the same order as her stack of control cards so she would not get confused. Renczkowski reported all of these concerns to his direct supervisor, Piro. Piro ultimately told Salemi about these GC/MS issues, but not until after the June Breach was discovered.

Around March 2011, chemist Kate Corbett reported to Piro that Dookhan had forged Corbett's initials on a "batch sheet" for the GC/MS instrument, falsely indicating that Corbett had been the operator on a particular GC/MS run. Piro assured Corbett that he would discuss the matter with Dookhan. Whether Piro directly confronted Dookhan remains unclear.

In addition, at some point prior to the discovery of the June Breach, Piro witnessed what appeared to be Dookhan testing samples without first performing the necessary calibration of her balance.[130] Piro confronted Dookhan by handing her the weights needed to perform the calibration. Dookhan took the weights from Piro and performed the calibration without comment. There is no evidence to suggest that Piro reported this incident to either Salemi or Nassif.

In late April 2011, O'Brien reported to Salemi that Dookhan's numbers were high again for the month of March 2011. Records indicate that Dookhan analyzed 715 samples that month, with thirty-seven listed as "not tested."[131] Salemi again communicated these concerns to Nassif and asked that he, Nassif and O'Brien meet to discuss the issue. The three met on May 2, 2011. Salemi again took the position that Dookhan was merely rushing. They also discussed the belief that Dookhan was working overtime and not requesting compensation.

On May 3, 2011, as a result of their meeting the previous day, Nassif indicated that she would assign Dookhan a project, presumably to slow down her testing. Specifically, Nassif suggested

[130] Chemists must check their balances daily. The calibration of a balance is an important quality control measure taken to ensure that the balance's readings are within an acceptable range of error.

[131] Of these 715 samples, 245 were powders.

that Dookhan assess the forensic application of a Raman Spectrometer, a type of forensic testing equipment, in the Drug Lab. Both Salemi and O'Brien approved of Nassif's plan; however, there is no evidence that Nassif ever gave Dookhan that project.

Also in May 2011, Piro and Renczkowski approached Salemi to report another issue with Dookhan. Specifically, Renczkowski informed Salemi that Dookhan had forged his initials on a GC/MS control sheet and thereby falsely indicated that he had received the samples in the GC/MS section. When Piro confronted Dookhan about the forgery, she claimed it was a mistake and took the sheet back. Without talking to Dookhan or doing any other due diligence, Salemi viewed this transgression as another indication that Dookhan was rushing her work. He believed she had forged the chemist's initials in order to get her samples tested more quickly.

In May 2011, Dookhan began to request by sample control number and geographical location – namely the City of Quincy – the samples that she wanted to test. At some point in May 2011, Evidence Officer Shirley Sprague denied Dookhan's requests because she felt that Dookhan should get whatever samples were next in line, like every other chemist.

In addition to the concerns that Dookhan's fellow chemists voiced, and concerns about her high productivity, the week before the discovery of the June Breach, the evidence office discovered that a sample Dookhan had analyzed had been returned to the wrong police department. The evidence office determined that the error occurred because Dookhan had placed the sample into the wrong envelope. On June 15, 2011, one day before the discovery of the June Breach, O'Brien, Salemi and Nassif conferred and agreed that they needed to implement stricter chain-of-custody protocols in order to protect the integrity of the chain of custody in the Drug Lab. They decided that, under the new protocols, a member of the evidence office would verify that the evidence envelopes contained the correct samples when chemists returned them to the evidence office. Under the previous practice, an evidence officer could accept the envelopes without checking their contents. They also agreed that the new protocols would go into effect as soon as practical, but no later than Monday, June 20, 2011.

C. The June Breach

On June 16, 2011, Sprague was entering drug findings from control cards into the computer for purposes of creating and printing drug certificates. After inputting the findings from approximately five control cards, she noticed that the name of the primary chemist on the control cards (Dookhan) failed to automatically appear in FoxPro, the evidence office's database, and she had to manually enter Dookhan's name each time. Concerned that multiple samples failed to have Dookhan's name already designated in FoxPro, Sprague alerted O'Brien to the situation. In response, O'Brien reviewed the control cards, the chain-of-custody screen in FoxPro and then the evidence logbook. Finding no evidence that anyone had assigned the samples to Dookhan, O'Brien checked the safe and found that the samples in question were not there. O'Brien immediately notified Salemi.

Salemi confirmed what O'Brien had found – that Dookhan appeared to have custody of ninety samples that had not been assigned to her in the evidence logbook or in FoxPro. O'Brien and Salemi arranged to meet with Nassif on the following Monday, June 20, 2011. At that meeting, Salemi and O'Brien told Nassif of Dookhan's apparent breach in protocol and showed Nassif

that there were blank lines in the evidence logbook where an evidence officer's initials should have appeared had an evidence officer properly assigned the samples to Dookhan. Because Dookhan had already left for the day, they decided to meet with her the following day and ask about the situation. Nassif immediately contacted Director of the Bureau of Laboratory Sciences ("BLS"), Linda Han to tell her about the situation with Dookhan.

The next day, just before the meeting with Dookhan, O'Brien discovered that the previously blank lines in the evidence logbook had been filled in and dated June 14, 2011, with a purported transfer of samples from Evidence Officer Gloria Phillips to Dookhan. Phillips, however, could not have signed and dated the evidence logbook, because she had not been at work between the time that Nassif, Salemi and O'Brien observed the blank lines on the previous day and the time her initials were discovered in the logbook. It was apparent to O'Brien, Nassif and Salemi that Phillips' initials had been forged.

Shortly after discovering the forgery, Nassif, O'Brien and Salemi met with Dookhan. When they confronted her with the evidence logbook, she did not confirm or deny the allegations that she had breached chain-of-custody protocols and forged Phillips' initials. She simply stated "I can see why you would think that."[132] At Nassif's direction, O'Brien called Phillips three days later and verified that Phillips had not initialed the evidence logbook.

D. Management's Failure to Take Appropriate Action

After the June 21, 2011 meeting, Nassif planned to temporarily remove Dookhan from her testing responsibilities and assign her to draft protocols for the Drug Lab. Ultimately, she placed Dookhan at a desk in the Drug Lab, outside of the secured chemist testing areas, near the evidence office. Nassif's purported rationale for this quiet removal was that Dookhan had always been an outstanding employee without any disciplinary issues. Both Salemi and O'Brien advised Nassif that they had no suspicion about the integrity of Dookhan's work product and that she was a hard worker and a good analyst. Further, Nassif believed that Dookhan had suffered some problems in her personal life that may have affected her judgment. There is evidence that Nassif believed that Dookhan would eventually transfer back to full testing responsibilities once she demonstrated an understanding of what she had done wrong. Nassif informed Han of her approach to the situation and Han approved.

At that time, neither Nassif nor Han reported Dookhan's breach in chain-of-custody protocols or her forgery to any senior staff at DPH. They failed to tell anyone in DPH's Human Resources department, Labor Relations department or the Commissioner's Office for more than five months, even though Han had regularly scheduled meetings with each of these groups.[133] Nassif clearly was aware of the legal significance of a breach in chain of custody. She had experience with overseeing high-profile cases in the Drug Lab in which she instructed others as to the

[132] Memorandum from Steven Chilian, Deputy General Counsel, Department of Public Health to John Auerbach, Commissioner, Department of Public Health (Feb. 29, 2012).

[133] DPH was organized into ten separate bureaus, one of which was the Bureau of Laboratory Sciences, directed by Han. At least once a month, DPH Commissioner John Auerbach would meet with all bureau directors as a group. He also held individual meetings with each bureau director roughly every two months. Thus, Han likely met with Auerbach multiple times in the five-and-half month period during which she failed to report the June Breach.

importance of chain of custody. Further, Nassif oversaw the Chemical Threat Laboratory, where chain of custody was an essential aspect of that lab's operations. For instance, one month after she and the others discovered the June Breach, Nassif was involved in a small, yet significant, change to chain-of-custody protocols in the Chemical Threat Laboratory's standard operating procedures.

The reason for Han and Nassif's failure to report the June Breach may have been based on their desire to conceal any problems at the Drug Lab, given its potential transfer to EOPSS and/or their fear of losing the money it was receiving through the federal Coverdell grant.[134] It is also possible that from Han and Nassif's vantage, the Drug Lab was just not that important compared to the more pressing needs of the other public health laboratories in the SLI building. In any event, neither disclosed Dookhan's misdeeds with respect to the June Breach to anyone outside the SLI building for five and a half months.

Neither Nassif or Salemi ever officially informed Drug Lab employees of Dookhan's transgressions with respect to the June Breach. In fact, Nassif admonished Phillips not to tell anyone about the June Breach and the forgery. However, news of the June Breach spread among the chemists. Given what they learned, the chemists did not view Dookhan's transfer from sample analysis to drafting protocols as discipline, and some felt that it seemed more like a promotion. Some questioned why a Chemist II like Dookhan would be given such a high-level assignment. Others were disturbed that management had asked the very person who had breached the protocols to draft them.

Not only did Nassif and Han fail to report Dookhan's transgressions in a timely fashion, they also failed to further investigate Dookhan and the June Breach for several months. Nassif, O'Brien and Salemi took the position that there was no issue with the integrity or accuracy of the test results for the samples involved in the June Breach; however, there is no evidence that anyone took steps to verify that was true. O'Brien looked at the evidence logbooks to determine whether there were any other breaches, and either uncovered or reminded herself of a second breach – one that had occurred the previous month ("May Breach").[135] O'Brien informed Nassif of the May Breach within a week of their meeting with Dookhan on June 20, 2011. Even armed with this information, Nassif and Han failed to direct a widespread investigation into the Drug Lab's chain of custody, which would have unearthed the many breaches the OIG later uncovered, or to verify the integrity of the May Breach testing results. In fact, no one ever questioned Dookhan about the May Breach.

E. Dookhan's Continued Access to the Drug Lab

Furthermore, not only did Nassif and Han fail to report or fully investigate the June Breach (or May Breach) for an extended period of time, they also failed to restrict Dookhan's access to samples. After the June 21, 2011 meeting, Dookhan continued to test the samples in her

[134] The impact of the money received from the Coverdell grant on Nassif and Han's decision-making will be explored more deeply in Section XIV.

[135] *See* Section XIII.

possession, including the samples from the June Breach.[136] It was not until July 18, 2011 that Nassif told Dookhan that she had to minimize her time in the chemist testing area and focus on writing the protocols for the Drug Lab.[137] Despite this directive, Dookhan was allowed to continue testing all of the samples she had in progress, the last of which she completed on July 20, 2011.[138] Moreover, between July 21, 2011 and November 2011, Nassif approved the assignment of samples to Dookhan for analysis. Dookhan was assigned twenty-six additional samples as primary chemist during this timeframe; she took possession of all twenty-six but only analyzed ten.

Not only did Nassif and Han fail to restrict Dookhan's access to samples as a primary analyst, they also failed to restrict her access as a confirmatory analyst. Dookhan remained in the GC/MS rotation for a week after June 21, 2011. On June 28, 2011, Nassif informed Dookhan that she was removing her from the GC/MS rotation so that she could work with Nassif on protocols and technical review templates. However, Dookhan continued to analyze samples as a confirmatory chemist, testing thirty-six samples between June 21, 2011 and July 12, 2011. Another chemist, Nicole Medina, observed Dookhan alone in the GC/MS room with the lights off and the door closed at some point between July 2011 and September 2011, after Piro had told the other chemists that Dookhan was no longer allowed in the area.

Dookhan was also allowed to continue her role as a QC reviewer in the Drug Lab through September 2011.[139] This work consisted of reviewing daily quality control documentation in connection with GC/MS equipment functionality and calibration to ensure the documentation was completed and properly recorded.[140] Dookhan's quality control work also included reviewing and signing off on Salemi's monthly quality control audits[141] and monitoring chemists' compliance with balance QC procedures.

At some point after the June Breach, Renczkowski reviewed some of Dookhan's quality control work and discovered that she had falsified records for the QC standard mix run on the GC/MS instrument[142] by recording fabricated data that suggested the instrument was working correctly.[143]

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[136] Between June 21, 2011 and July 20, 2011, Dookhan analyzed, as primary chemist, 155 samples that had been assigned to her prior to June 21, 2011.

[137] The day that Nassif finally told Dookhan to minimize her time in the lab, was the very day that Nassif was preparing for an upcoming visit from the MSP on July 26, 2011 to review the Drug Lab for purposes of determining the continued receipt of Coverdell grant funds. *See* Section XIV.

[138] Dookhan returned the samples from the June Breach to the evidence office in a storage bin that typically was used to store samples in the safe; the bin was not ordinarily used to transport samples from the evidence office to the lab. Dookhan's possession of the storage bin further corroborated the theory that she had taken the samples from the June Breach directly from the safe herself.

[139] *See* Section IX.

[140] Dookhan verified that the GC/MS operators had properly recorded daily quality control documentation such as the GC/MS Daily Injector/Column Check. Dookhan also signed off on GC/MS tune tests.

[141] Salemi conducted audits on the paperwork and testing methods for five to ten randomly-selected samples per month. These audits also involved preliminary retesting. *See* Section IX.

[142] The QC standard mix is a quality control procedure that ensures that the GC/MS instrument can distinguish between two compounds.

[143] *See* Section IX.

Also at some point after the June Breach, Renczkowski and Medina discovered that Dookhan had forged Medina's initials on a tune test.[144] Renczkowski reported both of these concerns to his supervisor, Piro.

In addition to Dookhan's continued involvement in sample analysis and quality control procedures, neither Nassif nor Han restricted Dookhan's involvement in the court system. Dookhan continued to fill discovery requests and to testify in court. She testified thirty-two times between June 22, 2011 and February 9, 2012.

Furthermore, Dookhan's supervisors did not restrict her security clearance in the Drug Lab in any way. Dookhan retained all of her keys and no one changed the keypad codes and hand reader in the Drug Lab until December 2011. Furthermore, no one changed the verbal password for access to the Drug Lab after normal working hours with the Drug Lab security company. In fact, as discussed in Section X, on one occasion – on October 1, 2011 – Dookhan was in the Drug Lab alone on a weekend day, having gained access through a telephone call to the security company.

In the late summer or early fall of 2011, Piro and Lawler met with O'Brien and Nassif. During that meeting, Piro and Lawler expressed numerous concerns about Dookhan: her forgeries of Corbett's, Medina's and Renczkowski's initials on Drug Lab documents; the false QC standard mix documentation; and her continued access to the chemist testing area, including the report from Medina that Dookhan had been in the GC/MS room with the lights off and the door closed. They further expressed concern that Dookhan's continued presence in the Drug Lab after Nassif removed her from testing was demoralizing and that Dookhan was being investigated only for her action in the evidence office, but not the multiple alleged transgressions in the Drug Lab. There is no evidence that Nassif reported Dookhan's other misconduct to anyone, including to anyone in Human Resources, Labor Relations, or the Commissioner's Office. Nor is there evidence that she investigated the allegations further. Rather, Nassif told O'Brien, Piro, Lawler and others when they asked that the situation with Dookhan was a "personnel matter" and refused to elaborate.

F. Han and Nassif's Delayed Report of the June Breach

It was not until late November 2011, when Nassif was discussing the upcoming transfer of the Drug Lab to the MSP with Grace Connolly, Director of Administration and Finance for the BLS and Emergency Preparedness, that Nassif first mentioned to anyone outside of the SLI building that Dookhan had breached chain-of-custody protocols and was no longer analyzing samples in the Drug Lab. Instantly recognizing the gravity of the situation, Connolly raised her concerns to Nassif and suggested that Nassif promptly inform the Labor Relations department at the upcoming monthly Labor Relations meeting.

The next monthly Labor Relations meeting took place shortly thereafter, on December 1, 2011. At the meeting, Nassif and Han informed David Young, an attorney and Labor Relations

[144] A tune test is a quality control measure that ensures that the GC/MS instrument is operating within acceptable parameters.

Specialist at EOHHS; Karen King, an Employment Services Manager at EOHHS; and Connolly that Nassif had removed Dookhan from the Drug Lab due to a breach in chain-of-custody protocols five and a half months earlier. Immediately following the meeting, Connolly alerted Monica Valdes Lupi, Deputy Commissioner of DPH, to the situation, and Young informed his supervisor, Marianne Dill, Labor Relations Director at EOHHS. Within days, DPH Commissioner John Auerbach, Valdes Lupi, Dill, Young, Connolly, Han and Nassif met to discuss the Dookhan situation. The Commissioner decided to conduct an internal investigation. At the time the investigation was ordered, Han and Nassif assured Auerbach and Valdes Lupi that Dookhan had been removed from the Drug Lab testing area since June 2011.

G. DPH's Response to the June Breach

Auerbach assigned Steven Chilian, DPH Deputy General Counsel, to investigate the June Breach. However, Chilian was narrowly tasked with corroborating only what O'Brien and Salemi had discovered on June 16, 2011 – that Dookhan had breached the chain-of-custody protocols in connection with the June Breach. Chilian was not asked to look into Dookhan's work product, the integrity of her testing process, or any other potential acts of malfeasance she may have committed. Chilian also was not tasked with assessing the appropriateness of Han, Nassif or Salemi's responses to the June Breach. Chilian understood he was to focus on verifying the breach to address a human resources concern that a chemist had been removed from her duties without the due process required under the state's collective bargaining agreement with the chemists' union, MOSES. Chilian interviewed staff members who were directly involved in the June Breach: Sprague, Phillips, O'Brien, Nassif, Salemi and Dookhan. He interviewed no other chemists or Drug Lab employees.

At the beginning of Chilian's investigation, Han and Nassif informed him of the May Breach.[145] At the time of Chilian's investigation, O'Brien, Nassif and Salemi were all also aware of Dookhan's excessively high productivity in sample analysis, as well as her forgeries and fabrications on a variety of testing and QC documents. However, Nassif, O'Brien and Salemi failed to tell Chilian about any of these other acts of alleged malfeasance or concerns.

Furthermore, around the time of Chilian's investigation in December 2011, concerns began to surface about Dookhan misrepresenting her credentials, both on her curriculum vitae ("CV") and when she testified under oath in criminal proceedings in court.[146] Specifically, in the winter of 2011- 2012, Dookhan was falsely representing on her CV that she was still involved in Drug Lab quality control and that she had a Master of Science degree in Chemistry from UMass, Boston. No one – not Han, Nassif, Salemi or O'Brien – alerted Chilian or the Commissioner's Office to the fact that Dookhan may have been falsifying her credentials on her CV and in court. As a result, prosecutors unwittingly continued to summons Dookhan to testify.

Ultimately, Chilian concluded his investigation without receiving any evidence of Dookhan's other suspected malfeasance (besides the June and May Breaches), including the alleged forgeries on multiple lab documents and her suspiciously high productivity. The investigation

[145] *See* Section XIII of this report for more information about the May Breach.

[146] As noted in Section V, Drug Lab supervisors failed to observe chemists testify.

found that Dookhan failed to follow proper chain-of-custody protocols when she removed the samples from the June Breach from the evidence office, and further, that she most likely falsified documentation of the June Breach transfer.[147]

Although Auerbach tasked Chilian with conducting a narrow investigation into a single breach in protocol (the June Breach), Chilian did ask questions that should have led him to information about Dookhan's other transgressions. In response to Chilian's pointed questions, Nassif, O'Brien and Salemi specifically told Chilian that the integrity of Dookhan's work was not in question and that Dookhan was a stellar employee. Despite these individuals' knowledge of Dookhan's other misconduct, they each withheld that information, leaving Chilian and DPH upper management (including Auerbach and Valdes Lupi) with the impression that Dookhan's only potential misdeeds were related to the June and May Breaches.

It was not until Chilian's investigation was well underway that EOHHS Secretary Dr. JudyAnn Bigby learned of the June Breach. In January 2012, at their regularly scheduled monthly meeting, Auerbach disclosed the details of the June Breach to Bigby.[148] After Bigby learned of the June Breach, she appropriately reported the details of the situation up the chain of command to the Governor's Office.

In late January 2012, DPH General Counsel Donna Levin notified the Norfolk County District Attorney's Office ("Norfolk DA's Office") of the June Breach. The Norfolk DA's Office recognized the prosecution's ethical obligation to disclose this information to the defendants and requested a statement in writing from DPH detailing the incident. On February 1, 2012, Han sent a letter to the Norfolk DA's Office. In that letter, Han stated that DPH was investigating a "possible breach of protocol" with respect to samples from Norfolk County. The letter further stated that the samples had been assigned to a chemist the same day the lab received them, an impossible statement, as there was no way to know when Dookhan took the samples from the evidence office.[149] Han further stated in her letter that there was no evidence that the accuracy of the sample analysis had been affected, despite the fact that DPH had failed to take any action to verify that statement.

On February 21, 2012, Han sent a follow-up letter to the Norfolk DA's Office with further details surrounding the June Breach. In that letter, however, Han failed to disclose that the breach consisted of a suspected forgery and suspected deliberate malfeasance by a chemist. Han reiterated that the integrity of the samples and the test results were not affected, despite no further efforts to investigate whether that was true. Han also stated that the chemist had been removed from all analysis duties on June 21, 2011, despite the fact that Dookhan continued to test samples, both as a primary and a confirmatory chemist, through November 2011. The letter did not mention any other alleged malfeasance committed by Dookhan.

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[147] Memorandum from Steven Chilian, Deputy General Counsel, Department of Public Health to John Auerbach, Commissioner, Department of Public Health (Feb. 29, 2012).

[148] There is no evidence that Auerbach or anyone else ever disclosed the May Breach, or any other Dookhan malfeasance, to Secretary Bigby.

[149] Furthermore, as a general rule, samples were not assigned to chemists on the same date the lab received them.

On February 21, 2012, Dookhan was placed on a paid administrative leave of absence. The terms of Dookhan's leave included a requirement that she continue to respond to court subpoenas, despite DPH's investigation finding that Dookhan had committed acts of dishonesty, including removing samples from the drug safe without the authority to do so and her likely forgery of the logbook. DPH and MOSES, on behalf of Dookhan, reached a settlement on March 8, 2012, in which Dookhan agreed to voluntarily resign the following day.

On March 1, 2012, at the direction of Bigby, Auerbach wrote a letter to Han expressing his disappointment with the way Han had handled the June Breach. Aside from this letter, there were no further disciplinary actions taken by DPH against Han or Nassif until after the MSP's investigation led to Dookhan's confession in August 2012.

Soon after the confession, in late August 2012, Han placed Nassif on administrative leave. DPH ultimately terminated Nassif on September 12, 2012. At Auerbach's request, Han resigned on September 11, 2012, stating that she was ultimately responsible for the actions of those working under her. Days later, on September 17, 2012, Auerbach voluntary resigned. However, he stayed on at DPH until November 1, 2012 in order to help with the transition to a new Commissioner.

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XIII. The May Breach

In addition to the June Breach, the OIG found that Dookhan breached the chain of custody with respect to a second large group of samples. Specifically, in May 2011, Dookhan took thirty samples from the Drug Lab's evidence office without following the proper chain-of-custody protocols ("May Breach"). The May Breach consisted of twenty-six samples from the Dedham police department and four from the Cohasset police department. The samples involved three cases: two from Dedham and one from Cohasset. Like the ninety samples from the June Breach, Dookhan acquired and tested the May Breach samples without following the Drug Lab's chain-of-custody protocols.

According to FoxPro – the database the Drug Lab used to track drug samples – the evidence office never assigned the May Breach samples to Dookhan. The only chain-of-custody entries in FoxPro were for the receipt of the samples from the police departments and the return of the samples to the police departments. Furthermore, examination of the evidence logbook revealed no initials by an evidence officer recording a transfer of the samples to Dookhan for testing or any chemist's initials signifying receipt of the samples. The Drug Lab had returned the samples and the corresponding drug certificates to the submitting police departments on June 13, 2011 (Cohasset) and July 21, 2011 (Dedham) without reporting a breach in the chain-of-custody protocols.

It is unclear to the OIG exactly when the evidence office discovered the May Breach. Certain evidence, as discussed below, suggests that Evidence Office Supervisor Elisabeth O'Brien knew of the May Breach either at the time that staff entered the control cards' findings into FoxPro or at the time that evidence officers scanned the samples back into the evidence safe. Specifically, O'Brien represented that she did not report the May Breach because she thought it was a computer glitch and believed the samples were in the safe,[150] a statement that supports a finding that she discovered the May Breach shortly after it occurred, particularly because the Cohasset samples had already been returned to the police department by the time the June Breach was discovered. Other evidence suggests that O'Brien discovered the May Breach after discovering the June Breach, when she went back through the evidence logbook to investigate whether there had been any other similar incidents. In either case, O'Brien reported the May Breach to director of the Division of Analytical Chemistry, Julianne Nassif within seven to ten days of discovering the June Breach, by the end of June 2011. However, besides O'Brien, Nassif, and eventually the director of the Bureau of Laboratory Sciences, Linda Han, it appears that no other Drug Lab employee knew about the May Breach, including the supervisor of the Drug Lab, Charles Salemi. Furthermore, neither Nassif nor O'Brien nor anyone else ever confronted Dookhan to question her with respect to the May Breach. Similarly, Han, O'Brien and Nassif failed to report the May Breach to anyone outside of the SLI building for at least five months.

[150] The Drug Lab received the twenty-six Dedham samples on March 18, 2011. Dookhan analyzed them on May 7, 2011. Records indicate that each sample underwent GC/MS analysis on May 17, 2011. The Drug Lab received the four Cohasset samples on April 14, 2011. Dookhan analyzed them on May 7, 2011. Each underwent GC/MS analysis on May 11, 2011.

When DPH assigned Deputy General Counsel Steven Chilian to conduct an internal investigation into the June Breach in December 2011, he received notice of the May Breach at the outset of his inquiry. Specifically, O'Brien, through Han, provided Chilian with information indicating that Dookhan had analyzed the May Breach samples and that these samples lacked a complete chain-of-custody record. Additionally, when Chilian interviewed O'Brien, Nassif and Han, they told him about the May Breach as a potentially similar chain-of-custody breach involving Dookhan. Chilian followed up on the information related to the May Breach that O'Brien, Nassif or Han provided to him. He had a telephone conversation with Nassif on January 27, 2012, in which she confirmed the existence of the May Breach and reassured Chilian that the integrity of the tests was not in question. Despite Nassif's reassurance, there is no evidence that anyone, including O'Brien, Nassif and Han, ever conducted any investigation to confirm that the integrity of the samples was uncompromised. To the contrary, the Cohasset samples were part of a GC/MS run for which Dookhan falsified the QC standard mix data, as discussed in Section IX. Chilian memorialized his conversation with Nassif in a Memorandum for Record dated January 27, 2012. Chilian reported the existence of this additional breach to his supervisors, which included DPH General Counsel Donna Levin.

On January 31, 2012, Nassif emailed a spreadsheet listing the samples contained in the May Breach to Levin, DPH Deputy Commissioner Monica Valdes Lupi and Han indicating that Dookhan had not yet received summonses to testify in three pending criminal cases stemming from the May Breach. The email also contained a spreadsheet of criminal cases associated with the June Breach.

Within minutes of receiving the spreadsheets, Levin forwarded both to the First Assistant District Attorney for Norfolk County ("Norfolk First Assistant DA"). About an hour and a half later, Levin again emailed the Norfolk First Assistant DA, stating "Re the chart of 30 samples – I should not have sent that to you . . . I did not realize that the investigation had not been completed with respect to those samples."[151] As mentioned above, Han's February 1, 2012 letter to the Norfolk District Attorney ("Norfolk DA"), which was sent at the Norfolk DA's request, disclosed the "possible" June Breach but made no mention of the May Breach.[152]

On February 2, 2012, Chilian shared a draft copy of his investigative report with Nassif, Levin and DPH First Deputy General Counsel Susan Stein. The report focused entirely on the June Breach. Chilian, however, made clear that there was an ongoing investigation into the May Breach that he would address in a separate report.

The OIG has determined that Chilian had fully intended to investigate the May Breach, as he believed that it was no different from the June Breach. However, at some point after February 2, 2012, there was a meeting at DPH headquarters where DPH Commissioner John Auerbach, Levin, Stein, Valdes Lupi and Chilian met to discuss the investigation into the June Breach. Walking into that meeting, Chilian believed that DPH should and would investigate the May

[151] Email from Donna Levin, General Counsel, Department of Public Health, to Jeanmarie Carroll, Norfolk County First Assistant District Attorney (Jan. 31, 2012, 12:42 EST).

[152] Letter from Linda Han, Director, Bureau of Laboratory Sciences, William A. Hinton State Laboratory Institute, Department of Public Health, to Michael Morrissey, Norfolk County District Attorney (Feb. 1, 2012).

Breach. Upon exiting that meeting, Chilian understood that DPH would not be investigating the May Breach.

Subsequent official communications from DPH regarding Dookhan and the internal investigation at the Drug Lab omitted any reference to the May Breach. For instance, the OIG found that DPH officials withheld information regarding the May Breach from David Young, the EOHHS Labor Relations specialist tasked with handling Dookhan's "show cause" hearing related to her employment termination; Young was shocked to learn of it just before the hearing was scheduled to take place.[153]

Furthermore, the Governor's Office, EOPSS and the Norfolk DA collaboratively devised a Drug Lab Outreach Plan on February 17, 2012 to disseminate information about Dookhan to stakeholders, the media and the Legislature. The plan referred to the June Breach as an isolated irregularity by one of its chemists on a single day of testing and omitted any reference to the May Breach. The OIG found that no one from DPH made the Norfolk DA aware of the May Breach during the development of the outreach plan, despite the fact that all of the samples were from Norfolk County and the fact that the Norfolk DA was included as one of the collaborators of the plan.

As mentioned above, Han's February 21, 2012 follow-up letter to the Norfolk DA emphasized that DPH had investigated only a "single batch" containing ninety samples. The letter additionally stated that the Drug Lab had taken steps to avoid any future breaches. The letter failed to mention the May Breach.[154]

DPH finalized its official investigative report on February 29, 2012. The report focused entirely on the June Breach and made no reference to the May Breach. There is no evidence that DPH disclosed the May Breach to other stakeholders, including the AGO, EOPSS, Governor's Legal Counsel, the MSP or other prosecutors' offices. Furthermore, the OIG found that Auerbach failed to report the existence of the May Breach to EOHHS Secretary JudyAnn Bigby or anyone outside of EOHHS.

DPH's motivation for failing to report the May Breach remains unclear. One possible motive was a concern that the existence of additional chain-of-custody breaches would hinder the transfer of Drug Lab operations and expenses to EOPSS, thus leaving DPH strapped with the financial burden of operating an analytical lab that performed a non-public health function.[155] Alternatively, DPH may have been concerned that disclosure of the May Breach would further spotlight the threat to the criminal justice system resulting from its failure to properly manage its

[153] That show cause hearing never took place, as the parties settled Dookhan's employment dispute. As a result, Young did not pursue the fact that he had not been told about the May Breach.

[154] *See supra* note 152.

[155] As discussed in Section II, neither EOHHS nor DPH considered forensic drug analysis to be a core public health function.

forensic drug lab. A third possible motive was that Han, Nassif, and DPH were fearful of losing the funding the Drug Lab received from the federal Coverdell grant.[156]

[156] See Section XIV for more detail regarding the Coverdell grant including DPH's failure to report the May and June Breaches to Coverdell.

XIV. Failure to Disclose Dookhan's Conduct in Coverdell Grant Reports

Beginning in the fall of 2009, the Drug Lab had the opportunity to receive funds from the National Institute of Justice's ("NIJ") Paul Coverdell Forensic Sciences Improvement Grant ("Coverdell grant"). The Coverdell grant awards funds to states to help "improve the quality and timeliness of forensic science and medical examiner services."[157] Recipients may use these funds to provide training and employ forensic laboratory personnel to eliminate a backlog in the analysis of forensic evidence. The MSP was the Coverdell Grant State Administering Agency, meaning that the MSP applied directly to the NIJ for the funds and then coordinated the sub-recipients' applications, funds distribution, and grant progress reports. Starting in fiscal year ("FY") 2010, DPH received Coverdell grant funds for the Drug Lab through an interdepartmental service agreement with the MSP. DPH received a total of $215,331.31 for FY10, FY11 and FY12 from the Coverdell grant, an amount equal to approximately 7% of state funding allocated to the Drug Lab for those years.

The Coverdell grant made a positive impact on Drug Lab operations at a time – post *Melendez-Diaz* – when the Drug Lab needed funds to curb the growth of the backlog. For FY10, the Drug Lab used the Coverdell grant funds to hire one full-time chemist, send two chemists to DEA training and pay chemists overtime, all in an effort to reduce the sample backlog and improve the turn-around time for testing samples. In FY11, the Drug Lab used the funds to employ one full-time chemist, upgrade data analysis software, pay overtime to chemists, send four analysts to DEA training and provide instrument training to ten chemists.

In April 2011, the MSP notified Director of Analytical Chemistry Julianne Nassif that it planned to eliminate the Drug Lab's Coverdell grant allocation due to an overall reduction in Coverdell grant funds for the upcoming fiscal year. Nassif responded that the Drug Lab could not absorb the loss of the Coverdell grant without a significant impact on the delivery of drug-testing services. Specifically, she noted that the loss of the funds would result in the dismissal of an analytical chemist, which in turn would increase the backlog and turn-around time for testing samples. EOHHS Secretary JudyAnn Bigby, DPH Commissioner John Auerbach, DPH Deputy Commissioner Monica Valdes Lupi, Bureau of Laboratory Sciences ("BLS") Director Linda Han, Director of Administration and Finance and the BLS Grace Connolly, and Nassif were involved in discussions with MSP officials regarding the Coverdell grant allocation to DPH. Ultimately, the MSP reduced the Coverdell grant allocation to DPH by 18%.

This seemingly desperate need for the Coverdell grant funds may have played into Nassif and Han's decision not to report Dookhan's malfeasance. The NIJ requires grant recipients to report allegations of serious negligence or misconduct, and to provide updates on those allegations in progress reports. This direct conflict between the need for full disclosure (with the accompanying requirement to report the malfeasance up the chain of command) and the desire to hold on to much-needed funds manifested when it was time for the Drug Lab to submit its FY10 Coverdell Grant Annual Report ("Annual Report").

[157] *See* U.S. Dept. of Justice, Office of Justice Programs, National Institute of Justice, OMB No. 1121-0329, *Solicitation: Paul Coverdell Forensic Science Improvement Grants Program*, 3, 8 (May 2010).

To comply with the NIJ's annual reporting requirements, recipients of Coverdell grant funds must respond to the External Investigations Report section of the Annual Report, which asks for the following information:

> (1) the number and nature of any allegations of serious negligence or misconduct substantially affecting the integrity of forensic results received during the 12-month period of the award; (2) information on the referrals of such allegations (e.g. the government entity or entities to which referred, the date of referral); (3) the outcome of such referrals (if known as of the date of the report); and (4) if any such allegations were not referred, the reason(s) for the non-referral.

On January 5, 2012, the MSP asked Nassif to complete by January 19, 2012 the Annual Report, including the External Investigations Report section, for the period of October 1, 2010 through December 31, 2011. By January 5, 2012, Nassif knew of the June and May Breaches. She also knew about other allegations of malfeasance related to Dookhan's forgeries and falsified QC standard mixes, as well as questions about the accuracy of Dookhan's CV. Nassif and Han, along with the DPH Commissioner's Office, were reluctant to report the June Breach, but ultimately did so. Nassif, Han and Valdes Lupi failed, however, to report the May Breach and Nassif failed to report any of Dookhan's other malfeasances.

Nassif first exhibited her reluctance to report the Dookhan situation by seeking an extension for drafting the response to the External Investigations Certification[158] for the Annual Report. More specifically, Valdes Lupi sought an extension on Nassif's behalf. The MSP granted a one-week extension on January 19, 2012. Five days later, on January 24, 2012, the MSP project administrator again contacted Nassif requesting the External Investigations Certification for the Annual Report. On January 26, 2012, Valdes Lupi requested another extension. The next day Nassif reported to Han that she had so far been successful in avoiding inquiries from the MSP project administrator.[159] Ultimately, the MSP granted an additional extension to January 27, 2012.

DPH failed to meet this second deadline extension and on January 30, 2012, the MSP informed Nassif that failure to file the certification that day would result in the immediate freezing of all grant activities for all state agencies receiving Coverdell funding. Han informed Valdes Lupi of the risk to funding caused by a further delay.

Meanwhile, Nassif continued to ignore inquiries from the MSP project administrator. On January 30, 2012, Nassif finally submitted via email the FY10 and FY11 progress reports but without the External Investigations Report. On February 2, 2012, the MSP project administrator

[158] The Annual Report must include an External Investigation Certification at the close of the report. The NIJ assumes that grant recipients will report any allegation of negligence or misconduct to the designated agency.

[159] Nassif and Han had an opportunity to disclose the June incident to the MSP prior to the reporting deadlines. MSP personnel made a site visit to the Drug Lab on July 26, 2011 – a full month after the discovery of the June Breach and the resulting reassignment of Dookhan. During the visit, MSP personnel met with Nassif and other lab staff to perform a full review of the Drug Lab's use of Coverdell grant funds, including any fraud, waste or abuse relating to the funds. The information the MSP sought under the fraud, waste and abuse component of the site visit mirrored the information that the External Investigations Report section of the Annual Report required the Drug Lab to disclose. Nassif failed to inform the MSP of any Dookhan wrongdoing during the site visit.

informed Nassif that DPH's failure to submit the necessary External Investigations Report jeopardized both the current grant and future awards. Nassif submitted a response on February 6, 2012. The response read as follows:

> [DPH] is currently in the process of investigating an isolated incident involving a breach in documentary protocols and can confirm that we do not believe that the integrity of the samples has been impacted by this breach.

Valdes Lupi and Han vetted this language before Nassif submitted it to the MSP. Auerbach was aware of the role Valdes Lupi played in writing the response and believed that she would report the Dookhan situation accurately. The response failed to mention the May Breach or any of Dookhan's other acts of malfeasance.

In addition, DPH's External Investigations Report stated that the agency had appropriately reported the "breach in documentary protocols" to "the appropriate state and federal law enforcement agencies." However, this language is not completely accurate in the Coverdell grant context. Before obtaining funds from the Coverdell grant, an applicant must certify that "a government entity exists and an appropriate process is in place to conduct independent external investigations into allegations of serious negligence or misconduct substantially affecting the integrity of the forensic results committed by employees or contractors of any forensic laboratory facility . . . that will receive a portion of the grant amount."[160] The MSP notified Nassif in August 2011 that the Internal Affairs Division of the MSP was the governmental agency designated to conduct Coverdell-related external investigations. DPH never reported the June Breach (or any of Dookhan's malfeasances) to the MSP's Internal Affairs Division, which would have been the "appropriate" government entity to which to report Dookhan's misconduct under the terms of the Coverdell grant.

Further, in its FY10 Coverdell Closeout Report, dated May 11, 2012 ("FY10 Closeout Report"), DPH again failed to fully report the Dookhan incidents. The information Nassif provided in the External Investigations Report section for the time period of January 1, 2012 to March 31, 2012 failed to report the outcome or status of the Dookhan investigation, did not include information related to referrals to the designated investigatory agency, and failed to address why allegations of misconduct (including the May Breach and other Dookhan malfeasances) had not been referred to the designated investigatory agency. Even when prompted with the suggestion that Chilian's investigation should be included in the FY10 Closeout Report, Nassif failed to do so.

The MSP took control of the Drug Lab on July 1, 2012. On July 3, 2012, after two Drug Lab chemists reported their concerns regarding Dookhan to an MSP official, the MSP immediately launched an investigation into Dookhan's conduct. The MSP promptly notified the Attorney General's Office, which was the agency designated to investigate allegations of misconduct at the time. During the next Coverdell reporting cycle – the FY11 Coverdell Closeout Report in approximately May 2013 – the MSP made a full disclosure of their investigation into Dookhan's malfeasance and the resulting criminal case against her. Since then, the MSP has properly reported the details of the Dookhan matter to the NIJ in all of its Coverdell reports.

[160] *See* U.S. Dept. of Justice, *supra* note 158 at 4, 5, 15, 29, 31.

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XV. Failures of Management that Allowed for Dookhan's Malfeasance

Any review of the Dookhan scandal begs the question of how this could have happened. The OIG found two primary issues at the Drug Lab that allowed Dookhan to commit and perpetuate her malfeasances: (1) a lack of supervision over the chemists in the Drug Lab; and (2) a lack of an effective mechanism for reporting concerns that Dookhan's peers had about her behavior and work habits, exacerbated by an inappropriate response by Drug Lab supervisors to these concerns when they were raised.

As mentioned earlier in Section V, Charles Salemi, who was responsible for day-to-day oversight of the Drug Lab, was a distant supervisor. This was particularly true after 2006, when Nassif became the director of Analytical Chemistry overseeing the Drug Lab and Salemi removed himself from most areas of oversight. Even prior to that, through the years, the essence of Salemi's management style was *laissez faire* as he let chemists work on their own, at their own pace, on the kinds of samples they were interested in, using techniques they felt comfortable using. Also, Salemi was not a strong communicator. Not only was there no uniformity in Drug Lab policies and testing protocols, but Salemi often allowed for changes in policy and protocols to "trickle down" to staff. In addition, the chemists sometimes created policies or new practices that "trickled up" to Salemi for his approval.

Furthermore, the physical layout of the Drug Lab supported the culture of chemists working on their own. Some of the chemist testing area spaces, including Room 362, where Dookhan was assigned, were separate rooms with doors that closed and locked. This allowed for chemists to work alone and unmonitored for most of their day. As a means of addressing this separation and lack of supervision, Salemi assigned a Chemist III or team leader to each room. Elisabeth O'Brien was the Chemist III designated as the team leader for Room 362, where Dookhan and chemist Daniela Frasca worked. However, beginning in 2008, Nassif reassigned O'Brien from testing – despite the ever-increasing backlog of samples awaiting analysis – and had her spend the majority of her time in the evidence office, and ultimately promoted her to the newly created position of Evidence Office Supervisor I. Dookhan and Frasca remained unmonitored in Room 362 until Dookhan's removal from testing in approximately June 2011.

The lack of direct oversight of Dookhan fed into her sense of self-importance. Dookhan referred to herself as "indispensable," and perhaps for good reason. Dookhan appeared to have a close relationship with O'Brien. Dookhan also inserted herself into all aspects of the lab. Dookhan assisted Salemi with computer-related tasks, assisted O'Brien in the evidence office by entering control card information into FoxPro and assisted Peter Piro, the technical supervisor in charge of quality control, with gathering and signing the Drug Lab's quality control records. Dookhan also had special access to O'Brien's computer in Room 362, which allowed her to access FoxPro, the Drug Lab database, and which she used to help other chemists find information on their cases. Dookhan, only a Chemist II, had the code to the chemist testing area's alarm and was allowed to open and close the testing area. Furthermore, she checked other chemists' math on trafficking cases and helped train new chemists. At times, Dookhan was given permission to enter the evidence safe unaccompanied (while O'Brien and others remained in the evidence office) and O'Brien would assure others that it was okay.

As Dookhan took on more responsibilities around the Drug Lab, the lack of formal lab protocols and the overall lack of supervision gave Dookhan the freedom to start making and following her own rules. When there was no evidence officer available or when the evidence officer was not giving her the samples she requested, Dookhan on occasion took her own samples. When there were no other GC/MS chemists available to receive her samples or to operate her GC/MS run or to approve her tune test, she forged initials. In order to analyze samples more quickly, she may have skipped the microcrystalline tests or batched the creation of multiple GC/MS vials. And, at times when the GC/MS results indicated different substances than she had expected, Dookhan admittedly tampered with the vials to make the result positive for the substance she expected it to be.

Not only did the atmosphere at the Drug Lab allow for Dookhan to commit malfeasances for an extended period of time, she was also able to continue committing these malfeasances because Drug Lab management ignored red flags raised by her actions and disregarded reports from her peers complaining of her suspicious behavior. One significant red flag that Dookhan's supervisors ignored was her spectacular productivity, particularly after *Melendez-Diaz*, the U.S. Supreme Court case that required forensic drug chemists to testify in court about their test results, when the productivity of all other Drug Lab chemists precipitously declined. Drug Lab supervisors failed to recognize that Dookhan's continued high testing volume was a harbinger for errors or malfeasance. When O'Brien alerted Salemi to Dookhan's numbers for the month of December 2009, Salemi concluded that Dookhan was trying to please people and was rushing her work.[161] What apparently did not enter Salemi's mind at that time was the possibility that Dookhan was not following proper analytical protocols and, in some instances, not performing the forensic tests at all. O'Brien and Nassif similarly lacked a high level of concern and both rejected the suggestion that a Chemist III should be transferred into Dookhan's lab room to serve as team leader.

When O'Brien brought the issue of Dookhan's high numbers – 715 samples with thirty-seven listed as "not tested" in March 2011– to Salemi again in late April 2011, they met with Nassif, but again there was no elevated response to this red flag. Salemi again took the position that Dookhan was just rushing her work. They also discussed their understanding that Dookhan was working overtime but not requesting compensation. Nassif suggested that Dookhan should work on a project to slow her down. Both Salemi and O'Brien approved of the plan.

Further, there was no formal mechanism in place for chemists in the Drug Lab to report concerns related to a peer's work performance. The chemists generally understood, however, that if any chemist had an issue, he could speak directly to Salemi about it. With respect to Dookhan, many chemists reported their concerns about her to Salemi. From that point, however, it was unclear what needed to happen. To the extent that Salemi was unresponsive to concerns, chemists typically had no recourse. Some of the chemists went over Salemi's head to Nassif, but even she ignored their reports. Salemi himself had no recourse when Nassif would not address the

[161] To the extent Salemi had concerns about Dookhan, he never addressed those concerns directly with her. Clearly, however, he did not approve of her volume of testing and made that disapproval known by telling the Drug Lab's newest hire, Hevis Lleshi, who was in training in the early months of 2011, that she should not perform testing at Dookhan's pace. He told Lleshi what his philosophy had always been: that it was most important to focus on obtaining the correct test result and not on the number of samples tested, regardless of the size of the backlog.

concerns he raised. There was no external mechanism that would have allowed the chemists to raise concerns regarding the integrity of the forensic work performed at the Drug Lab.

For instance, chemists Michael Lawler, Kate Corbett, Daniel Renczkowski, and Peter Piro each reported concerns to either O'Brien or Salemi, and some of these concerns ultimately reached Nassif. Piro and Lawler also met directly with O'Brien and Nassif in the late summer or early fall of 2011. During that meeting, Piro and Lawler voiced numerous concerns about Dookhan, including the fact that she had forged Corbett, Renczkowski and chemist Nicole Medina's initials on lab documents.[162] Nassif, however, responded that it was a personnel matter and would not discuss their concerns. This was Nassif's typical response to this issue.

Despite repeated complaints by numerous chemists and their efforts to curtail Dookhan's behavior, management in the Drug Lab failed to acknowledge the gravity of the problem. Dookhan's malfeasance continued until it corrupted not only the integrity of her forensic results but the integrity of the criminal justice system in Massachusetts – largely because there was no mechanism in place for Dookhan's peers to report their concerns beyond the unresponsive management structure in place at the Drug Lab.

[162] See Section XII for additional information about this meeting.

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XVI. Sampling Issues in Drug Trafficking Cases

A. Introduction

During the course of its investigation, the OIG uncovered issues with respect to the Drug Lab's approach to "sampling" in drug trafficking cases. First, the Drug Lab had no documented policy for how chemists were required to sample in trafficking cases and, as a result, the chemists' approaches were inconsistent. Second, many Drug Lab chemists routinely used invalid arbitrary methods for both identity and weight estimates. Third, when the Drug Lab applied statistical approaches, it often did so incorrectly. Finally, the Drug Lab inadequately reported, or in some cases may have failed to report at all, the methods it used and the limits of its statistical identity inferences and net weight estimates.

As will be explained further, these issues potentially caused chemists to inaccurately report drug identity and net weight findings and left stakeholders without the information needed to assess chemists' conclusions.

"Drug trafficking" refers to a class of drug charges in Massachusetts that require proof of the weight of the substance containing the drug and result in mandatory minimum jail or prison sentences for the offender.[163] To obtain a conviction for drug trafficking charges, the prosecution must prove the weight of some mixture containing the drug beyond a reasonable doubt.[164] The defendant then faces a mandatory minimum jail or prison sentence, depending on the type and reported net weight of the substance.[165] For example, the drug trafficking law in effect between 2002 and August 2012 required mandatory minimum state prison sentences from five to fifteen years for defendants convicted of trafficking heroin, depending on the reported weight.[166] For that same period, trafficking cocaine or methamphetamine resulted in mandatory minimum state prison sentences from three to fifteen years, also depending on the reported weight.[167] And

[163] *See* M.G.L. c. 94C, § 32E.

[164] Weight may be an issue with regard to other drug crimes but is not typically an element of the crime. As an example, for charges of possession with intent to distribute, "[t]he quantity of a controlled substance alone may be sufficient circumstantial evidence to raise an inference of intent to distribute." *Commonwealth v. LaPerle*, 19 Mass. App. Ct. 424, 428 (1985) (*internal citations omitted*). By comparison, with limited exceptions, weight is not an element of the crime of simple possession.

[165] *See* M.G.L. c. 94C, § 32E.

[166] Heroin is a Class A substance. *See* M.G.L. c. 94C, § 31(b)(10). The mandatory minimum sentence for heroin trafficking in weights of 14 grams to less than 28 grams was 5 years; from 28 grams to less than 100 grams was 7 years; from 100 grams to less than 200 grams was 10 years; and 200 grams and over was 15 years. *See* M.G.L. c. 94C, § 32E(c) *amended by* 2012 Mass. Acts c. 192, § 25.

[167] Cocaine and methamphetamine are Class B substances. *See* M.G.L. c. 94C, §§ 31(a)(4), (c)(2). The mandatory minimum sentence for cocaine or methamphetamine trafficking in weights of 14 grams to less than 28 grams was 3 years; from 28 grams to less than 100 grams was 5 years; from 100 grams to less than 200 grams was 10 years; and 200 grams and over was 15 years. *See* M.G.L. c. 94C, § 32E(b) *amended by* 2012 Mass. Acts c. 192, § 21.

finally, also from 2002 to 2012, for marijuana trafficking crimes, mandatory minimum sentences ranged from one year in jail to ten years in state prison.[168]

1. Law Enforcement Agencies Routinely Submitted Multi-Item Drug Evidence to the Drug Lab

Between 2002 and 2012, law enforcement agencies routinely submitted multi-item drug evidence (*e.g.*, 100 bags of suspected heroin) to the Drug Lab for chemists to identify and weigh, in part to determine whether the evidence met or exceeded the statutory weight thresholds for drug trafficking charges. Rather than weigh and identify each item (*e.g.*, each bag of suspected heroin), the Drug Lab routinely applied sampling approaches to process these multi-item drug cases.[169]

2. The Drug Lab Applied Sampling Approaches to Process Multi-Item Drug Cases

Sampling refers to forensic drug chemists' practice of only testing and weighing some of the suspected drug items in a multi-item case and making inferences with respect to the rest of the items. For example, a chemist might only test and weigh 10 out of 100 bags of suspected heroin. Based on the test results and weight of the 10 items, the chemist might infer the drug's presence in all of the bags and estimate the "net weight"[170] for all the submitted items, including the items that the chemist did not actually test or weigh. The purpose of applying a sampling approach is to reduce the time spent identifying and individually weighing each and every item in a large multi-item submission.[171] When done properly, it also allows for more efficient use of government resources while maintaining accuracy and relative certainty in chemists' findings, conclusions and reports.

3. Only Statistical Sampling Approaches Are Appropriate

The forensic drug community, including the Scientific Working Group for the Analysis of Seized Drugs ("SWGDRUG") and the European Network of Forensic Science Institutes ("ENSFI"), generally identify two categories of seized-drug sampling – "statistically-based" and "arbitrary."[172] A statistically-based approach allows for logical inferences to be made from a

[168] The sentence for trafficking in 50 pounds to less than 100 pounds was 1 year; from 100 to less than 2000 lbs. was 3 years; from 2000 to less than 10,000 lbs. was 5 years; and 10,000 lbs. or more was 10 years. *See* M.G.L. c. 94C, § 32E(a) *amended by* 2012 Mass. Acts c. 192, §§ 18-19.

[169] The Drug Lab applied sampling approaches in approximately 15% of the trafficking cases that the OIG reviewed.

[170] "Net weight" refers to the weight of the contents (*e.g.*, the powder suspected of containing cocaine) without the weight of the containers.

[171] *See* John R. Mario, *A Probability-Based Approach for the Analysis of Drug Seizures Composed of Multiple Containers of Either Cocaine, Heroin, or Cannabis*, 197 Forensic Science International, 105, 107 (2010).

[172] *See* SWGDRUG, *Minimum Recommended Standards for Sampling Seized Drugs for Qualitative Analysis*, 2 (2005), *available at* http://www.swgdrug.org/archived.htm. *See also* United Nations Office on Drugs and Crime & ENSFI, *Guidelines on Representative Drug Sampling*, 9 (2009), *available at* http://www.unodc.org/documents/scientific/DrugSampling.pdf.

sample[173] of items to the larger population of items with an associated, quantifiable degree of confidence; an arbitrary approach does not.[174] The problem with arbitrary approaches is that without a quantifiable degree of confidence in a lab's findings, stakeholders cannot assess the lab's conclusions regarding the estimated net weight of the entire population or the portion of the population that is likely positive for the drug of interest. Stated differently, with an arbitrary approach, the only items the chemist may reasonably report as containing a controlled substance and weighing a certain amount are the items the chemist actually tests and weighs.[175]

4. Accepted Approaches to Testing and Weighing Multi-Item Submissions

When processing multi-item submissions, a drug lab has at least three options. First, it can test and weigh all the items. Second, it can test and weigh enough items to meet or exceed a relevant statutory threshold and report the remaining items as not tested. Third, it can apply a statistical sampling approach for both weight and identity and report the limits of the inferences it makes.

a. Test and Weigh All Items

One approach to multi-item submissions is for the chemist to test and weigh each individual item in the submission. This is the most conservative and likely the most accurate approach, but it takes considerable time and resources.

b. Test and Weigh All Items Needed to Meet or Exceed a Weight Threshold

Alternatively, the chemist may test and weigh enough items to meet any relevant statutory threshold. For example, if the gross weight[176] of the evidence is 27 grams, the chemist knows the net weight of the evidence cannot possibly reach the 28 gram drug trafficking threshold, so the chemist could just weigh and identify each item until the evidence exceeds the lower 14 gram threshold by a comfortable margin. Then, the chemist may choose not to test the remaining items and report them as not tested; or the chemist may apply a statistical sampling approach to the remaining items to give the parties some information about the total weight and composition of the evidence, thereby minimizing further testing.

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[173] In this context, "sample" refers to a portion of a population of items (*e.g.*, 10 out of 100 bags). It is a statistical term. Confusingly, the Drug Lab referred to submitted evidence as "samples" and each sample received a "sample number." Some samples had many individual items (*e.g.*, 5 bags of suspected cocaine) and some samples only had one item. For example, if law enforcement seized five bags of suspected cocaine in a suspect's glove box, and one bag of cocaine in his house, the Drug Lab would assign two sample numbers to the evidence: one sample number for the five bags in the glove box and one for the bag in the house.

[174] *See* Mario, *supra* note 171, at 105.

[175] *See* SWGDRUG, *supra* note 172, at 5.

[176] "Gross weight" refers to the total weight of the contents and containers.

c. Apply a Statistical Sampling Approach

Another option is for the chemist to apply a *statistical* sampling approach to infer the identity and estimate the net weight of the evidence. Before applying a sampling approach, however, the chemist must identify the population as "homogenous," and establish an approach for choosing a "random sample" of items to test and weigh.

A population is homogenous if each item's contents are similar in size, color and appearance.[177] The determination that a population is homogenous requires the chemist to see the contents of the packages. Therefore, foil, paper and opaque containers must be opened. A chemist should not apply a sampling approach to a non-homogenous population. However, if the population has two (or more) identifiable sub-populations that share the same visual characteristics, the chemist may split the entire submission into sub-populations and apply a sampling approach to each sub-population.

Before conducting statistical sampling, the chemist also must establish an approach for randomly selecting the items to test and weigh. Statistically, a random selection process ensures that each item in the population has an equal chance of being selected. "Randomness is obtained by positive action; a random selection is not merely a haphazard selection, nor one declared to be without bias."[178] One accepted method to ensure randomness is to use a random number generator to select which items to test. The chemist assigns a number to each item in the population and the computer-based random number generator provides the numbers to select and test.

Once a chemist has a homogenous population and a method for random selection, the chemist can apply a statistical approach to sampling for both identity and weight. One accepted way as set forth below is to use the "hypergeometric approach" to statistically estimate identity in combination with the use of a drug sampling calculator to calculate a confidence interval for a net weight estimate.

i. Statistically Identifying the Drug of Interest

The hypergeometric method is a statistically-based approach that predicts the probability of drawing (in a sample) a number of "successes" or "failures" in a population.[179] In the context of seized drug analysis, "success" means that an item tests positive for a controlled substance and "failure" means that an item tests negative.[180] The hypergeometric approach provides drug chemists with the number of items (a sample) they must analyze to yield a statistically accurate estimate with regard to the identity of the population. Its use results in a conclusion, with an associated "confidence level," that at least a certain percentage of the population contains the

[177] *See* SWGDRUG *supra* note 172, at 3.

[178] *See* Mario, *supra* note 171, at 112, Appendix A.

[179] *See* Mario, *supra* note 171, at 109-110.

