

City of New York

OFFICE OF THE COMPTROLLER

Scott M. Stringer
COMPTROLLER



MANAGEMENT AUDIT

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Deputy Comptroller for Audit

Audit Report on the Safety Measures
Implemented by the New York City
Department of Education in Response
to the COVID-19 Pandemic

MH21-077A

June 30, 2021

<http://comptroller.nyc.gov>



THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
SCOTT M. STRINGER

June 30, 2021

Dear Residents of the City of New York:

My office has audited the New York City (City) Department of Education (DOE) to determine whether it has: (1) identified the specific benchmarks for meeting and maintaining the cited standards for in-person instruction during the COVID-19 pandemic; (2) developed procedures for meeting those benchmarks; and (3) established an adequate framework to monitor whether those procedures are being followed.

This audit found that DOE has identified specific benchmarks for establishing whether schools have met DOE's cited standards for being open for in-person instruction and developed procedures for its school-based personnel to meet those benchmarks. However, DOE has not produced sufficient evidence that it can reasonably ensure that the agency's COVID-19 procedures, particularly those relating to cleaning, disinfection, and air quality, are being carried out on a consistent basis in individual schools throughout the City. These weaknesses could lead to a false assurance of system-wide compliance, which in turn could increase the risk to some of the students and staff whom the procedures are intended to protect.

To address these issues, the audit made seven recommendations, for DOE's Division of School Facilities (DSF) and Division of School Climate and Wellness (DSCW). The audit recommended that DSF implement a procedure for mandatory and documented readings of carbon dioxide levels in indoor areas; consider establishing a set schedule for Deputy Directors to visit schools to assess compliance with COVID-19 procedures; and consider requiring that Deputy Directors certify those COVID-19-related findings. The audit also recommended that DSCW develop a mechanism for confirming that nursing supervisors are fulfilling their responsibility to ensure that schools have adequate nursing coverage.

The results of the audit have been discussed with DOE officials, and their comments have been considered in preparing this report. Their complete written responses are attached to this report.

If you have any questions concerning this report, please email my Audit Bureau at audit@comptroller.nyc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott M. Stringer".

Scott M. Stringer

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THE CITY OF NEW YORK OFFICE OF THE COMPTROLLER MANAGEMENT AUDIT

Audit Report on the Safety Measures Implemented by the New York City Department of Education in Response to the COVID-19 Pandemic

MH21-077A

EXECUTIVE SUMMARY

We conducted this audit to determine whether the New York City (City) Department of Education (DOE) has: (1) identified the specific benchmarks for meeting and maintaining the cited standards for in-person instruction during the COVID-19 pandemic; (2) developed procedures for meeting those benchmarks; and (3) established an adequate framework to monitor whether those procedures are being followed.

DOE employs approximately 79,000 teachers and provides primary and secondary education to over one million students, from early childhood through 12th grade, in 32 school districts. However, due to the COVID-19 pandemic, in-person instruction was suspended on March 16, 2020, and DOE schools transitioned to remote instruction for the rest of School Year 2019-2020.

As the COVID-19 pandemic continued for the start of School Year 2020-2021, DOE began the school year by offering a cohort-based approach where students would rotate between in-person and remote instruction. In connection with its phased resumption of in-person instruction during the pandemic, DOE established general standards for ensuring that in-person instruction at its schools could be conducted in a safe manner. For this audit, we focused on DOE's standards related to enhanced cleaning and disinfection, necessary supplies—including personal protective equipment (PPE)—proper air quality/ventilation, and nursing coverage.

Audit Findings and Conclusion

This audit found that DOE has identified specific benchmarks for establishing whether schools have met DOE's cited standards for being open for in-person instruction and developed procedures for its school-based personnel to meet those benchmarks. However, overall, DOE has not produced sufficient evidence that it can reasonably ensure that the agency's COVID-19 procedures, particularly those relating to cleaning, disinfection, and air quality, are being carried out on a consistent basis in its hundreds of individual schools throughout the City. These weaknesses limit DOE's ability to verify that its COVID-19 procedures are being followed and could lead to a false assurance of system-wide compliance, which in turn could increase the risk to some of the students and staff whom the procedures are intended to protect.

Specifically, we found that a key procedure relating to air quality within a school—the measurement of carbon dioxide levels with an indoor air quality (IAQ) monitor—is only optional, rather than a required aspect of DOE’s risk-mitigation procedures. Consequently, we have concerns about its effectiveness.

In addition, we found that DOE has not established an adequate framework of controls to monitor whether its procedures are being carried out. Specifically, DOE did not identify sufficient mechanisms to enable independent verification of whether its procedures are being followed in practice. Additionally, DOE’s management has not established sufficient mechanisms to enable confirmation of whether supervisory staff are monitoring the implementation of COVID-19 procedures.

Audit Recommendations

Based on our findings, we make seven recommendations, including:

- The Division of School Facilities (DSF) should implement a procedure for mandatory readings of carbon dioxide levels in indoor areas, such as classrooms, and require that such readings be adequately documented.
- The Division of School Climate and Wellness (DSCW) should develop a mechanism to enable it to confirm that nursing supervisors are fulfilling their responsibility to ensure that schools have adequate nursing coverage.
- DSF should consider establishing a set schedule for Deputy Directors to visit the schools assigned to them and a mechanism for ensuring that those visits are made.
- DSF should consider requiring that Deputy Directors certify their findings when they visit schools to ascertain schools’ compliance with COVID-19 procedures.

Agency Response

In its response, DOE generally agreed with the recommendation directed to DSCW and disagreed with the six recommendations directed to DSF. After carefully considering DOE’s response, we find no basis for modifying our report’s findings or recommendations.

AUDIT REPORT

Background

DOE provides primary and secondary education to over one million students, from early childhood through 12th grade, in 32 school districts and employs approximately 79,000 teachers. Due to the COVID-19 pandemic, in-person instruction was suspended on March 16, 2020 and DOE schools transitioned to remote instruction for the rest of School Year 2019-2020.

The New York City Department of Health and Mental Hygiene (DOHMH) and DOE jointly created guidance for DOE's schools to follow in preparing to offer in-person instruction for the following school year. According to DOE, that guidance was drawn from health protocols established by the Centers for Disease Control and Prevention (CDC) and by New York State.

For School Year 2020-2021, amid continued COVID-19 related concerns, DOE began the school year by offering a cohort-based approach whereby students would rotate between in-person and remote instruction. DOE also offered families the opportunity to opt out of in-person instruction and choose remote instruction on a full-time basis.

As COVID-19 cases across the City continued to increase in the fall of 2020, all in-person instruction at DOE schools was suspended on November 19, 2020. On November 29, 2020, the City first announced that a phased resumption of in-person/remote instruction would begin on December 7, 2020. Students in lower grades—3-K, Pre-K, and elementary school—returned for in-person instruction on that date; special education District 75 students returned beginning on December 10, 2020. The City later announced that middle school students would return beginning on February 25, 2021; and high school students would return beginning on March 22, 2021.

In connection with its phased resumption of in-person instruction during the pandemic, DOE established general standards for ensuring that in-person instruction at its schools can be conducted in a safe manner. DOE articulated these standards in two sections of its *Return to School Guidance*, published on its website: *Return to School 2020 Health and Safety*; and *Building Safety*. For this audit, we focused on DOE's standards in the following areas:

- enhanced cleaning and disinfection
- necessary supplies (including PPE)
- proper air quality/ventilation
- nursing coverage

The DOE units primarily responsible for monitoring the agency's readiness for in-person instruction in relation to the above-mentioned standards are the Office of the First Deputy Chancellor (OFDC), DSF, and DSCW.

