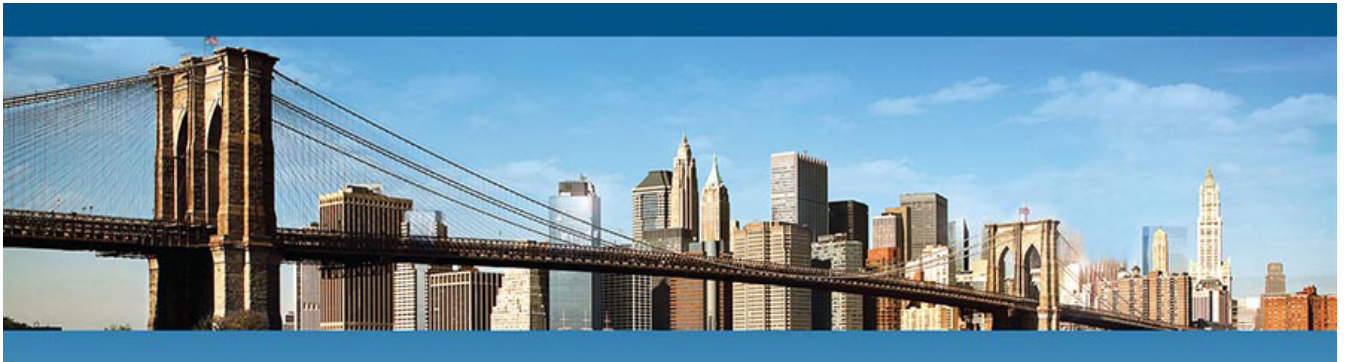




City of New York

OFFICE OF THE COMPTROLLER

Scott M. Stringer
COMPTROLLER



MANAGEMENT AUDIT

Marjorie Landa

Deputy Comptroller for Audit

Audit Report on the Department of
Buildings' Controls over the Inspection
of Amusement Devices

MD18-104A

April 4, 2019

<http://comptroller.nyc.gov>



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

April 4, 2019

To the Residents of the City of New York:

My office has audited the Department of Buildings (DOB) to determine whether it has adequate controls in place for the inspections it performed of permanent, temporary, and portable amusement devices throughout the City. We perform audits such as this as a means to increase accountability and to help promote public safety.

The audit concluded that DOB does not have adequate controls with regard to tracking and recording of inspections completed. DOB does not maintain adequate records of the random survey (spot check) inspections conducted and does not ensure that the inspection (both spot check and periodic) information recorded in its computer system for permanent devices is entered timely or is complete and accurate. DOB also did not document all deficiencies identified during its inspections or the actions taken by park operators to correct those deficiencies. In addition, DOB did not consistently record amusement device accidents and their related inspections. Finally, although DOB requires that its inspectors receive certain specialized training to help ensure that they are qualified to perform inspections of amusement devices, we found that only 10 of the 16 inspectors who performed amusement device inspections during the audit scope period passed the certification exam for such training.

To address these and other issues, the audit made 18 recommendations, including that DOB should: require individual inspection records to be completed for each device inspected; implement a plan to eliminate the entry backlog for amusement device inspections; require all deficiencies to be recorded on deficiency lists regardless of when they are corrected and enforce the requirement that the corrective actions taken are documented; ensure that all accidents are documented; and consider providing assistance to inspectors who receive specialized training but fail the certification exam.

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

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

Sincerely,

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

Scott M. Stringer

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
Audit Findings and Conclusion	2
Audit Recommendations.....	4
Agency Response.....	4
AUDIT REPORT	5
Background	5
Objective.....	6
Scope and Methodology Statement.....	6
Discussion of Audit Results with DOB	6
FINDINGS AND RECOMMENDATIONS.....	8
Inadequate Recording and Tracking of Inspections.....	9
Improperly Documented Spot Check Inspections	9
Inspection Information Recorded in BIS for Permanent Devices Is Incomplete and Unreliable.....	11
Poor Route Sheet Recordkeeping.....	13
Temporary and Portable Devices and Their Related Inspections Are Not Tracked	13
Deficiencies with DOB NOW	14
Recommendations	14
Weaknesses in Inspection Process	16
Recommendations	18
Inadequate Documentation of Amusement Device Accidents	19
Recommendations	20
Other Matters.....	20
Device Statuses in BIS Are Not Accurate.....	20
DOB Did Not Meet NAARSO Training Targets for Its Inspectors.....	21
Recommendations	22
DETAILED SCOPE AND METHODOLOGY.....	23
ADDENDUM	

**THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
MANAGEMENT AUDIT**

**Audit Report on the Department of Buildings' Controls
over the Inspection of Amusement Devices**

MD18-104A

EXECUTIVE SUMMARY

The Department of Buildings (DOB) promotes the safety of all people that build, work, and live in New York City (City) by regulating the lawful use of over one million buildings and construction sites across the five boroughs.

DOB's Elevator Inspection Unit is responsible for ensuring the operational safety, reliable service and lawful use of elevators, escalators, amusement rides and other "devices" throughout the City. According to Section 3005 of the Rules of the City of New York (RCNY), DOB is responsible for performing inspections of amusement devices.

Amusement park operators are required to obtain an individual license from the Department of Consumer Affairs (DCA) for each amusement device they intend to operate. The RCNY classifies amusement devices as permanent,¹ temporary,² portable,³ and inflatable.⁴ Under the RCNY, prior to receiving the DCA license, devices must pass an inspection performed by DOB's Elevator Unit, which focuses on the mechanical safety of the device.⁵ The RCNY states that permanent devices must receive two periodic inspections from DOB for devices operating from the spring to the fall and three periodic inspections for devices operating year round. A DCA license for a permanent device is valid for one year. Temporary devices, which are used primarily at street fairs, must receive an initial inspection from DOB each time they are set up at a location and upon renewal of the DCA license; the DCA license for these types of devices is valid for up to 14 days. Portable devices are inspected and tested once a year by DOB. The focus of our audit was on DOB's Elevator Unit.

¹ Permanent devices are those that are intended to remain in place and in operation for longer than 14 calendar days from the date of the issuance of a Certificate of Compliance (green card).

² Temporary devices are those that are intended to remain in place and in operation for 14 calendar days or less from the date of the issuance of a Certificate of Compliance (green card).

³ Portable devices are devices that can be relocated by being mounted on a motor vehicle or trailer.

⁴ Inflatable devices are designed for uses that may include, but are not limited to bouncing, climbing, sliding, or interactive play and are kept inflated by continuous airflow. Inflatable devices are not tested or issued green cards. Instead, park operators are issued a Certificate of Competency (COC) by DOB for these devices.

⁵ DOB's Electrical Unit also conducts inspections for devices that have an electrical component. For permanent devices, only one inspection per season is required (conducted at the beginning of the season). For temporary devices, one inspection is required each time the device is set up.

During each periodic inspection, a DOB inspector is required to complete an Amusement Ride Inspection Checklist, which indicates individual items that must be checked on the devices and marked “pass” or “fail,” and whether the device passed or failed the overall inspection. For devices that pass their inspections, the DOB Elevator Unit issues the park operators Certificates of Compliance (green cards)—one per device—to indicate that the devices are safe to operate.⁶

In addition to the periodic inspections, in accordance with DOB’s internal procedures, its Elevator Unit performs random survey inspections (spot checks) for permanent and temporary devices, which are performed while a device is in operation. Spot checks serve to ensure that the device is being operated safely and that the device operator is complying with safety requirements (e.g., not talking on a cell phone, ensuring that riders lock their seatbelts, and that they meet height requirements). According to Buildings Information System (BIS) data received from DOB, 95 percent of amusement device inspections performed by the Elevator Unit are spot checks. These inspections are performed solely during inspectors’ overtime hours, mostly on weekends and holidays, for which they receive additional compensation above their hourly rate. During spot checks, DOB procedures state that inspectors are to complete a Spot Check Inspection Checklist.

As per DOB’s procedures, inspection results are required to be noted on green cards after the inspection has been performed. DOB procedures also require inspectors to record the inspections conducted for all devices on a daily route sheet. DOB does not record inspection data for temporary and portable devices in BIS or in any other system.

According to data provided by DOB, there were 126 active permanent amusement devices in the City as of August 14, 2018. According to BIS and DOB NOW data, DOB conducted 9,640 inspections—387 periodic and 9,253 spot checks for permanent devices—from January 1, 2016 through December 31, 2018.

In addition, we note that, while not required by the RCNY, DOB’s internal policy calls for its inspectors to receive National Association of Amusement Rides Safety Officers (NAARSO) approved training and to take the certification exam. NAARSO certification helps to ensure that DOB’s inspectors are qualified to perform inspections.

Audit Findings and Conclusion

DOB does not have adequate controls over the inspection of amusement devices performed by its Elevator Unit, specifically with regard to the tracking and recording of inspections completed. Although the overwhelming majority of inspections performed are spot checks, the spot checks are rarely recorded on the devices’ green cards, which makes it difficult for DOB to identify and verify the specific devices for which such inspections were performed. Of the 1,857 spot check inspections recorded in BIS for the permanent devices sampled, we found that only 267 (14 percent) were recorded on the green cards of the devices in question. Since DOB does not ensure that the results of these inspections are adequately documented, neither we nor DOB are able to reasonably ascertain the number of spot checks that were actually performed on any of our sampled devices.

