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THE SPECIAL COMMISSIONER OF INVESTIGATION
FOR THE NEW YORK CITY SCHOOL DISTRICT

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June 26, 2014

Hon. Carmen Fariña
Chancellor
New York City Public Schools
Department of Education
52 Chambers Street, Room 314
New York, NY 10007

Re: Anna Poole
Beacon High School
SCI Case #2014-0088

Dear Chancellor Fariña:

This office has concluded an investigation into an incident at Beacon High School (“Beacon”) in Manhattan, where Teacher Anna Poole conducted a Science experiment which injured two students (“Student A” and “Student B”) on January 2, 2014.¹

On January 4, 2014, Department of Education (“DOE”) General Counsel Courtenaye Jackson-Chase contacted the office of the Special Commissioner of Investigation (“SCI”) by e-mail and requested an investigation into the experiment incident at Beacon. Jackson-Chase referenced an article in The New York Times which reported that there was a federal warning about the dangers of the experiment conducted at Beacon.

The Times article, “School Experiment That Burned Boy Was Focus of Federal Warning,” was published on January 3, 2014, and appeared in print in the Saturday, January 4, 2014 edition. The article reported that, just weeks before the incident at

¹ Poole was reassigned.

Beacon, the United States Chemical Safety Board (“CSB”) distributed a video which warned about the dangers of the experiment. The video, “After the Rainbow,” featured the first hand account of experiment victim Calais Weber who, at age 15, was burned on more than 40% of her body during a Chemistry demonstration performed on January 23, 2006, by a teacher at a prestigious boarding school she attended in Ohio.² The demonstration in the CSB video used highly flammable methanol to show how various mineral salts produced different color flames when burned.

As a result of the Beacon incident, Student A, a 16-year-old male, who received 2nd and 3rd degree burns to the face, neck, and torso, was transported, and admitted to the Burn Center at New York Presbyterian Hospital Weill Cornell Medical Center (“Cornell Burn Center”). Student B, a 16-year-old female, who received 1st degree burns to the forearms, was transported to the Cornell Burn Center where she was treated and released.

Officials from a number of agencies responded to the incident at Beacon. These included the New York City Fire Department (“FDNY”) – Firefighters, Chiefs, and Fire Marshals – Emergency Medical Services (“EMS”), the New York City Police Department (“NYPD”), the DOE, and the United Federation of Teachers (“UFT”). As a result, SCI amassed considerable documentation. This included Violation Orders (“VOs”) and Notice of Violations (“NOVs”) which the FDNY issued to Beacon following the incident. The FDNY also conducted an investigation into the incident.

SCI investigators spoke with Beacon Custodian Dimitri Stefanopoulos who turned over a flash drive containing documents and photos regarding the incident at Beacon. On January 2, 2014, Stefanopoulos arrived at the school at approximately 9:00 a.m. – the time when Poole was starting the lab class – and proceeded to his office on the 2nd floor of the school. As soon as he got there, he heard Custodial Fireman Danny Walls yelling “boss, boss,” in a stressful tone, and that there was a fire in the 3rd floor lab.

Stefanopoulos immediately responded to the 3rd floor and observed that the students from Room 317 were in the hallway. Stefanopoulos entered Room 317 and saw that the entire room was covered with orange powder. Stefanopoulos explained that two fire extinguishers had been discharged and released the orange residue throughout Poole’s classroom.

A student told Stefanopoulos that a “student was on fire” and was brought to Teacher Thomas Covotsos’s classroom. Stefanopoulos responded there – Room 321 – and then entered Room 331, the storage area located inside Room 321. Covotsos and School Nurse Connie McKillnon were administering First Aid to a male student who had been injured by the fire. Stefanopoulos described the student’s left ear as being melted. Stefanopoulos added that there was a hole in the student’s shirt and he was shaken.

² SCI obtained a copy of the video.

Stefanopoulos said that the student “looked like a victim from a battlefield.” A second student – a female – also had been injured.

