NEW YORK CITY DEPARTMENT OF EDUCATION
DIVISION OF SCHOOL FACILITIES
OFFICE OF BUILDING SERVICES

OCTOBER 19, 2021

ADDENDUM #2 TO BUILDING SERVICES CIRCULAR NO. 3 – 2019/20

NOTE: All circulars are to be kept in a permanent file

TO ALL CUSTODIAN ENGINEERS

OPERATION AND MAINTENANCE PROCEDURES (O&M) OF DETERIORATED LEAD-BASED PAINT

This addendum is to provide an update to the standard operating procedures for lead based paint abatement.

All work relating to lead-based paint shall comply with Department of Education procedures for lead-based paint as outlined in the attached document, "Standard Operating Procedures for Lead-based Paint Remediation".

Link to Standard Operating Procedures

Additionally, custodian engineers or custodial workers performing work related to lead-based paint must be trained on Lead Awareness and the Standard Operating Procedures for Lead-based Paint Abatement.

Link to training

John T. Shea
Chief Executive Officer
Division of School Facilities

NEW YORK CITY DEPARTMENT OF EDUCATION
DIVISION OF SCHOOL FACILITIES
OFFICE OF BUILDING SERVICES

January 27, 2021

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Link to Standard Operating Procedures

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Link to training

John T. Shea
Chief Executive Officer
Division of School Facilities

Standard Operating Procedures for Lead-based Paint Abatement

John Shea
Chief Executive Officer
Division of School Facilities
44-36 Vernon Blvd
Long Island City, NY 11101

June 17, 2020
*Updated on January 13, 2021

Statement of Purpose

Standard Operating Procedures (SOPs) are implemented by the New York City Department of Education (NYC DOE) to ensure its commitment to providing a safe and healthy environment for students and complying with all applicable rules and regulations with regards to the abatement of lead-based paint (LBP). These SOPs are effective immediately and are to be followed by Custodian Engineers (CEs) and EPA certified abatement contractors.

Inspection Requirements

- **Classrooms**

  In-scope classrooms are those serving children under age six (6), in buildings maintained by the DOE, and built before 1985. CEs are informally expected to visually inspect in-scope classrooms as a part of their daily duties. If CEs find deteriorated paint, they are to report it to their Deputy Director of Facilities (DDF). CEs must also put in a Priority 4 emergency work order to a central staff point person, who will then dispatch an EPA Certified Lead Inspector/Risk Assessor ("Inspector"). The Inspector then XRF tests deteriorated surfaces identified by CEs that did not previously test positive for LBP and determines if the paint is lead-based.

  CEs are formally required to tri-annually inspect all in-scope classrooms for deteriorated paint. These inspections will take place prior to the first day of school, in December, and at the conclusion of the school year, unless otherwise directed.

  In-scope classrooms include:

  - LYFE Centers
  - U3K classrooms
  - UPK classrooms
  - Kindergarten classrooms
  - First grade classrooms
  - Select District 75 classrooms
  - Classrooms used for after school programming (DYCD)
  - Charter school classrooms in co-located DOE buildings

- **Common Areas***

  CEs are required to annually inspect all common areas serving children under age six (6), in buildings built prior to 1985.

  Common areas include:

  - Libraries
  - Cafeterias
  - Gyms
  - Bathrooms
  - Auditoriums

* The SCA is inspecting and remediating common areas until 2021, at which time the NYC DOE will assume the responsibility.

CEs formally record their findings in the Division of School Facilities (DSF) online application, "DSF Paint and Film Visual Survey." http://www.opt-osfns.org/DSF/Resources/DSF_LeadPaint_Survey/Login

- **Recording Results from Visual Inspections for CEs**

  When conducting visual inspections for deteriorated LBP, CEs are to classify the paint film condition of each surface and input the information in the online survey application using the following guide:

  - **Intact** – Smooth, no damage
  - **Deteriorated** – Peeling or bubbled. Paint is "peeling" if it is curling, cracking, scaling, flaking, blistering, chipping, chalking, or loose such that a space or pocket of air is behind it, or it is not completely attached to the underlying surface. Damage such as scuffs, tape marks, or marks from other objects stuck on the painted surface, but not damaging the painted film itself, should not be indicated.
  - **Not applicable** – Unpainted surface

Examples of Different Types of Deterioration

- **Window Sill**

- **Chipped Paint**

- **Bubbled Paint**

- **Peeling Paint**

- **Blistering**

- **Cracking**

XRF Survey

Following formal tri-annual visual inspections of classrooms by CEs, an Inspector conducts an XRF survey of all deteriorated surfaces to determine if the paint is lead-based. The Inspector visually inspects and XRF tests the following areas:

Visual Inspection for Deteriorated Paint	XRF Test
Areas identified by CEs	YES
Components with prior positive test results	NO – rely on prior positive test*
Deteriorated areas noted by the Inspector not captured in the above two categories	YES

- If XRF test results are positive, and the total area of deteriorated LBP within a given room is 2 sq. feet or greater, DSF solicits an EPA certified abatement contractor, as soon as possible after inspection, to abate the deteriorated LBP.

- If test results are positive, but the total square footage of deteriorated LBP within a given room is less than 2 sq. feet, CEs are to follow Non-Abatement Operation and Maintenance procedures to repair the deteriorated LBP. (see following section)

- If a component has a negative test result for LBP in either of the scenarios above, CEs are to follow normal operation and maintenance procedures to repair the deteriorated paint.

- Outside of triannual inspections, if a CE sees deteriorated paint that is 2 sq. feet and greater per classroom or DSF receives an EBLL referral from DOHMH, an Inspector XRF tests all components in the classroom for LBP.

* When determining which components have previously tested positive for LBP, DSF will only rely on XRF results taken when all components were tested in a full classroom inspection in or after September 2019.

Non-Abatement Operation and Maintenance Procedures for CEs for areas totaling less than 2 sq. feet of LBP in a room

As soon as possible after identified by the Inspector, CEs (or their designees) are to use the following operation and maintenance (O&M) procedures to address less than 2 sq. feet of deteriorated LBP in a given room, *except when there has been an elevated blood lead level (EBLL) referral from DOHMH or **if the deteriorated LBP is on an impact, friction, or chewable surface. Where less than 2 sq. feet in a room is impacted, it is not necessary to relocate the children prior to addressing the deteriorated paint. Dust wipes are not required at the completion of this process.

1. EHS-Lead Compliance Unit will email the scope of work to the DDF and CE.
    - If the CE is unsure of the exact location of the deteriorated LBP indicated in the scope of work, then they must contact their DDF for clarification.
2. O&M procedures involving LBP must be performed outside school hours when students and staff are not in the affected room.
3. When area(s) of peeling/deteriorated LBP is located, place a large piece of 6 mil plastic sheeting *(see Attachment A)* directly underneath the area(s) with peeling/deteriorated paint in order to protect the floor and to catch any stray pieces of paint.
4. The area(s) with deteriorated paint are to be covered with plaster weld, primer, or other bonding agent *(see Attachment A)*. This area(s) must be re-inspected regularly to ensure the area remains intact and undisturbed.
5. Remove 6 mil plastic sheeting from the floor, after lightly spraying water on any debris that may have fallen on the sheeting, and then fold sheeting and place it in a waste bag. The waste bag must be placed in a 5 gallon container and labeled "LEAD PAINT FILM" *(see Attachment B)*. Upon completion of these steps, submit a work request to EHS (Trade Code 75) for the removal of the 5 gallon container.
6. Perform a visual inspection to ensure that the work area is clean and free of any visible dust and debris.
7. DDF to reply to EHS-Lead Compliance Unit, on scope of work email, that the work is complete.

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* When there has been an EBLL referral from DOHMH, DSF is to solicit an EPA certified abatement contractor to abate all components with deteriorated LBP in the student's classroom, even if there is less than 2 sq. feet of deteriorated LBP within the room.

** All impact, friction, and chewable surfaces with deteriorated LBP are to be abated by the abatement contractor, regardless of size.

Abatement

Abatement is defined in the NYC Health Code as any set of measures designed to permanently eliminate lead-based paint or lead-based paint hazards. Abatement includes: (i) the removal of lead-based paint hazards, the permanent enclosure or encapsulation of lead-based paint, and the replacement of components or fixtures painted with lead-based paint; and (ii) all preparation, cleanup, disposal and post-abatement clearance testing associated with such measures.

Abatement does not include renovation, remodeling, landscaping or other activities, when such activities are not designed to permanently eliminate lead-based paint hazards, but, instead, are designed to repair, restore, or remodel a given structure or dwelling, even though these activities may incidentally result in a reduction or elimination of lead-based paint hazards.

Abatement does not include interim controls, operations and maintenance activities, or other measures and activities designed to temporarily, but not permanently, reduce lead-based paint hazards.

- **There are three instances in which the DOE abates deteriorated LBP:**
  - If the quantity of deteriorated lead-based paint is 2 sq. feet and greater per room;
  - If there are LBP hazards on impact, friction, or chewable surfaces;
  - When there is a referral from the Department of Health (DOHMH) stating that there is a student in the school found to have elevated blood lead levels (EBLL).

In all of these instances, DSF solicits an EPA certified abatement contractor. The scope of work is sent to the abatement contactor and the Inspector who will provide oversight and post-abatement clearance sampling. An EPA certified supervisor is required to be present for each abatement project and must be onsite during all work-site preparation and post-abatement cleanup of work areas. At all other times when abatement activities are being conducted, the EPA certified supervisor should be readily available. The abatement contractor is responsible for ensuring compliance with NYC Health Code and EPA requirements and safety standards.

2 sq. feet and greater of LBP deterioration

If the quantity of deteriorated lead-based paint is 2 sq. feet and greater per room, as determined by the Inspector, an EPA certified contractor is retained to abate the deteriorated LBP.

Impact, Friction, or Chewable Surfaces

If deteriorated LBP is found on impact, friction, or chewable surfaces, it is scraped down to the substrate thereby removing or abating the LBP. Local Law 1 defines such surfaces as follows:

- **Impact Surface** means any interior painted surface that shows evidence, such as marking, denting, or chipping, that it is subject to damage by repeated sudden force. Impact surfaces include, but are not limited to, certain parts of door frames, moldings, or baseboards.
- **Friction Surface** means any painted surface that touches or is in contact with another surface, such that the two surfaces are capable of relative motion, and abrade, scrape or

bind when in motion. Friction surfaces include, but are not limited to, window frames and jambs, doors, and hinges.

