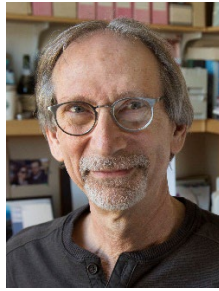


## Professor Gary Rudnick's State of CT DPH Lab Inspection



### BEFORE THE INSPECTION

- He used the help checklists provided to his lab.
- He cleaned up his lab.
  - First impressions matter. When the inspectors see a neat, orderly lab, they seem to be much less likely to look for problems.
- He checked all chairs to make sure none were fabric, all were easily cleanable, and none had tears, rips etc.
- It's a good idea to have a lab group meeting with your EHS contact to go over all the periodic requirements and assign lab members to making sure that they are up to date at least once a year. When a lab member leaves the group, reassign their duties to others.
- He made sure his biosafety cabinets were tested and certified within the last year.
  - He made sure the sash alarm activated if lifted above the set height working level.
  - He made sure the vacuum system was a 2-trap system and hydrophobic filters were present to protect the vacuum source.
  - Our department makes sure these hoods are inspected every year.
    - He made sure there was a bleach label with the date on it for the vacuum flask (lab staff was reminded to empty the vacuum flasks at least weekly).
- He made sure his chemical fume hood had been tested in the last year.
  - Below the hood, he made sure that chemicals were segregated by compatibility class for flammables and corrosives.
  - Made sure the chemical containers were in very good condition.
  - He also got rid of any unwanted chemicals as hazardous waste where applicable.
- He made a request to replace a few stained ceiling tiles with Facilities.
- He asked Facilities also to clean the floors in his lab (I never worried about the floors unless they were especially dirty).
- He assembled his "site-specific Biosafety Notebook."
  - The sign-up sheet for all lab staff to document understanding of the SOP and biosafety manual.
  - His approved biosafety SOP for working with Vaccinia virus.
  - A copy of the Yale Biological Safety Manual.

- One page of his Inventory Records as an example of his inventory.
  - He also included a copy of the Yale EHS Laboratory Chemical Hygiene Plan.
- He checked the door sign to make sure it had the agents on it and the contact info was up to date.
  - He made sure the door was lockable.
  - He made sure the self-closing mechanism worked properly.
- He found his biosafety spill kit and made sure it was still stocked.
- He asked Yale EHS for a chemical safety spill kit.
- He made sure he had a stock of the approved disinfectants for the agent (both concentrated and in dilution versions).
  - 70% Ethanol, 10% household bleach (labeled and dated).
- Verified that each person in his lab had a pair of safety glasses, their own lab coat and gloves in the sizes they needed.
- He refreshed the biomedical waste protocols with his laboratory.
  - Liquid waste treated with fresh household bleach until a 10% bleach dilution against the waste was achieved and allowed a 30-minute contact time before drain disposal.
  - Solid plastic that could be bleached would be treated the same way but placed in the biomedical waste box, then in biowaste cart for treatment by EHS.
  - Biowaste that can't be bleached (small red bag waste) is autoclaved by his lab, then placed in biomedical waste box, then in biowaste cart for treatment by EHS.
- He made sure all freezers were labeled and lockable/locked.
- He made sure all pathogen researchers know precisely where his human pathogens were stored inside the freezers in the event they were asked to randomly show where parts of their inventory were stored.
- He made sure labels were on incubators, centrifuges, and other equipment where biohazards are stored or used.
- He asked Yale EHS for a new transport container (unbreakable, sealable, and labeled with a biohazard label).
- He asked everyone in his lab to update their lab safety trainings (within 4 years for chem and biosafety and within 1 year for BBP).
- He checked that all relevant lab safety posters were still up and easy to see in his laboratory.
  - Exposure response
  - Spill response
  - Biosafety cabinet spill poster
  - Centrifuge spill poster
  - BSL-2 work practices poster
  - BSC use poster
  - QR posters of safety manuals and SDS links
  - QR posters of BSL-2 enhanced work practices

- He made sure that the hand washing sink was working and there was soap and paper towels present.
- He checked the eyewash to make sure it was working and made sure everyone in the lab knew how to use it.
  - He checked to see that he had the last 3 years' worth of records, and everyone was checking off the bump test of that eye wash every week.
  - He made sure the eyewash (and where applicable chemical showers) were not blocked and easy to access.
- He discussed the specific chemicals that were used with biohazards (formalin, phenol, chloroform, bleach, Ethanol etc.).
  - He made sure that everyone who used them had access to the SDS for each.
  - He posted the QR Poster that had the EHS Lab Chemical Hygiene Plan and the SDS.
    - He made sure that everyone's phone in the lab could access the documents from the poster.

### **THE DAY OF HUMAN PATHOGEN INSPECTION**

1 inspector arrived, he was escorted by two biosafety officers and the Safety Advisor was waiting with Professor Rudnick in his state registered laboratory. Unbeknownst to anyone, Professor Rudnick prepared for the inspection in a very unique way and had arranged everything that he thought would be needed the night before and had it set out in the laboratory. Upon arrival Professor Rudnick was introduced to Mr. John Murphy, the State Inspector, and he simply nodded and smiled to say hello.

