Advancing Clean.
Driving Innovation.

ISSA STANDARD

0220-2024

Measuring the Cleanliness of K-12 Schools

10275 W. Higgins Road, Suite 280
IL 60018 USA
800.225.4772 / Fax: 847.982.1012
www.issa.com/cleank12

DISCLAIMER

The **ISSA Standard for Measuring the Effectiveness of Cleaning in K-12 Schools – ISSA 0714 – 2014** was developed through a consensus standard development process, which brought together volunteers representing varied viewpoints and interests to achieve consensus on the Standard for Measuring the Effectiveness in K-12 Schools (hereinafter the "Standard"). While ISSA administers the process and establishes policies, procedures, and guidelines to promote fairness in the development of consensus, it does not evaluate or verify the accuracy of any information, or the soundness of any judgments contained in this Standard.

This 2024 update of the Standard is intended to be neither exhaustive nor inclusive of all pertinent requirements, methods or procedures that might be appropriate in a particular situation. Ultimately, it is the responsibility of the individual organization to verify, on a case-by-case basis, that application of this Standard is appropriate.

ISSA, and its consensus body standard committee members, contributors, editorial consultants, and the Cleaning Industry Research Institute (hereinafter collectively referred to as "ISSA") expressly disclaims, and shall not be liable for, any and all damages of any nature whatsoever, whether direct or indirect, arising from or relating to the publication, implementation, use of, or reliance on the information contained in this Standard, including without limitation any and all special, indirect, incidental, compensatory, consequential, punitive or other damages (including damages for personal injury and/or bodily injury, property damage, loss of business, loss of profits, litigation or the like), whether based upon breach of contract, breach of warranty, tort (including negligence and gross negligence), product liability or otherwise, even if advised of the possibility of such damages. The foregoing negation of damages is a fundamental condition of the use of the information contained in this Standard and this document would not be published without such limitations.

While the information contained within this Standard is provided in good faith and is believed to be reliable, ISSA makes no representations, warranties, or guarantees as to the accuracy or completeness of any information contained in this Standard, or that following this Standard will result in compliance with any applicable laws, rules or regulations or otherwise result in an expected outcome. All warranties, express or implied, are disclaimed, including without limitation, any and all warranties concerning the accuracy or completeness of the information, its fitness or appropriateness for a particular purpose or use, its merchantability, its non-infringement of any intellectual property rights, or any other matter.

In publishing this document, ISSA is not undertaking to render scientific, professional, medical, legal or other advice or services for or on behalf of any person or entity or to perform any duty owed by any person or entity to someone else. Any and all use of or reliance upon this Standard is at the user's own discretion and risk. Anyone using this document should understand the limitations with the use of this document, and rely on his or her own independent judgment, or as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given situation.

ACKNOWLEDGMENTS

The **ISSA Standard for Measuring the Effectiveness of Cleaning in K-12 Schools – ISSA 0714 – 2014**, that serves as a foundation for the 2024 update, was developed through a consensus-based effort involving industry experts, trade and professional associations, educational institutions, and other organizations.

In accordance with a true consensus-based process, all views and objections have been considered, every attempt has been made to resolve those objections that have been raised, and, ultimately, the elements contained herein have been agreed to by a substantial majority of interested parties who elected to participate in the process.

In this updated version, ISSA, with the assistance of Bob Ferguson (Strategic Consulting, Inc.), has taken on the responsibility of incorporating new ATP meters and presenting ATP limits in user-friendly tables. The integrity of the original standard was maintained throughout this process. While ISSA has guided and administered the Standard development process, the realization of this Standard would not have been possible without the hard work and dedication of the industry as a whole. ISSA and its Board of Directors would like to thank those volunteers who agreed to participate in the creation of this Standard, including the Cleaning Industry Research Institute (CIRI), whose science advisory panel performed the independent and unbiased research on which this Standard is based and who assisted ISSA in the administration of the Standard's development. ISSA would also like to thank the members of the Executive, Development and Stakeholder Committees, who generously offered their time, effort, and expertise during the creation of the original standard.

In the creation of the original standard, the following individuals and committees played crucial roles:

Executive Committee (2014)

- William C. Balek: ISSA
- John P. Garfinkel: ISSA
- Jim Harris Sr.: CIRI
- Jon Scoles: Scoles Floorshine Industries/ ISSA Board of Directors
- Charlie Smith: CIRI
- Dr. Steven Spivak: CIRI

Science Advisory Panel (2014)

Co-Principal Investigators

- Gene C. Cole, Dr.PH: Brigham Young University Department of Health Science
- Richard J. Shaughnessy, Ph.D: University of Tulsa – Indoor Air Research Program

Research Team Members

- Alesia Bailey: University of Tulsa – Indoor Air Research Program
- Dr. Ulla Haverinen-Shaughnessy: National Institute for Health and Welfare – Finland
- Keith E. Leese: LRC Indoor Testing and Research, Inc.
- Demetrios J. Moschandreas, Ph.D: Illinois Institute of Technology
- Cathy Richmond: LRC Indoor Testing and Research, Inc.
- Randy Smith: University of Tulsa – Indoor Air Research Program

Development and Stakeholder Committees (2014)

Please visit www.issa.com/cleanstandard for the full list of industry experts who participated on the Development and Stakeholder Committees.

**Organizations that participated in the development of the Standard include:

- American Federation of Teachers
- Healthy Facilities Institute (HFI)
- Healthy Schools Campaign (HSC)
- Indiana State Teachers Association
- International Executive Housekeepers Association (IEHA)
- Trade Press Media Group, Inc. (Housekeeping Solutions)
- Minnesota Department of Health
- National Association of State Boards of Education (NASBE)
- National School Plant Management Association

ISSA would like to extend a special thank you to the following individuals graciously providing valuable assistance and unselfishly contributing their expertise:

- Mark Cappel: Scarlet & Gray Facility Services
- Jason Lee: Harvard Maintenance
- Bill McGarvey: Philip Rosenau Co.
- Allen Rathey: Healthy Facilities Institute
- Bob Robinson Sr.: Kaivac
- John Schauff: Spartan Chemical Company
- Keith Schneringer: Waxie Sanitary Supply
- Kurt Schnitzer: FPC Distribution
- Corinne Zudonyi: Trade Press Media Group, Inc.

2023 Review Development and Stakeholder Committee

- Bob Ferguson, President Strategic Consulting, Inc.
- Brant Insero, ISSA Chief Global Education Officer
- Jonathan Adkins, Executive Vice President, ISSA
- Mark Warner, The Bullen Companies
- Roula Abdel-Massih, Ph.D., Director of Product Development, ISSA

1. Overview and Background

The goal of the Standard for Measuring the Effectiveness of Cleaning in K-12 Schools (hereinafter referred to as the Clean Standard: K-12) is to provide schools with a tool that will help them measure and monitor the effectiveness of the cleaning processes at their facilities thereby contributing to the quality of the indoor environment for the benefit of students and staff.

The Clean Standard: K-12 is a performance-oriented standard that is focused on:

- The desired levels of cleanliness that can be reasonably achieved;
- Recommended monitoring and inspection procedures designed to measure the effectiveness of cleaning procedures using quantitative measures (i.e., ATP Meters) and traditional methods (i.e., sight, smell, touch); and
- How to use the results of monitoring and inspection to evaluate and improve the cleaning processes and products that are critical to maintaining a safe and healthy learning environment for students and staff.

The Standard is focused on achieving and maintaining an effective cleaning program through the utilization of a systematic approach and standardized guidelines. As such, the Clean Standard: K-12 provides schools with a framework and protocol for using ATP meters along with qualitative methods to measure and assess cleaning effectiveness on a periodic and consistent basis.

Perhaps more importantly, the Standard provides a structured approach to addressing those situations where the school facility's condition and cleanliness is less than desirable. By assessing cleaning effectiveness, schools can improve the cleaning process and ensure that a desired level of cleanliness is achieved and maintained at school facilities. Effective cleaning is crucial, especially when considering the substantial body of evidence that supports the conclusion that improved hygiene in schools leads to reduced illnesses and decreased absenteeism.
The Standard was developed through a consensus-based process designed to garner the input of all major stakeholders in an open and transparent manner. The Clean Standard: K-12 development process allowed for stakeholder involvement by participation on the Development or Stakeholder Committees and by submitting feedback during the public review periods.

The development process was guided by independent and unbiased scientific research, including thousands of ATP measurements from high touch surfaces recognized as posing health risks in schools (i.e., student desks, cafeteria tables, restroom sinks and stall doors). The ATP measurements were conducted in numerous schools across the United States to account for potential geographic or climatic variations.