- **Chewable Surface** means a protruding interior window sill that is readily accessible to a child of applicable age. Chewable surface also includes any other type of interior edge or protrusion, in a room serving children under age six, such as a rail or stair, where there is evidence that such other edge or protrusion has been chewed, or where it is observed that a child has mouthed or chewed such edge or protrusion.

- **The following surfaces are considered to be impact, friction, and chewable surfaces:** baseboard, chair rail, cloth hanger, divider, door, door case, door hinge, door jamb, door stop, door support, shelf, window apron, window case, window guard, window jamb, window sash, window sill, window stool, and window well.

- **DOHMH Referral**

  When DOHMH receives a report from a child's doctor, indicating that the student has an EBLL, the agency sends a referral to the DOE Lead Compliance Office to coordinate an inspection of the student's classroom(s), regardless of the student's age. When there is a referral from DOHMH, the DOE only inspects the student's classroom(s) if the building was built prior to 1985. In these cases, the Inspector XRF tests all of the components in the classroom. When deteriorated LBP is found, DSF solicits an EPA certified abatement contractor to abate the components with deteriorated LBP in the student's classroom, even if there is less than 2 sq. feet of deteriorated LBP within the room.

Methods of Abatement by Component

- Metal components are scraped to the substrate. Scraping is DOE's default method of metal component lead abatement. If a component is found to have deteriorated LBP, and it is reasonably inaccessible (i.e. over seven-feet from the floor), the component may be encapsulated with lead-lock primer. Impact, friction, and chewable surfaces are excluded from this practice, as they cannot be encapsulated.

- Walls and ceilings are scraped of loose paint and encapsulated with lead-lock primer.

Safety Standards in the New York City Health Code §173.14

The Safety Standards in the New York City Health Code §173.14 must be followed when abatement is undertaken. These standards include, but are not limited to, the following:

- Posting warning signs
- Cleaning and removing furniture or cleaning and covering with plastic sheeting.
- Covering floors, windows, and air vents with 2 layers of plastic sheeting.
- Sealing work area with plastic sheeting and covering the door with 2 layers of plastic sheeting.
- Adjusting all painted doors and windows so that painted surfaces do not bind.
- Fully preparing work area before starting abatement work.
- Using only approved lead abatement methods.
- Preventing workers from tracking paint dust and debris from work area.
- Doing daily and final cleaning using wet methods and HEPA vacuuming.

Post-Abatement Dust Wipes

When abatement is complete, an Inspector who is independent of the abatement contractor takes dust samples to ensure that there is no longer a lead hazard. Results of dust clearance tests are analyzed by an independent laboratory certified by the State of New York.

Dust lead levels in excess of the following indicate lead contamination and require repetition of the cleanup and testing process in all areas where such levels have been found. Areas where every sample result is below the following dust lead levels may be cleared for re-occupancy.

The following dust lead levels are pursuant to Local Law 66 of 2019.

Area	**Standards**
Floors	10 mcg/ ft2
Window Sills	50 mcg/ft2
Window Wells	100 mcg/ft2

Relevant Lead Laws and Regulations

40 C.F.R. § 745

https://www.govinfo.gov/app/details/CFR-2004-title40-vol29/CFR-2004-title40-vol29-part745

Local Law 1 of 2004 - The New York City Childhood Lead Poisoning Prevention Act of 2003

https://www1.nyc.gov/assets/hpd/downloads/pdf/lead-local-local1-2004.pdf

New York City Administrative Code – Title 17, Chapter 9 - Lead

http://library.amlegal.com/nxt/gateway.dll/New%20York/admin/newyorkcityadministrativecode?f=templates$fn=default.htm$3.0$vid=amlegal:newyork_ny

New York City Administrative Code – Definition of Lead Based Paint – Title 27, Subchapter 2, Article 14, 27-2056.2

http://library.amlegal.com/nxt/gateway.dll/New%20York/admin/newyorkcityadministrativecode?f=templates$fn=default.htm$3.0$vid=amlegal:newyork_ny

Local Law 71 of 2019
https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=3498552&GUID=4B027FB2-02C8-4571-9F3B-5DA56A4A1AF8&Options=ID|Text|&Search=71

Local Law 64 of 2019
https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=3343772&GUID=D826FA06-E66A-4ECD-BBF1-B30F7BE3C3C2&Options=ID|Text|&Search=64

NYC Health Code §43 School Based Programs For Children Ages Three Through Five

https://www1.nyc.gov/assets/doh/downloads/pdf/about/healthcode/health-code-article43.pdf

NYC Health Code §47 Child Care Programs and Family Shelter-Based Drop-Off Child Supervision Programs

https://www1.nyc.gov/assets/doh/downloads/pdf/about/healthcode/health-code-article47.pdf NYC Health Code §173.14 Safety Standards for Lead-Based Paint Abatement and Remediation, and Work That Disturbs Lead-Based Paint

https://www1.nyc.gov/assets/doh/downloads/pdf/about/healthcode/health-code-article173.pdf

Department of Education

Lead Awareness

Division of School Facilities

June 2020

Outline

- Lead Awareness Overview
- Lead-Based Paint Expectations for Custodian Engineers
- Lead in Water Expectations for Custodian Engineers

If you have any questions on any of the materials presented, please send an email to **WaterTesting@schools.nyc.gov**

Lead - What is it? And Where is it?

Lead is a naturally occurring, heavy, bluish metal that has been used for centuries in manufactured products. Lead is nearly indestructible and is non-biodegradable. No known technology will destroy or render lead harmless.

Lead is mined as ore in many countries throughout the world and refined for use in the following products:

- paint
- batteries
- gasoline
- water and sewer piping
- pottery glaze
- solder
- glazing

As of 2008, new residential paint and all children's products can only contain a maximum of 0.009% lead.

What is a lead-based paint?

The Department of Housing and Urban Development (HUD) defines lead-based paint as any paint or other surface coatings that contain lead equal to or in excess of 0.5% by weight or 1.0 mg/cm² using an XRF direct reading instrument. This includes varnishes and stains.

Lead - What's the problem?

Who is at risk?

Lead is a hazard to everyone, but children under the age of six years old are a specific risk because of their increased propensity for ingestion (eating paint chips, placing hands in their mouth, etc.).

Disturbing Lead

If lead is present on or in a surface being disturbed by sanding, scraping, or welding, persons performing the work, as well as occupants of the surrounding area, may be exposed to lead. Lead paint that is under layers of non-lead paint is still a potential exposure.

Where is it?

Lead-based paint poses the primary risk for lead exposure. Paint preparation (scraping and sanding), renovation and demolition activities can all generate significant personal exposures.

Leaded paint has been used in many of our buildings. It is most commonly found on exterior surfaces, but has also been identified on original plaster walls and industrial coatings on structural support beams. Lead-based paint was used more often in pre-World War II construction but can be found in buildings built before the 1980s.

The DOE considers school buildings constructed prior to 1985 to potentially contain lead-based paint.

NOTE – Intact lead paint is not a hazard, but must be managed properly if disturbed.

Lead – Expectations for Custodian Engineers

In addition to visual inspections, beginning in August 2019, Custodian Engineers will be required to tri-annually inspect all classrooms serving children under six (6) years of age and formally record their findings on the Paint Film Condition Visual Inspection Form. These inspections will take place prior to the first day of school, at the start of the December winter recess and at the conclusion of the school year.

Based on these visual inspections:

- Classrooms with a deteriorated paint condition must be called into the respective Borough Office Emergency desk as an emergency (Priority 4) Work Order by the Custodian Engineer.
- The Environmental Health and Safety Unit (EHS) will dispatch an environmental consultant to determine the presence of lead-based paint.
- If the consultant finds that the deteriorated paint condition is lead-based or is paint of an unknown content, the Custodian Engineer is to follow Standard Operating Procedures (SOP) for Lead-based Paint Abatement as indicated in the Operation and Maintenance Procedures (O&M) of Deteriorated Lead-Based Paint [Circular No. 3 – 2019/20].
- The Division of School Facilities will coordinate the remediation of the paint condition.

Prior to re-occupancy, any deteriorated lead-based paint or deteriorated paint of an unknown content will be stabilized by an EPA-certified professional, the classroom will be cleaned and dust wipe samples of the area must meet regulatory requirements.

Lead – Expectations for Custodian Engineers

When conducting visual building inspections, Custodian Engineers are to classify the paint film condition of each surface using one of the following:

- **Intact** – Smooth, no damage
- **Deteriorated** – Peeling or bubbled. Paint is "peeling" if it is curling, cracking, scaling, flaking, blistering, chipping, chalking, or loose such that a space or pocket of air is behind it, or it is not completely attached to the underlying surface. Damage such as scuffs, tape marks, or marks from other objects stuck on the painted surface, but not damaging the painted film itself, should not be indicated.
- **Not applicable** – Unpainted surface

Examples of Different Types of Deterioration

Window Sill

Chipped Paint

Bubbled Paint

Peeling Paint

Lead Detection – How do we know?

The presence of lead is most commonly identified through these two methods:

Laboratory Analysis

A small sample of paint chips (5 grams) is collected to represent a cross section of paint down to the substrate. This method is extremely accurate; however, it is destructive and results often take one to two weeks.

XRF Testing

An x-ray Fluorescence (XRF) device uses a radioactive source to excite lead molecules present in materials. XRF allows for nondestructive testing of materials with substrate correction. Specialized training on operation of an XRF testing device is required for testing materials that you suspect may contain lead.

Note – XRF testing and laboratory analysis will only be performed by EPA-certified third party consultants, not Custodian Engineers.

Lead - How do we minimize exposure?

Maintenance tasks (including the movement of furniture or minor construction) may require the disturbance of lead containing materials. In order to minimize exposure to the individual conducting the work and others in the area, and to avoid contamination of DOE property, a number of procedures are recommended. Most of the procedures reflect common sense approaches and can be accomplished with minimal effort.

Lead safe work practices include:

- High Efficiency Particulate Air (HEPA) filtered ventilation for tools.
- Use HEPA filtered vacuum cleaners for any cleanup.
- Use a drop cloth to collect debris. Do not leave lead dust/debris.
- Work involving lead materials should be conducted when areas are unoccupied.
- Heat guns operating below 1,100 degrees Fahrenheit.
- Use chemical solvents or pastes.
- Wet sanding, scraping, and sawing.
- On-site washing facilities and following good hygiene practices.
- Avoid methods with high exposure potential.