[180] *See id.*

drug in question.[181] The confidence level represents the probability that the inference about the identity of the population is likely accurate. For example, if 23 out of 100 suspected bags of heroin test positive (23 is the sample size the hypergeometric approach requires for a population size of 100), the chemist may state that he is 95% confident that 90%, or 90 out of 100 bags, are positive for heroin.[182]

Occasionally, one or more items in the sample may not test positive for drugs.[183] If one or more items test negative, that negative result weakens the inference that each item in the population would test positive for a controlled substance is weakened. As a result, the 95% confidence level that 90% of the population is positive for a controlled substance decreases. To maintain the confidence level, the chemist must identify more items. That is, using the hypergeometric approach, if one of the 23 items tested negative for heroin, the chemist would need to test an additional 13 items, or 36 items altogether[184] to maintain a 95% confidence level that 90% of the population is positive for heroin. Alternatively, if the chemist keeps the sample size at 23, the chemist may only say with 77% confidence that 90% of the remaining population is positive for the heroin.[185]

ii. Statistically Estimating Net Weight

The chemist may also use statistics to properly estimate the net weight of the population. ENFSI created a drug sampling calculator using Microsoft Excel ("Drug Calculator") that incorporates statistical formulas to aid in estimating net weight. To use the Drug Calculator, a chemist inputs the desired confidence level, the population size (the total number of items), the sample size (the number of items actually weighed),[186] the "sample mean weight" and the "sample standard deviation." The Drug Calculator then provides an estimated net weight and a confidence interval.

The sample mean weight refers to the average of the net weights of each item in the sample. The sample standard deviation indicates the distance of the items' net weights from the average, or mean weight. A low standard deviation indicates that the net weight of the contents of each individual item is close to the mean. For example, if a chemist weighs four bags and each bag weighs 1 gram, the standard deviation is zero because the weight of the contents of each item is

[181] Each unit in the sample must be analyzed sufficiently to meet SWGDRUG minimum requirements. The chemist may not, for instance, simply test all of the selected items using a color test, but only confirm one item with GC/MS; they must fully analyze each item.

[182] Both the confidence level and the percentage of the population statistically identified may be adjusted.

[183] *See* United Nations Office on Drugs and Crime, *Guidelines on Representative Drug Sampling*, 13 (2009), *available at* http://www.unodc.org/documents/scientific/Drug_Sampling.pdf

[184] *See id.*

[185] *See id.*

[186] Typically, this will be the same number of items the chemist identified using the hypergeometric approach. However, the Drug Calculator is based on the assumption that drug populations are normally distributed and studies have revealed that not all seized drug populations distribute themselves normally. But with sample sizes of 20 items or more, sample means of non-normally distributed seized-drug populations do distribute themselves normally. *See* Mario, *supra* note 171, at 108.

equal to the mean. Therefore, the mean weight is a good representation of the true net weight of each bag in the sample.

Conversely, if many of the net weights of the sampled items lie far from the mean, then the standard deviation is high. Using a hypothetical example, if a chemist weighs the contents of four different bags and the first bag weighs 1.0 gram, the second bag weighs 2.0 grams, the third bag weighs 3.0 grams, and the fourth bag weighs 4.0 grams, the mean weight is 2.5 grams and the standard deviation is 1.3 grams. This is a relatively high standard deviation considering the average weight. A high standard deviation may indicate that the average net weight is not a good representation of the true net weight of each item in the sample.

The confidence interval refers to a range in which the actual value of a given result could deviate from the calculated value with a selected degree of probability. For seized drug sampling, the confidence interval can be generated to provide lower and upper limits for a population net weight estimate (*e.g.*, 15.5 gram estimated net weight, based on weighing 23 out of population of 100 items, plus or minus 2 grams). The population's true net weight is likely to lie within those limits. The "confidence level," in the context of a net weight estimate, is the probability of accuracy associated with the confidence interval, typically expressed as a percentage.

Therefore, a chemist who uses the Drug Calculator to estimate population net weight will have a statistical basis for stating, for example, that the estimated net weight is 15.5 grams plus or minus 2 grams, with a 99% confidence level. Based on the confidence interval of plus or minus 2 grams, the chemist can be 99% confident that the true net weight of the entire population (*e.g.*, all 100 bags of heroin) is between 13.5 grams and 17.5 grams. Because the lowest range of the confidence interval, in this example, is below the 14 gram trafficking threshold, the chemist should either not report the estimated weight as over 14 grams or, at the very least, should report the confidence interval (of plus or minus 2 grams) to the parties in the criminal case.

5. Chemists Should Report the Method Used and the Limits of any Inferences Made

The chemist should document and report the method used to sample the evidence and the limits of their inferences. More specifically, the chemist should document and report the percentage of the population statistically identified as a controlled substance[187] and the confidence level associated with that identification. Furthermore, the chemist should document and report the calculated confidence interval for the net weight estimate and the associated confidence level. Particularly, in cases near a statutory weight threshold, these statistical estimates will help the parties in a criminal case assess the chemist's findings.

[187] Statistical identification refers to the portion of the population the chemist may report as positive for the drug of interest based on the statistical method used.

B. The Drug Lab's Sampling Practices

The OIG uncovered a number of concerns with the Drug Lab's approach to sampling. The cases demonstrated that at times chemists: used outdated arbitrary approaches; sampled non-homogenous populations; failed to apply a truly random sample selection method; failed to fully analyze each item selected; misused statistical approaches; and failed to document and report the methods, inferences and confidence levels associated with particular samples. Each of these issues is explained below.

1. The Drug Lab Improperly Used Arbitrary Approaches to Infer the Identity and Estimate the Net Weight of Substances

The OIG found a lack of uniformity in the approaches that chemists used to sample multi-item drug evidence. Part of the problem stemmed from the fact that, over time, the Drug Lab added sampling procedures without discontinuing the use of outdated procedures. In the early 2000s, supervisors trained chemists to use the square root method; later, supervisors told chemists to use the 10% method. Both of these are arbitrary methods, as described in further detail below. In 2006, based on SWGDRUG recommendations that a chemist use a statistical sampling approach, supervisors introduced the hypergeometric probability distribution for use in trafficking cases. At no time, however, did supervisors instruct the chemists to discontinue the use of outdated methods.

Another basis for the inconsistency among chemists' sampling practices was that the chemists' training referenced different methods, but did not include the theory and assumptions behind those methods, nor did it include a step-by-step guide to using them. As a result, chemists demonstrated an inadequate understanding of the theory behind their methods. For example, the OIG found that chemists incorrectly believed (and testified about) a non-existent confidence level for the arbitrary square root approach and a non-existent "percent plus or minus" associated with an arbitrary weight determination. Additionally, chemists incorrectly testified that the Drug Lab followed SWGDRUG sampling recommendations even when the chemists continued to use arbitrary approaches.

As late as 2012, chemists in the Drug Lab routinely used invalid arbitrary approaches to sample seized drug evidence in trafficking cases. For instance, some chemists used the arbitrary 10% or square-root methods[188] to determine their sample sizes in trafficking cases. With these approaches, if a population consisted of 36 items, the chemist would chemically identify and weigh 4 out of 36 items (closest to 10%) or 6 out of 36 items (square root). Using the 10% method, if the 4 items tested positive for a controlled substance, the chemist would then infer the presence of that controlled substance in the remaining 32 bags.

[188] ASCLD/LAB describes the square root method, for example, as "not… suitable for forensic drug applications …." ASCLD/LAB, *Policy on Sampling, Sampling Plans and Sample Selection in the Drug Chemistry Discipline*, 5 (2011), *available at* http://www.ascld-lab.org/wp-content/uploads/2013/04/AL-PD-1018_Sampling_Policy_v2.0.pdf.

Next, the chemist would calculate the average weight of the 4 bags tested, multiply that average weight by the number of bags, here 36, and use the product as their estimate of the total net weight of the 36 bags. Alternatively, the chemist would calculate the average weight of the containers (*e.g.*, plastic bags), multiply the average weight of the plastic bags by the number of items, and subtract the result from the gross weight of the population.[189]

No confidence level is associated with the use of any of the above arbitrary methods. Furthermore, the concern with such arbitrary weight sampling is that the chemist risks overestimating the mean weight of the sample, thereby overstating the actual weight of the population – a critical error in a case near a statutory trafficking weight threshold. Equally, the chemist may underestimate the weight of the packaging and thereby overstate the weight of the contents. If either the contents or the packaging are not uniform in size, and the chemist inadvertently selects the larger items, the calculated average will result in an overestimation of the net weight of the evidence.

2. Lack of Homogeneity in Sampled Populations

The OIG found cases in which chemists appeared to sample non-homogenous populations. For instance, at times, chemists included items in the same sample that had a gram or more variation in net weight. In other words, the items were not similar in size. This practice could have resulted in an overestimation of the mean weight of the sample and caused a chemist to report an estimated net weight greater than the true net weight of the population.

In one instance, a chemist responsible for testing and weighing a resubmitted sample treated the entire population as homogenous, and estimated the net weight based on the average weight of bags chosen from three different sized sub-populations identified by the first chemist.

In addition, the OIG found cases in which chemists tested a population consisting of a combination of paper and foil packets. This is potentially problematic because the chemist cannot see through the foil or paper and thereby determine the consistency of the contents of the packets. The OIG could not determine, from a review of the case notes, whether the chemist opened each item or not.

3. Lack of Truly Random Sample Selection

Chemists also demonstrated inconsistent approaches to randomly selecting sample items. The Drug Lab did not have a defined approach to ensure random sample selection. The OIG found that some chemists looked straight ahead and picked samples or turned around and picked samples behind their back (neither of which are considered random) or picked samples out of a box or bag.[190] The fact that the Drug Lab did not have a defined policy for randomly selecting samples left chemists to select approaches that may not have resulted in truly random sample selections.

[189] Both the evidence officer and the preliminary chemist recorded a gross weight for each sample. The gross weight is the total weight of the containers and their contents.

[190] The "black-box" approach is an acceptable approach to random sample selection.

4. Failure to Fully Analyze Each Selected Item

The OIG identified cases where the chemist failed to complete the full analysis for each selected item. That is, in some instances, chemists preliminarily tested more samples than they submitted for GC/MS confirmatory testing. This practice violates SWGDRUG's recommendation that chemists fully analyze each item selected from a population.

5. The Drug Lab Incorrectly Applied Statistical Approaches

Some chemists used statistical approaches to infer identity and estimate net weight, but did it incorrectly. The Drug Lab gave chemists a hypergeometric chart (the "Chart") that provided the sample size to test based on the size of the total population, which allowed chemists to state that 90% of the population was positive for the drug of interest at a 95% confidence level.

The Drug Lab also had an Excel spreadsheet, which utilized statistical formulas to calculate a confidence interval for net weight estimates ("Weight Spreadsheet"). Chemists entered into the Weight Spreadsheet the number of items in the population, the number of items sampled, the gross weight, the package weight, and the individual net weights of each item tested. The Weight Spreadsheet calculated a confidence interval (*e.g.*, plus or minus 2 grams), a confidence level (usually 99%), a standard deviation, an estimated net weight, and an estimated gross weight for the entire submission. After using the Weight Spreadsheet, a chemist would have a statistical basis for stating, for example, that the estimated net weight of a multi-item sample was 15.5 grams, plus or minus 2 grams, with a 99% confidence level.

As will be set forth below, the OIG found that some Drug Lab chemists: improperly used the Chart to report that 100% of the drug population tested positive for a controlled substance even though there was only a statistical basis for stating that 90% tested positive; failed to properly establish a policy for items that tested negative; misunderstood the fact that the Chart, in the manner of the Drug Lab's use, could only be used for identity and not weight; and failed to use or sometimes improperly used the Weight Spreadsheet.

a. The Drug Lab Improperly Used the Chart to Infer the Presence of a Controlled Substance in 100% of the Population

One issue with the Drug Lab's use of the hypergeometric approach is that the chemists inferred the presence of a controlled substance in 100% of a population with only a statistical basis for inferring that 90% of the population was positive for the drug of interest. This not only resulted in failing to identify 10% of the population as a controlled substance, but technically resulted in overstating the net weight because chemists reported net weights in excess of the portion of the population that they had statistically identified as the drug of interest. In other words, the Drug Lab routinely failed to consider the combination of net weight and drug identity and reported net weights in excess of the portion of the submission they had identified.

For example, assume the Drug Lab received 36 bags of suspected heroin. A chemist weighed the contents of all 36 bags, and found a total net weight of 14.122 grams. If the chemist identified the contents of 15 bags as positive for heroin (the number required by the Chart), the chemist

only has a statistical basis for stating that 90% of the 36 bags contain cocaine (90% of 36 is approximately 32).[191] In other words, the chemist has no statistical basis for inferring the presence of heroin in approximately four of the bags. Therefore, the chemist should only report the weight of the population as 12.7098 grams, not 14.122 grams.[192]

With cases near the threshold, it was important for the chemist to have a statistical basis for stating that 100% of the evidence that weighs above a trafficking threshold was positive for the drug of interest.

b. No Provision for Responding to Negative Test Results When Using the Hypergeometric Approach

A related issue with the use of the Chart to select sample size for identity is that the Drug Lab had no definitive policy with respect to items that tested negative for a controlled substance. The chemists demonstrated their lack of understanding of appropriate application of the hypergeometric approach by occasionally splitting off items that tested negative from larger populations without increasing their sample size. Their documented protocol for applying the method did not address this point nor is there any evidence from case review that chemists properly addressed the issue of negative items. The fact that items in the population tested negative for a controlled substance weakens the inference that the remaining untested portion of the population was positive for a controlled substance.

c. The Chemists Could Only Use the Chart for Identification But Appeared to Use it to Make Improper Statements About Weight

As noted above, the hypergeometric method is a statistically based approach to predict the presence or absence of a controlled substance in a multi-item submission. There is no confidence level associated with using the hypergeometric approach to estimate net weight. It appears that some Drug Lab chemists incorrectly believed that if they calculated the average weight of the number of items identified on the Chart, and extrapolated that weight to the population, their net weight estimate had the same 95% confidence level as their identity inferences. It did not.

As noted earlier, the hypergeometric approach is an appropriate method to choose a sample size for weight and identity, but the chemist must take the further step of using a statistical approach to estimate net weight; one example is use of the Weight Spreadsheet.

[191] Assuming the chemist used the Chart which provided a 95% confidence level that 90% of the items contained a controlled substance.

[192] 90% of 14.124 g is 12.7116 g.

d. Some Chemists Did Not Use the Weight Spreadsheet and Others Ignored the Calculated Confidence Interval

Despite its apparent utility, most chemists did not use the statistically-based Weight Spreadsheet. Instead, they improperly opted for an outdated arbitrary method and simply multiplied the average weight of sampled bags by the total number of bags in the population, without calculating a confidence interval or the standard deviation. The chemists who did use the Weight Spreadsheet in some instances ignored the implications of the calculated confidence interval. The OIG identified trafficking cases where chemists used the Weight Spreadsheet to calculate net weight and the lowest confidence interval limit was below a trafficking weight threshold, but the estimated net weight and the highest confidence interval limit were above a trafficking threshold. In these cases, the chemists reported the net weight as over a trafficking weight threshold.

To further illustrate, in one instance a chemist had two cocaine samples[193] that together purportedly weighed 15.11 grams. The first sample was one bag of cocaine that weighed 6.77 grams. Its weight is not in dispute. For the second sample, which included 15 bags, the chemist weighed 9 of the bags to estimate the net weight at 8.34 grams. The chemist entered the net weights of the 9 bags into the spreadsheet. The confidence interval provided the chemist with a range of estimated weights from 5.7637 grams to 10.9163 grams. If that sample weighed anything less than 7.23 grams, the case would fall below the 14 grams threshold. But the chemist reported the 8.34 grams estimated net weight the spreadsheet had provided, despite the fact that the weight associated with the lowest confidence limit (5.7637 grams) placed the sample below a trafficking threshold.

In a related issue associated with the same sample, the chemist had a clear indication that the estimated net weight that the Weight Spreadsheet provided was inaccurate. The gross weight that the calculator estimated, 17.3902 grams, was 1.8602 grams *heavier* than the actual gross weight, 15.53 grams, recorded by the evidence office and by the preliminary chemist. This is a clear indication that the chemist either *underestimated* the weight of the packaging or *overestimated* the weight of the contents because based on the numbers the chemist entered into the Weight Spreadsheet, it calculated an estimated gross weight that was higher than the true gross weight.

C. The OIG Review of the Drug Lab's Sampling Practices

The OIG reviewed whether the issues related to the Drug Lab's sampling techniques had an adverse impact on the reliability of trafficking weights that the Drug Lab reported. Specifically, the OIG reviewed certain data related to clandestinely produced drug samples (*i.e.*, those not produced in a commercial pharmaceutical lab) that law enforcement submitted to the Drug Lab

[193] Here, "samples" refers to two submissions for one defendant.

after January 1, 2002. The OIG limited its review to samples with combined reported net weights per defendant that were within 25% above a drug trafficking weight threshold.[194]

1. Reviewed Multiple-Item Cases that Weighed Within 25% Above the Threshold

The OIG's focus on cases within 25% of a trafficking threshold was based on a determination that the 25% threshold would encompass the vast majority of trafficking cases with potential errors significant enough to bring the true net weights below a trafficking weight threshold. This limit was also based in part on a prior study that found average "relative standard deviations" in seized drug populations are typically below 25%.

In the context of seized drug analysis, the relative standard deviation reflects the average dispersion of item weights in a sample to the average weight of the sample and is expressed as a percentage. It is calculated by dividing the sample's standard deviation by the sample's average net weight and multiplying by 100. A high relative standard deviation reflects large variation in individual item net weights. For instance, a 2.5 gram mean weight plus or minus 1.3 grams can be expressed as 2.5 grams plus or minus the relative standard deviation of 51%.

The OIG did not review commercially manufactured drug samples, such as pharmaceuticals, because only multi-item clandestinely produced drug populations, like cocaine and heroin, have been found to reflect high intra-population weight variations.[195]

2. Number of Samples Reviewed

The OIG reviewed 56,749 cocaine, 24,722 heroin, 95 methamphetamine, and 3,105 marijuana samples in its efforts to isolate groups of samples (*i.e.*, cases) with net weights that were within 25% above a trafficking threshold. The OIG found that 2,747 cocaine, 460 heroin, 5 methamphetamine, and 118 marijuana samples were calculated by the Drug Lab to be within 25% above a trafficking threshold, a total of 3,381 samples.

Next, the OIG reviewed the underlying documentation for these 3,381 samples, including the powder sheets, control cards, GC/MS reports, drug receipts and control sheets for each sample.

3. Reviewing Chemists' Sampling Practices

For each group of samples, the OIG first determined whether the chemist applied a sampling approach. If so, the OIG determined the total population of items submitted to the lab and the number sampled. If the sample contained only one item and the chemist appeared to test and weigh that one item properly, the OIG did not review it any further. Also, where the sample

[194] That is, the OIG isolated cases with reported net weights between 14-17.5 g; 28-35 g; 100-125 g; and 200-250 g; for cocaine, heroin, and methamphetamine, and between 50-62.5 lbs.; 100-125 lbs.; 2,000-2500 lbs.; and 10,000-12,500 lbs. for marijuana.

[195] *See* Mario, *supra* note 171, at 108.

contained multiple items but the chemist identified and weighed each item, the OIG did not review it any further. Therefore, the OIG limited its review to multi-item samples for which a chemist did not weigh and identify each item.

For each multi-item sample for which the Drug Lab used a sampling approach, the OIG used the Drug Calculator to determine the true proportion of the population the chemist statistically identified based on the number sampled. In other words, the OIG determined whether the chemist identified 90% of the population or some lesser portion of the population as positive for the drug of interest. For example, if a chemist had a population of 36 bags, the Drug Calculator would suggest a sample size of 19.[196] But if the chemist only tested 4 out of 36 bags, the chemist only had a statistical basis for stating with 95% confidence that 50% of the population, or 18 bags, was positive for a controlled substance.[197] The OIG recorded the fact that the chemist only statistically identified 50% of the population.

Next, the OIG reduced the net weight the Drug Lab reported, based on the proportion of the population that the chemist had a statistical basis for actually reporting as positive for a controlled substance, using the Drug Calculator. In the same example as above, suppose the 4 bags weighed .2 grams, .3 grams, .445 grams, and .6244 grams respectively. If the chemist reported an estimated net weight of 14.1246 grams for those 36 bags, the OIG adjusted the reported net weight and recorded a reduced net weight finding based on the proportion properly identified as cocaine (50%). For the 36 bags, the OIG would record an adjusted net weight of 7.062 grams because the chemist only had a statistical basis for stating that 50% of the reported weight of 14.1246 grams was actually positive for cocaine.[198] Then, the OIG added this case to its list of suspect cases.

Finally, for each multi-item group of samples, the OIG calculated the mean weight, the standard deviation, and the relative standard deviation. Then, the OIG used the Drug Calculator to calculate a confidence interval (with a 95% confidence level) and an estimated net weight. Using the same 4 out of 36 bags (.2 grams, .3 grams, .445 grams, .6244 grams), the mean weight is .39235 grams. The standard deviation is .184 grams. The relative standard deviation is 46.8%. The Drug Calculator provides a confidence interval for the mean weight of plus or minus .276 grams. Therefore, after multiplying the mean weight by 36, the estimated net weight is 14.12 grams plus or minus 9.9 grams. Based on the calculated confidence interval, there is a 95% confidence level that the 36 bags weighed between 4.188 grams and 24.11 grams. The OIG documented the adjusted net weight of this sample as 4.188 grams and added this case to its list of suspect cases.[199]

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[196] The Drug Calculator and the Chart provide slightly different numbers to identify. The OIG used the Drug Calculator because it reflects the most up-to-date statistical formulas.

[197] Assuming the 4 bags tested positive.

[198] It is quite possible that if the chemist identified and weighed each item that the statutory weight threshold of fourteen grams may have been met. But the Drug Lab's statistical approach was lacking and they did not conduct enough analysis to say for certain.

[199] The OIG documented the lowest confidence interval because it is the most conservative estimate of the net weight.

D. The OIG's Findings Regarding Trafficking Cases

1. Number of Cases Where the Drug Lab Applied a Sampling Approach

Even with multi-item drug samples, chemists in the Drug Lab did not always use a sampling approach – the chemists often weighed and identified each item. The Drug Lab applied a sampling approach in approximately 532 out of the total number of 3,381 trafficking samples, or 15% of the time. This represents approximately 271 cases.

Of those 271 cases, the OIG found 156 cases – 117 cocaine cases, 34 heroin cases, 4 marijuana cases and 1 methamphetamine case – in which the chemist did not statistically identify enough of the population to report the net weights that the Drug Lab reported for the case. In 101 of these 156 cases, the Drug Lab did not identify enough of the population but the lowest confidence interval was above the nearest weight threshold. In 55 cases the Drug Lab did not identify enough of the population *and* the lowest confidence interval was below the nearest trafficking weight threshold.

The OIG searched the electronic Trial Court Information Center for information relating to criminal defendants whose cases were likely implicated in the review. The OIG found that most of the defendants with cases involving substances that potentially weighed less than the reported net weight were not convicted of trafficking offenses.[200] The majority of these cases resolved by way of plea to a lesser-included offense, such as possession with intent to distribute.

2. Number of Cases Where the Drug Lab's Sampling Approaches Are Questionable

Of the total of 204 cocaine cases sampled, the OIG performed calculations and found 117 cocaine trafficking cases for which results indicated that the chemist failed to statistically identify a sufficient proportion of the population to meet the nearest trafficking weight threshold. Approximately 103 were calculated using an arbitrary method for identity for at least one sample in the case. In other words, in those 103 cases, chemists identified less than 90% of the population as a controlled substance. In some cases, they statistically identified as little as 12% of the population as positive for a controlled substance.

In some cases in which chemists appeared to apply the hypergeometric approach (*i.e.*, they statistically identified 90%), they still did not statistically identify enough of the population to meet or exceed the nearest weight threshold. That is, if the net weight for the case was 14.1 grams, but the chemist only identified 90% as cocaine, he did not identify all 14.1 grams as cocaine and therefore should not have reported the weight as 14.1 grams.

[200] The OIG did not find disposition information for every affected sample. Frequently, a defendant's name that is associated with a sample included "et al.," suggesting others were also charged. Also, the OIG did not have identifying information. The OIG only had a name from the drug receipt and the county corresponding to the police department.

The OIG calculated confidence intervals using the Drug Calculator at a 95% confidence level, and found 44 of the 117 cocaine trafficking cases in which the lowest confidence interval limit was below a statutory weight threshold. In these cases and those detailed below, the estimated weight was typically at or above the relevant threshold, but the confidence interval limit estimated that the case might be below the relevant threshold. The fact that the confidence interval limits were below trafficking weight adds uncertainty to the chemists' weight estimates. Some confidence intervals were quite significant. In one case, the weight difference between the lowest confidence interval limit and the highest was more than 30 grams. At a minimum, this suggests a high level of uncertainty in the weight estimate.

The OIG applied the same statistical approach to the 60 heroin trafficking cases and found 34 cases in which the results indicated that the chemist failed to statistically identify a sufficient portion of the population to meet the nearest trafficking threshold. Twenty-three of these cases were calculated using an arbitrary method for identity for at least one sample in the case. In some cases where chemists appeared to apply the hypergeometric method, they still did not statistically identify enough of the population to meet or exceed the nearest weight threshold.

The OIG calculated confidence intervals using the Drug Calculator at a 95% confidence level, and found 11 of the 60 Heroin trafficking cases in which the lowest confidence interval limit was below a statutory threshold.

The OIG applied the same statistical approach to the 6 marijuana trafficking cases sampled and found 4 cases in which the results indicated that the chemist used an arbitrary method and failed to statistically identify a sufficient portion of the population to meet the nearest trafficking threshold. The OIG calculated confidence intervals using the Drug Calculator at a 95% confidence level, and found 1 of the 6 marijuana trafficking cases where the lowest confidence interval limit was below a statutory threshold.

The OIG applied the same statistical approach to the single methamphetamine trafficking case finding that the chemist used an arbitrary method and failed to statistically identify a sufficient portion of the population to meet the nearest trafficking threshold. The OIG did not uncover any methamphetamine cases with confidence intervals below the nearest trafficking threshold.

E. The Drug Lab's Use of Arbitrary Sampling Approaches Produced Questionable Results from 2002 to 2012

It was not until 2005 that SWGDRUG recommended that drug labs use only statistically-based sampling approaches to make inferences or estimates about untested or un-weighed evidence. Prior to 2005, the Drug Lab used the sampling approaches that the forensic drug community commonly used; that is, arbitrary approaches. The OIG finds no fault with the Drug Lab for using those approaches prior to 2005. But the results they produced using arbitrary approaches are still questionable. For this reason, the OIG reviewed multi-item trafficking cases for the entire span of 2002 to 2012.

Since 2005, the forensic drug community evolved and has come to recognize that only statistical methods are appropriate for sampling seized drug evidence. The Drug Lab was slow to evolve

with the forensic drug community and never fully adopted a consistent statistical approach to sampling.

1. Massachusetts Courts Have Approved of the Use of Non-Statistical Sampling Approaches

The Drug Lab's continued use of arbitrary sampling approaches through the years is somewhat understandable considering that Massachusetts appellate courts have routinely upheld cases in which drug labs have applied such approaches. Massachusetts courts have denied defendants' challenges to sampling methods in cases where:

- the chemist calculated an estimated net weight of 174 cocaine packets by taking the average weight of 20 packages and multiplying that average weight by 174; *Commonwealth v. Coplin*, 34 Mass. App. Ct. 478, 485 (1993);
- the chemist tested 5 of 9 bags, and concluded that all 9 contained cocaine because each bag contained substances that were reportedly similar—as to color, consistency, smell, etc.; *Commonwealth v. Shea*, 28 Mass. App. Ct. 28, 33-34 (1989);
- the chemist weighed 4 of 36 packets of suspected crack cocaine to estimate the weight for the entire population of 36 packets, and infer the presence of crack cocaine in the remaining 32 bags; *Commonwealth v. Crapps*, 84 Mass. App. Ct. 442 (2013).[201]

Despite the fact that Massachusetts courts have implicitly approved of arbitrary approaches (albeit with some reservations) to sampling seized drug evidence, it is the forensic drug labs not the courts, that should be responsible for validating the methods they use and keeping current with changes in the field of forensic drug testing.

2. SWGDRUG Requirements for Documenting and Reporting

SWGDRUG's 2005 recommendations included the provision that chemists must document the limits of their statistical inferences.[202] This would require documenting the percentage of the population identified using the hypergeometric approach, the confidence interval for the weight estimate, and the confidence levels associated with both the identity inference and weight

[201] According to the evidence introduced at trial, the chemist used a computer program to estimate net weight and testified that the program basically took the average weight, multiplied it by the thirty-six bags, and "extended a standard deviation." However, the chemist did not reveal the standard deviation or the algorithms and underlying assumptions of the computer program. *See Crapps*, 84 Mass. App. Ct. at 452. The concurring opinion in *Crapps* expressed concerns about whether the sampling methods employed in that case were proper. The concurrence highlighted the fact that the estimated "14.29 gram net weight came in evidence unadorned by any explanation of its statistical reliability…." The concurrence also expressed concern about the weight variability among the four samples. The chemist testified that the samples were "pretty consistent in size," but the largest packet of crack cocaine that the chemist sampled weighed more than two and one-half times that of the smallest packet sampled. The concurrence cautioned that without explanation of the validity and meaning of the chemist's weight estimate, a lay fact-finder may have difficulty evaluating the importance of the evidence, and may simply accept the estimated weight without appropriate scrutiny. *See id*. at 449-452.

[202] *See* SWGDRUG, *supra* note 172, at 2.

estimate. By 2008, SWGDRUG added the provision that labs should report uncertainty[203] when "…it may impact the use of the result by the customer."[204] Specifically, it listed weights close to a statutory threshold as an example of a "critical" value that should be reported.

At the very least, as of 2008, chemists at the Drug Lab should have been documenting the proportion of the population statistically identified, the confidence interval for the net weight estimate and the confidence level associated with both the proportion identified and the confidence interval. Chemists should also have been particularly vigilant in reporting the limits of their inferences in cases near a weight threshold.

3. The Lab Disclosed the Total Number Tested and the Total Number Used to Calculate the Average Net Weight

Despite the many issues with the Drug Lab's application of sampling approaches, the OIG found that the Drug Lab properly disclosed to the parties in criminal cases that chemists had estimated net weight and inferred chemical identity. First, on the drug certificate, the Drug Lab disclosed that the chemists used a sample to arrive at their conclusions. For example, a typical drug certificate for a sampling case would read:

> The identification of the contents of the 36 plastic bags was determined by analysis of a random sample of 4 plastic bags and the net weight of the 36 plastic bags was derived from the average weight of the randomly sampled plastic bags.

Second, the Drug Lab routinely disclosed analysis sheets with chemists' handwritten notations, including the description of the items; the amount of items in the sample; the amount tested; the weights for the individual items tested; and the estimated average weight. Moreover, the backs of those analysis sheets contained sections on the bottom entitled "Average WT of Packets," "Average WT of Powder," and "Net Estimated Powder Weight" with the chemist's net weight calculations included. Third, the control cards included the number of samples received, and the number of samples tested; they also typically included a notation that the chemist estimated the net weight.

On balance, the drug certificate, the control card, and the powder sheet, along with the other documents that the Drug Lab provided as part of discovery in criminal cases, served to inform the prosecution, defense and court that the Drug Lab used a sample to estimate net weight and infer drug identity. It accurately conveyed to stakeholders that the chemist only tested and weighed a limited number of bags. However, the OIG finds that the Drug Lab should have turned over more data to stakeholders to provide enough detail to analyze and question the chemists' sampling methods, opinions and conclusions.

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[203] "'Uncertainty' is an estimate attached to a test result which characterizes the range of values within which the true value is asserted to lie." SWGDRUG Recommendations, *Annex A SWGDRUG Glossary of Terms and Definitions*, (2006), *available at* http://www.swgdrug.org/OLD/SWGDRUG%20Recommendations_080907.pdf.

[204] SWGDRUG Recommendations, *Part IV C: Quality Assurance/Uncertainty*, §§ 5.5.1 – 5.5.1.2, (2008), *available at* http:// www. swgdrug.org /Archived /SWGDRUG%20Recommendations_012910.pdf.

4. The Lab Failed to Document and Disclose the Confidence Levels for Their Identity Inferences and Weight Estimates

For instance, based on the OIG's review of the documents for over 3,000 drug trafficking samples, there is no evidence to suggest that the Drug Lab ever documented the method or approach they used to sample a particular case. Further, it appears that the Drug Lab did not disclose the percentage of the population identified as a controlled substance, the confidence level associated with that identity inference, or the confidence interval or confidence level for its weight estimates.

5. The Lab Failed to Disclose the Weight Spreadsheet

In addition, to the extent that the Drug Lab chemists used the Weight Spreadsheet to calculate confidence intervals and standard deviations, the OIG determined that the chemists did not routinely turn over the Weight Spreadsheet or the calculations derived from it. For cases near a trafficking threshold, some Weight Spreadsheets could be exculpatory. Specifically, if the lowest limit of the confidence interval was below the trafficking threshold at issue in the criminal case, that confidence interval would tend to call into question whether the sample weight actually exceeded the trafficking threshold.[205]

As noted in 2009 by the National Research Council in "Strengthening Forensic Sciences," failing to include this type of information in discovery leaves "peers and other courtroom participants without enough evidence to understand, and if needed, question the sampling scheme, processes of analysis, or interpretation…."[206]

6. The OIG Questions Whether Reweighing Samples Would Resolve any Lingering Questions

Despite concerns with the methods the Drug Lab used to sample drug cases, the OIG questions whether reweighing samples would settle any lingering questions. Unlike testing for a drug's chemical identity, which can be determined years later with laboratory tests, such as a GC/MS instrument, drug samples lose weight or may gain weight over time due to a number of factors. Temperature fluctuations, light, exposure to water and dehydration all may affect the net weight of a substance.

Moreover, evidence storage at each of the more than 200 different agencies that the Drug Lab served has likely exposed the samples to different conditions. Fluctuations and inconsistencies in temperature, moisture, light and exposure to air between each police department will affect the net weight of a sample differently.

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[205] Exculpatory evidence is not a narrow term connoting only alibi or other complete proof of innocence, but is any evidence that tends to negate the defendant's guilt or support his innocence. *See Commonwealth v. Murray*, 461 Mass. 10, 19 (2011).

[206] Committee on Identifying the Needs of the Forensic Sciences Community, National Research Council *Strengthening Forensic Science in the United States: A Path Forward*, 135 (2009), *available at* https://www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf.

For these reasons the OIG chose not to attempt to reweigh any samples. To do so would not settle any uncertainty but only add to it. However, the OIG will report all of the sample numbers and defendants' names implicated in its review to the appropriate prosecutorial agency.

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XVII. OIG Sample Retesting

As noted in Section VIII above, sample vials were sometimes analyzed more than one time on the GC/MS instrument. There were many benign reasons why that might happen, including a need for the primary chemist to concentrate or dilute the aliquot. Sometimes, however, chemists retested vial samples multiple times on the GC/MS instrument because the initial confirmatory GC/MS result was inconsistent with the primary chemist's preliminary identification of the sample. In addition, sometimes with samples run multiple times on the GC/MS instrument, there were inconsistencies among the GC/MS results.

The Drug Lab failed to document multiple runs and also failed to consistently, if ever, disclose the fact of multiple runs to the parties in the resulting criminal case.

Given the anomalies among testing results for certain of these samples that were run multiple times on the GC/MS instrument, the OIG thoroughly reviewed the testing documents of all of the samples run multiple times. As a result of this document review, the OIG determined that it was necessary to retest a certain percentage of these samples to ensure the accuracy of the Drug Lab's testing results. That retesting is ongoing.

A. Failure to Properly Document Multi-Run Samples and Provide Test Results in Criminal Cases

The Drug Lab did not have any form of discrepancy log to document sample vials that needed to be returned by the GC/MS section to the primary chemist for any reason. In addition, for most of the years of the OIG's review, the Drug Lab did not have a policy for documenting the fact of multiple runs. Instead, the confirmatory chemist was only required to write on the front of the sample's control card the date of the final GC/MS analysis and the confirmed identification of the substance. In addition, the confirmatory chemist would sometimes write the final GC/MS sequence on the back of the control card.

At the end of March 2010, the Drug Lab instituted a policy stating that if a sample was returned to the primary chemist and thereafter tested additional times on the GC/MS instrument, the confirmatory chemist was responsible for recording each GC/MS sequence on the back of the control card in order to document the entire GC/MS history of the sample. That new policy, however, was only sporadically adhered to.

Further, when providing discovery in criminal cases in which the Drug Lab analyzed a controlled substance, the Drug Lab failed to disclose either the fact of multiple runs or the actual multiple GC/MS reports. Typically, the Drug Lab gave prosecutors a "discovery packet" with a copy of the following documents associated with a sample: (1) the front of the control card (and inconsistently the back); (2) the drug receipt; (3) the powder sheet or pharmaceutical analysis sheet; and (4) the printouts of the GC/MS report that confirmed the final identification of the sample. The Drug Lab's discovery packet did not include the printouts of any additional GC/MS reports reflecting instrument runs that did not lead to the sample's ultimate identification. Nor did the discovery packet include the sample's control sheets, which may have contained an explanation of why a sample had been returned to the primary chemist. Similarly, the discovery

packet often failed to include the back of the control card, which after March 2010, was supposed to contain information regarding the number of times the sample had been tested on the GC/MS instrument. The failure to turn over the additional GC/MS reports, in addition to the control sheets and the back of the control cards, may have prevented prosecutors and defendants from knowing that a sample had been tested more than once.

B. Need for Retesting

Once the OIG determined that there were samples tested multiple times on the GC/MS instrument ("Multi-Run Samples") that had deviations or discrepancies among the test results, it became clear that a thorough review of the testing of these samples was necessary. This was particularly true when it became apparent to the OIG that the parties in the criminal cases likely did not know about the multiple tests, which may have deprived certain criminal defendants of a meaningful opportunity to question the reliability and accuracy of the Drug Lab's test results, particularly on occasions in which the GC/MS instrument produced different results than the primary chemist.

C. Methodology of Review

Because of the Drug Lab's failure to consistently document when a sample had been tested multiple times on the GC/MS instrument, it was necessary for the OIG to use the raw, electronic data stored on the GC/MS instruments to compile a list of Multi-Run Samples. For its review, the OIG relied on the technical skills of its e-discovery firm, Navigant, to create this list. The OIG's Multi-Run Sample review focused on the lab work of all the chemists (including Dookhan) who worked in the Drug Lab between 2002 and 2012, as well as all classes of samples that the Drug Lab had tested, including those drugs in Classes A, B, C, D and E.[207]

Between the years of 2002 and 2012, 112,609 samples were analyzed on the Drug Lab's GC/MS instruments. Of those 112,609 samples, 9,483 samples, or 8.4% of the total, were Multi-Run Samples. These 9,483 Multi-Run Samples resulted in 27,991 GC/MS runs. For each of these 9,483 Multi-Run Samples, the OIG reviewed the underlying documentation to determine the accuracy of the results. In reviewing the documentation for each sample, the OIG examined: (1) the control cards; (2) the control sheets; (3) the powder sheets; (4) both handwritten and typed batch sheets; and (5) any other documents associated with each sample, including the drug receipt and, if available, the drug certificate.[208] The OIG then looked at the GC/MS results for each sample and, in some instances, reviewed the GC/MS reports for more detailed information.

[207] Each controlled substance defined in Chapter 94C of the General Laws is assigned to a specific "class" for the purpose of determining the severity of the criminal offenses associated with that controlled substance. In Massachusetts, there are five different classes of narcotics, Class A substances having the most severe criminal punishments and Class E having the least severe penalties. For a list of which substances are included in each class, *see* M.G.L. c. 94C, § 31.

[208] The Drug Lab used a template for their drug certificates, in which a prior drug certificate would be overridden by the creation of a new drug certificate. The Drug Lab had no policy for keeping a copy of the drug certificates at the Drug Lab; rather, typically, the one and only drug certificate for each sample was returned to the police department with the sample.

The information obtained from the examination of the underlying drug testing paperwork informed the OIG which samples required retesting.

In creating the OIG's final list of samples for retesting, every effort was made to be over-inclusive so as to identify all samples with potentially inaccurate results. The OIG's mission in this regard was to check the accuracy of the Drug Lab's testing and protect the rights of criminal defendants who may have been wrongfully convicted.

D. The OIG's Findings Regarding Multi-Run Samples

By reviewing the electronic and hardcopy documents associated with each Multi-Run Sample, the OIG categorized each sample by the type of discrepancy found in the Drug Lab's testing results. Multi-Run Samples were assigned to a particular category as follows:

> Category 1: GC/MS results differed from the primary chemist's preliminary identification.
>
> Category 2: Substance found in first GC/MS run and substance found in subsequent GC/MS runs differed among the multiple runs.
>
> Category 3: First GC/MS result found "No Integrated Peaks[209]" and subsequent GC/MS results confirmed the preliminary identification.
>
> Category 4: The primary chemist's preliminary finding was that the substance was an "unknown," the initial GC/MS finding was of a controlled substance, and all GC/MS runs thereafter were consistent with that initial GC/MS finding.
>
> Category 5: The substance found in all GC/MS runs was consistent with the preliminary identification, and the sample was re-run for no apparent reason.
>
> Category 6: The substance found in all GC/MS runs was consistent with the preliminary identification, but the sample was re-run for reasons stated on the GC/MS control sheet, such as "too weak," "RTC," or "dilute."[210]
>
> Category 7: The sample was not tested multiple times. Rather, the sample appeared to have multiple GC/MS results based on a transcription error on a batch sheet or handwritten sequence sheet.

[209] A finding of "No Integrated Peaks" means that the GC/MS instrument was unable to identify a substance satisfying the abundance threshold and parameters set by the GC/MS operator. A GC/MS result finding "No Integrated Peaks" does not necessarily mean that the sample is not a controlled substance.

[210] A "weak" sample is one that does not meet the minimum spectral requirements of the GC/MS instrument as set by the GC/MS operator. If a sample was too weak, the sample could be retested on a more sensitive GC/MS method or returned to the primary chemist for concentration. The comments for the vast majority of Category 6 samples were either "Repeat" or "Return to Chemist" (or "RTC"), which provided no real insight as to the reason a sample was run multiple times.

Category 8: The sample was not tested multiple times. The sample appeared to have multiple GC/MS results, but for unknown reasons, a sample that was tested once produced duplicate electronic data files.

All of the Multi-Run Samples in Categories 1, 2 and 3 were included on the retest list, because these categories were made up of samples which had discrepancies among the testing results for the samples. There were 762 samples in Category 1, 1,146 samples in Category 2 and 1,342 samples in Category 3.

The OIG did not include on the retest list the 1,850 Multi-Run Samples assigned to Category 4 because the only testing discrepancy associated with a Category 4 sample was a preliminary finding of an "unknown." While in some instances, the primary chemist could have conducted more bench tests to preliminarily identify a substance (including analyzing the sample on a separate GC instrument or using another preliminary testing technique), this category suggests potential inefficiencies at the Drug Lab, as opposed to any true discrepancies among testing results.

Also removed from the retest list were the 122 Multi-Run Samples in Category 7. While transcription errors suggest a lack of attention to detail, they do not cause concern that the samples had been inaccurately identified. Similarly, the 60 Multi-Run Samples assigned to Category 8 were, by definition, not actually run more than one time on the GC/MS, so these samples were removed from the retest list as well.

The OIG made a determination whether to include the Multi-Run Samples assigned to Categories 5 and 6 on a sample-by-sample basis. Samples in Categories 5 and 6 all had consistent GC/MS results which showed the same controlled substance each time the sample was tested. Additionally, the Drug Lab's records did not clearly indicate why the samples had been analyzed more than one time on the GC/MS instrument. By comparing the actual GC/MS data – including gas chromatographs and the area, quality and composition of the substances found in each GC/MS run for the Categories 5 and 6 samples – the OIG forensic experts identified certain samples that had minor inconsistencies in the GC/MS results. These inconsistencies suggested potential malfeasance, including the possibility that the multiple GC/MS results were run on vials derived from different samples, even though the same controlled substance was found in each test result. Based on the expert's analysis, 68 of the 2,830 samples in Category 5 and 31 of the 1,371 samples in Category 6 were included on the retest list.

In total, the retest list of Multi-Run Samples from Categories 1, 2, 3, 5 and 6 totaled 3,349 samples.

Once the list of Multi-Run Samples was complete, the OIG removed all known residues from the list, reasoning that virtually the entire sample was likely to have been consumed during the original drug testing, so a negative finding at this point would be unreliable. After these removals, the OIG's list totaled 2,987 Multi-Run Samples.

E. Phase One of the OIG's Retesting

After finalizing the retest list, the OIG sent letters to each of the 178 police departments in possession of the samples on the list to determine which samples had already been destroyed pursuant to court order in the normal course, and which samples were still in the department's custody. To date, the OIG has obtained information that 650 samples had been destroyed pursuant to court orders obtained in accordance with Mass. Gen. Laws ch. 94C, § 47A, prior to the MSP's investigation into Dookhan.[211] After removing the destroyed samples from the list, the OIG's retest list totaled 2,337 Multi-Run Samples.

The OIG then coordinated with each police department to transport the existing samples to a geographically centralized location for preliminary retesting. With the cooperation of the Association of Massachusetts Major City Police Chiefs, the OIG tested samples at police departments across the Commonwealth over the course of sixteen days.

To accomplish the preliminary retesting, the OIG forensic experts used a handheld Raman spectrometer instrument, called a "TruNarc," which is manufactured by Thermo Fisher Scientific in Tewksbury, Massachusetts. The TruNarc allows an operator to direct the "nose" of the instrument against a sample and cause a laser to reveal the chemical structure of the sample. After generating spectra for the sample and then reconciling and matching it with a drug listed in its internal drug library, the sample's identity is displayed on the TruNarc screen. One benefit of the TruNarc is that it can identify many types of controlled substances in powder, liquid and tablet form, and can do so through containers such as baggies and glass vials. Another benefit is its speed; many samples take seconds to identify. Furthermore, due to the generosity of Thermo Scientific, the Quincy Police Department and New York's Suffolk County Crime Laboratory, the OIG was able to use three TruNarcs at no cost to the Commonwealth, rendering the process cost-effective.

It should be noted, however, that the OIG's retesting with the TruNarc was preliminary in nature. Due to some limitations, the TruNarc cannot identify every type of controlled substance. When certain powder samples are overwhelmed by cutting agents, the TruNarc cannot identify the controlled substance in the sample.[212] Similarly, the TruNarc cannot always identify a low-dose pharmaceutical, although there is a "Type-H" kit for enhanced analysis of heroin and some low-dose pills. In addition, when the OIG experts viewed a sample's amount as too small, they did not preliminarily retest those samples.

After removing the samples that had been destroyed by court order and the samples that were not found within the TruNarc library, the list of samples to preliminary test was narrowed to 1,203 Multi-Run Samples.[213] In 739 of those 1,203 samples, the TruNarc's finding was consistent with

[211] Since the investigation into Dookhan began, the destruction of samples tested at the DPH Drug Lab was halted.

[212] A cutting agent is a non-narcotic substance that is added to a narcotic in order to increase its weight or volume. Common cutting agents include baking powder and baby formula.

[213] In addition to the 1,203 samples, there were a small number of samples that were preliminarily retested on-site due to human error.

the reported Drug Lab finding. The TruNarc returned an inconclusive finding or a finding inconsistent with the Drug Lab finding with respect to 464 of the 1,203 samples.

The OIG is now in the process of sending the samples that TruNarc identified as "inconclusive" or "inconsistent," as well as the samples that could not be tested with the TruNarc (due to library issues, for example), to an accredited, independent laboratory out of state. This testing should determine the accuracy of the Drug Lab's findings with respect to the Multi-Run Samples. The OIG is in the process of providing the appropriate District Attorney's Office with the results of each TruNarc test conducted.

XVIII. Conclusion

A. Findings

After a careful review of a significant volume of electronic and paper documents, witness testimonies, drug analysis results and other materials, and with the aid of its forensic experts, the OIG finds the following:

1. Dookhan Was the Sole Bad Actor

The OIG makes findings with respect to chemist Annie Dookhan, despite the fact that Dookhan was not the focus of the OIG's investigation. The OIG focused on the Drug Lab's policies and practices from 2002 to 2012 to determine whether any chemists, supervisors or managers at the Drug Lab during that time committed any misfeasance or malfeasance that may have impacted the reliability of drug testing at the Drug Lab. The Attorney General's Office separately investigated and criminally prosecuted Dookhan, and Dookhan pleaded guilty to conduct including tampering with Drug Lab documents, tampering with aliquots (by making negative findings into positives), and falsely testifying to having a Master of Science degree. Nevertheless, it was necessary for the OIG to review Dookhan and her work product as part of a thorough investigation of the Drug Lab.

With respect to Dookhan, the OIG finds that she (1) failed to follow chain-of-custody protocols with in relation to the June Breach and the May Breach; (2) forged certain documents, including the evidence logbook, a GC/MS control sheet, a GC/MS tune sheet and a GC/MS batch sheet; (3) fabricated multiple GC/MS QC standard mix reports; (4) batched the creation of her GC/MS aliquots in such a way as to risk contamination; (5) "tampered" with her own aliquots that had been returned to her by the GC/MS section; and (6) testified falsely in court to having a Master of Science degree.

The OIG did not find evidence that Dookhan tampered with any drug sample assigned to another chemist, or that she tampered with any of the actual evidence samples assigned to her as the primary chemist, only that she tampered with the small portion of the sample contained in the aliquots that she resubmitted to the GC/MS section.[214] Furthermore, the OIG did not find evidence that Dookhan made changes to drug findings in the Drug Lab's database.

The OIG did not determine Dookhan's motive for tampering with her aliquots. However, the OIG finds that Dookhan's motive was not based on a zealous desire to convict criminal

[214] The fact that the MSP retested and reached a negative result for certain samples that Dookhan preliminarily tested in the Drug Lab supports this finding that Dookhan only tampered with the aliquots and not the evidence samples.

defendants[215] given that her percentage of negative findings was consistent with the percentage of negative findings of all other chemists.[216]

Further, the OIG did not find evidence that any other chemist at the Drug Lab committed any malfeasance with respect to evidence testing or knowingly aided Dookhan in her malfeasance.[217] However, as will be set forth below, the following deficiencies at the Drug Lab created an atmosphere that allowed for Dookhan to commit her crimes.

2. Management Failed

The most glaring factor that led to the Dookhan crisis was the failure of management. Director of the Bureau of Laboratory Sciences ("BLS") Linda Han and Director of the Division of Analytical Chemistry Julianne Nassif were both weak, absent managers who had no forensic experience or training, failed to have regular meetings with the Drug Lab employees, and were incompetent in dealing with personnel matters. Neither ensured that background checks (including confirmation of academic credentials) were performed for new Drug Lab employees[218] or that annual employee performance evaluations were conducted.[219] When faced with repeated reports of Dookhan's malfeasance – including the May Breach, the June Breach, the forgeries and questions about Dookhan's ability to conduct all necessary tests given her high testing numbers – Nassif buried the information and quietly (and gradually) removed Dookhan from drug testing duties to writing standard operating procedures, a move that other chemists perceived as a reward. Nassif failed to investigate various allegations about Dookhan's suspicious behavior. Han and Nassif failed to report any of Dookhan's transgressions to the DPH Commissioner's Office or to any outside agency, including agencies involved in criminal investigations or the federal body from which the Drug Lab received Coverdell grant funds. Han and Nassif waited five months to report the June Breach to DPH, and did so only after mentioning it to Director of Administration and Finance for the BLS Grace Connolly in a conversation regarding which chemists should transfer to the Massachusetts State Police ("MSP").

Further, Nassif created a vacuum in oversight by marginalizing Charles Salemi, who had been the supervisor in the Drug Lab for approximately eight years when Nassif was appointed as director. She distanced a knowledgeable voice in the area of chemical testing processes. When this occurred, Salemi failed to assert himself to ensure the integrity of the Drug Lab, which he had managed for a significant period of time.

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[215] The OIG is aware of Dookhan's statements, contained in emails, indicating a desire to please prosecutors and email responses from prosecutors suggesting she was helpful to their cases.

[216] As discussed in footnote 39, Dookhan's percentage of negatives was in the middle of the range of chemists who worked in the Drug Lab from 2002 to 2012.

[217] Although the OIG discovered that chemist Kate Corbett did not have an undergraduate degree in chemistry, as she had represented in her curriculum vitae and in sworn court testimony, the OIG found that Corbett was likely mistaken in her understanding that she had such a degree based on statements made to her by faculty at her undergraduate institution after she had completed the coursework for a major in chemistry.

[218] The one background check performed was a criminal record check.

[219] This is policy for every state agency and is included in the chemists' union's collective bargaining agreement.

Within the Drug Lab, direct supervision and daily oversight was lacking. Salemi's philosophy was to provide chemists with the utmost independence. The Drug Lab's physical layout also perpetuated limited supervision and a high level of independence for chemists. Dookhan, for example, was alone with another chemist in a room with a closed door, without a team leader after 2008. Salemi, like other supervisors and DPH officials, also failed to respond to complaints from Drug Lab chemists regarding Dookhan, and he failed to investigate such complaints.

Management also failed to put systems in place that would have alerted them to testing discrepancies, lapses in the chain of custody and other potential problems in the Drug Lab. They failed, for instance, to create discrepancy logs to document when sample vials were returned to the primary chemist or to document errors in the chain-of-custody records. Similarly, management failed to conduct inventories and audits, such as an inventory of the evidence safe and audits of samples that had been run multiple times on the GC/MS instrument.

3. DPH Commissioner Auerbach Failed to Respond Appropriately to the Report of the June Breach

When Han and Nassif finally notified the DPH Commissioner's Office of the June Breach in December 2011, Commissioner John Auerbach failed to respond appropriately. The resulting investigation that Auerbach commissioned focused solely on confirming the facts of the June Breach rather than investigating any other breaches in chain of custody, any other potential malfeasance committed by Dookhan, or any other issues in the Drug Lab. Auerbach further failed to direct an investigation into the May Breach and failed to disclose the May Breach to prosecutors' offices or to the federal agency providing Coverdell grant funds.

4. The Drug Lab Lacked Formal and Uniform Protocols

The Drug Lab lacked written, uniform protocols for many aspects of its operations, including training, chain of custody and testing methods. This lack of direction from management allowed chemists to create their own discordant (and sometimes incorrect) practices. For a chemist like Dookhan, who appeared to be empowered by her ever-increasing responsibilities and independence, the lack of protocols fostered an atmosphere where she regularly disregarded the minimal procedures in place.

The lack of accreditation exacerbated the Drug Lab's lack of uniform policies, as did the physical location of the Drug Lab within a public health-oriented building, without other forensic science labs with which to consult.

5. Management Did Not Provide Sufficient Training to Chemists

Training was sorely lacking in the Drug Lab. The initial chemist training was limited, lacked uniformity among the new chemists and was deficient in both theory and the scope of required knowledge.

In addition, there was virtually no continuing education provided to the chemists from either inside or outside of the Drug Lab. Unless it was free, outside training was only available to

chemists when they sought it and paid for it. Furthermore, most chemists in the Drug Lab did not belong to any professional forensic organizations and when they did, they paid for it on their own and rarely, if ever, attended meetings. This lack of connection to other forensic drug labs, through either continuing education or attending forensic organization meetings, left the Drug Lab isolated from the rest of the forensic community and behind the times in terms of trends in forensic drug chemistry and practices.

Further, there was virtually no training for chemists related to providing expert testimony in court proceedings, even after *Melendez-Diaz*, when chemists were suddenly testifying in trials on a routine basis. Mock trials were not a regular part of chemists' training and supervisors failed to oversee chemists' live testimony in court. As a result, chemists testified in such a way that they misrepresented the two-chemist system and testified inaccurately about the statistical basis for weight extrapolations in trafficking cases.

6. The Drug Lab Should Have Provided Potentially Exculpatory Evidence to the Parties in Criminal Cases

The Drug Lab's management decided, without consulting legal counsel, to provide prosecutors with copies of only four documents in response to discovery requests. These documents were: (1) the drug receipt; (2) the powder sheet or pharmaceutical analysis sheet; (3) the front of the control card (and, inconsistently, the back); and (4) the GC/MS results that confirmed the sample's presumptive findings. The Drug Lab's failure to give prosecutors printouts of GC/MS runs besides the final one, the control sheets and often the backs of the control cards (after March 2010) may have prevented prosecutors and defendants from learning about potentially exculpatory evidence in the nature of additional GC/MS runs that may have been inconsistent with the final GC/MS run or the preliminary drug finding. To ensure the integrity of certain multi-run test results, the OIG is in the process of retesting 2,337 samples.

The Drug Lab further failed to produce the Weight Spreadsheets used in multi-item trafficking cases, which may have revealed a confidence interval that fell below the statutory threshold for trafficking.

7. The Drug Lab Lacked Effective Quality Controls

The quality control system in place at the Drug Lab was deficient in its ability to detect or uncover the type of malfeasance Dookhan committed or other testing problems or inaccuracies. Most of the Drug Lab's quality control was related to whether the instruments were functioning properly rather than the accuracy of the chemist's case work. The quality control "checklists" that were signed by Technical Supervisor Peter Piro, Dookhan and Nassif and provided to Han, were a paper trail of balances checked and reagents replaced. Salemi's monthly audit of chemists' work was inadequate; he only audited five to ten samples a month and only had the primary chemist repeat the preliminary bench tests. He did not routinely review the GC/MS data from the chemist's original analysis. Further, most chemists completed their drug analysis without a supervisory chemist observing them or reviewing their work. Such a system was ineffective in detecting malfeasance, incompetence or inaccurate results.

8. The Drug Lab Did Not Always Use a Valid Statistical Approach to Multi-Sample Trafficking Cases

The Drug Lab failed to uniformly and consistently use a valid statistical approach to estimate the net weight or to identify a sufficient portion of the population in multi-item drug trafficking cases, creating the possibility that the estimated weight of these samples did not actually reach the statutory threshold for a charge of trafficking.

9. The Drug Lab Lacked Heightened Security

Management at the Drug Lab failed to appreciate the need for heightened security given the contents of the drug safe, and mismanaged those safeguards that were in place, causing the Drug Lab to be vulnerable to a chemist who may have wanted to tamper with or obtain drugs for illicit purposes.