The details of the research are outlined in "ATP as a Marker for Surface Contamination of Biological Origin in Schools and as a Potential Approach to the Measurement of Cleaning Effectiveness," published in the June 2013 issue of *Journal of Occupational and Environmental*

Hygiene by Shaughnessy et al. Each school selected its own cleaning method which was then rigorously monitored for compliance by research personnel. Following cleaning, sampling procedures were conducted on the cleaned surface.

The research indicated that standardized measurement of cleaning effectiveness could be used as a practical approach to improve the cleaning practices and contribute to a healthier school environment.[1]

Specifically, the research has validated ATP (adenosine triphosphate) measurement systems as a *"…relatively simple, rapid and affordable measure of the level of biologically sourced contamination on the interior surfaces of schools*." Further the research concluded that ATP is an *"…excellent candidate marker for the monitoring of biologically derived soiling/cleanliness…".* In addition, the research has produced reasonable range values based on ATP measurements (for four different ATP meters) for each surface type tested, and that these ranges *"…may be used in a standardized and routine approach to the monitoring of cleaning effectiveness in school buildings based on detection and quantification of biologically derived soiling*."[1]

ATP measurement is widely adopted in various industries to ensure and maintain cleanliness.[2,3] The presence of ATP on a surface indicates inadequate cleaning and potential contamination from substances such as organic matter and bacteria. Food residues can create favorable conditions for bacterial growth, serving as a nutrient source, hindering disinfectants' effectiveness, and promoting biofilm formation.

Although ATP does not directly measure the total contamination on a surface, the research has concluded ATP luminescence is presently the best available quantitative measure of hard surface cleaning effectiveness. It is hoped that further research and development will yield additional measurement methods for other contaminants.

2. Scope and Purpose

The Clean Standard: K-12 is intended to apply specifically to K-12 school facilities, including both public and private institutions, and may be applied in all geographic regions.

The Clean Standard: K-12 is based on the following: (a) a building audit to assess the level of cleanliness at a school facility; (b) periodic measurement of cleaning effectiveness; and (c) establishment and implementation of corrective actions in the event the school is not achieving the desired level of cleaning effectiveness.

These elements are intended for a systematic process to determine the background condition and cleanliness of a school, and for periodic measurements of cleaning effectiveness. This process makes it possible to assess and improve the effectiveness of cleaning processes and products used at a school facility. In this regard, the Clean Standard: K-12 empowers schools to select a cleaning process that is the most effective and economical.

This is especially important considering the growing body of studies that indicate effective cleaning has a positive impact on the health and productivity of students. For example, it has been established that level of cleanliness is a key factor involved in the spread of viral disease in crowded indoor establishments including schools. In addition, improved cleaning of floors and desks in schools has been shown to reduce upper respiratory symptoms.[4] Furthermore, the exposure and health benefits associated with a reduction of airborne pollutants - achieved through effective cleaning practices - have been demonstrated in a long-term cleaning effectiveness study.[5]

Consistent with such studies and findings, the K-12 Clean Standard research suggests a reasonable connection between ATP reduction and healthier indoor environments. Concurrent with ATP testing, the researchers tested surfaces for culturable bacteria using a complementary reference method – culturing using RODAC[1]* plates. The simultaneous testing demonstrated that a reduction in ATP was accompanied by a consistent reduction in culturable bacteria. The researchers, therefore, were able to reasonably conclude that a reduction in ATP suggests both a cleaner and healthier surface.

While research has established that cleaning plays a critical role in the quality of the indoor environment, it is well-recognized that there are a number of additional factors that also impact indoor environmental quality. Building maintenance practices such as moisture control, ventilation and air flow, and other factors also play a key role.

1* RODAC – Replicate Organism Detection and Counting plates, used for detecting and culturing microorganisms on surfaces.

3. Defining Current Cleaning Procedures

The implementation of a cleaning effectiveness improvement program involves defining current cleaning procedures and measuring their effectiveness, analyzing the results, considering potential improvements, and then implementing identified improvements. The improvement process is a continuous cycle that requires constant reevaluation. The Clean Standard: K-12 formalizes this process by inserting the requirement to measure the effectiveness of the cleaning process and to ensure an efficient and healthy outcome rather than just a lower initial cost.

Toward that end, the first step in the process is to document the current custodial program for the facility, including an inventory of all materials & equipment used; personnel; and the scope of work for cleaning services (including the specific tasks to be performed and the frequency of service). If outside services are employed as part of the regular maintenance program (window washing, gym floor refinishing, service to HVAC equipment, etc.) such services should be included as part of the master schedule for the school.

4. Protocol for Measuring and Monitoring Cleaning Effectiveness

This section sets forth a protocol for measuring and monitoring cleaning performance in K-12 school facilities. A standardized protocol of this nature is critical in assessing the effectiveness of a school's cleaning program, geared toward providing a clean healthy indoor environment for the benefit of students, staff and visitors.

Information collected through this process is critical in improving cleaning effectiveness as well as ensuring that a desired level of cleanliness is maintained.

4.1. Written Plan

A school facility or school system shall develop and implement a comprehensive written plan describing the process to be used to measure and monitor the effectiveness of the cleaning processes used by the facility. The written plan shall include, at a minimum, the elements contained in this section.

4.2. Building Audit.

A building audit shall be conducted to establish baseline conditions and otherwise assess the level of cleanliness of a school facility. This audit involves a walk-through inspection of the school facility and seeks to simply answer the question: "Does the facility look and smell clean?"

Two sample building audit forms are provided in Appendix A: the first of which is a comprehensive format covering cleaning and maintenance activities; the other is a more concise format covering cleaning activities only. These sample building audit forms should be adapted to meet the particular needs of a facility.

The building audit should be conducted:

- Initially upon implementation of the Clean Standard: K-12 to establish baseline conditions;
- Two times per year (once per semester) to be scheduled at the convenience of staff and performed consistently each year. The building audit should be performed while school is in session; and
- Whenever there is a significant change in conditions or procedure (e.g., new cleaning program, significant construction activity, etc.)

A completed building audit provides a record of the conditions of specific locations within the school facility as well as an overall assessment of the facilities.

Audit records should be maintained for 3 years along with a summary of findings and suggested changes. This summary consolidates the findings of the audit into a concise dated document for implementation and follow-up.

4.3. High Touch Points.

A school shall identify "high touch points" (HTPs) within the school facility. High touch points shall include, but not be limited to: (a) classroom desks and similar surfaces such as worktables and teacher desks; (b) cafeteria tables, (c) restroom stalls and stall doors, and (d) sink fixtures and sink surroundings, especially in restrooms.

Schools may wish to include other high touch points based on experience or unique circumstances, etc. such as floors, drinking fountains, door handles, doors, student chairs, and gym equipment such as mats.

4.4. Limits for Each High Touch Point Based on ATP-RLU.

Once the high touch points have been identified, schools shall establish the desired level of "cleaning effectiveness" or "limits" for each HTP based on the ATP-RLU (Relative Light Units - the numerical measurement produced by ATP Testing) and the specifications outlined in Section 5. It is recommended that schools establish the limits at the levels associated with "Effective Cleaning" for the appropriate surfaces or areas within the school as set forth in Section 5.

In the event that a school includes HTPs other than the four required in Section 4.3, the school should use the ATP-RLU tables that are associated with:

- The HTP that is most similar in surface type to the surface actually being tested with the ATP meter; or
- The area in which the surface being tested is located (i.e., the limits for Classroom Desks may be used to set limits for other surfaces in the classroom such as doors or doorknobs)

4.5. ATP Testing Protocol for High Touch Points.

Schools shall establish an ATP testing protocol based on facility needs. Such protocol should address at a minimum: when and at what frequency ATP testing will occur; as well as the

appropriate procedures to be followed. The protocol described below is recommended as a starting point and should be modified to meet specific needs. For example, if ATP measurement suggests a school's cleaning process is "ineffective," the facility shall implement corrective actions and increase the frequency of testing.

a) Frequency. ATP testing should be conducted:

1. Upon implementation of the Clean Standard: K-12, before and after cleaning. (Note: Conducting ATP testing before cleaning is optional but recommended if a school wishes to establish a baseline so that they can measure improvement after cleaning. If ATP testing is conducted before cleaning, it should be conducted in conjunction with the building audit referenced in Section 4.2.);

2. Twice a year after cleaning has been performed (i.e., once a semester). Such testing should be conducted during the school year. (Note: The frequency of ATP testing adopted by a school should depend on the school's conditions, i.e., schools that are unkempt or dirty should test more frequently [i.e. once every two months] while schools that consistently meet their desired level of cleanliness may wish to conduct ATP testing twice a year); and

3. After a change in cleaning methods, processes, products, or frequencies; or following the selection of a new cleaning service provider, etc.

b) Procedures. In conducting ATP testing, the following procedures should be followed:

1. Manufacturer's Instructions. Unless otherwise indicated below, follow the manufacturer's instructions regarding storage and how to conduct ATP testing for the particular ATP meter.

