

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Office of the Inspector General

Inspector General



September 9, 2008

The Honorable Adrian M. Fenty
Mayor
District of Columbia
Mayor's Correspondence Unit, Suite 316
1350 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

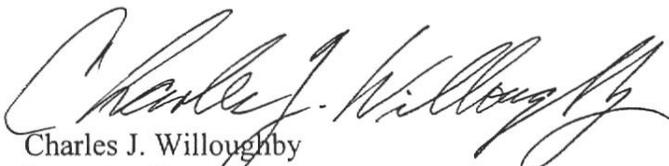
Dear Mayor Fenty:

Enclosed please find a copy of a Management Alert Report (MAR 08-I-007) issued August 7, 2008, to the Department of Consumer and Regulatory Affairs (DCRA). The MAR addresses deficiencies in boiler inspection operations and makes five recommendations for corrective actions. DCRA's response to the MAR, dated August 23, 2008, is also enclosed.

Although the OIG is conducting an ongoing inspection of DCRA and a full report of inspection will be completed later this year, we are providing this information to you now so that you are aware of the issues addressed in the MAR and the corrective actions proposed by DCRA.

If you have questions, please contact Alvin Wright, Jr., Assistant Inspector General for Inspections and Evaluations, at (202) 727-2540.

Sincerely,



Charles J. Willoughby
Inspector General

CJW/tc

Enclosures

cc: See Distribution List

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DISTRICT OF COLUMBIA
OFFICE OF THE INSPECTOR GENERAL

CHARLES J. WILLOUGHBY
INSPECTOR GENERAL

INSPECTIONS AND EVALUATIONS DIVISION
MANAGEMENT ALERT REPORT

**DEPARTMENT OF CONSUMER AND
REGULATORY AFFAIRS**

**DEFICIENCIES FOUND IN BOILER INSPECTION
OPERATIONS**

MAR 08 - I - 007

AUGUST 7, 2008

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Office of the Inspector General

Inspector General



August 7, 2008

Linda Argo
Director
Department of Consumer and Regulatory Affairs
Government of the District of Columbia
941 North Capitol Street, N.E., Suite 9500
Washington, D.C. 20002

Dear Ms. Argo:

This is a Management Alert Report (MAR-08-I-007) to inform you of deficiencies in the Department of Consumer and Regulatory Affairs (DCRA) Commercial Inspections Section (CIS) regarding safety inspections of boilers.¹ The District of Columbia (District) Office of the Inspector General (OIG) provides these reports when it believes a matter requires the immediate attention of District government officials.

During the OIG's ongoing inspection of DCRA, senior management and employees could not confirm that the installation and annual inspections of boilers (that heat both private and District government buildings) are conducted as required by District regulations. They also could not provide data on the total number of boilers there are in the District, or comprehensive information on when these boilers are due for required annual inspections. DCRA employees stated that there is an insufficient number of Boiler Code Compliance Specialists (boiler inspectors) to conduct these inspections. The OIG team noted a backlog of inspection reports in the CIS from insurance companies that CIS boiler inspectors had not reviewed and verified.

In addition, CIS records on boilers are not adequate to support initial inspection and annual re-inspection requirements. Boilers that have not been inspected properly and timely and certified as safe to operate have the potential to break down or explode, which could result in harm to people or property. Boilers not tested for scale buildup, for example, may develop operating conditions that could cause steam pipes to burst and create an explosion.

¹ According to 13B DCMR § 9901.1, Definitions, a boiler is a "closed pressure vessel in which a liquid, usually water, is raised in temperature by the application of heat. It may be used for power or process work, heating by either steam or hot water, or the heating of water for commercial or domestic supply."

Background

The Code of D.C. Municipal Regulations, provides that “[a]ll steam boiler[s] including hot water boilers shall be inspected annually by the boiler Inspector, an assistant boiler Inspector, or by an Inspector of an insurance company.” 12E DCMR § M-1013.2.1. According to documentation provided by DCRA senior management, the work of boiler inspectors is “essential to safeguard the safety and welfare of the public; to support economic development; and to protect the value of properties in the District.”

Boiler inspectors’ tasks include:

- ensuring that heating and hot water supply boiler installation methods comply with the D.C. Boiler and Pressure Vessel Regulations;
- conducting installation inspections and annual inspections;
- performing inspections in emergency situations;
- registering boilers and unfired pressure vessels;² and
- verifying the licenses of boiler plant engineers.

