Bridging the Technical-to-Layperson Gap for Environmental Matters at the US Postal Service

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Federal Environmental Symposium 2019
Best Environmental Practices Section
Natcher Conference Center, National Institute of Health, Bethesda, MD
October 31, 2019 9-9:30am

Bridging the Gap…

From facts.usps.com - the United States Postal Service (USPS)…

- Occupies 31,324 retail Post Offices
- Has 497,157 career and 137,290 non-career employees
- Processes an average of 5,611 pieces of mail per second

I am one of those career employees and I:

- Cover environmental/safety concerns associated mainly with real estate and design & construction actions.
- Work every day with my Facilities Department colleagues, Safety, the Law Department, the Office of Sustainability, Postal facility managers and occupants, and external parties (e.g. – env. agencies)
- Bridge the gap from technical-to-layperson's terms for environmental/safety matters every day
- ***Love this job***

Fort Worth TX 8th Ave. Station

Great Barrington MA Main PO

Bridging the Gap…

All layperson's env./safety topics at USPS are backed by a <u>LOT</u> of science:

- Asbestos
- Lead Paint
- Mold
- Drinking Water Quality
- Contaminated Property
- Indoor Air Quality
- Radon and Radiation
- Vapor Intrusion

Summa Canister – Newark NJ MPO

Bridging the Gap…

And how does one communicate risk and assure conditions are safe?

(maybe not JUST by using quotes such as these…)

‘The potential risk estimates were compared to MassDEP’s short-term/IH and long-term risk criteria of an excess lifetime cancer risk (ELCR) of 1E-5 (i.e., a potential risk of one in one hundred thousand). The potential non-cancer hazard estimates were compared to MassDEP’s short-term/IH criteria of a hazard index (HI) of 10 (per target organ) and long-term criteria of a HI of 1 (per target organ). Exceedance of these MassDEP criteria indicate a potential health concern associated with inhalation of CVOCs which may require further evaluation and/or mitigation to reduce exposure’ – MA PO 2018 Vapor-related Risk Assessment Excerpt

‘The Langelier Saturation Index (LSI) is a commonly utilized logarithmic index ranging from +3 to -3, indicating a water unit’s stability and tendency to form scale. A positive LSI indicates a tendency for calcium scales to form, and a negative LSI indicates a tendency to dissolve calcium minerals, a known indicator of corrosive water. LSI values at or near zero (-0.5 to +0.5) indicate a calcium carbonate equilibrium in the water unit and a generally low tendency to react. Additionally, LSI values are affected by water temperature, and water with a higher temperature may have a greater tendency to scale’ – TX PO 2017 Water Quality Investigation

Let’s talk about some examples and learn how we bridge the technical-to-layperson gap…

Bridging the Gap…

Asbestos – *'All it takes is one asbestos fiber to make you sick or worse.'*

- USPS policy requires industrial hygiene (IH) firm oversight for ***any*** non-Maintenance-capable asbestos abatement (so for ***all*** Facilities Dept. asbestos abatement actions where there is no Negative Exposure Assessment)
- USPS policy has an emphasis on Certified IH involvement (the ***CIH*** takes an *OATH*)

Asbestos flooring is USPS's most frequent asbestos concern:

Bridging the Gap…

Asbestos – **From a 2018 floor drilling formal union inquiry (excludes *two more* pages of questions):**

What was the purpose of the work performed?
What precautions were deployed?
What class of work was performed?
What was the demarcation area and regulated area?
When were employees officially notified and by whom?
When and where were signs posted?
When was the breathing zone air measured?
What local exhaust was provided in the employee work area?
Where were Postal employees working during the period the work was performed?
What precautions were deployed?
When was the initial exposure assessment made and by whom?
When was the Local Union officially informed of the work to be performed?
Were the local's representatives allowed to observe the monitoring?
Was protective equipment allowed to be used by the representatives?