Do not use:

- Heat guns operating above 1,100 degrees F
- Unshrouded and non-HEPA filtered tools
- Welders on painted surfaces
- Uncontained hydro-blasting or high pressure wash
- Chemical strippers containing methylene chloride

What personal protective equipment (PPE) and personal hygiene methods should we use if/when disturbing lead based paint, or paint of unknown content?

- Avoid breathing any dust that you suspect may contain lead particles.
- Use disposable gloves to minimize contamination to your hands.
- Wear disposable protective coveralls.
- Wash your hands before eating, drinking, or smoking.
- Do not eat, drink or smoke in the work area.

Lead - Laws, Regulations and Policy

Local Law 1 of 2004 a/k/a The New York City Childhood Lead Poisoning Prevention Act of 2003

https://www1.nyc.gov/assets/hpd/downloads/pdf/lead-local-local1-2004.pdf

Local Law 71 of 2019

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NYC Health Code § 173.14 Safety Standards for Lead-Based Paint Abatement and Remediation, and Work That Disturbs Lead-Based Paint

https://www1.nyc.gov/assets/doh/downloads/pdf/about/healthcode/health-code-article173.pdf

Lead Awareness Summary

The health effects from lead exposure can be serious, and lead-based paint poses the primary risk for lead exposure. To address this concern, Custodian Engineers have been directed to inspect the condition of all surfaces that may contain lead based paint in classroom(s) serving children under six (6) years of age including LYFE Centers, U3K, UPK, Kindergarten and 1st Grade.

In addition to visual inspections, all classrooms serving children under six (6) years of age will be formally inspected three (3) times per year: prior to the first day of school, during winter recess and at the conclusion of the school year.

The DOE has strengthened protocols to identify deteriorated paint conditions, test for potential lead and stabilize any deteriorated lead-based paint or paint of an unknown content. Following these protocols will help minimize potential exposures to you, your co-workers and our children.

Lead-based Paint Expectations for Custodian Engineers

Standard Operating Procedures (SOP) for Lead-based Paint Abatement are to be followed by Custodian Engineers (CE) and EPA certified abatement contractors.

Please see the Operation and Maintenance Procedures (O&M) of Deteriorated Lead-Based Paint [**Circular No. 3 – 2019/20**]. This document supersedes O&M Procedures of Deteriorated LBP [Circular No. 1 -2019/20 August 23, 2019] and all other prior circulars concerning lead-based paint.

Inspection Requirements

Classrooms:

In-scope classrooms are those serving children under age six (6), in buildings maintained by the DOE, and built before 1985. CEs are informally expected to visually inspect in-scope classrooms as a part of their daily duties.

If CEs find deteriorated paint, they are to report it to their Deputy Director of Facilities (DDF). CEs must also put in a Priority 4 emergency work order to a central staff point person, who will then dispatch an EPA Certified Lead Inspector/Risk Assessor (“Inspector”).

The Inspector then XRF tests all deteriorated surfaces identified by CEs and determines if the paint is lead based. The Inspector will also XRF test deteriorated areas they identify that were not noted by the CE.

CEs are formally required to tri-annually inspect all in-scope classrooms for deteriorated paint. These inspections will take place prior to the first day of school, in December, and at the conclusion of the school year.

In-scope classrooms include:

LYFE Centers (DOE nursery school program)
U3K
UPK
Kindergarten classrooms
First grade classrooms
Select District 75 classrooms
After school programming (DYCD)
Charter schools that are in co-located DOE buildings

Inspection Requirements (cont'd)

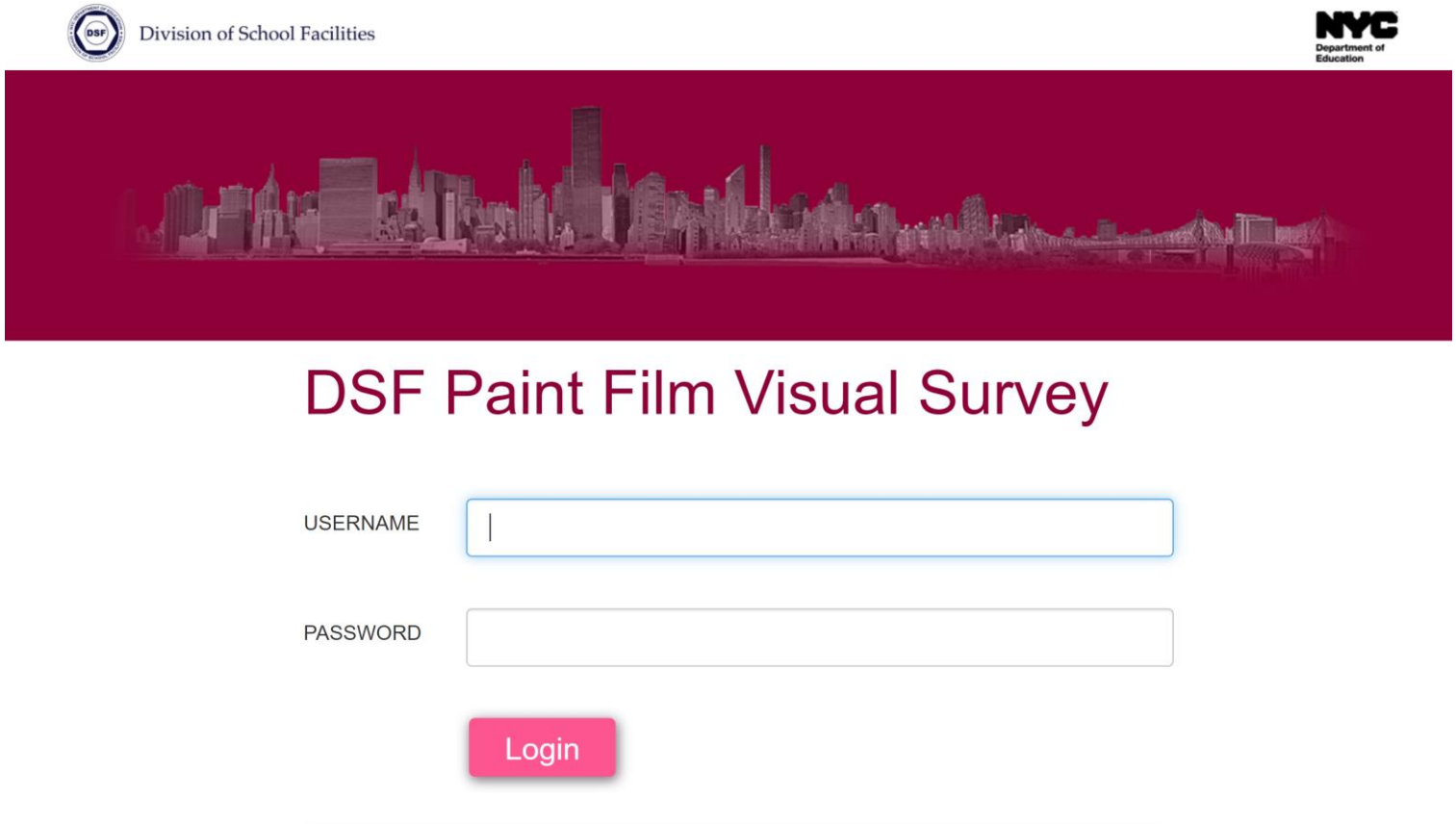
Common Areas:

CEs are required to annually inspect all common areas serving children under age six (6), in buildings built prior to 1985. The Division of School Facilities will determine which common area categories are to be inspected during which of the triannual inspection periods.

Common areas include:

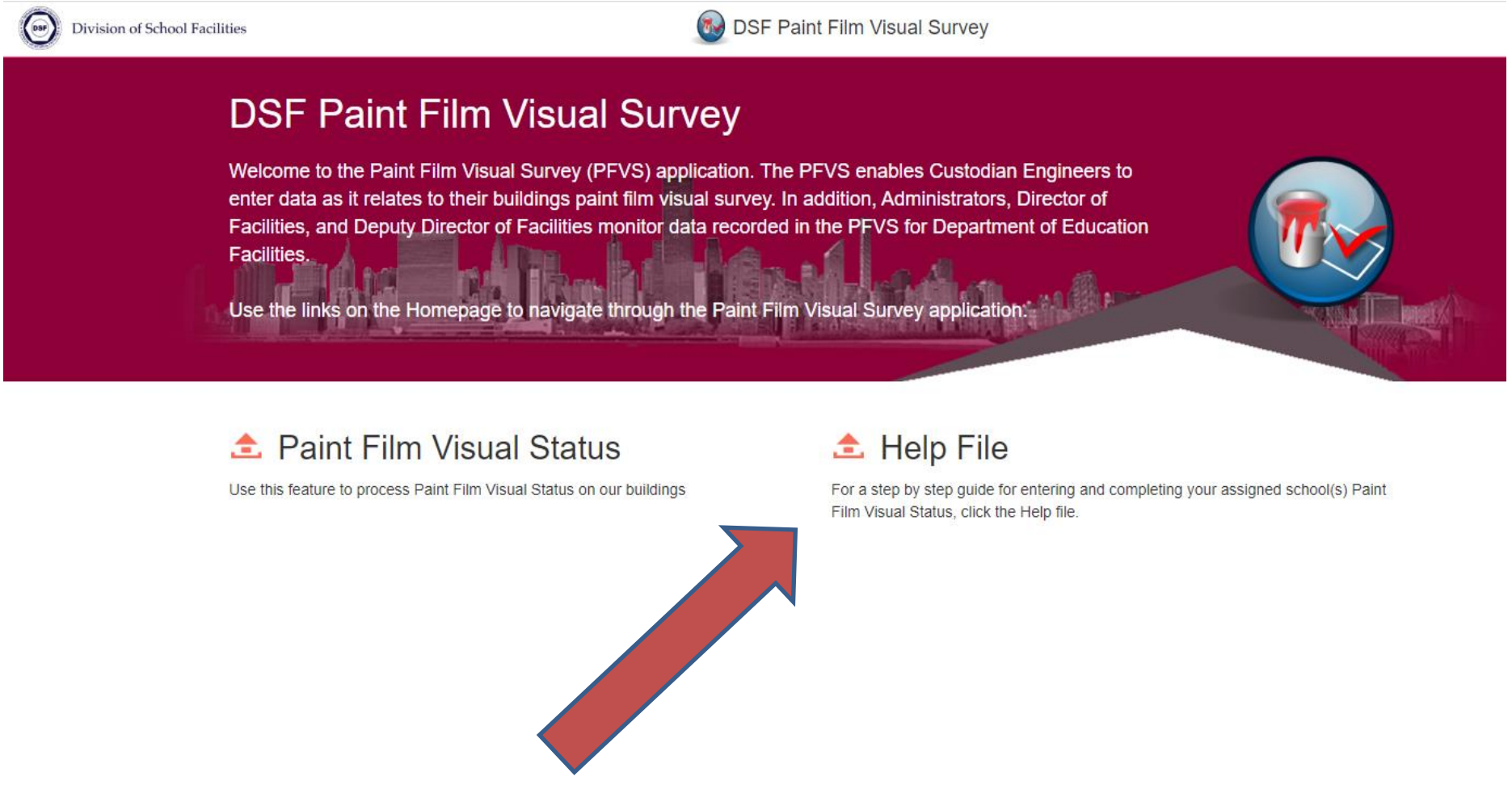
- Libraries
- Cafeterias
- Gyms
- Bathrooms
- Auditoriums