Furthermore, the Drug Lab failed to conduct periodic criminal background checks post-employment, citing a prohibition to do so in the collective bargaining agreement.

B. Recommendations

1. Better Management Practices Are Essential

All state agencies must employ management practices that hold supervisors accountable for their employees. These practices must incorporate comprehensive background checks and, at a minimum, annual top-to-bottom performance evaluations. In addition, these practices must include a mechanism for employees to report significant events and concerns to their supervisors.

In a forensic drug lab, a system to report significant deviations from policy must exist in the form of a discrepancy log or Corrective Action Reports, which alert supervisors to potential problems, including with respect to chain-of-custody and testing results. Additionally, a "whistleblower" reporting mechanism should be in place, so that an employee knows to whom he can make a confidential report of misfeasance or malfeasance.

In addition, managers of forensic labs should be experts in their respective fields; they should have both subject-matter expertise and an understanding of how to address changes in the law.

2. The MSP Is the Correct Agency to Handle the Drug Lab's Forensic Drug Testing Functions

The Massachusetts State Police ("MSP") should continue to conduct the forensic drug testing function that the Drug Lab performed before its closure.

The question of whether a forensic laboratory should be outside the purview of law enforcement has been at the forefront of forensic laboratory discussions since the release of the National Academy of Sciences' 2009 report, "Strengthening Forensic Sciences in the United States: A

Path Forward." In that report, the National Academy of Sciences suggested that, "ideally," public forensic science labs should be "independent of or autonomous within" law enforcement agencies. Prior to that report, in 2002, the Commonwealth hired an independent organization, the National Forensic Science Technology Center ("NFSTC"), to conduct a "needs assessment" related to forensic science services in Massachusetts. NFSTC recommended that all forensic drug testing be consolidated into one facility controlled by a separate agency of state government. The next year, then-Governor Mitt Romney appointed a Commission to examine the Commonwealth's criminal justice system to identify best practices and innovative solutions to crime problems. In the resulting report, the Commission also advocated for consolidation of forensic drug testing in Massachusetts, but this Commission suggested that all drug testing services reside within the MSP.

As we now know, over the eight to ten years after the work of NFSTC and the Governor's Commission, DPH exhibited a lack of commitment to the enhancement and continued success of the Drug Lab by failing to provide either the necessary resources for accreditation, training and professional development or the appropriate level of management and oversight that the Drug Lab so desperately needed. Moreover, it was while the Drug Lab was under DPH – a non-law enforcement agency – that the Dookhan crimes occurred.

Currently, the MSP has the infrastructure and the financial resources in place, along with the highest level of accreditation (ASCLD/LAB-International Program) to run a lab with the most exacting standards in the forensic drug testing community. The MSP is in the process of hiring and training the appropriate number of personnel to address the substantial backlog and the growing demands for testing.

The OIG has further determined that the MSP Crime Lab Drug Unit is autonomous within the MSP, and was required to demonstrate that autonomy to ASCLD/LAB, its accrediting body. The MSP Crime Lab (including the forensic drug unit) operates under its own budget, which is controlled by the Laboratory Director. Furthermore, the MSP Crime Lab Drug Unit sets its own priorities for casework and budgetary matters without undue influence from MSP management.

Finally, the Legislature should consider re-establishing the Drug Analysis Fund. Under Section 6B of Chapter 280, fines assessed against drug defendants were deposited into the Drug Analysis Fund and then used to support the Drug Lab. This law was repealed in 2003. Chapter 280 would need to be amended to ensure that fines are deposited into the re-established fund and directed to help support the MSP Crime Lab Drug Unit.

3. All Forensic Laboratories Must be Accredited

The Legislature should mandate that all forensic laboratories be accredited and sufficient funding should be appropriated for that purpose.

4. All Chemists Must Be Thoroughly Trained

Forensic drug chemists should receive extensive, theory-based training before analyzing drug samples. They should also be required to complete continuing education courses to stay current

on new laws and trends in testing processes. All forensic scientists should be trained in courtroom testimony and take part in a mock trial program to understand their role as an expert witness. Further, forensic scientists should be trained in the protocols and the importance of chain of custody, as well as the statistical methods of estimating drug trafficking weights.

In addition, forensic chemists should be provided ethics training to ensure that they remain unbiased in their forensic science responsibilities.

5. Drug Labs Should Provide a Complete Record of the Tests Performed to the Parties in Criminal Cases

A forensic drug lab must make it a practice to produce results from all analytical tests run on each sample, particularly tests that show anomalies from other tests. In addition, a forensic drug lab should report all estimated weight confidence intervals in trafficking cases.[220]

6. Drug Labs Must Have Ample Quality Controls

In addition to instrument functionality, quality control should be focused on the integrity and accuracy of the chemists' work product.

Testing methods should utilize objectively reviewable data, such as electronic printouts generated from the GC/MS instruments. For instance, instead of color tests, which cannot be reviewed without repeating the test, chemists could use an instrument such as an ultraviolet spectrometer for preliminary tests because this instrument produces objectively reviewable data; alternatively, color and microcrystalline tests could be photographed or contemporaneously reviewed by another chemist.

Every sample tested in the lab should be subject to a technical review by a supervising chemist, which would consist of a review of all the objectively reviewable data to identify errors or possible malfeasance.

Chemists should be subject to proficiency testing, using an outside vendor, to ensure that samples are being analyzed correctly.

Lab supervisors should observe chemists testify in court, and review court transcripts when available, to ensure that chemists understand the process and the science behind the tests they conduct, and are able to testify accurately. In addition, supervisors should periodically review chemists' curriculum vita to ensure accuracy.

7. Security Measures Are Essential

Any employee of a forensic drug lab who has access to controlled substances should submit to periodic random drug testing, as well as annual criminal record checks.

[220] The "Strengthening Forensic Science" report supports the disclosure of all "measures of uncertainty" in testing. Furthermore, ASCLD requires this of laboratories bearing its accreditation, including the MSP.

Forensic drug labs should incorporate well-designed security practices, including the use of biometric devices and closed-circuit televisions, which are consistently and properly managed in line with their identified needs.

8. Concerns About Certain Cases

As noted above, the criminal dockets in Massachusetts are inundated with Drug Lab-related post-conviction motions. As an independent agency charged with preventing and detecting fraud, waste and abuse, it would not be appropriate for the OIG to recommend to the judiciary how it should address these cases. Each case has its own facts and circumstances that must be individually evaluated by the judicial system. Throughout the course of the OIG's investigation, numerous stakeholders have urged this Office to provide an opinion on how the courts should resolve these cases. The OIG declines to do so. As other jurisdictions have faced similar lab controversies, their courts have issued rulings that may be instructive. Based on its thorough review of the Drug Lab, the OIG can only comment as follows:

a. Cases in Which Dookhan Was the Primary Chemist

Because Dookhan admitted to tampering with her own aliquots, making negatives into positives, and the MSP's retesting of certain samples has corroborated that confession, the OIG would suggest that all samples in which Dookhan was the primary chemist be treated as suspect and be subject to careful review.[221]

b. Cases in Which Dookhan Was the GC/MS Receiver, Operator, Confirmatory Chemist or Notary

As noted above, the OIG did not find evidence that Dookhan tampered with any sample assigned to another chemist. Accordingly, the OIG cannot suggest treating cases in which Dookhan was the GC/MS receiver, GC/MS operator, confirmatory chemist or notary with any increased suspicion because of Dookhan's involvement.

c. Cases that Were Analyzed in the Drug Lab by Other Chemists

Dookhan had a significant amount of access to samples tested by other chemists in the Drug Lab, including access to the drug safe and potentially other chemists' drug lockers. In addition, Dookhan had access to the Drug Lab's database, FoxPro. However, because the OIG did not find evidence that Dookhan tampered with any samples besides her own aliquots or altered any findings in the Drug Lab database, the OIG cannot suggest treating cases in which Dookhan had no known interaction with the drug sample in question with any increased suspicion because of Dookhan.

[221] *See, e.g.*, *Ex Parte Coty*, No. WR-79,318-02 (Tx. Ct. Crim. App. Jan. 15, 2014); *see also State v. Roche*, 111 Wash. App. 424 (2002).

d. Cases in Which Multiple GC/MS Runs Were Not Disclosed

For cases that had multiple GC/MS runs and the corresponding printouts were not produced to the defendant in a criminal case, the OIG defers to the courts to determine whether such test results were exculpatory and material to the defendant's conviction.

e. Cases in Which Trafficking Weights Were Not Properly Estimated

For cases in which the estimated weight of multi-unit samples was determined without using a statistical approach, the OIG suggests that when the weight finding is close to the statutory threshold for a finding of trafficking, the case should be carefully reviewed.

f. Cases With Samples that the OIG Wanted to Retest But the Samples Had Been Destroyed

As noted above, the OIG was interested in retesting 3,347 samples because of anomalies among testing results in the Drug Lab. Of those 3,347, approximately 650 samples had already been destroyed by police departments in the normal course, after the conclusion of a case. With respect to cases with samples that the OIG wanted to retest, but which no longer exist, the OIG suggests that the cases be evaluated with increased concern.

C. Supplemental Report

The OIG's mission included a review of the management and operation of the Drug Lab in order to determine whether the testing done at the lab was proper and followed best practices. Further, the OIG's mission included identifying cases that may have been affected by the failures of the Drug Lab.

To that end, the OIG is in the process of retesting certain drug samples identified in this report. The OIG has reported to the appropriate prosecutors' offices the results of the preliminarily retested samples. In a supplemental report, the OIG will detail the results of the samples that are being retested.

EXHIBIT 4

Office of the Inspector General
Commonwealth of Massachusetts

Glenn A. Cunha
Inspector General

Supplemental Report Regarding the Hinton Drug Laboratory

February 2, 2016

One Ashburton Place, Room 1311 | Boston, MA 02108 | (617) 727-9140 | www.mass.gov/ig

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Executive Summary

Over the course of eighteen months, the Office of the Inspector General ("OIG") conducted a comprehensive review of over 15,000 drug samples originally tested between 2002 and 2012 at the Forensic Drug Laboratory at the William A. Hinton State Laboratory Institute ("Hinton Drug Lab" or "Drug Lab"). The OIG was focused on certain samples that the Hinton Drug Lab had repeatedly tested, with inconsistent results, but had typically only reported the final result to the parties in the corresponding criminal case. From this review, the OIG identified 645 drug samples, 609 of which were retested by NMS Labs ("NMS"), an independent, out-of-state laboratory, to ensure the accuracy of the Drug Lab's analytical findings.

For 551 of the 609 samples retested, NMS found the same substance that the Hinton Drug Lab had certified. For eleven (11) of the samples retested, NMS made no findings of any controlled substances under the Massachusetts Controlled Substances Act, M.G.L. c. 94C. For seven (7) of the samples retested, NMS found a different controlled substance from what the Hinton Drug Lab had certified. For six (6) of the samples retested, NMS identified the same controlled substance by one analytical method, but was unable to confirm that finding by a secondary method as required under NMS' testing protocols. Finally, for thirty-four (34) of the samples retested, NMS found the same controlled substance that the Hinton Drug Lab had found, but also found additional controlled substances in the sample.

Ultimately, despite the OIG's concern about the existence of Hinton Drug Lab samples that had undisclosed internal inconsistencies among the test results, the OIG did not find widespread testing inaccuracies.

However, in the course of retesting, the OIG found that the Hinton Drug Lab had classified two substances – benzylpiperazine ("BZP") and 5-methoxy-N,N-diisopropyltryptamine ("Foxy") – as Class E substances, when, in fact, neither substance was illegal under Massachusetts law.

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Background

I. The OIG's 2014 Drug Lab Report

On March 4, 2014, the OIG issued a report entitled "Investigation of the Drug Laboratory at the William A. Hinton State Laboratory Institute 2002-2012" ("OIG's 2014 Drug Lab Report" or "Drug Lab Report").[1] In that report, the OIG issued findings related to its fifteen-month, independent, top-to-bottom review of the Drug Lab. This review followed the discovery by the Massachusetts State Police that a former Drug Lab chemist, Annie Dookhan, had, among other transgressions, changed negative findings into positive findings during the course of drug testing. The OIG made findings in its Drug Lab Report that the Drug Lab was afflicted by inadequate resources, chronic managerial negligence, inadequate training and a lack of professional standards, which created the environment that allowed the chemist to commit her transgressions.

In addition, the OIG found that certain Drug Lab samples were tested multiple times, and that the fact of multiple testing was not properly documented or disclosed to the parties in the resulting criminal cases. Specifically, the OIG found that at times during the Drug Lab's "two-chemist" testing system – in which a primary chemist conducted preliminary tests on the sample and a confirmatory chemist confirmed the primary chemist's result using a gas chromatograph/mass spectrometer ("GC/MS") instrument[2] – the initial confirmatory GC/MS result was inconsistent with the primary chemist's preliminary identification of the sample. This often happened for benign reasons, including when the aliquot – the vial which held a tiny portion of the sample dissolved in solution that was run on the GC/MS – needed to be more concentrated or diluted to reach a finding. If the confirmatory chemist found a result inconsistent with the primary chemist's preliminary finding, the aliquot typically was returned to the primary chemist, who would re-submit another aliquot for the same sample to be used for additional testing on the GC/MS. For some of these samples, the OIG found that the repeated testing not only revealed inconsistencies between the primary chemist's and the original confirmatory chemist's results, but also sometimes resulted in inconsistencies among multiple confirmatory chemists' GC/MS findings.

The OIG decided to conduct a review of the samples run multiple times on the GC/MS ("Multi-Run Samples"), given the discrepancies between the primary and confirmatory testing results, and among the confirmatory testing results.

II. Methodology – Identifying the Multi-Run Samples Retest List

As explained in the OIG's 2014 Drug Lab Report, the Drug Lab typically failed to document when a sample had been tested multiple times on the GC/MS. As a result, the OIG relied on its e-discovery experts, Navigant Consulting, Inc. ("Navigant"), to generate a list of

[1] The OIG's 2014 Drug Lab Report is available at http://www.mass.gov/ig/publications/reports-and-recommendations/2014/.

[2] A GC/MS is an analytical instrument that confirmatory chemists at the Hinton Drug Lab used to identify substances.

Multi-Run Samples from the electronic data stored on the GC/MS instruments. The OIG's review of the Multi-Run Samples was wide in scope and included the laboratory work of all the chemists who worked in the Drug Lab between 2002 and 2012, as well as all classes of controlled substances that the Drug Lab had tested.[3]

At the time the OIG released its Drug Lab Report, Navigant had provided the OIG with a list of 9,483 Multi-Run Samples. In March 2014, however, after the OIG issued its report, Navigant notified the OIG that it had discovered 12,160 more potential Multi-Run Samples. Navigant's detection in March 2014 of additional potential Multi-Run Samples was due mainly to its discovery of non-electronic, scanned hardcopy GC/MS reports in the Navigant database,[4] which suggested the existence of additional GC/MS runs for samples previously understood to have been run only one time. The OIG determined that 10,822 of these 12,160 potential Multi-Run Samples were not truly Multi-Run Samples, but rather were, for example: (1) duplicate copies of the same GC/MS reports; (2) reports of preliminary testing on the gas chromatograph ("GC") instrument;[5] (3) instances in which the GC/MS was run overnight, creating the appearance of testing on two separate dates; (4) typographical errors on the GC/MS reports; (5) a misread by Navigant's computer search tool of the numbers on a scanned PDF file; or (6) an external request for a retest (for instance, by a defense attorney), that took place months or years after the original test date.

The resulting newly-found 1,338 Multi-Run Samples were added to the 9,483 original Multi-Run Samples list, bringing the total to 10,821 Multi-Run Samples.

The OIG analyzed these 10,821 Multi-Run Samples by reviewing the following documentation for each sample to determine the consistency of the testing results: (1) the control cards;[6] (2) the control sheets;[7] (3) the powder sheets;[8] (4) both handwritten and typed batch

[3] Each controlled substance defined in Chapter 94C of the Massachusetts General Laws is assigned to a specific "class." There are five different classes of controlled substances: Classes A, B, C, D and E. Class A substances have the most severe criminal punishments and Class E substances have the least severe penalties. For a list of which substances are included in each class, *see* M.G.L. c. 94C, § 31.

[4] As described in the 2014 Drug Lab Report, the OIG relied on Navigant, to process 3,417 gigabytes of relevant electronically stored information, and also to scan 3.5 million hardcopy pages of Drug Lab-related documents stored at the Drug Lab, as well as other locations.

[5] A GC is an analytical instrument that primary chemists at the Hinton Drug Lab sometimes used to preliminarily identify substances.

[6] The control card documented information about the sample as it went through the analytical process, including the sample's analytical results, net weight, and the identities of the primary and confirmatory chemists. The Drug Lab used the final drug identification on the control card to generate the drug certificate of analysis.

[7] The control sheet tracked samples through the confirmatory testing process.

[8] The powder sheet documented the preliminary testing process, including a sample's identifying information, physical condition, gross and net weights, the results of each preliminary test, the preliminary identification, and ultimately, the final GC/MS result.

sheets;[9] and (5) any other documents associated with each sample, including the drug receipt[10] and, if available, the drug certificate of analysis.[11] The OIG then looked at the GC/MS results for each sample and, in some instances, reviewed the more detailed GC/MS reports. The OIG's forensic experts, Jack Mario[12] and Michael Wolf[13] of Marcum LLP, aided the OIG in analyzing the GC/MS reports to determine if there were inconsistencies to be resolved through retesting.

Using the information gleaned from the underlying drug testing documentation, the OIG identified 3,347[14] samples for retesting from the original 9,483 Multi-Run Samples.[15] From the supplementary list of 1,338 Multi-Run Samples that Navigant provided to the OIG after it issued its Drug Lab Report, the OIG identified an additional 633 samples for retesting. Thus, the OIG identified a total of 3,980 samples for retesting.

III. Methodology – Creating the Final Retest List

As noted in the OIG's 2014 Drug Lab Report, the OIG conducted preliminary retesting of certain samples through its forensic experts' use of a handheld Raman spectrometer instrument called a "TruNarc," manufactured by Thermo Fisher Scientific. In total, the OIG tested 1,203 Multi-Run Samples with the TruNarc. For 739 of those 1,203 samples, the TruNarc's finding

[9] The batch sheet documented the location of each vial placed on the GC/MS autosampler.

[10] The drug receipt documented the police departments' initial submission of the drug evidence to the Hinton Drug Lab and contained the name of the submitting department, name of the defendant(s), case number associated with the evidence, description of the submitted item(s), and the assigned Hinton Drug Lab Sample Number(s).

[11] The drug certificate was a notarized document signed by both the primary and secondary chemists reflecting the Hinton Drug Lab's analytical finding. As previously noted in the 2014 Drug Lab Report, the Hinton Drug Lab used a template to create their drug certificates, in which a prior drug certificate would be overridden by the creation of a new drug certificate. The Drug Lab had no policy of keeping a copy of each drug certificate at the Drug Lab; rather, typically, the one and only drug certificate for each sample was returned to the Police Department with the sample.

[12] Mario is a chemist with more than thirty years of experience analyzing seized drugs, including over ten years supervising drug analysts in an accredited crime laboratory in Suffolk County, New York. He has published several papers, and is a recently retired member of the Core Committee of the Scientific Working Group for the Analysis of Seized Drugs ("SWGDRUG"), as well as a member of the Northeastern Association of Forensic Scientists, the American Academy of Forensic Sciences, the American Society for Testing and Materials, and the International Association for Identification. Mario has provided presentations on drug testing to the forensic community for several decades.

[13] Wolf is the former interim Director of Scientific Services for the state of Connecticut, and before that, was a member of the Governor's Forensic Laboratory Working Group for the state of Connecticut, which developed and implemented constructive reforms following the revocation of the Connecticut Forensic Science Lab's accreditation. Additionally, Wolf acted as a special investigator for the North Carolina Attorney General's Office in the investigation of a North Carolina forensic lab that had been the subject of alleged wrongdoing after a defendant's murder conviction was overturned. Wolf has a long history of public service as a former Assistant Director with the Federal Bureau of Investigation ("FBI"), where he managed large-scale investigations of fraud and other criminal activities, and headed remedial actions that shepherded initial accreditation of the FBI Laboratory by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board ("ASCLD/LAB").

[14] The OIG's 2014 Drug Lab Report contained a typographical error on page 110 and incorrectly stated this number to be 3,349, when it should have stated 3,347. The correct number appears on page 121 of the Drug Lab Report.

[15] For a detailed description of the criteria used to determine which Multi-Run Samples to retest, see the OIG's 2014 Drug Lab Report, http://www.mass.gov/ig/publications/reports-and-recommendations/2014/, at pages 109-110.

was consistent with the reported Hinton Drug Lab finding. The OIG then removed the 739 Multi-Run Samples that had a consistent TruNarc finding from the retest list.

The OIG also removed from its list 1,029 samples that police departments reported had either: (1) been destroyed in the ordinary course, pursuant to court orders obtained in accordance with M.G.L. c. 94C, § 47A, prior to the Massachusetts State Police's investigation into Dookhan; (2) had already been retested by the Massachusetts State Police; or (3) were otherwise unavailable for retesting.[16]

In addition, the OIG removed 679 residues[17] from the retest list, reasoning that virtually the entire sample could have been consumed during the Drug Lab's initial testing, so a negative finding at this point would be unreliable.

The OIG also removed an additional 841 samples from the retest list after determining that the samples had not resulted in adverse dispositions for any criminal defendants. These removed samples included: (1) those that were involved in controlled buys and investigations that did not result in criminal cases; (2) those that were at issue in arrests in which criminal charges never issued; and (3) those in which the criminal charges were dismissed.[18]

Finally, the OIG removed 47 steroid samples from the retest list after determining that its initial finding of inconsistency among the Hinton Drug Lab testing was in error. That is, the OIG initially understood there to be inconsistencies between the primary chemist's preliminary steroid finding – *e.g.*, testosterone cypionate – and the confirmatory chemist's finding – *e.g.*, testosterone propionate. The OIG learned, however, that for the 47 steroid samples removed from the list, the preliminary findings were based solely on the labeling of the steroid container and not on chemical testing. Therefore, the initial finding was actually "unknown," as opposed to an analytical finding of, for example, testosterone cypionate. Because all of the GC/MS test results were consistent, the OIG determined that these 47 steroid samples should not be retested.[19]

For the reasons described above, the number of samples to be retested decreased from 3,980 to 645 samples after the the removal of the following samples: (1) 739 samples where the TruNarc finding was consistent with the Drug Lab's finding; (2) 1,029 samples reported to be

[16] For a variety of reasons, including database conversions and recordkeeping errors, certain police departments could not locate all of the samples that the OIG requested be sent for retesting.

[17] A residue refers to a small quantity of substance, often contained in a needle, spoon, wrapper or other type of drug paraphernalia. Chemists often have to scrape or "rinse" these items in order to obtain enough of the substance to perform chemical analysis on it.

[18] The OIG's retesting efforts stemmed from the OIG's concern for the accuracy of testing results for samples that the Hinton Drug Lab had repeatedly tested, with inconsistent results, but had reported only the final result to the parties in the resulting criminal case. The OIG, therefore, retested only those samples that resulted in an adverse disposition to a criminal defendant. Retesting all of the Hinton Drug Lab samples, or even all of the samples on the OIG's retest list, would have been prohibitively expensive.

[19] As noted in the 2014 Drug Lab Report at page 110, Multi-Run Samples whose sole inconsistency was a preliminary finding of "unknown," with all GC/MS runs thereafter consistent with the initial GC/MS finding, were removed from the retest list, as there was no true discrepancy among testing results.

destroyed, already retested or otherwise unavailable; (3) 679 residues; (4) 841 samples that resulted in no adverse disposition for a criminal defendant; and (5) 47 steroid samples.

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Retesting

For purposes of retesting the samples on the OIG's final retest list, the OIG contracted with NMS Labs, located in Willow Grove, Pennsylvania. For the past forty years, NMS Labs has been nationally prominent in providing forensic testing services to public sector laboratories, law enforcement agencies and medical examiners, in addition to serving as expert witnesses for both the defense and prosecution. NMS is accredited by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board ("ASCLD/LAB")[20] for the testing of controlled substances.

I. NMS' Testing Protocols

NMS tests for controlled substances using more sensitive GC/MS parameters and procedures than the Hinton Drug Lab. As a result of this greater sensitivity, NMS' testing is more likely to reveal more substances in a single sample, even those in trace amounts. The Hinton Drug Lab's approach to testing, in which it identified controlled substances in a sample, but not necessarily those present in only trace amounts, is consistent with the approach used by many seized-drug laboratories.

NMS' testing techniques are more sensitive in two ways. First, NMS' extraction procedures allow for a greater number of substances to be revealed. Extraction is the process by which a chemist adds a chemical to a sample in order to separate the controlled substances from non-controlled cutting agents or adulterants. NMS' acid-base extraction procedure is more effective than the Hinton Drug Lab's methanol-base extraction procedure at targeting controlled substances in a sample, while eliminating adulterants.

Second, NMS utilizes a more sensitive method for injecting the extracted sample into the GC/MS than the Hinton Drug Lab. NMS' splitless injection method results in the injection of more of the extracted sample into the GC/MS than the Hinton Drug Lab's split method, allowing for the GC/MS to potentially reveal a greater number of substances.

II. Samples Tested By NMS

Beginning in April 2014 and concluding in October 2015, the OIG coordinated with 96 police departments to have the 645 Multi-Run Samples identified above sent to NMS for retesting.

Certain samples that the police departments sent to NMS, however, could not be tested, either because they had degraded over time[21] or because the samples contained substances that

[20] ASCLD/LAB specializes in the accreditation of public and private crime laboratories. The accreditation process involves an extensive review of a laboratory's policies and procedures to ensure that they meet certain standards.

[21] Some controlled substances, including certain vegetable matter, degrade over time. Factors that can influence degradation include the age of the substance and the way in which the substance was stored (including exposure to temperature and light). The degradation of a substance may change its molecular structure such that retesting would likely result in a negative finding.

were outside the capability of NMS' testing methodologies.[22] In total, the OIG instructed NMS not to test ten (10) degraded samples[23] and twenty-eight (28) samples that were outside of NMS' testing capabilities, leaving 607 samples to be retested.

In addition, NMS received two (2) samples for testing in error, making 609 the total number of samples retested.

[22] Substances that NMS does not have the ability to test for include the following: megestrol acetate, terbutaline, allopurinol, clomiphene, clorazepate, norgestrel, 1,4-butanediol, ciprofloxacin, furosemide, GHB and isobutyl nitrite.

[23] Two samples – Hinton Drug Lab Sample Nos. D746009 and D640285, discussed in detail below – were in a degraded condition and were retested before the OIG was able to instruct NMS not to test substances that appear degraded.

Retesting Results

The results of the retesting revealed that for 551 of the 609 samples retested, NMS found the same substance that the Hinton Drug Lab had certified. The remaining retest results found the following: (a) for eleven (11) of the samples retested, NMS made no findings of any controlled substances; (b) for seven (7) of the samples retested, NMS found a different substance from what the Hinton Drug Lab had certified; (c) for six (6) of the samples retested, NMS identified the same controlled substance by one analytical method, but was unable to confirm that finding by a secondary method as required under NMS' testing protocols; and (d) for thirty-four (34) of the samples retested, NMS found the same substance that the Hinton Drug Lab had found, but also found additional controlled substances in the sample. See Summary Table of Retesting Results, at Appendix A.

I. NMS Did Not Find the Presence of Any Controlled Substance

On eleven (11) occasions, NMS analyzed a sample that the Hinton Drug Lab had certified as containing a controlled substance and did not find the presence of any controlled substances. These samples are described in further detail below.

1. Hinton Sample No. B08-08323

With respect to Hinton Drug Lab Sample No. B08-08323, the Drug Lab paperwork indicates that on January 16, 2009, the primary chemist was unable to identify a gray, chunky substance after four color tests[24] and a GC analysis. Confirmatory chemists analyzed the substance twice on the GC/MS, first on January 23, 2009 and again on January 28, 2009, both times finding the presence of cocaine. On January 29, 2009, Hinton Drug Lab chemists certified that the sample contained cocaine, a Class B substance.

When NMS retested B08-08323, it made no findings of any controlled substances.

The OIG notified the Suffolk County District Attorney's Office of this discrepancy.

2. Hinton Sample No. B08-17174

With respect to Hinton Drug Lab Sample No. B08-17174, the Drug Lab paperwork indicates that on February 4, 2009, the primary chemist preliminarily identified an off-white, chunky substance as containing cocaine. This finding was based on one weak positive color test[25] and two positive microcrystalline tests.[26] Confirmatory chemists analyzed the substance

[24] Color tests are a type of bench test that the primary chemist utilized to help preliminarily identify a substance. A reagent is added to the substance and the resulting color change indicates the type of substance present.

[25] A weak positive color test refers to a color test in which the color change occurs gradually or produces a dull or faint shade of color. This can be caused by the existence of only non-controlled substances in the sample or a low quantity of a controlled substance, overwhelmed by adulterants.

twice on the GC/MS, first on February 11, 2009, finding no integrated peaks,[27] and again on February 12, 2009, finding the presence of cocaine. On February 18, 2009, Hinton Drug Lab chemists certified that the sample contained cocaine, a Class B substance.

When NMS retested B08-17174, it made no findings of any controlled substances.

The OIG notified the Suffolk County District Attorney's Office of this discrepancy.

3. Hinton Sample No. D740494

With respect to Hinton Drug Lab Sample No. D740494, the Drug Lab paperwork indicates that on October 19, 2004, the primary chemist preliminarily identified a white, powder substance as containing cocaine. This finding was based on a weak positive color test, two positive microcrystalline tests, and a GC analysis that indicated the presence of cocaine. Confirmatory chemists analyzed the substance five times on the GC/MS. The first time, on October 21, 2004, the confirmatory chemist found an indication of the presence of cocaine. The second time, on October 26, 2004, the confirmatory chemist found an indication of the presence of cocaine. The third time, on October 27, 2004, the confirmatory chemist found no controlled substances. The fourth time, on October 27, 2004, the confirmatory chemist found a weak indication of the presence of cocaine. The fifth time, on October 28, 2004, the confirmatory chemist found a strong indication of the presence of cocaine. On November 1, 2004, Hinton Drug Lab chemists certified that the sample contained cocaine, a Class B substance.

When NMS retested D740494, it made no findings of any controlled substances.

The OIG notified the Essex County District Attorney's Office of this discrepancy.

4. Hinton Sample No. B09-06865

With respect to Hinton Drug Lab Sample No. B09-06865, the Drug Lab paperwork indicates that on December 30, 2009, the primary chemist preliminarily identified an off-white, chunky substance as containing cocaine. This finding was based on a positive color test and two positive microcrystalline tests. Confirmatory chemists analyzed the substance twice on the GC/MS, first on January 9, 2010 finding no integrated peaks, and again on January 13, 2009, this time finding the presence of cocaine. On January 14, 2010, Hinton Drug Lab chemists certified that the sample contained cocaine, a Class B substance.

When NMS retested B09-06865, it made no findings of any controlled substances.

The OIG notified the Essex County District Attorney's Office of this discrepancy.

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[26] Microcrystalline tests are a type of bench test that the primary chemist performed to help preliminarily identify a substance. A small amount of solution is added to a small amount of the substance and then observed under a microscope to determine if crystals develop. Crystal form or shape can indicate the type of substance present.

[27] A finding of "no integrated peaks" means that the GC/MS was unable to identify a substance satisfying the abundance threshold and parameters set by the GC/MS operator. A GC/MS result finding "no integrated peaks" does not necessarily mean that the sample does not contain a controlled substance.

5. Hinton Sample No. B10-07736

With respect to Hinton Drug Lab Sample No. B10-07736, the Drug Lab paperwork indicates that on October 1, 2010, the primary chemist preliminarily identified a brown, mushy, sticky substance as containing tetrahydrocannabinol ("THC"), a component of marijuana. This finding was based on a GC analysis that indicated the presence of THC, as well as a weak positive color test. Confirmatory chemists analyzed the substance twice on the GC/MS, first on October 13, 2010, finding no integrated peaks, and again on October 14, 2010, finding the presence of THC. On October 26, 2010, Hinton Drug Lab chemists certified that the sample contained Delta-9-Tetrahydrocannabinol (THC), a Class D substance.

When NMS retested B10-07736, it made no findings of any controlled substances.

The OIG notified the Essex County District Attorney's Office of this discrepancy.

6. Hinton Sample No. D805498

With respect to Hinton Drug Lab Sample No. D805498, the Drug Lab paperwork indicates that on approximately February 15, 2006[28], the primary chemist preliminarily identified a burnt cigarette as containing THC, a component of marijuana. This finding was based on visual and microscopic analysis, a positive color test, and a positive GC analysis. Confirmatory chemists analyzed the substance twice on the GC/MS. The first time, on February 18, 2006, the confirmatory chemist found no integrated peaks. The second time, on February 22, 2006, the confirmatory chemist found the presence of dronabinol (THC) and cannabinol, a breakdown of THC. On February 28, 2006, Hinton Drug Lab chemists certified that the sample contained marijuana, a Class D substance.

When NMS retested D805498, it found cannabinol, a substance not classified under Massachusetts law, but not dronabinol (THC).

The OIG notified the Middlesex County District Attorney's office of this discrepancy.

7. Hinton Sample No. D740580

With respect to Hinton Drug Lab Sample No. D740580, the Drug Lab paperwork indicates that on January 20, 2005, the primary chemist preliminarily identified an off-white pill as possibly an anabolic steroid, based on appearance and labeling. Confirmatory chemists analyzed the substance four times on the GC/MS. The results of the first GC/MS analysis on January 21, 2005 are unavailable.[29] The second time, on February 8, 2005, the confirmatory chemist found the presence of phenobarbital and nimesulide, the latter a substance not classified under Massachusetts law. The third time, on February 10, 2005, the confirmatory chemist found

[28] The OIG was unable to locate the powder sheet for this sample, and relied solely on the date provided on the control sheet.

[29] In this instance, Navigant was able to determine that the sample was first run on the GC/MS on January 21, 2005 but the results of the run are not readable due to corrupt data.

the presence of nimesulide, but not phenobarbital. The fourth time, on February 16, 2005, the confirmatory chemist found the presence of both phenobarbital and nimesulide. On February 22, 2005, Hinton Drug Lab chemists certified that the sample contained phenobarbital, a Class D substance.

When NMS retested D740580, it made a finding of nimesulide, a substance not classified under Massachusetts law, but not phenobarbital.

After the sample was retested, the OIG determined that this sample did not result in an adverse disposition for the defendant. Therefore, the OIG did not notify a District Attorney's Office about this discrepancy.

8. Hinton Sample No. D775714

With respect to Hinton Drug Lab Sample No. D775714, the Drug Lab paperwork indicates that on November 8, 2006, the primary chemist preliminarily identified an orange, round tablet with the markings of an "R" on one side and "129" on the reverse side, by appearance and labeling as well as a positive GC analysis, as containing clonidine. Confirmatory chemists analyzed the substance twice on the GC/MS, first on November 13, 2006 finding no controlled substances, and again on November 14, 2006, this time finding the presence of clonidine. On November 17, 2006, Hinton Drug Lab chemists certified that the sample contained clonidine, a Class E substance.

When NMS retested D775714, it made no findings of any controlled substances.

The OIG notified the Suffolk County District Attorney's Office of this discrepancy.

9. Hinton Sample No. B09-03371

With respect to Hinton Drug Lab Sample No. B09-03371, the Drug Lab paperwork indicates that on November 5, 2009, the primary chemist was unable to identify a green, round tablet with no visible markings based on one color test and a GC analysis. Confirmatory chemists analyzed the substance twice on the GC/MS. The first time, on November 14, 2009, the confirmatory chemist found no controlled substances. The second time, on November 21, 2009, the confirmatory chemist found the presence of clonidine. On December 1, 2009, Hinton Drug Lab chemists certified that the sample contained clonidine, a Class E substance.

When NMS retested B09-03371, it made no findings of any controlled substances.

The OIG notified the Suffolk County District Attorney's Office of this discrepancy.

10. Hinton Sample No. D746009

With respect to Hinton Drug Lab Sample No. D746009, the Drug Lab paperwork indicates that on June 2, 2005, the primary chemist preliminarily identified liquid in a needle and syringe as containing cocaine. This finding was based on one positive color test, two positive

microcrystalline tests, and an inconclusive GC analysis. Confirmatory chemists analyzed the substance twice on the GC/MS, first on June 9, 2005 and again on June 15, 2005, finding the presence of cocaine both times. On June 20, 2005, Hinton Drug Lab chemists certified that the sample contained cocaine, a Class B substance.

When NMS retested D746009, it made no findings of any controlled substances.

Note that this sample is a residue and was tested by NMS before the OIG instructed NMS not to test residue samples.

The OIG notified the Suffolk County District Attorney's Office of this discrepancy.

11. Hinton Sample No. D640286

With respect to Hinton Drug Lab Sample No. D640286, the Drug Lab paperwork indicates that on approximately March 14, 2003,[30] the primary chemist was unable to identify tablets based on ultraviolet spectroscopic analysis[31] and a color test. The same chemist analyzed the substance twice on the GC/MS, first on March 15, 2003 finding no controlled substances, and again on March 21, 2003, finding the presence of lysergide ("LSD"). It is the OIG's understanding that on approximately March 24, 2003, a Hinton Drug Lab chemist certified that the sample contained lysergic acid diethylamide (LSD), a Class B substance.[32]

When NMS retested D640286, it made no findings of any controlled substances.

It is the OIG's understanding that the contents of D640286 may have degraded; NMS tested this sample before the OIG instructed NMS not to test samples that appeared degraded.

The OIG notified the Suffolk County District Attorney's Office of this discrepancy.

II. NMS Found a Different Substance Than What the Hinton Drug Lab Certified

On seven (7) occasions, NMS analyzed a sample and found a different substance than the substance that the Hinton Drug Lab certified. These seven samples are described in further detail below.

1. Hinton Sample No. B10-12281

With respect to Hinton Drug Lab Sample No. B10-12281, the Drug Lab paperwork indicates that on January 19, 2011, the primary chemist preliminarily identified blue, round

[30] The OIG was unable to locate the powder sheet for this sample, and relied solely on the handwritten notes located on the back of the control card and on the control sheet.

[31] Ultraviolet spectroscopic analysis is an analytical technique that primary chemists at the Hinton Drug Lab sometimes used to preliminarily identify substances.

[32] The OIG was unable to locate the drug certificate for this sample and relied on information obtained from the control card.

tablets with the markings of an "m" on one side and an underscored "30" on the reverse side, by appearance and labeling, as containing oxycodone. This is, in fact, consistent with the appearance and labeling of an oxycodone tablet. Confirmatory chemists analyzed this substance twice on the GC/MS, first on January 22, 2011 finding the presence of tramadol, and again on January 29, 2011, finding the presence of oxycodone. On February 8, 2011, Hinton Drug Lab chemists certified that the sample contained oxycodone, a Class B substance.

When NMS retested B10-12281, it found tramadol, a Class E substance, but not oxycodone.

Note that around the time this sample was analyzed at the Hinton Drug Lab, chemists there had observed an influx of counterfeit oxycodone tablets that primarily contained tramadol.

After the sample was retested, the OIG determined that this sample did not result in an adverse disposition for the defendant. Therefore, the OIG did not notify a District Attorney's Office about this discrepancy.

2. Hinton Sample No. B10-11771-1[33]

Similar to the sample above, with respect to Hinton Drug Lab Sample No. B10-11771-1, the Drug Lab paperwork indicates that on January 11, 2011, the primary chemist preliminarily identified blue, round tablets, with the markings of an "m" on one side and an underscored "30" on the reverse side, by appearance and labeling, as containing oxycodone. This is, in fact, consistent with the appearance and labeling of an oxycodone tablet. Confirmatory chemists analyzed this substance twice on the GC/MS, first on January 15, 2011 finding the presence of tramadol, and again on January 29, 2011 finding the presence of oxycodone. On February 8, 2011, Hinton Drug Lab chemists certified that the sample contained oxycodone, a Class B substance.

When NMS retested B10-11771-1, it found tramadol, a Class E substance, but not oxycodone.

As noted above, around the time sample B10-11771-1 was analyzed at the Hinton Drug Lab, chemists there had observed an influx of counterfeit oxycodone tablets that primarily contained tramadol.

The OIG notified the Bristol County District Attorney's Office of the discrepancy.

3. Hinton Sample No. B10-09249

With respect to Hinton Drug Lab Sample No. B10-09249, the Drug Lab paperwork indicates that on November 23, 2010, the primary chemist preliminarily identified a blue, round tablet, with the markings of a "v" on one side and a "2531" on the reverse side, by appearance

[33] Hinton Drug Lab Sample No. B10-11771 consisted of eleven blue, round pills, ten of which looked the same and were designated as Sample No. B10-11771-1 and one of which looked different and was designated as Sample No. B10-11771-2.

and labeling, as containing oxycodone. In fact, according to the drug identification resource employed by the Hinton Drug Lab, the appearance and labeling of the tablet is consistent with a finding of clonazepam. Confirmatory chemists analyzed this substance three times on the GC/MS. The first two times, on November 30, 2010 and December 3, 2010, the confirmatory chemists found no integrated peaks. The third time, on December 14, 2010, the confirmatory chemist found the presence of oxycodone. On December 16, 2010, Hinton Drug Lab chemists certified that the sample contained oxycodone, a Class B substance.

When NMS retested B10-09249, it found clonazepam, a Class C substance, but not oxycodone.

The OIG notified the Suffolk County District Attorney's Office of this discrepancy.

4. Hinton Sample No. B10-04083-B[34]

With respect to Hinton Drug Lab Sample No. B10-04083-B, the Drug Lab paperwork indicates that on August 5, 2010, the primary chemist was unable to identify some broken white tablets based on a color test and a GC analysis. Confirmatory chemists analyzed this substance four times on the GC/MS. The first time, on August 11, 2010, the confirmatory chemist found the presence of venlafaxine. The second time, on August 14, 2010, the confirmatory chemist found a weak indication of the presence of oxycodone, but mostly acetaminophen. The third time, on August 21, 2010, the confirmatory chemist found the presence of only acetaminophen. The fourth time, on August 25, 2010, the confirmatory chemist found the presence of diltiazem. On September 2, 2010, Hinton Drug Lab chemists certified that the sample contained venlafaxine, a Class E substance.

When NMS retested B10-04083-B, it found oxycodone, a Class B substance, but no other controlled substances.

The OIG notified the Essex County District Attorney's Office of this discrepancy.

5. Hinton Sample No. B10-03784

With respect to Hinton Drug Lab Sample No. B10-03784, the Drug Lab paperwork indicates that on August 4, 2010, the primary chemist was unable to identify a yellow, round, tablet with scraped-off markings based on three color tests and a GC analysis. Confirmatory chemists analyzed this substance three times on the GC/MS. The first time, on August 11, 2010, the confirmatory chemist found a weak indication of the presence of oxycodone, but found mostly acetaminophen. The second time, on August 20, 2010, the confirmatory chemist found the presence of venlafaxine. The third time, on August 24, 2010, the confirmatory chemist found the presence of oxycodone. On August 27, 2010, Hinton Drug Lab chemists certified that the sample contained oxycodone, a Class B substance.

[34] Hinton Drug Lab Sample No. B10-04083 consisted of three green, round tablets, which were designated as Sample No. B10-04083-A and broken white tablets, which were designated as Sample No. B10-04083-B.

When NMS retested B10-03784, it found only venlafaxine, a Class E substance.

The OIG notified the Suffolk County District Attorney's Office of this discrepancy.

6. Hinton Sample No. B11-12178

With respect to Hinton Drug Lab Sample No. B11-12178, the Drug Lab paperwork indicates that on June 21, 2012, the primary chemist preliminarily identified a yellow, octagonal tablet with the number "40" imprinted on one side as possibly containing oxycodone or oxymorphone. This finding was based on appearance and labeling, three color tests and an inconclusive GC analysis. Confirmatory chemists analyzed the substance twice on the GC/MS. On both occasions, first on June 23, 2012 and the second on June 28, 2012, confirmatory chemists found the substance to contain oxymorphone. That finding was written on the control card. On July 5, 2012, however, Hinton Drug Lab chemists certified that the sample contained oxycodone, a Class B substance.

When NMS retested B11-12178, it found oxymorphone, a Class B substance, but not oxycodone.

It seems possible that this inaccurate Hinton Drug Lab finding was the result of a typographical or data entry error in the creation of the drug certificate, as opposed to a testing error. The practice at the Hinton Drug Lab was for the primary chemist to submit a completed control card to the evidence office for the creation of the drug certificate. Here, the completed control card indicates a finding of oxymorphone, but the drug certificate indicates a finding of oxycodone. Therefore, it seems possible that the chemists analyzed the sample correctly but that an error was committed during the creation and signing of the drug certificate.

The OIG notified the Essex County District Attorney's Office of this discrepancy.

7. Hinton Sample No. D640285

With respect to Hinton Drug Lab Sample No. D640285, the Drug Lab paperwork indicates that on approximately March 21, 2003,[35] the primary chemist was unable to identify tablets based on ultraviolet spectroscopic analysis and one color test. Confirmatory chemists analyzed the substance twice on the GC/MS. The first time, on March 15, 2003, the confirmatory chemist found no controlled substances. The second time, on March 21, 2003, the confirmatory chemist found lysergide (LSD). On March 25, 2003, Hinton Drug Lab chemists certified that the sample contained LSD, a Class B substance.

When NMS retested D640285, it found cocaine, a Class B substance, but not LSD.

[35] The OIG was unable to locate the powder sheet for this sample, and relied solely on the handwritten notes located on the front of the control card and on the control sheet.

It is the OIG's understanding that the contents of D640285 may have degraded; NMS tested this sample before the OIG instructed NMS not to test samples that appeared degraded. In addition, likely due to the greater sensitivity of NMS' testing procedures, NMS was able to detect a trace amount of cocaine that the Hinton Drug Lab did not detect.

The OIG notified the Suffolk County District Attorney's Office of this discrepancy.

III. NMS Identified the Presence of a Controlled Substance by One Analytical Method Only

On six (6) occasions, NMS analyzed a sample that the Hinton Drug Lab had certified contained a controlled substance and NMS identified the same controlled substance by GC/MS analysis, but was unable to confirm that finding by a secondary method as required under NMS' testing protocols. These samples are described in further detail below.

1. Hinton Sample No. D679263

With respect to Hinton Drug Lab Sample No. D679263, the Drug Lab paperwork indicates that on approximately June 8, 2004,[36] the primary chemist preliminarily identified liquid in a bottle labeled "Morphine Sulfate 10mg/mL" by appearance and labeling, as possibly containing morphine. Confirmatory chemists analyzed the substance twice on the GC/MS, both times on June 10, 2004, first finding no controlled substances, and then finding the presence of morphine. On June 16, 2004, Hinton Drug Lab chemists certified that the sample contained morphine, a Class B substance.

When NMS retested D679263, it identified morphine by GC/MS analysis, but was unable to confirm that finding by a secondary method.

The OIG notified the Suffolk County District Attorney's Office of this result.

2. Hinton Sample No. D816214

With respect to Hinton Drug Lab Sample No. D816214, the Drug Lab paperwork indicates that on approximately June 8, 2007,[37] the primary chemist preliminarily identified a crushed, orange substance as possibly containing buprenorphine, based on a GC analysis, as well as six color tests. Confirmatory chemists analyzed the substance three times on the GC/MS. The first time, on June 10, 2007, the confirmatory chemist found no controlled substances. The second time, on June 11, 2007, the confirmatory chemist found no integrated peaks. The third time, on June 12, 2007, the confirmatory chemist found the presence of buprenorphine. On June

[36] The OIG was unable to locate the powder sheet for this sample, and relied solely on the handwritten notes located on the front of the control card.

[37] The OIG was unable to locate the powder sheet for this sample, and relied on the handwritten notes located on the front of the control card and on the control sheet.

21, 2007, Hinton Drug Lab chemists certified that the sample contained buprenorphine, a Class B substance.

When NMS retested D816214, it identified buprenorphine by GC/MS analysis, but was unable to confirm that finding by a secondary method.

The OIG notified the Suffolk County District Attorney's Office of this result.

3. Hinton Sample No. B08-13137

With respect to Hinton Drug Lab Sample No. B08-13137, the Drug Lab paperwork indicates that on November 4, 2008, the primary chemist preliminarily identified a loose black and white chunky substance as containing cocaine. This finding was based on one positive color test and two positive microcrystalline tests. Confirmatory chemists analyzed the substance four times on the GC/MS. The first time, on November 6, 2008, the confirmatory chemist found no integrated peaks. The second time, on November 11, 2008, the confirmatory chemist found no integrated peaks. The third time, on November 12, 2008, the confirmatory chemist found the presence of cocaine. The fourth time, on November 13, 2008, the confirmatory chemist found the presence of cocaine. On November 24, 2008, Hinton Drug Lab chemists certified that the sample contained cocaine, a Class B substance.

When NMS retested B08-13137, it identified cocaine by GC/MS analysis, but was unable to confirm that finding by a secondary method.

The OIG notified the Suffolk County District Attorney's Office of this result.

4. Hinton Sample No. B11-00360

With respect to Hinton Drug Lab Sample No. B11-00360, the Drug Lab paperwork indicates that on March 15, 2011, the primary chemist preliminarily identified an off-white, chunky substance as containing cocaine. This finding was based on one positive color test and two positive microcrystalline tests. Confirmatory chemists analyzed the substance twice on the GC/MS, first on March 17, 2011 finding no controlled substances, and again on March 21, 2011, this time finding the presence of cocaine. On March 23, 2011, Hinton Drug Lab chemists certified that the sample contained cocaine, a Class B substance.

When NMS retested B11-00360, it identified cocaine by GC/MS analysis, but was unable to confirm that finding by a secondary method.

The OIG notified the Suffolk County District Attorney's Office of this result.

5. Hinton Sample No. D837014

With respect to Hinton Drug Lab Sample No. D837014, the Drug Lab paperwork indicates that on June 28, 2008, the primary chemist preliminarily identified a brown, powdery substance as containing heroin. This finding was based on three positive color tests and an

inconclusive GC analysis. Confirmatory chemists analyzed this substance four times on the GC/MS. The first time, on June 29, 2008, the confirmatory chemist found no integrated peaks. The remaining runs, on July 2, 2008, July 8, 2008, and July 9, 2008, all found a weak presence of morphine. On July 11, 2008, Hinton Drug Lab chemists certified that the sample contained morphine, a Class B substance.

When NMS retested D837014, it identified morphine by GC/MS analysis, but was unable to confirm that finding by a secondary method. In addition, NMS found heroin, a Class A substance.

The OIG notified the Suffolk County District Attorney's Office of this result.

6. Hinton Sample No. B08-14005

With respect to Hinton Drug Lab Sample No. B08-14005, the Drug Lab paperwork indicates that on May 6, 2009, the primary chemist was unable to identify a liquid substance based on two color tests. Confirmatory chemists analyzed the substance twice on the GC/MS, first on May 16, 2009 and then on May 19, 2009, both times finding the presence of morphine and 6-monoacetylmorphine. On May 20, 2009, Hinton Drug Lab chemists certified that the sample contained morphine, a Class B substance.

When NMS retested B08-14005, it identified morphine by GC/MS analysis, but was unable to confirm that finding by a secondary method. In addition, NMS found 6-monoacetylmorphine, a Class B substance.

The OIG notified the Suffolk County District Attorney's Office of this result.

IV. NMS Found Additional Substances

In thirty-four (34) instances, NMS retested Hinton Drug Lab samples and found the same substance that the Hinton Drug Lab found but also found additional controlled substances in the sample. This was likely due to NMS' use of more sensitive testing procedures, as described above, including its extraction process and its GC/MS injection methods. Despite the fact that these NMS results are consistent with the Hinton Drug Lab's results, the OIG notified the appropriate District Attorney's Office in each instance of NMS finding additional substances.

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BZP and Foxy

During the course of the sample retesting described above, the OIG discovered that the Hinton Drug Lab had certified two substances – benzylpiperazine ("BZP") and 5-methoxy-N,N-diisopropyltryptamine ("Foxy") – as Class E substances, although neither was a controlled substance under the Massachusetts General Laws.

BZP and Foxy are substances similar to 3,4-methylenedioxy methamphetamine ("MDMA"), more commonly known as "ecstasy." MDMA is classified under the Massachusetts General Laws as a Class B controlled substance. Although both BZP and Foxy have been federally classified as Schedule I controlled substances since 2004, and thus made illegal under the federal system, the Commonwealth has not yet amended its drug laws to make either substance illegal.[38]

Between 2008 and 2012, Hinton Drug Lab chemists determined that 187 samples contained BZP. It is the OIG's understanding[39] that the Hinton Drug Lab chemists certified these samples as BZP, a Class E, Subsection B drug, which is a "prescription drug other than those included in Classes A, B, C, D, and Subsection A of this Class."[40] BZP is not a prescription drug and, thus, should not have been certified as a Class E substance.

In January 2012, Hinton Drug Lab chemists issued one certificate of analysis certifying a substance to be Foxy, a Class E, Subsection B drug. Foxy, like BZP, is not a prescription drug and therefore should not have been certified as a Class E substance.

In 2011, Hinton Drug Lab chemists internally discussed how to certify substances that were federally scheduled but not classified in Massachusetts. In July 2011, one Hinton Drug Lab chemist sought guidance from the Director of the Division of Analytical Chemistry[41] about how to report BZP, who instructed the chemist to report only the identity of the substance, without certifying that it fell within any class under Massachusetts law. Even thereafter, in November 2011, certain Hinton Drug Lab chemists remained unsure of how to proceed and asked the Supervisor of the Drug Lab what the Drug Lab's policy was for certifying BZP, since it was federally scheduled but not controlled in Massachusetts.[42] Chemists continued to certify BZP as a Class E substance through April 2012.

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[38] A bill to amend M.G.L. c. 94C, § 31, to include BZP as a Class A drug, was filed in the Massachusetts Senate in 2011. The current bill, Senate Bill 1038, is still pending.

[39] As noted above, the OIG had access to relatively few drug certificates from the Hinton Drug Lab. In all of the BZP drug certificates available to the OIG, the Drug Lab chemists certified the sample as a Class E, subsection B drug. In addition, the information that the OIG was able to obtain from the Drug Lab's database, FoxPro, indicates that the Drug Lab classified all 187 BZP samples as Class E substances.

[40] M.G.L. c. 94C, § 31.

[41] The Director of the Division of Analytical Chemistry was responsible for overseeing several labs in DPH's Bureau of Laboratory Sciences ("BLS"), including the Drug Lab, the Childhood Lead Screening Lab, the Chemical Terrorism Response Lab, the Environmental Chemistry Lab and the Forensic Drug Lab in Amherst.

[42] The OIG was unable to determine whether the Supervisor provided any response.

The OIG conducted a review of all other Class E substances that the Hinton Drug Lab had certified and did not discover any other misclassifications of this nature.

The OIG has notified the appropriate District Attorney's Office of each sample that the Hinton Drug Lab found to be either BZP or Foxy as part of a case within its jurisdiction.

Conclusion

The OIG's decision to retest Hinton Drug Lab samples originated from the OIG's finding that the Drug Lab had repeatedly tested certain samples, with inconsistent results, but had typically only reported the final result to the parties in the corresponding criminal case. The OIG determined that it was important to verify the accuracy of those testing results. As a result, the OIG caused to be retested 609 samples at NMS, an independent, out-of-state, forensic drug laboratory.

Of the samples retested, the OIG determined that the Hinton Drug Lab certified accurate findings the vast majority of the time. Thus, despite the OIG's concern about the existence of Hinton Drug Lab samples that had undisclosed internal inconsistencies among the test results, the OIG did not find widespread testing inaccuracies.

In addition, during the course of retesting, the OIG found that the Hinton Drug Lab had classified two substances – BZP and Foxy – as Class E substances, when, in fact, neither substance was illegal under Massachusetts law. The OIG did not discover any other misclassifications of this nature.

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Appendix A: Summary Table of Retesting Results

NMS Retesting Results	Number of Samples
Hinton Drug Lab Samples Tested at NMS	609
NMS Reported the Same Controlled Substance That the Hinton Drug Lab Had Certified	551
NMS Made No Findings of Any Controlled Substances	11
NMS Found a Different Controlled Substance From What the Hinton Drug Lab Had Certified	7
NMS Identified the Same Controlled Substance By One Analytical Method Only	6
NMS Found Additional Controlled Substances	34

EXHIBIT 5

September 25, 2015

Via Email

Colin Owyang
Deputy Attorney General
1 Ashburton Place
Boston, MA 02108
Colin.Owyang@MassMail.State.MA.US

Re: *The Amherst Lab Scandal*

Dear Mr. Owyang:

We write to thank you for meeting with us about the misconduct at the Amherst State Lab, and to suggest how the resulting injustices might be repaired. We understand that you might convene a discussion of Farak matters among defense advocates and prosecutors, and we are eager to join it. Together, we can work toward solutions that will respect constitutional rights, save taxpayer dollars, and restore the justice system's integrity.

The discussion, in our view, should focus on three issues: (1) identifying affected cases; (2) notifying defendants of their post-conviction rights; and (3) developing alternatives to costly and counterproductive case-by-case litigation.

These issues are acutely important due to the magnitude of the Farak scandal, but not only for that reason. They are also important because the Commonwealth has just spent the last three years, during the Annie Dookhan scandal, confronting these issues in precisely the wrong way. To our knowledge, no district attorney has acknowledged an obligation to identify, let alone notify, Dookhan's victims. And although the defense community has been calling for a comprehensive approach to the Dookhan litigation since at least October 2012, prosecutors have largely favored a case-by-case approach that figures to exacerbate injustice and drag on for years.

We hope that prosecutors will take a fresh look at these issues, especially now that the Farak scandal appears to be much larger than initially believed.