Here is what transpired in 2 minutes and 45 seconds after the silent introduction.

<b>What the State of CT DPH Inspector Asked?</b>	<b>What Professor Rudnick did</b>
Where is your door sign?	He pointed to the sign, lifted the sign to show the back and put it back.
Is your door self-closing?	He opened the door and let it close by itself.
Is your door lockable?	He pointed to the locking mechanism on the door.
The inspector entered the lab and asked to see the site-specific biosafety manual.	He pointed to it on the bench. Then opened it to show the sign-in sheet for lab staff, the SOP, the biosafety manual, and the inventory cover page.
Does everyone understand the biosafety procedures?	He went back to the sign-in page and pointed to the names and nodded his head yes.
Do you have an inventory of agents?	He went back to the inventory page in his site-specific biosafety manual and pointed to it.

What the State of CT DPH Inspector Asked?	What Professor Rudnick did
Where do you store your pathogens?	He walked over to the freezer and pointed to the biohazard label, the lock on it, and an inventory map he had in a plastic sleeve near the freezer for the day of the inspection. He removed it and handed it to the inspector, it was titled "Human Pathogen Inventory" map.
Do you have training records for your staff?	EHS intervened: EHS said that all training records will be provided to the inspector at the end of the inspection.
Do you have personal protective equipment?	He pointed to a bench where he had lab coats, safety glasses, and boxes of gloves.
Do you have spill kits?	He pointed to a bio spill kit and chemical spill kit he had on the bench.
Do you have a sharps container?	He pointed to a brand-new sharps container, empty, that was also on the bench.
Do you have other biowaste containers?	He pointed to a red plastic biohazard bucket and a cardboard biomedical waste box.
Do you have a biosafety cabinet?	He walked the inspector the biosafety cabinet and pointed to it, and the certification sticker.
Does the sash alarm work?	He turned on the biosafety cabinet and lifted the sash until all heard the alarm and shut off the biosafety cabinet and lowered the screen back to where it was.
Do you use a vacuum system?	He pointed to the 2 traps in secondary containment and pointed to the filter.
Do you have any gas cylinders?	He pointed to them, secured, and labeled (in use and full) adjacent to the double stack incubators.
What disinfectants to you have?	He pointed to a gallon of bleach and two spray bottles of 70% Ethanol and 10% bleach that had their names and dates prepared on them.
Are labels on equipment?	He pointed to the incubators and their biohazard labels, then to the centrifuge and its label.
Do you have a centrifuge?	He pointed to the centrifuge and the safety buckets and left the gasketed lids upside down for inspection by the State DPH inspector.
Do you have a transport container?	He showed the inspector the plastic Rubbermaid container labeled with the biohazard symbol EHS had given him.
How are surfaces disinfected?	He pointed to the bottle of 10% bleach.

<b>What the State of CT DPH Inspector Asked?</b>	<b>What Professor Rudnick did</b>
How is liquid waste inactivated?	He pointed to the gallon of bleach (he was NOT asked contact time, but we are curious what he would have done. He probably had a note that said dilute bleach to 10% of the volume of waste to be treated for 30 minutes before drain disposal).
How is other waste treated?	He was prepared to walk the inspector to the autoclave, but EHS indicated that we keep the records for the central autoclave at the medical school and have the manifest records for anything that is treated by the biomedical waste vendor.
Do you have a Pest Management Program?	EHS spoke and indicated that each zone at Yale must have their own pest control contractor that can be called when needed.
Do you have a hand washing sink?	He walked over to the sink and pointed to the soap and paper towels.
Do you have an eyewash?	He pointed to the eyewash at the sink and then to the eyewash bump test record on the wall.
Do you have records for past years?	He handed the inspector 3 years' worth of eyewash test records.
Do you have a chemical fume hood?	He walked over and showed it and pointed to the annual certification sticker.
Do you store any chemical waste in your lab?	He opened the flammable storage door and let the inspector look. Then he opened the corrosive chemical cabinet storage door below the hood and let the inspector look. He had set up secondary containment trays to segregate chemicals from each other before hand.
Does your lab have access to Safety Data Sheets (SDS)?	He pointed to the QR Code Poster and to a handful of SDS that he had pre-printed before the inspection.
He was asked about other manuals?	He showed the inspector a copy of the Chemical Hygiene Plan and then the QR Poster for all other Yale EHS Lab Safety Manuals.
What do staff do if there was an exposure?	He pointed to the Exposure Incident Poster on the wall of the lab.
What do staff do if there was a spill in the lab?	He pointed to the BSL-2 Spill Response Poster on the wall of the lab. He also pointed to the centrifuge spill poster and the spill in a

<b>What the State of CT DPH Inspector Asked?</b>	<b>What Professor Rudnick did</b>
	biosafety cabinet poster that were up in his lab.
The inspector then looked at everyone and said, “well, I think that you have shown me everything I need to see, and your laboratory is in great shape. I will send you a certificate for the next two years.”	Professor Rudnick simply “nodded.”  I looked back as we were leaving and made eye contact with Professor Rudnick, and he simply smiled as I turned and went to the next lab with the group.