Moreover, while according to DOB officials at least one spot check of each device per location is required, DOB’s records do not reflect that all of the required spot check inspections had been made. Based on a review of spot checks recorded in BIS for permanent devices from January 1, 2016 through October 23, 2018 we found that:

⁶ The information indicated on a green card includes the device: name; number; address; and the date range the green card is valid.

- For the 119 active devices in 2016, 37 (31 percent) devices had no record of a spot check.
- For the 124 active devices in 2017, 23 (19 percent) devices had no record of a spot check.
- For the 114 active devices in 2018, 15 (13 percent) devices had no record of a spot check.

Furthermore, DOB has a significant longstanding backlog of inspection results that have not been entered into BIS. Consequently, inspectors are unable to rely on BIS to confirm whether a device needs to be inspected, whether it has received the required number of mandatory periodic inspections, or if any spot checks have been performed while a device was in operation. This weakness in DOB operations increases the risk that unnecessary inspections may be performed, which is an inefficient use of resources, or that necessary inspections might not be performed.

In addition, we found that DOB incorrectly reported that multiple spot checks were performed for a device that had been removed and was no longer in operation at the times it was supposedly inspected. We subsequently found that the device was incorrectly identified in BIS as “active.” In addition, when we compared the DOB listing of “removed” devices to the inspection data recorded in BIS, we identified an additional 16 devices that had records of periodic or spot check inspections totaling 294 inspections, notwithstanding these devices having been listed as “removed.” Given our finding that the data in BIS is unreliable, we cannot tell if the devices were incorrectly classified in BIS or whether inspections were inappropriately recorded in BIS for devices that were removed.

We also found that DOB did not document all deficiencies identified during its inspections or the corrective actions taken by park operators. In addition, the inspection checklists are not designed to allow for inspectors to indicate when a specific check on a device was not made because it is inapplicable to the device. This lack of clarity makes it harder for DOB to determine if a required inspectional step was not performed. The checklists also lack evidence that they had been reviewed by supervisors to ensure that all required steps are documented as having been taken. Consequently, the degree to which DOB can place reliance on the reported results of the device inspections is limited.

Further, our review also found that DOB did not consistently record amusement device accidents and their related inspections on green cards, in the devices’ accident log books, in BIS, and on accident reports as required by DOB policy.

Finally, although not required by the RCNY, DOB’s internal policy calls for its inspectors to receive NAARSO approved training. While we found that all 16 inspectors who performed amusement device inspections from January 1, 2017 through December 31, 2018 received such training and took the certification exam, only 10 passed the exam. DOB does not require its inspectors to have a NAARSO certification; however, they are required to take the training.

We believe that, to a significant extent, many of the issues identified are due to DOB’s failure to establish adequate procedures over the inspection process to help ensure that inspectors are aware of their responsibilities and that inspections are conducted in a consistent manner. As a result of these deficiencies, DOB is unable to reasonably ensure that all required inspections are performed and that any deficiencies found are appropriately addressed.

Audit Recommendations

Based on the audit, we make 18 recommendations, including:

- DOB should require individual inspection records to be completed for each device that receives a spot check and require inspectors to sign the green card of each device inspected.
- DOB should generate periodic reports of spot checks to ensure that all devices are receiving at least one spot check annually, and to ensure that resources are being used efficiently.
- DOB should ensure that inspectors are entering the inspections into DOB NOW on the day they are conducted, implement a plan to eliminate the entry backlog for amusement device inspections, and ensure that going forward inspections are recorded timely.
- DOB should periodically review and update device statuses in DOB NOW and reconcile devices with inspections recorded in DOB NOW and create an “inactive” status for devices that are not operational, but that have not been removed from their location.
- DOB should require all deficiencies to be recorded on deficiency lists regardless of when they are corrected and enforce the requirement that actions taken to correct deficiencies be documented.
- DOB should ensure that supervisors review and approve inspection checklists.
- DOB should ensure that all accidents are documented on the device’s green card, in DOB’s Accident Logbook, on an accident report, and in BIS or DOB NOW.
- DOB should consider providing training and/or tutoring assistance to inspectors who fail the NAARSO certification exam so as to increase their proficiency in weak areas and their prospect of passing a subsequent exam and receiving a NAARSO certification.
- DOB should develop more detailed written procedures for its inspectors when performing amusement device inspections.

Agency Response

In its response, DOB agreed to implement 14 recommendations and partially agreed to implement the remaining 4 recommendations. The full text of DOB’s response is included as an addendum to this report.

AUDIT REPORT

Background

DOB promotes the safety of all people that build, work, and live in New York City (City) by regulating the lawful use of over one million buildings and construction sites across the five boroughs. DOB enforces the City's Construction Codes, Zoning Resolution, the New York State Multiple Dwelling Law, and promotes worker and public safety through its review and approval of building plans, permitting and licensing functions, and inspections.

DOB's Elevator Inspection Unit is responsible for ensuring the operational safety, reliable service and lawful use of elevators, escalators, amusement rides and other devices throughout the City. According to Section 3005 of the RCNY, DOB is responsible for performing inspections of amusement devices.

Amusement park operators are required to obtain an individual license from DCA for each amusement device they intend to operate. The type of license issued by DCA depends on the classification of the amusement devices. The RCNY classifies amusement devices as permanent, temporary, portable, and inflatable. According to DCA's website, prior to receiving the DCA license, devices must pass an inspection performed by DOB's Elevator Unit, which focuses on the mechanical safety of the device. The RCNY states that permanent devices must receive two periodic inspections from DOB for devices operating from the spring to the fall and three periodic inspections for devices operating year round. The first one is an annual initial inspection prior to the device's first use, followed by at least one additional periodic inspection performed no sooner than 90 and no later than 120 days after the initial inspection. A DCA license for a permanent device is valid for one year. Temporary devices, which are used primarily at street fairs, must receive an initial inspection from DOB each time they are set up at a location and upon renewal of the DCA license; the DCA license for these types of devices is valid for up to 14 days. Portable devices are inspected and tested once a year by DOB.

During each periodic inspection, a DOB inspector is required to complete an Amusement Ride Inspection Checklist, which indicates individual items that must be checked on the devices and marked "pass" or "fail," and whether the device passed or failed the overall inspection. For devices that pass their inspections, the DOB Elevator Unit issues the park operators green cards—one per device—to indicate that the devices are safe to operate.

In addition to the periodic inspections, in accordance with DOB's internal procedures, its Elevator Unit performs random spot checks for permanent and temporary devices, which are performed while a device is being operated. Spot checks serve to ensure that the device is being operated safely; has adequate fencing; is placed on leveled ground; has a fire extinguisher near to the device; and that the device operator is complying with safety requirements (e.g., not talking on a cell phone, ensuring that riders lock their seatbelts, and that they meet height requirements). According to BIS data received from DOB, 95 percent of amusement device inspections performed by the Elevator Unit are spot checks. According to DOB, these inspections are performed solely during inspectors' overtime hours, mostly on weekends and holidays when ridership is at its highest, for which they receive additional compensation above their hourly rate. During spot checks, DOB procedures state that inspectors are to complete a Spot Check Inspection Checklist.

As per DOB's procedures, inspection results are required to be noted on green cards after the inspection has been performed. DOB procedures also require inspectors to record the inspections conducted for all devices on a daily route sheet that requires them to indicate the inspector's name and badge number, inspection date and, for each device inspected: (1) the inspection type; (2) device number; (3) location of device; and (4) whether the device passed inspection. The completed route sheets are submitted to the DOB Elevator Unit's data entry clerk, who is responsible for entering the information from the route sheets pertaining to permanent devices into BIS. DOB does not record inspection data for temporary and portable devices in BIS or in any other system.

According to RCNY § 3005-03, park operators must demonstrate their ability to operate their devices safely in normal and emergency situations. Upon demonstrating such ability, they may obtain a Certificate of Competency (COC) from DOB. Each COC is required to list every device that the applicant is competent to operate. The RCNY further requires that park operators who hold a COC train device operators in proper device operation in accordance with accepted standards. Park operators issue Certificates of Operation (COOs) to device operators who undergo such training. According to DOB, operators of permanent parks and street fairs are required to maintain COCs and COOs on site. COCs and COOs are valid for one year from the date of issuance and can be renewed annually.

DOB's internal policy calls for its inspectors to receive NAARSO approved training and to take the certification exam. NAARSO certification helps to ensure that DOB's inspectors are qualified to perform inspections.

According to data provided by DOB, there were 126 active permanent amusement devices in the City as of August 14, 2018. According to BIS data, DOB conducted 9,640 inspections—387 periodic and 9,253 spot checks for permanent devices—from January 1, 2016 through December 31, 2018.

Objective

To determine whether DOB has adequate controls over inspections of permanent, temporary, and portable amusement devices that are conducted by the Elevator Unit.

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.

The primary scope of this audit was from January 1, 2016 through December 31, 2018.