Stefanopoulos learned that Poole had been taken to the 2nd floor and he sent Walls to escort Poole back to Room 317. The FDNY officials, Teacher Kate Oldre, Teacher Covotsos, Teacher Christopher Mott, Principal Ruth Lacey, Stefanopoulos, and Poole’s mother convened in Room 317. The FDNY asked Poole to recreate the scene of the incident.

According to Stefanopoulos, Poole explained that she set up four Petri dishes on the instructor’s lab table and added a different nitrate to each dish. Poole then took a one gallon bottle of methanol and added a small amount to each Petri dish. Poole lit each dish as the students watched from the audience. An FDNY Deputy Chief asked whether the students were wearing protective gear and Poole responded: “They were not.”

Poole continued that, as she lit each Petri dish, a different color flame appeared. When the flames died out, the students asked Poole to conduct the experiment again. Poole explained that, this time, after she added the nitrates to the Petri dish, she reached for the one gallon container of methanol to add to the Petri dish and, all of a sudden, a fire ball – like a blowtorch – erupted and shot across the room. Poole did not hear anything, but saw a white flame shoot across the room, and then Student A was on fire. A student handed Poole a fire extinguisher and she shot the contents at Student A.

Stefanopoulos described Poole as “much shaken” and “very nervous.” When the questioning was finished, Poole was escorted to Room 221.

Stefanopoulos reported that Covotsos then explained that the experiment should have been conducted in a different manner. According to Stefanopoulos, Covotsos said that Poole should have placed a small amount of methanol in a beaker, rather than bringing an entire gallon to the experiment table. Covotsos added that the experiment could have been conducted using wooden sticks dipped in water and then dipped in a nitrate bottle. Covotsos said that the stick would be held over the Bunsen burner to produce the different color flames. Covotsos asserted that students could perform the experiment using that method.

According to Stefanopoulos, Covotsos said that another way to conduct the experiment was to use a small sponge, soaked in methanol, which was placed in a Petri dish, and lit. Covotsos said that the same flame reaction would occur. Covotsos added that the experiment should have been conducted only once.

At the request of the Fire Marshals, Stefanopoulos opened Room 319 so they could interview Poole. Stefanopoulos was not present during that interview, but Poole’s

mother was because she refused to leave. Stefanopoulos added that UFT representatives arrived, but were not allowed to enter Room 319. The UFT representatives demanded that all questioning be stopped and, according to Stefanopoulos, to his knowledge, the interview with Poole was terminated.³

At the request of Principal Ruth Lacey, at approximately 2:30 p.m., Stefanopoulos and members of his custodial staff entered Room 317 to retrieve the personal belongings of the students. Those items were emptied into clear plastic bags and returned to the students.⁴

Stefanopoulos described Room 317 as a Science demonstration room used by teachers to perform experiments in a safe manner. Only teachers could perform demonstrations and students could only observe. Stefanopoulos said that the safety equipment present in Room 317 at the time of the incident included 20 pound fire extinguishers, eye wash stations, and a box of goggles, but there was no protective clothing, such as aprons. According to Stefanopoulos, it was not mandated to have protective clothing in the Science room and the safety goggles were used for impact and splash protection, not for fire.

Stefanopoulos reported that, in light of the incident, the VOs, and the NOV's, a number of steps were taken to bring all the Science rooms – the demonstration room, the storage room, and the labs – up to standard.

SCI investigators met with Teacher Covotsos who taught Biology and Chemistry at Beacon. Covotsos said that, on January 2, 2014, he was in Room 321 when he heard what he believed to be a desk being moved across the hall in Room 317, Poole's class, and he thought students were fighting. Covotsos responded to Room 317, saw smoke coming from the room, and a "child on fire." Covotsos unsuccessfully attempted to smother the fire, but Teacher Guyyee Shum doused the flames using a fire extinguisher. Covotsos immediately called 9-1-1 from his personal cell phone. Student A was brought to Room 321 to be cooled by water from the sink.

SCI investigators met with Chemistry Teacher Shum who said that, on January 2, 2014, he was in Room 318 when he heard a commotion coming from Room 317. Shum did not hear an explosion, just the movement of chairs. Shum went to investigate and saw flames coming from Poole's lab table. Shum ran back to his room to grab a fire extinguisher and a fire blanket. Shum did not think Poole's classroom was equipped with a fire blanket. Back at Room 317, Shum saw Student A on the floor rolling around trying

³ An FDNY report indicated that the interview had concluded before the UFT attempted to intervene.