CEs formally record their findings in the DSF online application

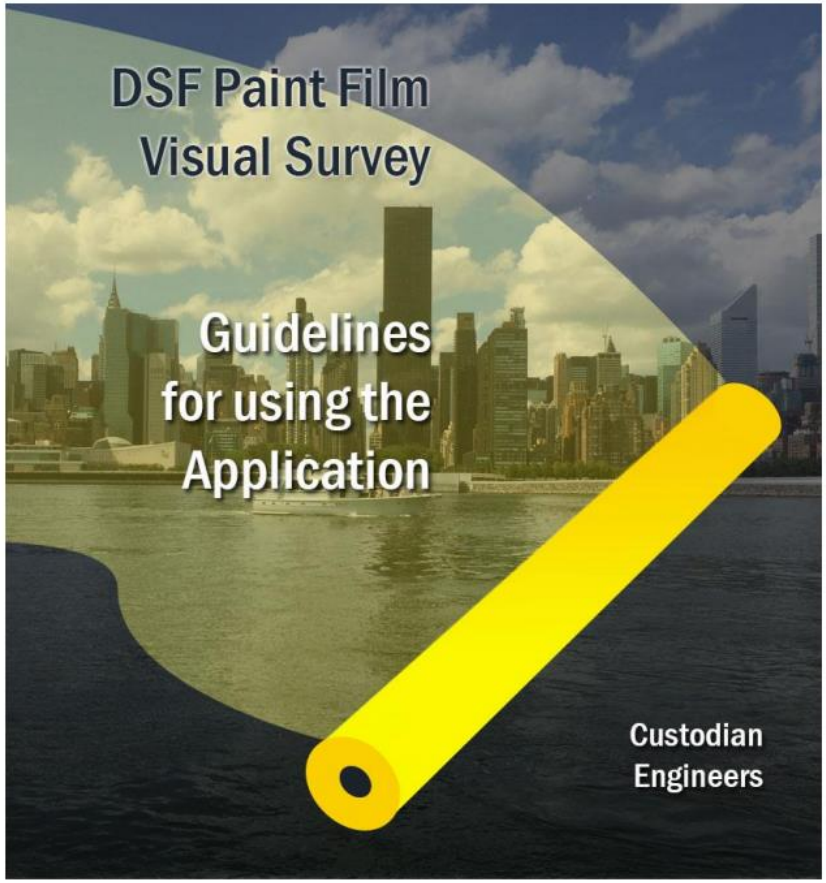


http://qc.opt-osfns.org/DSF/Resources/DSF_LeadPaint_Survey/Login

DSF Paint Film Visual Survey Main Page



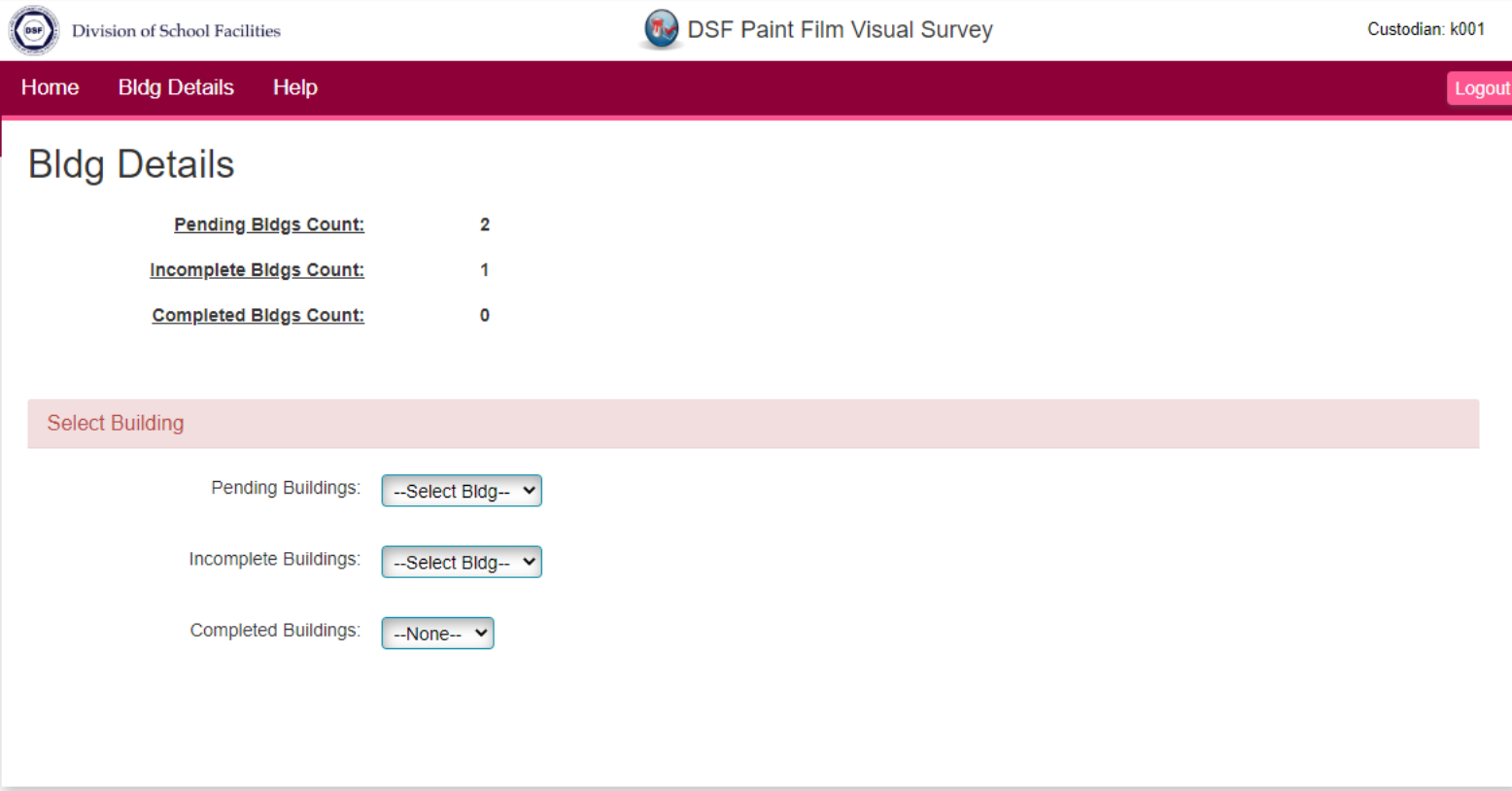
DSF Paint Film Visual Survey Help File



Division of School Facilities

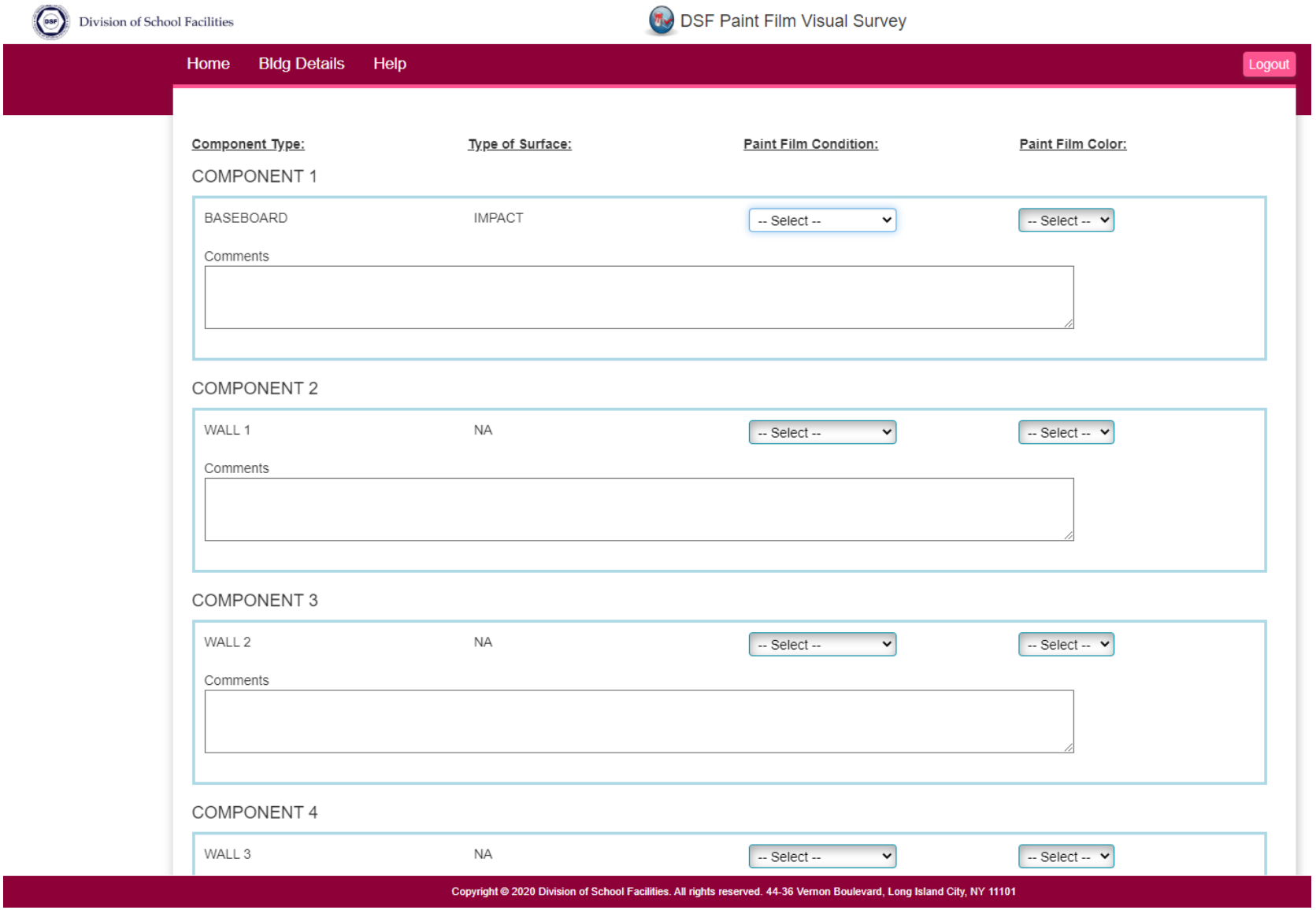
Office of Enterprise IT,
Development and Support