Discussion of Audit Results with DOB

The matters covered in this report were discussed with DOB officials during and at the conclusion of this audit. A preliminary draft report was sent to DOB and discussed at an exit conference held on March 12, 2019. On March 19, 2019, we submitted a draft report to DOB with a request for

comments. We received a written response from DOB on April 2, 2019. In its response, DOB agreed with 14 recommendations and partially agreed with the remaining 4 recommendations.

The full text of DOB's response is included as an addendum to this report.

FINDINGS AND RECOMMENDATIONS

DOB's controls over the inspection of amusement devices performed by its Elevator Unit, specifically with regard to the tracking and recording of inspections completed, are inadequate. Although the overwhelming majority of inspections performed are spot checks, the spot checks are rarely recorded on the devices' green cards, which makes it difficult for DOB to identify and verify the specific devices for which such inspections were performed. Of the 1,857 spot check inspections recorded in BIS for the permanent devices sampled, we found that only 267 (14 percent) were recorded on the green cards of the devices in question. Since DOB does not ensure that the results of these inspections are adequately documented, neither we nor DOB are able to reasonably ascertain the number of spot checks that were actually performed for our sampled devices. In addition, DOB does not monitor the frequency with which spot checks are performed.

Furthermore, DOB has a significant longstanding backlog of inspection results that have not been entered into BIS. Consequently, inspectors are unable to rely on BIS to confirm whether a device needs to be inspected, whether it has received the required number of mandatory periodic inspections, or if any spot checks have been made which a device was in operation. This weakness in DOB operations increases the risk that unnecessary inspections may be performed, which is an inefficient use of resources, or that necessary inspections might not be performed. In addition, hard copy route sheets, which are the source of the inspection results that are entered into BIS, cannot be readily located because they are not properly maintained.

Our review of the green cards for the sampled devices revealed that 165 (94 percent) of the 176 periodic inspections required during 2017 and 2018 were reportedly performed. However, only 68 (41 percent) of those 165 inspections were recorded in BIS. The remaining 97 inspections that were not in BIS had been performed an average of 327 days before our review of BIS—the days outstanding ranged from 85 to 641 days. This is because DOB does not ensure that the inspection information recorded in BIS for permanent devices is entered timely. In addition, DOB has not created a system to track temporary and portable devices or their inspections. As a result, DOB cannot readily assess whether all periodic inspections were conducted as required.

Moreover, while according to DOB officials at least one spot check of each device per location is required, DOB's records do not reflect that all of the required spot check inspections had been made. Based on a review of spot checks recorded in BIS for permanent devices from January 1, 2016 through October 23, 2018 we found that:

- For the 119 active devices in 2016, 37 (31 percent) devices had no record of a spot check.
- For the 124 active devices in 2017, 23 (19 percent) devices had no record of a spot check.
- For the 114 active devices in 2018, 15 (13 percent) devices had no record of a spot check.

In addition, we found that DOB incorrectly reported that multiple spot checks were performed for a device that had been removed and was no longer in operation at the times it was supposedly inspected. We subsequently found that the device was incorrectly identified in BIS as "active." In addition, when we compared the DOB listing of "removed" devices to the inspection data recorded in BIS, we identified an additional 16 devices that had records of periodic or spot check inspections totaling 294 inspections, notwithstanding these devices having been listed as "removed." Given our finding that the data in BIS is unreliable, we cannot tell if the devices were

incorrectly classified in BIS or whether inspections were inappropriately recorded in BIS for devices that were removed.

We also found that DOB did not document all deficiencies identified during its inspections or the corrective actions taken by park operators. In addition, the inspection checklists are not designed to allow for inspectors to indicate when a step in the inspection procedure is not checked off because it was not applicable to the device. This lack of clarity makes it harder for DOB to determine if a required inspectional step was not performed. The checklists also lack evidence of being reviewed by supervisors to ensure that all required steps are documented as having been taken. Consequently, the degree to which DOB can place reliance on the reported results of the device inspections is limited. Our review also found that DOB did not consistently record amusement device accidents and their related inspections on green cards, in the devices' accident log books, in BIS, and on accident reports as required by DOB policy.

Although not required by the RCNY, DOB's internal policy calls for its inspectors to receive NAARSO approved training. While we found that all 16 inspectors who performed amusement device inspections from January 1, 2017 through December 31, 2018 received such training and took the certification exam, only 10 passed the exam. DOB does not require its inspectors to have a NAARSO certification; however, they are required to take the training.

We believe that, to a significant extent, many of the issues identified are due to DOB's failure to establish adequate procedures over the inspection process to help ensure that inspectors are aware of their responsibilities and that inspections are conducted in a consistent manner. As a result of these deficiencies, DOB is unable to reasonably ensure that all required inspections are performed and that any deficiencies found are appropriately addressed. The details of our findings are discussed in the following sections of this report.

Inadequate Recording and Tracking of Inspections

Improperly Documented Spot Check Inspections

In accordance with DOB's internal procedures, its inspectors are required to perform at least one spot check of permanent and temporary devices to ensure that the device is being operated safely. DOB officials informed us that spot checks should be documented on checklists. In addition, according to Comptroller's Directive #1, *Principles of Internal Control*, control activities should exist at all levels and functions of an agency and include the creation and maintenance of related records that provide evidence of the execution of these activities.

However, DOB does not maintain adequate records of the spot checks conducted because it does not require that an individual checklist be completed for each spot check of a device. Instead, inspectors complete only a single checklist for all devices found at a location. The spot check checklists provided to us had as many as 21 device numbers listed at the bottom in the "inspectors notes" section, notwithstanding the fact that the checklist form appears to have been designed to record the inspection results of only one device; each checklist only had space for a single device number at the top and, depending on the type of device, up to 16 different items that need to be checked by the inspectors and marked off as "pass" or "fail."

By including inspection results for multiple devices on a single checklist, there is no clear record indicating that the specific inspection steps required for each device were actually performed.⁷ Moreover, as discussed in more detail below, the use of a single checklist to identify the results of spot checks of multiple devices appears to have resulted in spot checks being recorded in BIS, when in fact, they were never performed. Accordingly, the use of a single checklist to record the results of spot checks of multiple devices makes the recording and identification of deficiencies found, and the devices they pertain to, more difficult, and thus increases its unreliability.

Furthermore, according to DOB officials, after completing a periodic inspection, the inspector must sign, date, and indicate the type of inspection performed on the green card, maintained on-site in the parks' office, for *each* device. However, DOB has no such requirement for spot checks. Instead, for spot checks, DOB requires that only one green card related to a single device be signed and dated for that location and stated that the single signature indicates that spot checks were done for every device in the park. A DOB official stated that spot checks are performed anonymously and that signing each green card would identify the inspectors to the device operator. However, we question the validity of this stated concern since the green cards at the sites we visited were maintained in the park office and so the identities of the inspectors performing spot checks would not be revealed to the device operators by their filling out individual green cards at the park office for each device inspected.

Further, we found that DOB's stated practice of only filling out a single green card for multiple spot checks was, in fact, not consistently followed. During our review of green cards for permanent devices for the nine locations we visited, we found instances when spot checks were performed at a location and *every* green card was signed, other instances when only *some* green cards were signed, and instances when only *one* green card was signed. Due to an absence of specific procedures for recording spot checks, inspectors are not clear on how to document spot checks on green cards.

In at least one case, we found that DOB incorrectly reported that multiple spot checks were performed for a device. We identified a device that was listed in BIS as "active" for which three spot checks were recorded for 2018 but, according to Luna Park officials, this device was removed at the end of the 2017 season. Had DOB required that all green cards be signed at each location, they would have identified that this device had been removed and no longer at this location, and therefore could not have possibly received a spot check. Moreover, when we reviewed BIS, we identified 1,857 spot checks for permanent devices that were reportedly performed for the 9 locations we visited, 1,590 (86 percent) for which there were no notations on the green cards indicating that such inspections had been performed.

Notwithstanding these findings, DOB has indicated that there is no operational need to record such inspections on every green card. However, its current practice of permitting inspectors to sign a single green card for inspections performed on multiple devices, provides only limited assurance, if any, that each device actually received a spot check. Also concerning is that inspectors are required to list every device that is inspected on the route sheet, which is in turn signed by a supervisor and is the source document for the inspections recorded in BIS. The fact that DOB's records incorrectly reflect that inspections were conducted for a device that had been removed from service calls into question DOB's procedures for conducting the inspections, and by extension the reliability of DOB's inspection data overall. It also raises serious concerns about the monitoring and supervision of inspectors who perform spot checks.

⁷ The specific steps that need to be taken when inspecting individual devices depend on the nature of the device. Accordingly, not all of the 16 steps on the checklist need to be taken for every device.

Moreover, while according to DOB officials at least one spot check of each device per location is required, DOB's records do not reflect that all of the required spot check inspections had been made. Based on a review of spot checks recorded in BIS for permanent devices from January 1, 2016 through October 23, 2018 we found that:

- For the 119 active devices in 2016, 37 (31 percent) devices had no record of a spot check.
- For the 124 active devices in 2017, 23 (19 percent) devices had no record of a spot check.
- For the 114 active devices in 2018, 15 (13 percent) devices had no record of a spot check.

