
Alan G. Hevesi
COMPTROLLER



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OFFICE OF THE
NEW YORK STATE COMPTROLLER

DIVISION OF STATE SERVICES

NEW YORK CITY
DEPARTMENT OF
BUILDINGS

OVERSIGHT OF PERMITS
FOR CRANES, DERRICKS
AND SUSPENDED
SCAFFOLDS

Report 2005-N-4

AUDIT OBJECTIVES

Our objectives were to determine whether the New York City Department of Buildings (Buildings) ensures that cranes, derricks, and suspended scaffolds being used in New York City have valid operating permits, Stop Work Orders (SWOs) are properly addressed, and Notice of Violations (Violations) are properly recorded so that the related fines can be billed for and collected.

AUDIT RESULTS - SUMMARY

We found that Buildings needs to increase its oversight to ensure that cranes, derricks, and suspended scaffolds (equipment) in use in New York City (City) have valid permits. In addition, we found that Buildings has not established adequate controls to ensure the proper monitoring and resolution of SWOs and the proper recording of Violations. Buildings also has not established written policies and procedures for the issuance of permits, as well as for the handling of SWOs and Violations. We believe this is a significant, contributing factor to the problems we identified during our audit.

Construction sites pose many dangers to public safety. Permits are required to ensure that the equipment being used meets certain insurance and safety requirements. We visited building sites throughout the City and determined that 43 of 144 (30 percent) equipment items we observed in use did not have a valid permit on record. Therefore, there was no assurance that the equipment met safety and insurance requirements. Inspectors followed up on our findings and found conditions of sufficient concern in seven instances to issue SWOs, requiring work to cease at five sites. We later determined that three of these five sites continued to operate their equipment despite the SWOs. We conducted additional

observations at selected sites and found instances where work was ongoing with expired permits or where a permit had not yet been issued. We discussed our findings with Buildings officials. They acknowledged the need for increased patrols, stating that they will hire an additional inspector. [Pages 4 - 5]

Management also needs to be more pro-active in ensuring that SWOs are resolved. Buildings relies primarily on the contractor to ensure that the conditions that resulted in the issuance of a SWO have been addressed. Unless a contractor requests an inspection of the corrected condition, Buildings officials do not follow up on a SWO, and therefore do not know whether a SWO has been resolved. We determined that only 9 percent (25 of 277) of the SWOs issued between January 1, 2004 and June 30, 2005 had evidence of being resolved. As previously noted, we observed instances where sites continued to operate despite the issuance of a SWO. While these conditions present the potential for injury, we were unable to obtain data on construction site accidents and incidences relating to cranes, derricks, and suspended scaffolds, as Buildings officials acknowledge that they do not maintain a reliable database of this information. They indicated they were in the process of constructing a database that will capture all construction accidents/incidents and correctly categorize the incident type. [Pages 6 - 7]

A Violation contains an order to correct a condition and to certify the correction to Buildings. In addition, the contractor must pay a fine. The issuance of a SWO will usually coincide with the writing of a Violation. However, Buildings has not established a system for reconciling Violations written by inspectors with those recorded and processed. We found that 17 of 313 Violations we tested were not properly recorded and processed. We calculated that

these Violations represent about \$25,750 in lost revenue to New York City. [Pages 7 - 8]

Our report contains seven recommendations to improve oversight of permits for cranes, derricks and suspended scaffolds. Buildings officials generally agreed with our recommendations and have begun to take steps to implement them.

This report, dated August 28, 2006, is available on our website at: <http://www.osc.state.ny.us>. Add or update your mailing list address by contacting us at: (518) 474-3271 or
Office of the State Comptroller
Division of State Services
State Audit Bureau
110 State Street, 11th Floor
Albany, NY 12236

BACKGROUND

The New York City Department of Buildings (Buildings) is responsible for ensuring public safety by regulating the work of the building industry in three major ways: authorizing construction and occupancy through the review of plans and issuance of building permits and certificates of completion, issuing violations when construction or occupancy violates the law, and licensing many construction trades including plumbers, electricians, and crane operators. Buildings has jurisdiction over 900,000 buildings and properties within New York City's five boroughs. Each year, its 75 plan examiners and 225 inspectors perform more than 57,000 plan examinations (for building construction or alterations) and more than 350,000 building examinations. Buildings also issues approximately 71,000 building permits, 17,000 permit renewals, 9,500 certificates of occupancy, 57,000 violations, and 10,500 licenses.