2. Sampling. At least 5% of the high touch points referenced in Section 4.3 should be sampled. For example, if a school has 400 desks, at least 20 desks should be tested with the ATP meter. There should be at least ten (10) sample points for each test surface or area being evaluated. The average value of all samples for a high touch point should be calculated and used for determining whether the desired cleaning level has been met.

The selection of the actual high touch points that will be tested should be done randomly and in a manner that ensures the selected areas are located throughout the facility. For example, test 5% of the desks in each of the classrooms.

3. Sampling Template. Create a template to control the area to be tested with the ATP swabs. The template can be made from cardboard or poster board by cutting out a square 2 inches by 2 inches (5 cm by 5 cm) in dimension and placing the cardboard/ poster board from which the square has been cut over the surface to be swabbed (the template will resemble a picture frame with the surface to be tested in the middle).

Make sure the remaining cardboard/ poster board is used and not the square that has been cut out. The template must be free of contamination that might affect the results (which generally will require replacement of the template periodically).

ATP manufacturer instructions may recommend other template sizes for use with their systems, intended to apply to large surfaces in other facilities (i.e.: food processing). A 2x2 inch (5x5 cm) template is recommended for the variety of surfaces in schools.

For small, irregular surfaces where the standard 2x2 inch (5x5 cm) template does not fit (e.g., doorknobs, light switches, faucets), establish an area on the surface as close to 4 sq. in. (25 sq. cm.) as possible and use that area consistently for all other similar size sample points.

4. Sampling Process. The surface shall be tested using ATP swabs designed for the chosen ATP meter. To perform the testing, the ATP swabs should be rubbed over the surface that is inside the template, first left to right, then top to bottom. Consult the manufacturer's recommendations for the best sampling procedures.

5. Recordkeeping. Comprehensive and accurate records and reports of all testing results shall be kept. All records and reports shall be maintained for three years, along with a summary of findings and suggested changes. Recordkeeping shall be consistent with the school's written plan for the maintenance of test results and building audit reports, as required in section 4.8

4.6. ATP Measurement Evaluation.

After ATP testing has been completed, the school shall conduct an evaluation of the effectiveness of its cleaning processes by comparing actual ATP measurements with the ATP-RLU threshold values set using the criteria detailed in Section 5 for the specific surface tested.

In the event that a school's cleaning effectiveness is consistently measured as "Ineffective Cleaning" or falls within the "Needs Improvement" category, the school shall implement the appropriate corrective actions. Alternatively, if the school's cleaning effectiveness is consistently measured as "Effective Cleaning," no corrective action is needed. Surfaces that fall within "Ineffective Cleaning" should be re-cleaned and re-tested.

4.7. Establishment and Implementation of corrective Actions.

If the actual ATP values consistently fall within the "Ineffective Cleaning" or "Needs Improvement" categories, a school shall implement corrective action. The first step in determining appropriate corrective action shall be to identify the cause of the undesired result, which shall at a minimum include a reevaluation of the cleaning processes, frequencies, products, and tools. Common causes include inadequate cleaning frequencies, incomplete cleaning (i.e., not cleaning the entire surface), skipped cleaning, lack of training, inappropriate products or processes, and insufficient air ventilation.

Following determination of cause, corrective action shall be taken. The specific corrective action should be based upon a candid dialogue between the cleaning or inspection expert conducting the Clean Standard: K-12 evaluation, and the school's supervisory personnel, school system facilities manager and/or building engineer.
In general corrective action may include:

- Modification of cleaning process, products and/or tools and ensuring compliance with cleaning best practices as outlined in ISSA's "Principles of Cleaning," "Facility Cleaning and Disinfecting Checklist," and "Classroom Cleaning Area Guide";
- Ensured adherence to custodial management best practices as defined in the ISSA Cleaning Industry Management Standard (CIMS);
- Comprehensive employee training;
- Change in cleaning times and/or frequencies; or
- Implementation of a hand hygiene program consistent with the guidelines and recommendations of the Centers for Disease Control (CDC) on handwashing.
- Additional air quality monitors to further investigate how widespread the issue is, and/or if the issue is recurring/seasonal;
- Improve ventilation;
- Implement protocols to limit crowding in certain areas with insufficient air flow.

4.8. Recordkeeping Procedures.

A school shall have a written plan for recordkeeping and the maintenance of all documents, test results and audit/survey reports. Records that should be covered by the plan include all documents relating to cleaning and testing protocols, procedures, and evaluations.

4.9. Ongoing Analyses and Procedures to Ensure Maintenance and/or Continuous Improvement.

A school shall have a written policy for ongoing analysis of all measurements and testing results. Such policy shall include a commitment to continuous improvement.

4.10. Technical Training Requirements.

Individuals who will perform testing, measurements, monitoring, and evaluation activities shall be trained to effectively perform such activities. The training should cover the technical skills needed to ensure proper testing procedures, consistent results, and to eliminate or reduce sampling bias. At a minimum, the training shall address the information necessary to implement Section 4: Protocol for Measuring and Monitoring Cleaning Effectiveness.

5. Quantitative Measurement of Cleaning Effectiveness

5.1. Establishing ATP RLU Benchmark Values.

ATP RLU benchmark values serve as criteria for evaluating cleaning effectiveness. These values are determined using either specific site data or manufacturer's recommendations.

Benchmark values typically include two RLU levels that categorize into three ranges: 1) *Effective Cleaning*, 2) *Needs Improvement*, and 3) *Ineffective Cleaning* (requires re-cleaning).

The two RLU levels are: 1) a lower RLU level indicating "Effective Cleaning" or "pass," and 2) a higher RLU level indicating "Ineffective Cleaning" or "fail" necessitating re-cleaning. The interval between these thresholds is labeled as "Needs Improvement."

5.2. Methods to Set Benchmark Values.

a) Adoption of Manufacturer's Recommendations

Manufacturer-suggested benchmark values are detailed in Sections 5.5-5.9 and can be used if set in similar situations to the intended application. It's crucial to source benchmark values only from the manufacturer of the ATP test system used, as detection and measurement scales for RLU levels vary between manufacturers.

b) Data Collection and Setting Proportional Limits

Benchmark levels can also be set through the initial collection of samples. This method is often preferred in buildings with unique uses (e.g., very high occupancy, food service locations, etc.). Options for setting proportional limits include:

- **Option 1)** Collect one sample at each designated site after regular use and daily routine cleaning. Repeat this procedure to gather 5 replicates from each sampling site, preferably on different days to account for cleaning variability.
- **Option 2)** Collect samples in parallel at sampling sites under similar conditions from separate facility locations (e.g., sampling tables or desks in similar use in different office buildings to obtain 5 replicates). These tests can be collected on the same day or on different days. This approach allows the development of a benchmark applicable to all similar locations.

Based on the obtained results, the lower benchmark value is set to a specified percentage of measurements (as recommended by the manufacturer) that will indicate pass, and the upper value for a percentage indicating a failed test.

Different manufacturers recommend various proportional levels for benchmarks, outlined below: To ensure effective cleaning for each of the following specific ATP metering systems (Charm Sciences NOVALUM, Neogen Clean-Trace LM1, Hygiena SystemSURE Plus, Hygiena EnSURE Touch, and Kikkoman Lumitester SMART), follow the guidelines provided for each device.

The criteria for "Effective Cleaning," "Needs Improvement," and "Ineffective Cleaning" vary for each system. Below are the recommendations from each manufacturer:

Recommendations by ATP Test Manufacturers for Determination of Pass-Fail Limits:

Manufacturer	Effective Cleaning (Pass)	Needs Improvement	Ineffective Cleaning (Fail)
Charm Sciences NOVALUM (section 5.5)	Lowest 50% of ATP measurements (ATP measurements lower than 50th percentile)	50th to 75th percentile of all sampling results	Highest 25% of ATP measurements (ATP measurements in the highest 25th percentile)
Neogen Clean-Trace LM1 (section 5.6)	Lowest 50% of ATP measurements	50th to 75th percentile of all sampling results	Highest 25% of sampling results
Hygiena SystemSURE Plus (section 5.7)	Lowest 75% of ATP measurements	75th to 90th percentiles of all sampling results	Highest 10% of ATP measurements
Hygiena EnSURE Touch (section 5.8)	Lowest 50% of ATP measurements	50th to 75th percentiles of all sampling results	Highest 25% of ATP measurements
Kikkoman Lumitester SMART (section 5.9)	Lowest 80% of ATP measurements	ATP measurements between the 80th percentile RLU level and twice that benchmark RLU value	ATP measurements exceeding the second benchmark value (2x the 80th percentile benchmark RLU value

c) Correlation Analysis based on a Reference Method.