The failure of DOB to ensure that every device has at least one spot check every year results from its failure to monitor or perform analyses of the number of spot checks performed and recorded in BIS. Had DOB management been analyzing the BIS data, it would have determined that spot check results were not recorded in BIS. Without monitoring data related to spot checks, DOB is unable to effectively determine whether a spot check was performed for each device.

Furthermore, there is no defined frequency with which spot checks must be performed. Overall, for the three calendar years in our scope period, eight permanent devices each had anywhere from one to two spot checks recorded in BIS, while another 52 devices each had anywhere from 44 – 265 spot checks recorded. DOB has stated that going forward they intend to schedule spot checks through DOB NOW.⁸

By performing limited and even sometimes no spot checks, there is a potential for an increased risk to public safety. In addition, DOB has inefficiently used its resources by performing an excessive number of spot checks for some devices while others had no evidence of spot checks in BIS. As stated previously, spot checks are performed solely during overtime hours when there is increased ridership. According to DOB, spot checks are assigned by the assistant chief based on who is willing to work overtime. However, he does not create a written schedule indicating who will be conducting those spot checks, but rather informs staff verbally. Our review of the City's Payroll Management System (PMS) indicates that in Calendar Year 2017, inspectors who performed spot checks that year reportedly earned, on average, \$12,400 in overtime—ranging from \$1,300 to \$31,600. While in Calendar Year 2018, inspectors who performed spot checks that year reportedly earned, on average, \$14,600 in overtime—ranging from \$2,060 to \$33,500. (Total overtime reportedly earned during Calendar Years 2017 and 2018 for spot checks was \$136,138 and \$160,398, respectively).⁹ Based on DOB's inadequate controls over documenting spot checks, there is an increased risk that inspectors may not be performing all of the spot checks reported to have been performed.

Inspection Information Recorded in BIS for Permanent Devices Is Incomplete and Unreliable

DOB procedures state that inspection results are to be entered in BIS on a daily basis. In fact, according to the *Elevator Division Operations Manual*, applicable to the inspection of amusement devices, inspectors must check BIS prior to performing periodic inspections to verify that a device still requires one. Additionally, according to Comptroller's Directive #1, *Principles of Internal*

⁸ DOB NOW is a computer-based management tool that enables online inspection scheduling, tracking, and notification.

⁹ According to DOB, PMS code 8009 was used for amusement devices until July 1, 2018, at which time the amusement device code was merged with code 9038 (seasonal workload).

Control, “Transactions should be promptly recorded to maintain their relevance and value to management in controlling operations and decision making.”

However, DOB does not ensure that the inspection information recorded in BIS for permanent devices is entered timely or is complete and accurate. Our review of sampled green cards for 44 permanent devices, from February 10, 2016 through August 14, 2018, found that 346 (40 percent) of the 870 inspections identified were not recorded in BIS as required as of October 23, 2018. In fact, we identified 47 inspections performed in 2016 that had not been recorded in BIS as of October 23, 2018—dating as far back as February 2016, over two years and eight months after being conducted. Further, we found that DOB management had never identified the existence of this backlog and so never established a plan to address it. The employee in charge of data entry explained that she began entering inspection results in late 2017 after the prior individual responsible left DOB, and at the time she assumed this responsibility, she found a significant backlog of inspection results that had not been entered. As a result of DOB’s failure to ensure that amusement device inspection data was timely entered into BIS, the backlog of entering inspection results went unresolved for years, leading to the information recorded in BIS being incomplete.

Furthermore, DOB management does not emphasize the procedure that calls for inspection results to be recorded promptly in BIS. Our review found that inspection results that were entered in BIS were also not entered timely. We randomly selected 10 of the 126 permanent active devices (from the August 15, 2018 list) and reviewed the 284 associated inspections recorded in BIS. We found that, on average, it took 146 days (nearly 5 months) for inspections to be entered into BIS, including 68 inspections (24 percent) that took between 200 - 300 days to be entered and 50 inspections (18 percent) that took between 301 - 354 days to be entered. According to DOB, beginning on November 15, 2018 all permanent amusement device inspections were required to be recorded in its DOB NOW computer system automatically after being submitted by an inspector. However, in a subsequent meeting we had with DOB officials they stated that the recording of inspections in DOB NOW will not occur until the new season begins in March 2019.

Moreover, DOB management does not ensure that periodic reviews of inspection information for permanent amusement devices are conducted to ensure that the minimum requirement of two periodic inspections per year is met.¹⁰ Based on a review of periodic inspections recorded in BIS between January 1, 2016 and October 23, 2018 we found that:

- Of the 237 required periodic inspections for the 119 devices active in 2016,¹¹ there was no record in BIS that 105 (44 percent) of the inspections had been performed;
- Of the 246 required periodic inspections for the 124 devices active in 2017,¹² there was no record in BIS that 105 (43 percent) of the inspections had been performed; and
- Of the 228 required periodic inspections for the 114 devices active in 2018, there was no record in BIS that 166 (73 percent) of the inspections had been performed;

Had DOB inspectors checked BIS prior to performing periodic inspections, as required, they would have identified that many of the devices had no record of a periodic inspection being performed.

¹⁰ As noted in the Background section, each amusement device is required to have a minimum of two periodic inspections per year—one prior to the initial use of the device and the second between 90 to 120 days after the first inspection. For devices that operate year-round, a third inspection is required. For the purposes of this analysis, however, we tested whether each device received the required minimum of two periodic inspections.

¹¹ In 2016 one device was activated midseason and therefore required only one inspection.

¹² In 2017 there were two devices activated midseason and therefore each device required only one inspection.

Without monitoring data related to amusement device inspections, DOB is unable to: (1) effectively determine whether the required number of inspections are performed for every device; (2) determine whether periodic inspections are performed timely; or (3) identify potential issues or inefficiencies requiring corrective action when necessary. During 2017 and 2018, there were 43¹³ sampled permanent devices that received 165 periodic inspections as per their green cards. Of these, 90 represented the second and third required inspection of the respective years. Our review of the green cards found that 42 (47 percent) of the 90 periodic inspections were not conducted 90-120 days (*i.e.*, no sooner than 90 and no later than 120 days) after the previous inspection, as required. Furthermore, inspectors are unable to rely on BIS as a resource for confirming whether an inspection is required for a device, which may result in unnecessary inspections and a waste of resources.

Poor Route Sheet Recordkeeping

DOB stated that route sheets—which are the source documents for the inspection information recorded in BIS—are filed by inspector name and date of inspection.¹⁴ Additionally, Comptroller's Directive #1, *Principles of Internal Control*, states that all transactions and events need to be clearly documented and the documentation readily available for use or examination.

We attempted to systematically select 50 route sheets in order to compare the information from the route sheets to the information entered into BIS; however, we were unable to find any of the selected route sheets. Rather, we found that route sheets for multiple years were haphazardly stored in boxes and were not organized by date or inspector, and route sheets that were data entered into BIS were filed with route sheets that had not been data entered.

Because of DOB's poor recordkeeping and filing of route sheets it would be difficult for DOB to locate route sheets and to ensure the timely and accurate entry of inspection information. The poor recordkeeping in combination with the previously mentioned backlog in entering inspections could also result in route sheets being lost and inspections never being entered into BIS. Consequently, we were unable to determine whether the inspection information that was recorded in BIS was accurate.

Temporary and Portable Devices and Their Related Inspections Are Not Tracked

RCNY § 3005-10 requires DOB to inspect temporary devices to ensure that they are operating safely. Additionally, Comptroller's Directive #1, *Principles of Internal Control*, states that management requires operational data to determine whether they are meeting their agencies' strategic goals and annual performance plans as well as achieving their goals for the effective and efficient use of resources.

However, DOB has not created a system by which all active temporary and portable devices and their inspection statuses are tracked and recorded. According to DOB officials, BIS was designed to track devices based on the park's address using the Block and Lot number.¹⁵ DOB stated that due to the fact that temporary and portable devices do not have a permanent address and are relocated throughout the year based on the street fair's location, it would be difficult to track these devices in BIS. Additionally, DOB stated that it has insufficient resources to incorporate temporary

¹³ One device was removed during Calendar Year 2016.

¹⁴ According to DOB officials, hardcopy route sheets will no longer be used with the implementation of DOB NOW. The information from the route sheets will be recorded directly in DOB NOW going forward.

¹⁵ Block and lot numbers identify the location of buildings or properties.

and portable devices into BIS because “the small team responsible for making changes to BIS has multiple other competing priorities” However, DOB has not established an alternate method for tracking inspections of these devices outside of BIS.

By not establishing a system that enables DOB to record and track the inspections performed of these devices, management has failed to provide a means for it to efficiently determine whether DOB is meeting the requirement that these devices receive a periodic inspection, which can potentially increase the risk to public safety.