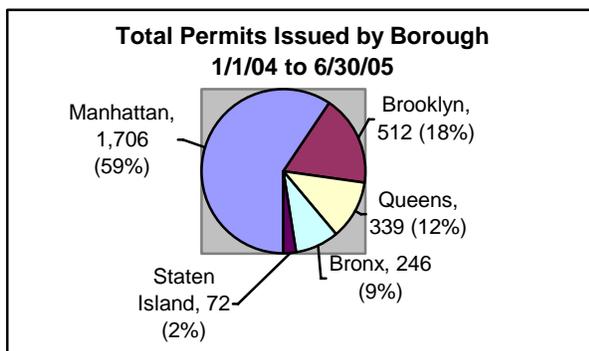
Buildings' Cranes and Derricks Division (Division) oversees the design, installation, and safe operation of equipment used for hoisting or lifting. The Division is responsible for issuing and monitoring permits for all cranes, derricks and suspended scaffolds. Permits are required before any work using the equipment commences. The Division is also responsible for ensuring that problems resulting in Stop Work Orders (SWOs) have been corrected. The Division's field inspectors test equipment integrity, conduct on-site equipment inspections, and oversee equipment registration and annual renewals. Division staffing consists of an Executive Director, three administrative staff, eight field inspectors, and one plan examiner.

Contractors must obtain three certificates from the Division to operate a crane or derrick in New York City. The first is the certificate of approval, for which the Division verifies that the design and testing of a specific make and model of a crane or derrick meets the New York City Building Code (Building Code) requirements. The second is the certificate of operation, for which the Division inspects the equipment to ensure it is in operating order. The certificate of operation is valid for one year, and applies only to the specific piece of equipment for which it is issued. The third is the certificate of on-site inspection (or permit), which allows a specific crane or derrick to operate at a specific location for a specified use. Before issuing this permit, the Division ensures that the proposed use does not exceed the equipment's capacity and that the equipment's foundation is stable.

Contractors must also obtain a permit from the Division to operate a suspended scaffold (scaffold) in New York City. The permits for scaffolds are site specific and have an expiration date. The permit expires the earliest of four expiration dates, the date of

the: contractor's license, general liability insurance, worker's compensation insurance, or disability insurance. Expiration dates are recorded on permit applications and are included when all other permit information is recorded in the Division's permit database. Although scaffolds do not have inspection requirements to receive a permit, Division officials told us that inspectors conduct spot checks of scaffolds during their patrols of construction sites. In addition, upon receiving a complaint concerning any piece of equipment, inspectors will inspect all equipment at a construction site.

The Division reported issuing 1,298 scaffold permits, 1,152 crane and derrick permits, and 425 scaffold permit renewals from January 1, 2004 through June 30, 2005. The following chart reflects, by borough, the numbers of permits issued.



AUDIT FINDINGS AND RECOMMENDATIONS

Permits for Cranes, Derricks and Scaffolds

Construction sites pose many dangers to public safety. Therefore, the required permits must be obtained as evidence that equipment being used at construction sites meets certain insurance and safety requirements. We found that the Division needs to increase its oversight to ensure that all cranes, derricks,

and scaffolds in use in New York City have valid operating permits.

Random Observations of Equipment

We conducted random site visits during the months of August and September 2005, observing cranes, derricks, and scaffolds (equipment). We visited four of New York City's five boroughs (we excluded Staten Island because of the small number of permits issued there). The largest proportion of the sites we observed was in Manhattan, where nearly 60 percent of the permits were issued. In total, we visited 86 sites and observed 144 pieces of equipment.