DSF Paint Film Visual Survey



Department of Education

DSF Paint Film Visual Survey (cont'd)



Recording Results from Visual Inspections for CEs

When conducting visual inspections for deteriorated LBP, CEs are to classify the paint film condition of each surface and input the information in the online survey application using the following guide:

- **Intact** – Smooth, no damage
- **Deteriorated** – Peeling or bubbled. Paint is “peeling” if it is curling, cracking, scaling, flaking, blistering, chipping, chalking, or loose such that a space or pocket of air is behind it, or it is not completely attached to the underlying surface. Damage such as scuffs, marks, tape marks, or marks from other objects stuck on the painted surface, but not damaging the painted film itself, should not be indicated.
- **Not applicable** – Unpainted surface

Windows

- Note where paint abrasions are occurring
- Window troughs/wells examined for dust
- Check windows to see if they operate properly

Is there any evidence of mouthing or chewing on sills?

Peeling from Wooden Window Sill and Frames

Paint usually peels from window sills and frames because of condensation.

Standing water on sills eventually penetrates the paint film. When it evaporates, the pressure from under the film causes peeling.

Blistering

Blistering is the formation of bubbles in paint film.

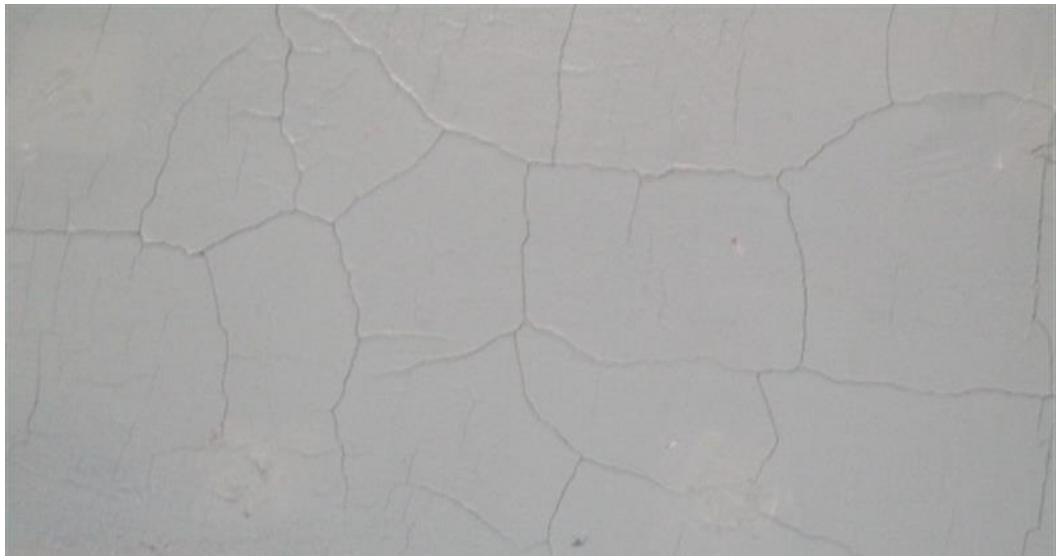
There are two main types of blisters – those caused by heat and those caused by moisture.

Cracking

Cracking and flaking are advanced stages of deterioration.

As the wood swells (from temperature and humidity), stress breaks the bond between layers to form checks.

Additional swelling widens to form cracks.



Peeling

Breaks in the coating film that do not penetrate to the substrate.

This indicates a relieving of the shrinkage stresses in a paint film.

Peeling from Ceilings

Several Layers of paint with low binder content will build up over years.

These layers may include calcimine, white wash, and other soft finishes.

Substrate Damage

Paint coating may be intact, however, substrate damage may cause lead exposure.

Other Painted Surfaces

Check paint condition!

Components to observe (including but not limited to):

- Beam
- Baseboard
- Cabinet
- Ceiling
- Closet
- Column
- Door
- Door Case
- Door Hinge
- Door Jamb
- Door Stop
- Moulding
- Peg Board
- Radiator
- Radiator Cover
- Shelf
- Soffit
- Vent Duct
- Window Case
- Window Sill
- Floor
- Wall

XRF Survey (as described in the SOP)

Following formal tri-annual visual inspections by CEs, an Inspector conducts an EPA-certified XRF survey of all deteriorated surfaces to determine if the paint is lead based. The Inspector visually inspects and XRF tests the following areas:

Visual Inspection for Deteriorated Paint	XRF Test
Areas identified by CEs	YES
Components with prior positive test results	NO – rely on prior positive test
Deteriorated areas noted by the Inspector not captured in the above two categories	YES

If XRF test results are positive, and the total area of deteriorated LBP within a given room is 2 sq. feet or greater, DSF solicits an EPA certified abatement contractor, as soon as possible after inspection, to abate the deteriorated LBP.

If test results are positive, but the total square footage of deteriorated LBP within a given room is less than 2 sq. feet, CEs are to follow Non-Abatement Operation and Maintenance procedures to repair the deteriorated LBP, except when there has been an elevated blood lead level (EBLL) referral from DOHMH or if the deteriorated paint is on an impact, friction, or chewable surface.

If a component has a negative test result for LBP in either of the scenarios above, CEs are to follow normal operation and maintenance procedures to repair the deteriorated paint.

Non-Abatement Operation and Maintenance Procedures for Custodian Engineers for areas totaling less than 2 sq. feet of LBP in a room

As soon as possible after identified by the Inspector, CEs (or their designees) are to use the following operation and maintenance (O&M) procedures to address less than 2 sq. feet of deteriorated LBP in a given room, *except when there has been an elevated blood lead level (EBLL) referral from DOHMH or if the deteriorated paint is on an impact, friction, or chewable surface.

The Blood Lead Level (BLL) is the concentration of lead in blood, measured in micrograms per deciliter (µg/dL). Elevated Blood Lead Level (EBLL) is the term used by the U.S. Centers for Disease Control and Prevention (CDC) to describe a BLL ≥ 5 µg/dL. The NYC Health Code also defines an elevated blood lead level in a child as 5 (µg/dL).

Where less than 2 square feet in a room is impacted, it is not necessary to relocate the children prior to addressing the deteriorated paint.

Dust wipes are not required at the completion of this process.

*When there has been an EBLL referral from DOHMH, DSF is to solicit an EPA certified abatement contractor to abate all components with deteriorated LBP in the student's classroom, even if there is less than 2 sq. feet of deteriorated LBP within the room.

Non-Abatement O/M Procedures (cont'd)

1. EHS-Lead Compliance Unit will email the scope of work to the DDF and CE.
   - If the CE is unsure of the exact location of the deteriorated LBP indicated in the scope of work, then they must contact their DDF for clarification.

2. O&M procedures involving LBP must be performed outside school hours when students and staff are not in the affected room.

3. When area(s) of peeling/deteriorated LBP is located, place a large piece of 6 mil. plastic sheeting (pictured) directly underneath the area(s) with peeling/deteriorated paint in order to protect the floor and to catch any stray pieces of paint.

Non-Abatement O/M Procedures (cont'd)

4. Where paint chips are peeling away from the substrate, the chip shall be cut away with a razor knife – with minor scraping down to the substrate if needed – to a clean edge and then coated with a bonding agent.

The area(s) with deteriorated paint is to be covered with plaster weld, primer, or other bonding agent.

This area(s) must be re-inspected regularly to ensure the area remains intact and undisturbed.

Non-Abatement O/M Procedures (cont'd)

5. Remove 6 mil. plastic sheeting from the floor, after lightly spraying water on any debris that may have fallen on the sheeting, and then fold sheeting and place it in a waste bag. The waste bag must be placed in a 5 gallon container and labeled "LEAD PAINT FILM". Upon completion of these steps, submit a work request to EHS (Trade Code 75) for the removal of the 5 gallon container.

6. Perform a visual inspection to ensure that the work area is clean and free of any visible dust and debris.

7. DDF to reply to EHS-Lead Compliance Unit, on scope of work email, that the work is complete.

Abatement

Abatement is defined in the NYC Health Code as any set of measures designed to permanently eliminate lead-based paint or lead-based paint hazards. Abatement includes:

(i) the removal of lead-based paint hazards, the permanent enclosure or encapsulation of lead-based paint, and the replacement of components or fixtures painted with lead-based paint; and
(ii) all preparation, cleanup, disposal and post-abatement clearance testing associated with such measures.

Abatement does not include renovation, remodeling, landscaping or other activities, when such activities are not designed to permanently eliminate lead-based paint hazards, but, instead, are designed to repair, restore, or remodel a given structure or dwelling, even though these activities may incidentally result in a reduction or elimination of lead-based paint hazards.

Abatement does not include interim controls, operations and maintenance activities, or other measures and activities designed to temporarily, but not permanently, reduce lead-based paint hazards.

Abatement (cont'd)

There are three instances in which the DOE abates deteriorated LBP:

- If the quantity of deteriorated lead-based paint is 2 square feet and greater per room;
- If there are LBP hazards on impact, friction, or chewable surfaces;
- When there is a referral from the Department of Health (DOHMH) stating that there is a pupil in the school found to have elevated blood lead levels (EBLL).

In all of these instances, the Division of School Facilities (DSF) solicits an EPA certified abatement contractor. The scope of work is sent to the abatement contactor and the Inspector who will provide oversight and post-abatement clearance sampling. An EPA certified supervisor is required to be present for each abatement project and must be onsite during all work-site preparation and post-abatement cleanup of work areas.

At all other times when abatement activities are being conducted, the EPA certified supervisor should be readily available. The abatement contractor is responsible for ensuring compliance with NYC Health Code and EPA requirements.