Bridging the Gap…

Asbestos – **2 highlighted questions from a 2018 floor drilling union inquiry (again, excludes *two more* pages of questions):**

When was the breathing zone air measured?

Air monitoring was conducted during the drilling events and through the post-drilling clean up phase within an 'ambient perimeter' based on the extent of the work.

What precautions were deployed?

Work was conducted by a certified asbestos abatement contractor with certified workers under the supervision of a certified asbestos abatement supervisor, and overseen by the IH oversight firm. Wet methods and local HEPA-filtered exhaust ventilation were used at the point of drilling to prevent asbestos fiber release. All work areas were demarcated with clear signage. Air monitoring was conducted during the course of abatement activities, with post-abatement clearance certificate documentation to establish safe clearance of the subject areas.

Bridging the Gap…

Lead Paint – *'Our landlord scraped off all the lead paint outside over the holiday weekend and now there are piles of red lead chips and dust all around the Post Office, including the main entrance and even customers are complaining.'*

- USPS lead paint policy is not the same as asbestos as far as requiring IH oversight, but it often does as OSHA requires us to prove NO excessive lead exposure
- Understanding the basics of work practices, oversight and **the power of wipe samples** goes a long way.. (from a 2019 NJ IH oversight report)…

'Lead-dust wipe clearance samples were collected and **compared to the results of the background wipe samples** collected prior to the LBP disturbing activities to verify the effectiveness of the cleaning. The results of all post-stabilization clearance wipe samples collected from surfaces in and around the work area(s) were below the analytical methods limit of detection (<10 micrograms of lead dust per square foot of surface sampled (µg/ft2)), which were significantly below the background/pre-stabilization wipe sample results for each corresponding area and below recognized HUD clearance levels for floors (10 µg/ft2) and window sills / troughs (100 µg/ft2) (also applied to sills, ledges, and walls). **All final lead-dust wipe sample results indicated that the stabilization and cleanup activities were effective**…'




Bridging the Gap…

Mold – *'The lower 3 feet of drywall in our basement has toxic, black mold and no one will go down there. I have pictures.'*

- USPS has detailed 2006 mold assessment and remediation guidance and formal 2008 mold policy
- The approach follows *practical* American Industrial Hygiene Association (AIHA) guidance to first check and stop ALL water/moisture intrusion *and* USPS does not endorse rote mold spore sampling

Pictures for suspect mold issues are powerful (efflorescence; dirt; water) as is the role of repair and alterations AND Safety/Medical staff

Budd Lake NJ MPO

South River NJ MPO

90 Church St. Station, NY, NY

Bridging the Gap…

Drinking Water Quality – *'I heard old pipes can leach lead into the tap water so I want it tested. Plus the water coming out is brown.'*

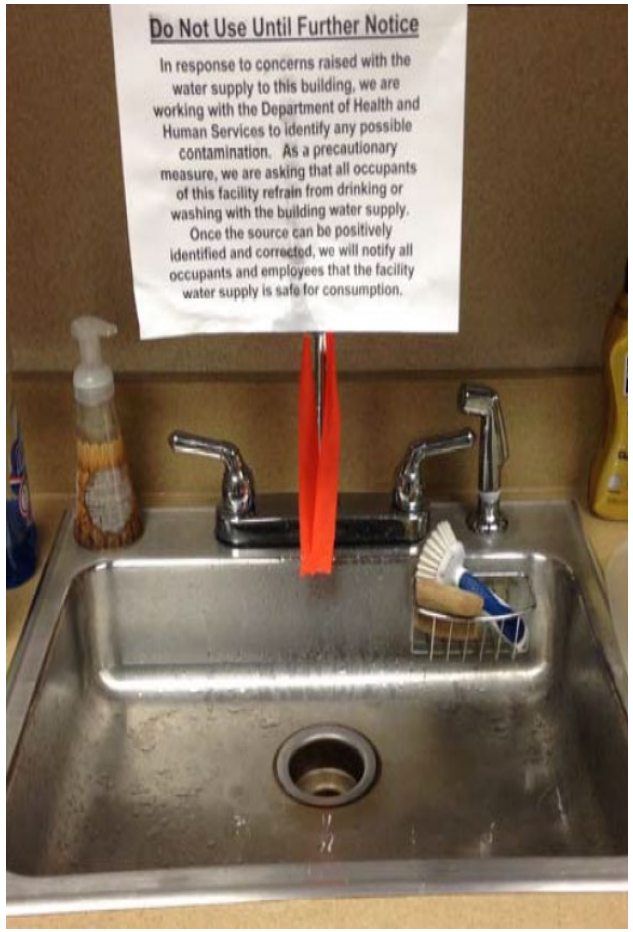
- It is challenging to explain the nuances of the Safe Drinking Water Act's 'primary' (e.g. – contaminants) and 'secondary' (e.g. - taste, color, odor) standards.