Our objective was to locate building sites where cranes, derricks, and/or scaffolds were in use, and to determine whether the equipment had valid permits. After identifying the equipment, we reviewed the Division's permit database to determine whether a permit had been issued for the items we observed. We provided Division officials with photos of the equipment and related addresses for items we could not locate in the database. After the Division's review of our information, we determined there was no valid permit on record for 43 of 144 (30 percent) equipment items we observed. There was no valid permit for 41 of the 104 (39 percent) scaffolds (13 had expired permits) and for 2 of the 40 (5 percent) cranes we observed. We did not observe any derricks.

In response to our findings, Division inspectors visited, or attempted to visit, the sites where we had located the 43 pieces of equipment. They found seven scaffolds located at five sites were still operating without a permit, and as a result, issued a Stop Work Order (SWO) requiring all work at the site to cease. For the other 36 equipment items, inspectors found either no ongoing

work or no equipment at the related sites. We followed up on the five sites where an SWO was issued and found that work continued at three of the sites.

Since Division officials could not assure us that a valid permit had been obtained for about 30 percent of the equipment we observed, it is important that the Division increase its oversight through patrols at construction sites. (Buildings officials acknowledge the need for increased oversight, stating they plan to hire an additional inspector.) The operation of equipment without a permit raises safety concerns. Moreover, the use of a scaffold with an expired permit indicates that the required insurance or license has expired, leaving no coverage should an accident occur.

While these conditions present the potential for injury, we were unable to obtain data on construction site accidents and incidences relating to cranes, derricks, and suspended scaffolds, as Buildings officials acknowledge that they do not maintain a reliable database of this information. They indicated they were in the process of constructing a database that will capture all construction accidents and incidents and correctly categorize the incident type.

Observations of Selected Equipment

We conducted additional observations of selected equipment to determine whether work was still occurring at locations where permits had expired or where permit applications had not yet been approved. We found the Division needs to increase its monitoring of these types of situations.

According to Division records, 94 scaffold permits had expired between August 1, 2005 and September 12, 2005. We judgmentally selected 78 of the 94 scaffolds and conducted

on-site observations between September 19, 2005 and October 5, 2005 to determine whether these scaffolds were still present at the site and whether work was ongoing. For 12 of the 78 (15 percent) expired permits, we found that equipment was still present at the work site and that 4 of the 12 scaffolds were operating on the day of our observation. The timeframe between the day of our visit and the permit expiration date for the four scaffolds ranged from 15 to 52 days. Division officials were not aware of these scaffolds operating past their permit expiration date. Although the other eight scaffolds with expired permits were not in violation of the Building Code because we did not observe them in operation, they still pose safety concerns and potentially could be operated.

As of September 12, 2005, we identified 24 scaffold permit applications received between June 1, 2005 and August 31, 2005 that had not yet been approved. They were pending the resolution of issues raised by the Division's plan examiner. We judgmentally selected 13 of the 24 applications, and found that work was ongoing at one site.

Division officials indicate there is insufficient manpower to routinely check scaffolds during patrols. They stated that, in addition to the large volume of inspection sites, timing is a critical factor in a meaningful inspection. An inspector needs to witness a scaffold actually being used to take action for operating without a permit. However, despite these assertions, we believe greater oversight is needed.

Division's Permit Database

The Division's database contains permit information for cranes, derricks, and scaffolds. However, we found the database should be improved to make it more useful as a monitoring tool. To research the issuance of

a permit, a user must type in the exact site address that was originally entered in order to retrieve the information from the database. The data cannot be obtained if the original entry contains an extra space, a period or hyphen, or unexpected capitalization. Therefore, inspectors cannot rely solely on the database to determine whether a valid permit has been issued for a specific location. We were able to overcome some of these limitations by utilizing software to convert the database to a more useable format.