OFDC oversees the 8 Executive Superintendents who are responsible for supervising their respective Borough/Citywide Office staff and the superintendents for each of DOE's 32 school districts. Prior to schools reopening for in-person instruction, OFDC reportedly performed walkthroughs of those sites to help ensure that the buildings, classrooms, and common areas were safe for students and staff. For a school to be approved to open for in-person instruction, OFDC had to affirm that the school had adhered to the COVID-19 standards established by DOE.

DSF is responsible for maintenance and custodial responsibilities within all DOE school buildings. In connection with those responsibilities, DSF has a primary role in carrying out three key components of DOE's risk-mitigation strategy for COVID-19: (1) disinfection protocols; (2) air quality and ventilation monitoring; and (3) maintaining inventories of necessary supplies (including PPE).

DSCW is responsible for overseeing a number of offices relating to health and safety, including the Office of School Health (OSH). In regard to the COVID-19 pandemic, OSH is responsible for developing health policies for schools and a daily health screening questionnaire. In addition, DSCW is responsible for ensuring adequate nursing coverage, specifically, nurses in every school building serving Kindergarten through 12th grade.

According to DOE officials, there are roughly 1,800 schools operating in approximately 1,400 school buildings.

Objectives

The objectives of this audit were to determine whether DOE has: (1) identified the specific benchmarks for meeting and maintaining the cited standards for in-person instruction during the COVID-19 pandemic; (2) developed procedures for meeting those benchmarks; and (3) established an adequate framework to monitor whether those procedures are being followed.

Scope and Methodology Statement

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. This audit was conducted in accordance with the audit responsibilities of the City Comptroller as set forth in Chapter 5, §93, of the New York City Charter.

For the purposes of this audit, the COVID-19 standards covered relate to cleaning and disinfection, necessary supplies (including PPE), proper air quality/ventilation, and the assignment of nursing personnel. While this audit endeavored to identify the benchmarks by which DOE determines that the above-mentioned standards have been met, we offer no opinion regarding the suitability of the benchmarks themselves. Additionally, this audit determined whether DOE had established a framework of controls that, if followed, would appear to allow the agency to monitor whether its COVID-19 procedures were being followed. However, we did not perform detailed testing to assess the degree to which those controls were in fact functioning.

The scope of this audit was September 2020 through April 2021. Please refer to the Detailed Scope and Methodology at the end of this report for the specific procedures and tests that were conducted.

Discussion of Audit Results with DOE

The matters covered in this report were discussed with DOE officials during and at the conclusion of this audit. A preliminary draft report was sent to DOE on May 18, 2021 and was discussed at

an exit conference held on May 27, 2021. On June 7, 2021 we submitted a draft report to DOE with a request for written comments. We received a written response from DOE on June 21, 2021.

In its response, DOE generally agreed with the recommendation directed to DSCW and disagreed with the six recommendations directed to DSF. In arguing against our recommendations, DOE emphasizes the processes it has in place, stating, for example, that,

The Department has designed and implemented a comprehensive multi-layered approach to maintain a safe and healthy environment for the students whose families opted into in-person learning, and for our dedicated staff.

Our audit acknowledges that DOE has identified specific benchmarks for establishing whether schools have met DOE's cited standards for being open for in-person instruction. However, our audit also found that DOE has not established an adequate framework of controls to *centrally monitor* whether its procedures are being carried out.

DOE also argued that the report contained inaccuracies and that we did not understand its processes. DOE stated,

During the audit, the Department flagged misunderstandings and inaccurate assertions made by the Comptroller with respect to the Department's monitoring and supervision of health and safety protocols for school readiness for in-person instruction, and we again offered clarification to the auditors during the exit conference. However, those inaccurate assertions still remained in the Report.

DOE fails to identify the "inaccurate assertions" it is referring to, so we cannot assess the basis for its claim and find no basis to modify any portions of the report. Moreover, DOE's response demonstrates that any "misunderstandings" relate to the agency's failure to recognize the difference between school-based and centrally-based oversight. Throughout the audit, we engaged in several discussions with DOE to identify what, if any, monitoring DOE's *central* management was conducting to assess the degree to which the agency's COVID-19 procedures were actually implemented at its hundreds of schools. Despite those discussions, DOE continues to refer to its *school-based* oversight in response to our findings of inadequacies in the agency's centrally-based oversight. For example, DOE states,

An understanding of the supervision structure is essential to assess our efforts during the pandemic, but unfortunately, the Report mischaracterizes a major component of it. As an example, the Report fundamentally misunderstands the role of the Deputy Directors of Facilities (DDFs). The Department explicitly stated several times during the audit that DDFs are a secondary line of supervision in each school's maintenance hierarchy. Custodian engineers, who are the direct manager at the site level, are responsible for ensuring custodial staff are fulfilling their duties, e.g., performing cleaning and disinfection duties. These duties are logged and those logs have been shared with the audit team. While the Comptroller acknowledges the custodian engineer's role through a footnote, the Report continues to mischaracterize the DDF's role.

However, the audit does not mischaracterize the role of Deputy Directors. We clearly recognize that the custodian engineers are the on-site supervisors of custodial staff and are responsible for school-based oversight. However, as stated above, our audit found supervisory inadequacies related to *centrally-based* oversight. As we state in the report, Deputy Directors are the persons tasked by DOE central management (i.e., DSF) with the responsibility for ensuring that school-

level personnel—namely, custodian engineers and their custodial staff—are fulfilling their COVID-19-related duties. Consequently, DOE’s argument—that we should consider the school-based oversight provided by custodian engineers as part of our assessment of the agency’s centrally-based oversight—has no merit. Additionally, DOE’s assertion that the auditors were provided with logs documenting the custodial staff’s cleaning and disinfecting duties is inaccurate. We were provided with blank templates of those logs and were not provided with evidence that the logs were used in the schools.

Regarding the audit’s recommendations, DOE states,

The Report offers recommendations that are based on inaccurate findings as noted above, and appears to recommend actions without considering that relevant policies are updated as the COVID-19 guidance on which they are based continue to evolve.

The audit’s recommendations reflect two primary concerns: (1) the need for DOE to use objective measures to assess the implementation *and* effectiveness of its COVID-19 procedures at schools; and (2) the need for DOE to assess the degree to which supervisory personnel charged with ensuring implementation of those procedures at the schools are in fact doing so. DOE provides no credible evidence challenging the findings that form the basis for these recommendations.

Unfortunately, rather than addressing the substance of the audit recommendations, DOE merely repeats its recitation of its centrally-prescribed procedures for personnel at each school to follow. In that regard, DOE’s response fails to acknowledge that a sound internal control system would also require the agency to develop and implement mechanisms to provide its central management with objective, verifiable information to assess, reliably, whether the schools in fact followed the agency’s procedures and the effectiveness of those procedures. Based on its response, DOE appears to be uninterested in assessing at an organizational level the implementation and effectiveness of the processes it devised in response to COVID-19. Unless DOE adopts a management approach that places an emphasis on evaluating the outcomes produced by its processes, the weaknesses identified in this report will likely persist, and DOE’s ability to verify that its COVID-19 procedures are being followed throughout its system will be limited. That limitation in turn may increase the risk to the students and staff whom the procedures are intended to protect.

The full text of the DOE response is included as an addendum to this report.

FINDINGS AND RECOMMENDATIONS

This audit found that DOE has: (1) identified specific benchmarks for establishing whether schools have met DOE's cited standards for being open for in-person instruction; and (2) developed procedures for its school-based personnel to meet those benchmarks. However, DOE has not produced sufficient evidence that it can reasonably ensure that the agency's COVID-19 procedures, particularly those relating to cleaning, disinfection, and air quality, are being carried out on a consistent basis in its hundreds of individual schools throughout the City. The control weaknesses that limit DOE's ability to verify that its COVID-19 procedures are being followed in practice could lead to a false assurance of system-wide compliance, which in turn could increase the risk to some of the students and staff whom the procedures are intended to protect.