- This method relies on establishing a correlation between the measured RLU level from an ATP test and data obtained from another definitive analytical test (e.g. analysis performed in a laboratory for microorganisms, allergens, detection of specific contaminants, etc.).

- This procedure is more intricate than the other methods and is typically only employed in special situations (e.g., schools with extensive food service or medical activities, buildings with previous contaminant issues, or other special cases). Establishing benchmarks using this methodology should only be completed with the guidance of a qualified expert with demonstrated competence in this type of correlation study. This expert can proficiently conduct the reference method sampling, assess the appropriateness of using the reference method, determine if a correlation can be established, and scientifically define benchmarks for the desired cleaning outcomes based on this data.

5.3. Understanding the ATP-RLU Tables

The effectiveness of the cleaning processes and products used at a facility may be determined by comparing actual ATP measurements with the tables presented in this section. The tables below outline ATP-RLU limits or ranges for specific surface types and ATP metering systems. These limits, ranges, and verbal descriptions reflect the results that can be reasonably attained using cleaning methods readily available today.

5.4. Using the ATP-RLU Tables

The tables below outline the manufacturer's recommended ranges for "cleaning effectiveness" levels for specific surfaces within a school. These surfaces include classroom desks, restroom stall doors, cafeteria tables, and sink surrounds in restrooms. Separate ranges are provided for the following ATP metering systems – Charm Sciences NOVALUM, Neogen Clean-Trace™ LM1, Hygiena SystemSURE PLUS, Hygiena EnSURE Touch, and Kikkoman Lumitester SMART.

It is recommended that schools strive to provide "Effective Cleaning" for the appropriate surfaces or areas as set forth in the tables below, based on ATP measurements for the metering system being used.

1. ATP Metering System. It is imperative to use the table that matches the specific ATP Metering system that is being used to take the measurements**.** ***DO NOT*** use the ATP/RLU values for a different ATP system as their scales vary widely.

2. Other Surfaces and Areas. The ATP-RLU limits specified in this Standard can be applied to non-porous high touch points and areas that are similar in surface type and/ or that are in the same area. In the absence of baseline data specifically developed for the facility, these limits can be applied. For example:
   - "Classroom Desk" values may be used for measurements taken of classroom tables, student seating, teacher's desks, and file cabinets. In addition, Classroom Desk values may be used for measuring cleanliness on surfaces such as gymnasium seating.
   - "Sink Surrounding" values may be used for measurements taken of urinals, toilets, restroom door handles, handrails, and gymnasium lockers and shower fixtures.
   - "Cafeteria Table" values may be used for measurements taken of serving counters, cafeteria seating, and foodservice trays.
   - "Restroom Stall Door" values may be used for measurements taken of other hard vertical surfaces in the facility.

3. Porous Surfaces. ATP meter systems should not be used on porous, soft, or otherwise distinctly different surfaces or material types. Surfaces such as wrestling mats, carpeted floors/walls, and grout cannot be measured using ATP meters.

5.5. ATP-RLU Limits: Charm Sciences (NOVALUM)

School Surface	Post-Cleaning Effectiveness (ATP Luminescence Level, in RLU)		
	Effective Cleaning	Needs Improvement	Ineffective Cleaning
Classroom Desks	5399 or below	5400 to 17300	17301 or above
Cafeteria Tables	11899 or below	11900 to 32000	32001 or above
Restroom Stall Doors	10799 or below	10800 to 23300	23301 or above
Sink Surroundings	5699 or below	5700 to 17600	17601 or above

5.6. ATP-RLU Limits: Neogen Clean-Trace™ LM1

School Surface	Post-Cleaning Effectiveness (ATP Luminescence Level, in RLU)		
	Effective Cleaning	Needs Improvement	Ineffective Cleaning
Classroom Desks	109 or below	110 to 250	251 or above
Cafeteria Tables	229 or below	230 to 420	421 or above
Restroom Stall Doors	99 or below	100 to 220	221 or above
Sink Surroundings	59 or below	60 to 150	151 or above

5.7. ATP-RLU Limits: Hygiena (SystemSURE Plus)

School Surface	Post-Cleaning Effectiveness (ATP Luminescence Level, in RLU)		
	Effective Cleaning	Needs Improvement	Ineffective Cleaning
Classroom Desks	20 or below	21 to 35	36 or above
Cafeteria Tables	35 or below	36 to 70	71 or above
Restroom Stall Doors	15 or below	16 to 35	36 or above
Sink Surroundings	15 or below	16 to 25	26 or above

5.8. ATP-RLU Limits: Hygiena (EnSURE Touch)

School Surface	Post-Cleaning Effectiveness (ATP Luminescence Level, in RLU)		
	Effective Cleaning	Needs Improvement	Ineffective Cleaning
Classroom Desks	40 or below	41 to 65	66 or above
Cafeteria Tables	70 or below	71 to 90	91 or above
Restroom Stall Doors	30 or below	31 to 70	70 or above
Sink Surroundings	30 or below	31 to 50	51 or above

5.9. ATP-RLU Limits: Kikkoman (Lumitester SMART)

School Surface	Post-Cleaning Effectiveness (ATP Luminescence Level, in RLU)		
	Effective Cleaning	Needs Improvement	Ineffective Cleaning
Classroom Desks	500 or below	501 to 1,000	1,001 or above
Cafeteria Tables	500 or below	501 to 1,000	1,001 or above
Restroom Stall Doors	500 or below	501 to 1,000	1,001 or above
Sink Surroundings	500 or below	501 to 1,000	1,001 or above

6. ATP Technology Limitations

While ATP meters have been validated as the preferred quantitative method of measuring biologically derived soiling/cleanliness, their use does have certain limitations that are discussed below. For example, in defining a cleaning process as effective, the Clean Standard: K-12 does not suggest that a surface is absolutely free of contamination or otherwise presents a completely "healthy" surface.

6.1. Non-Biological Soiling.

ATP monitoring is not appropriate for the determination of the presence or reduction of specific non-biological pollutants that may be recognized as health hazards such as lead, asbestos, and other such chemical contaminants.

6.2. Infectious Agents.

ATP meters are not capable of identifying specific pathogens or infectious agents and cannot directly detect viruses.

6.3. Biologically Augmented Cleaning products.

The use of ATP meters is incompatible with the use of biologically augmented cleaning products (BACP). BACP is a cleaning product that is augmented with non-pathogenic bacteria. These products provide a residual level of cleaning that is both safe and effective. The use of an ATP meter on a surface cleaned with a BACP will yield a high ATP/RLU reading indicating the surface is "dirty" when in fact it may be clean.

7. Alternative Methodologies.

While the Clean Standard: K-12 is based on the use of ATP measurement, there are a number of alternative methods that are capable of objectively validating the effectiveness of a school's cleaning processes. These methods include direct practice observation, the use of fluorescent markers and others. Such methods may be used in addition to or in lieu of ATP measurement, and are referenced in *Options for Evaluating Environmental Cleaning, Centers for Disease Control (CDC)*, 2010, Appendix B, Objective Methods for Evaluating Environmental Hygiene or in the GBAC-ISSA "Process Verification and Auditing Tool Guide for the Cleaning Industry"[6]. However, the use of these methods alone will not be construed as meeting the requirements of the Clean Standard: K-12.

REFERENCES

1. Shaughnessy, R.J., Cole, E.C.., Moschandreas, D., Haverinen-Shaughnessy, U. (2013). ATP as a Marker for Surface Contamination of Biological Origin in Schools and as a Potential Approach to the Measurement of Cleaning Effectiveness. Journal of Occupational and Environmental Hygiene 10(6):336-346.

2. Bakke, M. (2022). A Comprehensive Analysis of ATP Tests: Practical Use and Recent Progress in the Total Adenylate Test for the Effective Monitoring of Hygiene. Journal of Food Protection, 85(7):1079-1095. doi: 10.4315/JFP-21-384.

3. Bakke, M., and Suzuki, S. (2018). Development of a Novel Hygiene Monitoring System Based on the Detection of Total Adenylate (ATP+ADP+AMP). Journal of food protection, 81(5), 729–737.

4. Walinder, R., Norback, D., Wieslander, G., Smedje, G., Erwall,C., Venge,P. (1999). Nasal patency and lavage biomarkers tin relation to settled dust and cleaning routines in schools. Scand. J. Work Environ. Health (25)(2):137-43.