The Division's Executive Director acknowledged the need for an improved database, and indicated such a project is now underway.

Recommendations

1. Increase patrols to identify contractors using equipment without a valid permit.
2. Follow up on sites without a valid permit and where SWOs have been issued.
3. Improve the Division's permit database to provide greater functionality and flexibility so that management can identify high risk situations needing oversight.

SWOs and Violations

Each Division inspector can issue a SWO and/or write a Notice of Violation (Violation). Article 24 of the Building Code states that a SWO may be issued for any work done in violation of the Building Code or other applicable laws or regulations, or done in a dangerous or unsafe manner.

A Violation notifies the contractor that a site does not comply with applicable provisions of the Building Code and/or the New York City Rezoning Resolution. It contains an order to

correct the condition and to certify the correction to Buildings. In addition, to resolve a Violation, a contractor must pay a civil penalty (fine), which varies based on the type of condition. Division officials stated that the issuance of a SWO will usually, but not always, coincide with the writing of a Violation. For example, if a contractor does not have his permit on-site, but can obtain it in a reasonable amount of time, a Violation might not be written. However, a SWO will be issued and work would cease until the permit is produced.

We found that the Division does not effectively monitor the resolution of SWOs nor ensure the proper recording of Violations.

SWOs

Division officials explained that a SWO is lifted when the contractor corrects the problem, and passes a re-inspection. The inspector documents subsequent compliance by initialing the SWO form. However, we found that the Division has not established internal controls that ensure the proper monitoring and resolution of all SWOs. The Division has not established a database, tracking system, or monitoring procedures for SWOs. Unless a contractor requests a re-inspection, the Division does not follow up on a SWO, and Division officials do not know whether a SWO has been resolved. We determined that only 9 percent (25 of 277) of the SWOs issued between January 1, 2004 and June 30, 2005 had been documented as "lifted." This indicates a potential lack of follow-up by the Division.

Given the seriousness of SWOs and the safety concerns associated with them, the Division needs to take immediate action to address their proper handling. The Division cannot rely primarily on contractors to ensure a SWO has been addressed, but needs to be more pro-

active in its approach. Division officials should implement a database to track the status of all SWOs, and act appropriately when SWOs are not resolved. The lack of follow-up and enforcement against contractors who do not correct a SWO enable unsafe conditions to continue with little or no consequences to the contractors.

Violations

Inspectors can write up a Violation upon inspection or when they become aware of a problem. However, they are not involved in the process of issuing, assessing and collecting the corresponding fines. Instead, the Environmental Control Board (ECB) is responsible for sending out the Violation containing an order to correct the condition, and for following up on the collection of the fine. (The ECB, an administrative court, is part of the New York City Department of Environmental Protection.) For the period of January 1, 2004 through June 30, 2005, ECB collected \$228,975 in fines for such Violations.

After a Violation is written, the corresponding data is inputted into ECB's database and subsequently downloaded to Buildings' own database, known as the Building Information System (BIS). BIS provides real-time data online to the general public and reflects the status of all Violations. However, the Division does not have a system to reconcile Violations written by inspectors and those recorded on the BIS and ECB databases.

The inspectors maintain copies of the Violations they have written. We reviewed these records for the 313 Violations written during our audit period and found 17 Violations (5 percent) that were not on the BIS or ECB databases. We calculated that the fines associated with these 17 Violations represent about \$25,750 in lost revenue.

In responding to our findings, Division officials indicate that they have begun to create a database of SWOs and Violations to track their status and resolution.

Recommendations

4. Develop a database to track the status and resolution of all SWOs.
5. Develop a system to reconcile all Violations written to those recorded on BIS.
6. Process the Violations that were not recorded on BIS, and recover the lost revenues.

Written Policies and Procedures

Written policies and procedures should be in place and used as a reference source for Division staff, as well as a learning aid for new employees to understand their roles and responsibilities. A written manual could provide program, policy, and technical information, and could specify the appropriate procedures to be followed in carrying out Division functions. We found the Division has not established written policies and procedures for the issuance of permits for cranes, derricks, and scaffolds, as well as for the handling of SWOs and Violations. We believe that the lack of written policies and procedures was a significant, contributing factor to the problems we identified during our audit.