Specifically, we found that a key procedure relating to air quality within a school—the measurement of carbon dioxide levels with an indoor air quality (IAQ) monitor—is only optional, rather than a required aspect of DOE's risk-mitigation procedures. However, the decision to forgo regular IAQ monitoring increased the risk that high carbon dioxide levels, identified by the Occupational Safety and Health Administration (OSHA) as an indicator of inadequate ventilation, may go unnoticed. According to the CDC, ventilation, which is one component of maintaining healthy environments, is an important COVID-19 prevention strategy for schools and, along with other preventive actions, can reduce the likelihood of spreading the disease.

Furthermore, we found DOE has not established an adequate framework of controls to monitor whether its procedures are being carried out. Specifically, DOE did not identify sufficient mechanisms to enable independent verification of whether its procedures are being followed in practice. Additionally, DOE's management has not established sufficient mechanisms to enable confirmation of whether supervisory staff are monitoring the implementation of COVID-19 procedures.

DOE Has Established Benchmarks for Compliance with Standards for In-Person Instruction

As stated earlier, the general standards that DOE has developed for schools that implement in-person instruction include the following areas that are the subject for this audit:

- cleaning and disinfection;
- air quality/ventilation;
- necessary supplies; and
- adequate nursing coverage.

We found that DOE has identified a number of benchmarks that it uses to ascertain how compliance with these standards is determined. (It should be noted that we offer no opinion as to the suitability of the benchmarks themselves.)

The benchmarks established by DOE for the above-mentioned general standards are shown in Table I below.

Table I

Benchmarks Established for COVID-19 Standards

STANDARD	BENCHMARK
Cleaning and Disinfection	<ul style="list-style-type: none">• Regular cleaning of high touch areas in classrooms, bathrooms, and common areas (e.g., doorknobs, laptops)• Nightly deep cleanings using an EPA list-N disinfectant designed to address COVID-19
Air Quality/Ventilation	<ul style="list-style-type: none">• Air is able to flow in and out—whether through natural or mechanical means
Necessary Supplies	Several categories of items, including: <ul style="list-style-type: none">• PPE: face masks, face shields, gloves, isolation gowns and protective suits• Cleaning/Disinfection supplies: disinfectant, dispensers, electrostatic sprayers, and hand sanitizer• Building supplies: air purifiers and signage• Health supplies: IAQ monitors and thermometers
Adequate Nursing Coverage	<ul style="list-style-type: none">• Nurses in every school building serving Kindergarten through 12th grade

Additionally, with regard to the benchmarks DOE established:

- According to DOE, proper air quality can be accomplished through a window that opens, a type of mechanical ventilation (exhaust fan, supply fan, unit ventilator) or a combination of both.¹
- The initial quantity of necessary COVID-19 related PPE supplies provided to the schools for the start of School Year 2020-2021 was based on the number of students and staff within the school building.

DOE Has Developed Procedures for Meeting Benchmarks

The audit found that DOE has developed procedures for schools to follow to help ensure that benchmarks are being met.² However, as discussed in more detail below, the audit found that one of the procedures DOE implemented to assess the level of acceptable air quality and ventilation in a school—the measurement of carbon dioxide levels in occupied rooms with an IAQ monitor—is conducted only if requested by a school principal, not as a matter of standard practice, which reduces the overall value of this benchmark.

¹ If a room depends on windows for ventilation, then adequate ventilation is achieved when the area of window opening is at least 4 percent of the room's total square footage, according to DOE.

² DSF provided documentation to custodian engineers titled The Office of Building Services Circular No. 1 and No. 2 for School Year 2020-2021. Those circulars detail the strategic approach being taken by DSF to help maintain the health and safety of all building occupants during the COVID-19 crisis based on Cleaning and Disinfecting, Training, PPE, Disinfectant Supplies, HVAC, Sinks, and Social Distancing Signs.

The procedures developed by DOE by which it intends to meet the COVID-19 related benchmarks are shown in Table II below.

Table II
Benchmarks and Procedures Established for COVID-19 Standards

STANDARD	BENCHMARK	PROCEDURE
Cleaning and Disinfection	<ul style="list-style-type: none"> Regular cleaning of high touch areas in classrooms, bathrooms, and common areas (e.g., doorknobs, laptops) Nightly deep cleanings using an EPA list-N disinfectant designed to address COVID-19 	<ul style="list-style-type: none"> Continuously disinfect all high touch surfaces using COVID-19 combating disinfectants Regularly check all restrooms for cleanliness Properly stock bathrooms with necessary supplies (e.g., paper goods, soap) Maintain a disinfection log daily to document efforts Maintain a bathroom inspection log to document efforts
Air Quality/Ventilation	<ul style="list-style-type: none"> Air is able to flow in and out—whether through natural or mechanical means 	<ul style="list-style-type: none"> Inspect all HVAC equipment daily HVAC equipment turned on 2 hrs. prior to start of day and turned off 1 hr. after school day ends Document efforts in a monthly supply and exhaust fan maintenance log Upon request by a school principal, measure a room's carbon dioxide levels using an IAQ monitor
Necessary Supplies	Several categories of items, including: <ul style="list-style-type: none"> PPE: face masks, face shields, gloves, isolation gowns and protective suits Cleaning/Disinfection supplies: disinfectant, dispensers, electrostatic sprayers, and hand sanitizer Building supplies: air purifiers and signage Health supplies: IAQ monitors and thermometers 	<ul style="list-style-type: none"> Maintain at least a 30-day supply of the necessary COVID-19 related items Complete a weekly supply survey
Adequate Nursing Coverage	<ul style="list-style-type: none"> Nurses in every school building serving Kindergarten through 12th grade 	<ul style="list-style-type: none"> Through a partnership with NYC Health + Hospitals, every student and staff member is to have access to a qualified medical professional every day

With regard to the procedures pertaining to necessary supplies, the weekly supply survey that custodian engineers must fill out lists the COVID-19 related items that schools should have in their inventories and calls for the custodian engineer to estimate how much of each item that the relevant school has on hand, based on the following schedule: 0-7 day supply; 7-14 day supply; 14-30 day supply; and 30+ day supply. The survey aids in identifying reorder points and helps ensure that schools have sufficient amounts of COVID-19 related supplies on hand.

Procedure to Determine Adequacy of Ventilation is Optional

According to DSF, any room that does not meet the agency's safety standards—including the standards pertaining to proper air quality—will not be used for instructional purposes unless it is

repaired or remediated.³ However, our review of the air quality procedures found that the one procedure that actually measures a component of air quality is optional, which reduces its effectiveness since it will not necessarily be consistently employed.

As stated earlier, according to OSHA, carbon dioxide levels in a room can be used as a rough indicator of the effectiveness of a room's ventilation. According to DSF, carbon dioxide levels above guidance levels (350-1100 parts per million in an occupied room) could suggest inadequate air flow and ventilation. As shown in the table, DSF provided custodian engineers with an IAQ monitor, an instrument designed to detect the level of carbon dioxide in a room.

However, there are a number of shortcomings with DSF's procedure. First, under the procedure, custodian engineers will use the IAQ monitor to take a reading of a room's carbon dioxide level only if requested by a school principal, rather than as a required monitoring practice, notwithstanding that the carbon dioxide levels that signal inadequate air circulation are not readily apparent and may go unnoticed without such readings. Additionally, the process puts an added responsibility on teachers and principals to track requests for readings and follow up to ensure that they take place. Finally, custodian engineers are not required to maintain a record of such requests or of the results of any tests conducted. Consequently, DOE is hindered in its ability to both independently assess whether all requests are fulfilled *and* to determine whether carbon dioxide levels are within an acceptable range—and by extension whether ventilation is adequate—in its schools.