5. Franke, D.L., Cole, E.C, Leese, K.E., Foarde, K.K., M.A. Berry. (1997). Cleaning for improved indoor air quality: An initial assessment of effectiveness. Indoor Air 7:41–54.

6. Process Verification and Auditing Tools Guide for the Cleaning Industry, 2023. GBAC- ISSA. https://gbac.issa.com/process-verification-and-auditing-tool-guide-for-the-cleaning-industry

RELATED DOCUMENTS

Sciortino, C.A., Giles, R.A. (2012). Validation and comparison of three adenosine triphosphate luminometers for monitoring hospital surface sanitization: A Rosetta Stone for adenosine triphosphate testing. American Journal of Infection Control 40(8):e233-e239. https://doi.org/10.1016/j.ajic.2012.04.318.

Bakke, M., Suzuki, S., Kirihara, E., Mikami, S. (2019). Evaluation of the total adenylate (ATP + ADP + AMP) test for cleaning verification in healthcare settings. Journal of preventive medicine and hygiene, 60(2), E140–E146.

Advancing Clean.
Driving Innovation.

ISSA STANDARD

0220-2024

Measuring the Cleanliness of K-12 Schools

Appendix A: Building Audit Long Form

Appendix A: Building Audit - Long Form

Building Name & Location: _____

Investigators: *Primary:* _____

Others Involved: _____

Date: _____

Size of Building: _____ sq. ft. Number of Floors: _____ Grades: _____

Number of occupants: _____ Teachers: _____ Other Staff: _____

Number of Areas Needing Immediate Attention

A: Roof/Exterior/Neighbors #: _____ Follow-up dates/initials: _____ /_____	**F: Offices** #: _____ Follow-up dates/initials: _____ /_____	**K: Swimming Pools** #: _____ Follow-up dates/initials: _____ /_____	**P: Maintenance Prog SOPs** #: _____ Follow-up dates/initials: _____ /_____
B: Basements/Crawl Space #: _____ Follow-up dates/initials: _____ /_____	**G: Classrooms** #: _____ Follow-up dates/initials: _____ /_____	**L: Food Prep/Dining** #: _____ Follow-up dates/initials: _____ /_____	**Q: Hallways/Commons** #: _____ Follow-up dates/initials: _____ /_____
C: Garage/Docks/Shops #: _____ Follow-up dates/initials: _____ /_____	**H: Restrooms** #: _____ Follow-up dates/initials: _____ /_____	**M: Custodial/Storage** #: _____ Follow-up dates/initials: _____ /_____	**R: Media Center** #: _____ Follow-up dates/initials: _____ /_____
D: Entrances/Lobbies #: _____ Follow-up dates/initials: _____ /_____	**I: Locker Rooms/Showers** #: _____ Follow-up dates/initials: _____ /_____	**N: Mechanical Rooms** #: _____ Follow-up dates/initials: _____ /_____	**S!: Other 1** #: _____ Follow-up dates/initials: _____ /_____
E: Stairwells/Elevators #: _____ Follow-up dates/initials: _____ /_____	**J: Gymnasiums/Equipment** #: _____ Follow-up dates/initials: _____ /_____	**O: Auditoriums/Theaters** #: _____ Follow-up dates/initials: _____ /_____	**S2: Other 2** #: _____ Follow-up dates/initials: _____ /_____

TOTAL NUMBER OF AREAS NEEDING IMMEDIATE ATTENTION:	

Other Notes: _____

_____

_____

_____

Adapted form:
Housekeeping Survey Form – The Ashkin Group School General Checklist – Shaughnessy, et.al., University of Tulsa Indoor Air Quality program

Section A: Roof/Exterior/Neighbors

School Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item**	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____
Construction, renovation, or other structural changes affecting cleaning					
Neighboring building activities or conditions affecting cleaning					
Fresh air intakes clear of obstructions and away from hazards					
No standing water on roofs, parking lots or grounds					
Roof in good condition (vents, roof material, drains, etc.)					
Exterior walls in good condition (paint, mortar, etc.)					
No vehicular traffic issues					
No playground or athletic field issues affecting cleaning					
Windows in good condition (clear, sealed, operational, free of damage)					
Grounds free of litter and debris					
Outdoor areas around main entrances free of excessive soil to minimize tracking					

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Section B: Basements and Crawl Spaces

School Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item**	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____
No evidence of moisture or standing water					
No evidence of mold, mildew or other biocontamination					
Drains and sumps free of obstructions and odors					
No evidence of high levels of dust or debris					
No evidence of insects, rodents or other pests					
No evidence of dirty or ineKective air filters, pumps, back draft dampers or fans					
No noticeable odors					
No evidence of cracks in flooring or foundation					

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Section C: Garage/Loading Docks/Shop Areas

School Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item**	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____
No evidence of excessive dust, trash and debris					
Materials (e.g. paints, chemicals, fuels) are organized in area with adequate ventilation (e.g. direct exhaust)					
Floors are dry and free of visible debris or soil, with floor matting systems in working order					
Vehicular exhaust is NOT impacting fresh air intakes					
Dumpster areas are dry, free of visible debris and soil					
Dumpsters covered, dry and free of visible debris and soil					
No evidence of insects, rodents or other pests					
Walls/corners in good condition, dry and free of visible soil, dusts, markings, cobwebs or stains					
Ceilings are dry, in good condition and free of visible soil, dust or stains					

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Section D: Entrances and Lobbies

School Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item**	Entrance # _____	Entrance # _____	Entrance # _____	Entrance # _____	Entrance # _____
Entrance mats and floor grills are free of visible soil and debris, in good condition, and cover enough area to be effective					
Waste receptacles in good condition, empty and free of any visible soil					
Floors dry, in good condition and free of visible debris, soil, dust, residue and stains					
Light fixtures in good condition and free of visible soil, dust or cobwebs					
Glass doors, decorative surfaces, ledges, trim, mirrors and bright work are in good condition and free of visible soil and residue					
Windows (and coverings) in good condition, free of any visible soil, dust, residue or stains					
Door knobs, push plates, crash bars and light switches in good condition and free of visible soil or residue					
Ceilings are dry, in good condition and free of visible soil, dust or stains					
Walls/corners in good condition, dry and free of visible soil, dusts, markings, cobwebs or stains					

Notes on Entrance: _____

Notes on Entrance: _____

Notes on Entrance: _____

Notes on Entrance: _____

Notes on Entrance: _____

Section E: Stairwells/Elevators

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item**	Stair/ Elevator Location# _____	Stair/ Elevator Location# _____	Stair/ Elevator Location# _____	Stair/ Elevator Location# _____	Stair/ Elevator Location# _____
Floors, ceilings, walls, lights and elevator tracks are dry, in good condition and free of visible debris, soil, dust, residueand stains					
Bright work, hand rails and control consoles are in goodcondition and free of any visible soils or residue					
Steps and landings are free of visible soil and debris					
Floors, ceilings, walls, lights and elevator tracks are dry, in good condition and free of visible debris, soil, dust, residueand stains					
Bright work, hand rails and control consoles are in goodcondition and free of any visible soils or residue					
Steps and landings are free of visible soil and debris					
Floors, ceilings, walls, lights and elevator tracks are dry, in good condition and free of visible debris, soil, dust, residueand stains					
Bright work, hand rails and control consoles are in goodcondition and free of any visible soils or residue					
Steps and landings are free of visible soil and debris					

Notes on Stairwell/Elevator: _____

Notes on Stairwell/Elevator: _____

Notes on Stairwell/Elevator: _____

Notes on Stairwell/Elevator: _____

Notes on Stairwell/Elevator: _____

Section F: Offices

(Including Nurse, Lounge, Mail and Copy Rooms)

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item**	Office name/# _____	Office name/# _____	Office name/# _____	Office name/# _____	Office name/# _____
Floors dry, in good condition and free of visible debris, soil, dust,residue and stains					
Walls/corners in good condition, dry and free of visible soil,dusts, markings, cobwebs or stains					
Partitions (especially if fabric covered) are free of visible dustand stains					
Ceilings are dry, in good condition and free of visible soil, dust orstains					
Door knobs, push plates, crash bars and light switches in goodcondition and free of visible soil or residue					
Staff desks, mouse/keyboards and telephone free of visible soil,dust, debris and residue					
Waste receptacles in good condition, empty and free of anyvisible soil					
Plants exhibit no evidence of insect infestation, and surfacesunder plants are dry and free of visible soil					
No evidence of mold, mildew or other biocontamination					
No evidence of insects, rodents or other pests					
Self contained heating/cooling units are in working orderand free of visible dust, residue, mold, mildew and other biocontamination					
Mail, computer and copy equipment free of visible dust and debris					
Air vents operating correctly and free of visible soil and dust					
Windows (and coverings) in good condition, free of any visible soil, dust, residue or stains					
Light fixtures in good condition and free of visible soil, dust or cobwebs					
Soap, towel and tissue dispensers and hand dryers are operating properly and free of visible soil and residue					
Number of desks / tables / cabinets					

Notes on Office name/#: _____

Section G: Classrooms (Including Music, Shop, Art, Science, etc.)