Building owners may have their boilers inspected annually by an insurance company licensed in the District. A DCRA senior manager informed the inspection team (team) that 17 insurance companies currently are licensed to inspect privately owned boilers, and inspectors who work for insurance companies must have Certificates of Competency issued by the District. These companies provide DCRA with written reports of the annual inspections conducted by their inspectors to determine if the insured boilers are in compliance with District regulations. DCRA then reviews these reports and issues boiler certificates where compliance has been demonstrated.

Observations

Significant deficiencies were found in DCRA boiler inspection operations.

- a. Commercial Inspections Section (CIS) staffing is inadequate to effectively monitor and conduct all required boiler inspections.*

According to information obtained from a DCRA employee, as of June 1, 1981, CIS had 12 boiler inspectors assigned to various sections of the city. Since January 2002, however, CIS has had only two boiler inspectors - one District government employee and one contract employee - to carry out the same functions previously performed by 12 government employees. A DCRA employee informed the team that DCRA could fulfill its mandate and inspect every boiler in the District if CIS was staffed with 10 full-

² According to 13B DCMR § 9901.1, Vessel, an unfired pressure vessel is “[a] tank or pressure vessel in which a gas or a liquid is stored under pressure, which pressure is obtained from a source external to the vessel itself or from the indirect application of heat.”

time employees. An interviewee noted, however, that CIS does not know the total number of boilers and unfired pressure vessels in the District.

A CIS employee stated that the heating season for District government boilers begins in October and ends between March and May. Annual inspections of these boilers start once the heating season is over and schools are given “high importance” as inspection activities get closer to the new heating season. A DCRA senior manager forwarded information to the team that inspectors conducted 621 annual inspections in District government facilities for the 2007-2008 heating season in response to agency requests. However, during an interview with three CIS employees, the team was informed that boilers in some government facilities had not been inspected for the 2007-2008 heating season because CIS was focusing on schools,³ libraries, fire stations, police stations, and housing. A DCRA employee explained that “[d]ue to the number of inspectors[,] we try to service inspections the best we can.”

During an interview with three CIS employees, the team was informed that CIS inspectors rely on agencies to call them to inspect their boilers, and that boiler inspectors do not “hassle” agencies to determine if their boilers require inspection. An employee stated that CIS does not know the facilities that the District government has in use and does not have the manpower to be proactive regarding annual boiler inspections for government facilities. The employee recalled that there used to be more boiler inspectors, who were assigned to geographic areas. Upon review of the District’s boiler regulations, the team did not find any language assigning a responsibility to boiler owners or operators to notify DCRA when an annual inspection is required. However, the team noted that 12E DCMR § M-1013.1.4, Owner’s Responsibility, provides the following:

The owner or user of each boiler or unfired pressure vessel ***which is not covered by a current certificate of inspection*** shall notify [DCRA] in writing of the following information:

1. The location of each boiler or unfired pressure vessel not covered by a current certificate of inspection;
2. The date of the last inspection, if any;
3. Whether or not that equipment is insured and inspected by an insurance company; and
4. The name of the company insuring it.

(Emphasis supplied.)

These instructions appear to be applicable to boilers with *expired* certificates of inspection that may not have been in use for some period of time, or that may be operating without a current certificate of inspection. Therefore, it appears that DCRA

³ One interviewee noted that a DCRA official approved a request from DCPS to continue operating a portable hot water boiler for which there was no permit and that had not passed inspection by CIS. The interviewee stated that this created a risk of dangerous incidents.

should initiate annual boiler inspections of all functioning boilers not inspected by insurance company inspectors, such as boilers in District schools and other government buildings, rather than waiting to be contacted by agencies or other boiler owners.

According to 13B DCMR § 101.3 “ [t]he annual inspection of cast iron steam boilers shall consist of an external inspection while under operating conditions.” However, a CIS employee opined that inspections while boilers are operating are not required and informed the team that CIS does not conduct external boiler inspections (done when boilers are operating) because there are not enough boiler inspectors. Rather, the employee explained that “boiler engineers are responsible for operating boilers properly.”

Interviewees also noted that boiler inspectors should have carbon monoxide detectors and respirators to use when necessary when conducting inspections but do not. Instead, they must call in Department of Health inspectors who have these devices when the presence of carbon monoxide is suspected at a boiler site.

b. DCRA boiler inspectors are not verifying the accuracy of all inspection results reported by insurance company boiler inspectors.

D.C. Code § 2-107 (LEXIS through D.C. Law 17-155) allows privately owned and insured boilers to be inspected annually by insurance company inspectors instead of DCRA’s CIS inspectors. A DCRA senior manager informed the team that a staff employee reviews insurance inspection reports for “proper insurability,” and does not do “a technical review.” Information provided by CIS employees also indicates that this employee has other duties in addition to reviewing these reports. The DCRA senior manager noted that the employee gives reports that note boiler deficiencies to the CIS boiler inspectors for their review. A CIS employee stated, however, that CIS boiler inspectors have not been able to promptly review and act on the information in such reports because of work backlog.