Identification

It is decidedly the responsibility of prosecutors to identify each defendant, starting with those in custody, who has a conviction associated with Farak's misconduct. Farak was a member of the prosecution team, and so it is the prosecution's job to identify her victims. This allocation of burdens is not just fair; it is practical. If

prosecutors are not required to remedy scandals like this one, they will lack the proper incentive to prevent future misconduct by members of their team.

The Supreme Judicial Court's recent cases remove all doubt that prosecutors must identify victims of the Dookhan and Farak scandals. These cases emphasize that the remedy for these scandals must "inure to defendants." *Commonwealth v. Scott*, 467 Mass. 336, 352 (2014). To that end, the Court has stated that the provision of identifying information—which prosecutors undertook in the Dookhan context only in response to litigation—implicates the legal and ethical obligations of prosecutors to disclose "all evidence or information" known to the government that "tends to negate the guilt of the accused or mitigate the offense." *Bridgeman v. District Attorney*, 471 Mass. 465, 480-81 (citing Mass. R. Prof. C. 3.8(d)).

Likewise, in the Farak context, the Court has recognized the Commonwealth's "duty to conduct a thorough investigation to determine the nature and extent of [Farak's] misconduct, and its effect both on pending cases and on cases in which defendants already had been convicted of crimes involving controlled substances that Farak had analyzed." *Commonwealth v. Ware*, 471 Mass. 85, 95 (2015).

We therefore expect that prosecutors will now both accept and discharge their responsibility to identify potentially tainted cases.

Notice

In the spirit of cooperation and the interests of justice, we hope to work with prosecutors toward an efficient and effective plan for notifying all affected defendants about their post-conviction rights. Working together will ensure that defendants' rights are respected and that attorney efforts are not unduly duplicated.

That cooperative spirit, however, does not reflect a view that prosecutors' obligations with respect to notice are weaker than their obligations with respect to identification. To the contrary, the law is clear that your office's present investigation of the Farak scandal "is premised on a prosecutor's duty to learn of and *disclose to a defendant* any exculpatory evidence that is held by agents of the prosecution team." *Commonwealth v. Cotto*, 471 Mass. 97, 112 (2015) (internal quotation marks omitted; emphasis added).

Thus, the duty of disclosure—i.e., notice—resides with the Commonwealth. And "[i]t is incumbent on the Commonwealth to perform this duty in a timely fashion." *Id.*

Prosecutor-driven notice also appears to be the norm outside of Massachusetts. For example, the U.S. Department of Justice's Office of the Inspector General has called for the DOJ and FBI to ensure "maximum and effective" and "case-specific" notice to

defendants with potentially tainted convictions.[1] Similarly, state prosecutors appear to have implemented case-specific notice in numerous criminal justice scandals.[2]

Yet, so far as we know, no district attorney has committed to maximum, effective, and case-specific notice in either the Dookhan or Farak scandals. We hope to work with prosecutors to chart a new and better course.

Resolution

No matter who identifies and notifies defendants, all stakeholders should seek to remedy the injustice caused by Farak's misconduct. And if that misconduct had tainted just a handful of cases, then a case-by-case approach might succeed.

But the Dookhan experience has proved that, when egregious government conduct taints large numbers of cases, a case-by-case approach simply worsens injustice. In September 2015, more than four years after lab managers learned of Dookhan's misconduct, there is still no complete list of her cases, no plan for notifying defendants, and scarcely any resources available to litigate the thousands of cases that could arise if defendants are actually notified of their rights.

Meanwhile, there is a growing consensus that drug addiction should be addressed as a public-health problem. Attorney General Healey has stated that precious taxpayer dollars must be devoted to "prevention, intervention, and treatment programs," as well as "investing in supervision and reentry services."[3] To her credit, she has also acknowledged that "we cannot incarcerate our way out of this public health crisis."[4]

Nor can we *re*-prosecute and *re*-incarcerate our way out of this crisis. Given the lessons of the Dookhan scandal, and the Commonwealth's need to devote scarce resources to public health rather than incarceration, defense attorneys and prosecutors should seek to minimize relitigation of Farak cases—particularly

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[1] U.S. Dep't of Justice, Office of the Inspector General, *An Assessment of the 1996 Department of Justice Task Force Review of the FBI Laboratory* at 82-83 (July 2014).
[2] See, *e.g.*, Jennifer McMenamin, *Perjury fears through cases into turmoil*, Baltimore Sun, Apr. 22, 2007 (72 letters sent regarding ballistics evidence); John Schreiber, *Audit Finds O.C. Crime Lab Botched Some DUI Blood Tests*, Los Alamitos-Seal Beach Patch, Nov. 7, 2013 (900 letters sent regarding blood testing); Jaxon Van Derbeken, *S.F. Judge Breal steps aside on drug cases*, SFGate, June 30, 2010 (1700 letters sent regarding a drug lab scandal).
[3] Letter from the Hon. Maura Healey to the Hon. William Brownsburger and the Hon. John Fernandes at 1, *Re: S.64/H.1429, An Act to increase neighborhood safety and opportunity* (June 8, 2015).
[4] *Id.* at 3; see also Massachusetts OxyContin and Heroin Commission, *Recommendations of the OxyContin and Heroin Commission*, at 5 (2009) (finding that the Commonwealth had made "not a dent" in drug use).

because, as with the Dookhan scandal, most of Farak's victims have likely served their sentences of incarceration.

We therefore hope that a meeting among criminal justice stakeholders will identify categories of cases in which prosecutors would be willing to agree to post-conviction relief and to dismiss the underlying charge. These categories might be expanded depending on the outcome of the ongoing investigation into allegations of Farak-related discovery violations. But, setting aside those allegations for the moment, key categories might include:

- possession cases;
- cases in which the defendant has served at least 50% of the sentence of incarceration; and
- cases in which there has been no admission or judicial finding of unlawful firearm possession or violence.

Thank you in advance for your consideration. We look forward to a productive discussion of these issues.

Sincerely,

/s/ Matthew R. Segal
Matthew R. Segal
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EXHIBIT 6-1

COMMONWEALTH OF MASSACHUSETTS

HAMPSHIRE, ss. Grand Jury

IN RE: INVESTIGATION

HEARING BEFORE HAMPSHIRE COUNTY GRAND JURY AT THE HAMPSHIRE COUNTY COURTHOUSE, NORTHAMPTON, MASSACHUSETTS, ON SEPTEMBER 16, 2015.

APPEARANCES:

THOMAS CALDWELL,
Assistant Attorney General

KIM WEST,
Assistant Attorney General

PETER VELIS,
Special Assistant Attorney General

Kathleen M. Houghton
Court Reporter
PHILBIN & ASSOCIATES, INC.
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I N D E X

*****

MR. CALDWELL: Good morning, ladies and gentlemen. My name is Thomas Caldwell and with your permission I would like to begin an investigation into the facts and circumstances surrounding allegations of criminal misconduct at the Massachusetts Drug Testing Laboratory located on the campus of the University of Massachusetts at Amherst that occurred on diverse dates we're alleging between on or about July 2004 and on or about January 2013 in Amherst, Hampshire County, Commonwealth of Massachusetts.

Assisting me in today's investigation is Assistant Attorney General Kim West and Special Assistant Attorney General the Honorable Peter Velis.

And now at this time I will be calling my first witness.

*****

(Grand Jury Exhibit No. 1, marked.)

SONJA FARAK (SWORN.)

EXAMINATION BY MR. CALDWELL

Q. Ma'am, can you please state your name and spell your last name for the record?

A. My name is Sonja Farak and Farak is spelled F-A-R-A-K.

Q. And how old are you now?

A. I am thirty-seven.

Q. Where do you currently reside?

A. I reside at 37 Laurel Park in Northampton, Mass.

Q. And you received a grand jury subpoena to be here today, correct?

A. Correct.

Q. And prior to this date you've spoken to myself, Assistant Attorney General Tom Caldwell, Assistant Attorney General Kim West and Investigator Phil Mantyla, correct?

A. That's correct.

Q. And at those meetings you were told at that time that the Government was going to

be seeking immunity for you?

A. Correct.

Q. So you came to Northampton Superior Court on August 25th, 2015 with your attorney, Ms. Elaine Pourinski, and you saw a judge; is that -- is that right?

A. That is correct.

Q. And you saw in that courtroom, it was Courtroom Number 2, that there was a conversation between representatives of the Office of the Attorney General, your attorney and the judge?

A. That is correct.

Q. And at the end of that conversation the judge issued an order, Judge Carey, and gave you what's called immunity from prosecution; is that right?

A. That is correct.

Q. Showing you what was previously marked as Grand Jury Exhibit 1, can you please just take a look at that and look up when you're finished?

A. (Witness complies.)

Q. What is that that I placed before you?

A. It's the Commonwealth's petition for my -- for my grant of immunity.

Q. And you've had the opportunity to look at that before, correct?

A. Yes, I have.

Q. As did your attorney?

A. Correct.

Q. So that is, for the record, the immunity order that was issued by Judge Carey on August 25th, 2015 that immunizes you from any prosecution related to crimes that you may talk about today and on future dates; is that your understanding?

A. That is my understanding.

Q. Thank you.

MR. CALDWELL: May now enter Grand Jury Exhibit Number 1.

Q. (By Mr. Caldwell) We have talked about the Amherst Drug Laboratory at the time that you were employed there, correct?

A. Correct.

Q. Now, if you could just please give me a little background information. Where were you born?

A. I was born in San Diego, California.

Q. How long did you live in San Diego, California?

A. About a year. My dad was in the Navy so.

Q. Do you have any siblings?

A. I have one younger sister.

Q. Did you -- at any point did you leave?

A. Yeah. I think I lived in San Diego for about a year. We moved to Honolulu, Hawaii for three years where my sister was born and then my dad got transferred to Newport, Rhode Island.

Q. You say your dad got transferred; what did he do for work?

A. He worked in the Navy. It had something to do with computers. I'm not exactly sure what his job duty was but he ended up retiring as a senior chief in the

Navy.

Q. And about how long did you live in Rhode Island with your family?

A. Since I was five till when I went to college. My mom still resides in the same house that we moved to.

Q. Now, you attended high school, correct?

A. Correct.

Q. What high school did you attend?

A. I attended Portsmouth High School in the town of Portsmouth, Rhode Island.

Q. And can you tell -- you graduated?

A. I graduated.

Q. What year did you graduate?

A. I graduated in 1996.

Q. Did you receive any honors or awards in your time at Portsmouth High?

A. I received various varsity letters in sports and I was also co-class valedictorian.

Q. You attended a four-year college, correct?

A. That is correct.

Q. And where did you go?

A. It was Worcester Polytechnic Institute in Worcester, Mass.

Q. And you graduated from Worcester Polytech --

A. (Interposing) Yes, I did.

Q. You attended and graduated from Worcester Polytech?

A. That is correct, yes.

Q. Did you graduate -- when you graduated did you receive any awards or anything of distinction?

A. I graduated with high distinction and I had a couple of student life awards presented to me.

Q. What was your major at Worcester Polytech?

A. Biochemistry.

Q. And you received your degree in biochemistry?

A. Yes, I did.

Q. Did you -- after your graduation from Worcester Polytech did you matriculate

anywhere further?

A. I applied to graduate school at the Temple University School of Medicine in the Ph.D. program. I was accepted. I did go for a year but decided it wasn't what I wanted to do so after a year I left.

Q. Okay. Temple University is located in Philadelphia?

A. That is correct.

Q. Now, after you left the Ph.D. program at Temple, what did you do next?

A. 9/11 happened so I was working some temp jobs but basically I was living with my partner's mother for a few months and 9/11 happened but in January of 2002 I started working for the Commonwealth of Massachusetts out of Boston as a bacteriologist in an HIV testing lab.

Q. Can you just tell us, what was your partner's name at the time?

A. Nicky Lee.

Q. And was she from the Philadelphia area or was she from Massachusetts?

A. She was born and raised in New York though she had lived in the Boston area for a long time.

Q. Okay. Now, you indicated you were hired by the Department of Public Health as a bacteriologist?

A. Correct.

Q. And what year was that?

A. That was 2002.

Q. Okay. And can you tell me where were you assigned by the Department of Public Health?

A. The lab I worked in, the HIV testing lab was in Jamaica Plain, the Hinton State Lab Institute.

Q. The Hinton lab?

A. The Hinton lab.

Q. And could you just describe for the Grand Jurors your duties and responsibilities at the HIV lab, Hinton laboratory?

A. Different -- different medical facilities would send in blood samples and oral fluid samples to be analyzed to see if

they contained the presence of HIV antibodies so we'd process those samples and run tests to determine whether or not they did contain HIV and then we'd write reports and send them out.

Q. And you yourself would actually do the physical testing?

A. That is correct.

Q. How many employees were at the HIV lab at Hinton?

A. There was one lab supervisor who didn't do much of the actual hands-on lab work but there was five or six total people that did -- that did that testing.

Q. Approximately how many samples did you test per year?

A. The lab tested 75 to 80,000 tests per year.

Q. How long were you -- how long did you work as a bacteriologist for the Department?

A. I started in January of 2002 and I ended in the end of April of 2003.

Q. And what did you do in April of 2003?

A. I noticed there was a posting for a

chemist position in the drug analysis laboratory and so I applied and I was accepted so I took that job.

Q. And that was also located at the Hinton laboratory?

A. That is correct.

Q. And that was under the same roof essentially as the HIV lab that you previously worked at?

A. Yeah. I mean, it was under the Department of Public -- laboratory so.

Q. Why did you want to apply for the chemist position at the drug lab?

A. The bacteriologist position was very mundane. It was doing the same testing over and over again. I also had a professor in college was really into forensic science. He actually ended out of that, the forensic science at Yale, but he introduced me more to the chemistry side and then he sparked my interest in forensics.

Q. And what was the -- do you recall the exact date that you were hired as a chemist

for the drug testing lab?

A. I don't. I believe it was in May of 2003.

Q. May of 2003.

Now, how long were you employed as a chemist for the Department of Public Health and later the Mass. State Police, how many years?

A. 2003, so just under ten years.

Q. How many approximately, if you know, how many samples did you test in that ten years?

A. Approximately 30,000 different pieces of evidence.

Q. Can you describe to the Grand Jurors your duties and responsibilities as a chemist at the drug laboratory?

A. Our main responsibilities were when we were assigned submissions from police departments to record the amount of substance that was there, as well as to chemically analyze the substance to determine if there was any controlled substances or drugs present

in those samples.

Q. Can you describe what are controlled substances in your training and experience?

A. The most common one is heroin, cocaine, marijuana, different pills.

Q. Now, what training, if any, did you receive as a chemist for the Department of Public Health?

A. When I first started in the Jamaica Plain lab I received six weeks of in-house training where all I did was follow around a higher chemist supervisor to learn what to do. I then had six weeks where my work was verified and double-checked by the senior chemist before I was allowed to start analyzing things by myself. We also received in-house training where the company came in and gave us training on -- on different ways we could use one of the instruments, the mass spectrometer, to analyze.

Q. Can you explain to the Grand Jurors what the mass spectrometer is?

A. It's normally coupled with another

device, a gas chromatograph, and so you dilute a sample in the solvent, normally a methanol, and it dissolves and we inject it into an oven that has a very long skinny capillary tube about 30 meters long and due to the weight of the substance it elutes through the column at different rates, at different speeds, which in effect separates it into its components, that's the gas chromatograph for that.

Once it has that separated component, the mass spectrometer blasts ions at the chemical which breaks the actual structure of the chemical into a unique ion fragment, kind of like a chemical fingerprint of the substance, and provides a reading of the different amount -- what -- what ions it's broken down into and so we can compare that fingerprint to the fingerprint of the known substances to determine if there is a match.

Q. And you say "known substances." What are these, what do you compare them to actually?

A. We compare them to standards or

controls. Basically, we would purchase -- the lab would purchase known, you know, like a known heroin sample or submission so when we ran our unknowns, we would also run a known. The primary reason was to just tell if the machine was working properly anyway because we knew what a known should look like but it also then was to compare the unknown.

Q. Approximately how many chemists worked at the lab with you?

A. Which lab?

Q. At the Jamaica Plain laboratory, Hinton lab?

A. At the Jamaica Plain lab there was probably about twelve or thirteen chemists and there was two evidence officers.

Q. Do you know those evidence officers' names?

A. One was Gloria Phillips and the other one, I can't remember her name. I know her initials were SS but that doesn't -- I've been trying to think but that was years ago. I can't --

Q. If you know, would that person's name be Shirley Sprague?

A. Yes, it would be.

Q. Okay. And was there anybody else? Was there an Elizabeth O'Brien that worked there, if you know?

A. Towards my end time in the Boston lab she would cover if one of the other two evidence officers were out sick or on vacation, so she did do some evidence officer duties as well as analyze some testing.

Q. Okay. Can you explain to the Grand Jurors what an evidence officer did at the Hinton laboratory?

A. At that lab police officers would come in with their submissions and they would record on a drug receipt what the substance was, meaning was it a powder, was it a vegetable matter, was it pills; get the weight of the evidence in the evidence bag the police officers provided; assign it a lab number that would follow it through the whole testing process and then they would store it in the

drug safe.

They also -- with that many chemists we had and it was a very heavy workflow there, they would separate sometimes simple powders, meaning, you know, one to ten bags of a powder like into one pile and then something that might be a trafficking, which is a much higher penalty, they'd put in a different set for a more experienced chemist to do and they'd separate the pills from powders and they'd separate vegetable matter.

Q. From?

A. They'd just separate it into the type of substance it was.

Q. And when you say "vegetable matter," it's fair to say you mean marijuana, correct?

A. Correct.

Q. Who assigned the samples to the chemist; was it the evidence officer?

A. The evidence officer assigned to the chemist.

Q. And there were logbooks, correct?

A. That is correct.

Q. Okay. Did the chemists have to sign for those at any point with the evidence officer?

A. Yes, we did. We also signed them when we returned.

Q. Did you return them to the evidence officer every day?

A. No, we didn't. It only depended if you finished your batch of samples. Normally when we'd go in to get it, we'd get a batch of twenty or so samples assigned to us. We did have under our lab benches, we had a safe -- I don't want to say a safe -- a locker with a key that we could keep the submissions in overnight if we hadn't finished the tests on them.

Q. And you would take those out of that locker and finish them the next day?

A. The next day and then return them to the evidence officer afterwards.

Q. Was the drug safe, the large drug safe where the substances were kept and separated, was it a secure safe?

A. Yes, it was.

Q. Approximately how big was it?

A. Maybe a third of the size of this room.

Q. Okay. Maybe --

A. I don't --

Q. -- 20 by 20?

A. It was more long but, yeah, that sounds about right I guess.

Q. Okay.

A. I don't know. Is this more than 20 by 20. (Indicating)

Q. Now, can you describe when you started at the Hinton laboratory as a chemist what were you designated as, what was your title?

A. When I started I was obviously the newest chemist there so I was getting either batches of like vegetable matter samples assigned to me or like the simple powders. Even if someone got caught with one bag of a white powder it doesn't take as much testing as someone getting caught with 500 bags of a

white powder so it was easier-to-analyze samples that were assigned to me. The samples I could analyze more quickly just because like one piece of evidence could be one bag or it could be like 10,000 glassine bags, it's still considered one piece of evidence but obviously you're going to analyze more than one bag.

Q. So the more experienced chemists, they got the larger batches of drugs --

A. Correct.

Q. -- the more complicated type samples; and as a beginning chemist you received essentially the smaller samples?

A. Correct.

Q. So is it fair to say you were able to test more samples?

A. That's accurate, yes.

Q. What was your exact title at DPH; was it Chemist I?

A. Chemist I.

Q. Can you tell me, what were the differences between a Chemist I, Chemist II and a Chemist III?

A. When I started basically it was just the type of samples we would get. The Chemist II did more of the trafficking sort of cases, which like I said would be over a certain amount of substance because there are higher charges or the multiple bags. At that point trafficking was 14 grams, 28 grams and a hundred grams. So if something, a piece of evidence came in at 50 grams in the evidence bag, most likely it would be assigned to either a Chemist II or a Chemist III due to it being a -- I don't want to say more important case but a bigger case, more likely to possibly go to trial, so having a chemist with more experience testifying would be an advantage I guess.

Q. You discussed it briefly but could you just simply walk through the average testing procedures that you do at the Hinton lab with a drug sample?

A. With an average powder sample whether it was suspected heroin or cocaine, after we had the sample assigned to us, we'd do a gross

weight of the whole evidence bag that the officer brought in and record that. We would then proceed to open up the evidence bag and take out -- it's in a small bag of powder that the defendant was actually caught with. We'd do a gross weight on that, empty the bag and we weigh the bag and then subtract the two to get the net weight of the substance.

At that point we would do a spot color test, which basically we put a very small amount of the substance in some wells in a ceramic plate and we had four different reagents that we would put a drop -- a drop or two of each into the wells and with certain substances cause certain color changes with their agents.

Q. About how much would you put in the ceramic plate in the wells, if you could estimate?

A. Maybe one milligram, two milligrams.

Q. A very, very small amount?

A. Very, very small amount.

Q. So --

A. It also depended on purity and stuff but on average that's about what it was.

Q. After you did that just explain the next steps that you took?

A. If it was suspected heroin and there was tests that indicated it could be as a preliminary, we would add some of the sample to a vial, which is like a one-and-a-half, 1.7 milliliter glass vial, and dissolve it in methanol, the solvent, and seal it to be run on the gas chromatograph and the mass spectrometer.

For cocaine samples the way the laws are written would state you have to prove which isomer, if it's a left-handed or right-handed molecule, so we -- there was an additional step in there of doing crystal tests where we put about the same amount on a glass slide, add a different reagent which would form certain types of formation of crystal and look at it under a microscope. And by looking at the formation of the crystal with two different reagents we could determine

the polarity of the molecule. But we'd continue with that and put it -- we also do the dissolution in the glass vial and submit those samples to the gas chromatograph and the mass spectrometer.

Q. Now, after you ran the mass spectrometer and the gas chromatograph tests, what would you do next?

A. Well, normally when we were done actually setting up the vials, we'd seal the evidence or repackage evidence in the original bag and then we'd put it into a brand new evidence bag and we would initial and heat seal it closed. But once the results are in we'd fill out a results card, which we would make sure the lab number matched to record our results and we'd hand that to the evidence officer who would use the data we provided on it to print up the certificate of analysis.

At that point once they were printed, they would be returned to us and we would verify that the results on the certificate matched our results on the notebook and the

card, at which point we would sign the certificates, get them notarized by someone else in the laboratory, and everything would be back in the evidence office awaiting a police officer to pick them up.

Q. Now, were you the only person who did the test on the substance or did somebody else run additional tests?

A. When I started I was just doing the first half. I wasn't running the gas -- I would the gas chromatograph but I wasn't running the mass spectrometer running of it. So we would hand those in to the mass spec lab and they would be -- we'd have multiple people's samples, you know, run concurrently on an automated machines so we could analyze them overnight because it would take twelve minutes or so to run a simple sample and with that many people in the lab it would -- so to be as time efficient as we could.

About halfway through my time there I was trained on the mass spec and so I would not always analyze my own, it depended on our

rotation but I was capable of doing those tests for myself as well other people.

Q. And what is the certificate of analysis?

A. It is just a piece of paper that does list the drug lab number that was assigned to it, as well as the defendant, the police department who brought it in, and it stated the results of the drug testing as well as reporting the net weight of the substance.

Q. And the net weight obviously is very important in terms of the prosecution's role in the case, correct?

A. That's correct, yes.

Q. How many, if you know, how many tests approximately did the JP lab do in a year, if you know?

A. I don't know. I'm trying to remember whether it was 12 or 13,000 submissions but once again, you know, one bag is, let's say, it's cocaine and there's going to be six tests with all the color tests involved, where if you have one piece of evidence that's got 200

bags you're gonna have a lot more than six tests. So I believe it was 12 or 13,000 pieces of evidence a year that were seized. They were slightly behind. I'm not sure if they got through all 13 -- 12 or 13,000.

Q. When you say "slightly behind," what do you mean by that?

A. Well, it seemed like their backlog continued to grow, that they might not have enough people working to keep up with the amount of pieces of evidence that was coming into the lab.

Q. If you know, did they do anything to try to remedy that situation?

A. Not necessarily. Like I said, they had separated the powders and the marijuana at that point. You could analyze marijuana samples much quicker. In powder testing there were other tests involved so you could go through a lot more marijuana samples which overall decreased the number of backlog samples but it was arbitrary.

I do know once the law changed that

we decriminalized under an ounce, I'm not sure what happened with their levels at that point. I know they stopped receiving -- they were I don't want to say rejecting people bringing in less amounts of marijuana but police departments stopped bringing that in so I'm assuming that affected their backlog.

Q. So you said there were approximately twelve to thirteen chemists at the lab at Hinton, Jamaica Plain?

A. I did say that.

Q. Do you know a chemist there by the name of Annie Dookhan, also known as Annie Kahn?

A. I do.

Q. Could you describe the relationship you had with her, if any?

A. Yeah. Well, I started in May of 2003. She I believe was hired in November of 2003 to start there. We were cordial to each other. She seemed intelligent and bright and hard working. She did like to get things done and get them done right, meaning getting the

correct results.

I ended up leaving, you know, shortly the next year. She, like I said, was very smart. She was also trained pretty much when she started to run the mass spectrometer as well. Definitely liked to work I guess.

Q. Did you at any point discover that Ms. Dookhan was doing certain things at the lab she shouldn't have been doing?

A. No, I don't remember seeing anything or having any inclination that she was doing anything wrong while I was there.

Q. Did you later learn -- at a later time did you learn she was doing things improperly at the lab?

A. Yes, I guess. I know she pled to certain cases so. I have no firsthand knowledge of her doing anything wrong but.

Q. So you never observed -- is it fair to say you never had the opportunity to observe her work?

A. Correct.

Q. Okay. You said you left the lab

shortly. Approximately how long did you stay at the Jamaica Plain, Hinton laboratory?

A. I was at that lab for about a year and I realized that I would never be able to afford to buy a place in the Boston area so -- and I was intrigued with Western Mass. so I looked into -- well, so I talked to the head of the labs and mentioned if a positioned opened up in Amherst, Amherst lab, if I could transfer out this way because I like fresh air. I like, you know, being outside and I thought there would be a chance for me to buy a house.

Q. At any point did you move out to the Amherst laboratory?

A. Yes. I started at the Amherst lab in August of 2004.

Q. Okay. And where was -- when you say the Amherst lab, what was its actual name and where was it located?

A. It was on the UMass campus. I don't know what the real name was. It was just the Amherst lab. It was at 637 North Pleasant

Street, which is in Morrill Building, Morrill 1 on the UMass campus.

Q. And how many chemists were at the Amherst lab?

A. When I started there I was the fifth employee. We had one supervisor.

Q. What was that supervisor's name?

A. Alan or Cam -- his nickname was Cam -- Stevenson.

Q. And who else works under Cam?

A. The next senior chemist there was James Hanchett. Sharon Salem was a chemist there and there was a chemist there by the name of Rebecca Pontes.

Q. And can you please describe for the Grand Jurors what your duties and responsibilities were at the Amherst laboratory?

A. Starting at the Amherst lab it basically carried over my duties at the Jamaica Plain lab except at this lab with fewer people they didn't separate pieces of evidence by powders separately or vegetable

matter separately. They actually probably did it wiser and kept it by case, so you only have one chemist analyzing a certain case instead of having to have possibly three, four or five different chemists analyzing the evidence in one case.

So, I mean, I think by that point I had already started analyzing pills in the Jamaica Plain lab as well but I would get basically any drug that came in, you know, whatever next sequentially when I would pick up.

Q. So it's fair to say you tested a wide variety of controlled substances at the Amherst lab?

A. That is correct.

Q. Can you tell the Grand Jurors what the general atmosphere of the Amherst lab was compared to the Jamaica Plain, Hinton laboratory?

A. There was a little less stress, more laid back. We all -- it was one of the atmospheres if you got your work done there

wasn't a lot of people stressing over you, looking over you. It was friendly. We all got along. I mean, it was a good atmosphere to work in. There wasn't a lot of competition to try to get to -- to get to the mass spec. We only had two mass specs at the time and with four people analyzing samples, it wasn't as if we were in Jamaica Plain and there were, as you know, thirteen people trying to use four different machines. So we all -- instead of submitting like the glass vials to be analyzed in a batch, we all analyzed our own samples from start to finish.

Q. Who were the primary chemists at the lab?

A. When I started myself, Rebecca and Jim or James Hanchett were doing most of the work. Sharon did some but she also worked in the evidence office. Cam was more just the lab supervisor. He made weekly trips to the Boston lab, so I don't want to say I never saw him analyze anything but I don't think I ever saw him analyze things. He was more the

administrator of the lab. He shortly retired but at that point Sharon basically took over doing the evidence officer duties full-time even though she was a chemist and Jim eventually got the lab supervisor position so he was probably analyzing samples maybe only half his time and doing administrative duties the other time, where Rebecca and I continued to work.

Q. So it's fair to say that you and Rebecca did most of the work at the lab, most of the testing?

A. Correct, correct.

Q. Now, you had alluded to the way they handled the evidence at Amherst was slightly different than JP, correct?

A. Correct?

Q. Were there any -- other than the way they separated the drugs and a chemist would test all of the samples in a batch, were there any other differences?

A. Well, when they came in to the evidence officer they actually typed the

results -- not the results. When the police officer came in they would get the gross weight of the evidence and actually type it directly into the computer, where in the JP lab there were handwritten notes that were transcribed.

We also -- besides keeping batches together numerically to make sure the defendant -- one person would get the same defendant and we did keep I guess towns together. Instead of using envelopes for specific pieces of evidence, we -- every piece of evidence got its own lab number but all those were put into one bag. It was all from Springfield or Holyoke or Northampton or wherever but the same principle where a drug receipt was written, they were put into the drug safe where they were locked until a chemist came in to take out a batch of samples.

Q. Now, would Ms. Sharon Salem, the evidence officer, give you the samples or would you go into the safe yourself and take

-- remove the samples?

A. If Sharon was there she would assign them to us. If she wasn't there it would depend who was taking over the evidence officer duties. We all were trained on the computer system.

Q. So fair to say that Rebecca and you would sometimes act as the evidence officer?

A. That's correct.

Q. So you and Rebecca both had access not only to the computer system but also the safe itself?

A. Correct.

Q. Was the safe locked all the time or was it left open?

A. Most of the time it was shut. If it was ever left open the evidence officer there was right there and I'd say that sometimes she would pull out a batch trying to get it ready because Springfield was coming to pick up. She would pull out a couple of the Springfield batches to insert the drug receipts and to make sure everything was there, so she

wouldn't close the door right behind her but it was in a locked room as it was.

Q. How did you get into the lab, could you describe that to the Grand Jurors?

A. At the very beginning it was just a simple key to get into the lab. Across the hallway is where the drug safe and the evidence office was so we had a key to that door but it had an additional key for the drug safe that we had. We also had an alarm system so at the end of the day it would get set. In the morning, you know, we'd punch in our code to turn off the alarm system.

After I don't know how long we had some renovations and tried to put in more security features and so we had a card reader. We each had our badge with a, you know, magnetic strip that we could use to get into the drug safe and a couple other places but the keys still worked in the doors so.

Q. So you did not have to use the card system, you could always override that by use of a key?

A. Correct.

Q. And everyone at the lab had access to these keys for both the evidence room, the safe and the lab itself, correct?

A. Correct.

Q. Now, in terms of the testing that you described at the JP lab in regard to the liquids and the ceramic dish and the gas spectrometer [sic], were those -- did you do the same tests in the same fashion at the Amherst lab just like you did at Jamaica Plain?

A. We did not always do all of the color tests from the ceramic -- liquid and the ceramic.

Q. Was there any reason?

A. Sometimes at the Amherst lab we were not required to do all of the color testing in the ceramic plates due to recommendations from SWGDRG, the Scientific -- basically, it's the scientific working group that the DEA and everyone else has recommendations of what testing's required for substances. You need

to have, you know, so many tests from column A, so many tests from column B. Depending on the class of the drugs you might need an extra class. That was not required. But besides that we did all of the same testing.

Q. At any time during the tests were you able to detect any other substances in a sample that weren't drugs?

A. Yes, we were.

Q. Can you explain?

A. Different cutting agents or adulterants, so to get more bang for their buck some drug dealers would cut pure drugs or what they thought were given as pure with other substances to increase the weight and volume so when they sold it they were technically selling less pure drug to increase profit or they would add -- so they could add something as simple as flour or baking soda, which would not necessarily come up in our testing because of the chemical structure is too simple of a thing, but they also cut it with other drugs such as procaine, lidocaine,

levomenthol and all those drugs would -- I don't want to say give a similar effect but would be closer to consistency as real cocaine when they mixed it and, therefore, someone getting it might not know that they weren't getting -- or that they were getting a less pure drug than they thought.

Q. And it's fair to say that some of these substances that the powder drugs were cut with are dangerous?

A. Yes.

Q. Okay. Can you give an example to the Grand Jury?

A. The levomenthol is actually used as a de-wormer in livestock and it has no -- it can cause some skin lesions and things like that in people. I'm not sure why they put it in but.

Q. Can you tell the Grand Jurors approximately how many tests, if you know, you did in a month on average?

A. In the Amherst lab?

Q. In the Amherst lab.

A. Probably two to 300 pieces of evidence.

Q. And if you know did Rebecca do more, less or about the same?

A. We were about the same.

Q. Do you know how many tests Jim Hanchett did?

A. Not off the top of my head, no.

Q. But you had indicated that he really didn't do too many tests?

A. I don't want it to sound like that but um, he had other responsibilities so -- and when he would analyze sometimes he would do that 10,000 bags of, you know, heroin so although he might have been testing a hundred bags, it was only considered one piece of evidence so.

Q. You indicated that the drugs were stored in the safe when they were not being tested?

A. Yes, but when, I mean, they were not assigned to us.

Q. Okay. When they were not assigned to

you. But when they were assigned to you, what did you do with it?

A. After analyzing it the same way, you know, opening it up, getting the weights of everything, doing the analysis, if we were not finished with that batch we had two small safes, you know, ground floor about this high safes in our lab that we stored the samples in overnight instead of returning them, logging them back into the system into the evidence room and then taking them back out. (Indicating)

Q. Somewhat similar to what happened at the Jamaica Plain, Hinton lab?

A. Correct.

Q. Now, you had referenced earlier in your testimony standards or national standards and you described those. Were there standards, also these same standards at the Amherst laboratory?

A. Yes.

Q. And, if you know, how many standards did you have at the Amherst laboratory?

A. Our standards were stored in a couple different places. In the refrigerator there was probably 50 standards. In the actual -- not refrigerator -- and in the filing cabinet there possibly were twice as many, a hundred. Everything -- standards were everything from some cutting agents like the lidocaine and procaine, to all the way up to different classes of drugs, even classes of drugs which we normally analyzed by appearance and labeling. If it was only a Class E drug, someone had an Ibuprofen 800, technically it's an illegal drug unless you have a prescription for it. Something like that we would analyze by appearance and labeling. Since every pill has a unique marking, if the marking was worn off or if it looked as if it had been counterfeited or it was altered, in some way we would analyze it chemically but more often than not people with Class E drugs had prescriptions, they had thrown, you know, that pill in their pocket because they had a sore back and were gonna take it later.

Q. Now, you indicated the standards were stored in two locations: one was in a refrigerator, the other ones were in a locked cabinet?

A. Correct.

Q. Was the refrigerator in a secure location or could be it locked?

A. I don't believe it could be locked. It was in the lab and the only way into the lab was either with a key to get into the lab so.

Q. So the refrigerator itself was not locked?

A. Correct.

Q. And it's fair to say that everybody in the Amherst laboratory had access to those national standards, correct?

A. Correct.

Q. Okay. Did the standards, were they in powder form or liquid form or both?

A. Both depending on what type of standard it was. Most were in powder form but there were a few that were in liquid form.

Q. Okay. And were the liquid and powder ones refrigerated or was there any reason one was refrigerated and another was not?

A. I believe some were refrigerated for stability reasons. They degraded less, you know, in cold conditions or in dark conditions. There were some standards that were kept in, you know, small ones kept in both. I'm not sure the rivalries and how things were put in one or another. It was that way when I started there and I never questioned it.

Q. What kind of containers were these standards stored in?

A. Whatever container they were sent to us in from the chemical company. There were a lot in glass jars. Other ones were in plastic vials. I guess depending upon what it was, if it was sensitive to light, how much was sent. Certain standards we used a lot more frequently, things like cocaine or heroin standards. Since we had to run a standard when we did every single run to prove that the

machine was working in comparing, we'd use those a lot more, where other standards that we rarely got samples from, there was -- like we could receive a smaller quantity. Likewise, things like LSD standards, it takes very little of it to actually get a positive test so we received only like ten microliters or micro -- micrograms of it but it was in a fairly decent size container though. So we got anywhere from, like I said, ten micrograms from a standard all the way up to -- we had a jar that had, you know, a hundred grams of methamphetamine. I don't remember what our coke and heroin standards were. We ordered them occasionally.

Q. Did you order those or did someone else in the lab order those?

A. Someone else, other people in the lab. Either Cam did when he was there and I believe Jim may have ordered some. I know I never did so.

Q. Okay. Were there any -- were there any standards that -- what were the largest

standards that you had on hand in the laboratory?

A. In the refrigerator probably when I started the biggest standard would be -- it would've been a methamphetamine standard. Way back when in the eighties or something a different lab in the building had ordered something and got the wrong thing sent to them so they gave it to our lab.

Q. And how do you know that?

A. I was told that by Jim Hanchett.

Q. And did he tell you that when you started at the lab?

A. I don't believe so. I think he was doing an inventory of what was there one day and you could see that the bottle was -- like the seal around the bottle was corroding. I get it, I mean, it was a corrosive substance but also it's -- I won't say it looked old but it looked really old. The label was coming off and stuff like that.

Q. If you could estimate for us, how -- what size was that bottle?

A. About this tall and, you know, that around so. I have no idea of the volume on it. I should know. (Indicating)

Q. But it's fair to say it was one of the largest of the samples?

A. It was. It was the largest liquid amphetamine we had. It was a methamphetamine base sample. When most people think of methamphetamine, they think of crystal meth. This was not the hydrochloric form, it's the base form so it was an oil.

Q. Now, these national standards, I assume they're fairly pure; is that fair to say?

A. They are pure, period.

Q. So they're not like the other samples that you were getting that were cut?

A. Yeah, these were not cut. These are a hundred percent pure, 99.99 percent pure substances.

Q. And --

A. I mean, in the cabinet, the large -- we had like one, you know, hundred gram

container of amphetamine, which is -- the jar was about that big around to use for the lab itself. I'm not sure if everyone did that. I know that we had a smaller amphetamine sample in the drawer I guess. Most samples were in a small vial just about that big. (Indicating)

Q. What -- about how many milliliters would you estimate that?

A. Sure. Milliliters -- it would be milligrams because it's a powder.

Q. Milligrams?

A. Maybe one milligram. It wouldn't be all the way full.

MS. WEST: Ms. Farak, could you go back to the methamphetamine standard that you said was in the refrigerator?

THE WITNESS: Yes.

MS. WEST: And you showed everybody using your fingers about how big it was?

THE WITNESS: Mm-hmm.

MS. WEST: Do you think that's about a six or seven inches tall?

THE WITNESS: Maybe six inches tall.

MS. WEST: And you put your fingers together --

THE WITNESS: (Interposing) It was probably a little bigger than this around. (Indicating)

MS. WEST: Okay. So the diameter of that bottle was about how big?

THE WITNESS: Probably two inches.

MS. WEST: All right. So that bottle was the biggest bottle in the refrigerator?

THE WITNESS: Correct.

MS. WEST: And then when you talked about the amphetamine --

THE WITNESS: Correct.

MS. WEST: -- the other bottle, that was bigger?

THE WITNESS: That was much bigger, yes.

MS. WEST: And how much

bigger?

THE WITNESS: That was probably ten -- is that ten inches or so tall -- and about six inches. (Indicating)

MS. WEST: Of diameter?

THE WITNESS: Diameter.

MS. WEST: And when you spoke about the vials, how tall were those?

THE WITNESS: Maybe an inch-and-a-half.

MS. WEST: And what was the diameter of the vials?

THE WITNESS: An inch, three quarters of an inch. And we had some even smaller that were more like the 1.7 ml vial size that we analyzed the samples. Some of the times it depended on what it was, did we use it frequently and there were -- most of the standards in our lab we did not get submissions from agencies about or suspected. Some of the designer drugs we might have a standard for because we had it once five years ago or ten years ago but we haven't seen it

since so we've got it. You know, we -- something that was not common so we -- either the size they were provided in or we ordered it in the smallest available.

MS. WEST: And just another question, the standard of methamphetamine, was that a clear glass bottle or a colored glass bottle?

THE WITNESS: It was a brown opaque bottle.

MS. WEST: Okay.

Q. (By Mr. Caldwell) Have you ever had the opportunity to test methamphetamine at either the JP lab Hinton or the Amherst laboratory?

A. In the JP lab I did receive a couple of crystal methamphetamine submissions that I analyzed.

In the Amherst lab I don't recall ever getting any methamphetamine samples myself. Occasionally we'd get MDMA and that besides having the ecstasy that would be cut with amphetamine or caffeine or something else

but that's.

Q. So, Ms. Farak, growing up did you ever have the opportunity to use drugs?

A. I was never introduced to any drugs until after college.

Q. After college. So you didn't do any type of drugs in high school?

A. No.

Q. And you didn't do any types of drugs while at college?

A. Not at college. I had tried cocaine once while I was in grad school and I had tried heroin once at grad school and I had smoked some pot.

Q. Were you a heavy user of marijuana?

A. I wouldn't say heavy but frequent I guess.

Q. Daily, a few times a week?

A. A few times a week.

Q. And you had a partner at that time, correct?

A. Correct.

Q. Ms. Lee?

A. Correct.
Q. Was she also a marijuana user?
A. She was not a user.
Q. You said you had tried cocaine one time?
A. Correct.
Q. At graduate school?
A. A friend of a friend brought some over and a couple of us did a couple lines, that was it.
Q. You tried it. Okay. And that was the only time you tried cocaine up until --
A. Up until --
Q. Close to 2000?
A. Yes, past 2000 but, yes.
Q. You also said you tried heroin?
A. Correct.
Q. How did you administer that heroin to yourself?
A. I snorted part of a bag and I was nauseous and sick and hated every minute of it.
Q. Okay. So you never tried heroin

again?

A. Never, no desire to.

Q. And that's true up to this day --

A. Yes.

Q. -- have you ever had heroin, taken heroin?

A. No.

Q. Now, have you ever tried methamphetamine?

A. Have I ever?

Q. No. Well, prior to working at the lab have you ever taken methamphetamine?

A. No.

Q. Now, you were discussing about a methamphetamine standard that was at the lab?

A. Correct.

Q. Did you ever try -- did you ever take any of that methamphetamine sample from the laboratory standard?

A. I took part of, yes, I did.

Q. And when did you start taking the methamphetamine standard?

A. The first time I took any of the

methamphetamine standard was late 2004 or early 2005.

Q. And why, why did you do that?

A. I guess I was curious. For some reason even while I was in college as a freshman I -- I was going through a rough period in my life like mentally and for some reason I had looked up drugs online and was reading about them and when I read about it I said like that's the one I would want to try if I was going to try it. It would give me energy and I liked the positive side effects of it I guess. It was a longer -- it would -- it would last a while. It was an energy boost but I never considered it. When I got to the Amherst lab I ended up seeing a meth standard that they had and one day I just decided to try a little bit.

Q. Did you ever try any of the standards at the Jamaica Plain laboratory?

A. No, I didn't have access to them.

Q. So it's fair to say that the access to the standards was -- it was a little

stricter -- it was more strict at the Jamaica Plain lab as opposed to the Amherst laboratory?

A. That is correct.

Q. And the first time you took it in late 2004, 2005, how did you administer it to yourself?

A. It was in a liquid form so I had used a pipette and just stuck it in the bottle and squirted it in my mouth, so I took it orally and swallowed it.

Q. Now, was anybody else in the laboratory --

A. At that time?

Q. -- at that time when you took it?

A. No.

Q. You were alone?

A. I was alone. It was over a lunch period. Someone may have been in the evidence office across the hallway but people had gone out to lunch.

Q. Can you describe briefly what -- can you just get a little further into that; what

effect did it have on you, the drug?

A. It gave me the desired effects. 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.

Q. And approximately -- you've indicated the methamphetamine high was approximately eight to ten hours?

A. Mm-hmm.

Q. Now, did it in any way affect the work that you did at the lab that day?

A. No.

Q. And when you say that can you explain that to the Grand Jurors?

A. I still did the work that I was assigned to do. Like I said, if anything, it made me feel more alert and more let's get this done sort of thing but I analyzed everything according to procedure.

MS. WEST: How do you know that?

THE WITNESS: How do I know I did it by procedure?

MS. WEST: Yes.

THE WITNESS: I did all the testing required. I ran the tests. I ran the standards. I was double-checking work. I followed our procedure.

Q. (By Mr. Caldwell) Now, from the first time you took it did this become daily use or was it just this one time and was there a lapse of time before you took it again?

A. I might have waited a short period but quickly became daily use.

Q. Okay. It's fair to say that daily use began in early 2005?

A. That is correct.

Q. And you were administering it to yourself the same way?

A. Yes, either using a pipette or I had the opportunity when no one else was there to aliquot a small amount of the bigger vial to one of our sample vials. And so if they were to allow me to use it in private, I would use a small metal spatula that we had that we used to manipulate the powder and dip it in and

since it was an oil it would kind of coat the metal spatula and I would lick it.

Q. Now, would you do that at your workstation or where the refrigerator is where the items were stored or both?

A. Well, as I think I said, I would try not to do it at those places, that I'd aliquot a small amount so I could, you know, if I was in the bathroom I could do it in the morning or, you know, I would start by keeping a small aliquot in my drawer. If no one else was around and I was there earlier, I could do it when no one was looking.

Q. When you say "aliquot" can you describe that?

A. Basically, you had a big jar, you'd pour a little bit out in two aliquots, so I wouldn't have to continuously go back to the bigger jar of standard. I wouldn't have to go over to the standards refrigerator to take the whole bottle of standard out. It was much more -- it was easier to disguise and to hide.

Q. Did you take it before you went to

work at home or did you wait until you got to work to take the methamphetamine?

A. It varied. I started just keeping it at work and doing it when I got to work for energy. It did get to the point where I was bringing it home though and doing it basically first thing in the morning.

Q. Okay. Were you doing it only once a day or more than once a day?

A. It became multiple times, a couple times a day. It's a longer high. It was probably never more than two or three times a day.

Q. And how long did this -- the use of the methamphetamine sample last, if you know?

A. So I was taking small aliquots or, you know, repeatedly. I know since I was taking, I know that by the beginning of 2009 I had -- that I was totally out basically of the methamphetamine standard.

Q. Okay. So is it fair to say for approximately three plus years you had been using methamphetamine at the lab?

A. That's right. And I tried to have periods of sobriety, you know, a couple weeks here or whatnot but I was not super successful.

Q. So for a majority of time you were under the effects of methamphetamine while at the laboratory?

A. That would be accurate.

Q. Now, when you said you attempted periods of sobriety, was this on your own or with the help of anybody, a therapist?

A. Up until 2009 it was by myself.

Q. So what would happen when you stopped using methamphetamine?

A. I would go through some withdrawals.

Q. Can you describe those withdrawals?

A. It wasn't physical and what you think of with a heroin -- opiate withdrawal of throwing up or anything but I became increasingly lethargic, tired beyond belief, wanting to sleep all day long. I could get bitchy for lack of a better word. I was very irritable and, I mean, there were times I took

a couple days off from work just because I wasn't feeling like I could get up and go into work.

Q. Now, when you weren't taking the methamphetamine was it affecting your productivity at work?

A. I was having trouble focussing and even after those few days of extreme tiredness I would still have a lack of energy and it was a rebound effect.

Q. Now, is it your testimony that up to this point, you said it was the beginning of 2009, you were only doing the methamphetamine standard?

A. That is correct.

Q. You weren't doing any other standard at the lab?

A. No.

Q. And your use of the drug was simply just as to the methamphetamine standard?

A. Correct.

Q. Okay. Now, you said end of 2009 you ran out of the methamphetamine sample?

A. It was beginning of 2000 --

Q. 2009?

A. Nine.

Q. So what did you do?

A. I realized it was getting lower. I started looking around at the different standards our lab had hoping that there might be something that I could even take to help me get through the withdrawal period when I was not using at all.

It was, like I said, the end of 2008, beginning of 2009 while looking through the standards I found that we had a big jar of amphetamine around and we also had some smaller containers of phentermine, which is another stimulant, not as addictive as methamphetamine.

Q. In terms of the liquid methamphetamine sample, did anyone notice it was missing?

A. At one point Jim -- James Hanchett was doing an inventory of the lab for Environmental Health and Safety or whatever --

well, I knew he was going to be doing an audit. You know, he was complaining about it or something and I knew that the level had gone down dramatically because of what I had taken and so in my haste I added some water to it.

Q. What happened when you added the water to it?

A. Well, oil and water don't mix very well so it separated. He didn't notice that but due to the age of the sample and the fact that the seal -- the thing that would help seal it was corroding, he assumed that it was just degrading, breaking down and so he basically got rid of it. He -- I don't want to say siphoned off the oil and he put it in a very tiny vial like a residue vial and got rid of it.

Q. Did James Hanchett suspect that anybody had been using that standard?

A. I didn't get that feeling. I mean, I was slightly paranoid about that.

Q. Did any other chemists at the lab

discuss that incident?

A. No.

MS. WEST: When you noticed -- when you understood that Jim was going to do the audit, how much before the beginning of 2009 was that?

THE WITNESS: That I don't remember. I really don't remember.

Q. (By Mr. Caldwell) Now, you had indicated that there were other standards at the lab that were very similar to the methamphetamine sample?

A. Well, they were stimulants, yes.

Q. And also stimulants. What were those stimulants that you found?

A. It was the jar of amphetamine, the large jar, as well as a couple of smaller containers of phentermine. I did try both in a short period of time and came to the conclusion that the amphetamine was a closer -- the amphetamine made me feel better, that it was closer to the methamphetamine and the desired effects.

Q. And those were increased energy, increased alertness?

A. Exactly.

Q. Increased focus?

A. Yes.

Q. And that was -- that was the high essentially that you desired?

A. That was the high I desired. The high doesn't last quite as long with amphetamine as methamphetamine but I'd say I started using it and using it multiple times a day.

Q. And this would've been throughout 2009?

A. 2009, beginning of 2010, yes.

Q. And it was also daily use of the amphetamine?

A. Minus the few periods I tried to get sober but, yeah, when I was using I was using daily.

Q. And started in the morning; is that fair?

A. Yes, that's fair.

Q. And because the high didn't last long you took it multiple times during the day?

A. Correct.

Q. What forms would you use methamphetamine in?

A. Well, the methamphetamine was oil but the amphetamine was a powder.

Q. Excuse me. So it was powder form?

A. Yes. And I would -- I did try snorting it but I either wasn't good at it or but it clogged up my nasal passages so I ended up doing it orally, just putting some on my hand and eating it. I found that ingesting in that way it might not give me an intense high as some people feel using drugs but it actually prolonged the effects for me and considering I wasn't going for the being high feeling, it was the longer I could get it to last.

Q. And you were doing tests while under the influence?

A. Correct.

Q. And was your productivity affected at

all while you were under the influence of this drug?

A. I don't believe so. I mean, my numbers I don't believe dipped off at any point.

Q. Did anyone to your knowledge talk of people using drugs at the lab or suspect you to the best of your knowledge that you were under the influence of a drug?

A. I'm sure there were moments I was concerned but I knew I was doing something wrong and I knew I could be in a lot of trouble so I'm sure there was some paranoia on my part but there was never any direct talk of anyone using drugs or things were missing.

Q. So at no point did anyone after Supervisor Jim Hanchett, Sharon Salem ever pull you aside and have a discussion with you about drug use?

A. No.

Q. Did no one from the Department of Public Health ever talked to you about drug use?

A. Correct.

Q. Did you ever take sample -- did you ever take -- you indicated you never took samples while at the Jamaica Plain, Hinton laboratory, correct?

A. Correct.

Q. Now, you had testified earlier that in approximately January 2009 you sought treatment for your substance abuse?

A. I was speaking about treatment with one problem and that being mental health -- or being addiction.

Q. And were you previously diagnosed with a mental illness prior to working at the laboratory?

A. Yeah, back when I was 16 I had a suicide attempt and it was over the years through college and whatnot I had hospitalization because I couldn't contract for safety and then at that point I believe I was diagnosed with major depressive disorder.

Q. And when you started at the lab at Amherst were you under the care of any doctor

or psychologist or psychiatrist?

A. No.

Q. No. But you were previously diagnosed?

A. Yeah. While I was in college I was seeing a therapist and that was, you know, at the end of 2000. I finally decided to go back to therapy in January of 2009.

Q. Okay. And who did you go to see in January 2009?

A. A woman by the Sarah Hawrylak, H-A-W-R-Y-L-A-K.

Q. And this was not only for your mental illness but also for your substance abuse?

A. I originally went there more for my mental health issues. I was concerned that -- that if I mentioned the addiction issue at the beginning that's what it would focus on and not that I didn't think it was a problem but I knew I had mental health issues previous to any addiction issues and I did not want it to be all assumed that it was for -- because of an addiction.

Q. And in terms of your mental illness, was the treatment effective that you were receiving in 2009?

A. It was -- it was helpful. I had someone to talk to. I was having some problems with my spouse. By that time we were married and it gave me an outlet.

Q. Do you currently suffer from a mental illness?

A. Probably.

Q. Are you in any type of therapy or treatment?

A. I'm in therapy. I am also on an antidepressant medication.

Q. And what antidepressant medication are you on?

A. Right now I'm on Lexapro.

Q. And did you take Lexapro before you came in today?

A. Yes.

Q. Now, does the taking Lexapro, does it affect your memory or in any way?

A. No, I -- I don't have any side

effects from it.

Q. Okay. So you have a clear mind today --

A. Correct.

Q. -- as you're giving your testimony?

A. Yes.

Q. Now, you said you began your mental health treatment in 2009. Were you still using the amphetamine standard at this point?

A. Yeah, the amphetamine standard started right about the same time I started seeing that therapist. I told my therapist in I believe April of that year about the substance abuse issues. She obviously encouraged me to get further treatment whether it was an inpatient or, you know, at Adcare Detox.

Q. Did you take advantage of any of those programs?

A. I did not. I was concerned about losing my job if people found out. I was concerned -- I mean, she even recommended going to like NA meetings.

By this point we were going to court frequently as chemists to testify in cases and I was concerned that I would run into somebody I may be testifying against and that things would be brought to light and not in a good way.

I did manage to get to a couple of NA meetings up in Brattleboro thinking it would be a safer venue for me being away from the area that I had a lot of strength in since I did all four Western Mass. counties analyses. And then at one of those meetings someone else was there that was talking about how they had just been arrested in Holyoke with these drugs and they had previously been arrested, you know, in Pittsfield and I got scared that, you know, what's the name and you're trying to pay attention to a name, did I just get samples from Holyoke, the guy's first name and it really, it scared me away from -- from continuing to go to NA.

Q. So at this point you were still using the standard amphetamine sample?

A. Correct.

Q. Were there any other standards that you tried along with the amphetamine sample?

A. I mean, at some point during that year I tried the cocaine standard that was in the lab, very pure. I was snorting that. But we didn't have as much of it and we did go back to use that standard frequently because we got a fair number of cocaine submissions to the lab so I really wasn't using much of it. It was mostly amphetamine.

Q. Where were you using the cocaine standard?

A. Where was I using the cocaine standard? Probably in the bathrooms at work.

Q. Okay. Were you ever using it in the lab itself or at your workstation?

A. At that point, no.

Q. Okay. About how many times do you know or if you remember did you take the cocaine standard?

A. Just a few. Like I said, I knew we would be going into the cocaine standard

frequently and I had seen what had happened with the methamphetamine standard and I was aware the -- the amphetamine standard was decreasing as well and I thought I would definitely get caught.

Q. Did you enjoy using the cocaine standard?

A. It had the desired effect but it was a very quick high and dissipated quickly.

Q. And you had -- the cocaine standard and the amphetamine standard, were you still taking these daily?

A. I wasn't taking the cocaine daily but I was taking the amphetamine daily.

Q. And you said you were going to court now to testify; is that correct?

A. Yes.

Q. And this was in the wake of the Court's decision in Commonwealth versus Melendez-Diaz?

A. Yes.

Q. And it's fair to say that required chemists who did test on certain substances to

go to court and testify?

A. Correct.

Q. And be subject to cross-examination by defense counsel?

A. Correct.

Q. How much of this -- how much of your time during the day was spent in court on an average week?

A. On an average week the actual time in court was probably less than a day on average but we would get a lot of requests. We'd get a lot of summonses, especially for like Springfield District Court where they're an extra, which cases are going to trial so you're on call, you're going to be on call this day. We had to make discovery packets routinely for defense lawyers who wanted copies of all our notes and testing procedures and things like that. I would say on a normal, you know, eight-hour day between possibly being in court to, you know, making notes -- copies of notes, sending things, talking to the ADA, you know, DA, we probably

spent two-and-a-half hours working on court things.

Q. Coordinating court appearances?

A. Correct.

Q. For the various district attorney's offices?

A. Yes.

Q. Did you ever testify while under the influence of substances?

A. Have I ever? Yes.

Q. Because you were using them daily?

A. Correct.

Q. Now, you had indicated you were trying the cocaine sample -- or the cocaine standard, excuse me, by the end of 2009?

A. Right.

Q. Is there any time during this period, end of 2009, that you moved beyond the use of standards at the lab?

A. Yes, there was.

Q. And when I was say that I mean were you now --

A. (Interposing) I tampered with my

first piece of evidence.

Q. And can you --

A. (Interposing) I guess I was concerned with the cocaine standard and the volume going down I guess.

I had been assigned a sample from the USPS, the Postal Service, that was a large amount of cocaine and after analyzing it, I did take some off to the side for personal use.