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item**	Room # _____	Room # _____	Room # _____	Room # _____	Room # _____
Floors dry, in good condition and free of visible debris, soil, dust, residue and stains					
Student desks, chairs and tables are dry, in good conditions and free of visible soil, residue and markings					
Teacher's desk, keyboard/mouse and telephone free of visible soil, dust, debris and residue					
Partitions (especially if fabric covered) are free of visible dustand stains					
Ceilings are dry, in good condition and free of visible soil, dust or stains					
Air vents/filters in good condition and free of dust and obstructions					
Door knobs, push plates, crash bars and light switches in good condition and free of visible soil or residue					
White boards and chalk board free of markings and dust					
Light fixtures in good condition and free of visible soil, dust or cobwebs					
Windows (and coverings) in good condition, free of any visible soil, dust, residue or stains					
Waste receptacles in good condition, empty and free of anyvisible soil					
Plants exhibit no evidence of insect infestation, and surfaces under plants are dry and free of visible soil					
Staff desks, mouse/keyboards and telephone free of visible soil, dust, debris and residue					
No evidence of mold, mildew or other biocontamination					
No evidence of insects, rodents or other pests					
Self contained heating/cooling units are in working orderand free of visible dust, residue, mold, mildew and other biocontamination					
Animal habitats (if present) are secure, free of odors, and free of visible wastes					
Walls/corners in good condition, dry and free of visible soil,dusts, markings, cobwebs or stains					
Soap, towel and tissue dispensers and hand dryers are operating properly and free of visible soil and residue					
Number of desks / tables / cabinets					

Make notes for Classroom on the back of this sheet.

Section H: Restrooms

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3	RR Loc# M W _____	RR Loc# M W _____	RR Loc# M W _____	RR Loc# M W _____	RR Loc# M W _____
Survey Item					
Countertops, basins, toilets and urinals are free of visible soil andstains					
Floors dry, in good condition and free of visible debris, soil, dust,residue and stains					
Water faucets, toilets and urinals are operating properly					
Mirrors free of visible soil and residue, as well as marks, scratches, chips, etc.					
No noticeable odors					
No evidence of mold, mildew or other biocontamination					
Soap, towel and tissue dispensers and hand dryers are operatingproperly and free of visible soil and residue					
Light fixtures in good condition and free of visible soil, dust orcobwebs					
Vents are operating properly and free of visible soil and dust					
Stall doors and latches in good working order and free of visiblesoil and residue					
Door knobs, push plates, crash bars and light switches in goodcondition and free of visible soil or residue					
Waste receptacles in good condition, empty and free of anyvisible soil					
Floor drains free of obstructions and odors					
Ceilings are dry, in good condition and free of visible soil, dust orstains					
Walls/corners/tile in good condition, dry and free of visible soil,dusts, markings, cobwebs or stains					
Number of stalls					
Number of urinals					
Number of stalls					

Notes on Restroom: _____

_____

_____

Notes on Restroom: _____

_____

_____

Section I: Locker Rooms and Showers

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3	Lck/Shw# M W _____	Lck/Shw# M W _____	Lck/Shw# M W _____	Lck/Shw# M W _____	Lck/Shw# M W _____
Survey Item					
Floors dry, in good condition and free of visible debris, soil, dust, residue and stains					
Walls/corners/tile in good condition, dry and free of visible soil, dusts, markings, cobwebs or stains					
Benches are dry and free of visible soil and residue					
Floor drains free of obstructions and odors					
Soap dispensers are filled, working properly and free of any visible soil or residue					
No evidence of mold, mildew or other biocontamination					
Light fixtures in good condition and free of visible soil, dust or cobwebs					
No noticeable odors					
Shower heads, faucets and handles are in good workingorder and free of visible soil and residue					
Door knobs, push plates, crash bars and light switches in good condition and free of visible soil or residue					
Ceilings are dry, in good condition and free of visible soil, dust or stains					

Notes on Locker/Shower: _____

Notes on Locker/Shower: _____

Notes on Locker/Shower: _____

Notes on Locker/Shower: _____

Notes on Locker/Shower: _____

Section J: Gymnasiums and Equipment Rooms

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3	Gym/ Room/ Name/# _____	Gym/ Room/ Name/# _____	Gym/ Room/ Name/# _____	Gym/ Room/ Name/# _____	Gym/ Room/ Name# _____
Survey Item					
Floors dry, in good condition and free of visible debris, soil, dust, residue and stains					
No evidence of mold, mildew or other biocontamination					
No noticeable odors					
Bleachers are free of debris and spill residue					
Wrestling mats are dry and free of visible soil and residue					
Apparatus, work-out and weight training equipment are dry and free of visible soil and residue					
Balls, toys, etc., are stored appropriately and are free of visible soil and residue					
Light fixtures in good condition and free of visible soil, dust or cobwebs					
Ceilings are dry, in good condition and free of visible soil, dust or stains					
Door knobs, push plates, crash bars and light switches in good condition and free of visible soil or residue					
Waste receptacles in good condition, empty and free of any visible soil					
Walls/corners/tile in good condition, dry and free of visible soil, dusts, markings, cobwebs or stains					
Number of floor mats					
Number of exercise machines, weight benches, etc					

Notes on Gym/Room: _____

_____

_____

Notes on Gym/Room: _____

_____

_____

Notes on Gym/Room: _____

_____

_____

Notes on Gym/Room: _____

_____

Section K: Swimming Pools

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3	Pool Name/# _____	Pool Name/# _____	Pool Name/# _____	Pool Name/# _____	Pool Name/# _____
Survey Item					
Chemicals are stored properly and vented directly outdoors					
Waste receptacles in good condition, empty and free of any visible soil					
No evidence of mold, mildew or other biocontamination					
Light fixtures in good condition and free of visible soil, dust or cobwebs					
Floors dry, in good condition and free of visible debris, soil, dust, residue and stains					
Ceilings are dry, in good condition and free of visible soil, dust or stains					
Door knobs, push plates, crash bars and light switches in good condition and free of visible soil or residue					
Walls/corners/tile in good condition, dry and free of visible soil, dusts, markings, cobwebs or stains					
Pool testing and inspection record up-to-date and submitted to proper authorities					
Spectator areas dry and free of debris and soil					

Notes on Pool: _____

Notes on Pool: _____

Notes on Pool: _____

Notes on Pool: _____

Section L: Food Preparation and Dining Areas

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item**	Prep/ Dine Name/# _____	Prep/ Dine Name/# _____	Prep/ Dine Name/# _____	Prep/ Dine Name/# _____	Prep/ Dine Name/# _____
Floors dry, in good condition and free of visible food scraps,debris, soil, dust, residue and stains					
Kitchen floor mats are dry, free of food scraps/debris and in good condition					
Floor drains free of obstructions and odors					
Air vents are operating properly and free of visible soil and dust					
All surfaces that come in contact with food are free of food scraps, debris and stains					
Dining table and chair tops and undersides are in good conditionand free of visible soil, residue and stains					
Appliances and cooking equipment are free of soil and residue					
Cooking and eating utensils are clean, dry and properly stored					
All food and beverages are properly stored					
Waste receptacles in good condition, covered, empty and free ofany visible soil					
No evidence of insects or rodents					
No evidence of mold, mildew or other biocontamination					
Ceilings are dry, in good condition and free of visible soil, dust orstains					
Light fixtures in good condition and free of visible soil, dust orcobwebs					
Door knobs, push plates, crash bars and light switches in goodcondition and free of visible soil or residue					
Windows (and coverings) in good condition, free of any visiblesoil, dust, residue or stains					
Walls/corners/tile in good condition, dry and free of visible soil,dusts, markings, cobwebs or stains					
Grease traps are clean and free of obstructions and odor					
Grease trap chemical dispensers are working properly					
Soap, towel and tissue dispensers and hand dryers are operating properly and free of visible soil and residue					
Number of cafeteria tables:					

Make notes for each Meeting Room on the back of this sheet.