According to a Buildings official, the Building Code was developed over the years through a series of bulletins, addendums, and word-of-mouth interpretations, and it does not set forth clear requirements for obtaining a permit for cranes, derricks and scaffolds. The Buildings official told us that the Building Code is difficult to read and its requirements

are not stated clearly. The Buildings official told us that the Building Code is in the process of being rewritten and updated.

The Division's Executive Director told us that she has begun to address the lack of written policies and procedures. She has developed in-house drafts of Scaffold Permitting Procedures and On-Site Crane Permitting Procedures, and is preparing plans for implementing formal written policies and procedures that will govern many of the Division's other functions.

Recommendation

7. Adopt formal written policies and procedures for all Division responsibilities and activities, including permits, SWOs and Violations.

AUDIT SCOPE AND METHODOLOGY

We conducted our performance audit in accordance with generally accepted government auditing standards. We audited Buildings' oversight of permits for cranes, derricks and scaffolds for the period January 1, 2004 through November 3, 2005. To accomplish our objectives, we met with Buildings officials to confirm and enhance our understanding of the process used to assign inspectors. We visited four boroughs and performed observations of 144 pieces of equipment to determine if they had a valid permit. The largest proportion of the sites we observed were located in Manhattan, where nearly 60 percent of the permits are issued. We reviewed and analyzed selected excerpts of the Building Code, as well as the Division's reports and database.

In addition to being the State Auditor, the Comptroller performs certain other constitutionally and statutorily mandated duties as the chief fiscal officer of New York

State, several of which are performed by the Division of State Services. These include operating the State's accounting system; preparing the State's financial statements; and approving State contracts, refunds, and other payments. In addition, the Comptroller appoints members to certain boards, commissions and public authorities, some of whom have minority voting rights. These duties may be considered management functions for purposes of evaluating organizational independence under generally accepted government auditing standards. In our opinion, these management functions do not affect our ability to conduct independent audits of program performance.

As is our practice, we notified Buildings officials at the outset of the audit that we would request a representation letter in which agency management provides assurances, to the best of their knowledge, concerning the relevance, accuracy, and competence of the evidence provided to the auditors during the course of the audit. The representation letter is intended to confirm oral presentations made to the auditors and to reduce the likelihood of misunderstandings. Agency officials normally use the representation letter to assert that, to the best of their knowledge, all relevant financial and programmatic records and related data have been provided to the auditors. They affirm either that the agency has complied with all laws, rules, and regulations applicable to its operations that would have a significant effect on the operating practices being audited, or that any exceptions have been disclosed to the auditors. However, officials at the New York City Mayor's Office of Operations have informed us that, as a matter of policy, mayoral agency officials do not provide representation letters in connection with our audits. As a result, we lack assurance from Buildings officials that all relevant

information was provided to us during the audit.

AUTHORITY

We performed this audit pursuant to the State Comptroller's authority as set forth in Article V, Section 1, of the State Constitution; and Article III of the General Municipal Law.

REPORTING REQUIREMENTS

We provided a draft copy of this report to Buildings officials for their review and comment. Their comments were considered in preparing this report. Buildings officials generally agreed with all of our recommendations and indicated they have begun to make the necessary changes. A complete copy of Buildings' response is included as Appendix A.

Within 90 days after final release of this report, we request that the Commissioner of the New York City Department of Buildings report to the State Comptroller, advising what steps were taken to implement the recommendations contained herein, and where recommendations were not implemented, the reasons therefor.

CONTRIBUTORS TO THE REPORT

Major contributors to this report include Frank Houston, Cindi Frieder, Myron Goldmeer, David Louie, Liu (Elaine) Yu, Jay Gwak and Paul Bachman.