LEAD IN DRINKING WATER ADVISORY

IT HAS BEEN DETERMINED THAT THIS WATER OUTLET NEEDS TO BE FLUSHED DAILY (e.g. early in the morning) PRIOR TO BEING USED AS A DRINKING WATER SOURCE

RUN THE TAP FOR ONE MINUTE PRIOR TO CONSUMPTION

(e.g., coffee, soup, or drinking)



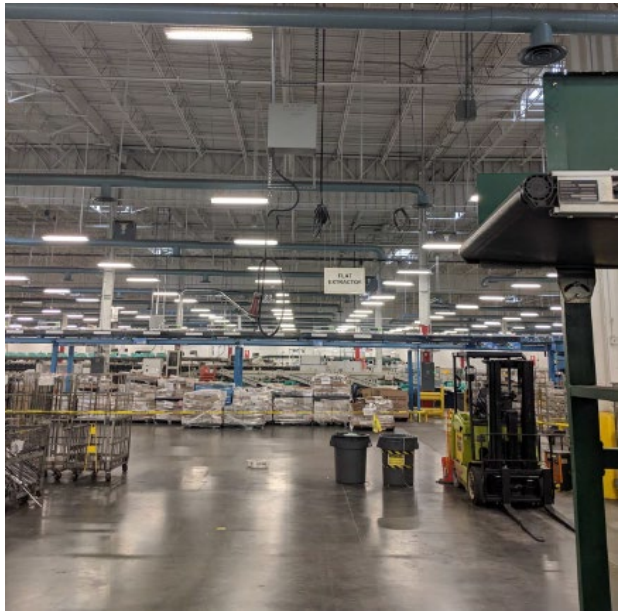
Water quality warnings

Lead filter device

Bridging the Gap…

<u>Contaminated Property</u> – *'We heard this new mail processing plant was a thermostat factory for 60 years before we got here.'*

- Working at real or perceived contaminated sites or having such sites *nearby* poses significant worries for the layperson
- USPS follows detailed env. due diligence processes for ALL new real estate actions (e.g. – Phase I Env. Site Assessment, Phase II Sampling)
- Think of long-term occupancy *EARLY* in the planning stages

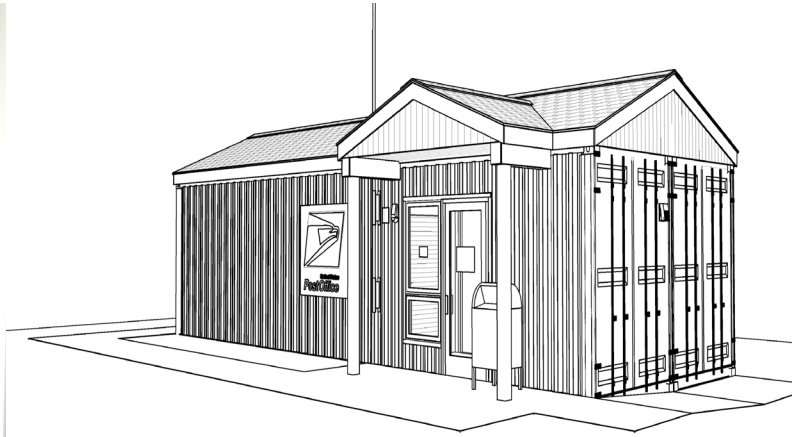


Teterboro NJ – No. Metro NJ PDC

Bridging the Gap…

Contaminated Property – Shipping Container Pilot Program

- In addition to site selection, sometimes the *structure* needs study
- Example of how the occupant's perception is just as important as any actual facts they present