Deficiencies with DOB NOW

As mentioned above, beginning in March 2019, DOB officials stated that all permanent amusement device inspections will be recorded in DOB NOW. For devices that require multiple days to be inspected (e.g., the Coney Island Cyclone—a large roller coaster), according to DOB, the result for each day was recorded in BIS as an “incomplete inspection” until the day the inspection was complete, resulting in a “pass” or “fail.” However, during a walkthrough of DOB NOW with inspectors, we identified that DOB NOW does not allow inspectors to select an “incomplete inspection” result for such situations. Instead, they must select the “fail” option for each day they were on site, which results in inaccurate recording and reporting of inspection results and inflates inspection numbers. According to DOB, an enhancement can be made to include a disposition type.

Recommendations

1. DOB should require individual inspection records to be completed for each device that receives a spot check and require inspectors to sign the green card of each device inspected.

DOB Response: “DOB partially agrees with this recommendation. DOB inspectors are currently using DOB NOW: *Inspections* to record permanent device inspection results. Those results include information on individual devices. DOB inspectors will not, however, sign the green card of each device for spot check inspections, for reasons described below. . . .

City rules have no provision for and do not require spot checks, and thus do not require the results of these spot checks to be recorded. DOB performs these inspections above and beyond rule requirements to promote the safe operation of amusement rides.

We believe it would be counterproductive for DOB inspectors to sign each device's green card when conducting spot checks. This is because unlike technical inspections where inspectors are in uniform and interact with park staff to conduct the inspection, inspectors conduct spot checks unobtrusively, often in civilian clothes, without announcing their presence to ride operators. Signing each device's green card announces the inspectors' presence in the park to ride operators, thereby reducing the inspectors' ability to effectively conduct additional spot checks on that date and on future dates. . . .

Nonetheless, in the past, DOB inspectors have signed one device green card at a given park when conducting spot check inspections to document that they visited the location as a unit personnel time accounting measure. Given that this has caused confusion as to when and how green cards are to be signed, and that

spot check inspections will be documented contemporaneously in *DOB NOW: Inspections* going forward, this will no longer be practiced.”

Auditor Comment: Although not required by City rules, spot checks are a DOB requirement and should therefore be sufficiently documented. DOB contends that signing green cards after spot checks would be counterproductive because it would announce inspectors’ presence to device operators. However, this concern is without merit because, as stated in the report, the green cards at the sites we visited were maintained *not* with each individual device but in the park office. Therefore, the identities of the inspectors performing spot checks would not be revealed to the device operators. Of greater concern, though, is DOB’s statement that they will no longer be signing *any* green cards. By signing the green card for each device inspected, DOB inspectors are attesting that they have performed spot check inspections for those devices, providing DOB with greater accountability of its inspectors. Notably, the green card is the only DOB record that is physically located at the amusement park or site where the spot-checked device is also located, and as such it is the only DOB record that, when signed by an inspector, provides some independent assurance that the inspector who completes it was in fact at the location. In the absence of signed green cards—and with no compensating control established in its place—DOB’s assurance that each device actually receives a spot check is further diminished. We therefore urge DOB to fully implement this recommendation.

2. DOB should ensure adequate oversight of the inspections of amusement devices, including developing written procedures detailing management’s responsibilities for monitoring and reviewing of data related to spot checks and periodic inspections, and ensuring that management performs regular reviews.

DOB Response: “The Department agrees with this recommendation. The Department will issue standard operating procedures detailing management’s responsibilities for monitoring and reviewing inspection information.”

3. DOB should generate periodic reports of spot checks to ensure that all devices are receiving at least one spot check annually, and to ensure that resources are being used efficiently.

DOB Response: “The Department agrees with this recommendation. The Department will generate periodic reports of spot checks to verify that each device receives at least one spot check annually.”

4. DOB should ensure that inspectors are entering the inspections into DOB NOW on the day they are conducted, implement a plan to eliminate the entry backlog for amusement device inspections, and ensure that going forward inspections are recorded timely.

DOB Response: “The Department agrees with this recommendation.”

5. DOB should generate periodic reports of inspections to ensure that all devices are receiving required inspections.

DOB Response: “The Department agrees with this recommendation.”

6. DOB should establish recordkeeping procedures to ensure that route sheets are filed and maintained in an organized manner so that they can be easily located.

DOB Response: “The Department agrees with this recommendation. DOB inspectors now use DOB NOW: Inspections to record inspection results for permanent amusement devices, eliminating the need for paper route sheets for those inspections. For inspections requiring route sheets, the Department will take steps such that those route sheets are filed and maintained appropriately.”

7. DOB should implement procedures for tracking temporary and portable devices and their associated inspections.

DOB Response: “The Department agrees with this recommendation.”

8. DOB should ensure that DOB NOW contains the appropriate categories necessary for the recording of required amusement device inspections.

DOB Response: “The Department agrees with this recommendation. DOB NOW contains the appropriate categories for permanent amusement device inspections. Any further adjustments to those categories will be made as circumstances require.”

Weaknesses in Inspection Process

Deficiencies Identified During Inspections Are Not Consistently Documented

RCNY §3005-03 requires inspection and test records of amusement devices be kept on site by the park operators. The records must contain any violation or notice of deficiency issued by DOB and the action taken to fix the problem. In addition, Comptroller’s Directive #1, *Principles of Internal Control*, states, “Operating information is also needed to determine whether the agency is achieving its compliance requirements under pertinent laws and regulations.” DOB uses a deficiency list to record defects identified during inspections and the corrective actions that were taken to remedy those defects. The deficiency list used by DOB is a triplicate form with one copy provided to the park operator and two copies maintained by DOB. However, DOB’s requirement is to only document defects that are not repaired on the day of the inspection on deficiency lists. DOB does not require its inspectors to record deficiencies that were fixed on the day of the inspection, and so the deficiency list does not reflect all deficiencies noted or the actions taken to fix those problems.

Furthermore, actions taken to correct deficiencies that cannot be corrected on the day of an inspection are not sufficiently documented. We found 10 deficiency lists for 1,098 periodic inspection checklists completed from January 1, 2016 through September 9, 2018. Only 1 of the 10 deficiency lists indicated the corrective action(s) taken to remedy the defect, as required. This is due to the lack of management enforcement of this requirement.

Since DOB does not document defects corrected on the day of the inspection, it would be difficult for DOB to identify recurring problems with particular devices. In addition, in instances where there is an accident or malfunction with an amusement device, DOB has limited records of the device history including deficiencies identified by inspectors and what corrective action was taken to correct them.

Lack of Supervisory Review of Inspection Checklists

Inspection checklists contain a provision for a supervisor’s signature indicating that the checklist was reviewed. DOB confirmed that checklists must be signed by a supervisor. However, we

sampled 242 periodic inspection checklists and found that *none* contained a supervisor's signature indicating that the checklists were reviewed. We also found eight photocopied spot check checklists containing the inspector's—an assistant chief—photocopied signature. A single signed checklist was used by the same inspector in each of the eight instances with the inspection date 'whited out' and replaced with a different date. This raises questions about the accuracy and reliability of the inspection results purportedly contained in the photocopied form.

The deficiencies noted above result from management's failure to enforce the agency's review and signature requirements. Moreover, we found no evidence that an alternate means exists for management to ensure that supervisors are reviewing and approving inspection checklists or that inspectors are properly conducting inspections beyond having the supervisors review and sign off on the checklists as required. Without original checklists and a supervisory review and signature, there is limited assurance that all components required to be inspected were examined and that all deficiencies were identified and corrected, potentially increasing the risk to riders' safety.

Deficient Periodic Inspection Checklist

According to DOB, inspectors must complete a checklist when performing inspections. Each checklist contains various items to be inspected where the inspector must indicate "pass" or "fail". However, upon examination of the checklists, it was unclear whether all *required* steps were performed during inspections because each checklist contained inspection steps that were left unchecked.

The same checklist template is used for every device, despite each device having different features to be inspected, so not all items will be inspected for all devices. Furthermore, DOB does not require inspectors to indicate items on inspection checklists that are not applicable for certain types of devices. According to DOB, if a certain inspection step on the checklist does not apply to a given device, it would be left blank. In addition, since the checklists are completed electronically and only include a check box for either "passed" or "failed," there is no way for the inspector to indicate that a step is not applicable. Consequently, there is an increased risk that incomplete inspections may occur with required steps not being performed and going unnoticed, leading to devices inappropriately passing inspections.

Based on a demonstration of DOB NOW, the "Not Applicable" option is available on the electronic inspection checklists.

Limited Evidence That Certificates of Operation Were Maintained

According to DOB, COOs must be maintained on site at the parks/shows and be presented to DOB inspectors during spot checks upon request. Spot check checklists contain an inspection item that requires inspectors to confirm (check mark either "pass" or "fail") that parks maintain valid COOs for device operators. COOs are valid for one year after they are issued.

However, we found that valid COOs were not maintained on site for 6 (46 percent) of the 13 sampled locations in 2018: 3 locations were unable to provide COOs and 3 had COOs that were not approved by the park operator and therefore not valid. Furthermore, we found inadequate evidence that inspectors checked for the COOs when performing spot checks. Our review of 52 sampled spot check checklists revealed that 20 (38 percent) did not indicate whether the COO was requested and reviewed by the inspector. Without valid COOs, there is limited assurance that device operators are competent and qualified in operating the devices, increasing the risk to public safety.