⁴ Principal Lacey told SCI investigators that the school was closed on Friday, January 3, 2014, as a result of snow. She said that the custodial staff cleaned Room 317 that day, and the students received their property on Monday, January 6, 2014.

to extinguish the flames on his clothing. Student A's shoulder and neck also were on fire, as were a table and some jackets. Shum draped the fire blanket over Student A and used the fire extinguisher to put out the flames on Student A and in the classroom. Teacher Covotsos immediately called 9-1-1. Shum described the students as being shaken up. Shum said that Student A walked away on his own power. Shum had never conducted the "Rainbow Experiment."

Through his attorney, Student A declined to speak with investigators.

SCI investigators spoke with 16-year-old 10th Grade female Student B who came from 1st period Spanish class to 2nd period Chemistry class in room 317, at about 9:00 a.m. on the day of the incident. When she arrived at class, Student B went to the table to the left of the front lab table and sat down with Student A, Student D, and some other students she could not identify. By the time Student B got to class, Poole's demonstration was underway at the front lab table and she was explaining the use of different chemicals to create different colors. It was supposed to be a fun demonstration called the "Rainbow Experiment." Poole had set up four dishes on the lab table and lit them with a lighter.

Student B said that, when the flames started to go out, Poole took a gallon jug of methanol, and poured it directly into the first dish. Student B added that she heard a "boom" and flames erupted immediately. Initially, Student B did not realize she was on fire and another student told her she was on fire. Student B then saw that the bottom of her shirt had caught on fire; she extinguished it herself. EMS transported Student B to the Cornell Burn Center where she was treated for the resulting injuries. Student B did not know whether she was splashed with chemicals or burned by the fire which erupted in class.

Student B confirmed that Student A also was on fire. Student B described Poole as appearing to be in shock. Student B did not recall whether another student grabbed a fire extinguisher. Teacher Shum or Teacher Christopher Mott came running into the room and threw a fire blanket on Student A. According to Student B, Poole used a fire extinguisher to put out the fire on Student A. Student B's gym bag and book bags in the classroom also caught fire. The fire extinguisher was used to put the rest of the fire out. Student B and the rest of the class ran toward the rear of the classroom and opened windows so they could breathe.

Student B said that Poole wore safety goggles when she conducted experiments and, at times, instructed students who were in close proximity of an experiment to wear safety goggles. On the day of the incident, Poole was wearing safety goggles, but no student had safety goggles or protective clothing.

SCI investigators spoke with 10 other 10th Grade students (“Student C” through “Student L”) who were in Poole’s class on the day of the incident. The accounts given by the students were consistent, with slight variations based on their personal perceptions, and their locations in the lab room.

The students were excited to be back at school following the holiday recess. Some students arrived early to Poole’s class, while others came in as the experiment was beginning. The students were not wearing safety goggles or protective clothing; only Poole wore safety goggles. Student A, Student B, Student C, and Student D sat at a table to the left of the front lab table where Poole conducted the demonstration. It was called the “Rainbow Experiment” and was supposed to be a fun lesson. Poole set out four dishes, added chemicals – nitrates – then added a liquid – methanol – and lit each dish. The chemicals reacted with the liquid and caused a different color flame in each dish. When one dish started to go out, Poole took a gallon jug of methanol to add to the dish. As she did so, there was no explosion, but flames – a fireball – erupted, and shot toward Student A who caught on fire. Student A started to yell: “Help me.” Everyone was in shock. Student B also was burned as were Student B’s gym bag, book bags, and a chalkboard. Student C was stunned and could not believe that he did not get burned; he moved away from the fire.

There was immediate panic. Student D ran from his desk and grabbed a fire extinguisher, but was unable to unclip it. Poole grabbed the fire extinguisher, but also was not able to unclip it. Poole ran out of the classroom to get Teacher Shum who returned with a fire extinguisher and a fire blanket. Poole, Shum, and Teacher Covotsos now were in the classroom. Shum threw the fire blanket on Student A and sprayed Student A with the fire extinguisher. Poole also discharged the contents of a fire extinguisher. Covotsos called 9-1-1. Some students heard Poole say, “I burned a student,” or “Oh my God, I set a kid on fire.”