Q. Now, when you say it was a large sample, do you recall how large a sample it was?

A. I believe it was just under 500 grams or it was four plastic bags with a total net weight of just under 500 grams.

Q. If you know, do you recall the defendant's name in that case?

A. I know there were four defendants listed on it. Two were Cosme, last names were Cosme, C-O-S-M-E, I think Rodriguez and I don't remember the fourth defendant's name. I know one defendant was -- when it went to

trial was exonerated from it. Whether he knew or not I don't know but he was in the wrong place at the wrong time.

Q. Did you testify in that case?

A. Yes, I did.

Q. Were you under the influence do you recall when you testified?

A. I don't recall if I was or not.

Q. How do you remember this case specifically?

A. I remember due to the quantity of it and that it was a Postal Service sample. I remember actually sitting on the stand and looking at it and knowing that I had analyzed the sample and that I had then tampered with it.

MS. WEST: And is this the first sample that you ever tampered with?

THE WITNESS: Yes.

MS. WEST: And how do you know that?

THE WITNESS: I remember it. It was -- I knew what I was doing was wrong,

taking controls and standards, but taking from an evidence is a whole nother level of morality I never thought I would cross and I did and it scared me.

Q. (By Mr. Caldwell) In taking --

A. Yeah, after I -- I took from it and, you know, I used it or whatever, I was adamant that I would never take from evidence again.

Q. Approximately how much of that sample did you take if you know?

A. A few grams maybe, a little bit from all four of the bags.

Q. Did you use that at the laboratory or did you use it at home?

A. I may have used a little bit at the lab but I believe I brought some home and had a weekend that --

Q. Did you share that --

A. No.

Q. -- with anybody?

A. No, I never shared the drugs I took.

Q. Now, you did the test on that, on that sample, correct?

A. Correct, yes.
Q. And what was the result of the test?
A. It was positive for cocaine.
Q. And you did all the testing as you were trained?
A. Correct.
Q. Now, when you did the drug did you get the desired high of cocaine that you were searching for?
A. Yes.
Q. Was there anything different about that cocaine sample versus the cocaine standard?
A. I could tell it wasn't as pure. I didn't get the -- the initial buzz that I got with the cocaine standard, the pure stuff, and it did clog my nose a little more. I, you know, had some sinus issues but I did -- I was still getting the desired effect of cocaine.
Q. Now, moving forward into 2010, were you still using any other standards?
A. I was still using amphetamine standards but that was slowly diminishing as

well or quickly diminishing I guess the case would be. By midyear I had used all of the amphetamine standard that we had there.

Q. So what did you do?

A. Panicked again and I put it -- I replaced -- I put a counterfeit substance in that jar. I believe it was sodium sulphate, which was just some we had in the lab but it's not an active drug, and I turned to the phentermine standard that I had tried and started using that.

Q. Did anyone notice that these standards were missing?

A. They were not telling me if they were -- if they noticed anything.

The phentermine, did not give me quite the same effect that I had wanted so I did start using more of the cocaine standard as well towards the end of the year.

Q. During this point in 2010 did you take any more samples from evidence that you were supposed to test, if you know?

A. I'm gonna -- possibly by the end of

year I started taking some more. I know by 2011 I was taking from cocaine powder samples.

Q. Going back to the standards, did you ever try a ketamine standard?

A. Yes.

Q. And what -- can you tell the Grand Jurors what ketamine is?

A. It's a veterinary drug but there had been studies done on humans to see if it was -- if it could help with depression.

From studies I had read there was a chance that taking a small dose could have the same effects as an antidepressant for a longer period of time but you didn't need to take it every day.

Q. Did you ever try MDMA standard?

A. Yes. Through 2010 I did try different -- some smaller vials of ketamine we had in the lab. MDMA is ecstasy. I tried ketamine and I tried MDMA, MDEA, which is basically a knockoff. I don't want to say knockoff. It's related to ecstasy. A lot of these desired drugs, all you have to do is

change one molecule or atom and it's a whole different substance but the same drug basically.

Q. The ketamine, the MDMA and MDEA standards, where were those located?

A. The ketamine was located in the refrigerator where the amphetamine was. The other ones were in the locked filing cabinet.

Q. Can you describe the way in which they were stored?

A. In the refrigerator we had plastic bins that were in the refrigerator in some different racks that they were just placed on. There was no real rhyme or reason where they were. There was a list on the outside of the refrigerator that listed what was in the refrigerator.

In the filing cabinet a couple of the bigger ones, like the amphetamine jar, were on the top shelf but for the majority of the standards in there they were alphabetized. You know, the -- was in the A standards and then there was the B standards and all the way

through.

MS. WEST: Was the refrigerator and the cabinet in the same room?

THE WITNESS: The refrigerator always stayed in our main lab. When I started at the lab in Amherst the cabinet was in what we call the marijuana room which was across the hallway in a room next to the evidence office. We had some renovations done and that cabinet was moved and found a home in the main lab because Jim's office was made I guess where that lab was or in that area but, yes, towards the end the cabinet with the standards was in the main laboratory.

MS. WEST: And the refrigerator, is that a normal size refrigerator or is it a bigger size?

THE WITNESS: It's a normal size refrigerator.

MS. WEST: And when you said when you were talking about the cabinet and where the standards were located, you talked about shelves. Was this a cabinet with

shelves or is this a --

THE WITNESS: Okay. They had -- the top one or two had a shelf but then they were like metal filing cabinet drawers I guess, not -- you know, they were two inches high by your normal eight-and-a-half inch wide or whatever that slid into, you know, for A, B, C, D, E, F. (Indicating)

MS. WEST: And I know you indicated that the methamphetamine bottle was tinted.

THE WITNESS: Correct.

MS. WEST: What about the amphetamine bottle?

THE WITNESS: The amphetamine bottle was tinted.

Q. (By Mr. Caldwell) Were you taking any of these standards home with you?

A. Of those standards, no.

Q. What standards were you taking home?

A. The methamphetamine, the amphetamine, and ketamine and a little cocaine standard.

Q. Did you share ever any of those

standards with anybody?

A. No.

Q. So those were just for your own personal use?

A. Correct.

Q. Now, going back to the United States Postal Service case which you had testified was the first time that you took from an evidence sample --

A. Right.

Q. -- can you tell the Grand Jurors the time frame which you began taking samples regularly?

A. Like I said, I know that was a sample. I know that case -- the arrest was made in November of 2009. Yeah, so November of 2009. As to when I actually started taking from submissions regularly, I would say that would have been probably in early 2011.

Q. And what type of samples were you taking regularly?

A. I was only taking cocaine samples. I had taken, I guess once or twice taken an

acid, part of an acid piece of evidence and brought that home.

Q. And you took that?

A. Yes.

Q. And when you say "acid" can you describe to the Grand Jurors what acid is?

A. Acid or LSD, it's a hallucinogen drug and they give you some visual distortions or perceptual differences.

Q. Did you test that drug?

A. Yes.

Q. What was the result of the test, if you know?

A. That it was positive for LSD.

Q. And when you administered to yourself how did you do that?

A. It was a small tablet. The tablets come like blotting paper, you know, they don't have a big design on it. So I don't remember exactly how many squares were there but if there were ten squares, since LSD is normally a very weak drug, we normally analyze three squares to dissolve the suspected LSD off the

paper to get it into the methanol. I would just use two and say I took three -- used three and kept one for myself.

Q. Did it give you the desired effect that you were seeking?

A. I believe so.

Q. Now, you said that you would take some of the sample for the testing. In the LSD case you said you used three but you really only used two --

A. Two.

Q. -- and you kept one for yourself. Can you describe to the Grand Jurors what an acceptable loss is within the lab or what you would term in your training --

A. (Interposing) Okay. I'm not sure exactly for LSD. Like I said, in my notes I probably wrote down that I used three. Three was a normal number if we had enough to analyze but for a powder substance in our lab, normally like a five percent loss was -- could be explained by moisture loss, you know, in testing.

Q. Did you ever take at this point when you were regularly taking from samples now, were you taking more, less or the acceptable loss amount from samples?

A. It started as the acceptable amount. It did eventual grow to unacceptable amounts.

Q. Now, were you still undergoing therapy at this point?

A. I had switched therapy. In June of 2010 I went from an individual therapist to a DBT, a dialectical behavioral therapy program, in Northampton where I had an individual therapist and a group therapist -- or a group therapy session once a week.

Q. And was this something you did on your own or was it suggested that you go to this DBT program?

A. It was suggested by my -- the therapist I was seeing that it might be a program that could help me with my issues.

Q. So at this point it's fair to say that you told your therapist that you were using and taking drugs from the lab?

A. That I was -- yeah, I had told my -- Sarah Hawrylak, like I said, I think it was April or May of 2009 that I had a drug -- had a drug problem.

Q. When you -- so you knew you had a drug problem?

A. Yes.

Q. And was it at this point your drug of choice is it fair to say was cocaine?

A. Are we talking about when I told my therapist or are we talking --

Q. Excuse me. To back up, when -- when you told your therapist, yes.

A. When I told my therapist I was using the amphetamine. My drug of choice was methamphetamine but I was using amphetamine at that point.

MS. WEST: Ms. Farak, you first started seeing Sarah, your therapist, in 2009, right?

THE WITNESS: Correct.

MS. WEST: And that's when you were taking the amphetamine standard?

THE WITNESS: Correct.

MS. WEST: And so you said the postal case, the arrest was in November 2009; is that right?

THE WITNESS: Yes.

MS. WEST: And so it would have been a short time later that you then tested that sample?

THE WITNESS: Correct.

MS. WEST: And so then you indicated that you thought it was probably in 2000 -- regularly taking from the samples in early 2011 --

THE WITNESS: Correct.

MS. WEST: -- does that make sense?

THE WITNESS: Yes.

MS. WEST: So was there a -- for the course of 2010 subsequent you taking the sample from the postal case, was there a period of time where you didn't take samples at all?

THE WITNESS: There was times

I didn't take pieces of evidence, samples at all. I was still using the controls from the labs frequently but I wasn't taking the pieces of evidence.

MS. WEST: So when you took from the postal case, that was the first time and what followed, it was a long time before you tried to take a sample again?

THE WITNESS: For cocaine. Like I said, there may have been one or two acid cases in there but, yeah, for cocaine it wasn't for a long time.

MS. WEST: Okay.

MR. VELIS: Mr. Caldwell, I'd like to ask a few questions.

I know you might be tired, folks, but just for the purpose of clarification for myself and, more importantly, for the Grand Jurors.

If it's difficult for you to direct your answers, that's fine. You can look at the Grand Jurors --

THE WITNESS: Okay.

MR. VELIS: -- and please respond.

Ms. Farak, if I'm correct -- and correct me if I'm wrong with any of these times -- first of all, from the inception of your employment at the Amherst lab up until your termination at that lab, approximately how many samples did you test?

THE WITNESS: At the Amherst lab?

MR. VELIS: Correct.

THE WITNESS: By process of elimination -- I don't know exactly how many I tested at the Boston lab. I was there a little over a year. So I'm going to guess maybe I analyzed at an average of ten years and 30,000, maybe a tenth or -- out of that so I would say about 25,000.

MR. VELIS: 25,000 at the Amherst lab?

THE WITNESS: I think. I -- I don't know --

MR. VELIS: So there was a

pourover from other labs with respect to certain samples that you tested physically in Amherst?

THE WITNESS: I'm confused with your question.

MR. VELIS: All right. It was confusing.

You tested at Amherst?

THE WITNESS: Yes.

MR. VELIS: The inception of your employment is August 2004 at the Amherst lab?

THE WITNESS: Correct.

MR. VELIS: You indicated in that respect also that you began using the standard methamphetamine in late 2004?

THE WITNESS: Late 2004 or early 2005, I don't remember which but I know when I got engaged to be married that I was using it.

MR. VELIS: So you were using it right after the inception of your employment at Amherst?

THE WITNESS: Fairly soon afterwards.

MR. VELIS: And you used it all through the duration up until when Mr. Caldwell had asked you apparently in 2009?

THE WITNESS: Correct.

MR. VELIS: So all during that time you were doing testing?

THE WITNESS: You mean analyzing other pieces of evidence?

MR. VELIS: Correct.

THE WITNESS: Yes.

MR. VELIS: And all during that time how many samples would you say you tested?

THE WITNESS: In all I have no --

MR. VELIS: Generally?

THE WITNESS: I mean, I can go by -- it sounds like four years, so maybe 12,000 to 15,000. I have no idea.

MR. VELIS: Now, you had said that the evidence officer -- again, interrupt

me if I'm wrong if I didn't hear you correctly or you need to clarify something.

You said that the normal protocol was that the evidence officer would assign to an analyst samples for testing, correct?

THE WITNESS: Correct.

MR. VELIS: You also indicated that at times you served as an evidence officer?

THE WITNESS: Correct.

MR. VELIS: Can you approximate how many times you served as an evidence officer from 2004 up until 2009?

THE WITNESS: Very, very rarely. I mean, maybe a handful of times.

MR. VELIS: Is it fair to say that during those times, however, you were using that standard?

THE WITNESS: Specifically, I don't remember. Like I said, throughout that time I was using drugs, yes.

MR. VELIS: Okay. Now, during the course of analysis, were the

analyses done on a solo basis or were they ever conducted in conjunction with another analyst?

THE WITNESS: In the Amherst lab we worked solo.

MR. VELIS: You worked solo?

THE WITNESS: We worked solo. We did the different tests that we would compare what the results -- like we'd do like our crystal tests and prepare and then we'd do our other GC and then we'd do the GC and mass spec and, I mean, we would then compare results of one test with the next, with the next to make sure that they confirmed.

MR. VELIS: But from start to finish after it was assigned, for the most part you were solo?

THE WITNESS: That is correct.

MR. VELIS: Right. Was there anyone that ever exercised supervisory authority over the technique that you employed in doing your testing?

THE WITNESS: We followed the rules, the protocols of the laboratory all during this period of time even while I was back in the Boston lab or JP lab. We were trying to get -- the lab was not accredited. We were trying to get accredited and funding ran out. So they had -- they knew what the requirements would be to get accredited, meaning what level of testing and what needed to be tested but no one was watching over my shoulder to see if I tested things or how I tested.

MR. VELIS: That being the case, is it fair to say that you very rarely, if at all, sought the help of another analyst when you were doing testing from 2004 to 2009?

THE WITNESS: On a routine basis, that's correct. Occasionally we'd get something that was different or tricky or, you know, rare and we'd ask for advice but on a day-to-day basis we were not asking each other for help or input or to double-check our work.

MR. VELIS: So generally is

it fair to say it was one chemist, one case?

THE WITNESS: Yes, generally speaking, yes.

MR. VELIS: Now, with respect to the testing and when you did the analysis, was there dialogue with other chemists about what you were doing? I'm not talking about everyday dialogue like how are you doing, how are things going, where are you going after work, but did you ever have a dialogue with another chemists describing what you were doing?

THE WITNESS: When I first got to the Amherst lab and I would get some drug I had never been familiar with so they would walk me through it, help me a few times but on a day-to-day basis there was no dialogue about our procedures and what we were doing.

MR. VELIS: Just give me a moment.

Now, you said that the standards for the most part were in powder form and some

were in liquid form.

THE WITNESS: Correct.

MR. VELIS: What percentage would you describe powder versus liquid?

THE WITNESS: At least 95 percent powder, probably maybe 97 percent. There may have only two or three liquid standards.

MR. VELIS: You were describing to Ms. West, Attorney General West, the physicality of the repository where this evidence would be kept, these samples were kept, and I think -- and clarify this for me -- I think you said a third of the size of this room was the area in which these samples were kept?

THE WITNESS: Yeah, the drug safe in the Amherst office is about a third of the size of this room.

MR. VELIS: And then she proceeded to ask you about certain sizes of different vials and things of that nature, correct?

THE WITNESS: Correct.

MR. VELIS: And were those things that she was speaking of all stored there or were there any other places?

THE WITNESS: They were not stored with the evidence.

MR. VELIS: They were not?

THE WITNESS: The drug lab -- the standards and controls we had in the lab were not stored in the same room with the pieces of evidence that were brought in by the police departments.

I'm not sure that was by design and they didn't want any chance of a cross-contamination or if it was just we had standard safes and then we had a drug lab where the evidence was put in. I'm not sure why but the standards were not kept in the same place as the evidence.

MR. VELIS: Now, you were pretty precise when you were describing when you said one third the size of this room. What about the entire lab work area, can you

give us a description of how large that was?

THE WITNESS: The main side of the lab had two -- had -- it was probably about three times the size of this room, maybe four times. It had like from here to the wall back, the length of the table, a small office area. One side of the room had lab benches where we did the actual wet chemistry on. The other side had instrumentation. Then across the hallway we had the evidence room. It was probably about half this size. Plus, then the drug lab, the actual drug safe.

On the other half this size, a little smaller than half this size was Jim's office and we had another room the same size as that that had our own fume hood where when we were using chemicals that were toxic or had odor, we'd go over there to use the fume hood.

MR. VELIS: Now, on the average workday you had mentioned the following names: I think a Mr. Hanchett, a Ms. Salem, a Ms. Pontes, as well as yourself?

THE WITNESS: Correct.

MR. VELIS: For the most part how many people were present in that lab on an average day?

THE WITNESS: At any given point or? Normally, Sharon Salem was in the evidence office so she was on the other -- she was in the evidence office side, so that would leave me, Jim and Rebecca in the side that was like three times the size of this room plus the small office. Jim spent some of his time in his separate office doing administration stuff.

MR. VELIS: So that the other analysts in the position would be able to see other analysts while they were testing?

THE WITNESS: Correct.

MR. VELIS: Okay. Just a couple more questions and then I'll be through. I'm sorry to hold you so long.

I think Mr. Caldwell gave you some in-depth questioning about the procedures that you followed. He asked a question about approximately how many pieces of evidence per

month you handled. Did I hear you correctly, you said two to 300?

THE WITNESS: I believe at one point when they were -- I mean, I'm sure they were recording our amounts throughout the process but in a couple reports I saw that's what I was doing.

MR. VELIS: And those two to 300 per month, would you say that was the average from the inception of your employment in August of 2004 up until 2010?

THE WITNESS: Probably. I don't have any basis to know otherwise. I didn't keep track. Once a year the evidence officer, after about 2009, would give us a new running total of approximately how many total samples we had done so when we'd go to court and they'd always seem to ask how many pieces have you analyzed, you know, we'd just have a relative number of, oh, we've analyzed, you know, 37 samples of which 8500 were cocaine and things like that, but I wasn't paying attention to it on a monthly basis. To me it

wasn't a race, it wasn't a goal to get a certain amount of tests; it was to analyze the pieces of evidence accurately.

MR. VELIS: Now, granted, when the evidence is presented to you for analysis it would be different volumes. In other words, there would be a lot, there would be a little, there would be more than a lot, so to speak?

THE WITNESS: Correct.

MR. VELIS: How long would the average analysis take from A to Z?

THE WITNESS: I just have to say, like I said, if it's -- I know it's a lot versus a little depends on how it -- if it was a lot but it was in one bag --

MR. VELIS: I understand.

THE WITNESS: -- it would be a lot easier to test than a little in a bunch of bags because we'd have to -- but each actual thing we opened, both computer runs took ten minutes plus the standard run -- or twelve minutes because of the warmup and

slowdown. While it was open on my lab bench, maybe ten to fifteen, if that. Like I said, it depends if it was one quick bag or if it was sometimes getting a kilo of coke, it was wrapped in rubber, in grease and tape and Saran wrap and everything else. You could spend quite a bit of time trying to open it without having powder go everywhere or, you know, or to try to get it all out of that bag even so you could get an accurate weight. (Indicating)

MR. VELIS: So as you say, August of '04 up until, as you responded to Mr. Caldwell, in 2009, the standards of methamphetamine that you were using was used while you were conducting tests?

THE WITNESS: I was under the influence a lot of the time while conducting tests.

MR. VELIS: And based on your experience there and knowing the techs that were with you that were also performing the same functions --

THE WITNESS: Mm-hmm.

MR. VELIS: -- knowing the physical layout of the laboratory, knowing where drugs were placed, where analyses take place, how drugs were transferred from one location to another, is it your opinion or knowledge that you have as to whether or not anyone knew that you were under the influence or did anything untoward while you were conducting these tests?

THE WITNESS: I mean, up through like 2009 I don't think anyone had a clue. I think there were times during the day when someone, you know, we all got in at slightly different times, people would go home, someone would go out to lunch and I could get the aliquot that I wanted. It wasn't as if I was using directly in front of them or while they were at the same lab bench facing me. All I had to do was grab a quick vial and, you know, go to a normal bathroom break and I could think, well, I'll be back in the normal time and the drugs would slowly hit

me but, you know, I'd get the energy and the attentiveness but they didn't seem to notice that I was aware of.

MR. VELIS: Last question. Mr. Caldwell had asked you about the accuracy -- I don't know if he used that exact word at the time but words to that effect -- regarding the testing that you implemented.

THE WITNESS: Mm-hmm.

MR. VELIS: So is it fair to say and did I hear you correctly that from August 2004 or closely thereof up until 2010 all the tests you had performed notwithstanding being under the influence --

THE WITNESS: I missed that last --

MR. VELIS: All the tests that you had performed --

THE WITNESS: Yes.

MR. VELIS: -- and notwithstanding being under the influence that you described --

THE WITNESS: Yes.

MR. VELIS: -- were performed accurately it's fair to say?

THE WITNESS: That is correct.

MR. VELIS: And you used the term "dips." You said there were no dips that you can recall?

THE WITNESS: I -- probably dips in production at that point?

MR. VELIS: Correct.

THE WITNESS: Yeah, I -- like I said, I wasn't paying attention to the numbers. That wasn't my priority but I don't feel that my productivity either worsened or worsened at all at that time.

MR. VELIS: All right. So although I said last question, this is the last question. Somebody's saying it better be the last question.

From the inception of your employment all the way to the last timeline that Mr. Caldwell had mentioned to you as well as Ms. West, did anyone ever question your

analysis?

THE WITNESS: No, I never had any --

MR. VELIS: Any of your fellow workers?

THE WITNESS: I never had fellow workers question my work. I never had a defendant have their defense lawyer question directly my analysis. Nothing was ever -- most people that get arrested on suspected drugs know whether they had drugs or not. If I ever had called anything positive and they knew it was negative they at any point could have asked for it to be reanalyzed. The court system is set up that way so they're allowed to analyze the evidence.

I never had any piece questioned or needed to be reanalyzed. Most of the time when I went on the stand it had absolutely nothing to do with the actual analysis. It was more about, well, how did the cops get it or do you know what the cops did to it before it came in, so I had no one ever question the

quality of my work.

MR. VELIS: When do you recall as being your last day of employment?

THE WITNESS: What do I recall?

MR. VELIS: When do you recall being -- sorry -- your last day of employment?

THE WITNESS: The 18th of January 2013.

MR. VELIS: And now the last, last, last question. You knew Ms. Dookhan from Hinton lab?

THE WITNESS: Yes, I worked with her for about nine months.

MR. VELIS: Did you ever inquire of her as to the techniques to employ doing any analysis when you were working here?

THE WITNESS: There was one sample. They had gotten a new piece of equipment, an FTIR. We didn't have the newer model yet and one of the pieces of evidence I had analyzed, they -- it came back and that

they requested a cocaine base analysis. It ended up being a federal case and not a state case and the feds have a different penalty versus cocaine versus crack, so we set it up one day where I would go to the other lab to do the analysis there. I think it -- and she was the one that showed me how to use that piece of instrumentation while I was there.

MR. VELIS: Thank you.

MR. CALDWELL: I'm seeing it's approximately quarter after 11. With the Grand Jurors' permission, I would like to give the witness a brief break if that's acceptable. Thank you.

(Brief recess taken.)

MR. CALDWELL: Thank you, Grand Jurors. It's approximately twenty minutes of noon. All the Grand Jurors have returned and are present.

THE FOREPERSON: Yes.

MR. CALDWELL: Assistant Attorney General West.

MS. WEST: So, Ms. Farak, I

just want to ask you a couple -- a couple things for clarifying and they will be the subject matters you talked about earlier.

All right. So one thing we spoke about was scheduling and you spoke a little bit about when people were coming in. You were there for several years but can you give us a sense about what your schedule was, when you came in the door and when you left?

THE WITNESS: It would be we were there for eight hours a day. There was some leeway in when we came and when we left, meaning different people had different set schedules or temporary set schedules. Like the supervisor, Jim Hanchett, normally got to work at around 6:30 in the morning. He liked to go to the Y before he went to work and it just worked out for his schedule so he was normally there bright and early.

I was there normally between 7 or 7:30. My goal was 7 but sometimes the dogs made it difficult. Rebecca for a while was coming in right at 7. Other times -- so she

was on maternity leave for a while. Depending on the age of her child and childcare she would come in at 8, 8:30.

Sharon had kids in school. Her normal schedule start was more around 9:30 to 4:30 -- or, sorry, 8:30 to 4:30 or 9 to 5 depending on the day, you know, doctor's appointments or whatnot.

MS. WEST: So you said it was an eight-hour workday?

THE WITNESS: Eight hours.

MS. WEST: So does that mean if somebody came in before you they left before you?

THE WITNESS: That is correct.

MS. WEST: And you mentioned the one woman that came in later, 8 or 8:30?

THE WITNESS: Yes, she -- Sharon, she worked in the evidence office side of the laboratory.

MS. WEST: So that was a different side of the lab than your lab?

THE WITNESS: Exactly right. The hallway's between. No windows, no doors between.

MS. WEST: So were there occasions when you were in the lab alone?

THE WITNESS: Definitely, yes.

MS. WEST: Okay. So tell us about those occasions, how often?

THE WITNESS: How often? I could be alone for a short period of time multiple times a week. You know, Sharon most of the time was across the hall. She did come over and bring, you know, certificates of analysis for us to sign and stuff over. Jim almost always left before me.

I guess, depending on the day, sometimes Rebecca would -- or two of us might have court and so one of us would be in the lab from, you know, noon to the end of the day by ourselves or like, you know, if one person's already left for the day, who else is gonna run across the hallway to return their

submissions and get -- take some more out. You know, that's gonna take at least five, ten minutes so if I was on the other side it afforded me the opportunity if I wanted to try to take another aliquot of some sample from the main stash, I could do that.

MS. WEST: So let's talk about that specifically. In the very beginning you were taking from the methamphetamine standard, right?

THE WITNESS: Correct.

MS. WEST: And that was in the refrigerator?

THE WITNESS: Correct, in the laboratory.

MS. WEST: So describe how you would go in and take part of that sample in order to ingest it?

THE WITNESS: Okay. Assuming no one else was there, it was at the end of the day, Jim had already left, maybe Rebecca was getting -- returning samples across the hallway, I could very easily go to the

refrigerator, take out the bottle of methamphetamine, open it up, use a pipette to transfer, you know, a milliliter of liquid into a small vial, seal the main aliquot back up and put it back in the fridge, put the top of the small vial in my pocket or put it in my desk drawer or my lab bench drawer or wherever I wanted. I was good at being quick if I needed to be quick. I mean, I could easily do it within 30 seconds from start to finish of getting what I needed done if I needed more -- if I wanted to have more drugs available to me.

MS. WEST: And how about the actual ingestion of it, how would you do that?

THE WITNESS: The actual ingestion, like I said, if I was getting another aliquot let's say some day, there's a chance, you know, I would actually after using the pipette to transfer it, I would actually sometimes go to whatever drink I might have in there, if it was soda or whatever, and squeeze a little bit of the soda out to put the

pipette in my mouth.

Other than that, if I already had an aliquot made, once again if people left the lab I could just screw off the top, dip in a metal spatula and take it while I was in the lab. I could also while I was going to the bathroom if I already had the aliquot in my pocket, the metal spatula, it was ridiculously simple. You could go to the bathroom, you take it, dip it in, take it and go back and no one's the wiser of what you've done.

MS. WEST: And sort of jumping ahead, not with the standards but when you were actually taking cocaine, was there a period of time when you were smoking crack cocaine?

THE WITNESS: Correct.

MS. WEST: And how would you do that?

THE WITNESS: How would I do that? Depending on how many people were around, most of the times I would take what I had and I would go to one of the many

bathrooms in the building. I learned which ones were more frequented, which ones were single stalls, things like that, to smoke.

If no one -- depending on what people were doing, if I knew Rebecca -- or both Jim and Rebecca were intensely involved in doing bench work at their benches, I could sneak across the hallway to the fume hood where I would smoke just because I could get rid of the smell, the smoke directly. If people weren't around I could pretty much -- if it was the end of day and everyone had already left or their, you know, their shift was over or, you know, say Sharon left to go home early because it was a long weekend and she was packing, then I could normally smoke at my lab bench if I wanted to.

MS. WEST: All right. So on the days where you were actually taking drugs while you were at work, you have already indicated that there was no dip in your productivity --

THE WITNESS: Correct.

MS. WEST: -- but I want to focus on your accuracy. When we asked you that earlier you indicated that you knew your results were accurate. Can you tell us how you knew that?

THE WITNESS: All of my tests for any specific sample did collaborate each other. I wasn't getting positives on some tests and negatives on other tests. The results matched.

Like I said, I know the weights were accurate because I always took the weights accurately. There was never any problems of samples getting mixed up or something showing positive on one test and negative on another test. I was good about only having one piece of evidence open at a time on my lab bench so I wasn't accidentally taking from this one when I meant to be taking from that one.

MS. WEST: Okay. So stop there. How do you know that? How do you know that you were always good about having one piece of evidence open on your bench?

THE WITNESS: It was -- besides being procedure it just -- it sounds weird, it's just the thing I did. I -- the last thing I ever wanted to do was mess up an analysis.

MS. WEST: But if you were under the influence at the time, how do you know that you were following procedure?

THE WITNESS: Because everything just -- how do I know it? I -- no one ever commented that I wasn't or there was never an issue of things getting messed up.

MS. WEST: All right. So you spoke a little bit earlier about sort of the internal methods in the tests corroborated?

THE WITNESS: Correct.

MS. WEST: Tell us more about that?

THE WITNESS: We do either crystal and/or color test at the beginning and we'd have a preliminarily knowledge of what it was. But then running from, let's say, once we put it into a vial -- we only have one

piece of evidence open, you know, the one you just tested from here would go directly into the vial and it's labeled with that number. When you put it up on the automated machines, the GC and the GC MS, besides verifying that we're putting the right vials there, I never got any situations where something came back positive that was expected to be negative or the other way around, negative where I expected it to be positive. And then we'd transfer it to the other machine and once again everything seemed to match up -- did match up.

MS. WEST: And so focusing on the period of time where you were taking cocaine from the samples themselves?

THE WITNESS: Okay.

MS. WEST: When you took the cocaine from the sample, was that before or after you had already weighed?

THE WITNESS: I had weighed everything before I took from the sample.

MS. WEST: All right. So if

somebody took the cocaine after it was sent back to the police station and compared it to the certification, that cocaine would weigh less?

THE WITNESS: It could weigh less, yes.

MS. WEST: But you mentioned a five percent depletion in the weight of the cocaine. In the beginning were you trying to take within the five percent?

THE WITNESS: Yes, I was.

MS. WEST: All right. But then you mentioned that as time went by you took more than that?

THE WITNESS: Correct.

MS. WEST: Give us -- give us an idea of when that happened?

THE WITNESS: I know towards 2011 I was using fairly heavily. I did have a short period in that time where I tried to sober up but probably starting about April of that year -- right? I'm sorry. Am I off on my years? Sorry.

In April of 2012 -- in 2012 I was starting to use fairly heavily and going into submissions but by, like I said, April or so I had a couple months where I was trying really hard to be sober and I was fairly sober I guess.

MS. WEST: And this is April of what year?

THE WITNESS: April 2012.

MS. WEST: And how do you know it was April 2012?

THE WITNESS: I had entered therapy in January 2012 and we had talked about whether I was gonna go back to therapy and whatnot and my individual therapist in DBT advised -- we had a discussion about whether or not I was gonna try and stay sober or not and I know I really did try earnestly for a while. I also know in March of that year I went to a DEA training school for a week down in Virginia and I know for that time I was -- I was not using any drugs.

MS. WEST: So for that March

week you weren't using?

THE WITNESS: I definitely was not using, no.

MS. WEST: And when you returned --

THE WITNESS: I believe things started heating up again, like I said, in April or so that I -- I started touching samples.

MS. WEST: Okay. So give us a sense of how long you think that period of sobriety was in March and April?

THE WITNESS: I think that I ended therapy I think it was the 20 -- either the 17th or 23rd of January. I know I used a couple days but there was -- I'm gonna guess about a two, yeah, about a two-month period where I only used once or twice.

MS. WEST: Beginning in March?

THE WITNESS: It was probably end of February, first part of March.

MS. WEST: You said earlier

that you -- on the days that you were not using you would go into withdrawal and you called in sick?

THE WITNESS: Sometimes, yes.

MS. WEST: All right. So tell us about the procedure that was in place when you were not sick and -- excuse me -- when you were sick and you called in?

THE WITNESS: When I called in? I mean, well, the lab was small and it was a -- I don't want to say an honor policy but even if you were sick whether it was legitimate -- well, I was sick. You know, you'd just call in to work and let them know you were sick. So they would write it down as a sick day on the time sheet. You know, you'd sign your time sheet. At the end of the week it would get faxed down to Boston and just get recorded as a sick day.

MS. WEST: Okay.

THE WITNESS: I wasn't out more than like two days in a row so doctor's notes weren't needed or anything like that.

MS. WEST: Thank you.

Q. (By Mr. Caldwell) Ms. Farak, I'm just gonna go back and this is about weighing the evidence.

A. Okay.

Q. And obviously working as a drug chemist the weight of the substance is very important, correct?

A. Correct.

Q. Because that goes to the prosecution of the case and possible sentencing of an individual?

A. That is correct.

Q. And you had discussed trafficking weight and things of that nature and the required grams to convict them on trafficking.

A. Correct.

Q. Can you describe for the Grand Jurors the weights that you used at your workstation to weigh the drugs?

A. Okay. Well, we had two different --

Q. What kind of scales did you use?

A. -- two different balances. One went

to the hundredths decimal point in grams, the other went to the ten thousandths place. So we reported all of our results up to a hundredth of a gram for the substances. On a monthly basis we did some QA and QC on our balances using known weights from I don't remember which calibration company but we had a set of official weights that we used to make sure our balances were reading accurately. If they weren't reading accurately they were taken on computer.

On a daily basis we also -- it wasn't the full gamut of weights but there were two or three different weights that we would use on a daily basis just to make sure our balances were reading correctly.

Q. And is it fair to say you did this every time you began your work?

A. Beginning of the day, yes.

Q. Even though you were under the influence --

A. Correct.

Q. -- you still made sure you stuck to

the accuracy of your scale?

A. Correct.

Q. Did you --

A. (Interposing) Another reason we did the weights the way we did where we did a gross weight of everything and then we weighed the actual packaging and the weight of the powder and the substance itself, if the calibration was slightly off, if it was, you know, five hundredths of a gram off, both weights would be the same amount off, so the displacement would be the same amount. If you have a hundred grams and you minus ninety-five, you get five; or if you have ten and you minus five, you get five. It's still five grams. It was another safety measure.

Q. How did you put the substances on the scale?

A. Like I said, we weighed the bag that it was in. It would be directly on the pan. For doing gross weights we'd then use like a weigh paper or a plastic boat they were called to put the substance in and we'd reweigh the

empty packaging on the scale and between the substances we would wipe it clean with methanol.

Q. And then you would -- after the weight was made then you would return it to bag?

A. That's correct.

Q. Did you do anything with the wax paper at all, if you remember?

A. I -- with cocaine samples I just tried to get as much sample back in the bag but due to static electricity and whatnot, occasionally there was some substance left on the paper. If no one was around I was known to lick off the powder cocaine from the weigh paper before throwing it away. If people were around it would just get thrown in the trash.

Q. Did that give you any type of sensation?

A. I don't remember the intense, you know, high or anything from it but it did give me like a numbing, tingling feeling to my tongue which I enjoyed.

Q. Did each time that you sampled the residue on the wax paper, did it always give you a tingling sensation if you remember?

A. Not always. Like I said, it depends on what it was cut with. If it wasn't a pure sample, you know, if it was cut with more things -- depending on what it was cut with.

Q. So just as a follow-up to that, had you already done the liquid -- strike that.

Let's go to -- you had left off with me in approximately early 2011 when you started to frequently take powder cocaine samples from --

A. Okay.

Q. -- from the lab?

A. Mm-hmm.

Q. And you indicated your drug use got heavier by the middle of 2011, correct?

A. Correct.

Q. And is it fair to say you were under the influence almost every day at work?

A. It's fair to say, yes.

Q. Now, you had indicated to me earlier

that there would be occasionally times where you would act as the evidence officer --

A. Correct.

Q. -- if Ms. Salem was not there and Rebecca would also assume the same role?

A. Correct.

Q. So you did have special -- you had access to the computer system?

A. Correct.

Q. Okay. At any point do you recall in the middle of 2011 did you access that computer system for the purposes of obtaining or manipulating any type of drugs or samples?

A. At that point, no.

Q. Did you ever at any point look into the computer system to arrange your workload to guarantee that you got cocaine samples?

A. There was no guarantee. There were times that I had looked ahead in the computer system. Submissions were assigned to us numerically with the next twenty in or next twenty out sort of thing.

By, yeah, probably end of 2011,

beginning of 2012 I would look in the computer system to see -- if I was like ready to return a batch of samples or I could do this other paperwork first, I would look in the computer system to see what the next batch of submissions was. If it was, you know, a cocaine case or something like that, I would probably return my submissions immediately to get that next batch of samples but if it was all pills or heroin or something, I could do the paperwork first hoping that the batch after that had submissions that I liked.

Q. And it's fair to say, Ms. Farak, that the amount of powder cocaine samples coming into the lab began to decrease?

A. That is correct, that in 2011 I was using cocaine but we seemed to be getting less and less cocaine -- or police were bringing in less cocaine to the laboratory, both in number of pieces of evidence but also quantity. I mean, at that point it was if we got a tenth of a gram bag I couldn't really take anything from it because it would be noticeable. It

would be obvious by the visual eye or naked eye if I took any.

Q. And is it fair to say that you acted the same if something came in close to trafficking weight?

A. That is correct. Since I always weighed the samples first, if it was going to be, you know, 14.18 grams of whatever, assuming it was a positive, I would probably not take from it because if the defendants were going to question anything about the case it would be from my direct knowledge of the weight, just because 14 grams would be the cutoff weight for the next level of sentencing guidelines and not wanting to get caught, I would hate to take some, plus the normal, you know, weight loss due to evaporation of water, I would hate for it to have been asked to be reanalyzed and come in about 13.75 grams.

MS. WEST: You said probably not. Was it your policy not to take close to 14?

THE WITNESS: I don't

remember ever taking anything that was close to the trafficking weight.

MS. WEST: Okay.

Q. (By Mr. Caldwell) Now, because these -- the powder cocaine samples were decreasing in starting to come into the lab because of the change in police activity, was there any other drug that you began to experiment with in 2011?

A. In 2011 I had already exhausted the methamphetamine, amphetamine and ketamine standards. The cocaine, I had touched the standard. I had diminished; it wasn't totally gone. And with the lack of available cocaine I did start trying to smoke crack cocaine.

Q. And do you remember the first time that you did smoke crack cocaine that was a sample from work?

A. I don't remember. I know by the fall of 2011 I had tried smoking crack and I believe it was evidence. We had a small amount of cocaine base, which is the chemical way crack is, chemical name, in the lab which

I tried smoking. There was not a lot of it but I did start trying to smoke crack cocaine and I say "try" because I wasn't really good at it at first.

Q. So is it fair to say you had started to experiment with crack cocaine in the middle of 2011?

A. Most likely middle to third quarter I would say.

Q. And aside from originally taking from that lab control, you were experimenting by using samples --

A. Correct.

Q. -- coming in as evidence?

Now, you had indicated that you weren't good at smoking crack cocaine in the beginning; can you explain why?

A. I had never been a smoker in general. I also was not -- I don't want to say prepared. I was using aluminum foil pipes. I was probably more timid about trying not to get caught because of the odor and the smoke, especially if you're using foil. It's really

actually bad for your health too, not just the crack but the foil. But I eventually I guess you could say made a crack pipe through the pipettes, glass pipettes in the lab. I would break off the tips then I'd have the tube. At first I didn't have any wire mesh but I would put aluminum foil or whatever else. Eventually I got some -- some copper wire to put in. And when I did that I started to get better hits I guess and quickly became very addicted.

Q. So you -- you achieved the desired high?

A. Correct.

Q. Did you at any time -- let me step back.

Frequently it's fair to say paraphernalia, specifically crack pipes, were submitted to the lab for evidence for residue tests, correct?

A. Correct.

Q. And at any time did you use these crack pipes that were submitted as evidence?

A. Yes, I did use a few different pieces of evidence that were crack pipes after cleaning them and sterilizing them to make -- to try to get rid of the germs that were there. There were a few occasions that I used crack pipes pieces of evidence.

Q. Had you tested those pipes for residue before you had cleaned them --

A. Yes.

Q. -- and used them?

So it's fair to say by the end of December 2011 you were -- you were addicted to crack cocaine?

A. Definitely.

Q. Okay. And I know when asked by Assistant Attorney General West that you indicated you had smoked crack at work?

A. That is correct.

Q. And you smoked crack not only in the various bathrooms in the building at UMass but also under the fume hood?

A. That's correct.

Q. And at certain occasions directly at

your workstation?

A. I did it at my workstation. I actually smoked in the evidence room. At one point I -- I don't want to say there was no stopping me where I smoked but I --

Q. (Interposing) And that was because of your addiction at this point, correct?

A. I was totally controlled by my addiction.

Q. And it's fair to say that you started to smoke crack cocaine when there were other employees at the lab?

A. That is correct.

Q. Was this affecting your productivity as far as you know in terms of your testing?

A. I -- I believe it probably did lower it. I was very in tune to what pieces of evidence were coming up to try to manipulate the system so I could get pieces of evidence I wanted to analyze. So I know there were times I was ready to return samples but I wanted to wait for -- to get that second batch so I would hold on to samples, which sometimes

became longer than just an overnight. Then if someone who had -- one of the other chemists wasn't returning theirs, so I was kind of just waiting for them to return their batch. So also I could have them there -- what they do in the lab, meaning they refer discovery packets for court or just following up on records. There was a time I wasn't getting many samples throughout 2012 and my productivity did go down. I started -- my habit increased a lot and I was going to smoke crack at work multiple, multiple -- like ten, twelve times a day and, you know, so you'd go to the bathroom and that became longer. That wasn't a quick minute bathroom break; it was like --

Q. So you were just gone from your workstation?

A. Correct.

Q. Did anybody question you at this point about absence from your workstation throughout the day?

A. I don't remember anyone commenting on

it. From your records I've seen supposedly they said they talked to me about my productivity. I remember we also over 2012 we were taken over by the state police so we had some different procedures in place, which I honestly think it slowed my productivity down in general. I don't think it was the total cause of it but I believe my productivity would have dipped anyway just not as much as it did.

Q. So your drug of choice at this point of 2012 was crack cocaine?

A. It was the drug I could get my hands on.

Q. Most readily?

A. Yes.

Q. And were you using any other substances at this point either at or from the lab or outside of work?

A. My wife occasionally smoked -- now my ex-wife now -- has a medical marijuana card. She did have some pot around the house. Maybe once a month I would smoke a little, normally

if I'd come down off something. Besides that in 2012, like I said, the drug of choice was more crack than cocaine. If I still got cocaine samples, I may take from it to use as cocaine but my habit got bad enough in the mid and later stages of 2012 where I was taking cocaine from cases that I had analyzed and instead of using it as cocaine, during like overtime or when no one else was there or I did occasionally go into work when I wasn't scheduled, you know, I did type in my key code but there was obviously no record of me going in and I would use that cocaine to make crack for myself.

Q. So when the crack cocaine wasn't readily available, you manufactured base cocaine at the laboratory?

A. I did, yes.

Q. And what was the frequency of that, your --

A. Of actually making it or?

Q. -- actually making it?

A. Maybe three or four times --

Q. Can you explain --

A. -- but I would -- I do remember one year there was one case that was a kilo of cocaine that we had received and I took out a good hundred grams of it to make crack, so I wasn't necessarily making small batches if I got a big enough submission where I could make a quantity worth my time.

Q. And can you explain to the Grand Jurors how, in fact, you manufactured the base cocaine?

A. So there was one specific sample of a kilo of cocaine from a Chicopee delivery. This was right at the end of about 2012 and after analyzing it, I took out -- measured out, weighed out a hundred grams of it and put it off to the side. By this point I actually -- I knew a hundred grams may or may not be recognizably missing so I did replace it with just a baking powder/baking soda mix in with the rest of it so the weight would not be as obvious. But basically I would make crack by using, you know, dissolving the cocaine in

water, adding baking soda, heat it up, let it precipitate out and then I would form the crack. I would then filter it through a funnel and let it dry for my use.

Q. Did you take the amount that you've described that you manufactured, did you take from the lab and bring it home?

A. I mean, by that point I was just smoking at the lab, smoking at home, I was smoking and driving. I was --

Q. Do you remember the first time you smoked that crack cocaine at home?

A. I believe it was in April, probably of 2012. I only remember it because my wife had gone to her mother's for her birthday and I had brought some home.

Q. Did at any point when your partner was away or either by April of 2012 or looking forward in the future, did you share that crack cocaine with anybody?

A. No, she never saw it.

Q. Did anyone else use it with you?

A. Oh, no, nobody.

Q. I'm going to point out a specific date to you, Ms. Farak. January 9th, 2012, do you recall that day?

A. Yes, I do.

Q. And how do you recall that day?

A. I recall that day. It was one day if you asked if I was so impaired on drugs at work, I would have to say yes. By that time I was using crack. I wasn't making crack yet in the lab. I remember the submissions, I think I remember were Springfield samples. They were small bags so I was going into multiple small bags.

But the reason I specifically remember the day is that it was also a day that -- or during that time one of my other submissions was some liquid LSD and although in the past when I had taken, you know, an LSD square, I had brought it home, I did it that day. I took some at work and I remember that afternoon -- I did it around lunchtime and I remember not being able to function too well.

Q. Did you do any tests that day if you

remember?

A. That morning I had, you know, analyzed some -- did some of the tests on this cocaine and just to make sure I knew what it was. That afternoon I did not. I may have pulled some, you know, some of the reports off the computer and put it off to the side so someone else could use the machinery. Our instrumentation was hooked up directly to a printer so our results were printed, yeah.

Q. Was anyone else present at the lab on January 9th do you recall?

A. I believe Jim had to go to court that day. He wasn't around in the afternoon. Sharon would have been across the hall. I believe Rebecca was still around.

Q. So the liquid acid was a sample from a test submitted?

A. Correct.

Q. Do you remember what police department?

A. I do not.

Q. And did you take a substantial amount

of the liquid LSD?

A. I didn't measure the amount but I was very impaired.

Q. And when you say you were "impaired," can you describe --

A. (Interposing) I knew I couldn't drive. I actually had to cancel a therapy appointment. I -- there were some as far as hallucinations, not little green men but, you know, colors swaying in the wind. I remember going to the bathroom to smoke crack after taking it and dropping some of it and totally freaking out, you know, crawling on the floor and trying to find crack which I thought was there.

Q. Did you say you worked the entire day?

A. Yeah.

Q. How did you get home?

A. I waited and waited and eventually drove home.

Q. Did you use any -- did you wait inside the lab?

A. I waited inside in the lab, you know, maybe re-filed some folders or whatnot that afternoon until it was my scheduled time to leave. At that point Rebecca was -- I believe Rebecca was still there. I'm not positive. But I -- I did move my car from one lot to a separate lot so people wouldn't see my car still sitting next to their car when they went to leave and then I walked around UMass campus.

Q. Now, you had testified previously that you manufactured base cocaine at your workstation. At any point did any of your fellow chemists discover any materials that would give rise to the belief that this was going on at the lab? When I say that, specifically baking powder or anything like that?

A. The only time that anything was discovered -- well, besides the final day when they realized certain evidence was missing from the evidence locker and went to my desk to look, the only other possible inclination

that something was up might have been -- it was in January of 2013. I had made some crack over that -- the holidays and I was rushing to get back home on time because my wife was where are you, you should have been home so long ago and I was busy doing stuff. And so I was using in the -- the room that has the air hood and we had some drawers in there, so I was drying some crack on like the bottom shelf deep in and I measured that. That was gone but I had left a beaker that had some liquid and some white residue, probably not crack, probably baking soda/baking powder on the edge in the drawer and Jim ended up finding it.

Q. What did he do when he found it?

A. He came -- well, Rebecca was still out. I think she had taken time off for the holidays. Her kids were in school. And, you know, he asked -- I don't know if he asked like do you know what this is or what's this or. It was a simple question. I said I didn't know and he came up with the idea that, well, maybe Rebecca had brought her daughter

in and they were doing a little science experiment thing.

Q. Now, this was around the holidays?

A. Around, you know, it was the holidays so I said, yeah, maybe and left it at that.

Q. And there was no --

A. No follow-up.

Q. -- no follow-up or other inquiry?

A. Yeah. I don't know if he ever asked her or not. I mean, looking back he probably has a whole different opinion on things, you know, but while I was there I don't -- besides my productivity going down, I don't think they had any idea what I was doing.

Q. Focus on the middle of 2012. You testified previously as to some events that took place around the summer of 2012. At any point during this time period or outside of this time period I just mentioned, did you ever manipulate or take samples from other chemists at the laboratory?

A. Yes.

Q. Can you give me the time if you

remember and the whose samples that you took?

A. I know I took one of Rebeccca's -- took from one of Rebecca's samples. She had already analyzed it and resealed it. Let me step back for a second.

We, as I mentioned earlier, when we were done analyzing it we'd put it in a new evidence bag, initial it and heat seal it shut. So for me to touch anyone else's samples I would either need to forge their initials or find a way to get a bag that had their initials on it.

Jim for a while was leaving bags with his initials on it on the side of his desk so he wouldn't have to write it out each time. He had a supply.

Rebecca rarely ever did that. There was once I walked by her desk and she had an extra bag there and I did take it and I put it in my lab bench drawer. Obviously, no one was looking and I -- I guess saved it for the right opportunity. So she had analyzed like a 73 or 74 gram sample from -- a cocaine powder

sample from Springfield and one day I believe during overtime, no one else was around, I think she set it in the drug safe in the lab, the small locker I guess. I had taken it and I had removed about 30 grams of it to make crack with and replaced it with a counterfeit substance. And that was the only one of hers I ever touched.

MS. WEST: How do you know that?

THE WITNESS: Because I only took -- I had no other access to her initials on a bag. I had practiced trying to write her initials and it wasn't believable I guess. I just know that was the only one of hers I took. She was very careful about -- I don't know if it was careful, I don't know if it was intentional but she didn't pre-initial bags or anything.

Q. (By Mr. Caldwell) Now, going to James Hanchett's bags, you had indicated that he had left them basically on his desk --

A. Correct.

Q. -- already signed?

A. Yeah, it was on a lab bench, yes.

Q. And can you please approximate how many samples of Jim Hanchett's did you manipulate?

A. Probably half a dozen. They would all be crack samples. I remember one from Northampton that was originally like three-and-a-half grams. I did not put anything back in with it. It was -- it would weigh less but I did not add a counterfeit substance to it.

There was another sample from Pittsfield that was twenty-four-and-a-half grams of crack. Once again, way over that fourteen gram limit for trafficking or twenty-eight, you know, enough below that that it wasn't going to get that. I took a fair amount of that. I went back into the bag a few times. So, you know, I took a little. I'm not gonna do it again. Every day you swear you're not going to and then, you know, you'd put it back, return it to the safe, but

then a night would come when I was the only one there, it was morning or whatever time of day it was and I would want more of. I'd go back into the evidence office, go into the safe, take some more and use one of the bags that I had already stashed with the initials on the evidence bag.

Q. Now, to your knowledge, if you know, were any of those samples that you took from James Hanchett or the one that you took from Rebecca Pontes, were those ever questioned in court?

A. I don't -- I don't believe they were. I never heard if they were so.

Q. So there was no discussion between the chemists, for example, I knew that was twenty-four-and-a-half grams and now the ADA's saying it's only fifteen grams, there wasn't conversation of that nature?

A. There was never -- I've never heard a conversation like that. Like I said, I did take it out after it was analyzed so whatever the certificates said were accurate.

Q. Did you ever practice James Hanchett's signature or his initials?

A. I'm sure I tried.

Q. And was that the same case as Ms. Pontes'?

A. Yeah, I don't believe I ever forged his initials and used a bag.

Q. So you would steal other chemists' samples when you had the opportunity to have a previously signed bag, that was the only time?

A. When -- I would do it under those circumstances and if I couldn't get it any other -- I didn't have any other way. If it was either me taking from my own evidence I analyzed or other people's, I would definitely do my own. That was one of the lines I had thought I would never cross. I wouldn't tamper with evidence, that I wouldn't smoke crack and then wouldn't touch other people's work due to how it could look.

Q. Did you ever at any point during this time frame -- you testified in 2012 you were heavily, heavily using crack cocaine?

A. Correct.

Q. Did you ever go back into the drug safe and attempt to manipulate bags that were not tested or had already been tested?

A. There were times I went back and, like I said, although I was heavily using I always wanted to try not to use so I might have taken a little, repackaged my own sample, put it back in the safe and then two days later been craving it and needing it so I would sneak back into the drug safe to retake my sample, then take some more and reseal it up and put it back in.

Towards the very end, meaning the end of 2012, there were times I would go into the drug safe and look ahead at samples, not only what was there but there were times I, you know, maybe there was a twenty gram bag of crack -- let's say an eight gram bag of crack, I would sometimes take it out if there was a way for me to open the evidence bag without it being seen. I would weigh it, analyze it -- not necessarily record it in my lab notebook.

I used normally scrap piece of paper but I would test it to see what it was, get an accurate weight, then take some of it, then reseal the bag and put it back in the drug safe.

There were points where I would be very aware of who was taking out which samples and definitely times my returning samples so that I could get those pieces of evidence so my misdoings -- so people wouldn't see that the weights were off.

Q. So you would -- you would go into samples that were not yet analyzed?

A. Correct.

Q. You would weigh them and confirm they were what they were alleged to be?

A. I would do at least a preliminary analysis on them to make sure they were coke or crack.

Q. And when you did those drugs or those samples, they gave you the desired narcotic effect you sought, correct?

A. Correct.

Q. And correct me if I'm wrong, you would go back and make sure you got those samples?

A. Yes.

Q. So then you could manipulate the numbers, so to speak?

A. So that I could what?

Q. So you could manipulate and --

A. (Interposing) Well, so I could -- well, yeah, I mean, the gross weight might be listed at ten grams but if when a chemist was assigned it and it came back at eight grams, that's obviously more than a five percent weight error. That would probably get brought to the attention of why a weight is off and then recorded and.

Q. So what would you do to correct that?

A. Well, if I was the one that got it when I was good at making sure I got those samples, I would record the original weight, the actual weight that I have. So even though it said it was supposed to be ten grams, I weighed it at eight, I would still make my --

when I wrote it in my lab notebook I would make it be the ten grams, make it be the correct and accurate weight, even though upon reweighing it it was less but I would record what it should have been.

I didn't try to do that often when I was taking that much. I tried to keep it within an acceptable range. It did get to the point on a handful of occasions where I was taking much more.

The way the samples were spread out, we'll say, I couldn't say, well, I shouldn't get that batch. There might be three batches in a row that had one sample. And I got to the point where I actually went into the computer system. I mean, I did start it the same way. I would take it and I would get the correct weight but I would sometimes go into the computer system and change the gross weights on the drug receipts, reprint out another drug receipt and put that with the stack of drug receipts that I had and replace what -- if I had changed an evidence officer's

weight on it so that if it was assigned to another chemist, the evidence weight would be the same. I still did my best to get those samples and I don't recall ever not getting one of those samples back. But for a few of them I did go back in after analyzing it, going back into the system and changing the evidence weight back to its original weight when the cops -- or the police officers brought it in.

Q. So the police wouldn't be suspicious?

A. Exactly.

Q. But they would do -- they would, is it fair to say, sometimes they would come in with a weight that they had done at the station, correct?

A. I don't know if it was a direct weight but they would notice if it was a couple grams less, you know what I mean. It might be the situation of if it was crack in a plastic bag, they might have weighed it in the plastic bag. You know, it's, oh, it's eight-and-a-half grams. Okay. If he came

back and said it was eight. Well, maybe that's not right. I think it's probably the plastic bag but if it came back and it's six grams, they would notice the difference. That was why I would keep it, so I had -- I would report the correct weight. The other reason, like I said, I didn't want the other chemists if they were assigned the samples to see the difference in weights from what it was brought in at and what it was then. There was also the --

Q. (Interposing) So when did you -- when did you begin entering the computer system, was it the times when you were the evidence officer or would you do this during the day or after hours?

A. I never manipulated it while I was the evidence officer. It was always when no one else was around. Like I said, we all had access to the computer system in the room.

Q. And no one ever -- if someone were to come in the lab when you were on the computer would anybody question you?

A. Probably not. Like I said, most of the times I would change it when nobody was in the system. I would do what I needed to and no one else would be around. Like I say, even on the days that I was the evidence officer because Sharon was on vacation, someone was finishing or at court or whatever, even if I was just typing on a computer and a police officer came in to drop off some submissions, they wouldn't necessarily know what I was doing on the computer.

Q. While you were the evidence officer did you ever have the opportunity to manipulate the packaging it came in from the police department?

A. The evidence officer, no. I think when you -- talking about when you say the packaging, you know, there were times when I wasn't the evidence officer but I knew that Springfield would bring in a piece of evidence that I was interested in from -- he normally brought in a lot, a fair number of submissions.