Insufficient Written Procedures

Per Comptroller's Directive #1, *Principles of Internal Control*, "Internal controls should be documented in management administrative policies or operating manuals." In its response to the Comptroller's Office *Calendar Year 2017 Checklist Agency Evaluation of Internal Controls Directive #1 - Effectiveness & Efficiency*, DOB stated that its policies and procedures are reflected in formal written operating procedures and communicated to appropriate agency staff.

However, our review found that DOB has not developed detailed written procedures relating to its inspection process for amusement devices. While DOB provided the *Elevator Division Operations Manual*, this manual only listed the types of amusement device inspections and included a sample route sheet, periodic inspection checklist and spot check checklist. It does not detail the step-by-step processes for scheduling inspections; the frequency with which periodic and spot check inspections should be conducted for each device; the documentation (green cards, checklists, route sheets, deficiency lists—including corrective actions taken) required to be completed by inspectors for each type of inspection; how and when to properly complete and submit the required inspection documentation for review; how to properly record inspection information in BIS; and how accidents should be documented. DOB, however, believes its procedures as currently promulgated are sufficient.

Since DOB did not have specific procedures related to the amusement device inspection process, employees may not have been aware of how to handle certain tasks and have taken an inconsistent approach to their duties. For example, inspectors inconsistently recorded spot checks on green cards and none of the sampled inspection checklists had evidence of supervisory review as required. This led to inefficiencies, confusion, and errors, as well as rendered it more difficult for DOB to hold individuals accountable when they failed to carry out their responsibilities.

Recommendations

9. DOB should require all deficiencies to be recorded on deficiency lists regardless of when they are corrected and enforce the requirement that actions taken to correct deficiencies be documented.

DOB Response: "The Department agrees with this recommendation. Failure on items on the inspection checklist will be documented. The Department will also document actions taken to correct deficiencies."

10. DOB should ensure supervisors adequately review spot check checklists, and require follow-up of any items left unchecked.

DOB Response: "The Department agrees with this recommendation."

11. DOB should ensure that supervisors review and approve periodic inspection checklists.

DOB Response: "The Department agrees with this recommendation, which it implemented while the audit was in progress."

12. DOB should amend the periodic inspection checklist for each item to indicate when the step is not applicable to a device until DOB NOW is fully operational for amusement device inspections.

DOB Response: "The Department agrees with this recommendation in that it is current practice. DOB NOW: *Inspections* allows an inspector to indicate when a checklist item is not applicable."

13. DOB should require inspectors to ensure that signed COOs are maintained on site.

DOB Response: “The Department agrees with this recommendation. DOB will continue to request to inspect copies of signed COOs as part of the inspection process.”

14. DOB should develop more detailed written procedures for its inspectors when performing amusement device inspections.

DOB Response: “The Department agrees with this recommendation. The Department will issue standard operating procedures for amusement device inspections.”

Inadequate Documentation of Amusement Device Accidents

As per the City’s Building Code, the device owner is required to report accidents to DOB.¹⁶ According to DOB officials, every reported amusement device accident, for all device types, and their required related inspections (to determine the causes) must be recorded: (1) on the device’s green card; (2) in DOB’s accident logbook; (3) in BIS; and (4) on an accident report. According to DOB’s procedures, the accident report must include a detailed description of the accident and the results of the related inspection(s). According to DOB policy, each accident report must be reviewed by a supervisor and the director of field operations for elevators.

However, DOB did not consistently adhere to these requirements for the 19 accidents identified in DOB records, which took place between June 20, 2016 and October 6, 2018. We identified these 19 accidents and their related devices by reviewing the green cards (for 6 sampled devices), the accident logbook, and BIS for the period of January 1, 2016 through December 31, 2018. Eighteen of these accidents were related to 14 permanent devices.¹⁷ However, the information we found was not consistently recorded in all of the required locations. We found that 6 of the 18 accidents were not recorded in the logbook and 13 of the 18 accidents were not recorded in BIS. For the six devices in our sample for which we had the green cards—pertaining to seven of the accidents—we found that three of them were not recorded on the green cards. In addition, there was one accident recorded in the logbook for a temporary device that was not in our sample, since it was not recorded in BIS in accordance with DOB’s policy to not track temporary devices.

Of greater concern, the six accidents not recorded in the logbook were also not documented with accident reports. As stated previously, according to DOB’s procedures, the accident report must include: (1) a detailed description of the accident; (2) the person(s) involved; (3) whether there was an injury; (4) the device’s inspection history; (5) how DOB was notified; (6) the results of the related inspection(s); and (7) the conclusion of the investigation. Without properly documenting all accidents, DOB is unable to adequately track the reported accidents and ensure that the necessary protocols have been followed, including determining the cause of the accident and whether all necessary corrective action was taken.

¹⁶ Accidents required to be reported to DOB must involve “injury to any person requiring the services of a physician or damage to property or to apparatus exceeding \$1,000.”

¹⁷ There were four devices that each had two accidents; three of which were at Luna Park and one at Adventurer’s.

Furthermore, a review of the 13 accident reports that were maintained by DOB found that 3 (23 percent) did not indicate the result of the inspection that is required to be performed after an accident is reported.¹⁸

DOB does not ensure that inspectors complete all required documentation for accidents. Although DOB informed us that accident reports must be reviewed by a supervisor and the director of field operations for elevators, we found no evidence that such reviews occurred. None of the reports were signed and the report design does not include a dedicated field for reviewer signatures. In addition, the accidents that were not recorded in BIS may not have been recorded due to the previously mentioned backlog in entering information into the system and because temporary and portable devices are not recorded in BIS. Due to the deficiencies in recording accidents, DOB has limited assurance that all accidents reported were accounted for and that required corrective actions were taken, which can increase the risk to public safety. Consequently, we were unable to determine whether all accidents required to be reported were documented.

Recommendations

15. DOB should ensure that all accidents are documented on the device's green card, in DOB's Accident Logbook, on an accident report, and in BIS or DOB NOW.

DOB Response: "The Department partially agrees with this recommendation. The Department will continue to document all accidents as required by the New York City Building Code. However, the device green card is not an appropriate record on which to document accidents."

Auditor Comment: DOB's response contradicts the information we were provided by DOB officials during the course of the audit. Regarding the recording of accidents on green cards, DOB confirmed to us in writing that all accidents are *required* to be noted on green cards with the letter "A" signifying that an accident occurred and an inspection was performed. In fact, we found that some accidents were recorded on the green cards with a letter "A", an indication that the staff in question recognized this to be a requirement. We therefore urge DOB to fully implement this recommendation.

16. DOB should amend the accident report to include required signatures of reviewers.

DOB Response: "The Department agrees with this recommendation. The current version of the accident report form includes a section for reviewer signature."

Other Matters

Device Statuses in BIS Are Not Accurate

According to Comptroller's Directive #1, *Principles of Internal Control*, "Sound control activities help ensure that all transactions are . . . accurately recorded." According to DOB, a device's status must be recorded in BIS; devices that are currently operational should be recorded as "active," devices that have been physically removed should be recorded as "removed."

¹⁸ Of the 13 accidents for which accident reports were maintained, 1 accident was attributed to device malfunction, 4 to operator error and 8 to rider error.

We selected 16 of the 21 devices (located in two Brooklyn locations) that had no periodic inspections recorded in BIS from January 1, 2016 through October 23, 2018 even though the devices' statuses were listed as "active." However, we were unable to gain access to the first location, which contained 11 of the 16 sampled devices because the park was closed for the entire 2018 season. For the five remaining devices in the second location, three were found and two were not. According to a park official, the two devices not found were removed from that location. Therefore, the device statuses for these two devices should be recorded as "removed" in BIS but were incorrectly recorded as "active."

In addition to the 16 selected devices, we identified an additional device in the second location that was recorded in BIS as "active" and had three spot checks recorded, on three separate dates by two different inspectors, for 2018 but on the day of our visit this device was not found at the park. According to park officials, the device was removed at the end of the 2017 season. We also identified two devices that were in use at the park and that had 295 total inspections recorded in BIS, but whose device status was incorrectly recorded in BIS as "removed." In total, we identified five devices with inaccurate statuses in BIS.

Further, when we compared the DOB listing of "active" devices to the inspection data recorded in BIS, we identified an additional four devices (not in our sample) that had no record of periodic or spot check inspections. This could indicate that these devices were removed and also incorrectly classified in BIS or that required periodic and spot check inspections had not been conducted. In addition, when we compared the DOB listing of "removed" devices to the inspection data recorded in BIS, we identified an additional 16 devices that had records of periodic or spot check inspections totaling 294 inspections. This raises questions as to whether the devices were incorrectly classified in BIS or whether inspections were inappropriately recorded in BIS for devices that were removed.

Because DOB does not reconcile the status of devices found by inspectors with the status recorded in BIS, there is an increased risk that active devices that are listed as "removed" may be allowed to operate without receiving the required inspections.

Although DOB informed us on January 16, 2019 that DOB NOW is the system of record for device statuses going forward, it needs to ensure that these statuses are accurate.