These shortcomings are particularly concerning because according to the CDC, inadequate air circulation heightens the risk of transmitting COVID-19. Further, the taking of carbon dioxide levels in rooms is the only objective measure identified by DSF by which custodian engineers can determine the degree to which its other procedures related to air quality—inspecting HVAC equipment daily, turning HVAC equipment on and off at the start and end of every school day—are effective in promoting adequate ventilation in its rooms.

Recommendation

1. DSF should implement a procedure for mandatory readings of carbon dioxide levels in indoor areas, such as classrooms, and require that such readings be adequately documented.

DOE Response: “The Department disagrees with this recommendation. The level of carbon dioxide (CO₂), which is naturally produced by humans, fluctuates in an indoor area based on the occupancy rate, ambient level, supply air level, and air exchange rate. While CO₂ levels can reflect inadequate air flow or ventilation when measured against occupancy levels and ambient CO₂ levels when the tested area is occupied, it is not the only means of evaluating ventilation. The Department has equipped each custodian engineer with an Indoor Air Quality (IAQ) monitor to use as one of their diagnostic tools, and the DOE also diagnoses ventilation issues using other methods, e.g., equipment may be tested visually, or with an anemometer.”

Auditor Comment: DOE fails to state the reason that it objects to taking and recording carbon dioxide readings that would provide an objective indicator of the effectiveness of the air quality procedures employed at its schools. In fact, DOE's response cites the very tool—an IAQ monitor—that measures carbon dioxide levels while at the same time

³ The School Construction Authority conducted a survey, and issued a public report during the summer of 2020 which looked at all of the instructional spaces' ventilation. The report determined if repairs to ventilation systems were needed on a per room basis within schools. As DSF has made repairs, they have updated the information on those surveys.

maintaining that custodian engineers should not be required to *actually use* it. Additionally, we note that DOE’s response refers to its use of anemometers (which measure air flow) as an alternative method of “diagnosing ventilation issues,” while further down in its response, rejects a similar recommendation that Deputy Directors—the DOE personnel who are equipped with anemometers—should be required to take and record *air flow* readings.

Given the potential threat posed by elevated carbon dioxide levels, we find it problematic that DOE would be opposed to requiring the custodian engineers who are equipped with IAQ monitors to use them to take and document scheduled mandatory readings. We therefore urge DOE to reconsider and implement this recommendation.

DOE Has Not Established an Adequate Framework of Controls to Ensure Actual Implementation of COVID-19 Procedures

The audit found that DOE has not established an adequate framework by which it can obtain reasonable assurance that its COVID-19 procedures are implemented at the schools. DOE has not identified mechanisms to ensure that designated personnel independently verify that certain procedures are being followed in the schools or assess the degree to which supervisory personnel charged with ensuring implementation at the schools are in fact doing so. (We again note that we did not perform detailed testing to assess the degree to which the controls identified by DOE were functioning in practice in the schools.)

Comptroller’s Directive #1 describes the level of monitoring necessary for a sound system of internal controls that is capable of providing DOE’s senior management with reasonable assurance that its prescribed COVID-19 procedures are being carried out in its schools throughout the City:

A sound internal control system must be supported by ongoing activity monitoring occurring at various organizational levels and in the course of normal operations. Such monitoring should be performed continually and be ingrained throughout an agency’s operations. It should include appropriate measurements on regular management and supervisory activities, comparisons, reconciliations, and other actions taken by employees in performing their duties. Agency management must perform continual monitoring of activities and programs.

We asked DOE to identify the controls by which the supervisory personnel responsible for monitoring the implementation of COVID-19 procedures at the schools assess whether those procedures are being followed. The controls identified by DOE are shown in Table III below.

Table III

Controls Identified by DOE to Ensure Compliance with COVID-19 Procedures

STANDARD	BENCHMARK	PROCEDURE	CONTROL
Cleaning and Disinfection	<ul style="list-style-type: none"> Regular cleaning of high touch areas in classrooms, bathrooms, and common areas (e.g., doorknobs, laptops) Nightly deep cleanings using an EPA list-N disinfectant designed to address COVID-19 	<ul style="list-style-type: none"> Continuously disinfect all high touch surfaces using COVID-19 combating disinfectants Regularly check all restrooms for cleanliness Properly stock bathrooms with necessary supplies (e.g., paper goods, soap) Maintain a disinfection log daily to document efforts Maintain a bathroom inspection log to document efforts 	<ul style="list-style-type: none"> Deputy Directors of Facilities (Deputy Directors) are responsible for ensuring that custodian engineers are performing their duties and maintaining the Disinfection and Bathroom Inspection Logs
Air Quality/Ventilation	<ul style="list-style-type: none"> Air is able to flow in and out—whether through natural or mechanical means 	<ul style="list-style-type: none"> Inspect all HVAC equipment daily HVAC equipment turned on 2 hrs. prior to start of day and turned off 1 hr. after school day ends Document efforts in a monthly supply and exhaust fan maintenance log Upon request by a school principal, measure carbon dioxide levels in rooms using an IAQ monitor 	<ul style="list-style-type: none"> Deputy Directors are responsible for ensuring that custodian engineers are checking the HVAC equipment and maintaining a monthly supply and exhaust fan maintenance log Deputy Directors have been provided with anemometers, a tool to check air flow
Necessary Supplies	<p>Several categories of items, including:</p> <ul style="list-style-type: none"> PPE: face masks, face shields, gloves, isolation gowns and protective suits Cleaning/Disinfection supplies: disinfectant, dispensers, electrostatic sprayers, and hand sanitizer Building supplies: air purifiers and signage Health supplies: IAQ monitors and thermometers 	<ul style="list-style-type: none"> Maintain at least a 30-day supply of the necessary COVID-19 related items Complete a weekly supply survey 	<ul style="list-style-type: none"> Deputy Directors may conduct spot check validations to review stock levels for supplies DSF's IT department performs analytics on the weekly supply surveys to flag schools lacking a 30-day supply
Adequate Nursing Coverage	<ul style="list-style-type: none"> Nurses in every school building serving Kindergarten through 12th grade 	<ul style="list-style-type: none"> Through a partnership with NYC Health + Hospitals, every student and staff member is to have access to a qualified medical professional every day 	<ul style="list-style-type: none"> Nurses confirm their attendance to a supervisor by 7 am each school day Nursing supervisors are in regular contact with principals or designee regarding coverage issues (absences, etc.)

In reviewing the controls identified by DOE, we do not see adequate evidence that supervisory staff independently verify that certain procedures were followed. This issue is discussed in the following section.

Lack of Independent Verification That Certain Procedures are Being Followed

DOE has not identified a mechanism whereby it independently assesses the extent to which its COVID-19 cleaning and disinfection procedures are being implemented. Additionally, although the agency recently developed a procedure whereby designated personnel *can* independently test air flow and ventilation at schools, it is left to their discretion whether or not to conduct such tests. Moreover, DOE has not implemented a requirement that these persons record and report the results of the tests they conduct. Consequently, the agency is hindered in assessing the degree to which these procedures are actually being implemented at the schools.

Weaknesses in DSF Oversight Relating to Cleaning and Air Quality

To carry out DSF's responsibility to oversee maintenance and custodial responsibilities within school buildings, Deputy Directors of Facilities (Deputy Directors) are responsible for ensuring that custodian engineers and their custodial staff are fulfilling their duties, including those related to the COVID-19 standards.⁴ However, DOE does not require the Deputy Directors to review, test, or document the school-based custodial staff's implementation of COVID-19 cleaning and air quality/ventilation protocols or the effectiveness of those protocols in the schools.