The team reviewed approximately 1,000 insurance boiler inspection reports submitted to CIS between 2003 and 2007 and found a number of reports for which CIS failed to timely issue certificates. In addition, the reports cited boiler problems such as those listed below:

- leaking relief valve that could reduce its capacity to properly protect the boiler against excessive pressure;
- significant scale build-up;⁴
- inoperative safety valves; and
- no emergency shut-off switch outside the boiler room.

⁴ According to a CIS boiler inspector, the condition results when mineral deposits (called scale) insulate pipes, preventing heat from raising the temperature of water enough to turn it into steam. Consequently, more heat has to be applied to the pipe to produce steam, which may overheat the pipe and cause it to burst, creating an explosion.

In some instances where reports cited problems, they were still approved and certificates of inspection issued to the boiler owners. Furthermore, other reports among the 1,000 reviewed showed installations of new boilers or boiler equipment not inspected by CIS boiler inspectors as required by 12E DCMR § M-1013.1.2. Instead, these new installations were inspected by insurance company boiler inspectors and the inspections were approved by the CIS.

A DCRA senior manager informed the team that DCRA does not have written procedures for processing insurance company boiler inspection reports and issuing certificates, but there is a policy directing that insurance company reports containing deficiencies be turned over to a CIS boiler inspector.

In addition, 12E DCMR § M-1013.5.1.2 requires insurance company inspectors must possess certificates of competency issued by the District. When requested, however, DCRA did not provide documentation to the team showing that all insurance company boiler inspectors who conduct inspections in the District meet this requirement.

c. CIS is not issuing inspection certificates timely after it approves insurance inspection reports.

According to 12E DCMR § M-1013.5.2, an insurance company is required to file an annual inspection report with CIS “in time to prevent the certificate of inspection from becoming more than thirty (30) days overdue.”⁵ However, a CIS employee informed the team that it takes CIS more than 30 days to review reports and issue inspection certificates because of the backlog of boiler work and the lack of clerical staff. On the other hand, during an interview with two DCRA senior managers, the team was informed that the current number of support employees in the entire Inspections Division, which includes residential and commercial inspections, is sufficient. However, these managers stated that some support positions’ responsibilities are too narrow and management is looking at ways to realign and deploy them more effectively. Based on its review of a sample of insurance inspection reports issued, the team found that CIS issued certificates between 2 and 11 months after the reported date of an inspection by an insurance company inspector.

CIS inspection certificates are valid for 1 year from the date of inspection and the fee for a certificate is \$50. A CIS employee informed the team that CIS had a backlog of 1,520 insurance boiler inspection reports received between May and October 2007 that were not processed. The revenue potential once certificates are issued for these reports is \$76,000. According to information forwarded to the team by a DCRA senior manager, CIS conducted 621 annual boiler inspections for the 2007-2008 heating season in District government facilities. However, a CIS employee informed the team that DCRA has only issued approximately 30 certificates.

⁵ The team believes that this provision is intended to prevent more than 30 days from elapsing after the certificate has expired.

d. The CIS records system does not allow easy and accurate retrieval of basic information about District boilers.

D.C. Code § 2-112 (LEXIS through D.C. Law 17-155) states:

The Boiler Inspector shall keep in the office of the Boiler Inspection Service all applications made, and a complete record thereof, as well as of all certificates issued. He shall also keep a complete record of each boiler and unfired pressure vessel inspected, and such other records and data pertaining to the Boiler Inspection Service as may be directed by the Mayor of the District of Columbia.

DCRA has an automated system to schedule and track requested boiler inspections conducted by DCRA, maintains a logbook to record boiler identification numbers, and has paper files to track boiler certificates and insurance reports. A DCRA senior manager informed the team, however, that the boiler section has no means to determine the total number of boilers in the District's private or government buildings. In addition, the manager informed the team that DCRA is working with the Office of Information Systems and other DCRA divisions (e.g. Permitting Operations) to obtain the data.

The team is concerned that DCRA does not have an automated system that can easily retrieve basic information such as the total number and location of all boilers operated in D.C. government and private buildings/facilities that require inspection. As a result, DCRA cannot use its records efficiently and effectively to ensure that annual boiler inspections take place, that all safety defects in boilers are identified and corrected, and that certificates of inspection are issued or denied as appropriate in a timely manner.