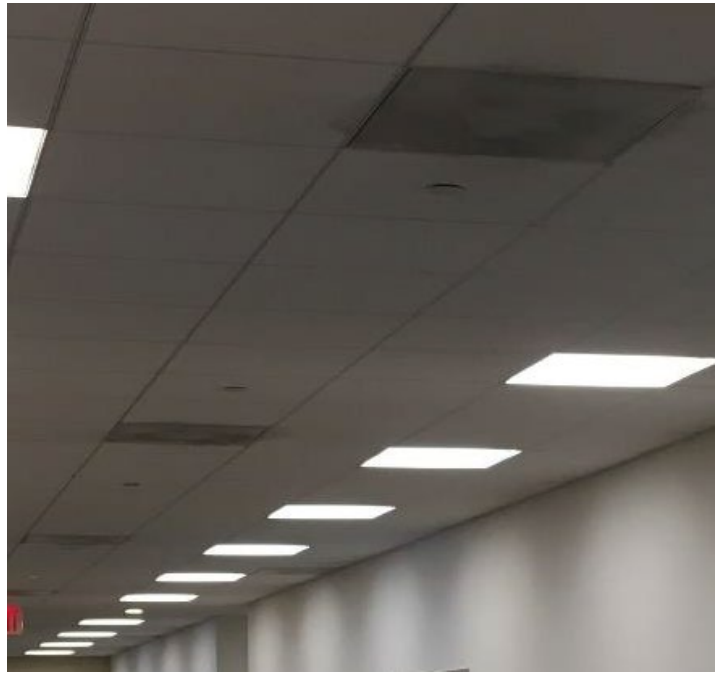
Bridging the Gap…

<u>Indoor Air Quality</u> – *'We have asthmatic folks in our office who are feeling worse lately and we see dirt on the air vents.'*

- 'IAQ' issues *outside of vapor intrusion, mold/mildew odors, and radon* often require non-scientific repair and alterations services such as HVAC studies
- USPS has an 'IAQ/Mold' screening form that helps identify building parameters such as moisture levels, temperature, CO and CO2 levels

Deposits of dirt and dust were observed on the ceiling tiles adjacent to the seven supply diffusers in the common areas above Cubicles 1, 2, and 3. These deposits usually originate from one of two sources: the primary supply airstream being unfiltered or picking up dirt and dust from the HVAC system ducts, or turbulence around the diffusers picking up particulates generated from activities in the conditioned and/or occupied space.