DSF currently employs approximately 40 Deputy Directors, who are responsible for overseeing custodian engineers at DOE's approximately 1,400 school buildings. Therefore, each Deputy Director is responsible for managing approximately 35 school buildings. With regard to the COVID-19 pandemic, they have been given additional responsibilities for ensuring that custodial staff follow the procedures DOE prescribed to ensure safety in the schools during the pandemic. DOE did not identify any additional resources that have been dedicated, or prior responsibilities that have been transferred to other units, to help Deputy Directors meet that additional responsibility. However, DOE stated that other aspects of the Deputy Director's position have required less time than they did previously due to the reduced level of occupancy in schools and fewer extra-curricular activities during the pandemic.

According to DSF officials, a checklist was created to serve as a reference for the Deputy Directors when they visit their assigned school buildings and identifies the key areas that Deputy Directors are responsible for reviewing. DOE provided us with a copy of this checklist, which if utilized appears to be a helpful resource in aiding the Deputy Directors in their review of the custodian engineers' activities to ensure that COVID-19 procedures are being followed.

However, DSF does not require Deputy Directors to utilize that checklist, nor has DSF established any specific steps that Deputy Directors must perform during their visits. Consequently, DSF is less able to ensure that the Deputy Directors are adequately reviewing the implementation of the relevant COVID-19 procedures consistently in schools across the City.

⁴ Custodian engineers, who are site-based supervisory staff, are responsible for ensuring custodial staff are fulfilling their duties. Deputy Directors are responsible for ensuring custodian engineers are fulfilling their duties. In general, custodial staff perform cleaning and disinfection duties which are logged, and those logs are maintained by the custodian engineer.

As shown in Table III, to verify that custodian engineers are maintaining an adequate level of supplies and are accurately filling out the weekly supply surveys, Deputy Directors *may* perform independent testing, such as conducting spot checks of supplies. With regard to cleaning and disinfections, however, DSF did not identify a mechanism whereby Deputy Directors independently verified compliance with the related procedures. In the absence of such independent checks, Deputy Directors primarily rely on the logs the custodian engineers maintain in which they self-report the cleaning and disinfecting efforts taken in their schools. DOE did not identify any independent testing that Deputy Directors are recommended or required to conduct to assess the level of cleanliness at schools as an indication of whether COVID-19 related cleaning and disinfection procedures are being followed.

Regarding air quality and ventilation, until recently, Deputy Directors also relied primarily on logs in which the custodian engineers self-report the maintenance efforts taken. During the course of this audit, DSF informed us that as of March 5, 2021, it had also provided all Deputy Directors with anemometers (instruments designed to measure air flow) for use in the schools. Notably, however, Deputy Directors are not required to use the new anemometers; their utilization is left to the Deputy Directors' discretion.

DOE's failure to (1) develop a means by which Deputy Directors independently verify that high touch surfaces have been cleaned, and (2) require documented testing of air flow and ventilation by Deputy Directors or qualified, independent persons, reduces DOE's assurance that its COVID-19 procedures are being carried out and are effective. This control weakness is of particular concern because unclean surfaces and inadequate air flow and ventilation—conditions that, according to the CDC, increase vulnerability to COVID-19's transmission—may not be readily apparent and can easily go undetected, which increases health and safety risks to students and staff at the schools.

Inadequate Mechanisms to Ensure Senior Management's Supervision and Monitoring of COVID-19 Procedures

DOE has not identified an adequate control whereby it can assess the degree to which supervisory personnel (i.e., Deputy Directors and nursing supervisors) are monitoring and regularly reporting to senior central management whether schools are in compliance with COVID-19 procedures. Consequently, we do not have reasonable assurance that if deficiencies exist regarding the implementation of COVID-19 procedures, DOE has a mechanism that will enable it to identify and correct those deficiencies in a timely manner, if at all.

We asked DOE to identify the oversight controls by which upper DOE management confirms that the personnel responsible for monitoring the implementation of COVID-19 procedures at the schools are in fact performing that function. The oversight controls identified by DOE are shown in Table IV below.

Table IV

Oversight Controls Identified by DOE to Assess Supervisory Monitoring of COVID-19 Procedures at Schools

STANDARD	BENCHMARK	PROCEDURE	CONTROL	OVERSIGHT CONTROL (EXEC./ UPPER DOE MANAGEMENT)
Cleaning and Disinfection	<ul style="list-style-type: none"> Regular cleaning of high touch areas in classrooms, bathrooms, and common areas (e.g., doorknobs, laptops) Nightly deep cleanings using an EPA list-N disinfectant designed to address COVID-19 	<ul style="list-style-type: none"> Continuously disinfect all high touch surfaces using COVID-19 combating disinfectants Regularly check all restrooms for cleanliness Properly stock bathrooms with necessary supplies (e.g., paper goods, soap) Maintain a disinfection log daily to document efforts Maintain a bathroom inspection log to document efforts 	<ul style="list-style-type: none"> Deputy Directors are responsible for ensuring that custodian engineers are performing their duties and maintaining the Disinfection and Bathroom Inspection Logs 	<ul style="list-style-type: none"> Management's expectation is that Deputy Directors are familiar with their monitoring responsibilities and are carrying them out
Air Quality/Ventilation	<ul style="list-style-type: none"> Air is able to flow in and out—whether through natural or mechanical means 	<ul style="list-style-type: none"> Inspect all HVAC equipment daily HVAC equipment turned on 2 hrs. prior to start of day and turned off 1 hr. after school day ends Document efforts in a monthly supply and exhaust fan maintenance log Upon request by a school principal, measure carbon dioxide levels in rooms using an IAQ monitor 	<ul style="list-style-type: none"> Deputy Directors are responsible for ensuring that custodian engineers are checking the HVAC equipment and maintaining a monthly supply and exhaust fan maintenance log Deputy Directors have been provided with anemometers, a tool to check air flow 	<ul style="list-style-type: none"> Management's expectation is that Deputy Directors are familiar with their monitoring responsibilities and are carrying them out
Necessary Supplies	<p>Several categories of items, including:</p> <ul style="list-style-type: none"> PPE: face masks, face shields, gloves, isolation gowns and protective suits Cleaning/Disinfection supplies: disinfectant, dispensers, electrostatic sprayers, and hand sanitizer Building supplies: air purifiers and signage Health supplies: IAQ monitors and thermometers 	<ul style="list-style-type: none"> Maintain at least a 30-day supply of the necessary COVID-19 related items Complete a weekly supply survey 	<ul style="list-style-type: none"> Deputy Directors may conduct spot check validations to review stock levels for supplies DSF's IT department performs analytics on the weekly supply surveys to flag schools lacking a 30-day supply 	<p>Management's expectation is that Deputy Directors are familiar with their monitoring responsibilities and are carrying them out</p>
Adequate Nursing Coverage	<ul style="list-style-type: none"> Nurses in every school building serving Kindergarten through 12th grade 	<ul style="list-style-type: none"> Through a partnership with NYC Health + Hospitals, every student and staff member is to have access to a qualified medical professional every day 	<ul style="list-style-type: none"> Nurses confirm their attendance to a supervisor by 7 am each school day Nursing supervisors are in regular contact with principals or designee regarding coverage issues (absences, etc.) 	<ul style="list-style-type: none"> DSCW has not identified the means by which it monitors whether nursing supervisors ensure adequate nursing coverage

Based on DOE's response, the agency has not established an adequate system for verifying that oversight personnel are monitoring the implementation of COVID-19 procedures at the schools. As shown in Table IV, DSCW has not identified any means it has to monitor how well nursing supervisors ensure that schools have adequate nursing coverage. As also shown in the table, DSF officials contend in effect that Deputy Directors are familiar with their responsibilities and are expected—and trusted—to carry them out. Deputy Directors are expected to communicate any ongoing issues to their superiors.