Q. And those submissions were crack cocaine, that's what you were interested in?

A. Well, I mean, he brought in a lot period but some towns would never bring in anything that I liked, where others towns had a better chance we'll say. But I knew he almost always came in Wednesday morning, like first thing Wednesday morning, and even not knowing what he was gonna bring in but knowing that, you know, I had a supply, some samples ahead of time, I sometimes returned it -- let's put it this way. He needs to have a very good well oiled machine to heat seal it but, you know, hand it to evidence officer. It was a very smooth process with our evidence officer and the detective from Springfield but with so many -- I'm not saying he got lackadaisical but sometimes the heat seal wasn't great from him and so I could get into those bags later on but I would occasionally turn down the heat sealers just a fraction of an inch hoping that the heat seal would not be great so I could go into the bag at a later

date if there was something I would like.

Q. If you know, at any point in 2012 when you began counterfeiting substances and when I say that, taking entire samples coming in and replacing it entirely with counterfeit, do you remember doing that?

A. I remember starting to add counterfeit substances, whether it was entire samples and replacing the whole thing or in the case if it was cocaine, chopping up, taking a hundred grams but replacing it with a counterfeit substance.

Q. And that was you testified --- do you know what town that was from, the hundred gram sample?

A. That I took a hundred grams from --

Q. Yes.

A. -- that was the Chicopee kilo.

Q. And did you ever have a chance to manipulate anything from Holyoke?

A. There was at least one piece of evidence. Well, there was more than one piece of evidence from Holyoke that I touched.

There was one piece that was almost 200 grams that, you know, I started by just taking a little, a little more. I kept going back to the same piece of evidence and by the time I was done it was, you know, more than 99 percent counterfeit substance. I don't know how well I scraped the bag but.

Q. So it's fair to say at least as to those two that if they were to be retested, they would essentially come back as no substance?

A. That is correct. And I used a variety of substances trying to figure out how to counterfeit crack.

Q. And what are those counterfeit substances that you used?

A. I tried using everything from soap chips to a candle wax. I tried rocks at the very beginning when I was -- there was a specific set of samples that I know I touched that were kind of big samples that I was concerned would be noticed and I didn't have experience counterfeiting it so I used rocks.

I ended up using a lot of modeling clay that I could keep and harden in the ovens at work and just chip them up to break them to try and resemble the crack in bags.

Q. Now, you had indicated earlier in some of your earlier testimony was concerning special tests and one test that you sought the assistance of Annie Dookhan on?

A. Correct.

Q. And that was just a test for base cocaine?

A. Correct.

Q. And when those samples came in and there was a request for a base cocaine test, what did you believe that to be?

A. Since our different testing guidelines, federal versus state, and the state does not distinguish between the two, when a substance comes in and they request a crack analysis or a cocaine base analysis, we're led to believe that they are federal samples, that it will be tried in federal court.

Q. And how many of those -- how many of those tests did you do if you recall?

A. Through all my years?

Q. All your years, yes.

A. There was probably one or two cases a year max for me personally. Like I said, we didn't always know when they were federal. Sometimes they were brought in by a local police force but you don't know who they're aligned with. There was a sample, a Springfield ATF sample in 2012 that requested the crack analysis, which I did, and I -- knowing they were federal, the crack analysis was requested, I resisted taking for a long while but eventually could not any longer.

Q. And those tests that you did for the base cocaine, the crack test --

A. Yes.

Q. -- when they came back did they come back as crack cocaine?

A. Yes, they did.

Q. And you took those samples for your own use?

A. The positive ones. The negative ones I left.

Q. But there were some negative ones?

A. There were some negative ones.

Q. Now, just as an aside speaking about negative samples, was it frequently that a sample was negative, it would come back negative?

A. I wouldn't say it was frequent. It happened but -- I wouldn't want to say it was odd. It wasn't odd that it happened either.

Q. So can you approximate, if you know, maybe how many times a month?

A. A couple times a month per chemist maybe, not including, let's say, OTC drugs because sometimes people get arrested with other drugs but they've got Tylenol, regular Tylenol in their pocket which we report as a negative because it's not a controlled substance but actually a counterfeit substance, maybe a couple times a month, if that.

Q. All right. Now, have you ever heard

of the phrase dry-labbing --

A. Yes, I have.

Q. -- or word dry-labbing?

In your experience what do you know that to be?

A. I've been told that it's basically when you just make up a result for a test. You don't actually test something but you're guessing basically what it is by its appearance or by whatever.

Q. Did you ever do that --

A. I never did that.

Q. -- at UMass lab?

And is that because you want to know what the drug was so you could use it?

A. As a secondary, yeah. But at the same point when I was even in the Boston lab we were -- one of the guys mentioned like the last thing you want to do is call something positive that's not positive. Like you don't want some drug dealer mad at you, sending them to jail for something that's negative. You want the accurate result. If there was a

question if something was positive or negative, you called it negative.

And, like I said, for my sake and towards the end, yeah, I wanted it for possible use. I wanted to know what it was but I also thought it would draw less attention if I also tested everything correctly. Like I said, most people know what they have.

Q. Now, in the year 2012, the year we've been talking about, were you in therapy at that time?

A. I ended therapy, DBT, and the year I ended in 2012 I did try a kind of a group thing over some of the summer. Into the fall I saw a therapist for maybe a month or so. I don't exactly remember how long in the fall. That wasn't working well.

Q. So your attempts at recovery and staying sober did not work out?

A. Correct.

Q. And you had also, I think your testimony was your use of crack cocaine was

quite heavy at this point?

A. By that point it was -- I know when I was in the group it was pretty bad.

Q. Were you going to these appointments under the influence of crack cocaine?

A. Yeah.

Q. Did you indicate that to your therapist or any of the members of your group that you were under the influence?

A. I don't believe so. That one therapist I didn't feel connected to her at all. She was no help to me. Maybe I wasn't helping myself.

As for the group, I don't know if the woman that ran it knew or didn't know. I was fairly honest, you know, saying how -- reporting back how was your week. Like it wasn't, oh, did you use every day, did you do this, did you do that but she knew I was still using.

Q. When you did the DBT program were you filling out worksheets, progress reports or were you doing a daily diary at any point?

A. In the DBT program, which was mid 2010 through the first couple weeks of 2012, part of it is to record -- they have a worksheet. I won't say it's a worksheet. It's a -- I won't say a rate sheet but you can list your -- some of your target behaviors, your urges to engage in those behaviors and whether or not you did or you didn't. It also listed various different tools and skills that we learned in the DBT program to try to help relieve stress and ways -- other ways to deal with anxiety in our lives.

Q. How would you term your personal relationship with your partner at that time?

A. It was rocky.

Q. Was that due to your drug use do you believe or was it due to other outside factors?

A. I believe my drug use did not help it but it had been rocky for a while and even looking back to when she asked me to marry her in the beginning of 2005, I had questions about -- or concerns about doing that but I

just pushed them down and said yes.

Q. Did she have a -- Ms. Lee at any point ever question your behavior and whether it was linked to drug abuse?

A. Every now and again she would -- besides having some depression issues and addiction issues, I have some anger issues so there were times she would see an erratic behavior and ask if I was on drugs and I would say no. Or whether -- she occasionally wondered if maybe I was getting some weird contact high at work just being around drugs, poor ventilation, it's an old building but I told her no. We had this -- I don't want to say joke -- a long running joke that I had really bad PMS three weeks out of the month. But I'll say my anger issues started previous to any drug use, so there was no like boom, all of a sudden I was acting a certain way around her.

Towards the end when the use got heavier and became more than the coke, the crack, it required -- I don't want to say much

more attention but it wasn't I could do it and be good for eight hours. I would have to continue to do it. And she, besides having some mental health issues of her own, she had a bad concussion and had some neurological stuff going on and -- and she -- she's an alcoholic so her attention to me wasn't as much there and so doing things without her, realizing it wasn't a problem.

Q. Did you ever attend a couples therapy or do anything of that nature with Ms. Lee?

A. Right before I went to jail. I knew by that point my relationship had been over. I had known for years. When she had gotten a neurological -- it felt wrong to try to leave when someone gets sick and you always hope it will work. You never go into a relationship thinking it's not gonna work.

Q. At any point -- so you were -- you're aware of the issues at the Jamaica Plain laboratory, the Hinton laboratory, correct?

A. Correct.

Q. And that was surrounding the conduct

of one chemist, Annie Dookhan, also known as Annie Khan?

A. Correct.

Q. And the allegation and subsequent confirmation that she was, in fact, dry-labbing samples at the lab?

A. Yes.

Q. And not only did she dry-lab the samples, fair to say she was adding weight to the samples to push it over to trafficking weight?

A. I have no idea how she was ever doing that. I have no idea how she would have guesstimated at the weight.

Q. But you were aware that Ms. Dookhan -- or the prosecution --

A. Yes.

Q. -- of her by the Attorney General's Office?

A. Yes.

Q. And that she admitted to doing certain things like dry-labbing and whatnot?

A. Correct.

Q. At that point when she was placed into custody and essentially arrested for what she did done, for tampering with evidence, what happened at the Amherst laboratory?

A. So that would be like I believe August of 2012. I mean, we were warned to -- not that much longer before they went to talk to her or whatnot.

Q. And so let me stop you there. What were you told?

A. We were told that there was something going on. They wouldn't tell us what but the state police told us not to talk to anybody about anything, which was -- I mean, we didn't know anything but it was kind of just giving us a heads up, you might be getting a lot of phone calls or something along those lines.

After she was questioned and then they ended up closing down the JP lab, they wanted to interview all of us in the Amherst lab to see if we knew of anything, did we know people. Sometimes, you know, Jim or Sharon

would go out to the Boston lab to transport samples because if there were overflow --

Q. You picked up some samples?

A. So, and also due to the disarray of their lab they wanted to check out our lab to see how we were organized, to see were we following procedure, you know, what was our backlog like, what was our setup. And since they were taking us over they wanted to know those things anyway but it pushed things along.

Q. Okay. So you had mentioned "overflow." Can you describe what this overflow is?

A. Even when I was there they had a lot of samples that weren't getting done. I'm not sure if it was just purely they were getting more pieces of evidence than they could analyze in a timely fashion. So our lab was granted some overtime and normally Jim, the lab supervisor, would go to Boston and they would have, you know, a couple hundred samples put off to the side, whether it was pills or

whatever they decided to go with, that he would bring back to our lab. We would log it into our computer system and then analyze it and when we were done, they would be returned to the Boston lab.

Q. Did you do this for the entire time period that you were out --

A. No. When I was at Jamaica Plain?

Q. No. Strike that. When you were at the Amherst laboratory?

A. No. It varied. Sometimes we'd have overtime on just our own stuff. Sometimes -- it varied if we were getting samples from JP.

Q. Were there regular samples that you would normally get from the Hinton lab or was it -- it did not matter, was it every type of controlled substance?

A. I think overall we got pretty much every type. There were, you know, sometimes it seemed like we were getting more pills. It was like they were just giving us a pill thing but other times they would give us powders or they would -- I think at one point

they started -- I don't want to say not mixing them or they just stopped separating them and they were just giving us like the next numbers coming in, whether they were a special amount of their pills or they were powder or they were whatever. I believe it was arbitrary.

Q. Now, going back to my original line of questioning. The state police you said had taken over the Department of Public Health laboratory in Amherst?

A. Correct.

Q. And that was in the wake of the Annie Dookhan issue?

A. I believe this was right along in time as the Annie Dookhan issue. I believe they took us over -- the fiscal year starts July 1st in the state so I think they officially took us over July 1st and when they were visiting the Hinton lab that's when they got wind that something might be amiss with Annie Dookhan.

Q. And they came out to the Amherst laboratory and they did an inspection; is that

fair to say?

A. They did.

Q. And they questioned each chemist there I assume as to procedures, protocol and --

A. (Interposing) Yeah, they went back through our notebooks where we describe what we did and they looked through it.

Q. Were you at any point questioned by any member of the Massachusetts State Police with regard to your testing and your procedures?

A. I, like I said, all of us, there was a couple people going around looking at our notebooks and whatnot, which I participated in as well. In the early afternoon the head of the Crime Lab for the state police got -- I was the last of the four to be interviewed between the four people in the lab.

Q. And did you have a conversation with the head of the state Crime Lab?

A. Yes, I did.

Q. At any time during this interview did

he call into question anything you were doing at the lab in terms of your procedures, your testing, your workstation, anything like that?

A. No. The only thing he mentioned was it would be nice if we could get accredited, which we all agreed with. It was purely a money issue from the state and that had been going on for ten years with the Crime Lab. That was one of the first things he wanted to do once he took us over.

Q. So this was the summer of 2012 and you testified that your drug use at this point was very heavy?

A. Correct.

Q. You were using daily?

A. Mm-hmm.

Q. Multiple times a day?

A. Correct.

Q. Now, during this takeover or this interview by the Mass. State Police, were you under the influence that day?

A. Yes.

Q. What were you under the influence of?

A. Of crack cocaine. I don't -- I might have used first thing in the morning. I knew they were coming at whatever time, 9 or 10. I didn't use again until lunchtime and I hadn't gone to my interview yet but I physically didn't feel like I could make it through without using so I did smoke crack at lunch and I was interviewed at 1 o'clock or whatnot.

Q. At any point were there any concerns raised by not only members of the lab but also any members of the Mass. State Police concerning your condition?

A. No.

Q. So you conducted the interview in front of the Mass. State Police and there were no issues?

A. I don't believe there were. It seemed to run smooth to me. We talked.

Q. What was the tone of the conversation; do you remember any questions?

A. I thought it was a fairly light conversation. He asked me a little more about Annie since I actually worked with her and no

one else in the lab did but it was a friendly conversation. We actually talked football. He was a Jets fan.

Q. About how long was the interview, if you can recall?

A. Maybe fifteen, twenty minutes.

Q. Were there -- other than just light conversation, were there any questions asked about samples you had done recently or anything specifically from your notebook?

A. There was nothing asked directly from my notebook or no specific cases of mine brought up. He did inquire into did I know anything about what dry-labbing is, have you ever participated. You know, it sounded very form letter-ish like that, if you can call it that, but there was no specifics about my work.

Q. And you were aware of this interview the day prior or the week prior?

A. Prior, yeah.

Q. And you still used?

A. I still used.

Q. And it's fair to say you still used at that point you were so addicted to the drugs?

A. Yes, that is accurate, yeah.

Q. At any other points do you remember being under the influence in speaking to a member of the Mass. State Police?

A. Yes.

Q. Do you know the day?

A. The 18th of January.

Q. Okay.

A. Of 2013.

Q. And where -- where did that conversation take place?

A. That took place at the Hampden County Hall of Justice. I was there to testify in court. I was there all morning. They didn't get to me so, you know, I went out to my car for lunch, ate lunch. Had some fair amount of crack in my car, I smoked up, got pretty high. On my way back in, I knew I wasn't the first person to go in, they had to finish up with another witness but on my way there Detective

Lieutenant Whitney and another guy that I forget his name pulled me aside and asked to speak with me. I explained I had to go to testify. They said they'd take care of it. So we went into a conference room, I think it was in the DA's office and, you know, they asked if I knew what it was about. I had a sneaky feeling but I said I don't know, maybe the Annie Dookhan thing.

Q. And you were under the influence at this time?

A. I was high, yes.

Q. Did they make any comments at that time about your appearance or your demeanor --

A. No.

Q. -- that you were under the influence?

A. No, they didn't.

Q. So they never made a statement like are you high now, are you under the influence?

A. They never did, no. They talked -- I mean, they made it clear that it wasn't about Annie Dookhan. They just did a general talking about the lab, about how we analyze

samples and the lab layout. They had, you know, whatever, a picture. They got to the point where they asked if there would be any evidence how do we package it back up. When they finally got to the question of, you know, why -- I don't remember if it was why is there a crack pipe in your drawer or something along those lines, I -- I stopped the conversation and asked for a lawyer.

Q. Prior to that interaction, were there any other interactions with a police officer?

A. The only other time -- I don't necessarily remember if I was under the influence or not but I had a close call from -- besides working this job, my wife and I delivered the Sunday newspaper in Northampton. So we had been doing that since 2004. It was a way to save up some money, you know, five or six hundred bucks a month to buy a house and I would -- we would take separate cars and we were splitting it up and I got pulled over right as I was leaving my house. And basically I had a taillight out, which I

didn't know it but, you know, I had gone to my glove box to pull out the registration and all that and the officer was seeing me reaching over, you know, what's going on. He walked over to the car and I'm just getting this out of my glove box. He walked around the car, shined a light in my glove box. At that point I believe I did have a small vial of amphetamine in there. I asked him if he wanted to look in there. He said no but I had some drugs in there. So I don't necessarily -- I don't remember if I was high at that direct time but it was a close call.

MR. VELIS: Mr. Caldwell, may I intercede for one moment?

MR. CALDWELL: You may.

MR. VELIS: Just for purposes of clarification, Ms. West as well as myself and Mr. Caldwell in various ways had asked you about your productivity and the accuracy of your analyses throughout the years and in terms of the timing of that and how expansive it was. Starting from the point in 2004, in

late 2004 when you started in August --

THE WITNESS: Yes.

MR. VELIS: -- when did you start getting under the influence in testing in August in 2004?

THE WITNESS: It would be at the very end of 2004 and beginning of 2005, it was methamphetamine.

MR. VELIS: Okay. And so through all that course of your analyses, plural, that you were under the influence, what is it that you point to specifically as the reason why you answered Ms. Caldwell's -- excuse me -- Ms. West's question that you were sure about the accuracy of your productivity or did you mean just that you were sure that you put out that number of cases? By productivity I assume you meant the accuracy of what you did?

THE WITNESS: Correct. I mean I am confident that it is accurate. All results matched with each other throughout any single piece of evidence's testing. Nothing

was questioned either by coworkers or defendants or defense attorneys. Yes.

MR. VELIS: So if any of those analyses were ever in question and those samples were available for retesting, you say they would bear that out?

THE WITNESS: It would be correct, yes, that's correct.

MR. VELIS: With respect to retesting from 2004 to the point where you no longer rendered your services, what is the capacity at that lab to now retest any of the evidence that has not been destroyed? By "destroyed" I mean through the course of litigation.

THE WITNESS: Yes. What do you mean by the "capacity at that lab"?

MR. VELIS: Is it able to be done?

THE WITNESS: I would assume they'd be able to retest anything that exists.

MR. VELIS: And that the passage of time, would that be a variable that

would be considered as to the accuracy of the analysis?

THE WITNESS: The accuracy as to composition, whether or not it is or is not a drug, should be the same. Like I said, certain things over time do lose a little bit of water weight but whether it -- if something was retested and it came back as cocaine -- you know, if I had it as cocaine it should come back as cocaine.

MR. VELIS: So if one of those samples say from 2005 was retested tomorrow, the same accuracy would remain as existed in 2005?

THE WITNESS: In 2005, yes. Toward, like I said, 2012 I was starting to tamper with pieces of evidence and some of those -- there were some samples, as Mr. Caldwell pointed out, that I did replace with counterfeit substances that could in theory if it was retested come back as negative even though when I originally tested it was positive.

MR. VELIS: So to find the very essence of your reason for saying that you know that your testing was accurate while you were under the influence is all the data, tangible data, would reflect that, correct?

THE WITNESS: Yes.

MR. VELIS: So if these things were all retested they would show the same thing?

THE WITNESS: Back in 2005, definitely.

MR. VELIS: And now, finally, police officers would bring evidence to your lab and then the -- I'm talking about the usual course --

THE WITNESS: Yeah.

MR. VELIS: And that the usual packets or whatever they have would be handed over to the evidence officer, first person?

THE WITNESS: I don't know what they would do at the police department.

MR. VELIS: I'm talking about

at the lab.

THE WITNESS: When they brought in the packets themselves, would it be handed over --

MR. VELIS: Correct.

THE WITNESS: -- their packets? Say there was ten packs of heroin, they would have put it in their own evidence bag.

MR. VELIS: And did any officers ever at any time from any department, state police or local police ever -- for the lack of a better term -- stay around, stick around to watch the analysis take place?

THE WITNESS: No. I mean, if there was a -- even if they wanted to stick around, as soon as a piece of evidence comes in, it gets its bar code, a number; it gets its gross weight. There was probably a month back time for a chemist actually to get to that piece of evidence to be tested. It's put into the drug safe. And, you know, that might be number 2000 but we might only be on, you

know, number 1800 so the next -- you know, I would get, you know, 1800 to 1820 or 1820 to 1840, so it could end up -- I mean, maybe that's not the best use of numbers but it's that sort of thing where there's a good month, six-week backlog in the lab.

MR. VELIS: Okay. So finally, Ms. Farak, is the sum and substance of what you said the following: That everything you tested from that late 2004 on while under the influence, if those samples were still available and not destroyed in the usual course --

THE WITNESS: Okay.

MR. VELIS: I'm not saying destroyed in a --

THE WITNESS: I understand.

MR. VELIS: -- it is capable for that to happen, that they could all be retested?

THE WITNESS: I don't see why they couldn't be.

MR. VELIS: And they'd reveal

the same degree of accuracy as when they were originally tested?

THE WITNESS: Minus the ones that I directly tampered with, they will.

MR. VELIS: Other than the ones that Mr. Caldwell specifically mentioned?

THE WITNESS: I mean, there was -- give or take, yes. I mean, like I said, I don't remember every specific sample in 2012 that I touched --

MR. VELIS: Okay.

THE WITNESS: -- but anything prior to at least 2011 should be -- and that USPS case, anything at least prior to that will come back how I analyzed it.

MR. VELIS: Thank you.

Q. (By Mr. Caldwell) Ms. Farak, I just have one quick follow-up in terms of police interaction. You have the opportunity frequently to interact with police as they brought samples in?

A. Correct.

Q. You not only interacted with them on

a social basis but also a work basis in general; is that correct?

A. Correct.

Q. There were certain officers that you knew, were familiar with; is that fair to say?

A. That is fair.

Q. And is it also fair to say that during many of these interactions you were also under the influence of various drugs?

A. That is correct.

Q. Whether they be the batch controls or actual drug samples that were submitted for evidence?

A. Correct.

Q. Can you estimate perhaps -- I know the number might be great -- but the interactions you had with officers if you can recall when you were under the influence?

A. Well --

Q. Only if you -- only if you know and it's somewhat accurate.

A. I mean, it was probably three or four interactions a week at least between me and a

police officer when I was under the influence.

MR. CALDWELL: Thank you very much. I have nothing further.

MS. WEST: Okay. Just a few more questions and I promise we're almost done. I want to go back to about 2012 when you were in therapy at DBT.

THE WITNESS: Okay. I was in therapy at DBT in 2012 up until like the 17th or something.

MS. WEST: Okay. So the first therapist you saw, her name was Sarah, right?

THE WITNESS: Correct.

MS. WEST: You saw her in 2009?

THE WITNESS: Yes.

MS. WEST: And you had a good relationship with her?

THE WITNESS: I thought so.

MS. WEST: Were you being candid with her?

THE WITNESS: Yes.

MS. WEST: And you told her about your drug problem, right?

THE WITNESS: I told her about my drug problem about three months after I started.

MS. WEST: Okay.

THE WITNESS: But I was honest with her.

MS. WEST: And then when did you start in DBT?

THE WITNESS: June of 2010.

MS. WEST: And it went all the way till when?

THE WITNESS: Second or third week of January of 2012, about 18 months.

MS. WEST: Okay. You spoke earlier about that the therapy wasn't going well and you talked about I think two therapists?

THE WITNESS: I talked about a therapist later in 2012.

MS. WEST: Who was that therapist?

THE WITNESS: Beth Quill, Beth Quinn, Beth --

MS. WEST: Her first name is Beth?

THE WITNESS: Beth, yeah.

MS. WEST: And her surname was?

THE WITNESS: Quill I think.

MS. WEST: Q-U-I-L-L?

THE WITNESS: Yes.

MS. WEST: And describe your relationship with her?

THE WITNESS: I didn't feel safe talking to her. It became a mutual decision for us to end it. And, like I said, I don't know if I was just not wanting to be honest with myself, if I had progressed past the point of being able to be honest with her.

MS. WEST: So putting aside that you didn't feel safe with her, were you candid with her?

THE WITNESS: I can't say that.

MS. WEST: Okay. And who was the second therapist that you spoke of?

THE WITNESS: I had spoke about a group situation. It was called the seeking safety group for people with addiction problems and like PTSD issues that I don't have but I got into the group. Her name -- I don't have off the top of my head right now.

MS. WEST: Okay. How long was that group therapy?

THE WITNESS: Well --

MS. WEST: Months long?

THE WITNESS: -- probably a couple months.

MS. WEST: And in that atmosphere of a group were you being candid there?

THE WITNESS: It was difficult with my work position. They knew I had a problem. I don't think they knew where I worked, meaning the other people in the group. I think that I was fairly candid with her, however, I also -- I wasn't telling her I

was coming in high.

MS. WEST: Okay. I have nothing else.

MR. CALDWELL: The time is approximately five minutes after 1. This will end the presentation for the day, unless there was anything further, Assistant Attorney Generals?

MR. VELIS: Nothing.

MS. WEST: Nothing from me.

MR. CALDWELL: Thank you, Ms. Farak. You may step out.

(Witness excused.)

(The presentation was suspended.)

*****

COMMONWEALTH OF MASSACHUSETTS

COUNTY OF HAMPDEN

I, KATHLEEN M. HOUGHTON, Court Reporter, hereby certify that the foregoing is a true and accurate transcription of my stenographic notes to the best of my knowledge and ability.

KATHLEEN M. HOUGHTON

EXHIBIT 6-2

COMMONWEALTH OF MASSACHUSETTS

HAMPSHIRE, ss. Grand Jury

IN RE: INVESTIGATION

HEARING BEFORE HAMPSHIRE COUNTY GRAND JURY AT THE HAMPSHIRE COUNTY COURTHOUSE, NORTHAMPTON, MASSACHUSETTS, ON SEPTEMBER 29, 2015.

APPEARANCES:

THOMAS CALDWELL,
Assistant Attorney General

KIM WEST,
Assistant Attorney General

THE HONORABLE PETER VELIS (Ret.),
Special Assistant Attorney General

Kathleen M. Houghton
Court Reporter
PHILBIN & ASSOCIATES, INC.
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I N D E X

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(Grand Jury Exhibit Nos. 2 through 13, marked.)

MS. WEST: Good morning, ladies and gentlemen. My name is Kim West. I'm an assistant attorney general here with Assistant Attorney General Thomas Caldwell and Special Assistant Attorney General Peter Velis. We were here two weeks ago presenting evidence on the matter regarding the Amherst lab case. Today we will continue that evidence.

SONJA FARAK (SWORN.)

EXAMINATION BY MS. WEST

Q. Ma'am, can you state your name for the record?

A. My name Sonja Farak.

Q. And your last name is F-A-R-A-K?

A. That is correct.

Q. You were before this Grand Jury two weeks ago?

A. Correct.

Q. And when you were here, before you started to testify do you remember looking at

Grand Jury Exhibit 1? (Indicating)

A. Yes, I did.

Q. And is that your grant of immunity?

A. Yes, it is.

Q. And do you remember going before the court in Hampshire Superior Court regarding that grant of immunity?

A. Yes, I do.

Q. And is your testimony today a continuation of the testimony you gave two weeks ago pursuant to that grant?

A. Yes, it is.

Q. So today I want to talk to you a little bit about your interaction over the years in therapy. Now, you spoke last time about seeing a number of therapists; do you remember that?

A. Yes, I do.

Q. And when was the first time you went to a therapist?

A. The first time I went to a therapist I was in high school.

Q. About how long did that last?

A. Just a year or two.

Q. And when was the next time you went to therapy?

A. I went in college. I was depressed and I saw the therapist on and off for two to three years and that ended in 2000 -- 2000 I guess.

Q. And subsequent to 2004 after you started at the Amherst lab, when was the next time you saw a therapist?

A. In January of 2009.

Q. And who was that therapist?

A. Sarah Hawrylak.

Q. And is that -- is Hawrylak, H-A-W-R-Y-L-A-K?

A. Yes.

Q. Now, in front of you you have what's been marked as Grand Jury Exhibit 13; do you see that?

A. I didn't see that but I'm assuming it's the same thing.

Q. Do you have a binder in front of you?

A. Correct.

Q. And this is a number of documents?
A. Yes, it is.
Q. And do you recognize these documents?
A. Yes, I do.
Q. Have you seen them before?
A. Yes.
Q. All right. So the documents begin with a Bates number, which is 00001, and they go all the way through Bates 00252 --
A. Correct.
Q. -- is that right?
A. That is correct.
Q. And I've shown these to you before, right?
A. Yes, you have.
Q. And even without me showing these to you before, have you seen some of these records?
A. Yes, I have.
Q. When did you see them?
A. I saw some of the first set of records up to the first binder point in 2013. After I was arrested I learned -- I had

thought it would be in my best interest to obtain my mental health records to see what they may have said since we weren't sure in which direction the trial or court was going to be.

Q. So we don't need to talk about what an attorney told you but I just want -- so you have seen these before?

A. Yes, I have.

Q. And we're going to look through them, not in too much detail but we'll go through them. And now I want to refer you to the first set and that set are the records of Sarah Hawrylak, so I'm going to refer to Bates Number 1 through Bates Number 19.

Now, these are records that began in 2009, correct?

A. Correct.

Q. And in 2009 give us a sense of where you were at the lab in terms of your addiction into narcotics?

A. Well, in 2008 and '09, beginning of 2009 I pretty much exhausted the

methamphetamine standard in the lab. I was fighting addiction trying to get out of it and that it was around that point, of course, for the drug reasons and other reasons I decided to go into therapy. At around that point I also started tinkering with the dextroamphetamine standard in the lab since I had run out of the methamphetamine.

Q. And just to remind everyone, I used the word standard, does standard refer to the vials that were in the refrigerator and the cabinet?

A. Correct. They were not submissions from police departments. It was a hundred percent pure substances that the lab had acquired from chemical companies to run as controls.

Q. And a standard is different than a sample, right?

A. Correct.

Q. And you just explained that. Can you tell us a little bit more about that; what's the difference?

A. Well, in our lab the word "sample" normally referred to a submission from a police department. So, you know, we'd run samples on like the machinery, on the instrumentation, and we'd compare them to the standard; where the standards were known substances, pure substances, so that we could see if the sample was consistent with the known substance to have a positive identification.

Q. By the beginning of 2009 were you taking just standards from the lab or were you also taking samples?

A. Just standards.

Q. All right. So I want you to look at the first page, it's Bates Number 1. And this is entitled -- and for everyone, that's up here. I apologize. It's entitled Diagnostic Intake January 15th, '09 to January 27th, '09.

Now, the notes that we see on this page, those are not your notes, right? (Indicating)

A. No, they are not.

Q. Okay. Do you understand whose notes they are?

A. I believe that they are by the therapist.

Q. So I'm not going to ask you about the writing in the notes and what went into the writing in the notes but I'm going to ask you as to whether some of these notes that we see are consistent with your memory as well. Okay?

A. Okay.

Q. So I want you to go down to the third block. Excuse me. I want you to go down to the last block. And under Substance Used, it says: CT, client declined to answer questions about drug and ETOH, alcohol, use.

So when you first started seeing -- you did not write that, correct?

A. Correct.

Q. And when you first started seeing this particular therapist were you being candid with her?

A. I wasn't lying about my drug or

alcohol use but I did want -- I was concerned that if I brought that up, that's all that would be focused on. And considering some of my depression issues stem back much farther than I had ever used a drug or a substance, I didn't want it to be minimized.

Q. When you say "minimized," do you mean your other issues, issues other than drug and alcohol use?

A. Correct.

Q. All right. So let's go to the next page, which is Bates Number 2, and looking under the portion that's April 28th, '09, second paragraph, it says: One hour appointment. Client disclosed that she had been using illegal substances, methamphetamine primarily, for a long period of time but she was afraid to tell me previously. She obtains the drugs from her job at the state drug lab by taking portions of samples that have come in to be tested.

The first time did you tell your therapist that?

A. No. I probably said standards to her. I know at the time I wasn't taking from pieces of evidence. So there's a chance I said I was taking a sample of the standard, you know, taking out from the big jar into a little container. I'm not sure if it was a miscommunication issue between the two of us or she wasn't fully aware of the difference between standards and samples.

Q. Okay. So but for the word "sample," everything else that I've read, is that true?

A. Well, samples that have come into the lab to be tested.

Q. Yes.

A. The standards weren't really there to be tested; they're to be run concurrent with but, yes, by that point I had been using methamphetamine for a long time.

Q. If you go to Bates Number 3, May 7, 2009, one hour appointment. Client focused on her history of substance abuse. She has used methamphetamine and dextroamphetamine for four years on and off. I want to stop there.

This date is May 2009. By May 2009 how long have you been using those narcotics?

A. About four years, maybe four-and-a-half years. I'm not sure of the exact date I started but it was towards the end of 2004, beginning of 2005 so.

Q. So if we move down the paragraph, it says: Client first tried methamphetamine when she was a chemist in a previous job but didn't get much from it. Let's stop there.

Do you have a memory of using methamphetamine at a previous job?

A. No. I believe I took some E with my partner at one point that might have had some methamphetamine in it but I didn't take any drugs from the Boston lab.

Q. After moving to western Massachusetts for her job at the state drug lab, she tried it again -- in quotes -- really liked it. I felt euphoric.

I want to explore a little bit more your previous jobs. So the job before this was the job in the JP lab, right?

A. Are we talking about working for the -- in the state drug lab?

Q. Yes.

A. In the JP lab?

Q. Yes.

A. Yes.

Q. And when you were in the lab on the eastern side of Massachusetts, describe for us your first job there? It wasn't -- it had nothing to do with drugs, right?

A. Right. My first job working for the state started in 2002. It was in the Jamaica Plain same building. I was a bacteriologist where I worked in an HIV testing laboratory, so we would receive blood and saliva samples from patients and we would test it for the presence of antibodies to HIV-1 and HIV-2.

Q. So at some point you finished working with HIV issues --

A. That's correct.

Q. -- and you moved on, correct?

A. Correct.

Q. But you were still in the JP lab?

A. It was the same building, different lab.

Q. All right. And then what was your second job there?

A. The second job was working as a Chemist I with the drug analysis laboratory.

Q. And in that lab would you have had access to methamphetamine?

A. I believe I may have gotten a couple of methamphetamine standard -- or samples, submissions from police departments, but we had no access --well, I had no access to their standards. They were under tighter lock and key.

Q. So the next line in the note says: The client thought it gave her energy, helped her to get things done and not procrastinate, feel more positive. Is that true?

A. Correct.

Q. And it continues: She reports that she was getting her supply from samples at work but worried that she would get caught. Client's longest period of sobriety from

amphetamines in the past four years has been three to four months.

So let's stop there and go back a little bit. It says you're getting your supply from samples at work but worried that you would get caught. At this point in May 2009, this is when you were here in Amherst, right?

A. Correct.

Q. And it uses the term -- she used the term "samples"?

A. Mm-hmm.

Q. Did you tell your therapist that you were taking samples?

A. I did not tell her I was taking samples. I did not say I was taking from pieces of evidence or submissions. I was taking from standards.

Q. She also talks about a period of sobriety in the past four years, the longest being three to four months. What is your memory of the four years preceding 2009?

A. I was heavily using methamphetamine.

I did try multiple times to kick the habit I guess for multiple reasons. I mean, there were periods of a couple weeks here, a month there. There was one better attempt I guess to stay sober. I think it was when I knew I was running out of the methamphetamine standards. But I guess for the most part I was using or at least thinking about using most of that time.

Q. If you go to Bates 7, and then towards the bottom, the last paragraph, July 14th, it says in the middle: Client continues to engage daily in other risky behavior, however, and does not feel ready to take steps to stop.

In July of 2009 can you give the Grand Jurors a sense of what other drugs or alcohol or activity you were involved in?

A. June -- or July of 2009 I was using the dextroamphetamine heavily on a daily basis. I don't believe there was any other drug use besides occasional pot, which was -- my partner had -- or, you know, had obtained

from a source.

I was -- I don't remember if I was drinking. I know it's not my drug of choice but my partner was an alcoholic so I drank a lot.

Q. Can you turn to page eight? Towards the bottom, August 4th: Client continues to be sober. Then August 11th: Client continues to be clean with no reported cravings. She has noted increased drinking, however, when her partner brings alcohol into the house.

Tell us about this period of sobriety. Was it, first of all, was there a period of sobriety?

A. Yes. I didn't lie to this therapist so.

Q. And throughout 2009 and going into 2010 were there periods of time where you were using drugs and periods of time where you were not using drugs?

A. Yes.

Q. Can you give us a sense of what -- what was going on in your life such that you

would start the drugs up again?

A. I don't remember all the things that may or may not have been going on from 2009. I mean, I knew the standards were getting lower in the lab. I was concerned about getting caught eventually. My partner has mental -- had some mental health issues and that caused me a lot of stress at times.

Q. But when things were better at home were there periods of sobriety?

A. There were periods of sobriety, yes.

Q. All right. So we're going to go through these records and there's going to be a period of time in 2009 up through 2013 and I want to get a sense over that course of time were you using drugs consistently or was there a consistent -- were there consistent periods of sobriety littered throughout those years?

A. There were periods of sobriety throughout. Sometimes, obviously, I was more successful than other times but.

Q. And what's the longest period of sobriety that you had that you can remember?

A. I don't believe I had anything longer than, you know, the three or four months that was already mentioned and most probably weren't more than a month or so and some as little as, you know, a few days or a week.

Q. Would you go to page nine? August 25th, one hour appointment. Client continues to use on a daily basis, says she is almost out and wants to stop. I'll stop there.

In August 2009 were you almost out of a particular drug?

A. I'm assuming I was, just -- it's written and I have no reason to believe that she would say anything contrary to what I told her.

Q. So you were being candid with her?

A. I was being candid.

Q. All right. She attended her first NA meeting last weekend, is willing to try one again. Client had close call with getting caught with substances when pulled over by police officer when her taillight was out.

Is this something that you spoke

about two weeks ago?

A. I don't remember.

Q. Okay.

A. I might have.

Q. I'll stop there. On this particular occasion, do you remember this?

A. Yes, I do.

Q. All right. Tell us about that?

A. My partner and I delivered the Sunday Republican newspapers as a part-time job, so Saturday nights we would go out around midnight to pick up the paper to deliver. That particular day we had taken two separate vehicles to try to cut the time in half, not quite half but to do it quicker. She had already left. I was driving down to go. I got pulled over by a state police officer. It was about a quarter mile from my house. So, you know, I mean, I get pulled over. Totally forgot I had something in my glove box at that point but, you know, I go to do what I was supposed to do, turn the interior lights on and I go to get out my registration and my

license. I guess the officer saw me reaching over and was inquiring more, you know, what was going on. You know, I handed him -- told him I was just getting my registration for you. He went to the other side of the car, he shined the flashlight in the --

Q. Slow down.

A. -- glove box that I had left open and he asked is there a problem or whatever. He could tell I was looking. I said, Do you want to take a look in my glove box or whatever and he said, No, no, it's okay. And he mentioned the taillight out and I told him what I was doing. He did allow me to drive back home. Like I said, I was about a quarter mile and I called my partner, who came and picked me up and we delivered newspapers that way.

Like I said, when I first opened the glove box I had kind of forgotten the drugs were there but I -- by the time I had taken the registration out, I did see them so I knew they were in there.

Q. The event that you just described, is

that the same event that is referred to by your therapist in the notes?

A. Yes.

Q. Go to Bates 11. Go down to March 3rd, 2009 -- excuse me -- November 3rd, 2009. One hour appointment. Client continues to be clean re: amphetamine, 34 days since last use, though she has noticed an increase in her alcohol consumption.

And then November 10th as well: Client still clean re: amphetamine, 41 days since last use.

So in this period of time do you have a memory of being clean?

A. Vaguely, yes.

Q. Why do you say "vaguely"?

A. It's tough to remember all periods. I know there was a period of time after the close call I guess that -- I don't want to say I was scared straight but put things in perspective and it was like a new found effort I guess to try to stay clean.

Q. Okay. Turn to Bates 12, please.

November 12th, towards the bottom. Excuse me. November 24th, towards the bottom: Client continues to be clean from substances, eight weeks and has limited alcohol intake. Is this a continuation of being scared and --

A. Correct, that and I believe I was running out of substances.

Q. Bates 13, January 5th, 2010: Client stopped Lamictal, L-A-M-I-C-T-A-L, for last week December and used hallucinogens during that time. Do you have a memory of what was going on in January 2010?

A. Not specifically.

Q. So do you know what she's referring to when she says hallucinogens?

A. Yes, I do.

Q. What is that?

A. Acid, LSD.

Q. And where did you get that LSD?

A. I got that from the lab.

Q. Bates 14, February 2nd, 2010: Focus on client's admission. She was dishonest last appointment in reporting her drug use. She

has been using cocaine for several weeks as well as ketamine occasionally.

So in the beginning of 2010 were you using cocaine?

A. Yes, around Christmastime I relapsed and started using other drugs.

Q. And where did you get the cocaine?

A. I got it from the lab.

Q. From -- was it from a lab sample or a lab standard?

A. I know I definitely started using the standards in the lab at that point.

Q. The cocaine standard?

A. The cocaine standard, correct. I -- in looking back on notes I also know that the first piece of evidence I touched was a piece of evidence that was confiscated by the police in November of 2009. I'm not sure when that was brought into the lab for me to analyze it.

My I guess belief on this is that, you know, I started with the -- or using the cocaine standard as well and then eventually supplemented it with pieces of evidence.

Q. So I'm just trying to get a sense of timing. This is dated February of 2010. I want to know if that helps you remember during February in 2010 were you taking cocaine from standards or were you taking it from samples?

A. Besides possibly that one piece of evidence --

Q. Correct.

A. -- it was all standards.

Q. And when did it change with the cocaine, when did it change from standards to samples?

A. The cocaine changed in 2011 I believe, early 2011.

Q. Bates 15, February 23rd, 2010, in the middle: Client thinks that other staff at work may know about her taking samples.

Did you say this to your therapist?

A. Like I said, I'm not sure if -- samples or standards. I thought they may have known about my drug use.

Q. And why did you think that?

A. I was paranoid. I don't know, maybe

just, you know, if I'm going into where the standards are kept, you know, do they see me walking back from that area with no discernable reason, not that they asked me and I made up a lie but. That would be my guess.

Q. Okay. But you don't have a particular memory of somebody saying something to you or acting in a particular way that made you believe that you thought they were -- they knew what you were doing?

A. At that time, no, because there was a previous incident with the methamphetamine standard, which I think I discussed last time, where the supervisor did an inventory and noticed that it looked like it had separated.

Q. Right. Other than that?

A. Other than that there was nothing else concrete or something they said or anything along those lines that made me think that.

Q. Go to March 2nd, 2010. Client continues to feel depressed. Has used cocaine, alcohol and marijuana in the past

week.

So now we're in March of 2010. The cocaine you were using, where was that coming from?

A. That was from the standard.

Q. Go down to March 9th, 2010. Client reports continuing depression with suicidal ideation but no intent plan and continuing polysubstance abuse.

So my question is, in March of 2010 what types of drugs were you taking?

A. I was taking the cocaine standard. I was using alcohol. I'm guessing I was smoking pot occasionally. There may have been either the ketamine standard that I would occasionally touch and some other standards in the lab.

Q. Will you turn to Bates 16?

March 30th, 2010: Client reports that mood was fairly stable this week, little to no arguing with partner but she also began using again, coke, acid and alcohol. Increased her risk of being caught by using at

work on Friday.

So this is dated March 2010. Can you give us a sense of prior to March 2010 how often you used at work?

A. Prior to 2010 I used at work quite frequently when I was using. I mean, obviously, during my periods of sobriety I wasn't but when I was using I was a daily user. The amphetamine, for example, I would either have -- I would take it like first thing in the morning and I might do some more throughout the day while at work.

Q. And that happened even before March 2010?

A. Yes.

Q. Will you go to Bates 17?

April 20th: Has been working overtime for past week. Client has not used substances for past three weeks until yesterday. Took cocaine, ketamine and MDMA.

Will you remind us what MDMA means?

A. It's ecstasy. It's kind of a blend between a stimulant and a hallucinogen I

guess.

Q. And during this period of time was it typical for you to work overtime?

A. I'm sorry, did you say prior to this time or at this time?

Q. During this period of time was it typical for you to work overtime?

A. When we had overtime I'd work -- well, I tried to work the most we could. A lot of times it was only 10 hours a week.

Q. While you were working overtime was it such that you had -- it was easier to take out of standards?

A. That is correct. A lot of the overtime I did was not the same overtime that other people would do so there were many times I was alone in the lab.

Q. And go to Bates 18, please?

May 26, 2010: Client acknowledged that she left quote from Jeffrey Dahmer on my door. Did not mean it in any threatening way to me, herself or others.

Do you have a memory of this?

A. I remember leaving the note -- or the quote on her door.

Q. Okay. So tell us about that?

A. We had had a -- a session previously -- I'm not trying to say trying to get to the root of my problems but basically I would say I came up with a normal childhood, you know, it was a middle class family. I was provided for in every way. I wasn't abused and that -- but yet I still turned out a certain way, still had some problems. And the quote from Jeffrey Dahmer -- I think it's in here -- but basically it said, I was a normal kid, just like anybody else. Saying that I was just -- there wasn't any huge traumatic incident in my childhood or, you know, circumstances of my life that would make people see me turn down the path I turned down.

Q. Okay. Bates 19. June 1, she writes: We continued to talk about client's transition to DBT program.

June 9: Client will be starting

six-month DBT program on Monday.

What is a DBT program?

A. It's dialectical behavioral therapy. It's a type of CBT, cognitive behavioral therapy, that helps or tries to help people with specific target behaviors. It can be anything from drug and alcohol abuse to cutting to suicidal threats and things like that and ways to cope in the moment and I guess to pre-cope in a sense to try to limit the emotional dysregulation that some people experience.

Q. So at this point did you stop seeing this particular therapist?

A. I, yeah, in June.

Q. Okay. We're going to move to the next tab. This is page 20. First page says ServiceNet and this goes all the way to Bates 222. Do you see that?

A. Yeah.

Q. Now, this set of records, before I showed them to you a month or so ago, had you seen them before?

A. I had.

Q. And tell us the circumstances about seeing them before?

A. I had seen them, like I said, twice before. I -- back in March I think it was of this year, I found out that my mental health records had been released under protective order to the judge so I asked for a complete copy of my records from ServiceNet and received them. I had also -- I guess that's when I saw these records. I had also, as I previously said, requested my mental health records with my lawyer a couple years ago and she had received a copy at that point.

Q. Okay. So you asked for them yourself --

A. Correct.

Q. -- earlier this year and then a month or so ago we showed you this particular set, right?

A. Correct.

Q. And when you compared them, were they the same?

A. The records that I personally requested for myself and these, yes.

Q. And at some point did you compare another set of these records to the ones we showed you and were they the same?

A. Yes, I did. I noticed that these records, that the -- okay.

When I had requested a set for my lawyer back in 2013, she had gotten a copy. I hadn't seen them till this year but when I looked through them they seemed to be more -- I don't want to say detailed but there were things in those notes that were not in the set I received or that the AG's office received.

Q. All right. So let's go back on that. The set that you had, were those bigger than the set that I had?

A. Yes.

Q. And --

A. Or the set that my lawyer got was bigger than the set that you had or the set that I had.

Q. And once you had an opportunity to

review them, the set that your lawyer received, how was that different than the set that I had?

A. They had some progress notes from my individual therapist that I could not locate in this packet and they had -- in DBT we have an individual therapist but we also have the group therapy and this set didn't have anything from the group therapist.

Q. Okay. So we're going to look at a couple of pages that I have, which does not include the progress notes or group therapy.

So if you can go to 23? At the bottom under Diagnosis, it says: Starting at about 2005 she has a history of abusing a number of different classes of drugs, including cocaine, cannabis, methamphetamine and Fen-Phen. She had a week-long cocaine binge in March.

So, first of all, did you write this?

A. No.

Q. Are these the notes of one of the therapists at DBT?

A. Yes, it is.

Q. In looking at what it actually says, is this true, did it start in about 2005?

A. It was the beginning of 2005, end of 2004 so, yeah, I would say it's correct or accurate.

Q. What is Fen-Phen?

A. I actually did not abuse Fen-Phen, which is like a weight loss drug, but one of the two drugs in it is phentermine, which I did have access to standard in my lab -- in the lab. When I was debating -- after I'd run out -- sorry. After I had run out of the methamphetamine, I was debating between doing the dextroamphetamine standard and the phentermine standard, so I tried I guess both for a short period and decided to go with the amphetamine standard. Once I ran out of the amphetamine standard, I started using the phentermine standard. And so the Fen-Phen refers to phentermine.

Q. Go to page 27?

A. Yes.

Q. When you initially went to DBT they did an initial intake on you, right? You gave a history of what you had used, correct?

A. Correct.

Q. So on this page towards the bottom, it says: Client started using methamphetamine and cocaine at her job as a chemist starting in 2004. She has used somewhat consistently for the last eight years. She has had several periods of sobriety during this period, the longest of which was five months.

Now, that initial intake happened in the spring of 2010, correct?

A. Correct.

Q. So if you go back eight years, that would be since about 2002?

A. I'm sorry. There was a period where I was using pot pretty heavily while I worked in the HIV testing lab in Boston.

Q. And were you using anything else besides pot?

A. Occasionally I would get -- we would get either like ecstasy pills and I was using

alcohol.

Q. Bates 31, please?

This is entitled Medical Progress Notes but under Perceptions: The client --

A. Yeah.

Q. Do you see that?

A. Yeah.

Q. The client denies auditory or visual hallucination. She reports when abusing stimulants she has had perceptual disturbances in the past, including paranoia and auditory hallucination. The client's judgment is impaired due to her ongoing substance abuse. It is difficult to evaluate the client's level of insight.

But, again, you didn't write this, correct?

A. Correct.

Q. But the therapist notes that your judgment is impaired due to her ongoing substance abuse problem. Do you agree with that -- at the time?

A. It may have been slightly impaired.

I mean, this was a half an hour intake with someone. It was her perception of me at the time.

Q. Do you think your judgment was even slightly impaired?

A. My judgment may have been impaired, yes.

Q. Okay. How do you reconcile your judgment being impaired with what you told the Grand Jury a couple weeks ago about the -- your ability to do tests appropriately?

A. I don't feel that it impaired my ability to perform the test accurately.

Q. Why?

A. It was one thing in life I actually cared about was doing my job well. I never wanted to analyze anything incorrectly, especially if I was going to send someone to jail that didn't deserve it. And I -- overall the stimulant use did help me focus on the issue or task at hand. I would say my judgment was impaired more in me actually deciding whether or not I should or could take

the drugs and I think it impaired my judgment more about my home life situation than my work life.

Q. All right. Backing up, you first said you think the drugs impaired your ability at work to do testing?

A. Correct.

Q. All right. So in the process of your testing, were there mechanisms involved in the testing that auto checked whether the process was correct or not?

A. Yes, there were.

Q. So explain that.

A. Everything from, you know, making sure the crystal tests, the results for that would -- I don't want to say match but match, you know, any gas chromatograph tests or color tests that we did to make sure results are consistent throughout the process.

Q. Page 40, please? Now, we're in July of 2011 and towards the bottom under Subjective: The client reports a marked decrease in substance abuse and increased

sadness directly related to her relationship with partner.

Do you remember a period of time in the middle of 2011 when you were abstaining from drugs?

A. Yes.

Q. Do you have a sense of how long it was?

A. I am not sure. I know by that point I was in my second six-month period of DBT and I was working the program well. I was utilizing the tools and skills I had learned and, you know, I was reaching out for phone coaching with my therapist when needed and I felt I was having -- my recovery was getting better I guess.

Q. Now, these DBT records go all the way through 2012. So right now we're in July of 2011. Did you go to DBT continually for that period of time consistently?

A. Yes, I went from June of 2010 up to January of 2012 so.

Q. To January of 2012?

A. January of 2012. Wait. It was a -- 19 months so, yes, January 2012.

Q. Okay. Let's go to 46. So just looking at the date, which is at the top, session time is September 27th, 2012 and if you'd turn the page to 47, there is a -- you can just take a look again at this but, obviously, this is a report of an interaction with you. Does this help you remember the period of time that you were going to DBT frequently?

A. Was this a date of 2012?

Q. September 2012.

A. I was not in DBT at that time. I didn't -- so I went and stopped going to DBT I guess in January of 2012. There were -- I restarted in a group through the same ServiceNet in June or July for a couple months and then I started with an individual therapist.

Q. Should we then continue to see records for you during the course of 2012, they just won't be from DBT, they will be from

the group --

A. Correct.

Q. -- interaction?

A. Correct. Anything after January 2012 were not DBT records.

Q. Okay. You were arrested in January 2013, right?

A. Correct.

Q. And post arrest tell us about your drug use?

A. It was escalating quite heavily. I had eventually run out of phentermine standard and started --

Q. (Interposing) I'm sorry, talking about post arrest --

A. Post arrest.

Q. -- January 2013.

A. Sorry. What was the question about again?

Q. Tell us about your drug use post arrest?

A. Post arrest, I used cocaine one night in December 21st of 2013.

Q. So between your arrest in January and between that one time that you mentioned, December, did you use any drugs?

A. No. I drank but I didn't use any drugs.

Q. And what happened in December that you used drugs?

A. I was with a friend -- actually, going over to another person in AA's place and was not anticipating there to be drugs but they ended up getting some cocaine. I resisted for the first batch they had, the first bag they opened, but they got another one and I didn't resist so I used that night.

Q. And once you ultimately were convicted of this crime and reported to -- to be incarcerated, did you tell the authorities there at the jail about your -- your use in December?

A. I may have. The reason I -- although my plea was in January of 2014, like I said, I used on December 21st of 2013. On the 23rd, which was a Monday, I had probation and a

final pretrial hearing and I -- actually, I'm not sure if I had a pretrial hearing that day. I had probation and my urine screen came back positive for cocaine so instead of -- they basically sent me right to jail and in front of a judge for violating my -- terms of my pretrial probation.

Q. Okay.

A. So I'm sure the jail was aware of why I was there that early I guess. It was all over the news. I'm not sure.

Q. So why don't you turn to the next tab, 223; do you see that?

A. Yeah.

Q. And go back to 224 and on top it says Anna Kogan, K-O-G-A-N. Who is that?

A. She was a therapist. I had started doing another group through ServiceNet and that summer ended up trying to find an individual therapist. I saw her twice. We met the first time. It was, I guess, a normal first visit, you know, what do you want to work on, what's your story basically. We set

up another appointment. When I went there for the second appointment we talked and she did not feel comfortable working with me. My current situation with my drug use and my -- my job, she didn't feel qualified to help me so we decided not to continue meeting.

Q. Okay. And that first interaction that you had with Kogan, were you candid with her?

A. Yes, I believe I was.

Q. And so these records, although they're small, have you seen them before?

A. Yes.

Q. And do you believe anything in these records is inaccurate?

A. I believe it's accurate.

Q. You can take a moment.

A. I mean, slight things that are wrong. I mean, it says I did not resume therapy until 2009, at which point I received DBT treatment at ServiceNet. I mean, that was all -- at first I had seen an individual therapist starting in 2009 and then went to DBT therapy.

Q. Okay. Look under Substance Abuse History; do you see that part?

A. Yes.

Q. It says: Client denies any past or present alcohol use. That's not true, right?

A. Where?

Q. I'm sorry. On 225?

A. Oh. Oh, it states: See history of presenting problem and client denies any past or present alcohol use.

I don't believe I was using alcohol at the time. Obviously, I drink or I had had a drink in the past. It wasn't a problem.

Q. Okay.

A. I was more of a social drinker than -- I didn't -- I would rather be under the influence of stimulants than alcohol any day and it took away from the high I was trying to obtain.

Q. All right. Can you go to 230, which is the next tab? These records begin the Hampden County Sheriff's Department and Correctional Center. Is that where you

ultimately were incarcerated?

A. I'm sorry. The -- well, the Women's Correctional Center in Chicopee.

Q. Yes. So we're not going to go through this in detail but I just want you to identify these records. Are these your records that were produced? (Indicating)

A. I'm assuming. I've never seen them before.

Q. Okay. Why don't you take a second to look at them?

A. Not that it matters, on the court ordered privilege they do have my birth date wrong.

Q. Okay. What page are you on?

A. Page 232.

Q. Okay.

A. Obviously, that didn't stop them from getting my records.

Q. If you'd go to page 250?

And at the top under Summary there's a block and parts of it are redacted. In the middle it says: She states she was using

cocaine, six lines recently, and alcohol, two-thirds a liter of vodka when she was using heavily. She states that she's been diagnosed with polysubstance abuse.

First of all, the writing there, is that true?

A. I believe when I was brought to jail that night I didn't use at the time. Okay. When I violated my pretrial probation, the night in question that I violated I did use about six lines of cocaine.

Q. Okay.

A. As for the alcohol use, two-thirds of a liter I think is a low estimate. It was two-thirds of a big bottle, the 1.75. I hadn't drank since July of 2013. I had showed up to probation one day under the influence of alcohol at 10 in the morning, at which point, basically, it led to go to detox even though it wasn't technically a violation of my probation. They probably got me for driving intoxicated to get to probation and it was just under the legal limit but that shouldn't

matter. So when I had been drinking, basically in June and July of 2013, I was drinking very heavily, probably a replacement drug and for all the stressors in my life.

Q. Okay. So we're going to wrap up this part of the testimony. Ultimately, when were you released from incarceration?

A. January 5th of 2015.

Q. All right. So the beginning of this year and you're on a period of probation, correct?

A. Correct.

Q. And one of the conditions of your probation is that you abstain from any drug use?

A. Drug and alcohol use.

Q. And have you had any issues with using drugs?

A. No, I haven't.

Q. Have you been checking in with your probation office -- officer?

A. Yes, I have.

Q. How often?

A. At this point every two weeks I check in with her.

Q. Do you receive random drug tests?

A. I'm subject to random drug screenings and she does give me alcohol -- or breathalyzers and urinalysis almost every time I see her.