Recommendations

1. ***Staffing.*** That the Director of DCRA (D/DCRA) take steps to acquire an adequate number of boiler inspectors to conduct boiler equipment inspections and enforce boiler regulations for both District government facilities and uninsured private facilities.
2. ***Insurance Company Reports Backlog.*** That the D/DCRA take steps to eliminate expeditiously the backlog of insurance company boiler inspection reports and pending boiler certificates, and to ensure that the CIS has enough boiler inspectors and support employees available to process insurance company reports accurately and timely in order to detect and address safety deficiencies.
3. ***Policies and Procedures.*** That the D/DCRA ensure that written policy and procedures are implemented so that DCRA may expeditiously process insurance company boiler inspection reports.

4. **Operational Safety.** That the D/DCRA determine the need for carbon monoxide detectors and respirators for boiler inspectors to use during inspections, and take the appropriate action to obtain such equipment if required.
5. **Recordkeeping.** That the D/DCRA take steps to develop and implement an automated information and tracking system for all insured and uninsured boilers in the District for which licenses and certificates are applied for and issued. Such a system should allow quick retrieval of the number, location, owners, and operators of boilers city-wide; inspection completion and due dates; certificate expiration dates and fee payment information; insurance company and insurance inspector information (including inspectors' required DCRA certifications) for insured boilers; identification and license information for engineers who operate boilers; and any other information necessary to ensure the timely identification and location of boilers that may present actual or potential safety risks to people and property.

Please provide your comments on this MAR by August 29, 2008. Your response should include actions taken or planned, dates for completion of planned actions, and reasons for any disagreement with the concerns and recommendations presented. Please distribute this MAR only to those who will be directly involved in preparing your response.

Should you have any questions or desire a conference prior to preparing your response, please contact [REDACTED], Director of Planning and Inspections, at [REDACTED].

Sincerely,


Charles J. Willoughby
Inspector General

CW/tc

cc: The Honorable Adrian Fenty, Mayor of the District of Columbia
Daniel M. Tangherlini, City Administrator and Deputy Mayor
The Honorable Mary Cheh, Chairperson, Committee on Public Services and
Consumer Affairs
The Honorable Carol Schwartz, Chairperson, Committee on Workforce
Development and Government Operations

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Consumer and Regulatory Affairs

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2008 AUG 27 PM 3:04

August 23, 2008

Charles Willoughby
Inspector General
717 14th Street, NW
Washington, DC 20005

RE: Management Alert Report
Deficiencies Found in Boiler Inspection Operations

Dear Mr. Willoughby:

The letter is in response to the Management Alert Report the Department of Consumer and Regulatory Affairs (DCRA) received regarding deficiencies found in the Boiler Inspections Operation. We have reviewed your recommendations and provide the following responses:

Staffing- You advised that DCRA take steps to acquire an adequate number of boiler inspectors to conduct boiler equipment inspections and enforce boiler regulations for both District government facilities and uninsured private facilities.

Staffing in the Commercial Inspections Division is under review. Steps are being taken to insure that there are an adequate number of inspectors in each division.

Insurance Company Backlogs- You advised that DCRA take steps to eliminate expeditiously the backlog of insurance company boiler inspection reports and pending certificates.

DCRA is currently assessing the total number of backlogged files and implementing an action plan designed to eliminate the backlog. It is expected that the backlog will be cleared by the end of Quarter 1 in FY 2009.

Policies and Procedures- You advised that DCRA ensure written policy and procedures are implemented so that DCRA may expeditiously process insurance company boiler inspection reports.

DCRA is expected to have written policies and procedures in place for intake processing, and issuance of boiler licenses and certificates by the end of Quarter 1 FY 2009.

Operational Safety- You advised DCRA to determine the need for carbon monoxide detectors and respirators for boiler inspectors to use during inspections and take the appropriate action to obtain such equipment if required.

The Chief Building Inspector is in consultation with OSHA on the appropriate safety equipment required to be used during boiler inspections. DCRA will abide by the OSHA recommendation.

Record Keeping- You advised that DCRA take steps to develop and implement an automated information and tracking system for all insured and uninsured boilers in the District for which licenses and certificates are applied for and issued.

DCRA is in the process of adding the boiler certificate process to its Comprehensive Property Management System (CPMS). The system will allow the agency to maintain the historical records on boiler applications and issuances. It is expected that all boiler information will be available in CPMS by the end of Quarter 1, 2009.

Thank you for bringing these matters to my attention. If you need additional information, please contact [REDACTED], DCRA's Service Integrity Officer at [REDACTED].

Sincerely,


Linda K. Argo
Director

cc: Leila Franklin