However, DOE has not established a process whereby Deputy Directors are expected to visit and assess schools' compliance with DOE's COVID-19 procedures in a consistent manner, with a specified minimum frequency, or with documentation of their observations and communications with school-based staff; nor is there any record that DOE senior management, either in DSF or above, is regularly apprised of the results of those visits. For example, Deputy Directors are not required to state in any specific written record or report to DSF (1) each time a school was visited; (2) the observations and tests conducted; and (3) the results of those observations and tests.

As stated previously, each Deputy Director is responsible for approximately 35 school buildings. The responsibility of ensuring—in any meaningful way—that all of the schools they are responsible for follow DOE's COVID-19 procedures throughout their classrooms and other areas would presumably require a significant amount of a Deputy Director's time and attention, notwithstanding DOE's assertion that other aspects of their duties require less time due to reduced occupancy at the schools. Consequently, in the absence of any prescribed standards for *how* Deputy Directors are expected to carry out their responsibilities for ensuring schools' compliance with COVID-19 procedures, DOE has an increased risk that they may not be able to adequately assess the degree to which COVID-19 procedures are being followed at DOE's schools. In the absence of requirements that Deputy Directors visit their assigned schools on any specified cycle, assess their COVID-19-related procedures in a uniform manner, and report the results of all such assessments in a medium and format that DOE central management regularly track, DOE cannot readily identify even basic information, such as which schools have been visited by a Deputy Director or when. DOE is also hindered in holding Deputy Directors accountable for the critical role DOE has given them in ensuring the implementation of DOE's COVID-19 procedures in the schools.

DOE has produced insufficient evidence that it is able to reasonably ensure that its COVID-19 procedures are being carried out on a consistent basis in City schools. As noted earlier, conditions that can increase the risk of COVID-19's transmission, specifically, inadequate air ventilation and inadequately cleaned surfaces, may not be readily apparent and may go undetected and therefore unaddressed in the absence of effective testing and objective measurement. Consequently, it is imperative that DOE develop mechanisms to independently verify that COVID-19 procedures are being followed and ensure that Deputy Directors and other oversight personnel are performing such verifications.

Recommendations

2. DSCW should develop a mechanism to enable it to confirm that nursing supervisors are fulfilling their responsibility to ensure that schools have adequate nursing coverage.

DOE Response: "The Department agrees with this recommendation inasmuch as it aligns with our current practices. Leadership at the Office of School Health (OSH) and the Division of School Climate and Wellness (DSCW) engages daily with the Nursing Supervision teams to review nursing assignments and resolve any issues related to

coverage. ... At the end of every day, the DSCW data team receives nursing assignments from the vendor to ensure that we have coverage for all assigned schools for the following day. In addition, we receive daily updates around absence coverage from the agency so that we are made aware of any gap and the respective steps taken to ensure coverage.

DSCW leadership oversees the placement of NYC Health + Hospitals (H+H) contract nurses, and manages the relationship with H+H and the contract agencies, including absence alerts and concerns. The Department receives a daily update from H+H every morning at the beginning of the school day and continuing throughout the morning as needed. DSCW immediately coordinates with OSH and the nursing team to ensure coverage when any issues arise.

Additionally, OSH provides DSCW with a daily report of any nursing absences and the steps that have been taken to provide coverage to the affected schools.”

Auditor Comment: Although DOE states that this recommendation aligns with its current practice, we did not find that to be the case during the audit scope period. As presented to us during the audit, DSCW’s monitoring of nursing coverage was exception-based, in that the DSCW was notified by a nurse supervisor when a nurse was going to be absent so that coverage could be arranged. However, if a nurse supervisor neglected to notify DSCW, DSCW would be unaware that a school building did not have coverage, unless the principal or another school official became aware of it and took the initiative to contact OSH or DSCW. That system is not an equivalent substitute for actively and affirmatively verifying that nursing supervisors ensure that schools have adequate nursing coverage. Accordingly, we urge DOE to implement this recommendation.

3. DSF should consider establishing a set schedule for Deputy Directors to visit the schools assigned to them and a mechanism for ensuring that those visits are made.

DOE Response: “The Department disagrees with this recommendation. The Department explicitly stated several times to the audit team that DDFs are a secondary line of supervision within the supervision structure of each school’s maintenance team. Custodian engineers, who are the direct managers at the site, are responsible for ensuring custodial staff are fulfilling their duties, e.g., performing cleaning and disinfection duties. Custodial staff are responsible for logging the performance of such duties, which are maintained and reviewed by their supervisor, the custodian engineer.

DDFs are a secondary level of supervision with broad responsibilities for ensuring that each school’s maintenance is carried out, which is accomplished through their supervision of the custodian engineers. DDFs conduct one or more visits of each school throughout the year, often unannounced. During those visits, the DDFs can conduct observations of specific duties and follow up on the school’s maintenance issues that have been identified through prior discussions. In addition, each custodian engineer is subject to two formal evaluations each year by the DDFs. In that case, the DDFs conduct separate visits and use the checklists developed by the Department to guide them through the assessment of the protocols that must be followed by the custodian engineer.”

Auditor Comment: As stated earlier under *Discussion of Audit Results*, it appears that DOE fails to recognize the difference between *school*-based and *centrally*-based oversight and fails to acknowledge that its current procedures provide no assurance that its centrally-based supervisors—Deputy Directors—methodically monitor and report to

DOE's senior central management whether schools are in compliance with COVID-19 procedures. The fact that school-based custodian engineers are directly responsible for ensuring that custodial staff are fulfilling their duties does not negate the need for a system of central management oversight that enables—and requires—DOE's senior, centrally-based management to monitor the degree to which the COVID-19 safety protocols are being effectively implemented at the individual schools. Notwithstanding DOE's statements regarding the "broad responsibilities" that Deputy Directors have with regard to overseeing the schools under their purview, they are the only persons designated by DOE central management to oversee custodian engineers and ensure that their schools follow COVID-19 related procedures. Consequently, we find DOE central management's inability to readily identify which schools have been visited by Deputy Directors and when to be a control weakness. Deputy Directors serve a vital role in assessing schools' adherence to the COVID-19 safety measures.

Failure to regularly ensure that each school is visited increases the risk that DOE's central office will not be aware of deficiencies in a particular custodian engineer's compliance with COVID-19 protocols. Additionally, DOE's statement in its response that the Deputy Directors use checklists during their twice a year assessment visits conflicts with what officials told us during the audit, which is that the Deputy Directors are not required to utilize the checklists as part of their visits. Further, we do not know the basis upon which DOE makes its claim because, as stated in the report, Deputy Directors are not required to report to DSF the observations and tests conducted during its school visits. Therefore, we continue to recommend that DOE establish a set schedule for such visits, and we urge DOE to reconsider and implement this recommendation.

4. DSF should develop a uniform format that all Deputy Directors should follow when conducting and documenting their school visits.

DOE Response: "The Department disagrees with this recommendation. As stated above, the Department already has direct managers (custodial engineers) documenting the maintenance efforts in each school. Further, it is inefficient and impractical to have DDFs repeat the same set of steps for each school visit, especially since a DDF may visit some schools multiple times in a week to review any number of items during each visit."

Auditor Comment: As stated above, Deputy Directors are designated by DSF to assess schools' compliance with COVID-19 procedures. In the absence of a standardized format for Deputy Directors to follow when conducting and documenting their school visits, DOE incurs an increased risk that they will not be fully aware of senior management's expectations with regard to assessing the degree to which COVID-19 procedures are being followed at DOE's schools, and do so in a uniform manner. We therefore urge DOE to reconsider its position and implement this recommendation

5. DSF should develop a mechanism by which Deputy Directors can independently verify that high touch surfaces have been cleaned.