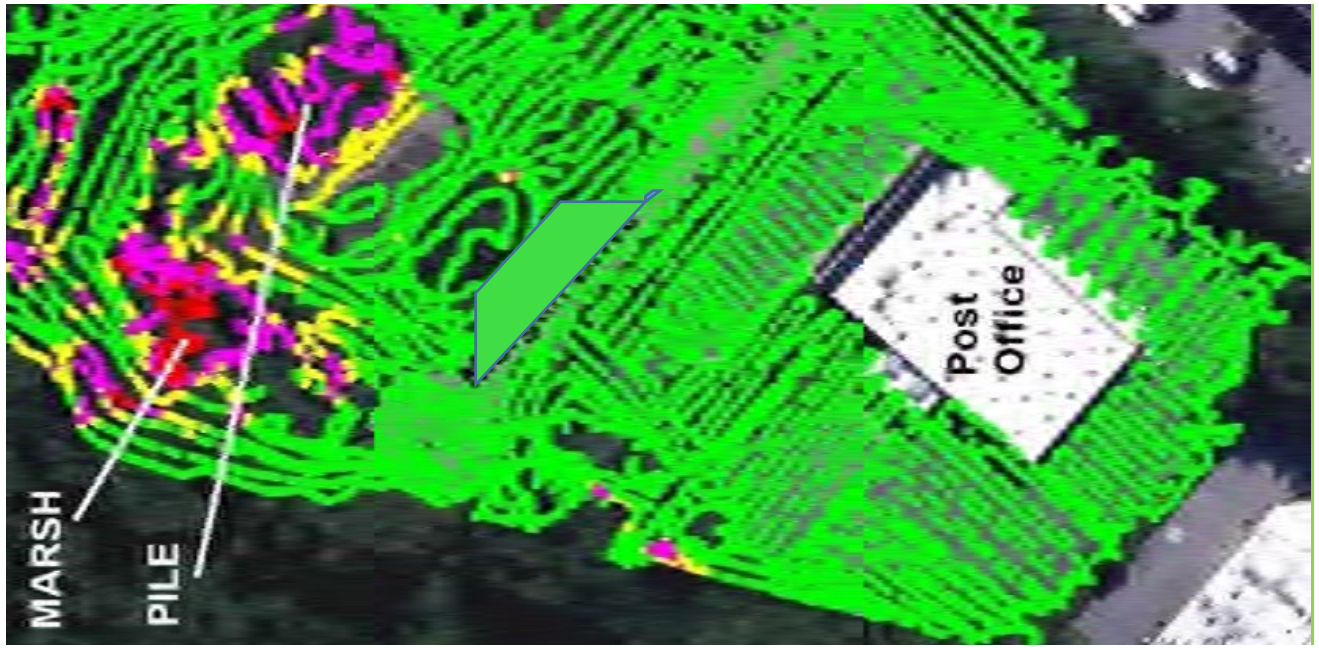
- 2019 Indoor Air Study at 90 Church St. Station, NY, NY

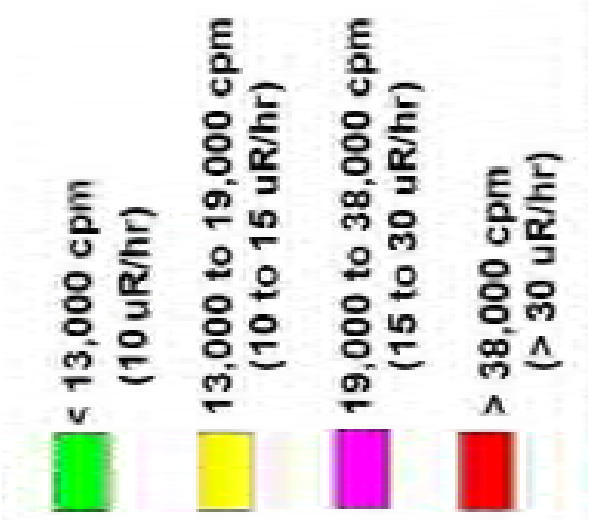


Bridging the Gap…

<u>Radon and Radiation</u> – *'The City wants to check our Post Office with a Geiger counter.'*

- Radon and radiation are not routinely screened for, but radon tiers and related radon potential are reviewed as part of env. due diligence for new real estate actions
- Off-site, third party radiation sampling requests can put everyone in a tailspin





Bridging the Gap…

Vapor Intrusion – *'I smell fumes in the office…'*

- USPS has circa 2009 vapor intrusion guidance based on mounting concerns at the time, such as states re-opening closed contamination cases based on lowering vapor-related exposure thresholds, or newly establishing them