Q. All right. We'll continue on.

Do you need a break?

A. No.

Q. No break?

MS. WEST: Special Assistant Velis.

MR. VELIS: Ms. Farak, just prior to Attorney Tom Caldwell asking you some questions, I have some -- very few questions. But in answer to Attorney General West, do you need a break at this moment?

THE WITNESS: No, I'm all set.

MR. VELIS: Okay.

*****

EXAMINATION BY MR. VELIS

Q. Ma'am, this phenomenon known as spectra in terms of comparing unknown and known samples, what is it?

A. Once the substance in question is dissolved, we -- after doing the crystal tests and whatnot, we send it through the mass spectrometer and the gas chromatograph where I think I explained it separates a substance into its components and then it will blast each component with electrons to basically make a chemical fingerprint --

Q. Okay.

A. -- what's in it and so we -- that's called the spectra, the chemical fingerprint.

Q. All right. So --

A. We compare it.

Q. -- you do this and you compare it, the known with the unknown?

A. Correct.

Q. And the comparison that you make eventually evolves into a judgment call that you're gonna make?

A. Correct.

Q. Now, those judgment -- that judgment call, as I say, is determining whether they're the same or whether they're slightly the same or not the same at all?

A. Correct.

Q. Is it fair to say that they're never exactly the same?

A. I would say that is fair to say, yes.

Q. Okay. So you from time to time make these judgment calls in your capacity of being an analyst?

A. Correct.

Q. And Ms. West had asked you, based upon your testimony at the previous Grand Jury proceeding -- and correct me if I'm wrong -- wherein you indicated that you were impaired conducting these tests for a protracted period of time from 2004 all the way up to 2000 whatever that date was; is that correct?

A. That is correct.

Q. You recall your testifying to that?

A. I do.

Q. Okay. Now, Ms. West just precisely asked you to explain what a -- excuse me. And in addition to that, you responded to me that while you were conducting these tests, you had no problems with the accuracy of them in conclusion?

A. Correct.

Q. And I'm basically going to ask you the same thing that Ms. West asked you but I want for my own purposes to be clear as to what you said and what you meant when Ms. West asked you, in essence, why you say that despite the fact that you were, quote, slightly impaired or impaired, that the testing was accurate.

Now, the last sentence I want to say -- and you can answer the question and then we'll let Mr. Caldwell examine you.

A. Mm-hmm.

Q. Did I hear you say that, in essence -- without using these words -- your answer to her question as to why you felt that this testing, notwithstanding your being

impaired, was accurate was because you had a sense of duty?

A. Correct.

Q. So that's the thing -- if there's one thing you could point to to determine or to bolster the fact that you say that all of this testing that you did while impaired was accurate, it was that you had a sense of duty?

A. To make an accurate analysis.

Q. Correct. There's nothing scientifically or tangibly that you can point to that says that you know why these were accurate analyses?

A. If I may, besides doing a visual comparison of the spectra of the known standard as well as the piece of evidence, the computer program also does a match quality that compares it to an internal standard in the computer for the known substance and would give a match quality for similarities between the two substances.

Q. And you would observe this match quality?

A. Correct.

Q. And you were impaired when you observed this match quality?

A. Correct.

Q. So your judgment was impaired even while you were observing this match quality?

A. If you're saying my -- my judgment was impaired for everything, then I guess so.

As I said, if it wasn't 98 or 99 percent match quality, we didn't consider it a positive match quality.

Q. Okay. So to find -- in essence, you were impaired --

A. Yes.

Q. -- your judgment was impaired from time to time, correct?

A. Correct.

Q. Now, these basically are judgment calls that are made when you observe for the purposes of determining a match?

A. Like I said, I mean, my physical comparison of the two spectra would be a judgment call but when it pops up a 99 percent

match quality, I don't have much judgment about that. It is a fact that that is the match quality, if that makes sense.

Q. So you see that 99 percent come up?

A. Correct. It's printed on the printout.

Q. I'm sorry?

A. It is printed on the printout of the result -- of the spectra.

Q. So this is what you stand upon when you say that, notwithstanding being impaired, you still made accurate analyses during the course of the time period from 2004 to that end date that we had mentioned, despite the fact once again that your judgment may have been impaired?

A. That is a big factor in why I believe that my accuracy was not compromised.

MS. WEST: Just one more question about that. If the match quality wasn't 99 percent but, nonetheless, you sent this through, you made a finding that it was what police purported it to be, what would

happen? Would that be checked? Would somebody find that at the end?

THE WITNESS: No, they would not. And, like I said, depending how cut a substance was, the match quality might be down to, you know, 98 percent. So, once again, with each fingerprint being a unique -- a unique spectra, it's not as if a different substance would give that spectra for a false positive.

MS. WEST: And so if you were wrong and that percentage came out to be less than 98 percent, if it was 70 percent, what are you supposed to do?

THE WITNESS: At 70 percent it would be called negative.

MS. WEST: And would a piece of paper say that, would a certificate?

THE WITNESS: Yes, a certificate would say that there was no narcotic -- illegal substance or narcotics found.

MS. WEST: And is the

machine such that it's automatic if it's below 98 percent, it says negative?

THE WITNESS: No, it's not. We would look at the match quality, the results of all our testing and then we would have to report on a result sheet that it was negative.

MS. WEST: When you report on the sheet, are you writing negative or typing negative?

THE WITNESS: We're writing negative.

MS. WEST: And is that as a result of you seeing the data?

THE WITNESS: Seeing the data in front of us.

Q. (By Mr. Velis) All right. So for the most part the thread that runs through all of your exercise in analyzing is an observational component; it's all based on observations when you make your judgment?

A. When we make -- it is -- when we determine the result, it is based on our

observations of the test results.

MR. VELIS: Mr. Caldwell.

MR. CALDWELL: For the record I'm Assistant Attorney General Thomas Caldwell. I'm going to take a brief five minutes because the witness needs a break. The time is approximately 10:25 a.m. We'll go back on the record in approximately five minutes.

(Brief recess taken.)

MS. WEST: Ms. Farak, you know you're under oath.

THE WITNESS: Yes, I do.

MS. WEST: I have a few followups on what we were talking about when we left.

EXAMINATION BY MS. WEST

Q. You were indicating that you made observations of the test results and those test results would come back at 99 or 98 and if they did then you would take that number and that would -- you would write them down and issue a positive finding, right?

A. Well, if those test results, the 99 or 98 percent, also matched the results from our previous tests, you know, from if -- it wasn't just the results of that one test. There was a series of tests that all -- we put the results in our lab notebook, look at the series of results and.

Q. And if those comparisons were such that would lead to the positive, you would just go on, right?

A. Correct.

Q. If they led to negative, would you retest it?

A. We might retest it for -- if it just appeared that it could have just been a weak sample, like it was a very weak and diluted down, we might do an injection into the instrumentation. We might inject five microliters instead of one microliter, just because there is a minimum number of atoms or whatever that need to be there in order for the machine to pick it up, if that makes sense.

Q. Okay.

A. If it didn't appear to be one of those situations, like say there was no peak in the graph where we thought whatever suspected drug it was was, we may run it on a longer, broader range set of conditions. So instead of like -- for example, coke and heroin and marijuana and your normal drugs come out in a specific -- under specific conditions between minutes like two to ten.

We did have a range that started at a lower temperature and ran for 30 minutes and, you know, it held it at the higher temperature longer so if, for instance, things like amphetamines elute through the column in the machine quicker, to see if maybe we missed something because our -- we weren't looking at a broad enough range of results. If it still came back negative over that broad range of results then we would report it as negative.

MS. WEST: Thank you.

MR. CALDWELL: This is Assistant Attorney General Thomas Caldwell for

the record.

EXAMINATION BY MR. CALDWELL

Q. Ms. Farak, I'll just approach and give you a packet and in that packet there are several exhibits marked Grand Jury Exhibits 2 through 11. I'm just going to go through these.

Now, looking at Grand Jury Exhibit Number 2 before you -- and on the screen for the Grand Jurors to review -- can you please tell the Grand Jurors what exactly Grand Jury Exhibit Number 2 is? (Indicating)

A. It is a pros and cons list or chart for engaging in my target behavior, which in this case is using drugs or resisting the urge to use. The pros and cons list is one of the tools that DBT -- I don't want to say suggests or recommends to use to, A, to take time out but to see the pros and cons of either, you know, following through with the target behavior or resisting.

Q. Okay. So now I'm going to step back and ask you some additional questions just in

regards to this document and the other documents I've placed before you.

Now, you testified previously that you were arrested in January of 2013, correct?

A. Correct.

Q. And you were subsequently indicted and prosecuted by the Office of the Attorney General of the Commonwealth of Massachusetts, correct?

A. Correct.

Q. And in approximately January of 2014 you testified you went to jail?

A. It was in December of 2013 but.

Q. When your pretrial probation was revoked?

A. Revoked. But the plea date was going to be in January of 2014.

Q. And during the pendency of that case you were represented by an attorney, correct?

A. Correct.

Q. And you were indicted for possession of controlled substances, tampering with evidence and theft of controlled substances

from a dispensary area, correct?

A. Correct.

Q. And you pled guilty to those charges?

A. Yes, I did.

Q. And you received a sentence from the judge?

A. Correct.

Q. And it was two and one-half years in the House of Corrections?

A. Correct.

Q. Eighteen months to serve, the balance suspended for five years?

A. Correct.

Q. And some of the other charges you were also on probation for five years and it ran concurrently?

A. Everything was -- ran concurrent.

Q. And as you testified earlier, you are on probation now?

A. That is correct.

Q. With certain conditions of probation which include abstaining from drugs and alcohol, correct?

A. Correct.

Q. Okay. Now, are you currently on medications today?

A. Yes, I am.

Q. What medications are you on today?

A. I am on two types of insulin. I am a diabetic so I have to inject myself with insulin and I'm on an antidepressant, Lexapro.

Q. Now, the antidepressant, does that affect your ability to recall or understand anything?

A. Not that I'm aware of.

Q. Now, as a result of the case that you were subsequently -- that you were incarcerated for, the tampering and theft of controlled substances, the Mass. State Police and the Office of the Attorney General began an investigation, correct?

A. That is correct.

Q. And it's your understanding through your attorney that certain search warrants were executed on various pieces of your property, correct?

A. Correct.

Q. And one was the automobile that you owned, which was a Volkswagen Golf?

A. Correct.

Q. And as a result of that search warrant being executed of the Volkswagen -- in the Volkswagen Golf, the state police ceased certain items and materials, correct?

A. Correct.

Q. It's fair to say that this worksheet, Exhibit Number 2, was one of the items that was taken from your automobile?

A. I believe so, yes.

Q. Okay. And have you had an opportunity to look at this Grand Jury Exhibit previous to today's date?

A. To today's date?

Q. Yes.

A. I wrote it so, sure.

Q. So fair to say you're familiar with it?

A. Correct, yes.

Q. Did you have an opportunity to review

this with your attorney?

A. We did go down to the Attorney General's Office in Springfield and have a chance to go over some of the pieces of evidence that they found or possible evidence.

Q. Okay. So during the course of you being prosecuted you were able -- these were provided by the Office of the Attorney General to you and your attorney?

A. I don't believe we have a copy but we did get to view the evidence.

Q. Now, you've indicated this is part of your DBT therapy. Can you please state to the Grand Jury -- I don't know if they can read your handwriting -- what exactly you indicated in the Pro column?

A. So in the Pro column of resisting the urges to use drugs, I had been feeling better about myself and I don't lose my phone coaching. In DBT if you engage in a target behavior, you lose the privilege to call your therapist for -- for a day, 24 hours. It's to encourage you to call before you engage in

target behavior. Another pro was it was better for my health.

Q. And that would stop -- was to stop you from using drugs?

A. Correct, for resisting the urge, yeah. And I wouldn't get caught.

Q. And you say you wouldn't get caught, what do you mean by that?

A. Directly using drugs at that moment. That was a pro for resisting the urge. There was also a chance of me getting caught using.

Q. And when you say "getting caught," do you mean getting caught by police or getting caught by employees or supervisors at the lab?

A. I was talking about employees or supervisor at the lab. I knew eventually if I got caught there, I would get caught by the police but it was pertaining to work.

Q. Okay. Continue.

A. That there would be no crash afterward coming off of cocaine or whatever stimulant I was using. And that I could focus my energy on my work and not my target

behavior.

Q. And the column below that's indicated "TB," what's that?

A. Target behavior, which would've been acting on my urge to use drugs.

Q. And it's fair to say also to use substances at the laboratory?

A. Correct. And under Pro is instant gratification.

Q. And as to the Cons on this worksheet?

A. That I wanted to do it in the moment, mostly psychologically, not so much a physical addiction but that may lead to a decreased productivity if I was distracted by the urges, if they maintained within me and didn't dissipate.

Q. And when you say "productivity," do you mean productivity at work?

A. At work.

Q. And the TB or target behavior in the Cons column was what?

A. That I wouldn't be able to call Anna, which was the phone coaching. That I would

feel bad for engaging in this, for using, or if I lied, which would lead to more shame. The possibility of getting caught, the crash afterwards. That it could trigger continued use, that it might not be doing a quick whatever and that be the end of it. And it would waste time while I was preparing to use it.

Q. Okay. And, now, in terms of this document, Grand Jury Exhibit Number 2, do you recall drafting this?

A. Specifically, no.

Q. No. But it's fair to say it was during your DBT --

A. Correct.

Q. -- therapy?

A. Yes.

Q. Which was -- and remind the Grand Jurors when was that?

A. The middle of -- like June of 2010 to January of 2012.

Q. Now, moving on to Grand Jury Exhibit Number 3. Please review that item that's

before you. It's up on the screen for the Grand Jurors to look at. (Indicating)

A. It's the backside of our diary sheet. In DBT we got a diary sheet to fill out every day. This is basically a list of the different skills that DBT tries to teach which can offer help in resisting urges, acting on your urges. So each day at the end of the day you would go through and check off which skills we used throughout that day, not to be accountable but just what skills we used so we wouldn't -- when we were feeling emotional, vulnerable or dysregulated to try to bring us back to the baseline.

Q. And there are notes on this Grand Jury Exhibit Number 3. Would you please state to the Grand Jurors what that says?

A. Yeah. It says: Wednesday I kept thinking that most things I said to others sounded stupid or the, quote, unquote, where the hell did that come from feeling. And it was at work, at doggy daycare. We brought our dog to -- anyway, and a little bit at the DBT

group. Just when I tried to have conversations with people I was sometimes socially awkward and say things that --

Q. Was that anything related to your use of drugs at that point or paranoia?

A. That's something I've always felt. I don't think it directly had anything to do with my drug use. Like I said, I don't actually remember writing that so to remember that day or what was going on that day.

Q. And it's fair to say this was also seized from your automobile pursuant to a search warrant?

A. Correct.

Q. Moving on. Before you is Grand Jury Exhibit Number 4. We'll go over this in detail. Can you please explain to the Grand Jurors what that is? (Indicating)

A. It is an Observe and Describe worksheet. So in previous exhibits there was a list of different skills and things to do to try and deregulate yourself or to re-regulate yourself and this worksheet was one of those

things that they suggest doing. So please think about an event and, you know, your feelings about the event and how you -- what happened and what you did in response.

Q. Can you please go through the different emotion regulations --

A. Okay. So --

Q. -- and start with Vulnerability Factors, which is at the top?

A. Okay. So the vulnerability factors, what made me vulnerable on the specific day I wrote this, I was tired in the morning as though I didn't have enough sleep the night before, and the vulnerability factor was that I already had urges to use earlier in the day.

The emotion name was shame, with an intensity of six-and-a-half on a zero to 10 scale.

Q. Okay. Now, as to Prompting Event, would you please read that in its entirety to the Grand Jurors?

A. Sure. So it says: Told Jim, supervisor at work, earlier in the week that I

had put DEA application in but I didn't -- or I hadn't. I figured I would do it later or soon. And then on this day I found out I needed his signature on the sheet, leading to knowing that he will know -- he knows or will know that I lied about already having it submitted.

Q. Okay. Who's Jim?

A. Jim is Jim Hanchett. He is or was the lab supervisor in the lab.

Q. Okay. And you said "DEA." What's the DEA?

A. The DEA is the Drug Enforcement Agency. I submitted an application to go to a week-long training. So there was an application process that I was slow getting in.

Q. Okay. Now, you said you told Jim earlier in the week you put the DEA application in but you didn't. Why did you lie to Jim?

A. Um, why did I lie to Jim? I lied because I thought it would make me look

unproductive or that I was dragging my feet on it.

Q. Is that something that was required of the chemists at the lab, to go to a DEA training?

A. It was not required, no.

Q. Did any other colleague at the lab attend this DEA training?

A. Rebecca attended it the year before.

Q. And that's Rebecca Pontes, correct?

A. That's Rebecca Pontes, correct. And I believe the year I went there was a chemist from the Boston lab that got to go, so I think with me it was one person from the Amherst lab and one from the Jamaica Plain lab. And Rebecca when it was her, I think it was two people from the Jamaica Plain lab.

Q. Do you recall on or about when that training was?

A. That training?

Q. The specific one that you're referring to in this worksheet?

A. The training itself was in March of

2012.

Q. Now I'm going to take you down to the Action Urge on the Emotion Regulation worksheet and can you please read what you wrote to the Grand Jurors?

A. The first in the Action Urge, so the first -- what I felt like saying or doing, the first thing was to ask Rebecca, or Becky, who she had sign the sheet because she had taken this conference previously to know if I had to go through her -- or through Jim or could it go through someone else, but the second action urge was to use. And in parentheses it says: I have 12 urge-ful samples to analyze out of the next 13.

Q. Now, can you explain what you meant to the Grand Jurors when you said that?

A. What I meant was that 12 out of the next 13 samples, pieces of evidence that I had to analyze, were all substances I would like to use, that I may be tempted to take from, meaning cocaine in this case.

Q. And so in this case it was cocaine;

was it powder cocaine or base cocaine if you recall?

A. I really don't know for sure. I started using cocaine base or crack at the end of 2011 but I believe -- so I'm not sure if this was the end of 2011 or beginning of 2012 when I wrote this.

Q. But it's fair to say --

A. (Interposing) But it was one of the two and it was definitely a piece of evidence.

Q. Now, those 12 out of the 13 samples, were those random or were they by your own design? Did you use -- you had previously testified that at certain points you would go in and manipulate the samples in the drug safe so you would get them. Was this, if you know, one of those occasions?

A. I don't recall. When I believe I wrote this, due to the timing of the DEA conference, I don't believe I was looking at samples ahead of time to try to get certain samples. So if I had to take a guess, I think it was just random at that time but I don't

know for sure.

Q. And how did you get to know that there were 12 out of the 13 samples that you may have used; were they already given to you or?

A. They were already given to me.

Q. Now, going to the next one, What I Did or Said, could you please state what you wrote to the Grand Jurors?

A. I called Anna, who was my individual therapist, and I committed to not using that day. And then I also asked Rebecca about who she had sign the paperwork and she said she thought Jim, Jim Hanchett signed.

Q. So going back up to the Action Urge which we just previously talked -- spoke about, you have under there "make up lie." What is that in reference to?

A. I believe that was making up a lie about why, you know, why -- where I was gonna get it in and I didn't and make up a reason why I hadn't sent it out.

Q. Why?

A. To tell Jim about a reason -- a lie why I didn't actually have it done when I said I did.

Q. So that has nothing to do with your taking samples or using at work?

A. No. Making up a lie, no.

Q. Okay. Can you move on to Grand Jury Exhibit Number 5? That's up on the screen for the Grand Jurors to see.

This is a very similar worksheet. Can you briefly explain to the Grand Jurors what it is? (Indicating)

A. It's the same format, a worksheet for another -- to observe and describe the emotions I was having.

Q. And that's obviously part of the DBT training?

A. Correct.

Q. Going to the first caption under Vulnerability Factors, you indicated: Last night with Molly. That's what you wrote on the sheet?

A. Yes.

Q. What does that mean?

A. Molly was the first name of the group therapist that I was -- when I was in DBT we had the individual and we had the group therapist, so by reading this I feel I probably had a -- I don't want to say tough but emotionally unsettling group therapy session the night before.

Q. Now I'm going to take you down to the Prompting Event, which is number three. You stated -- you wrote: Got a good -- in quotation marks -- sample at work and having urges to use and having that I will be --

A. (Interposing) Knowing that.

Q. -- knowing that I will be the only one here after lunch. Can you please explain that to the Grand Jurors?

A. That I know I'll be the only one there after lunch? Well, according to the vulnerability factor, both Sharon and Rebecca had decided to take the day off from work and I probably knew that Jim either had court or had to leave early so I would have been the

only one in the lab.

Q. Okay. So is it -- is it fair to say that you were actively using at work at this point when you drafted these worksheets?

A. Definitely.

Q. Okay. I'm going to move on to Grand Jury Exhibit Number 6. The worksheet is up on the screen for the Grand Jurors to look at.

Ms. Farak, can you please explain what this is to the Grand Jurors? (Indicating)

A. Okay. This is a hand-drawn sort of chart. On the diary sheets that I had shown you with all the lines on one side, there was a reverse side. Apparently when I wrote this I didn't have another diary card with me but for each day, besides recording what things we did to try to regulate ourselves, we also recorded different emotions that we felt on a regular basis, negative ones as well as target behaviors.

The first couple, killing yourself, hurting yourself, alcohol and drugs were on

everybody's worksheet, where the other two are more personalized I guess for people.

And so, for example, on the upper left it's basically the column pointing down for Tuesday. On a scale of one to five, how sad was I, how frustrated or angry, just to keep track. Part of DBT was also identifying what feelings you're having and just not acting on having a feeling.

Q. Okay. Ms. Farak, you have some notes there on Tuesday. Would you read those to the Grand Jurors?

A. Tuesday, it's probably what happened that day. I said work, cable guy, therapy, home, and in parentheses then I said more relaxed than when I left. Argument with Nicky, my ex-wife, regarding Smart TV. I offered to let her watch The X-Files. I tried to do my DBT homework and then I went to bed early.

Q. And it's fair to say that this was also seized from your automobile --

A. Correct.

Q. -- pursuant to a search warrant?

A. Correct.

Q. Moving on to Grand Jury Exhibit 7. Ms. Farak, it's fair to say -- and I'm putting this up on the screen for the Grand Jurors to look at. It's fair to say that this was also a document, Grand Jury Exhibit Number 7, was a document seized from your automobile pursuant to a search warrant? (Indicating)

A. Correct.

Q. And can you please tell the Grand Jurors what, in fact, this is right here?

A. Okay. This is a copy of somebody's lab request form. They had a urine screen. So my neighbor works with community legal aid and she helps under-advantaged people with their legal cases and he swore to her he wasn't using drugs and he got a positive urine. And she wanted to show me this to see if there -- but he was on Suboxone, prescribed, to come off opiates and heroin and whatnot. And she gave me a copy of it hoping that I would know something like how the drug

would show up on a urine screen through the spectra, if there could have been a mistake made in this guy's urine screen.

It has absolutely nothing to do with my work in the sense of me at work or the work that I was doing. I was just trying to help out a neighbor and her client to see -- well, what else could it, you know, what else might show up with a positive result for, I believe it came up with morphine, which the guy adamantly denied.

Q. Okay. So this, the notes that are on here, the checkmarks and circling, are those your notes?

A. No, no. I -- she gave me this copy.

Q. Okay.

A. Like I said, I don't know whose it is. She just asked if there was any way, you know, a Suboxone reading could be a false positive for morphine basically.

Q. Okay. And it's your testimony that this has nothing to do with your employment?

A. That has absolutely nothing to do

with my employment. She just thought I might understand it better than she could due to the nature of my job and of analyzing substances.

Q. Okay. Thank you.

Moving on to Grand Jury Exhibit Number 8, placing it up on the monitor.

Ms. Farak, it's fair to say this was also an item that was in your automobile that was seized pursuant to a search warrant? (Indicating)

A. That's correct.

Q. And can you -- it's indicated that it's a ServiceNet Diary Card. Fair to say that this is your -- part of your DBT also?

A. Correct.

Q. It has the same emotions and target behaviors that you've made notes on in the past, correct?

A. Correct.

Q. And there's certain dates here. I believe it starts on 12/19?

A. Mm-hmm.

Q. And runs through 12/25, December

25th. Do you recall the timeline that you drafted this diary card --

A. I don't --

Q. -- or when you did?

A. -- recall if it was in 2010 or 2011.

Q. Okay. And these are your notes on the diary card, correct?

A. Correct. And the dates are actually Tuesday, the 20th, through Monday, the 26th, but that's not as important I guess. When I saw therapy it went through -- so it was a week.

Q. Okay. Now, you have certain notes from Monday through Sunday, correct?

A. Correct.

Q. Can you tell the Grand Jurors what you wrote for Monday?

A. Under what I did today?

Q. Yes. What did you do?

A. Go home, expect to have relaxing day with Nicky but went downhill fast, bed by 6 p.m.

Q. Okay. When you say "but went

downhill fast," does that mean you were using or there were relationship issues with Nicky?

A. I believe that was a relationship issue.

Q. Can you please read to the Grand Jurors what you listed on what you did today under Tuesday?

A. I yelled at Nicky about everything in the a.m. and p.m., so probably before work and after work. I got mad about the computer and finding the recipe for the cheesecake and broken spatula, so blew it off. Bed early, hopefully up early tomorrow.

Q. Okay. Now, going to -- skipping down to Thursday --

A. Mm-hmm.

Q. -- can you please state what you wrote under your notes for Thursday under What did you do today?

A. Tried to resist using at work but ended up failing. Then: I know I should have called but had thoughts about how I felt last time I called.

Q. Okay. Let me stop you there. So on Thursday, and that would be December 22nd, you're unsure of the year, you used at work?

A. Correct.

Q. Do you recall what drugs you were using at work at this time, if you know?

A. Either time it would have been coke or crack, cocaine in -- if it was 2010, crack probably 2011.

Q. Okay. And move on to Grand Jury Exhibit Number 9?

A. Wait. Yeah, possibly crack, not definitely crack. I'm getting my years --

Q. Okay. I've placed Grand Jury Exhibit Number 9 on the screen. Can you tell the Grand Jurors what this is? (Indicating)

A. It's an article about a Pittsfield police officer who got into trouble being part of a steroid sting or probe, where he ended up getting caught I guess. He was actually part of the task force out there.

Q. And this was in your car and it was seized pursuant to a search warrant, correct?

A. Correct.

Q. Why did you have this in your car?

A. I had printed this out and I had actually given it to my therapist at one point, my DBT therapist. I had some handwritten notes on it.

Q. Can you please state what those handwritten notes are on the article for the Grand Jurors?

A. And Kirchner -- who is the name of the police officer -- seemed like such a good guy. I do feel bad for his five-year-old daughter. And then in parentheses I wrote: Thank god I'm not a law enforcement officer.

Q. What does that mean?

A. Thank god I'm not a law enforcement officer?

Q. Why did you write that in parentheses?

A. I'm not sure.

Q. And what does the -- what's the remainder of the note?

A. It says: P.S. Most of the cases he's

been a part of have been dismissed for exactly this reason.

Q. What does that mean?

A. The reason he made -- a lot of the cases he was part of the arrest, he was part of those cases that have been dismissed due to them not knowing. I mean, it was a little more involved than just the steroid probe but whether or not his role in those investigations --

Q. That he was under the influence?

A. Not that he was under the influence but did he have, you know, a financial stake in drug staying on the streets or that he was actually part of the ring selling steroids.

Q. And this Officer Kirchner, what department was he out of?

A. Pittsfield.

Q. Pittsfield. And did you know him personally?

A. I've known him. I've talked with him while I was in Pittsfield doing some -- testifying in cases but I don't know him

outside of seeing him in court.

Q. Did you ever have any cases where he made arrests for narcotic offenses and you did the test?

A. That's how I would know him, if we were both called in to testify for the same case in court.

Q. And did you have any knowledge of his steroid or alleged drug use?

A. Not at all, no.

Q. Did you ever discuss any drug use with him or?

A. No.

Q. Moving on to Grand Jury Exhibit Number 10. It's up on the screen for the Grand Jurors. Would you please tell us what this is? (Indicating)

A. This is an article about a woman who got jail time for stealing drugs.

Q. Okay. And it's fair to say it's an article from MassLive?

A. Correct.

Q. It's a case out of Springfield,

correct?

A. Correct. I believe it was federal since the judge was Michael Ponsor but, yes.

Q. Okay. And this was seized pursuant to the search warrant on your automobile?

A. Correct.

Q. Now, why did you have this in your car?

A. Because I didn't get rid of most anything. I don't know why I never cleaned out my car. The -- when the cops searched it there was so much paperwork, some relevant, some not relevant.

Q. When you say "not relevant," not relevant to what?

A. Meaning to a case. I mean, there was old magazines and mail and stuff like that that I hadn't opened in my car.

Q. But why did you have this?

A. Why did I print this in the first place?

Q. Yeah, why did you print this out and have it in your car?

A. I was obviously worried about getting caught and the ramifications of my getting caught at this time.

Q. Did you ever show this to any of your therapists?

A. I probably showed that to my DBT therapist, yes.

Q. And the article's about a Pittsfield pharmacist, a Nicole Bombardier?

A. Sounds good to me.

Q. B-O-M-B-A-R-D-I-E-R. And did you know this woman?

A. No, I did not.

Q. Did you have any personal interactions with her?

A. No.

Q. Moving on to Grand Jury Exhibit Number 11. It's up on the screen. Please tell us what this is? (Indicating)

A. It's an article about a former San Francisco Police Department drug lab technician that was stealing or at least a small amount of drugs from cases.

Q. And it's fair to say this was also in your automobile and seized pursuant to the search warrant?

A. Correct.

Q. Okay. Why did you have this in your car?

A. Once again I was worried about getting caught so I had a piqued interest in what the ramifications could be. I probably showed this to my therapist. I think I held on to these articles also as reminders. Even doing the pros and cons list, knowing like, oh, people do get jail time, people do lose a lot. My original use, I never thought I was gonna get caught. By the end, I knew that was the only way I was stopping. But in the time in between, obviously, I tried to keep -- I tried to stop and any little pieces of -- articles or pieces of -- any reasons I could find to quit, I tried to hold on to.

Q. Thank you.

THE FOREPERSON: Can the Grand Jury take a look at the exhibits?

MR. CALDWELL: Yes, absolutely. At this time I will publish to the Grand Jurors, Grand Jury Exhibits 2 through 11.

THE FOREPERSON: Thank you.

MR. CALDWELL: Go off the record a moment.

(Discussion off the record.)

Q. (By Mr. Caldwell) Ms. Farak, I've placed up on the screen -- this is a video recording. The video recording is a recording made during the course of the investigation of malfeasance in the Amherst drug laboratory. I am going to show you specific portions of the video and I'd like you to explain to the Grand Jurors what you see.

Okay. This is Chapter 1, Title 1. Can you explain what that is to the Grand Jurors, Room N251? (Indicating)

A. It's a door that -- it's the door to the evidence office where the officers will bring in the pieces of evidence to get logged into our computer system and then put into the

drug safe which is inside that room to be analyzed -- or to wait to be analyzed.

Q. This is Chapter 1, Title 3 of the video. Can you explain to the Grand Jurors what you are looking at on that screen right now? (Indicating)

A. So if you enter the door in the previous title, you get into this area, which is like a waiting room in case there's more than one officer there. The door in front of you goes directly to where the evidence officer sits and there's some chairs there for officers to wait until they're heard.

Q. Okay. So that's where the -- when the police will come and bring in samples, that's where they will wait to --

A. (Interposing) For the evidence officer to be available. We also had a telephone in there so if the evidence officer was out that day and we were all across the hall analyzing evidence, they would call and say, you know, we're here and so we'd go over and let them in.

Q. There's a black tab located next to the doorway. Can you please tell us -- on the wall -- can you please tell the Grand Jurors what that is?

A. It's a magnetic strip reader. On the back of our campus ID card we had a strip and only certain people were allowed access to that -- through that with that swipe. However, there was a key on the door -- the keyhole on the door also works.

Q. Okay. So the swipe pad gave access to all the employees at the lab to get into that evidence room --

A. Correct.

Q. -- correct?

However, you could bypass -- it's fair to say you could bypass that swipe card system just by using a regular key?

A. If you had a key. Well, a key that also only the lab employees had.

Q. Okay. But it's a key that you had?

A. Correct.

Q. And Jim Hanchett had?

A. Correct.

Q. Sharon Salem also had a key?

A. Correct.

Q. As did Rebecca Pontes?

A. Correct.

Q. Okay. I'm playing Chapter 1, Title 8 of the video. Stop that.

Can you please describe to the Grand Jurors what -- what room that was? (Indicating)

A. When you enter into that evidence room, the first part of this scan from the far left of the room showing the computer in the corner, scanning across the room to basically this desk. When the evidence officer -- when the police officer came in they would sit on what was now the left side of the desk. Our evidence officer would sit in the chair there and that is their computer station. The scale you can see kind of against the wall, the big square machine, and the heat sealer that was used when we processed evidence when police officers brought in pieces of evidence.

Q. And it's fair to say that's basically Sharon Salem's desk?

A. Correct.

Q. And at times, however, you sat behind that desk and acted as evidence officer?

A. Correct, yes.

Q. And you had referenced earlier in your testimony the heat sealer and the scale. Can you tell me -- can you just remind the Grand Jurors what process, why -- what process was used in weighing the evidence at this point in the procedure?

A. When the police officer brought in his evidence it was already in a sealed -- it should've been in a sealed evidence bag, whatever evidence bag that they had sealed -- had to seal it.

They would -- we would affix a barcode to each sample in front of the officer and then weigh the piece of evidence in the evidence bag on the scale and record that weight into the computer system in front of both and we'd both fill out and the officer

would get a copy of the drug receipt for it.

Q. Okay. And there's a heat sealer here?

A. Correct.

Q. And you referenced that heat sealer in your previous testimony, correct?

A. Correct.

Q. And that is used to reseal the bag after it was weighed --

A. Um, we --

Q. -- or how was this used?

A. Most -- some officers already had their evidence sealed in an evidence bag. Other officers had them in evidence bags but not heat-sealed, so before we would -- you know, while we were taking it in they would heat seal it in front of the evidence officer. This was only used for that reason.

At our lab bench, each of us had a heat sealer on it as well, so when we had finished analyzing a piece of evidence and were repackaging up, we had our own heat sealer to reseal the evidence in the evidence

bag.

Q. At any time when you were either acting as evidence officer or you weren't acting as evidence officer, did you ever manipulate the temperature on the heat sealer?

A. Yes.

Q. And why would you do that?

A. I occasionally did that on Wednesday mornings because I knew the Springfield Police Department normally came in on Wednesday morning and he did not -- or the department didn't already have the bags pre-sealed so he would seal them. He would seal them on site, so I would occasionally turn the amount of heat down hoping it wouldn't get a good seal and it would be a piece of evidence I would be interested in.

Q. So it would obviously give you easy access to the sample?

A. It would give me an easier access where I wouldn't have to rip the bag to get to the evidence. I could take it out and then heat seal over that heat seal mark.

Q. Okay. I'm now playing Title 16 of Chapter 1. I'll stop that. Okay. I'm going back. I'm now playing Title 14 of Chapter 1.

Ms. Farak, can you tell us what that is, what you're looking at on the screen? (Indicating)

A. That is our drug safe. Inside the evidence room to the far left -- you couldn't really see it because of the location -- but it's a locked room inside the evidence room where when police departments bring in evidence, we would store them until they were assigned to an officer -- or to a chemist.

Like, for example, the paper bags you can see in the back were from like one police department, so we kept all the same police departments in the bag together. And so, you know, if he needed the next 20 samples, you might take the first 20 of a bag or this bag might have five, this one might have four, this one might have three. You'd just take the next 20 or whatever, 17.

Q. So you kept the samples in large bags

per police department?

A. Right. But in each large bag -- each large bag contained individual sealed pieces of evidence, so they weren't -- each big bag had a bunch of smaller bags that were individually sealed.

Q. And what are these manila envelopes also on the shelf?

A. Those manila envelopes are samples that the lab had from the Jamaica Plain lab. When we did overtime, sometimes the supervisor would bring samples back from Jamaica Plain since their backlog was so big.

I mean, by this point the lab had closed but we had had these samples in our lab so it was kind of a limbo place. They couldn't be returned there. But there -- you can kind of see the barcode, the envelopes on the left. So those individual manila envelopes contained pieces of evidence that had been analyzed.

Q. And you had indicated this was directly located within the evidence room?

A. Correct.

Q. Okay. And was this locked at all times?

A. No. It was a locked door but it's -- when we were pulling evidence in or out, you know, it was unlocked. We all had access to it. Once again it had both a swipe code as well as a key so.

Q. And one could override the other?

A. Correct.

Q. And then in saying that, you could either swipe it or use the key?

A. Correct.

Q. And to your knowledge did it record when the door was opened, when it was locked?

A. It did not record that I'm aware of. Likewise, I've learned -- I guess I kind of figured it out while I was there -- that the number -- when you -- when you like swipe the card, not only did it not record if it was open or closed but it didn't record who swiped it.

One thing in this picture that was

not the way when I left is the cabinet on the right, you can see -- after that first bookshelf there's like a metal cabinet, can you -- that used to be in the lab and that's the drug cabinet that the standards were kept in, the locked cabinet. I'm not sure when that got moved into there, if it was a safety thing once the lab was closed or not but that was not kept in there.

Q. All right. And the metal cabinet is in the far right-hand corner of the frame here, correct? (Indicating)

A. Correct.

Q. Now, playing Chapter 1, Title 18. What do you see on the screen there Ms. Farak? (Indicating)

A. This is another angle of the drug safe. Basically we were looking in before; now you are looking out towards the door that opens to the evidence room. So this metal safe on your left is the drug storage cabinet.

Q. And this was not located in this room at the time that you worked there?

A. I don't -- I don't recall it ever being there.

Q. Where was this, was it in the evidence room or was it somewhere else in the lab?

A. It was not in the evidence room. At one point it was -- before there was renovation it was in a separate room that we analyzed our vegetable matter in and then it was moved to the laboratory.

MS. WEST: And this is one of the two places that you took the samples from, right?

THE WITNESS: Or the standards from?

MS. WEST: Sorry.

THE WITNESS: Yeah.

MS. WEST: The standards, yes.

THE WITNESS: Yes.

MS. WEST: And just one more question. On the screen we can see a piece of paper taped up to the cabinet?

THE WITNESS: Mm-hmm.

MS. WEST: Was that piece of paper taped up to the cabinet when you were taking standards out of it?

THE WITNESS: I don't recall it being taped up there.

MS. WEST: So do you know what that is? Are you familiar with that?

THE WITNESS: On our refrigerator we had a similar thing, a list of the chemicals and standards that were in there.

MS. WEST: Were you supposed to write on it when you took a standard out or?

THE WITNESS: No. It was just a list of what was contained, like what was actually physically in there. And I don't recall that being up. It could have been.

I know the safe wasn't in the -- the cabinet wasn't in the safe.

Q. (By Mr. Caldwell) I'm playing Title 19, Chapter 1. Okay. Now playing Title 19,

Chapter 1.

Ms. Farak, those last two frames that you saw, can you explain to the Grand Jurors what that is? (Indicating)

A. That is the inside of that metal cabinet where the drug standards were kept, an amount of drug standards were kept. There were a couple shelves on top and there were drawers with alphabetized, like the A standards were in this drawer. I mean, this cabinet was locked with a key.

Q. So that card -- that cabinet below with the letters on it, index card, did that also contain standards?

A. Correct, and it wasn't packed full. Some drawers only had one or even with the standards, depending if we had any standard that started with the letter Q or whatever but.

Q. And you saw in the earlier frame there was a standard inventory binder?

A. Correct.

Q. What was contained within that

binder?

A. I know when I first started there was a spot where we could record if we took out standards to make -- if we were taking out a small amount of aliquot of a standard to make to -- sorry -- to use for comparison on the machines, to note how much of it we've used. I don't recall it looking that clean. It looked like a newer label on the book to me that I recall.

Q. Who kept that list?

A. Whoever took from it was supposed to write it down what they took out.

I know when we were being taken over by the state police, Jim started going through and really recording all the standards and, as you can see, sealing some in plastic bags with initials.

Q. So previous to that, that was not done?

A. What wasn't done? Each of us put in a sealed bag?

Q. Yes.

A. That is correct, it was not. Like I said, the cabinet was sealed. I don't know when that -- like I said, the label in that book, he may have done that.

I know once he started doing the inventory and sealing everything in plastic bags, I think pursuant to what the state police wanted --

Q. (Interposing) Versus what the Department of Public Health had you do?

A. Exactly. I stopped even trying to look at standards because I knew I couldn't get away with taking them. At that point most of the standards I wanted were gone anyway.

Q. Is it fair to say that the policy regarding standards was more in line with what the Jamaica Plain, Hinton laboratory was doing in terms of security and inventory?

A. Um, maybe more in line. I mean, I know the Jamaica Plain didn't have every -- I don't believe it had everything in plastic bags but there was only a couple keys that people had and everyone didn't have access to

them.

Q. There are some jars here, I believe approximately three, maybe more behind it.

A. Mm-hmm.

Q. Do you recognize those?

A. Specifically not at this -- I mean, I can't tell what they are by reading them. There were jars in -- in the cabinet, yes. That's where I had gotten the big jar of amphetamine was on one of those top shelves in the standard because there was no way it would fit in the drawer. (Indicating)

Q. Now, you've referenced and there's several shelves. Back while you were employed at the lab were these shelves filled with similar type jars?

A. I wouldn't say filled but there were a few jars, maybe half a dozen. So, like I said, what had been the amphetamine standard I took. There was also a jar of caffeine, which we -- was a -- it was a standard. It wasn't a controlled substance but it was one of the things that drugs are sometimes cut with, so

besides having controlled substances as a standard we also had, you know, other substances as a standard.

Q. Now playing Title 22 of Chapter 1 of the video. Stop it.

Ms. Farak, do you recognize this room? (Indicating)

A. Yes. As soon as you step out of the drug safe and into the evidence room, to the left there was a door and if you opened that door, you looked into Jim's office, which is what you see here. That's his desk and his chair to the right. (Indicating)

Q. So his office was directly across from the evidence safe?

A. Not directly across but to the -- the safe was in the evidence room and if you opened the door on your left, it would go into another room, so it was like a 45 degree angle. But his room did not open directly onto the -- his room opened up into the evidence office, which then opened up into the drug safe.

Q. So if you know, if you were seated in any of the seats in Mr. Hanchett's office, could you observe direct -- in a direct line with the drug safe?

A. Not necessarily. There was a door there that sometimes was open and sometimes was closed.

Q. I'm going to play Title 28, Chapter 1. Stop it.

Now, is that the door that -- the door that you will see in this screen here next to the metal cabinet and the cart with boxes, is that the door that exited out into where the drug safe was? (Indicating)

A. To the evidence office. So if you went -- opened that door and the drug safe would be directly on your right. (Indicating)

Q. Now playing Title 28 of Chapter 1.

Ms. Farak, what frame are you looking at there?

A. What frame? I have no idea what frame.

Q. Excuse me. What's depicted on the

frame?

A. It's a picture of Jim Hanchett's desk.

Q. Now, you had previously testified that you had taken bags from Jim Hanchett --

A. Right.

Q. -- evidence bags that were previously initialed?

A. Correct.

Q. Did you take them from this desk?

A. No. I took them from his lab bench, which is in the lab part and not his main desk.

Q. Now playing Title 31 of Chapter 1. I'll stop that right there.

Ms. Farak, what door is this to do you recall? (Indicating)

A. This is a separate door leaving Jim's office going into the main hallway or corridor in the building we were located in.

Q. Okay. And there's a -- there's a touch or key -- type of keypad --

A. Correct.

Q. -- to the left of the door? What is that?

A. At night we would set an alarm for the lab and there were a couple different keypads. One side of the hallway, which is basically the evidence room, had a keypad, not the drug safe but the evidence room and this room. So in order to get into the room next to the drug safe, you had to set off the alarm and we all had our codes -- we had a code to turn off the alarm.

Q. And that was done every day and every night?

A. Every night, yeah.

Q. And you all had -- all four employees all had all the pass codes?

A. There was just one code to get in and out.

Q. So it wasn't particular to any one employee, there was just one general code?

A. Correct.

Q. And, if you know, it did not record when it was shut on and off?

A. I don't believe so. I'm not sure if it ever did. I -- considering I went in at times that it could draw suspicion and I was never questioned about it, I'm gonna assume it wasn't recorded.

My understanding is that if the alarm went off, after as long, I mean, the cops would be sent if you didn't turn it off. So, you know, you open the door, the alarm goes off. You put in the code and, okay, it went off. The cops aren't notified or whatnot, but I don't know if the company that ran the system recorded it over time or not.

Q. Okay. And you previously described the setup of the lab we saw in earlier frames, a waiting room, the evidence room, the evidence room itself, the drug safe which is also connected to the evidence room, and also Jim Hanchett, the lab supervisor's office. So these are all within one area of the lab?

A. Correct.

Q. So it's fair to say if you were to exit this room, Jim's office, you'd come to a

hallway. Where does that hallway lead you?

A. The hallway is a general hallway in one of the science buildings on the UMass campus.

Q. Okay.

A. There were exits directly to outside. You could go up some stairs and get to the lecture hall. So it was a public hallway.

Q. Now, was there any part of the lab that was across that hallway?

A. Yes, there was.

Q. And what was across the hall that was part of the lab in question?

A. To the -- a ways down was where we keep all of our records, our paperwork, our test results, you know, data from the gas chromatograph and the mass spectrometer. But directly across the hallway from here was the actual -- directly across the hallway from here is the lab that we did most of our lab work. There is one more room on the same side of the hallway as these labs that wasn't connected directly to these labs where we

analyzed our marijuanas and it had a fume hood.

Q. I'm now playing Title 37 of Chapter 1. I'm going to stop that for you, Ms. Farak. What is -- what room is this? (Indicating)

A. This looks like the main part of the laboratory that we do bench work in.

Q. It's fair to say this is what you referenced was across the hall from the evidence room?

A. Correct. There was two doors to the main lab. This door appears to be the one across more from the evidence room than Jim's office.

Q. And this is where all or the majority of testing would take place?

A. Correct.

Q. Now playing Title 38 of Chapter 1.

Ms. Farak, this is the same room where the drugs were tested like the earlier frame? (Indicating)

A. Correct.

Q. Now playing Title 39, Chapter 1.

Stop it right there.

Ms. Farak, can you explain what this workstation is that you see in Chapter -- Title 39, Chapter 1? (Indicating)

A. Directly, like from the bottom of the screen up --

Q. Correct.

A. -- there is a lab bench that is set up for use on both sides by a chemist. The side closest to us that looks really nice and clean was where Sharon would do lab work if she was doing lab work. On the other side of the bench was where Jim Hanchett would do his -- his bench work.

Q. And fair to say Sharon, her -- she was basically the evidence officer and did not do testing?

A. Correct. I mean, once in a blue moon she might but not recently.

Q. And your previous testimony was that Jim Hanchett, as the lab supervisor, would do testing but only if they were large samples or they were more --

A. (Interposing) Well, he would do large samples or if he had time his sample -- he did a lot fewer samples due to his other responsibilities and would normally choose to take some of the more tedious samples so Rebecca and I wouldn't get weighed down on one sample.

Q. So this Title 39, Chapter 1 in the video depicts Sharon Salem's workstation and Jim Hanchett's workstation?

A. Correct. It also shows in the back corner the refrigerator.

Q. And this refrigerator, that was -- that has always been in that location?

A. Within a couple feet of that location, yes.

Q. Okay. And what's contained within the refrigerator?

A. There were some of the standards including the methamphetamine standard that I took.

Q. So when you took that methamphetamine, I know you had previously

testified that at times you would administer it to yourself right in front of the refrigerator?

A. Mm-hmm.

Q. And at other times you would fill a small --

A. Vial.

Q. -- vial for your own use at your workstation or at another location?

A. Correct.

Q. And there was no lock on this refrigerator, correct?

A. There's no lock on that refrigerator.

Q. And if you could estimate, how frequently were Sharon Salem and Jim Hanchett actively doing work at that table?

A. Sharon, in the total time I was there, two percent max. Jim, maybe 20 percent, 30 percent. It's tough to tell with his administrative stuff and then also getting ready for court. He did a lot of copy -- in the evidence room there was also a copy machine where we'd make copies for discovery

packets.

Q. So it was an area that was easily accessible by you?

A. Yes, definitely.

Q. Now, Title 39 of Chapter 1, could you please explain --

A. Yes.

Q. -- what is on the screen now? (Indicating)

A. This is another lab bench that's set up with -- for two chemists. My lab bench was on the left side, lab 2A; where Rebecca's was facing me on the right side.

Q. So this was, in fact, your lab bench?

A. That side that looks really messy right there, yes, that was my lab bench.

Q. And can you please explain the equipment going from the left to the right on the screen that's located on the lab bench?

A. Okay. So the bottom left corner is a -- the microscope. We would use that to do -- to view marijuana to notice if there were certain features on the plant that would be

helpful in the identification of it.

We would also occasionally use a microscope if there was a pill that had like a worn imprint where we could use it to increase the image to try to read what it said.

To where are we going now; to right above it?

Q. To this item right there, the lab bench. (Indicating)

A. Okay. That is one of the -- each lab bench had two balances as well as a couple of microscopes. That is a balance that goes down to the thousandths of a gram I believe... tenths, hundredths, thousandths of a gram.

Q. What's this piece of equipment?

A. Which piece?

Q. Right next to the balance?

A. That white thing?

Q. Yes.

A. It's a tube rack, a test tube rack. For our marijuana, I mean, it would -- it involved doing a color test and we'd put a small amount in a test tube before we brought

it to the marijuana room to complete the analysis because the chemicals were not very healthy so we would do it in with the fume hood.

Q. So that -- it's fair to say there's also a heat sealer?

A. Correct.

Q. What's this piece of equipment at the top of the screen?

A. That is my -- it is the balance I used to get the weights of substances.

Q. Okay. Is it fair to say you -- all this equipment on the lab bench you would use in the daily course of work -- daily course of your workday?

A. Almost daily. I mean, we might not use one microscope one day or a few days if we didn't get the samples and we might not need to use the second microscope but they were there and things we would use frequently and commonly.

Q. And under this lab bench there were cabinets, correct?

A. Correct, there's a drawer and cabinets -- drawers and cabinets.

Q. I am currently playing Title 40 of Chapter 1. And stop it there.

Can you explain what this item is right there? (Indicating)

A. Oh, that's another heat sealer. We had a standard size heat sealer, which worked great for smaller samples but, you know, sometimes we would get, you know, 20 pounds of pot or 30 pounds of pot and we would need a longer heat sealer because we'd use bigger bags so this just was another heat sealer available to all people in the lab.

Q. Now playing Title 41, Chapter 1. Stop it there.

It's fair to say this is the view looking from your workstation to the other end of the laboratory? (Indicating)

A. Correct.

Q. And what's contained in this area of the laboratory?

A. This middle section or the whole --

Q. Yeah, the middle section.

A. Yeah, the middle section there are some sinks on the right where we would do our glassware, as well as the -- you can't see it but right on the left there were big metal boxes which were commercial dish ware washers for our -- some test tubes but also our flasks and beakers and things like that.

Q. What's located in the far end?

A. The far end is where we had our instrumentation, our gas chromatograph, our gas -- mass spectrometers, computer setups with them. We also had an FTIR set up at the far end.

Q. What is that? What is an FTIR?

A. It's an infrared spectroscope. It's another way -- with like certain substances that don't dissolve well so they can't be injected into the gas chromatograph, so it's another way you can analyze things from a solid state.

Q. Now, if you're working at the lab bench from previous screens, can you see what

was going on down at that end of the lab?

A. There were some things in the way. You had a computer obviously in the way. At the far end of the lab the benches had computers facing away -- both directions go away from the other end of the lab as well as the same direction. And there is a -- you can kind of see the wall on the left where the dishwasher was. That was a fairly thick wall that the end of the bench is and you couldn't see a direct to the lab. You could easily hide behind it.

Q. I'm currently playing Title 42, Chapter 1.

I'm currently playing Title 43 of Chapter 1.

A. This is Jim's workstation. He's at the far end of the lab.

Q. This is now Title 44 of Chapter 1.

This is still Jim's workstation, correct? (Indicating)

A. Correct. You're standing at the end of Jim's workstation. You can see the lab

bench I used. You can see the drawers. That would be my lab bench.

Q. And that was your lab station and there's drawers underneath?

A. Correct. And far back you can see the end of the lab with the computer station and instrumentation was set up. The dishwasher is the big shiny thing and that small room to the left is where -- well, Rebecca and I had desks in there and Jim did as well but, yeah, is where we would sit down and write our results in our lab notebooks.

Q. So when you were working with Rebecca, it's fair to say you were facing each other?

A. Correct.

Q. And what percentage of time were you working at the same time during the course of employment?

A. During the course of employment?

Q. Or the percentage?

A. No, no, I understand that. I mean, at the beginning it wasn't a big deal for us

to be facing each other a fair amount, you know, 70, 80 percent of the time maybe. Once we started to have to do our discovery packets and we had more non-lab bench work things to do, it decreased.

I also planned it at times where if I knew she was finishing up with lab bench work so I would go out and overlap, you know, for 15, 20 minutes knowing she was going to be done with her batch, so then I'd be at my bench by myself and she would be doing instrumentation or sitting at her desk doing paperwork. Like I said, I was rarely doing bench work at the exact same time that she was.

Q. And that was by design?

A. Correct.

Q. Now, going to Title 50 of Chapter 1.

A. That's the back of the dishwasher standing by that extra long heat sealer.

Q. Stop it right there. So what's depicted in this screen right here; is that the shared office you discussed? (Indicating)

A. That's the shared office. Jim's small desk there was the first one on the right. Then Rebecca had her desk. We had a desk that had a computer on it that Rebecca and I shared and then I had my desk at the end.

Q. Okay. What is -- what is this brown item here? (Indicating)

A. That is a refrigerator. That was purely -- we brought our lunches to work in.

Q. So there were no standards --

A. No standards.

Q. -- or anything kept in that refrigerator?

A. Not at all.

Q. And you said there was a computer?

A. There was a computer.

Q. For what purpose did you use the computer?

A. We used it to do our e-mails, work e-mails. We used it when we did multiples, like I said, if a sample had a thousand glassine bags and we had to figure out

standard deviations and all sorts of statistical analysis for confidence levels, for estimated weights on things. We used it to write discovery packets when either district attorneys or defense lawyers would request them. We used it for research. We could access the -- we could access the drug lab system where we -- evidence was put into as a read only copy.

Q. Okay. And that's the computer you're talking about, correct? (Indicating)

A. Correct.

Q. And the desk, this far desk, that's Jim's? (Indicating)

A. Correct.

Q. The second desk here was Rebecca's, correct? (Indicating)

A. Correct.

Q. Okay. Playing Title 57 of Chapter 1 of the video. Stop it here.

And this, what's depicted here in the image is your desk? (Indicating)

A. My desk. It is my desk. I mean, you

can see a file holder thing that had things I was currently working on. I'm not sure what the bottle is or the bag. I'm not sure if things were put down at any point but.

Q. Did you ever take samples to this desk and store them?

A. No.

Q. Now playing Title 58 of Chapter 1 of the video.

MS. WEST: Did you ever bring standards to that desk?

THE WITNESS: Not to put in the desk. Did I ever have things in my pocket at the desk, yes, but nothing was stored in the desk.

Q. (By Mr. Caldwell) A file cabinet -- you're now seeing Title 58 of Chapter 1 -- what was contained in that file cabinet? (Indicating)

A. More manila envelopes. Each of those -- those manila envelopes contains a case file, so if we got requested to do a discovery packet or even if we got a summons for court,

oh, for this case, you know, you're called in to testify, we would make copies of all our handwritten notes in our lab notebook, as well as the data, the chain of custody and any other relevant information and make a copy both for ourselves and one for the DA if they asked for one, and we would put it in a manila envelope. And, like I said, that desk was full of manila envelopes that --

Q. Now, in the -- earlier in the video you indicated that the cabinet where the standards were in, where they were stored --

A. Mm-hmm.

Q. -- not only the small cabinet but the large cabinet south of the inventory and other items, where was that located before it was placed into the evidence locker?

A. Before that -- so if you're looking -- you're basically just standing where I were to sit, there's that wall to your left, it was just on the other side of the wall.

Q. Okay.

A. Yeah, so there's a file cabinet and

then there would be a wall on its left. (Indicating)

Q. I'm going to play Title 61, Chapter 1 of the video.

What's that, Ms. Farak? (Indicating)

A. It's a drawer in the desk.

Q. Okay. Now playing -- this is Title 62. Stop it right there.

Is this the filing cabinet you were previously talking about? (Indicating)

A. Correct.

Q. And what's the next room?

A. Right, just as you could see from the end of the lab benches, you could see the instrumentation on the other end. This is a continuation of that and they had long lab benches just like on the previous side of the room that had like different pieces of instrumentation for analysis.

Q. And is this the room in which the cabinet was --

A. Yes.

Q. -- for the standards before it was

placed into the evidence locker?

A. Correct.

Q. This is Title 62 of Chapter 1. I'll stop right there.

This is Title 63, Chapter 1. What is this piece of machinery? (Indicating)

A. It's a gas chromatograph and a mass spectrometer. They are connected so.

Q. And this is a continuation, this computer?

A. I mean, it's a computer that is hooked up with software for the -- for the mass spec, so it would print out results automatically. It's automatically sent to the printer when it was done being analyzed.

Q. And this computer itself was only used with the machinery; you didn't have Internet access for your own personal --

A. (Interposing) No, no, no. Yeah, I don't believe -- I mean, we probably had access to Notepad but I'm not even sure if we had Microsoft Office on it. But it was -- it was used for -- pretty much just for running

the analysis and for -- yeah, for running the analysis.