DOE Response: "The Department disagrees with this recommendation. As part of its layered prevention strategy during the beginning of the pandemic, the Department's approach not only included cleaning but also disinfection, *i.e.*, destroying the virus with an EPA approved cleaning agent.

Custodial staff disinfect touchpoints throughout the school day using conventional methods. Once the school day has ended, the custodial staff utilize electrostatic sprayers across all surfaces to ensure complete daily disinfection of school buildings.

These cleaning activities were logged by the custodial staff and maintained by the custodian engineer. Further, it is worth noting that the Comptroller's recommendation discounts the verification done by the direct supervisor (custodian engineer) and it fails to offer any meaningful guidance with respect to how to implement the recommendation."

Auditor Comment: In its response, DOE refers to its processes for cleaning and disinfecting surfaces. We are, however, recommending that DOE develop a mechanism to ascertain the *effectiveness* of those processes. DOE did not provide evidence that Deputy Directors can or do independently verify that high touch surfaces have been cleaned. In disagreeing with this recommendation, DOE appears to be more concerned with establishing a process for cleaning surfaces than with ascertaining whether its process is followed and whether it results in clean surfaces. We therefore urge DOE to reconsider and implement this recommendation.

Moreover, DOE's contention that this audit "fails to offer any meaningful guidance with respect to how to implement the recommendation" demonstrates a fundamental misunderstanding of management's responsibility and the audit function. Our recommendation calls for DOE to develop a way to assess whether the procedures it prescribed for cleaning surfaces in its hundreds of schools are being followed and are effective. It is the responsibility of DOE management to identify and develop the operational means (i.e., controls) for assessing compliance with its own procedures. Conversely, as auditors, generally accepted government auditing standards require that we be independent and, as such, preclude us from participating in such managerial decisions. If DOE lacks the institutional knowledge necessary to develop a methodology for assessing the implementation and effectiveness of its cleaning processes, we suggest that the agency reach out to cleaning trade organizations for guidance.

6. DSF should consider requiring that Deputy Directors certify their findings when they visit schools to ascertain schools' compliance with COVID-19 procedures.

DOE Response: "The Department disagrees with this recommendation for the reasons explained in responses four and five above. In addition, the Department has shared records in support of its compliance with COVID-19 procedures (school logs)."

Auditor Comment: This recommendation is intended to enable DOE to obtain a formal confirmation that the persons designated to oversee compliance with COVID-19 procedures (among other things) at the schools have actually done so. In light of the seriousness of the health risks associated with COVID-19, we believe it is evident that DOE needs verifiable records of whatever efforts its Deputy Directors make to ensure that DOE's COVID-19 procedures are implemented. Therefore, we urge DOE to consider requiring that Deputy Directors document and certify their findings when they visit schools regarding the schools' compliance with COVID-19 procedures.

7. DSF should require that Deputy Directors periodically take and record regular anemometer readings, checking air flow, while conducting their school visits, set a minimum standard for the frequency of such readings, and record the results of such readings.

DOE Response: "The Department disagrees with this recommendation. Anemometers are not monitoring tools. These devices will continue to be used as a diagnostic tool to follow up when a potential issue has been uncovered."

Auditor Comment: DOE's reasoning for rejecting this recommendation is unclear. DOE fails to explain why its classification of an anemometer as a diagnostic tool would

preclude Deputy Directors' ability to take and record readings during their visits to schools or why DOE would decline to use the tool to measure air flow within the schools.

As in its response to recommendation #1, DOE objects to taking and recording readings that would provide the agency with an objective measure—in this case of air flow—in its schools. As stated earlier in this report, inadequate air flow and ventilation are conditions that can easily go undetected. Therefore, we urge DOE to reconsider and implement this recommendation.

DETAILED SCOPE AND METHODOLOGY

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. This audit was conducted in accordance with the audit responsibilities of the City Comptroller as set forth in Chapter 5, §93, of the New York City Charter.

For the purposes of this audit, the COVID-19 standards that we focused on related to cleaning and disinfection, necessary supplies (including PPE), proper air quality/ventilation, and the assignment of nurses in every school building. While this audit endeavored to identify the benchmarks by which DOE determines that above-mentioned standards set by DOE to reopen schools for in-person instruction have been met, we offer no opinion regarding the suitability of the benchmarks themselves. Additionally, this audit determined whether DOE had established a framework of controls that, if followed, would appear to allow the agency to monitor whether its COVID-19 procedures were being followed. However, we did not perform detailed testing to assess the degree to which those controls were functioning in practice.

The audit scope was September 2020 through April 2021.

To obtain an understanding of DOE's COVID-19 standards and benchmarks for meeting those standards, we reviewed and used as criteria the following resources:

- 2020-2021 New York City Department of Education's School Reopening Plan Submission to the New York State Department of Education
- Information on DOE's website pertaining to the Return to School 2020 Health and Safety Measures
- 2020-21 School Year Re-opening Plan - Office of Building Services Circular No. 1
- Building Ventilation and Domestic Water System Readiness - Office of Building Services Circular No. 2
- Comptroller's Directive #1: *Principles of Internal Control*

To further understand DOE's operations and framework of controls that, if followed, would appear to allow the agency to monitor whether its COVID-19 procedures were being followed and to assess the supervisory review by the Deputy Directors and upper management, we conducted interviews with DSF's Chief Executive Officer, DSF's Senior Compliance Officer, DSCW's Chief of Staff, OFDC's Director of Operations, and OFDC's Chief of Staff. In addition, we reviewed organization rosters for the DOE units that implemented and monitored readiness for in-person instruction, the Playbook for Principals 2020-2021 School Reopening and the School Year 2020-2021 Building Readiness Survey. We also reviewed templates of the disinfection, bathroom inspection and supply and exhaust fan maintenance logs, and information pertaining to PPE stock levels and nursing scope of services.

The work conducted provides a reasonable basis for us to evaluate DOE's efforts with regard to identifying benchmarks for meeting and maintaining the cited standards for in-person instruction; developing procedures for meeting those benchmarks; and establishing an adequate framework to monitor whether those procedures are being followed in its schools.



June 21, 2021

Marjorie Landa
Deputy Comptroller for Audit
The City of New York
Office of the Comptroller
One Centre Street
New York, NY 10007-2341

**Re: Audit Report on the Safety Measures Implemented by the
DOE in Response to the COVID-19 Pandemic**

Dear Ms. Landa:

This letter constitutes the New York Department of Education's (Department) formal response to the recommendations made by the New York State Comptroller (Comptroller) in its draft audit report on the Safety Measures Implemented by the DOE in Response to the COVID-19 Pandemic (Report). The health and safety of all our students and personnel has been our priority during the novel coronavirus (COVID-19) pandemic; our success in safely reopening the largest school system in the country and maintaining positivity rates below 1 percent are a testament to our efforts.

In response to the COVID-19 pandemic, the Department has designed and implemented a comprehensive multi-layered approach to maintain a safe and healthy environment for the students whose families opted into in-person learning, and for our dedicated staff. In fact, our procedures have become the template for health and safety for other school districts and national guidance. Plans were and continue to be developed in accordance with the ongoing guidance from the Centers for Disease Control and Prevention (CDC), the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) and state and local health officials.

Since the beginning of the COVID-19 pandemic, our schools have been, and continue to be, the safest places, thanks to strong health and safety protocols, compliance with such protocols, and the hard work and dedication of the Department's staff and administrators. The evidence is in our consistently low in-school positivity rates, which never went above 1 percent; currently the rate is .04 percent. The professionals on our facilities and nursing teams were at the forefront of keeping our buildings open and the people in them safe, and our multi-layered approach to health and safety worked.