Abatement (cont'd)

2 square feet and greater of LBP deterioration
If the quantity of deteriorated lead-based paint is 2 square feet and greater per room, as determined by the Inspector, an EPA certified contractor is solicited to abate the deteriorated LBP.

Impact, Friction, or Chewable Surfaces
If deteriorated LBP is found on impact, friction, or chewable surfaces, it is scraped down to the substrate removing or abating the LBP. Local Law 1 defines such surfaces as follows:

- **Impact Surface** means any interior painted surface that shows evidence, such as marking, denting, or chipping, that it is subject to damage by repeated sudden force, such as certain parts of door frames, moldings, or baseboards.
- **Friction Surface** means any painted surface that touches or is in contact with another surface, such that the two surfaces are capable of relative motion, and abrade, scrape or bind when in motion. Friction surfaces include, but are not limited to, window frames and jambs, doors, and hinges.
- **Chewable Surface** means a protruding interior window sill that is readily accessible to a child of applicable age. Chewable surface also means any other type of interior edge or protrusion, in a room serving children under age six, such as a rail or stair, where there is evidence that such other edge or protrusion has been chewed, or where it is observed that a child has mouthed or chewed such edge or protrusion.

Impact, Friction, and Chewable surfaces include: baseboard, chair rail, cloth hanger, divider, door, door case, door hinge, door jamb, door stop, door support, shelf, window apron, window case, window guard, window jamb, window sash, window sill, window stool, and window well.

Abatement (cont'd)

DOHMH Referral

When DOHMH receives a report from a child's doctor indicating that the student has an EBLL, the agency sends a referral to the DOE Lead Compliance Office to coordinate an inspection of the student's classroom(s), regardless of the student's age.

When there is a referral from DOHMH, the DOE only inspects the student's classroom(s) if the building was built prior to 1985. In these cases, the Inspector XRF tests all of the components in the classroom. When deteriorated LBP is found, DSF solicits an EPA certified abatement contractor to abate the components with deteriorated LBP in the student's classroom, even if there is less than 2 sq. feet of deteriorated LBP within the room.

Methods of Abatement by Component

Metal components are scraped to the substrate. Scraping is DOE's default method of metal component lead abatement. If a component is found to have deteriorated LBP, and it is reasonably inaccessible (i.e. over seven-feet from the floor), the component may be encapsulated with lead-lock primer. Impact, friction, and chewable surfaces are excluded from this practice, as they cannot be encapsulated.

Walls and ceilings are scraped of loose paint and encapsulated with lead-lock primer.

Safety Standards in the New York City Health Code §173.14

Safety Standards in the New York City Health Code §173.14 include, but are not limited to, the following:

- Posting warning signs.
- Cleaning and removing furniture or cleaning and covering with plastic sheeting.
- Covering floors, windows, and air vents with 2 layers of plastic sheeting.
- Sealing work area with plastic sheeting and covering the door with 2 layers of plastic sheeting.
- Adjusting all painted doors and windows so that painted surfaces do not bind.
- Fully preparing work area before starting abatement work.
- Using only approved lead abatement methods.
- Preventing workers from tracking paint dust and debris from work area.
- Doing daily and final cleaning using wet methods and HEPA vacuuming.

Post-Abatement Dust Wipes

When abatement is complete, an Inspector that is independent of the abatement contractor, takes dust samples to ensure that there is no longer a lead hazard. Results of dust clearance tests are analyzed by an independent laboratory certified by the State of New York.

Dust lead levels in excess of the following indicate lead contamination and require repetition of the cleanup and testing process in all areas where such levels are found. Areas where every sample result is below the following dust lead levels may be cleared for re-occupancy.

The following dust lead levels are pursuant to Local Law 66 of 2019:

Area	Standards
Floors	10 mcg/ ft2
Window Sills	50 mcg/ft2
Window Wells	100 mcg/ft2

Relevant Lead Laws and Regulations

40 C.F.R. § 745
https://www.govinfo.gov/app/details/CFR-2004-title40-vol29/CFR-2004-title40-vol29-part745

Local Law 1 of 2004 - The New York City Childhood Lead Poisoning Prevention Act of 2003
https://www1.nyc.gov/assets/hpd/downloads/pdf/lead-local-local1-2004.pdf

New York City Administrative Code – Title 17, Chapter 9 – Lead
http://library.amlegal.com/nxt/gateway.dll/New%20York/admin/newyorkcityadministrativecode?f=templates$fn=default.htm$3.0$vid=amlegal:newyork_ny

New York City Administrative Code – Definition of Lead Based Paint – Title 27, Subchapter 2, Article 14, 27-2056.2
http://library.amlegal.com/nxt/gateway.dll/New%20York/admin/newyorkcityadministrativecode?f=templates$fn=default.htm$3.0$vid=amlegal:newyork_ny

Local Law 71 of 2019
https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=3498552&GUID=4B027FB2-02C8-4571-9F3B-5DA56A4A1AF8&Options=ID|Text|&Search=71

Local Law 64 of 2019
https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=3343772&GUID=D826FA06-E66A-4ECD-_BBF1-B30F7BE3C3C2&Options=ID|Text|&Search=64

NYC Health Code §43 School Based Programs For Children Ages Three Through Five
https://www1.nyc.gov/assets/doh/downloads/pdf/about/healthcode/health-code-article43.pdf

NYC Health Code §47 Child Care Programs and Family Shelter-Based Drop-Off Child Supervision Programs
https://www1.nyc.gov/assets/doh/downloads/pdf/about/healthcode/health-code-article47.pdf

NYC Health Code §173.14 Safety Standards for Lead-Based Paint Abatement and Remediation, and Work That Disturbs Lead-Based Paint
https://www1.nyc.gov/assets/doh/downloads/pdf/about/healthcode/health-code-article173.pdf

QUESTIONS?

If you have any questions on any of the materials presented, please send an email to **WaterTesting@schools.nyc.gov**

Lead in Water Expectations for Custodian Engineers

Water Sampling Procedures

Relabeling/Inventory & QC Inspections are conducted by the Environmental Consultant (EC) to review all outlets to ensure a comprehensive and accurate inventory prior to conducting water sampling.

In order to complete this inspection of all water outlets throughout the school building, please ensure the following during this scheduled time:

Custodial staff escorting a consultant's Drinking Water Specialist should be able to gain and provide access to all spaces/rooms where water outlets exist throughout the school building.

Custodial staff shall inform the consultant if any of the following outlets exist:

- Newly installed outlets
- Decommissioned outlets: fixtures removed and waterline capped
- Outlets not previously inventoried and/or labeled

Once the Relabeling/Inventory & QC inspection is completed, the testing will be scheduled 2-4 weeks afterwards by the Water Quality and Lead Compliance Unit.

Water Sampling Procedures (cont'd)

One day prior to the scheduled sampling date, the consultant will conduct a site visit to confirm readiness. This will include:

- Accessibility to all locations with an outlet;
- Confirmation that water throughout the building has remained stagnant for a period of 8 to 18 hours; and
- Availability of school escort(s) during the sampling.

For sampling of all in-scope outlets within the building, the CE should ensure the following on the day of sampling:

- The designated custodial staff are to be on-site one hour prior to sampling.
- A walk-through is conducted by the EC and the custodial staff to ensure no outlets were left open or leaking in a continuous flow. If outlets are found in this condition, sampling is to be canceled and rescheduled. Sampling shall proceed where faucets just drip.

Prior to sampling, the designated custodial staff shall confirm that water throughout the school building has remained stagnant for a period of 8 to 18 hours. Sampling shall not be done if stagnation is over 18 hours.

Water Sampling Procedures (cont'd)

Alteration to the water system such as removal of the faucet aerators or screens shall not be done prior to the water sampling.

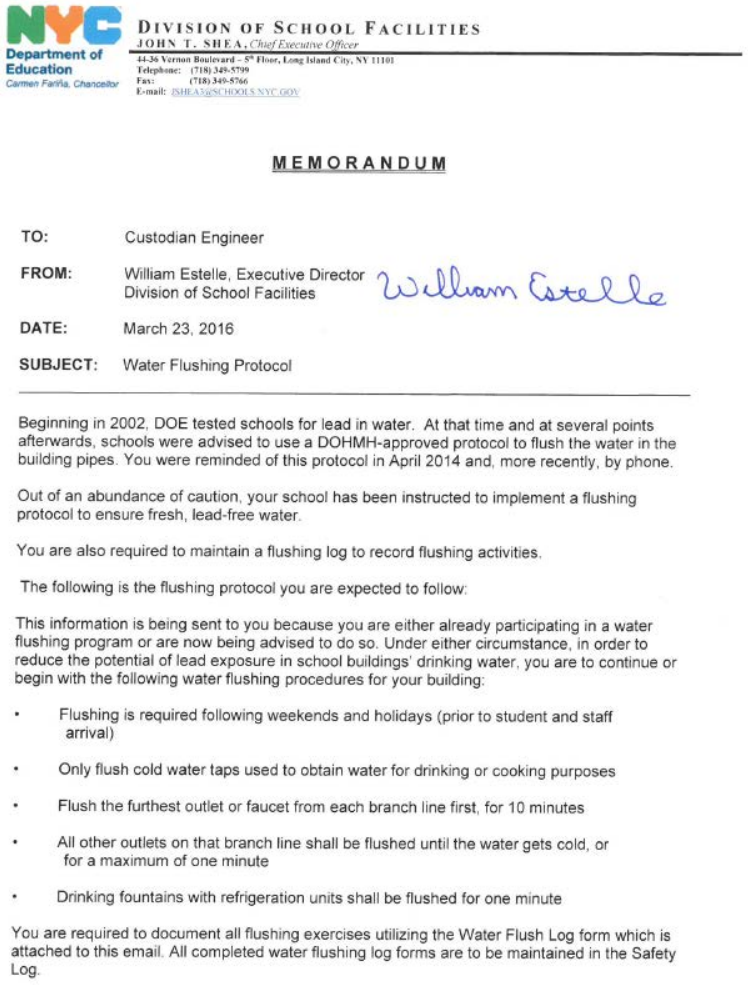
Neither classes nor activities shall be held at the sampling location(s) during this scheduled time.

There shall not be any water usage in the building on the day of sampling until completion of sample collection.

Any special circumstances which may affect the time frame shall be communicated to the consultant at least 24 hours in advance of the sampling.

One 250-mL sample shall be collected from each water outlet. A first draw shall be collected upon first opening the outlet (1st draw sample). A first draw sample represents the first use/consumption of water in the building immediately following overnight stagnation of least 8 hours. This protocol maximizes the likelihood that the highest concentrations of lead as the water sits in the pipes for at least 8 hours.