Q. Okay. This is Title 65 of Chapter 1 I am now playing.

Title 66 of Chapter 1. Fair to say this is the opposite side of the mass spectrometer? (Indicating)

A. Correct. It is a quarter of the room, kitty-corner when you came into the lab. (Indicating)

Q. This is Title 67 of Chapter 1.

This is Title 68 of Chapter 1. So there's a door there with lab coats on it. Where did that door go? (Indicating)

A. That door went back to the main hallway, that same hallway that the evidence office and Jim's office was off of. Across from that was the lab that had two entrances that both went out to the main corridor.

Q. Okay. Was that door locked at all times?

A. Yes.

Q. Was there a security keypad on that

door?

A. There was a keypad on that door and it really didn't work. The keypad -- I mean, we used a key.

Q. Was it the same key to all the doors or did each door have its own key, if you know?

A. I believe they were all the same keys perhaps except for the -- except for the lab safe. The safe, not the evidence room, but the actual safe had its own key.

Q. So it's fair to say that you were given two keys when you began your employment at the lab?

A. We had a different lab safe -- there was renovations done but we were all given keys to the safe, to the rooms, and we were also given a small like padlock key that was used -- that could work on that cabinet for standards.

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EXAMINATION BY MR. VELIS

Q. Ms. Farak --

A. Yes.

Q. -- during the average day you would co-mingle with your employees, fellow employees, correct?

A. That's correct.

Q. And those quarters were quite close?

A. Mm-hmm.

Q. During the time that you were doing your analysis yourself, and more specifically at the comparative stage of the analysis --

A. Mm-hmm.

Q. -- sample versus standard, how close on an average day when you were conducting that particular activity were your fellow analysts to you when they were working?

A. Actually you can do the analysis, I mean, I was probably sitting at my lab bench mostly or, I'm sorry, at my desk some of the time and they could be just at the desk next to me. Other times I could do it at my lab bench probably because I just didn't want to

interact or if they weren't around, if they were doing bench work, I could be at my desk, you know, analyzing or recording the data into my lab notebook.

Q. So at your desk and at the lab bench?

A. But there was no guarantee that the other employees would be at either of those places. They could be off doing -- and Jim could've been across the hall.

Q. But based on your recollections and based on the observations that you made of your surroundings and those surrounding you, how far away on an average day would they be when you were at the desk or at the lab bench from you when you were conducting the analysis in feet?

A. I mean, it really -- I understand your question. I mean, it would vary by day. Some -- average, there would probably be someone within 15 to 20 feet of me. I'm sorry?

Q. No. 15 to 20 feet would be the average distance?

A. Possibly. I mean, it depends where people were. If Jim was across the hall say and Becky was doing bench work and I was sitting at my desk. It's hard to tell what the average is because sometimes they were in this space here across the lab, other times I was the only one there and there was no one else around, you know what I mean, like the afternoon where I was the only one there and there was no one else around.

Q. Well, when there was someone else around, would you say the average was 15 feet?

A. No. It could have been they were on the machinery and I was at the lab bench and let's say Jim was across the hall at his office, which would've been, you know, three-quarters the length of the lab. I really don't have a way to say there was an average amount or -- I mean, it did vary depending on, you know, we had basically two sets of instrumentations to do -- to run things on. If I was running it, instrumentation, and Jim was running

instrumentation, we would both be done about the same time so Rebecca might go to the instruments after if I was at -- you know what I mean -- and Jim might go across the hall to write stuff in his notebook.

Q. So based on the physical layout, they had an opportunity to observe you when you would be conducting analysis?

A. Correct.

Q. They had opportunity to be next to you?

A. Right.

Q. Close in proximity?

A. Yes.

Q. Did you have much dialogue with them when you would conduct analysis on an average day?

A. While I was actually comparing --

Q. MR. VELIS: While you're actually comparing?

A. Not really, I was focused on what I was doing. If I ever had questions I knew I was free to ask but we focused on our job.

I'm not saying we didn't have any social, you know, talking back and forth but.

Q. Last question from me --

A. Okay.

Q. -- with respect to something that is related but unrelated to this particular line of questioning. You indicated that with your therapist and with -- that there were certain recollections that you made and memorialized about urges that you had during the conduct of your employ.

A. Mm-hmm.

Q. And you had indicated that you were impaired for a great period of time over those years while conducting these analyses.

Is it fair to say that while you were conducting the analysis while being impaired to whatever degree you may have been, that you had urges all during the course of that analysis?

A. So you're asking not necessarily was I impaired but was I having urges?

Q. Impaired, whatever that impairment

may have been and whatever degree, along with it were there urges when you were handing these drugs or looking at these analyses?

A. Um, sometimes, yeah. I mean, when I was analyzing things like heroin or pills I didn't have a direct urge for those pieces of evidence or drugs but it doesn't mean my head wasn't thinking who's gonna be around later, will I have an opportunity to --

Q. (Interposing) It was thinking that or wasn't?

A. I could've been. I don't know if I was constantly but there were definitely times I was thinking about later in the day -- not necessarily when I was comparing the data but, yeah, it definitely crossed my mind who will be around later, which standard do I want to touch or do we have enough of this or.

Q. Can you ever recall having urges when you were comparing data?

A. I don't remember any. I'm not saying they didn't exist. They probably did exist but I -- you're asking me something from years

ago and.

Q. And all this was from that time period that you responded to me when I asked from 2004 up to whatever date it terminated?

A. My urges early on were not the same. Like I said, I may use early in the day and the drug lasted longer and I wouldn't necessarily have anymore urge to use that day. I was getting the desired effect of, you know, the increased focus or attention and energy. Towards the end when I was using cocaine and crack cocaine the intensity -- I don't want to say the intensity but the length of the -- of feeling the effects was shorter so I was having more urges to re-get to that state of being.

Q. And was that more towards the later years of 2004 to 2010 or 2011, the period --

A. Like I said, the coke and the crack really got heavy in 2011 and the urges were much more intense and much more frequent.

MR. VELIS: Thank you, ma'am.

MR. CALDWELL: Ms. Farak,

just a few more questions in regards to Special Assistant Attorney General Velis's.

*****

EXAMINATION BY MR. CALDWELL

Q. You indicated in previous testimony you took methamphetamine, dextro methamphetamine?

A. Dextroamphetamine.

Q. Dextroamphetamine, excuse me, cocaine and crack cocaine for the stimulant effect. Now, can you just briefly describe for the Grand Jury what -- what type of effect would you get from the methamphetamine?

A. The methamphetamine, I got increased energy, increased alertness. It helped me focus more on getting the task done. Not that I was -- could be scatterbrained, but it did help me, you know, put my energy into getting something done and doing it.

Q. Okay. And is it fair to say that dextroamphetamine gave you a similar type of high?

A. Similar but not as strong. I mean,

methamphetamine is a stronger drug but I was getting the same sort of focused concentration and energy that I was getting from the methamphetamine.

Q. And that could last anywhere between nine to 12 hours?

A. The methamphetamine lasted that long. The amphetamine was shorter.

Q. Dextroamphetamine?

A. Dextroamphetamine, yes.

Q. Did you ever hallucinate when you were on any type of amphetamine do you know, if you remember?

A. I don't remember. I don't remember any visual hallucinations. I mean, I may hear a whistle or a bell.

Q. So auditory?

A. Possibly. But, I mean, when I'm working now I'm hearing whistles all the time I'm so used to hearing them.

I know at one point when I was using crack heavily, which is also a stimulant, I started having auditory hallucinations. You

know, not that I thought I would see things but, you know, you think you see a movement and you look and there's nothing there.

Q. What type of -- what type of high did you receive from doing powder cocaine?

A. It was more of a quick buzz. It wasn't a sustainable or sustained alertness. I mean, it did help me focus for, you know, 20, 30 minutes.

Q. Okay. And the high that you received from the crack cocaine compared to the other drugs that you've talked about?

A. It wasn't -- was more instantaneous high, was more intense but it definitely left me craving it even before it was totally out of my system.

Q. Fair to say that at this point when you were doing the crack cocaine your productivity at work dramatically fell off?

A. I was focused a lot on -- I was having urges before I was even having, you know what I mean, I was constantly how can I get more. Although part of me was saying I'm

not gonna use today, you know, you try to -- I don't want to say fix everything but if -- so you say you won't and, you know, by the middle of the day I was finding ways to get some.

MR. CALDWELL: The time is approximately 12:20 p.m. I have no further questions for this witness.

MR. VELIS: I have no further questions.

MS. WEST: I have no further questions. Thank you.

MR. CALDWELL: Thank you. You may step out.

(Witness excused.)

MR. CALDWELL: In reference to the video, that will be entered as Grand Jury Exhibit Number 13 and it will be made -- Number 14 and it will be made available to the Grand Jurors at any time they wish to view it and if I can facilitate that in any way by way of computer or DVD player.

Excuse me, ladies and gentlemen. I'm sorry. There's a correction. The video has

been marked as Grand Jury Exhibit Number 12 and will be made available to you at any time.

MR. VELIS: Are your notebooks all collected and left here?

GRAND JURY: Yes.

MR. VELIS: Thanks. Have a good day.

MS. WEST: Thank you, everyone.

MR. CALDWELL: Thank you.

(The presentation was suspended.)

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COMMONWEALTH OF MASSACHUSETTS

COUNTY OF HAMPDEN

I, KATHLEEN M. HOUGHTON, Court Reporter, hereby certify that the foregoing is a true and accurate transcription of my stenographic notes to the best of my knowledge and ability.

KATHLEEN M. HOUGHTON

EXHIBIT 6-3

VOLUME III

COMMONWEALTH OF MASSACHUSETTS

HAMPSHIRE, ss. Grand Jury

IN RE: INVESTIGATION

HEARING BEFORE HAMPSHIRE COUNTY GRAND JURY AT THE HAMPSHIRE COUNTY COURTHOUSE, NORTHAMPTON, MASSACHUSETTS, ON SEPTEMBER 30, 2015.

APPEARANCES:

THOMAS CALDWELL,
Assistant Attorney General

THE HONORABLE PETER VELIS (Ret.),
Special Assistant Attorney General

Kathleen M. Houghton
Court Reporter
PHILBIN & ASSOCIATES, INC.
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I N D E X

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EXHIBIT DESCRIPTION PAGE

(There were no exhibits marked.)

*****

SONJA FARAK (SWORN.)

MR. CALDWELL: Good morning, ladies and gentlemen. My name is Thomas Caldwell. I'm an assistant attorney general. With me sitting today is Special Assistant Attorney General the Honorable Peter Velis. We are continuing the investigation into the drug lab at the University of Massachusetts Amherst and any criminal conduct that occurred at that laboratory. I'm continuing questioning the witness, Ms. Sonja Farak.

EXAMINATION BY MR. CALDWELL

Q. Good morning, ma'am.

A. Good morning.

Q. Ma'am, during your time as a state chemist with the -- employed by the Department of Public Health and then subsequently the Massachusetts State Police, you had a work e-mail account; is that correct?

A. I did not hear. Working?

Q. You had a work e-mail account?

A. That is correct.

Q. And you used that work e-mail account

to speak with different chemists, correct?

A. Occasionally chemists, more frequently ADAs.

Q. ADAs. Okay. So why did you use that e-mail account -- or strike that.

Why were you e-mailing other chemists?

A. Why was I e-mailing other chemists?

Q. Correct.

A. I e-mailed some chemists in the Boston lab for -- to get their expertise and their knowledge on certain drugs that we received in our lab that we were unfamiliar with.

Q. Are there any examples of drugs the lab received for testing and you were not familiar with?

A. One example is lisdexamfetamine. Basically, it's an ADHD drug but it's, instead of being a Class B, it's a Class C due to the fact that it's not -- I don't want to say it's not abusable but it's much harder to abuse because it needs the acids in your stomach to

break it down into the amphetamine component. And a lot of people that use amphetamines snort them, so this is not a snortable drug I guess.

Q. And was there any particular chemist that you e-mailed more frequently than others?

A. Probably either Annie Dookhan -- she seemed to be knowledgeable. I also have e-mailed Peter Piro, P-I-R-O.

Q. And who is Peter Piro?

A. He was in charge of the mass spectrometer lab in the Jamaica Plain, Hinton lab.

Q. Did he train you on the mass spectrometer?

A. Yes, he did.

Q. And did you e-mail Ms. Dookhan of your own accord or was it suggested that you contact her to -- for information on drug testing?

A. I don't remember. I remember Peter mentioning her name a couple times, that she might have gotten the lisdexamfetamine sample

and knew more about it. I mean, I also contacted -- I'm not sure if I was told to contact Annie but when I went to the Boston lab to learn a new piece of instrumentation, I mean, we were in contact in setting up the days that were workable for us.

Q. You indicated also that you spoke to assistant district attorneys --

A. Correct.

Q. -- on your e-mail account?

A. Correct.

Q. Why would you do that?

A. Normally we would contact via e-mail if we were trying to -- well, if they were trying to set up dates that they might need us to testify in court. You know, they would e-mail me saying, you know, I have this case with these drug lab numbers. It's scheduled to go to court on this date. Are you available. And, you know, I would let them know yes or no, I've already got other cases scheduled that day or which courthouse is it in. Especially in Springfield, a lot of the

cases that were on the docket to go didn't actually go to court -- or go to trial, so there were multiple times I would have different courts scheduled for the same day. Most of the time we were on call. But it was either to, like I said, make sure dates were available or I would let them know I'm going to be on vacation that week, you know, I can't make it.

Q. So it's fair to say you had a pretty busy schedule at the lab?

A. That is correct.

Q. And that's in terms of not only performing the tests but also scheduling court times?

A. Correct.

Q. Now, during your previous testimony before the Grand Jury you gave us information about the testing process at the lab. You said that the drugs you most commonly analyzed were cocaine, heroin, marijuana and certain pills, correct?

A. Correct.

Q. Now, if you were assigned to analyze a sample believed to be cocaine or heroin, the first thing that you did after weighing the sample was do a spot test, correct?

A. We didn't always do spot tests on the cocaine since we had to do the crystal test but there was spot testing that we did.

Q. Now, you didn't do it on the cocaine. Was that something that you just didn't do on your own or was that policy at the lab?

A. It was policy at the lab according to the scientific working group for the drug testing. We had to hit so many tests under category A, category, B, category C, depending on the drug and what the tests were and we did fulfill those requirements.

Q. Okay. And there were -- but those color spot tests that you did, it's not a sophisticated testing process, correct?

A. No.

Q. And if you did do a color spot test, what was the purpose of the color spot test?

A. It's a preliminary positive.

Basically, it's like a field test that a lot of the police officers do. For example, cocaine, if you add a small -- put a small amount in a well, like a ceramic plate in a well, and add a few drops of cobalt thiocyanate, it's a pink liquid, it turns blue. If it's not -- I mean, cocaine will always turn blue in it but there are other things that will turn it blue that are not a hundred percent accurate but if it doesn't turn blue, it's not going to be cocaine.

Q. Now, if you did do a color spot test and it didn't produce a certain color --

A. Mm-hmm.

Q. -- that you described, you would know at that point that the substance didn't contain cocaine or heroin?

A. Correct, we would know that it doesn't -- didn't contain what the specific spot test would indicate.

Q. Now, would you do any other testing after that or would you just immediately determine that there's no -- it's not a

controlled substance?

A. No, we would -- if you need to do testing, we would add it to the small vial and run it under -- through instrumentation.

Besides doing -- when we -- when there's a presumptive positive for one of the common drugs, we could run a shorter runtime on the machines. For something that wasn't going to give any -- if we didn't know what it was, we'd run a more broad range scan of the substance to see if there were any narcotics present.

Q. Okay. If you got that color reaction in an unknown powder consistent with the reaction you'd expect if the substance contained cocaine or heroin, at that point you use the gas --

A. Gas chromatograph.

Q. -- chromatograph and the mass spectrometer?

A. Correct. We use the gas chromatograph by itself and then afterwards we use a different gas chromatograph that was

linked with the mass spectrometer.

Q. Okay. And those are pretty sophisticated instruments; is that fair to say?

A. It's fair to say.

Q. And the first thing you do is run the instruments with the known substance, correct?

A. Right, we would run it with the standard solution from the known substance.

Q. And what would the gas chromatograph do, what was --

A. Basically, every -- if you -- if you put a small amount of the sample and dissolved it in -- in my case most of the time it was methanol, not only would the suspected drug dissolve but other possible adulterants to the sample would dissolve, so the gas chromatograph basically would separate it by substance and show how many different substances or show the -- it would show a peak with the different substances, how quickly they went through the column. So it separated it basically.

Q. Okay. At what time would you do a visual comparison, was it after you ran it through the --

A. After we ran --

Q. -- gas chromatograph and mass spectrometer?

A. Okay. After we ran it through -- we did the standards testing on the gas chromatograph as well, but we would compare that with the sample gas chromatograph, the graph that came out. At that point we'd also run the gas chromatograph and mass spec and after those results, we'd compare the standard with the individual submission as well.

Q. Okay. So explain the process in which you would use the microscope to examine the substance?

A. Well, there was two different microscopes. One microscope was used primarily for marijuana. Under a microscopic evaluation when you actually look at marijuana under a microscope, there are like calcium deposits on the leaves with tiny pistillate

hairs coming out and for it to be -- which these calcium deposits and hairs are specific for marijuana. And along with the Duquenois color test that we'd run on it, we'd also then follow that up with a mass spectrometer if those two tests were positive.

The other microscope was a polarizing light microscope so it was used for cocaine or suspected cocaine and we'd put a small amount of the sample on a glass slide and add a substance to it. The initials are TLTA. And it would form -- if there was cocaine present, crystals would form in a certain crystalline pattern.

The reason we did this is in theory there are two forms of cocaine, basically a right-handed cocaine and a left-handed cocaine, for lack of a better word. It has to do with its chirality of a round carbon atom that has the same molecular structure, just they're basically mirror images of each other.

So one form of cocaine was controlled; the other isn't. The one that

isn't has like never been seen in nature but in theory it could exist so the state law -- the law of the state had us prove which of the two -- or which of the two enantiomers it was. And so depending which -- which of the two forms would give different crystalline structures.

Q. So did you use the microscope for every drug that you tested?

A. We did not use a microscope for opiates or pills, per se. Like I said, we'd occasionally use the microscope to get a better visual of the pill to try to find the imprint if it was worn off or scraped off or whatnot but it wasn't actually done for physical testing.

Q. And about how long would you examine these substances under the microscope?

A. Not long at all, maybe five or 10 seconds depending on how pure -- or how concentrated we'll say the cocaine was; on the slide whether or not -- how quickly crystals formed I guess. A more mixed and cut sample

took longer for the crystals to form because basically the cocaine molecules would fight each other in that solution before it could form the crystals. There'd be less of them.

Q. Is it fair to say that was just an extra step you would take to confirm that it, in fact, was a controlled substance or was not a controlled substance?

A. For the cocaine?

Q. The cocaine or for whatever you were looking at under the microscope?

A. Yeah, it was for the cocaine under the polarizing microscope -- how do I word this -- just because we could get crystals doesn't mean it would be a strong hit on the mass spec. Likewise, we could get a positive 99 percent match on the mass spectrometer but if we couldn't get crystals, we would have to call it negative because we need to prove which form of cocaine it was.

Q. So just to restate that, if you couldn't confirm it with the mass spectrometer testing, the instrument test, so if you didn't

get crystals when you looked under the microscope for that testing, you would automatically call the drug negative?

A. Correct.

Q. Did that happen frequently?

A. It was rare. It was either residues or just a very cut sample.

Q. Did it ever happen the other way around, where it was negative on the mass spectrometer, gas chromatograph and then it formed crystals under the microscope?

A. Not that I'm aware of.

Q. And that's -- that's basically, is it fair to say that's a judgment call for you at that point when you're looking at it under the microscope?

A. As to the formation of the crystals?

Q. Yes.

A. Yes.

Q. And did you record that anywhere in terms of what you observed under the microscope?

A. We -- in our lab notebook we'd either

say the test was positive or negative to form the crystals.

Q. And those lab notebooks also -- you also recorded the results of the mass spectrometer and gas chromatograph tests, correct?

A. That's correct.

Q. So it's fair to say, Ms. Farak, at the end of the day in order to sign a drug certificate attesting that a sample contained the controlled substance, it's fair to say that the analyst has to rely on his or her training and experience, correct?

A. Correct.

Q. And sometimes those are judgment calls, correct?

A. Correct.

Q. Now, you previously testified about the standards that the Amherst lab used. And you remember that testimony, correct?

A. Used by the lab or used --

Q. Used by the lab?

A. Okay.

Q. All right. And you -- at some point I asked you the question, the national standards, they're fairly pure, correct?

A. They are pure, yes.

Q. And that they weren't like the other samples that you were getting that were cut with various substances, correct?

A. That is correct.

Q. Now, you testified that the samples were pure and I believe you said they were 99 percent pure?

A. What are we talking about?

Q. The standards. Excuse me.

A. The standards mostly were 99 plus percent pure.

Q. And the drug dealers would sometimes use cutting agents or adulterants to increase the weight and volume of their product, correct?

A. Correct.

Q. Or to get more bang for their buck?

A. Yes.

Q. Now, the standards at the lab needed

to be pure, correct, because you needed known substances in order to compare them to the unknown adulterated substances that were coming off the street, correct?

A. Correct.

Q. Okay. And to get those pure standards, the lab would have to purchase them, correct?

A. Correct.

Q. Now, at any time did the lab itself create a standard, if you know?

A. I believe prior to my employment there some of the designer drugs were created but I am not positive. But we would dilute the powder into like standard solutions but it would always come as a pure substance.

Q. So at any time you were at the lab did Jim Hanchett or anyone else produce a standard maybe because you ran out of the standard that was purchased or for some other reason?

A. I'm not -- I'm not sure. I know Jim was in charge of making the coke heroin

solution. How he did that, I am not a hundred percent sure.

Q. Okay.

A. I'm assuming he took it from the standards though.

Q. Did you ever -- did you yourself ever create a standard?

A. Like I said, I would dilute some small amount in liquid when we ran out of the standard from the pure stock that the lab had purchased, if that makes sense.

Q. It does.

A. We weren't actually making drugs at the lab if that's the question.

Q. Who would order the standards when they were -- when you ran out?

A. Towards the end I would believe -- I believe it was Jim Hanchett. I know -- I'm not sure which ones they were. I know at one point we were low on something and the Boston lab had an extra vial or whatever from the manufacturer and so it was brought out to our lab. But either Jim Hanchett or before him

Cam Stevenson, Alan Stevenson.

Q. So you never ordered standards?

A. I never ordered standards, no.

Q. Now, on or about July 2012 the supervision of the Amherst drug lab was transferred from the Department of Public Health to Massachusetts State Police, correct?

A. Correct.

Q. And why was that, if you know?

A. There may have been a variety of reasons. I mean, we were under the impression that DPH didn't want us anymore. Whether or not that was a good thing or not, I'm not sure. I know there was a budget cut and the lab was taken out of the budget and picked up by the state police. The logistics of why, I'm not sure.

We looked at it as a good thing that we would then be able to get accredited with the State Police Lab.

Q. Because you weren't accredited at that point, correct?

A. That's correct.

And then we would -- I don't want to say streamline things but instead of having, you know, our -- the Amherst lab and the Jamaica Plain lab were part of DPH and the state police lab, the Worcester lab, was actually part of the DA's office I believe. So they were trying to consolidate it all into one heading I guess or one entity.

Q. Okay. Was there any other reason that you know of?

A. That I know of, I'm not sure.

Q. Now, the Mass. State Police operated an accredited drug lab at Sudbury, correct?

A. Correct.

Q. And or about July 2012 the Amherst lab was supposed to begin following the Sudbury protocols, correct?

A. Correct.

Q. And the -- is it fair to say that the only standards that they used at Sudbury laboratory were standards that they purchased?

A. I have no idea. I'm assuming so but I don't -- I don't know.

Q. Did the standards that came to the lab, your lab at Amherst, did they ever have any type of certificates with them that attested to their purity, if you know?

A. I don't know. I wasn't in charge of receiving chemicals or standards.

Q. Now, during your time as a chemist at the Amherst lab, did you ever personally respond to any type of discovery requests made by defense attorneys?

A. Multiple times.

Q. Okay. And what would -- what would you contain in a discovery packet that you would send to a defense attorney?

A. At a minimum we would send a copy of the drug receipt and the chain of custody of the sample from the drug locker to the chemist, back to the drug locker, back to the police department. We would include a copy of our handwritten notebook. We'd include a copy of all the instrumentational data, both of the sample in question as well as the standard that was run with that -- with -- well, in the

same run as the sample.

Additionally, some discovery packets requested everything from copies of our SOPs to a list of questions, you know, a CV. And then the list of questions could be anything from who else works in the lab and what are their, you know, educational qualifications, and training. It really depended what the defense attorney requested and put a motion in for that.

Q. Okay. What's an SOP?

A. Standard operating procedure. Basically, it's the procedure that tells you how to test the drugs or how to weigh the drugs. We follow those written procedures on how to do our job.

Q. What's a CV?

A. A curriculum vitae, it's basically a quick resume. It will list our educational experience, any other training we received and the experience we gained in the lab.

Q. Okay. And it's fair to say that you'd go to court and you'd be cross-examined

by a defense attorney on those items that you provided initially?

A. It varied. We could be asked about them. Most of the times when we got to court they didn't have any questions for us but, yeah, they could ask us about it if they wanted to know about it.

Q. And approximately how many times did you testify in court if you know and can recall?

A. Maybe 50 total.

Q. At any point did any defense attorney ask you any questions about the standards used at the lab?

A. I don't believe so. Like I said, I don't remember each time specifically. I'm sure I mentioned that we ran standards to compare with and they were known standards from companies but I don't think they ever questioned the standards.

Q. But you, in your discovery packets that you prepared for defense counsel, you would mention that there were standards used

and compared with?

A. Standards, correct.

Q. Okay. Ms. Farak, now, the last time you testified about when you first stole methamphetamine from the standard at Amherst. Was that the first time you had tried methamphetamine or had you tried methamphetamine before then?

A. Methamphetamine by itself, yes, that was the first time. Like I said, I think I had a couple of E tablets before that that had some methamphetamine in it but that was the first time I tried it.

Q. And you never tried methamphetamine when you were working at the Jamaica Plain laboratory, correct?

A. That is correct.

Q. And you had previously testified that you never had access to any of the standards at the JP laboratory, correct?

A. That is correct.

Q. Who did have access to those standards at the JP lab?

A. I know Chuck Salemi had it. I know he had access. I'm not sure who else may have had access to the standard. My guess is Peter Piro might have. I don't know if we needed a standard -- or the mass spec lab needed a standard. If they got it, I'm not sure. I never had to do that there so.

Q. Okay. Now, some more questions about the Hinton lab. You had previously testified when you started working at the Hinton laboratory in Jamaica Plain in 2003 you were assigned easier-to-analyze samples, correct?

A. Correct. I don't want to say easier to analyze but less -- quicker samples in the sense of instead of having to -- getting the submission with a thousand bags, you'd get one with three bags, so you'd be doing less testing but they were also less likely to get questioned or called into court so it was a way to gain experience.

Q. Because you were learning on the job, correct?

A. Correct. And we had training there

but it, you know, until you have -- you've done it so many times, you know, you haven't done it so.

Q. And it's fair to say that the most common samples you were given in the beginning of your employment by the Department of Public Health at the lab was marijuana and pills?

A. It was marijuana, coke and heroin.

Q. Marijuana, cocaine and heroin?

A. Correct.

Q. Were you ever assigned any pills to --

A. (Interposing) Towards the end of my work -- I don't want to say work I had but halfway through the time I was at the Hinton lab the pill backlog was getting bigger so a few of us were trained on the way of testing pills and what solvents are needed to dissolve the drugs out of the pill in order to be able to run a mass spec and get the -- a correct analysis.

Q. Now, were you at this time when you started your employment at the Hinton

laboratory, you were still using just a one-chemist system, correct?

A. At the Hinton lab?

Q. Hinton lab.

A. Hinton lab, they always used, I believe, two-chemist system where you have one chemist do the preliminary work and then it was given to the mass spec laboratory -- or the mass spec room and either Peter, or later on they had a couple other chemists rotating through there too, would do a bigger batch which might include three or four different chemists' work run with standards and then separate the paperwork that way.

Q. And that -- so you would hand it off to the mass spec chemist?

A. Correct.

Q. And you weren't trained on the mass spectrometer at this point?

A. Like I said, about halfway through I got trained and so I was working in the mass spec lab.

Q. If you know, what chemist at the JP

lab tested the most samples on a month to month basis?

A. On a what?

Q. On a month to month basis, if you know?

A. I'm not sure. You mean towards the end or while I was there?

Q. While -- while you were there --

A. When I was there?

Q. -- in your experience at the Hinton laboratory.

A. I know Peter's name was probably on a lot of drug certificates but as a two-chemist system, his name went on certificates for multiple chemists when he was doing the mass spec. I mean, I feel I did a fair amount of mari -- especially marijuanas when they came through. A woman, Danielle, I forget her last name, probably had quite a bit but, I mean, I don't want to say higher chemists, you know, Chem IIs and Chem IIIs that were doing the bigger samples and needed to spend more time doing it so in theory they were doing less.

They were not doing less work but their sample production was less.

Q. Okay. Now, you testified that -- is it fair to say maybe at the end of 2003 you were finally trained on the mass spectrometer testing?

A. Correct.

Q. And can you please explain how long would it take you do to the preliminary testing on just say a marijuana sample and then do the mass spec test, about how long would that take to do one sample?

A. For marijuana specifically, in the JP lab we did not need to do the mass spectrometer on it, so we would do the microscope test and the color test. So for one specific sample from the time I got it, opened it, weighed it, and ran all the testing, if it was a simple one bag or two bags sort of thing, I mean, no more than five minutes. But, like I said, we didn't run the mass spec on the marijuanas at that time.

For another sample, say cocaine or

heroin sample, by the time we did the preliminary testing, once again it would only be maybe five or -- five minutes of me actually working on it before giving it over to the mass spec lab.

Q. You had previously testified before the Grand Jury that you -- at some point you became aware of Annie Dookhan and what she was doing at the JP lab, correct?

A. That's correct.

Q. And you became aware that she was, in fact, dry-labbing drugs?

A. I heard that. I don't know that for a fact but I -- yeah.

Q. Okay. And when did she begin her employ at the Department of Public Health --

A. (Interposing) She started in I believe November of 2003.

Q. And, again, how long did you work with her?

A. I was -- six or eight months I think. I moved out to Western Mass. in -- I think I started at the beginning of August 2004, so

about eight, nine months. Nine months or so, yeah.

Q. And you were never aware that Ms. Dookhan was dry-labbing drugs, correct?

A. No, I was not aware.

Q. And you never observed her doing that in the laboratory --

A. No, I didn't.

Q. -- while you were at the lab at Hinton?

A. No.

Q. Now, going back, Ms. Farak, you previously testified that you were using drugs at the laboratory while you were doing your testing, correct?

A. Correct.

Q. And you had also testified that during your periods of non-use you experienced withdrawal symptoms, correct?

A. Correct, yes.

Q. And it's fair to say that those withdrawal symptoms had a negative effect on your productivity?

A. I guess it's fair to say that. I did take days off occasionally due to withdrawal symptoms.

Q. Okay. And what type of withdrawal symptoms were you suffering from?

A. Mostly just extreme fatigue, headaches, very bad irritability.

Q. Okay. And do you believe that affected your ability to perform the tests accurately when you were suffering those symptoms?

A. When I was actually at work? No, I don't think it did.

Q. About how many times did you call out sick to work because of suffering from withdrawal symptoms?

A. Maybe just three or four times -- or periods I guess. I know there was one time when I was coming off methamphetamine I called out I think two or three days in a row and I call that as one time but.

MR. CALDWELL: Special Assistant Attorney General Velis, do you have

any --

MR. VELIS: Yes, just a couple, please.

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EXAMINATION BY MR. VELIS

Q. Good morning, ma'am.

A. Good morning.

Q. Mr. Caldwell asked you some questions in detail about the testing procedure and the analysis protocol that's followed. It's fair to say, is it not, that a layperson would construe the entire protocol that you're doing as being a detailed procedure?

A. Correct. Are you saying would they consider it or do they consider it a detailed procedure?

Q. Yes.

A. Yes.

Q. You, in fact, consider it a detailed procedure?

A. I mean, not knowing -- yes, I would.

Q. Now, notwithstanding your vast experience, if anyone in this room including

myself were today to be taken through the everyday average analysis of any of the drugs that you mentioned, it would be fair to say that we would have to pay strict attention to what we're doing?

A. I mean, until -- to get a grasp of it, yes. Once you knew what you were doing it's fairly routine but, yes.

Q. Now, it's not a situation as it were the machines do all the work?

A. Correct. I mean, they do some of the work but they don't do all of the work.

Q. Now, in the course of doing these analyses, as I say, there's a certain protocol for each drug?

A. Or the class of drugs. I mean, pills are grouped together in our SOPs so, you know, if I get a tablet of -- a Percocet tablet, it's basically analyzed in the same way but each different type of drug has its own procedure.

Q. You had indicated to Mr. Caldwell in the past in your testimony that judgment calls

are predominant in this analytical procedure, you have to make judgment calls, don't you?

A. Yeah. I don't want to say they're predominant but they're necessary.

Q. Is there any kind of thesis or any kind of guideline publication that any scientific authority has ever suggested or -- to analysts to follow in analyzing specific drugs as well as safeguards that should obtain when you do this analysis that you can point to off the top of your head?

A. Yeah, I know the DEA, Drug Enforcement Agency, has published the Microgram and Microgram Journal, which don't necessarily give procedures on how to analyze drugs but they do introduce new drugs and ways they were tested.

They are also part of the group that -- the SWGDRG, basically the scientific working group which sets the standards that accredited laboratories do use to analyze drugs and that they list the three categories of, you know, you need one test from this

category, one test from that category, et cetera, to get positive results or negative but to ensure that results are accurate I guess. Like I said, we did follow those -- our procedures were in line with those procedures.

Q. So if I were to follow you or any of the ladies and gentlemen here were to follow you to do an analysis this afternoon and you would be directing us to certain things knowing that we hadn't done it before to take us through a procedure, so you in a sense would be the guideline, you would be the guidepost?

A. I would be communicating what the protocol is.

Q. What the protocol is?

A. Yes.

Q. Now, contained within that, would you direct attention to various -- to different variables?

A. Yes.

Q. In other words, sir, I direct your

attention to this or, ma'am, I direct your attention to this, and that would require a sharp focus on our part?

A. Correct.

Q. So in the course of the average analysis that's done on a daily basis --

A. Mm-hmm.

Q. -- there has to be a pretty high level of concentration? On the analyst's part? Excuse me.

A. It does help.

Q. And when Mr. Caldwell asked you about these judgment calls that you have just said have to be made --

A. Mm-hmm.

Q. -- what percentage would you say of the analyses that are required to be performed or were required to be performed by you in those years that you were employed at the lab involved judgment calls?

A. I mean, do you consider comparing -- comparing two sets of results a judgment call or is that just looking at the two facts, you

know, two things and do they compare? Is that a judgment call in your --

Q. Well, I'm really -- I guess you're the person because --

A. Well, I'm trying to --

Q. -- you're the expert, not me.

A. I find that very straightforward. I don't think that's a judgment of -- I understand the crystals may be more of a judgment call.

Q. So certain drugs require more of a certain drug determination?

A. Possibly. I mean, to determine the right- or left-handedness of a cocaine molecule but, once again, if cocaine isn't in there it won't form any crystals so.

Q. Well, I guess maybe I was unclear. I think you said to me the machines don't do all the work?

A. No, they don't do all the work. They do make a comparison with the internal standard. They do give a match quality. We do review that and -- I don't want to say make

sure the computer's accurate but we do compare the standard that we've run as well as the piece of evidence we've run just to make sure -- to double-check.

Q. Okay. I plead ignorance but is it fair to say, clearly, that the machines don't make any judgment calls?

A. Correct. They make factual -- factual results.

Q. Upon which you make a judgment?

A. For which we?

Q. The analyst.

A. We make a judgment or we, yeah, I guess we determine whether or not those results are consistent with the other testing that has been performed on the piece of evidence.

Q. Now, in terms of your withdrawal symptoms, you had indicated to Mr. Caldwell a certain amount of times that you had called in sick or whatever the case may be.

A. Correct.

Q. Were there any occasions, Ms. Farak,

during the course of your duties at the time that you were at the lab wherein you felt withdrawal or you may have felt an urge or you may have felt something that you felt required you to ask someone else in the lab to do the testing for you even though you don't want to go home sick?

A. No, I don't believe so.

Q. So you never asked anyone else to stand in for you?

A. I was gonna be having the withdrawal symptoms one way or the other, I might as well work and be productive.

Q. Okay. But you admittedly were impaired during this entire process?

A. I'm not saying the entire process. There was a chance I was preoccupied at times. Likewise, when my now ex-wife called me multiple times a day I got distracted. When Sharon's kids were sick she was distracted.

Q. Well, what about being under the influence?

A. You're talking about judgment calls

and being distracted.

Q. Well, my question is during this period of time, if I understood you correctly, your previous testimony, you were under the influence?

A. At sometimes, yes.

Q. Now, did you ever speak with any of law enforcement personnel, Ms. Farak, or assistant district attorneys about the procedures that you followed in these cases? Is that ever -- I know that may not be -- well, I don't know or I wouldn't be asking you. That's not commonplace, correct?

A. I don't remember talking to any, I'll say, law enforcement officials about that. I believe meeting with a few different ADAs or federal attorneys we would go -- depending on the case, they may be bring me in to -- I don't want to say prep me but let me know what type of questions they were going to ask me. They might have a feeling of what the defense attorney is gonna try to poke a hole in, so I'd have to explain the procedures to them as

well as providing it in multiple discovery packets, if that answers your question.

Q. So to put in the most simple terms, did any of them ever question a result of yours --

A. No.

Q. -- all during the course of your duty --

A. I don't recall.

Q. -- because, in essence, it wasn't their place?

A. It wasn't their place.

I never had a defendant in a case swear their thing wasn't drugs and it was. Most of the time that a defense attorney would bring me to the stand was either, A, to see if I showed up. Because if I didn't show up they could in theory try to get that piece of evidence thrown out as a lack of ability to get it cross-examined; or they may question -- actually, they questioned me a lot about the police and how the drugs got to the lab and how do I know nothing happened to the drugs

between the police and the lab, which in that case I don't have any idea. But I don't remember a specific incident where they actually questioned my -- the analysis.

Q. Without me having read any of your responses to your condition with respect to drugs and the use of drugs and being under the influence while at the lab, without me having read any of the chronology of that but only having in mind for the purposes of this question the year 2004, latter of 2004 --

A. Okay.

Q. -- I think like September, up until the time that the lab closed -- up until the time that you were no longer employed there --

A. Yeah.

Q. -- is there any year that you could point to or any time period that you could point to where you were more under the influence or more impaired than not?

In other words, example, and I know this -- I'm not putting any words in your mouth -- were you more impaired in the years

2004 to 2007 than you were 2008 to 2011 or can you not say that?

A. I would say I was more impaired 2011 to when I was arrested.

Q. I'm sorry?

A. I was more impaired during that time. I was much more preoccupied by it, in getting it. I would say 2011 on I was more impaired than previously. Previously the drug of choice I was using actually I feel helped me focus and concentrate and be productive where starting a little bit in 2011 but more 2012 my focus became more -- at times became more on obtaining drugs than it had previously been. In the past I could use it, be good and not be craving it the rest of the day but once I started using coke and typically crack my focus definitely changed.

Q. Okay. And once you started using coke and definitely crack your focus had changed, definitely changed. I think you just said that?

A. I believe that's what I said.

Q. All right. And can you pinpoint when that started?

A. I believe using the cocaine standard in the lab, which was -- appears to have started in early 2011. I know by early 2012 I -- 2011 -- okay. 2011 I might have already been using a little bit of coke.

By the end of 2011 I had tried using crack. I wasn't obsessed with it. For lack of a better way to describe it, I wasn't very good at smoking it. I didn't have the system down. But throughout 2012 I was predominantly focused on crack and I was -- my production decreased and although I don't feel my -- the accuracy went down in my testing, I do believe the production went down due to the fact that I was -- had other focuses.

Q. So, finally, taking 2004, late 2004 as a starting point --

A. Mm-hmm.

Q. -- did the intensification of the urge to use drugs gradually increase or was there a dramatic intensity that increased in a

certain year?

Starting from 2004 when did the intensity start to increase in terms of the urge?

A. I remember the first time I used the methamphetamine it was a pretty instantaneous I want it. I eventually --

Q. (Interposing) Was that in '04?

A. That was in '04 I wanted it. I could use it, like I said, once a day and I would be okay and not think about it the rest of the day because I was still feeling some of the positive effects.

Once I was using the shorter lasting drugs, the cocaine and the crack, the intensity of the cravings or the frequency of the cravings increased.

Q. And you can't pinpoint what year that happened?

A. I know when I started crack specifically that the cravings were ridiculously intense. There was a huge jump in cravings.

Q. And what year did you start crack?

A. I started crack like -- started it in late fall, early winter of 2011. In 2012 I was predominantly only using crack so.

Q. But cravings and urges from other drugs took place before that?

A. Slightly, I mean, not to the same intensity.

Q. Not the same intensity?

A. No.

Q. How was your attendance record from 2004 up until the time --

A. I think it was pretty good. I don't have a copy of my personnel file. I'm sure you guys have obtained that already.

MR. VELIS: All right. I have nothing further.

MR. CALDWELL: I have nothing further for this witness. I invite any questions from the Grand Jurors.

Sir.

GRAND JUROR: I have a couple for you. Some might be intense, some aren't.

Some might even be repetitious.

Just trying to go back into this thing when you're doing your testing. Did you have to use standards with your testing every time you did a test or was there something locked into the machines that already gave you a pre-result?

THE WITNESS: So we would get a batch of samples, 10 or 15, for example. So we have our preliminary from either the color test or whatnot what it could be. When we'd go to the machine we'd say, oh, we think we have some positive cocaine and some positive heroin and some positive oxycodone. So in that process of running those 10 samples on the instrumentation, we would run a cocaine standard, a heroin standard and an oxycodone standard. So each run or batch of samples would have its own standard run with it.

Same thing with the mass spec. It would be the -- each batch would have its own set of standard that was run with it.

You mentioned if there's something

already in the computer. So the match quality that the mass spec came up with was not comparing our standard with the sample. The match quality was running -- was comparing the sample with a database, I believe through the Georgia -- Georgia Crime Database or whatever it is. It's a common database that's used in these applications. I don't know why but. It would compare that to the standard in the system. Likewise, we would see -- it would also compare our standard to the standard in the system to get a match quality.

Does that answer your question?

GRAND JUROR: Yes, yeah.

And outside of doing like maybe a marijuana test, every other test required at least three or four segments or more of testing?

THE WITNESS: The only ones that did not require more testings were Class E drugs. If someone got arrested and they had some Ibuprofen 800, we would look up the labeling on it and in a couple different

books, make sure the pill or capsule was intact, and if it was a Class E drug, we reported it as a Class E drug, which is anything like from Ibuprofen 800s to antidepressants to antibiotics, things you do need a prescription for but not necessarily narcotics or anything that's abused, if that makes sense.

GRAND JUROR: This is a -- might be a little tricky, I don't know, or could be touchy. All these times you were going to your therapists and everything throughout the years and everything. Now, do therapists have the same kind of patient confidentiality I guess that a doctor would so that they could not call up and say, hey, I've got somebody in here who's taking drugs out of the lab?

THE WITNESS: I believe so. What I was told is that they had to report if I was homicidal, suicidal, or like could injure or disable a person, the elderly or something like that but they were not required

to report crime that they knew was happening if it did not involve --

GRAND JUROR: But during your visits did they actually suggest that you stop removing products from the lab or maybe turning yourself in or anything?

THE WITNESS: They never suggested turning myself in. They definitely thought I needed help in treatment. The first therapist, Sarah Hawrylak, I mean, really pushed for me to go to a detox. She pushed me to go to NA meetings which, like I said, I eventually did go to a few and then turned right back around. Yeah, therapists throughout the time were not, you know, condoning my type of behavior by any means.

GRAND JUROR: Now, I don't know, on all these visits you had -- and you don't have to answer this -- was this stuff that was covered under your insurance or was this coming out of your pocket when you went to these therapies?

THE WITNESS: Therapy, it was

covered under my policy.

GRAND JUROR: I'm thinking of all these things that may help you -- benefit you or somebody else in the future.

And during all this time you used drugs through the lab and everything else, did you ever have to resort to buying on the street to fill in or?

THE WITNESS: I never had to do that and, like I said, my partner at the time -- she has her medical marijuana card now but she had mental -- or mental health but also physical ailments and she had a connection to buy pot, which years ago back, you know, in 2002, 2003 I would smoke. I can't say I didn't smoke at all but it wasn't what I wanted.

GRAND JUROR: So you had a backup, you could use that or --

THE WITNESS: I guess. I really didn't care for it. I preferred stimulants and marijuana kind of had the opposite effect. I never bought it.

GRAND JUROR: Near the end what would you think would actually be the cost of the daily use of your drugs if you had to buy on the street?

THE WITNESS: I have no idea what drugs cost on the street.

GRAND JUROR: You don't know?

THE WITNESS: I have no idea. I mean, easily at the end I was -- I mean, at the very end I probably could have gone through an eight ball of crack a day, which I don't know if that's a lot or not a lot.

GRAND JUROR: You don't know?

THE WITNESS: I have no idea. People ask me that and I'm like, I've never bought it. I don't know.

GRAND JUROR: This question may be even for one of you gentlemen more.

I'm just curious, after all these deals that are going through with this kind of attesting, if there is now in place or expected to be that anyone working at these kind of lab facilities will be going under

drug and alcohol testing, if it would be some kind of thing that's coming forward or?

MR. CALDWELL: Sir, that would be a question you can direct to the witness.

If you know, Ms. Farak.

THE WITNESS: I don't know. I'm gonna assume that those precautions or those things, if they have not already occurred, will be. We were not drug tested due to the union's bargaining -- collective bargaining agreement.

GRAND JUROR: Right.

THE WITNESS: And whether or not we should have had a special situation or circumstance, I am totally a hundred percent for drugs testing of employees. I am also in favor of more cameras in the lab. We did not have a camera in the lab at all or in the evidence safe.

I remember telling a therapist back in, you know, 2000 -- probably 11 that I just wish they would, you know, put cameras in.

And not that -- I don't know if it would have stopped me but there weren't a lot of precautions in place to prevent someone from doing that and I just wish they would have. Maybe I would have been caught earlier, maybe I would have found a way to stop. I don't know.

GRAND JUROR: Okay. That's my end of it. Thank you.

GRAND JUROR: I'm not thoroughly convinced that through all the years of taking drugs and doing all these tests and being sick taking tests, you didn't take any shortcuts or make any mistakes in the results that came through. Is there anybody that you're uneasy about that went into jail as a result of your testing?

THE WITNESS: I don't believe so at all. I am so thoroughly convinced of that.

I know with all my drug use and my motivations changing towards the end there is doubt about my ability to do the job. It is a

job that I loved from the get-go, you know, when I was in the Jamaica Plain lab with no drug use. I do realize the responsibility and duty that was involved. I know I wouldn't do anything intentionally to put -- especially put anyone in jail or even call something negative that was positive so I can take it.

There was a duty. I know when I crossed the line to actually taking evidence that, I mean, I knew it was one of those things in the beginning I'm never going to do, that I know I'm going too far when that happens. And, you know, I did pass different lines in the sand.

I guess part of me, you know, besides having a duty to do these tests correctly, it was also, I didn't want to send anyone innocent to jail. You know, I could be that person, you know, and I also knew if I did the test accurately there wouldn't be any reason for the test to be contested and possibly reanalyzed or possible misdoings being brought up. If I did everything well there would be

no reason for anything to be questioned.

GRAND JUROR: Did you testify that when you tampered with the evidence, you used some of the evidence for your own personal use?

THE WITNESS: I did.

GRAND JUROR: You always returned it with a similar amount or close to similar amount that was in there but did you ever put anything else in there that wasn't -- aspirin pills instead of percocet or anything?

THE WITNESS: I never touched pills but for a while I was just taking drugs, small amounts from different pieces of evidence so the weights were not accurate. If they were reweighed they may show a decrease in an amount. But once I started using crack, like I said, late 2011 or -- yeah, late 2011, 2012, I got to the point where I was taking more -- I took enough that would definitely be noticeable by the, you know, the naked eye and I did start putting counterfeit substances in pieces of evidence.

GRAND JUROR: So if they went back and tested those particular samples, they would not have the -- they would have something other than that was written in the evidence room?

THE WITNESS: If they were to go back and retest pieces of evidence, they may not find the same thing. There are a few pieces of evidence that are a hundred percent counterfeit substance at this time, that I took all of it for one reason or the other, whether I needed it, I wanted it or if it was, you know, I had left some of it but tried to put a counterfeit substance that looked like it but it was difficult to make it look the same, I would take it all out and put a hundred percent counterfeit substance in.

There were other pieces of evidence that maybe I only took, you know, a third of what was there so two-thirds of it is what was originally there and I added something that -- with a similar appearance or consistency or whatnot to make up the difference.

THE FOREPERSON: In your initial training period in Jamaica Plain you referred to on numerous occasions positive results being 98, 99 percent of your test, some number below that being negative. Was that percentage ever written in the standard operating procedures that you had to follow?

THE WITNESS: Do you mean the match quality?

GRAND JUROR: Yes.

THE WITNESS: No.

GRAND JUROR: So that was pure judgment.

THE WITNESS: I don't know if it was judgment on my part but it's -- I don't know if the boss was told that by his boss or whatnot.

GRAND JUROR: So each chemist could technically say I'm gonna call it 95 percent positive and you could say I'm gonna call it 98 percent positive --

THE WITNESS: I guess depending on --

GRAND JUROR: -- and there's nothing to really have a standard protocol as to what percentage --

THE WITNESS: (Interposing) What percentage of quality? I don't know that either.

I mean, in the Jamaica Plain lab the mass spec was not always and not normally run by the same chemist so it was up to the mass spectrometer chemist and not the bench chemist to indicate whether or not the match qualities were acceptable.

GRAND JUROR: Talking a little bit about oversight, so for many years I worked for a large corporation as a department head and supervised in excess of 50 people. I had to give each person every January a list of objectives for the year: This is what I expect for productivity, this is what I expect for accuracy, this is what I expect for a myriad of things. And I also had to tell them how they would be monitored.

Did you and the rest of the people in

the lab ever -- were they ever given a list of expectations as to, this is your job and this is how we expect it to be done and this is how we're going to monitor it?

THE WITNESS: I don't believe so. I don't remember getting it in either lab.

The overall expectation of the lab was that we were going to do the tests right. I mean, it wasn't, oh, it's okay if you do the test wrong. You know, we're talking about people lives here but there was no set list of expectations. A lot of it wasn't just on us but depending on what the police departments brought in. You can't say you have to get through so many samples a month or you have to do this or you have to do that because you never know what -- what piece of evidence you're gonna get so.

As for monitoring, while I was in the Jamaica Plain lab they were -- I don't want to say audited. They did some, occasionally -- I don't know if it was routinely, I don't

remember the schedule. The supervisor would basically, you know, have so many -- I don't remember how many -- a number of previous submissions that were analyzed and still kind of in the lab that hadn't been picked up by the police officers yet, come over and kind of retest it in front of them just to show that the results that we originally got were the same as what we got now. I don't remember that happening in the Amherst lab at all.

I mean, we did have reviews, an annual review, but I'm not saying it was a joke. It wasn't the specifics of did you meet this quota, did you meet this quota, did you meet this quota.

GRAND JUROR: So basically there was no oversight in the Amherst lab?

THE WITNESS: Correct.

GRAND JUROR: You also mentioned that the lab was not accredited.

THE WITNESS: Yeah.

GRAND JUROR: That's surprising. That you're in an industry that

is working hand in hand with the police department and stuff is going to court. Why was it not accredited?

THE WITNESS: Simple answer, money. Even back when I was in the Jamaica Plain lab you heard rumors that they were trying to get us accredited and this and that and somehow it would just fall off the table. There's no money to put into everything that needs to get done for it.

Like I said, the lab did try to do all the procedures and protocols and follow all the guidelines that were given by this group that would be required. The actual money that was needed to get accredited was not available to us.

Part of the time the DPH, Department of Public Health, that's what we were under first, I mean, tried to shut the lab down also by not funding and had to go for like senate overrides and whatnot to keep the labs open at all.

Whether or not DPH was playing with

aliquots of money so they could get more money for their programs and not fund us sort of thing, I'm not sure. I mean, this is speculation I guess. But we at different times even in the Amherst lab, Rebecca was working on trying to get this stuff -- paperwork together, you know, I don't want to say written in a way but try to prepare a packet to get accredited. Cam, when he was still there had thought about coming back after retiring and working part-time. You know, you could work up to, I don't know, up to 20 percent of the time and still get your full retirement because retirement was only 80 percent and just to work on that but the funding for him to do that wasn't there.

GRAND JUROR: And, lastly, when you had mentioned there was no drug testing due to the fact of the labor agreement, was that a Massachusetts labor agreement, was it a national thing because it seems crazy working in that field --

THE WITNESS: I agree with

you. It's a -- the union is called MOSES. It's the Massachusetts Organization -- um, basically the science and engineers and there's an S in there. But it's science and engineers so since we were part of the Department of Public Health, all their -- it was the same union I was in as a bacteriologist working in the HIV lab, people working in the STD labs and all the different scientists were kind of grouped together on this. Like I said, whether or not we should have been in DPH in the first place is debatable.

I even see positives and negatives when, yeah, it makes more sense to put it under public safety, which we eventually came under, but then is there -- are we working for the state police or are we kind of an independent third party because we shouldn't have a stake in those results. So there's a positive or negative with them. But as a whole, MOSES collective bargaining agreement's in there and it's never been updated so.

GRAND JUROR: I have a question about two of the exhibits that were found when your car was searched. It's sort of a curiosity question.

THE WITNESS: Okay.

GRAND JUROR: The one about the neighbor who wanted your expertise about that drug testing?

THE WITNESS: Yes.

GRAND JUROR: And on there there's a Doctor Bombardier's name. And then the other document is the Pittsfield pharmacist, Nicole Bombardier. Any relationship between these two people?

MR. CALDWELL: If I can for the record, the Grand Juror was referencing -- the first was Grand Jury Exhibit Number 7 and the second was Grand Jury Exhibit Number 10.

THE WITNESS: I have no idea. I had never noticed that so I am not aware of it but great observation there.

GRAND JUROR: Just curious.

THE WITNESS: I have no idea.

MR. CALDWELL: Are there any other questions from the Grand Jurors?

MR. VELIS: One more question.

In conclusion, Ms. Farak -- unless anyone else has a thought about a question -- interrupt me if I'm wrong but I gleaned from your remarks about your fellow employees that you spoke about them affectionately.

THE WITNESS: Correct.

MR. VELIS: You were a close-knit group?

THE WITNESS: Fairly close, yeah.

MR. VELIS: Do you have any reason to believe that from 2004 up until the time when your employment was terminated, do you have any of reason to believe that any of those fellow employees -- any of them -- were ever aware of your physical or mental condition during that period of time?

THE WITNESS: Physical condition, meaning the drug use?

MR. VELIS: Drug use and mental condition, meaning any of the things for which you were being treated.

THE WITNESS: I know at times they heard me talking on the phone with my partner. I could be argumentative I guess. I don't want to say I was screaming at her on the phone at times but I'm sure they heard that.

In 2012 when I was -- started a second group therapy, not the DBT but after that, I did have to leave. It was at a 1 o'clock on Friday group so I did leave early and I believe I used sick time. I'm not a hundred percent sure if I always used sick or sometimes I used vacation time.

MR. VELIS: That was in 2012?

THE WITNESS: 2012.

At the end, I mean, I had lost weight due to my drug use. My moods had changed slightly. I actually did have some physical stuff. That's when I was diagnosed as a diabetic. It's an autoimmune form so it's

kind of a like a late onset juvenile diabetes thing so I was -- which could explain certain things like weight loss and maybe my sugars are off and all these sorts of things. I mean, looking back maybe they all see things in a different light but prior to that time I don't have any reason to believe that they knew when I started therapy or about the drug use.

MR. VELIS: It's fair to say you don't know?

THE WITNESS: I don't know. I don't think they did. I have no reason to think they did but I have no idea really what went through their heads. You'd have to ask them.

MR. VELIS: I have nothing further.

GRAND JUROR: No one ever said how are you feeling today, no comments? I mean, usually when you work with coworkers and you're off one day, somebody will say, you know, are you feeling okay?

THE WITNESS: You know, they knew some of the stuff with my wife too and maybe some of my mood changes at times had to do with her. You know, they heard me talking on the phone. Okay, fine, I'll be home. I'll bring you to the doctor or whatever, you know, frustration in that sense.

You know, people have bad days and I probably just said I'm just having a bad day. I didn't sleep well last night. Yeah, I'm not feeling good. Like I said, I was fairly close I guess to my coworkers but I wasn't buddy-buddy with any of them so.

MR. CALDWELL: Are there any other questions?

Grand Jurors are content.

I have nothing further.

MR. VELIS: Nothing further.

(The presentation was suspended.)

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COMMONWEALTH OF MASSACHUSETTS

COUNTY OF HAMPDEN

I, KATHLEEN M. HOUGHTON, Court Reporter, hereby certify that the foregoing is a true and accurate transcription of my stenographic notes to the best of my knowledge and ability.

KATHLEEN M. HOUGHTON

EXHIBIT 7

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 Plain[2] 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

[3]The 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, marihuana, 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.

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[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 THC [9] 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 standard[16] 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

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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 to74 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 of 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 twelves time 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, Hatchett 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 contaminates . . . 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

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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).

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[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 marihuana 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 SOP[33] 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/LAB[36] (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.ascld-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 Guidelines[37] (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.ascld-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 Spectroscopy[38] 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 ultraviolent 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

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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 one[41] 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 investigation[44] 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
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[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.