During the audit, the Department flagged misunderstandings and inaccurate assertions made by the Comptroller with respect to the Department's monitoring and supervision of health and safety protocols for school readiness for in-person instruction, and we again offered clarification to the auditors during the exit conference. However, those inaccurate assertions still remained in the Report.

Supervisory structure for the maintenance of schools

It is important to highlight that the Department has a supervisory structure for the maintenance of buildings that has allowed us to obtain our goal of keeping over 1,400 school buildings clean and safe. An understanding of the supervision structure is essential to assess our efforts during the pandemic, but unfortunately, the Report mischaracterizes a major component of it. As an example, the Report fundamentally misunderstands the role of the Deputy Directors of Facilities (DDFs). The Department explicitly stated several times during the audit that DDFs are a secondary line of supervision in each school's maintenance hierarchy. Custodian engineers, who are the direct manager at the site level, are responsible for ensuring custodial staff are fulfilling their duties, *e.g.*, performing cleaning and disinfection duties. These duties are logged and those logs have been shared with the audit team. While the Comptroller acknowledges the custodian engineer's role through a footnote, the Report continues to mischaracterize the DDF's role. The Report provides limited information regarding the custodian engineer's role as the supervisor of on-site custodial staff at Department buildings and directly responsible for monitoring that those staff fulfill their required duties. It is also important to note, that although not a monitoring mechanism, cleaning and disinfection activities for the schools' high-touch areas happened during the school day, and in plain sight of school staff.

Enrollment and Ventilation

The Department did thorough inspections of its facilities in conjunction with the School Construction Authority (SCA)¹ prior to allowing students into buildings and instituted operational protocols around its ventilation equipment to ensure that equipment continues to work effectively throughout the school year. HVAC systems in Department buildings can accommodate needs up to or beyond maximum occupancy. As a result, with enrollment below typical capacity, ventilation systems kept buildings and its occupants safe during the COVID-19 pandemic.

The Report offers recommendations that are based on inaccurate findings as noted above, and appears to recommend actions without considering that relevant policies are updated as the COVID-19 guidance on which they are based continue to evolve. The Department will continue to be guided by the science and experts and will comply with all applicable guidance related to school maintenance and health and safety protocols for building occupants.

We offer the below responses to the individual recommendations:

¹ As part of its inspection team, SCA utilized architects and engineers.

Recommendation 1. *DSF should implement a procedure for mandatory readings of carbon dioxide levels in indoor areas, such as classrooms, and require that such readings be adequately documented.*

Response. The Department disagrees with this recommendation. The level of carbon dioxide (CO₂), which is naturally produced by humans, fluctuates in an indoor area based on the occupancy rate, ambient level, supply air level, and air exchange rate. While CO₂ levels can reflect inadequate air flow or ventilation when measured against occupancy levels and ambient CO₂ levels when the tested area is occupied, it is not the only means of evaluating ventilation. The Department has equipped each custodian engineer with an Indoor Air Quality (IAQ) monitor to use as one of their diagnostic tools, and the DOE also diagnoses ventilation issues using other methods, e.g., equipment may be tested visually, or with an anemometer. In short, the Department is employing a much broader and more effective layered mitigation strategy to assess air quality than the measure recommended by the Comptroller.

Recommendation 2. *DSCW should develop a mechanism to enable it to confirm that nursing supervisors are fulfilling their responsibility to ensure that schools have adequate nursing coverage.*

Response. The Department agrees with this recommendation inasmuch as it aligns with our current practices. Leadership at the Office of School Health (OSH) and the Division of School Climate and Wellness (DSCW) engages daily with the Nursing Supervision team to review nursing assignments and resolve any issues related to coverage. For example, at the beginning of the school year (August through November 2020), DSCW leadership met every morning to review coverage and ensure that every school had a nurse in place and had separate meetings to discuss issues that were raised during the day. At the end of every day, the DSCW data team receives nursing assignments from the vendor to ensure that we have coverage for all assigned schools for the following day. In addition, we receive daily updates around absence coverage from the agency so that we are made aware of any gap and the respective steps taken to ensure coverage.

DSCW leadership oversees the placement of NYC Health + Hospitals (H+H) contract nurses, and manages the relationship with H+H and the contract agencies, including absence alerts and concerns. The Department receives a daily update from H+H every morning at the beginning of the school day and continuing throughout the morning as needed. DSCW immediately coordinates with OSH and the nursing team to ensure coverage when any issues arise.

Additionally, OSH provides DSCW with a daily report of any nursing absences and the steps that have been taken to provide coverage to the affected schools.

Recommendation 3. *DSF should consider establishing a set schedule for Deputy Directors to visit the schools assigned to them and a mechanism for ensuring that those visits are made.*

Response. The Department disagrees with this recommendation. The Department explicitly stated several times to the audit team that DDFs are a secondary line of supervision within the supervision structure of each school's maintenance team. Custodian engineers, who are the direct managers at the site, are responsible for ensuring custodial staff are fulfilling their duties, e.g., performing cleaning and

disinfection duties. Custodial staff are responsible for logging the performance of such duties, which are maintained and reviewed by their supervisor, the custodian engineer.

DDFs are a secondary level of supervision with broad responsibilities for ensuring that each school's maintenance is carried out, which is accomplished through their supervision of the custodian engineers. DDFs conduct one or more visits of each school throughout the year, often unannounced. During those visits, the DDFs can conduct observations of specific duties and follow up on the school's maintenance issues that have been identified through prior discussions. In addition, each custodian engineer is subject to two formal evaluations each year by the DDFs. In that case, the DDFs conduct separate visits and use the checklists developed by the Department to guide them through the assessment of the protocols that must be followed by the custodian engineer. Conducting both scheduled and unscheduled visits allows DDFs to most effectively assess a school's maintenance.

Recommendation 4. *DSF should develop a uniform format that all Deputy Directors should follow when conducting and documenting their school visits.*

Response. The Department disagrees with this recommendation. As stated above, the Department already has direct managers (custodial engineers) documenting the maintenance efforts in each school. Further, it is inefficient and impractical to have DDFs repeat the same set of steps for each school visit, especially since a DDF may visit some schools multiple times in a week to review any number of items during each visit.

Recommendation 5. *DSF should develop a mechanism by which Deputy Directors can independently verify that high touch surfaces have been cleaned.*

Response. The Department disagrees with this recommendation. As part of its layered prevention strategy during the beginning of the pandemic, the Department's approach not only included cleaning but also disinfection, *i.e.*, destroying the virus with an EPA approved cleaning agent.

Custodial staff disinfect touchpoints throughout the school day using conventional methods. Once the school day has ended, the custodial staff utilize electrostatic sprayers across all surfaces to ensure complete daily disinfection of school buildings. These cleaning activities were logged by the custodial staff and maintained by the custodian engineer. Further, it is worth noting that the Comptroller's recommendation discounts the verification done by the direct supervisor (custodian engineer) and it fails to offer any meaningful guidance with respect to how to implement the recommendation.

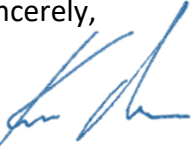
Recommendation 6. *DSF should consider requiring that Deputy Directors certify its findings when they visit schools to ascertain schools' compliance with COVID-19 procedures.*

Response. The Department disagrees with this recommendation for the reasons explained in responses four and five above. In addition, the Department has shared records in support of its compliance with COVID-19 procedures (school logs).

Recommendation 7. *DSF should require that Deputy Directors periodically take and record regular anemometer readings, checking air flow, while conducting their school visits, set a minimum standard for the frequency of such readings, and record the results of such readings.*

Response. The Department disagrees with this recommendation. Anemometers are not monitoring tools. These devices will continue to be used as a diagnostic tool to follow up when a potential issue has been uncovered.

Sincerely,



Kevin Moran
Chief School Operations Officer