DOB Did Not Meet NAARSO Training Targets for Its Inspectors

Although not required by the RCNY, DOB has an internal goal to provide all of its inspectors with NAARSO approved training and certification as a reinforcement to ensure "it's [sic] inspectors are qualified" to perform inspections. Upon completion of the training, inspectors take a NAARSO certification exam. We found that all 16 inspectors who performed amusement device inspections from 2017 through 2018 received this training and took the certification exam. However, only 10 of the 16 passed the exam and so only those 10 received NAARSO certifications. According to DOB, of the six who failed the exam, four failed twice and two failed once. However, DOB officials stated that there are no consequences for inspectors who fail the certification exam. While DOB does encourage the inspectors who fail to retake the exam the following year, agency officials did not identify any efforts made to provide added training for these inspectors in areas in which they are weak or in need of assistance (e.g., tutoring) to help them pass the exam.

When inspectors who have not received NAARSO certification conduct inspections of amusement devices, DOB has less assurance that inspections are being conducted by inspectors who are knowledgeable in the most up-to-date amusement device inspection training. DOB also has less

assurance that all amusement device inspections are being performed with a consistent level of expertise.

Recommendations

17. DOB should periodically review and update device statuses in DOB NOW and reconcile devices with inspections recorded in DOB NOW and create an “inactive” status for devices that are not operational, but that have not been removed from their location.

DOB Response: “The Department partially agrees with this recommendation. DOB will take steps such that device statuses are periodically updated. It will take the recommendation regarding creating an ‘inactive’ status under advisement.”

Auditor Comment: DOB should strongly consider adding the “inactive” status for devices that are not removed and are not in operation allowing DOB to more accurately classify and track device statuses and their corresponding inspections.

18. DOB should consider providing training and/or tutoring assistance to inspectors who fail the NAARSO certification exam so as to increase their proficiency in weak areas and their prospect of passing a subsequent exam and receiving a NAARSO certification.

DOB Response: “The Department partially agrees with this recommendation. Neither the National Elevator Code nor the New York City Building Code requires NAARSO training or NAARSO certification. However, DOB does go above and beyond City and national requirements by encouraging its amusement ride inspectors to take the NAARSO training. As noted in the audit, all of DOB’s amusement ride inspectors took the training.”

Auditor Comment: NAARSO training itself is not the goal but is the means toward the goal—NAARSO certification, which signifies that an inspector is knowledgeable in the most up-to-date amusement device inspection training. Consequently, it would be prudent that DOB provide additional assistance to inspectors who fail the exam so that they can attain such certification. Accordingly, we encourage DOB to 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.

The primary scope of the audit was from January 1, 2016 through December 31, 2018.

To obtain an understanding of DOB's role in the inspection of amusement devices, we reviewed Chapter 3000 Elevators and Conveying Systems of *The Rules of the City of New York (RCNY)*, DOB's Elevator Division Operations Manual, and DOB's standard operating procedures related to its *Inspections Oversight Program*. In addition, we reviewed Comptroller's Directive #1, *Principles of Internal Control* and DOB's response to the Comptroller's Office *Calendar Year 2017 Checklist Agency Evaluation of Internal Controls Directive #1 - Effectiveness & Efficiency*. We also interviewed officials from DOB's Elevator Unit, including a chief inspector, an assistant chief inspector, and two associate inspectors. Furthermore, to ascertain the steps taken by DOB inspectors when performing inspections, we accompanied DOB inspectors on June 20, 2018 in their performance of inspections for temporary amusement devices at the St. Theresa Street Fair in the Bronx and again on June 25, 2018 for permanent amusement devices located in Brooklyn's Luna Park.

To determine whether the periodic and survey inspection data recorded in BIS is accurate and reliable we randomly selected 50 inspection date entries, using ACL, in order to compare them to the route sheets to ensure the information matched. In addition, we planned to select 50 route sheets to compare the information on the route sheets to the information recorded in BIS. However, we were unable to perform these tests due to the unorganized manner in which the route sheets were maintained.

To ascertain the accuracy and reliability of device statuses (e.g. active or removed) as recorded in BIS, we selected 16 devices that had no periodic inspections recorded in BIS from January 1, 2016 through October 23, 2018 and visited the park where the devices were located to determine whether the devices were still active or had been removed.

To ascertain whether the checklists were reviewed by a supervisor we reviewed all 242 periodic inspection checklists provided to us for the period January 1, 2016 through December 31, 2017 and checked for a supervisor's signature.

We reviewed the dataset of inspections recorded in BIS for all active permanent devices from January 1, 2016 through October 23, 2018 to determine the number of periodic inspections and spot checks recorded.

To determine whether DOB adequately tracks the inspections performed by its inspectors we reviewed the green cards from January 2016 through July 2018 for 44 sampled permanent devices and compared the dates of the inspections recorded on the green cards to the inspection dates recorded in BIS. We reviewed inspection data maintained in BIS to determine the timeliness with which inspections are recorded by comparing the inspection date recorded in BIS to the entry date generated by the system for inspections of our sampled devices. In addition, we compared

the periodic inspection dates recorded in BIS for our sampled devices to the dates recorded on the green cards and the corresponding inspection checklists to determine whether there was evidence that a periodic inspection was performed. We also reviewed the periodic inspection dates recorded on green cards to determine whether inspections were performed timely.

Since DOB informed us that DOB NOW is the system of record for amusement device inspections going forward, beginning in March 2019, we conducted an observation of DOB NOW to obtain an understanding of how inspections will be scheduled and documented.

We reviewed BIS to ascertain whether DOB tracks and records inspections of temporary and portable amusement devices.

To determine whether park operators of permanent amusement devices maintained the required inspection documentation on site we systematically selected and visited four locations in Manhattan, two in Brooklyn, and one each in Queens, Staten Island, and the Bronx, covering 44 of the 126 active permanent devices.¹⁹ Specifically, we determined whether Certificates of Operation were maintained for Calendar Years 2017 and 2018. We also performed this same test for two shows/events located in Manhattan and two show/events located in Brooklyn where temporary amusement devices were operated. To ascertain whether there was sufficient evidence that inspectors requested the Certificates of Operation from park operators during spot checks we systematically selected 52 spot check checklists for 2018 and determined whether this inspection step was performed.

To determine whether inspectors who performed amusement device inspections during Calendar Years 2016 through 2018 received NAARSO certification we reviewed supporting documentation provided by DOB of inspectors who received this certification and compared it to the October 23, 2018 inspection dataset provided to us, which identifies the names of inspectors who performed device inspections during our scope period.

To determine whether any defects found during an inspection were documented, we reviewed all 1,098 periodic inspection checklists provided to us for permanent, temporary and portable devices from January 1, 2016 through September 9, 2018²⁰ and identified all deficiency lists that were attached and reviewed them for evidence of documented repairs. To determine whether DOB adequately documents accidents and their associated inspections, we reviewed DOB's accident log book and accident reports for the period of January 1, 2016 through December 31, 2018, green cards for our sampled permanent devices, and BIS.

Although the results of our sampling tests were not statistically projected to their respective populations, these results, together with the results of our other audit procedures and tests, provide a reasonable basis for us to determine whether DOB has adequate controls over inspections of amusement devices.

¹⁹ We systematically selected: (1) all permanent devices located in the Bronx and Manhattan; (2) the location with the most permanent devices in Queens and Staten Island; and (3) two locations in Brooklyn with the most permanent devices.

²⁰ For Calendar Year 2016 we reviewed the 2016 periodic inspection checklists for permanent devices that were provided to us at the beginning of the audit; for Calendar Years 2017 and 2018 we reviewed the 2017 and 2018 periodic inspection checklists for both permanent and temporary devices that were provided to us on September 12, 2018.



Thomas Fariello, R.A.
Acting Commissioner

April 2, 2019

280 Broadway
7th Floor
New York, NY 10007
nyc.gov/buildings

+1 212 393 2002 tel
+1 646 500 6308 fax

Ms. Marjorie Landa
Deputy Comptroller for Audit and Investigation
Office of the New York City Comptroller
One Centre Street, Room 1100N
New York, New York 10007

Re: Audit Report on the Department of Buildings' Controls over the Inspection of Amusement Devices MD18-104A (Draft Report of March 19, 2019)

Dear Ms. Landa:

Thank you for the opportunity to respond to the recommendations in the above-captioned draft audit report.

At the Department of Buildings, safety is our top priority, whether for amusement rides or any of the city's nearly 1.1 million buildings. The strong safety record of our city's permanent amusement rides reflects this commitment: in the three years reviewed in this audit, during which time millions of people visited the city's amusement parks, there was one minor injury caused by a malfunctioning ride. In this case, which occurred in May 2017, a patron's clothing caught on an exposed bolt, causing the patron to bruise her arm.

While the city's amusement parks are well attended, there are a limited number of locations with amusement rides in New York City and the Department performs inspections at these parks many times throughout the year. In addition to inspections mandated by city rules that examine the rides' mechanical integrity, DOB conducts spot checks to encourage ride operators to prioritize safety. While we are not mandated to perform these spot checks, we do so as part of our longstanding mission to promote safety. DOB has already begun the process of thoroughly inspecting every permanent amusement ride in the city, as it does every year, prior to the start of the 2019 season. Accordingly, all permanent amusement rides in New York City will be inspected by April 7th. As noted above, the Department will then conduct many additional safety inspections to ensure that the rides at those locations are properly operated and maintained throughout the season.