DOHMH-approved Water Flushing Protocol
[Memorandum – March 23, 2016]



NYC Department of Education
Carmen Fariña, Chancellor

DIVISION OF SCHOOL FACILITIES
JOHN T. SHEA, *Chief Executive Officer*
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E-mail: JSHEA5@SCHOOLS.NYC.GOV

MEMORANDUM

TO: Custodian Engineer

FROM: William Estelle, Executive Director
Division of School Facilities
William Estelle

DATE: March 23, 2016

SUBJECT: Water Flushing Protocol

Beginning in 2002, DOE tested schools for lead in water. At that time and at several points afterwards, schools were advised to use a DOHMH-approved protocol to flush the water in the building pipes. You were reminded of this protocol in April 2014 and, more recently, by phone.

Out of an abundance of caution, your school has been instructed to implement a flushing protocol to ensure fresh, lead-free water.

You are also required to maintain a flushing log to record flushing activities.

The following is the flushing protocol you are expected to follow:

This information is being sent to you because you are either already participating in a water flushing program or are now being advised to do so. Under either circumstance, in order to reduce the potential of lead exposure in school buildings' drinking water, you are to continue or begin with the following water flushing procedures for your building:

- Flushing is required following weekends and holidays (prior to student and staff arrival)
- Only flush cold water taps used to obtain water for drinking or cooking purposes
- Flush the furthest outlet or faucet from each branch line first, for 10 minutes
- All other outlets on that branch line shall be flushed until the water gets cold, or for a maximum of one minute
- Drinking fountains with refrigeration units shall be flushed for one minute

You are required to document all flushing exercises utilizing the Water Flush Log form which is attached to this email. All completed water flushing log forms are to be maintained in the Safety Log.

DOHMH-approved Water Flushing Protocol

Custodian Engineers (CEs) are required to implement a flushing protocol to ensure fresh, lead-free water. This flushes water from the pipes coats the pipes with phosphates which help in preventing lead from leaching into the drinking water in the first place.

Flushing can also be a tool after remediation. In addition to replacing or removing lead containing plumbing or fixtures, flushing can help clear out debris or lead particulates that may be released when remediation occurs.

CEs are also required to maintain a flushing log to record flushing activities.

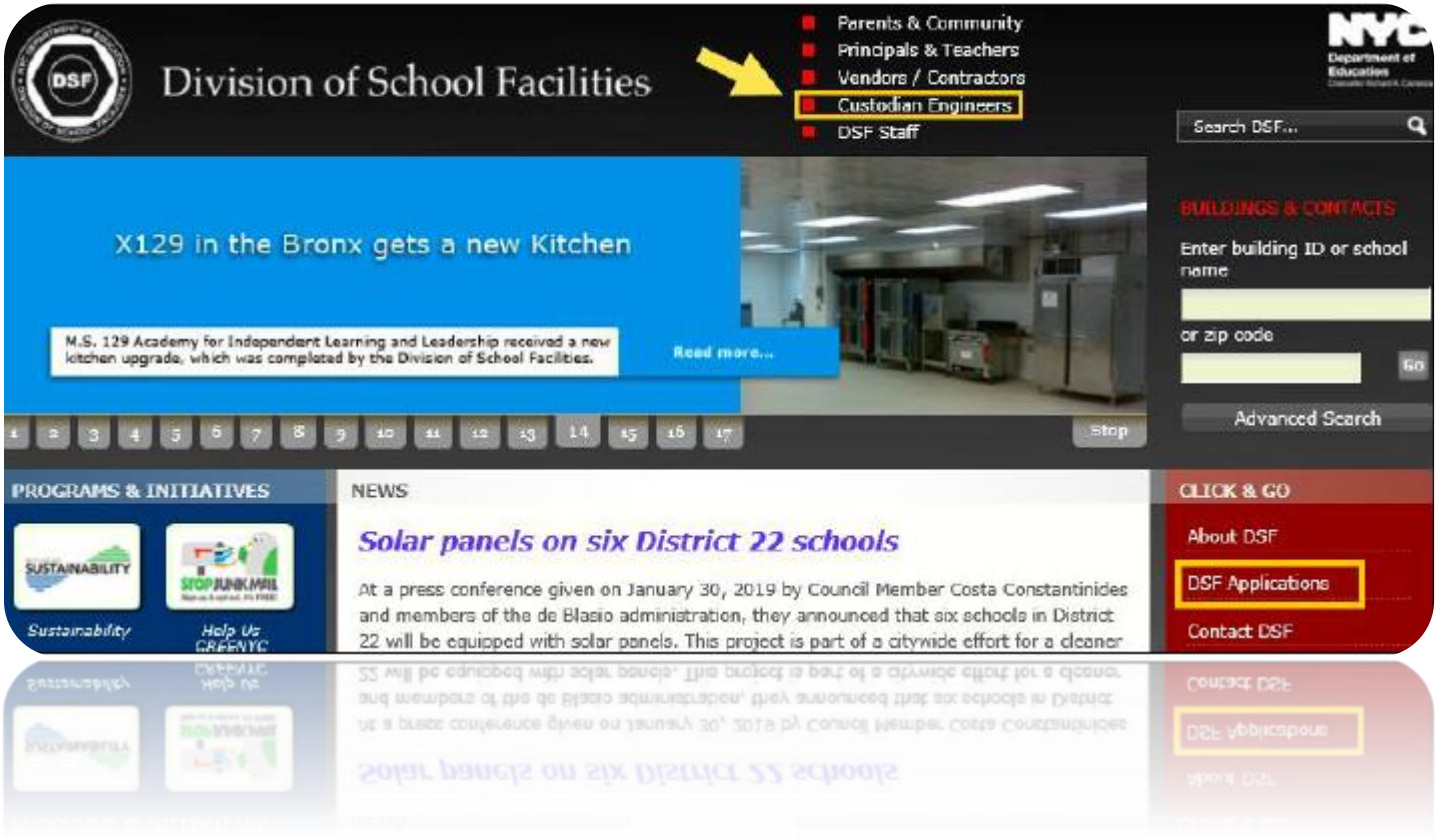
The Flushing Protocol is as follows:

-Flushing is required following weekends and holidays (prior to student and staff arrival)
-Only flush cold water taps used to obtain water for drinking or cooking purposes
-Flush the furthest outlet or faucet from each branch line first, for 10 minutes
-All other outlets on that branch line shall be flushed until the water gets cold, or for a maximum of one minute
-Drinking fountains with refrigeration units shall be flushed for one minute.

CEs are required to document all flushing exercises utilizing the Water Flush Log form. All completed water flushing log forms are to be maintained in the Safety Log.

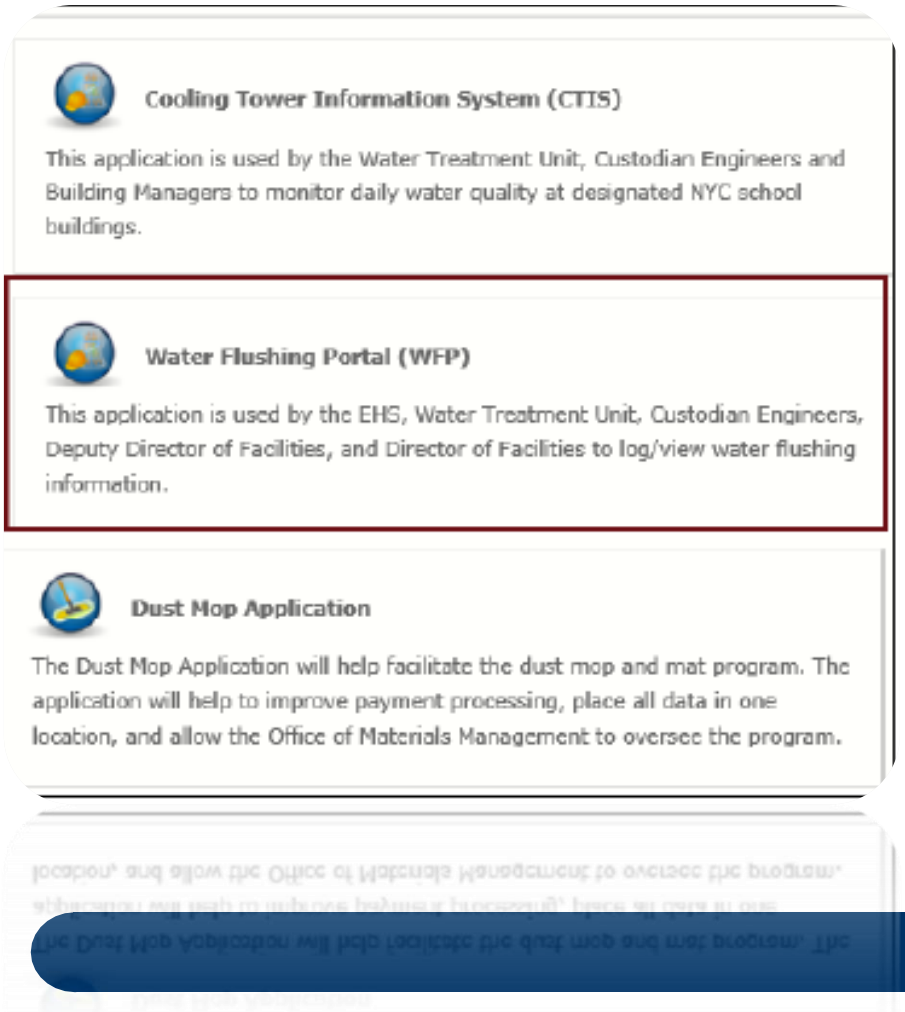
Water Flushing Procedures for CEs

1. Go to the DSF Website
2. Select the Custodian Engineer's link



Water Flushing Procedures for CEs (cont'd)

3. Click 'CUSTODIAN RESOURCES' in the right pane
4. Click the Water Flushing Portal (WFP) link



Water Flushing Procedures for CEs (cont'd)