Section M: Custodial Closets & Storage

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3	Closet/ Room Name/# _____	Closet/ Room Name/# _____	Closet/ Room Name/# _____	Closet/ Room Name/# _____	Closet/ Room Name/# _____
Survey Item					
Area is neatly organized and free of visible debris and soil					
Stored equipment is empty, free of visible soil and residue and, if charging, vented properly					
Equipment cords, extensions and battery chargers in good repair					
MSDS sheets and DOT Hazard placards are up-to-date and posted					
Eye-wash stations accessible, in working order and with current refills					
Mops and cloths in good condition and hung to dry					
Floors dry, in good condition and free of visible debris, soil, dust, residue and stains					
Drains and sinks free of visible soil, obstructions and odors					
Exhaust fans/vents are working properly and free of visible soil and obstructions					
Ceilings are dry, in good condition and free of visible soil, dust or stains					
Light fixtures in good condition and free of visible soil, dust or cobwebs					
Waste receptacles in good condition, empty and free of any visible soil					
Door knobs, push plates, crash bars and light switches in good condition and free of visible soil or residue					
Walls/corners/tile in good condition, dry and free of visible soil, dusts, markings, cobwebs or stains					
Chemicals clearly labeled and safely stored.					
Chemical dilution control system in place and in good working order					

Notes on Closet/Room/#: _____

Section N: Mechanical Rooms and Attics

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3	Pool Name/# _____	Pool Name/# _____	Pool Name/# _____	Pool Name/# _____	Pool Name/# _____
Survey Item					
Waste receptacles in good condition, empty and free of any visible soil					
Light fixtures in good condition and free of visible soil, dust or cobwebs					
No evidence of birds, rodents, insects, mold, mildew or other biocontamination					
Screens and barriers are in place to prevent pest entry					
Outdoor air intakes are clean and away from sources of contamination (vehicle exhaust, smoke stacks, etc.)					
Air handlers, filters and related equipment are free of dust and obstructions					
Floors dry, in good condition and free of visible debris, soil, dust, residue and stains					
Ceilings are dry, in good condition and free of visible soil, dust or stains					
Walls/corners/tile in good condition, dry and free of visible soil, dusts, markings, cobwebs or stains					

Notes on Room/Area/#: _____

Notes on Room/Area/#: _____

Notes on Room/Area/#: _____

Notes on Room/Area/#: _____

Notes on Room/Area/#: _____

Section O: Auditoriums and Theaters

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3	Room Name/# _____	Room Name/# _____	Room Name/# _____	Room Name/# _____	Room Name/# _____
Survey Item					
Floors dry, in good condition and free of visible debris, soil, dust, residue and stains					
Seats free of debris (top and bottom)					
Doors handles, push plates and bright work free of dust and soil					
Light fixtures in good condition and free of visible soil, dust or cobwebs					
Ceilings are dry, in good condition and free of visible soil, dust or stains					
Walls/corners in good condition, dry and free of visible soil, dusts, markings, cobwebs or stains					
Waste receptacles in good condition, empty and free of any visible soil					
Door knobs, push plates, crash bars and light switches in good condition and free of visible soil or residue					

Notes on Room Name/#: _____

Notes on Room Name/#: _____

Notes on Room Name/#: _____

Notes on Room Name/#: _____

Notes on Room Name/#: _____

Section P: Maintenance Programs and SOPs

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3	In Place?
Survey Item	
Integrated Pest Management program in place	
HVAC, elevator, and other systems inspection and maintenance records present and up-to-date	
Cleaning procedures and SOPs in place	
Hand hygiene program in place	
Infection control program in place	
Pandemic/outbreak plan in place	
Recycling and waste reduction plan in place	
MSDS sheets and DOT Hazard placards are up-to-date and posted	
Custodial staff training program in place	

Notes on Programs/SOPs: _____

Section Q: Hallways and Commons

(Including Drinking fountains and lockers)

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item**	Hall/ Com Name/# _____	Hall/ Com Name/# _____	Hall/ Com Name/# _____	Hall/ Com Name/# _____	Hall/ Com Name/# _____
Ceilings are dry, in good condition and free of visible soil, dust orstains					
Light fixtures in good condition and free of visible soil, dust orcobwebs					
Drinking fountains clean and in good working condition					
Student lockers clean and in good working condition					
Lockers clean and in good working condition					
Floors dry, in good condition and free of visible debris, soil, dust,residue and stains					
Walls/corners in good condition, dry and free of visible soil,dusts, markings, cobwebs or stains					
Door knobs, push plates, crash bars and light switches in goodcondition and free of visible soil or residue					
Waste receptacles in good condition, empty and free of any visible soil					
Windows (and coverings) in good condition, free of any visiblesoil, dust, residue or stains					
Exit signs free of dust, visible and operational					

Notes on Hallway/Commons Name/#: _____

Notes on Hallway/Commons Name/#: _____

Notes on Hallway/Commons Name/#: _____

Notes on Hallway/Commons Name/#: _____

Notes on Hallway/Commons Name/#: _____

Section R: Media Centers (including library and computer lab)

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3	Room Name/# _____	Room Name/# _____	Room Name/# _____	Room Name/# _____	Room Name/# _____
Survey Item					
Tables and chairs (top and underside) in good condition and free of dust, debris and stains					
Floors dry, in good condition and free of visible debris, soil, dust,residue and stains					
Computer and study carrels (desk and walls) free of visible debris, dust and stains					
Staff desks and keyboard/mouse free of dust and debris					
Stacks free of dust and debris					
Light fixtures in good condition and free of visible soil, dust orcobwebs					
Windows (and coverings) in good condition, free of any visiblesoil, dust, residue or stains					
Door knobs, push plates, crash bars and light switches in goodcondition and free of visible soil or residue					
Waste receptacles in good condition, empty and free of anyvisible soil					
Ceilings are dry, in good condition and free of visible soil, dust orstains					
Walls/corners in good condition, dry and free of visible soil,dusts, markings, cobwebs or stains					

Notes on Room Name/#: _____

Notes on Room Name/#: _____

Notes on Room Name/#: _____

Section 0S: Other Area 1:_____

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item** - add as needed	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Section 0S: Other Area 2:_____

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item** - add as needed	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Advancing Clean.
Driving Innovation.

ISSA STANDARD

0220-2024

Measuring the Cleanliness of K-12 Schools

Appendix B: Building Audit Short Form

Appendix B: Building Audit - Short Form

Building Name & Location: _____

Investigators: *Primary:* _____

Others Involved: _____

Date: _____

Size of Building: _____ sq. ft. Number of Floors: _____ Grades: _____

Number of occupants: _____ Teachers: _____ Other Staff: _____

Number of Areas Needing Immediate Attention

A: Entrances/Lobbies/Halls #: _____ Follow-up dates/initials: _____ /_____	**D: Classrooms** #: _____ Follow-up dates/initials: _____ /_____	**G: Food Prep/Dining** #: _____ Follow-up dates/initials: _____ /_____	**I2: Other 2** #: _____ Follow-up dates/initials: _____ /_____
B: Stairwells #: _____ Follow-up dates/initials: _____ /_____	**E: Restrooms** #: _____ Follow-up dates/initials: _____ /_____	**H: Media Center** #: _____ Follow-up dates/initials: _____ /_____	**I3: Other 3** #: _____ Follow-up dates/initials: _____ /_____
C: Offices #: _____ Follow-up dates/initials: _____ /_____	**F: Gym/Equipment Rooms** #: _____ Follow-up dates/initials: _____ /_____	**I: Other 1** #: _____ Follow-up dates/initials: _____ /_____	**I4: Other 4** #: _____ Follow-up dates/initials: _____ /_____
TOTAL NUMBER OF AREAS NEEDING IMMEDIATE ATTENTION:			

Other Notes: _____

Adapted form:
Housekeeping Survey Form – The Ashkin Group School General Checklist – Shaughnessy, et.al., University of Tulsa Indoor Air Quality program

Section A: Entrances, Lobbies, Halls and Commons

School Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item**	Entrance # _____	Entrance # _____	Entrance # _____	Entrance # _____	Entrance # _____
Entrance mats and floor grills are free of visible soil and debris, in good condition, and cover enough area to be effective					
Waste receptacles in good condition, empty and free of any visible soil					
Floors dry, in good condition and free of visible debris, soil, dust, residue and stains					
Drinking fountains clean and in good working condition					
Glass doors, decorative surfaces, ledges, trim, mirrors and bright work are in good condition and free of visible soil and residue					
Student lockers clean and in good working condition					
Door knobs, push plates, crash bars and light switches in good condition and free of visible soil or residue					
Ceilings are dry, in good condition and free of visible soil, dust or stains					
Exit signs free of dust, visible and operational					