While DOB works diligently to ensure that amusement rides are safe, we also acknowledge that many of audit report's criticisms regarding record keeping are well-founded. In fact, some of these poor record keeping and documentation practices caused the auditors to conclude that in some cases DOB recorded inspections on removed devices or were not aware of active devices. This is not the case. While the appropriate devices were in fact inspected, poor record keeping and data entry errors obscured that fact. This further highlights the need for changes to our amusement ride record keeping procedures and practices – and we intend to implement these improvements swiftly and in accordance with many of the auditors' recommendations.

Ms. Marjorie Landa
April 2, 2019
Page 2

One of the primary ways in which we are addressing the record keeping concerns highlighted in the audit is through our DOB NOW: *Inspections* system, which DOB inspectors are now using to document inspections for permanent devices. Through this system, your auditors and members of the public will have access to the results of our inspections and spot checks of amusement rides nearly in real time. We believe this change will far more accurately reflect DOB's longtime work to inspect the city's amusement rides thoroughly and frequently.

Response to Recommendations

Recommendation 1: DOB should require individual inspection records to be completed for each device that receives a spot check and require inspectors to sign the green card of each device inspected.

DOB Response: DOB partially agrees with this recommendation. DOB inspectors are currently using DOB NOW: *Inspections* to record permanent device inspection results. Those results include information on individual devices. DOB inspectors will not, however, sign the green card of each device for spot check inspections, for reasons described below.

RCNY §3005-10 requires that DOB conduct acceptance tests and inspections and periodic re-inspections of amusement ride devices. Green cards, as per the rule, are to certify that the ride has been inspected, tested, and found to be in compliance with safety requirements.

Amusement ride spot checks differ significantly from periodic inspections and acceptance tests. Unlike those inspections, which involve full review of the mechanical workings of the device, spot checks are non-technical inspections conducted to observe whether ride operators are operating rides safely and that the devices have the proper safety protections in place.

City rules have no provision for and do not require spot checks, and thus do not require the results of these spot checks to be recorded. DOB performs these inspections above and beyond rule requirements to promote the safe operation of amusement rides.

We believe it would be counterproductive for DOB inspectors to sign each device's green card when conducting spot checks. This is because unlike technical inspections where inspectors are in uniform and interact with park staff to conduct the inspection, inspectors conduct spot checks unobtrusively, often in civilian clothes, without announcing their presence to ride operators. Signing each device's green card announces the inspectors' presence in the park to ride operators, thereby reducing the inspectors' ability to effectively conduct additional spot checks on that date and on future dates.

Lastly, where the green card is specifically to certify the result of inspections related to mechanical fitness and operability of the device, spot checks are to observe whether operators and other staff set up and use the device safely, information that is specific to the actions of the ride operator and park owner, not the device itself. Information related to spot checks, therefore, does not belong on the device green card.

Nonetheless, in the past, DOB inspectors have signed one device green card at a given park when conducting spot check inspections to document that they visited the location as a unit personnel time accounting measure. Given that this has caused confusion as to when and how green cards are to be signed, and that spot check inspections will be documented contemporaneously in *DOB NOW: Inspections* going forward, this will no longer be practiced.

Recommendation 2: DOB should ensure adequate oversight of the inspections of amusement devices, including developing written procedures detailing management's responsibilities for monitoring and reviewing of data related to spot checks and periodic inspections, and ensuring that management performs regular reviews.

Ms. Marjorie Landa
April 2, 2019
Page 3

DOB's Response: The Department agrees with this recommendation. The Department will issue standard operating procedures detailing management's responsibilities for monitoring and reviewing inspection information.

Recommendation 3: DOB should generate periodic reports of spot checks to ensure that all devices are receiving at least one spot check annually, and to ensure that resources are being used efficiently.

DOB's Response: The Department agrees with this recommendation. The Department will generate periodic reports of spot checks to verify that each device receives at least one spot check annually.

Recommendation 4: DOB should ensure that inspectors are entering the inspections into DOB NOW on the day they are conducted, implement a plan to eliminate the entry backlog for permanent amusement device inspections, and ensure that going forward inspections are recorded timely.

DOB's Response: The Department agrees with this recommendation.

Recommendation 5: DOB should generate periodic reports of inspections to ensure that all devices are receiving required inspections.

DOB's Response: The Department agrees with this recommendation.

Recommendation 6: DOB should establish recordkeeping procedures to ensure that route sheets are filed and maintained in an organized manner so that they can be easily located.

DOB's Response: The Department agrees with this recommendation. DOB inspectors now use DOB NOW: *Inspections* to record inspection results for permanent amusement devices, eliminating the need for paper route sheets for those inspections. For inspections requiring route sheets, the Department will take steps such that those route sheets are filed and maintained appropriately.

Recommendation 7: DOB should implement procedures for tracking temporary and portable devices and their associated inspections.

DOB's Response: The Department agrees with this recommendation.

Recommendation 8: DOB should ensure that DOB NOW contains the appropriate categories necessary for the recording of required amusement device inspections.

DOB's Response: The Department agrees with this recommendation. DOB NOW contains the appropriate categories for permanent amusement device inspections. Any further adjustments to those categories will be made as circumstances require.

Recommendation 9: DOB should require all deficiencies to be recorded on deficiency lists regardless of when they are corrected and enforce the requirement that actions taken to correct deficiencies be documented.

DOB's Response: The Department agrees with this recommendation. Failure on items on the inspection checklist will be documented. The Department will also document actions taken to correct deficiencies.

Recommendation 10: DOB should ensure supervisors adequately review spot check checklists, and require follow-up of any items left unchecked.

DOB's Response: The Department agrees with this recommendation.

Ms. Marjorie Landa
April 2, 2019
Page 4

Recommendation 11: DOB should ensure that supervisors review and approve periodic inspection checklists.

DOB's Response: The Department agrees with this recommendation, which it implemented while the audit was in progress.

Recommendation 12: DOB should amend the periodic inspection checklist for each item to indicate when the step is not applicable to a device until DOB NOW is fully operational for amusement device inspections.

DOB's Response: The Department agrees with this recommendation in that it is current practice. DOB NOW: *Inspections* allows an inspector to indicate when a checklist item is not applicable.

Recommendation 13: DOB should require inspectors to ensure that signed COOs are maintained on site.

DOB's Response: The Department agrees with this recommendation. DOB will continue to request to inspect copies of signed COOs as part of the inspection process.

Recommendation 14: DOB should develop more detailed written procedures for its inspectors when performing amusement device inspections.

DOB Response: The Department agrees with this recommendation. The Department will issue standard operating procedures for amusement device inspections.

Recommendation 15: DOB should ensure that all accidents are documented on the device's green card, in DOB's Accident Logbook, on an accident report, and in BIS or DOB NOW.

DOB Response: The Department partially agrees with this recommendation. The Department will continue to document all accidents as required by the New York City Building Code. However, the device green card is not an appropriate record on which to document accidents.

Recommendation 16: DOB should amend the accident report to include required signatures of reviewers.

DOB's Response: The Department agrees with this recommendation. The current version of the accident report form includes a section for reviewer signature.

Recommendation 17: DOB should periodically review and update device statuses in DOB NOW and reconcile devices with inspections recorded in DOB NOW and create an "inactive" status for devices that are not operational, but that have not been removed from their location.

DOB Response: The Department partially agrees with this recommendation. DOB will take steps such that device statuses are periodically updated. It will take the recommendation regarding creating an "inactive" status under advisement.

Recommendation 18: DOB should consider providing training and/or tutoring assistance to inspectors who fail the NAARSO certification exam so as to increase their proficiency in weak areas and their prospect of passing a subsequent exam and receiving a NAARSO certification.

DOB Response: The Department partially agrees with this recommendation. Neither the National Elevator Code nor the New York City Building Code requires NAARSO training or NAARSO certification. However, DOB does go above and beyond City and national requirements by encouraging its amusement ride inspectors to take the NAARSO training. As noted in the audit, all of DOB's amusement ride inspectors took the training.

Ms. Marjorie Landa
April 2, 2019
Page 5

Though DOB encourages inspectors to take the NAARSO training, it cannot mandate that inspectors do so as part of their job qualifications. DCAS sets those requirements. Additionally, the certification exam that NAARSO administers is distinct from the training and entirely optional; taking and passing the certification exam is not required in order to complete the training. Though inspectors can take the exam of their own volition, DOB cannot and does not require that its inspectors take or pass the certification exam as part of a requirement to perform amusement ride inspections. Therefore, while DOB will continue to encourage inspectors to undergo the NAARSO training, the certification exam cannot be part of DOB's requirements or formal training goals.

Thank you again for the opportunity to respond to this audit and for your recommendations to improve our record keeping practices for amusement ride inspections and spot checks. We agree strongly that these practices can and should be improved significantly and we will do so.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Tom Fariello', with a large loop at the end.

Thomas Fariello, R.A.
Acting Commissioner

cc: George Davis, III
Archana Jayaram
Timothy Hogan
Germain Difo
Frank Torres
Kerry Castro