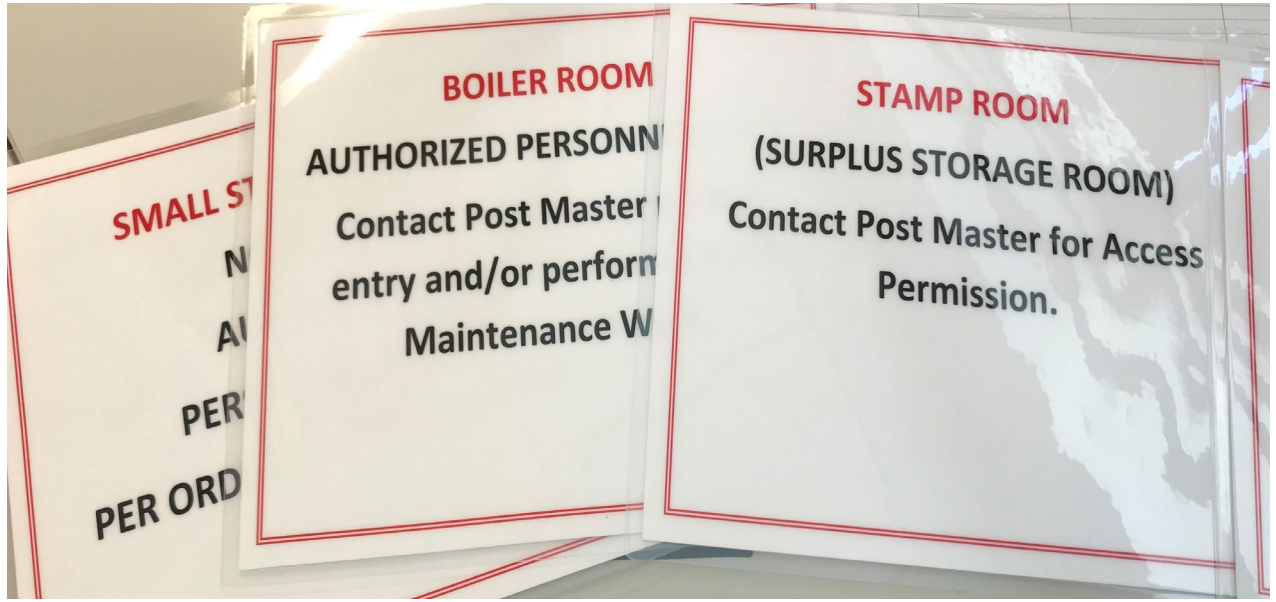
Great Barrington

MA MPO

Bridging the Gap…

Vapor Intrusion – Risk Communication Lessons Learned, Great Barrington

1. Risk assessors and toxicologists speak their own language
2. Without scrutiny of all draft reports, deliverables can leave the reader frustrated and/or scared
3. The Project Mgr. needs a consistent approach, but has to adjust for the listener [e.g. – consultants, PO employees, PO mgmt., other mgmt.(District, Area, HQ, my mgr.), Law Dept., Safety, Repair and Alterations, Real Estate, Corporate Communications, City staff (sewer authority, Town Planner), and MADEP(env. agency)
4. If you have to take matters into your own hands as an impacted party, you have to be decisive about the who, what, when, where and how
5. Treat everyone with respect and dignity just as you would want to be treated
6. When you don't know something, say so and find the answer promptly



Some life experience guidance about bridging the gap –

1. Have empathy. Put yourself in the concerned party's shoes, BUT be firm and decisive about your env./safety position
2. Policy can help
3. Call on a pool of experts when you are *not* qualified
4. Select smart, down-to-earth, reliable, communicative env. consultant experts
5. Carefully and thoughtfully review and edit even the MOST technical reports to at least *always* make key points crystal clear
6. Always condense technical documents into bullets that can be used to:
    a. Brief management (from HQ to the subject facility)
    b. Present an overview for employees (e.g. – Safety Talk)
    c. Help you stay on track with more broadly managing the problem

DISCUSSION/Q&A

Part of this talk included me wanting to learn from you.

Before and after at Morrisville NJ MPO