Notes on Entrance: _____

Notes on Entrance: _____

Notes on Entrance: _____

Notes on Entrance: _____

Notes on Entrance: _____

Section B: Stairwells

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item**	Stair/ Elevator Location# _____	Stair/ Elevator Location# _____	Stair/ Elevator Location# _____	Stair/ Elevator Location# _____	Stair/ Elevator Location# _____
Floors, ceilings, walls, lights and elevator tracks are dry, in good condition and free of visible debris, soil, dust, residueand stains					
Bright work, hand rails and control consoles are in good condition and free of any visible soils or residue					
Steps and landings are free of visible soil and debris					
Floors, ceilings, walls, lights and elevator tracks are dry, in good condition and free of visible debris, soil, dust, residueand stains					
Bright work, hand rails and control consoles are in good condition and free of any visible soils or residue					
Steps and landings are free of visible soil and debris					
Floors, ceilings, walls, lights and elevator tracks are dry, in good condition and free of visible debris, soil, dust, residueand stains					
Bright work, hand rails and control consoles are in good condition and free of any visible soils or residue					
Steps and landings are free of visible soil and debris					

Notes on Stairwell/Elevator: _____

Notes on Stairwell/Elevator: _____

Notes on Stairwell/Elevator: _____

Notes on Stairwell/Elevator: _____

Notes on Stairwell/Elevator: _____

Section C: Offices

(Including Nurse, Lounge, Mail and Copy Rooms)

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item**	Office name/# _____	Office name/# _____	Office name/# _____	Office name/# _____	Office name/# _____
Floors dry, in good condition and free of visible debris, soil, dust,residue and stains					
Ceilings are dry, in good condition and free of visible soil, dust orstains					
Partitions (especially if fabric covered) are free of visible dustand stains					
Door knobs, push plates, crash bars and light switches in goodcondition and free of visible soil or residue					
Staff desks, mouse/keyboards and telephone free of visible soil,dust, debris and residue					
Waste receptacles in good condition, empty and free of anyvisible soil					
Plants exhibit no evidence of insect infestation, and surfacesunder plants are dry and free of visible soil					
No evidence of mold, mildew or other biocontamination					
No evidence of insects, rodents or other pests					
Self contained heating/cooling units are in working order and free of visible dust, residue, mold, mildew and other biocontamination					
Mail, computer and copy equipment free of visible dust and debris					
Air vents operating correctly and free of visible soil and dust					
Number of desks / tables / cabinets					

Notes on Office name/#: _____

_____

Notes on Office name/#: _____

_____

Notes on Office name/#: _____

_____

Section D: Classrooms

(Including Music, Shop, Art, Science, etc.)

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item**	Room # _____	Room # _____	Room # _____	Room # _____	Room # _____
Floors dry, in good condition and free of visible debris, soil, dust,residue and stains					
Student desks, chairs and tables are dry, in good conditions and free of visible soil, residue and markings					
Teacher's desk, keyboard/mouse and telephone free of visible soil, dust, debris and residue					
Partitions (especially if fabric covered) are free of visible dust and stains					
Ceilings are dry, in good condition and free of visible soil, dust orstains					
Air vents/filters in good condition and free of dust and obstructions					
Door knobs, push plates, crash bars and light switches in good condition and free of visible soil or residue					
White boards and chalk board free of markings and dust					
Waste receptacles in good condition, empty and free of any visible soil					
Plants exhibit no evidence of insect infestation, and surfaces under plants are dry and free of visible soil					
No evidence of mold, mildew or other biocontamination					
No evidence of insects, rodents or other pests					
Self contained heating/cooling units are in working orderand free of visible dust, residue, mold, mildew and other biocontamination					
Animal habitats (if present) are secure, free of odors, and free of visible wastes					
Food (if present) is in designated containers in storage areas					
Number of student desks (or seats):					
Number of tables/counters:					

Notes on Classroom: _____

_____

_____

Notes on Classroom: _____

_____

_____

Section E: Restrooms

(Including locker rooms, showers)

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3	RR Loc# M W _____	RR Loc# M W _____	RR Loc# M W _____	RR Loc# M W _____	RR Loc# M W _____
Survey Item					
Countertops, basins, toilets and urinals are free of visible soil andstains					
Floors dry, in good condition and free of visible debris, soil, dust,residue and stains					
Water faucets, toilets and urinals are operating properly					
Mirrors free of visible soil and residue, as well as marks, scratches, chips, etc.					
No noticeable odors					
No evidence of mold, mildew or other biocontamination					
Soap, towel and tissue dispensers and hand dryers are operatingproperly and free of visible soil and residue					
Vents are operating properly and free of visible soil and dust					
Stall doors and latches in good working order and free of visiblesoil and residue					
Door knobs, push plates, crash bars and light switches in goodcondition and free of visible soil or residue					
Waste receptacles in good condition, empty and free of anyvisible soil					
Floor drains free of obstructions and odors					
Ceilings are dry, in good condition and free of visible soil, dust orstains					
Number of stalls					
Number of urinals					
Number of stalls					

Notes on Restroom: _____

_____

_____

Notes on Restroom: _____

_____

_____

Section F: Gymnasiums and Equipment Rooms

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3	Gym/ Room/ Name/# _____	Gym/ Room/ Name/# _____	Gym/ Room/ Name/# _____	Gym/ Room/ Name/# _____	Gym/ Room/ Name# _____
Survey Item					
Floors dry, in good condition and free of visible debris, soil, dust, residue and stains					
No evidence of mold, mildew or other biocontamination					
No noticeable odors					
Bleachers are free of debris and spill residue					
Wrestling mats are dry and free of visible soil and residue					
Apparatus, work-out and weight training equipment are dry and free of visible soil and residue					
Balls, toys, etc., are stored appropriately and are free of visible soil and residue					
Ceilings are dry, in good condition and free of visible soil, dust or stains					
Door knobs, push plates, crash bars and light switches in good condition and free of visible soil or residue					
Waste receptacles in good condition, empty and free of any visible soil					
Number of floor mats					
Number of exercise machines, weight benches, etc					

Notes on Gym/Room: _____

_____

_____

Notes on Gym/Room: _____

_____

_____

Notes on Gym/Room: _____

_____

_____

Notes on Gym/Room: _____

_____

_____

Notes on Gym/Room: _____

_____

Section G: Food Preparation and Dining Areas

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item**	Prep/ Dine Name/# _____	Prep/ Dine Name/# _____	Prep/ Dine Name/# _____	Prep/ Dine Name/# _____	Prep/ Dine Name/# _____
Floors dry, in good condition and free of visible food scraps,debris, soil, dust, residue and stains					
Kitchen floor mats are dry, free of food scraps/debris and in good condition					
Floor drains free of obstructions and odors					
Air vents are operating properly and free of visible soil and dust					
All surfaces that come in contact with food are free of food scraps, debris and stains					
Dining table and chair tops and undersides are in good conditionand free of visible soil, residue and stains					
Appliances and cooking equipment are free of soil and residue					
Cooking and eating utensils are clean, dry and properly stored					
All food and beverages are properly stored					
Waste receptacles in good condition, covered, empty and free ofany visible soil					
No evidence of insects or rodents					
No evidence of mold, mildew or other biocontamination					
Ceilings are dry, in good condition and free of visible soil, dust orstains					
Door knobs, push plates, crash bars and light switches in goodcondition and free of visible soil or residue					
Soap, towel and tissue dispensers and hand dryers are operating properly and free of visible soil and residue					
Number of cafeteria tables:					

Notes on Food Prep/Dining Area: _____

Notes on Food Prep/Dining Area: _____

Notes on Food Prep/Dining Area: _____

Notes on Food Prep/Dining Area: _____

Section H: Media Centers (including library and computer lab)

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3	Room Name/# _____	Room Name/# _____	Room Name/# _____	Room Name/# _____	Room Name/# _____
Survey Item					
Tables and chairs (top and underside) in good condition and free of dust, debris and stains					
Floors dry, in good condition and free of visible debris, soil, dust,residue and stains					
Computer and study carrels (desk and walls) free of visible debris, dust and stains					
Staff desks and keyboard/mouse free of dust and debris					
Stacks free of dust and debris					
Door knobs, push plates, crash bars and light switches in goodcondition and free of visible soil or residue					
Waste receptacles in good condition, empty and free of anyvisible soil					
Ceilings are dry, in good condition and free of visible soil, dust orstains					

Notes on Room Name/#: _____

Notes on Room Name/#: _____

Notes on Room Name/#: _____

Notes on Room Name/#: _____

Notes on Room Name/#: _____

Section I: Other Area 1:_____

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item** - add as needed	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Section I2: Other Area 2:_____

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item** - add as needed	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Section I3: Other Area 3:_____

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item** - add as needed	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Section I4: Other Area 4:_____

Building: _____

Date:_____Page_____of_____Pages

Okay = 1 Needs Some Attention = 2 Needs Immediate Attention = 3 **Survey Item** - add as needed	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____	Area Name/# _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____

Notes on Area/#: _____