APPENDIX A - AUDITEE RESPONSE



Patricia J. Lancaster, FAIA
Commissioner

Executive Offices:
280 Broadway, 7th Floor
New York, NY 10007

212.566.3111
212.566.3784 fax
comm-dob@buildings.nyc.gov

April 19, 2006

Mr. Frank J. Houston
Audit Director
Office of the State Comptroller
123 William Street – 21st Floor
New York, NY 10038-3804

**RE: Draft Audit Report (2005-N-4)
Cranes & Derricks Division, Oversight of Permits**

Dear Mr. Houston:

We appreciate this opportunity to respond to the recommendations of your above mentioned draft audit report. We view your input as assistance in furthering our commitment to providing quality public service while maximizing our resources.

We generally agreed with all of your recommendations and have begun to make the necessary improvements to our existing procedures to better regulate the issuance of permits by DOB's Cranes and Derricks Division. We see the value in improving our administrative measures to ensure that the procedures involved in issuing and monitoring permits for cranes, derricks and suspended scaffolds being used in New York City are adequate enough to maintain public safety.

Clarifying comments:

We believe it is important to comment on your statement, in paragraph 3 on page two and paragraph 1 on page five, it states "Construction sites pose many dangers to workers and others in the area." DOB does not have jurisdiction over workers' safety. Occupational Safety and Health Administration (OSHA) is charged with the enforcement of safety for workers. DOB's responsibility is to protect the public and adjacent property. Based on this, the word "workers" should be removed from that sentence.

NYC.gov/buildings

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April 19, 2006
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Responses to Recommendations

Recommendation 1: *Increase patrols to identify contractors using equipment without a valid permit*

Response: We agree that increased patrols are needed. One additional inspector joined C&D in January 2006, and the Division increased their patrols in February 2006.

Recommendation 2: *Conduct follow-up on sites without a valid permit and where SWOs have been issued.*

Response: We agree. For work sites without a valid permit, C&D's database was enhanced in November 2005. It now supports improved monitoring, and inspectors are conducting follow-up visits regularly. For sites where SWOs have been issued, the current C&D database is inadequate. Rather than creating a manual, paper-based process to track these locations, the Director of C&D is working with Information Technology staff to develop a database that will allow C&D to schedule follow-up visits and record inspection results efficiently. We believe this is the proper use of limited staff resources.

Recommendation 3: *Improve the Division's permit database to provide greater functionality and flexibility so that management can identify high risk situations needing oversight.*

Response: We agree. The permit database has been modified and expanded to provide greater functionality and to generate valuable reports.

Recommendation 4: *Develop a database to track the status and resolution of all SWOs*

Response: C&D has created a database of SWOs and violations. In addition, in September 2005, staff members from C&D, the Administrative Enforcement Unit (AEU) and the Environmental Control Board (ECB) began a collaborative effort to create a database about the resolution of SWOs and violations. Within the Department, this latter database will be managed and "owned" by AEU rather than C&D.

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Recommendation 5: *Develop a system to reconcile all violations written to those recorded in BIS.*

Response: We agree. As part of the project underway with C&D and AEU C&D will suggest developing a program that compares the C&D database to BIS to identify any missing violations.

Recommendation 6: *Process the Violations that were not recorded on BIS, and recover the lost revenues.*

Response: We agree. As a result of the upgrade of the C&D database, C&D has implemented procedures to ensure that hereafter all DOB violations that are entered into BIS by AEU can will verified and cross-checked through the use of more useful database reports. DOB will not pursue lost revenues but will ascertain that henceforth we will maintain better records to reconcile the monies received with the violations processed.

Recommendation 7: *Adopt formal written policy, procedures and guidelines for all C&D responsibilities and activities, including the handling and following-up of SWOs and violations.*

Response: We agree that written policies and procedures will help the C&D staff members control and monitor their activities. The Director of C&D has already begun to develop standard operating procedures.

Very truly yours,



Patricia J. Lancaster, FAIA *MLH*
Commissioner