Students ran to the back of the room to open windows to have the smoke escape and allow fresh air to enter the room so they could breath – there were fumes from the fire and from the discharged fire extinguishers. The students went into the hallway and Teacher Mott escorted them to the library.

SCI investigators interviewed Principal Ruth Lacey in the presence of her union representative. Lacey said that there was only one assistant principal assigned to the school so there was no assistant principal in charge of the Science Department; Lead Teacher Kate Oldre was in charge of the Science curriculum.

On January 2, 2014, Lacey arrived at school at approximately 7:30 a.m. The school had two sessions: one started at 8:00 a.m. and the other at 9:00 a.m. Lacey was in the cafeteria on the 1st floor when the School Safety desk at the entrance to the school

received a telephone call about something happening on the 3rd floor in Room 317. The FDNY arrived within minutes and Lacey responded to the 3rd floor with the FDNY.

When she arrived at Room 317, she discovered that the fire had been put out. Lacey found School Nurse McKillnon and Teacher Covotsos administering First Aid to Student A. Student A then was moved to Room 321 and Teacher Mott escorted Poole's class to the library. Lacey asked Teacher Oldre to escort Poole to Room 221. EMS transported Student A and Student B to the Cornell Burn Center. Lacey heard from a student that Poole was the only person wearing safety goggles.

Additional emergency response units arrived at the school including FDNY, NYPD, EMS, and DOE officials, as well as representatives from the UFT. Local media also arrived at the school. According to Lacey, she was not a witness to any statements made by Poole. On the day of the incident, Lacey asked Teacher Covotsos to explain the experiment and why the fire started, but she did not recall his response. According to Lacey, she really did not understand what happened until she read the article in The New York Times the weekend after the incident. Lacey reported that, immediately following the incident, the Rainbow Experiment was banned in the New York City public schools.⁵

Lacey had interviewed and hired Poole who started at Beacon in September 2013. Poole had a Master's degree in Chemistry and had taught Advance Placement Science at the Bronx High School of Science. Lacey only received lesson plans when she conducted an observation or evaluation of a teacher and, therefore, did not receive a lesson plan from Poole on the day of the incident. Lacey added that it never was a requirement that experiments be approved before being conducted in a class.

Through her attorney, Anna Poole declined the opportunity to speak with investigators from this office. On a DOE "Written Statement Form," Poole wrote:

I performed a demo in which I lit 4 different nitrates in evaporating dishes as a flame test. When the flames went out, I lifted a bottle of methanol from below the bench and opened it and then there were flames that just flew across the bench toward the front and left. [Student A] was sitting at his table next to [student] and his clothes were on fire. He stood up and then rolled on the floor. I yelled for a fire blanket and grabbed the extinguisher. Mr. Shum came with the blanket and we tried to cover him and sprayed the extinguisher. After he was not on fire I grabbed a second fire extinguisher and put out the rest of the fire.

⁵ By e-mail, Deputy Chancellor Kathleen Grimm sent a message to all high school principals, the clusters, the networks, and the superintendents, suspending the performance of the Rainbow Experiment in all schools.

June 26, 2014

We refer our findings for your review and any action you deem appropriate.

We are forwarding a copy of this letter to the Office of Legal Services. We also are sending our findings to the New York State Education Department for whatever action it deems appropriate. Should you have any inquiries regarding the above, please contact First Deputy Commissioner Regina Loughran, the attorney assigned to the case. She can be reached at (212) 510-1426. Please notify First Deputy Commissioner Loughran within 30 days of receipt of this letter of what, if any, action has been taken or is contemplated regarding this investigation. Thank you for your attention to this matter.

Sincerely,

RICHARD J. CONDON
Special Commissioner
of Investigation for the
New York City School District

By:


Regina A. Loughran
First Deputy Commissioner

RJC:RAL:ss

c: Courtenaye Jackson-Chase, Esq.
Laura Brantley, Esq.
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