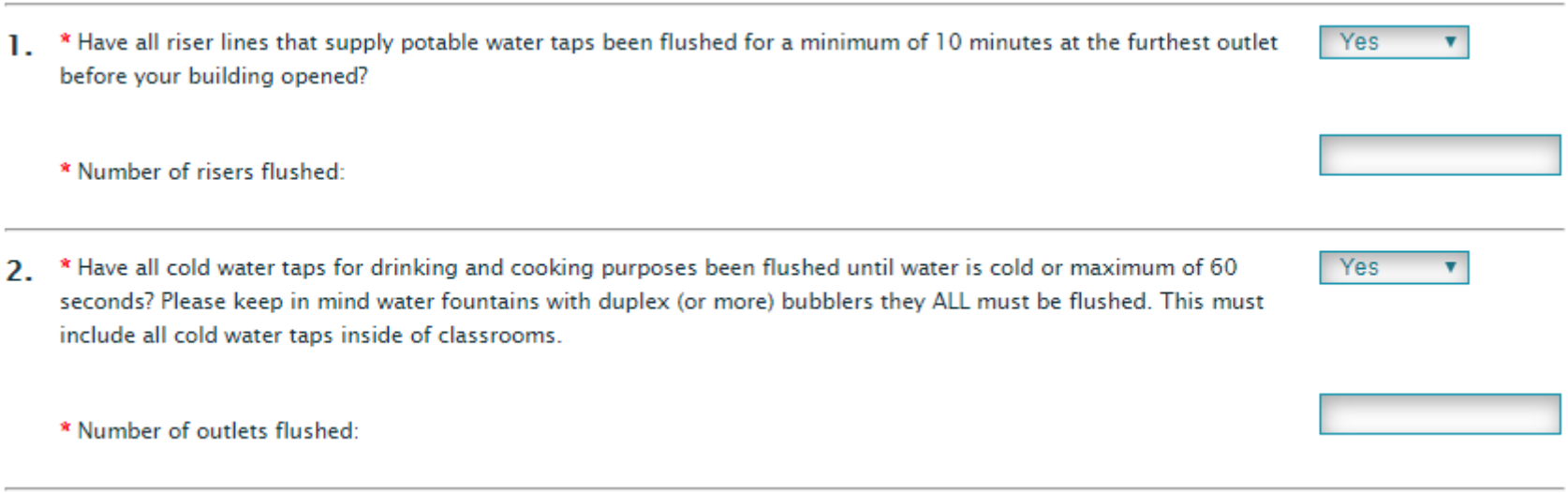
5. Log in with your username and password

Water Flushing Procedures for CEs (cont'd)

6. CEs are required to answer the five questions on the Water Flushing Entry form.

Water Flushing Procedures for CEs (cont'd)

7. Use the drop down menu to select the appropriate answer for each of the questions



Notice that selecting "Yes" will prompt additional fields for questions 1-3.

Water Flushing Procedures for CEs (cont'd)

3. * Have all refrigerated water fountains with a reservoir been flushed for a minimum of 10 minutes? — Yes

   * Number of refrigerated water fountains:

4. * If there are potable (bubbler, bottle fillers, cooking) fixtures in your building with a confirmed exceedance that requires remediation and retesting, are they isolated and tagged pending remediation and retesting? (Select "N/A" if you do NOT have any fixtures that meet this criteria). — Yes

5. * If there are non-potable (cold water faucets, lab sinks, secured slop sinks, etc.) fixtures in your building with a confirmed exceedance that requires remediation and retesting, is the proper signage (Hand washing only, not for drinking use) posted at all fixtures that meet this criteria? (Select "N/A" if you do NOT have any fixtures that meet this criteria). — Yes

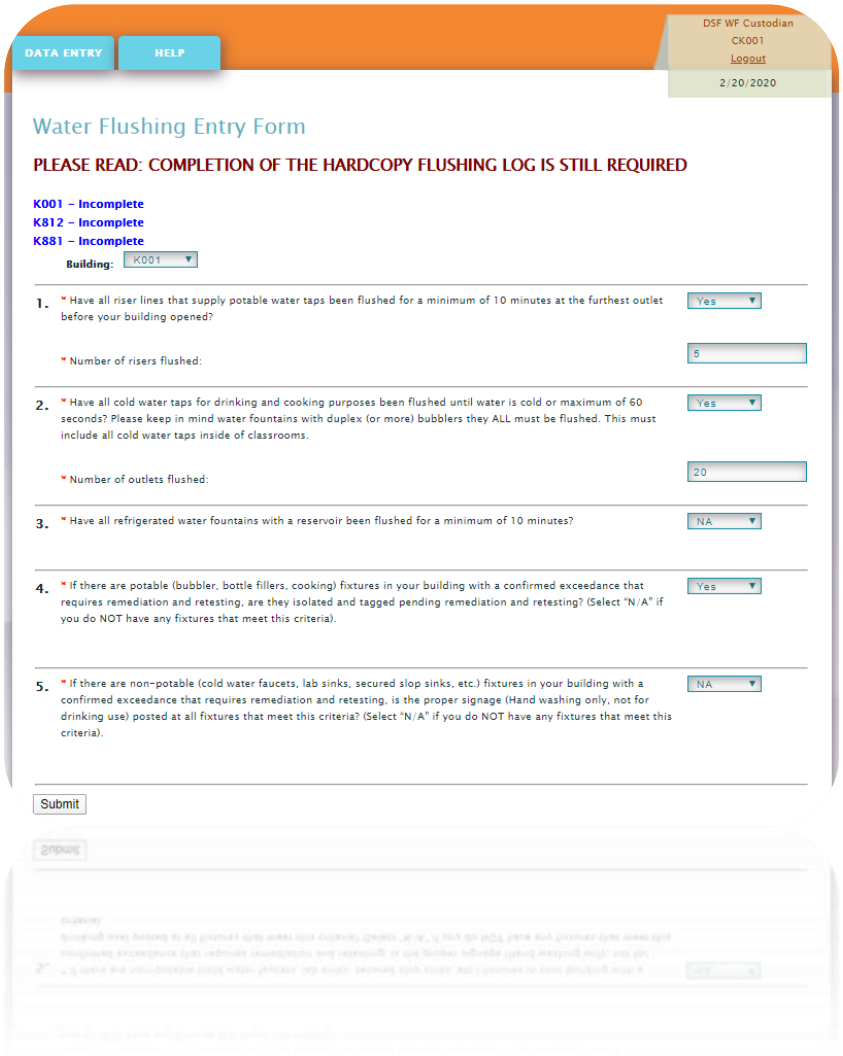
Submit

Click on the **Submit** button at the bottom of the page to save your entries. If you have additional schools, follow the previous steps outlined for answering questions one through five.

Water Flushing Procedures for CEs (cont'd)

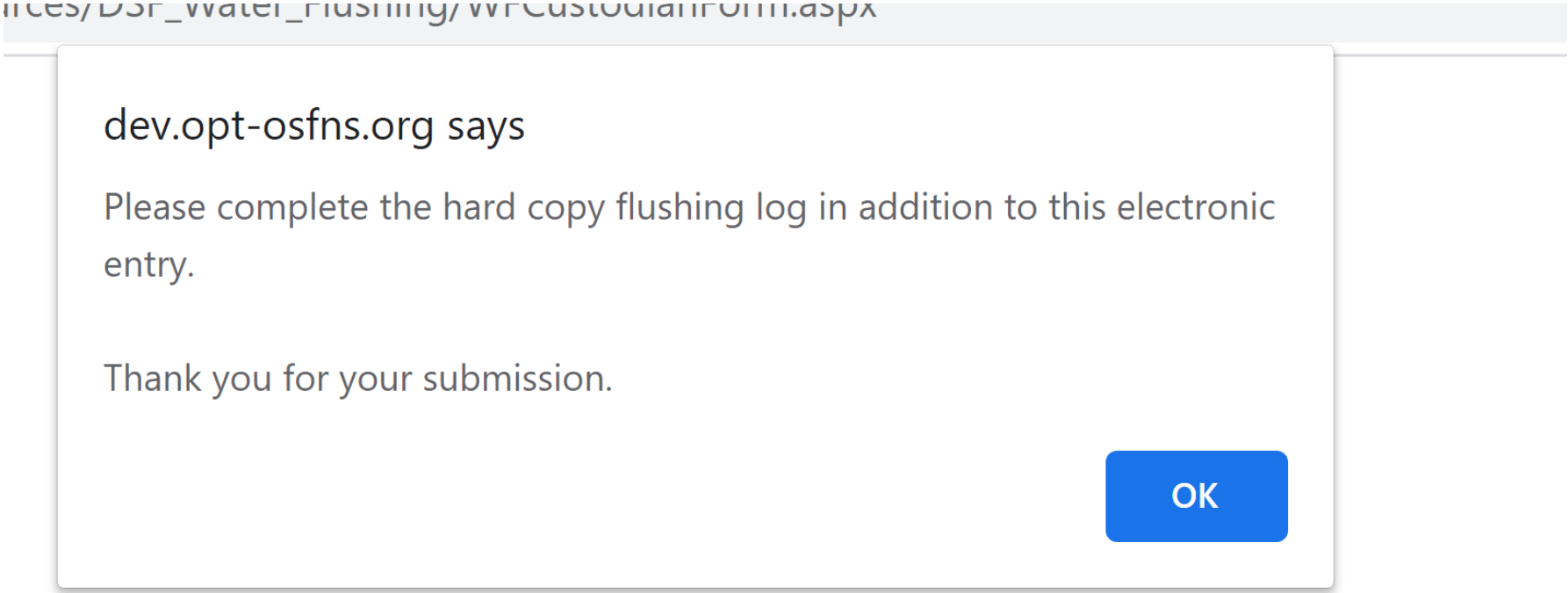
***Note**: After completing and submitting the water flushing data, the following displays next to each school: Completed, date, and time of submission.*

*In addition, the **Submit** button becomes the **Update** button. You can change your entries on the form and then click the Update button to save your entries again.*



Water Flushing Procedures for CEs (cont'd)

After submitting the form you should see the following:



Relevant Lead Laws and Regulations

Title: Subpart 67-4 Lead Testing in School Drinking Water

https://regs.health.ny.gov/volume-1a-title-10/1942050456/subpart-67-4-lead-testing-school-drinking-water

Subpart 67-4 Lead Testing in School Drinking Water

- Section 67-4.1 - Purpose
- Section 67-4.2 - Definitions
- Section 67-4.3 - Monitoring
- Section 67-4.4 - Response
- Section 67-4.5 - Public Notification
- Section 67-4.6 - Reporting
- Section 67-4.7 - Recordkeeping
- Section 67-4.8 - Waivers
- Section 67-4.9 - Enforcement

QUESTIONS?

If you have any questions on any of the materials presented, please send an email to **WaterTesting@schools.nyc.gov**

That's All Folks!

Thank you for participating in this training and your continued dedication to protecting the health and safety of NYC's children.