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NEWS RELEASE

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FOR RELEASE September 14, 2011

Auditor of State David A. Vaudt today released a report on a review of the Boiler and Pressure Vessel Safety Program (Boiler Program) and the Elevator and Escalator Safety Program (Elevator Program) administered by Iowa Workforce Development (IWD). The review was conducted for the period July 1, 2008 through June 30, 2010 to determine whether the inspections conducted as part of the Boiler and Elevator Programs were performed in compliance with the requirements established by the *Code of Iowa* and administrative rules.

The purpose of the Boiler Program is to protect public health, safety and welfare by formulating definitions and rules relating to the safe and proper installation, repair, maintenance, alteration, use and operation of boilers and pressure vessels, and the purpose of the Elevator Program is to establish safety standards covering the design, construction, installation, operation, inspection, testing, maintenance, alteration and repair of elevators and escalators.

Approximately $3.8 million was collected by IWD during fiscal years 2009 and 2010 for the Boiler and Elevator Programs. Program funds consist of fees collected for installations, operating permits, inspections, re-inspections and other items resulting from operation of the Programs. As of June 30, 2010, IWD had fund balances of $644,058 and $638,595 in the Boiler Safety and Elevator Safety Revolving Funds, respectively. During fiscal year 2011, IWD hired 2 additional elevator inspectors which will impact the Elevator Safety Revolving fund balance. IWD also intends to use these balances for upcoming retiree payouts, software upgrades and vehicle purchases. However, a formalized plan has not been developed.

Vaudt reported IWD does not consistently comply with the annual inspection requirements established in the *Code* and administrative rules for the Boiler and Elevator Programs. The annual inspection requirement was not complied with for 3 of 100 boiler inspections and 68 of 100 elevator inspections tested. The noncompliant inspections ranged from 34 to 46 days late for

boilers and from 6 days to more than 9 years late for elevators. In addition, there is a significant backlog of elevator inspections, including wind tower lifts which are not currently being inspected after installation. IWD also does not consistently comply with elevator safety testing and reporting requirements and does not have a written complaint resolution policy in place for either Program.

Vaudt recommended IWD review the annual inspection requirements for reasonableness and implement policies and procedures to ensure compliance with the established requirements to ensure all boilers and elevators are safe for public and private use. Vaudt also recommended IWD, in conjunction with the Boiler and Pressure Vessel Board, the Elevator Safety Board and the General Assembly, develop a written plan for the use of the balances in the Boiler Safety and Elevator Safety Revolving Funds and consider the appropriateness of the fees established for the Programs.

The report also includes a recommendation IWD review the established elevator safety test schedules and reporting requirements for reasonableness, implement policies and procedures to ensure compliance with the requirements established and consistently maintain the elevator safety test reports submitted. In addition, Vaudt recommended IWD develop and implement written policies and procedures regarding complaints received from citizens and/or operators for both Programs.

A copy of the report is available for review in the Office of Auditor of State and on the Auditor of State's web site at http://auditor.iowa.gov/specials/1160-3090-B0P1.pdf.

# # #

# A REVIEW OF THE BOILER AND PRESSURE VESSEL SAFETY AND ELEVATOR AND ESCALATOR SAFETY PROGRAMS ADMINISTERED BY IOWA WORKFORCE DEVELOPMENT

**FOR THE PERIOD**
**JULY 1, 2008 THROUGH JUNE 30, 2010**

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Auditor's Transmittal Letter

To the Governor, Members of the General Assembly and
the Director of Iowa Workforce Development:

In conjunction with our audit of the financial statements of the State of Iowa and in accordance with Chapter 11 of the *Code of Iowa* (Code), we conducted a review of the Boiler and Pressure Vessel Safety Program (Boiler Program) and the Elevator and Escalator Safety Program (Elevator Program) administered by Iowa Workforce Development (IWD). Our review included an assessment of the controls over the Boiler and Elevator Programs, including the inspection, monitoring and reporting procedures. We also evaluated compliance with the *Code* and administrative rules governing the Boiler and Elevator Programs.

We applied certain tests and procedures to selected processes and financial information for the period July 1, 2008 through June 30, 2010. Based on a review of relevant information, the *Code* and administrative rules governing the Boiler and Elevator Programs, we performed the following procedures:

(1) Interviewed IWD staff responsible for administering the Boiler and Elevator Programs to obtain an understanding of the administration, policies and procedures, controls and monitoring of the Boiler and Elevator Programs.

(2) Reviewed and evaluated the procedures and controls for the Boiler and Elevator Programs for adequacy.

(3) Reviewed applicable laws, rules and guidelines.

(4) Examined selected inspections completed by State and/or third-party inspectors to determine compliance with the *Code*, the Iowa Administrative Code and IWD policies and guidelines.

(5) Examined selected inspection fees to determine if the fees were properly assessed, collected and recorded in compliance with applicable administrative rules.

(6) Examined selected expenditures of the Boiler and Elevator Programs to determine if they were appropriate, reasonable, properly approved and supported by adequate documentation.

(7) Reviewed the financial activity and the accumulated fund balances of the Boiler and Elevator Programs for reasonableness.

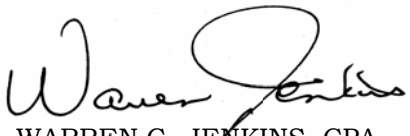
(8) Compared the Boiler and Elevator Programs to similar safety programs administered by other states.

Based on these procedures, we determined IWD did not consistently comply with inspection and re-inspection, elevator safety test and reporting requirements. In addition, IWD did not consistently maintain documentation of elevator safety test reports and has not established a formal complaint resolution process. We have developed certain recommendations and other relevant information we believe should be considered by Iowa Workforce Development, the Governor and the General Assembly.

The procedures described above do not constitute an audit of financial statements conducted in accordance with U.S. generally accepted auditing standards. Had we performed additional procedures, or had we performed an audit of Iowa Workforce Development, other matters might have come to our attention that would have been reported to you.

We extend our appreciation to the personnel of Iowa Workforce Development for their courtesy, cooperation and assistance provided to us during this review.

DAVID A. VAUDT, CPA
Auditor of State



WARREN G. JENKINS, CPA
Chief Deputy Auditor of State

September 16, 2010

# INTRODUCTION

The Division of Labor Services (DLS) within Iowa Workforce Development (IWD) is responsible for ensuring the safety of Iowans through the Boiler and Pressure Vessel Safety Program (Boiler Program) and the Elevator and Escalator Safety Program (Elevator Program). Under the Boiler and Elevator Programs, DLS-IWD conducts inspections of boilers and pressure vessels and elevators, escalators and other conveyances to ensure established standards have been met. Permits and certificates of inspection are issued to the owners/operators upon completion of a successful inspection.

The Labor Commissioner oversees the Boiler and Elevator Programs in addition to other programs and responsibilities of DLS-IWD. To provide additional oversight for the Boiler and Elevator Programs, the Boiler and Pressure Vessel Board was established in fiscal year 2005 and the *Code of Iowa* requirements for the Elevator Safety Board, originally established in fiscal year 1989, were amended in fiscal year 2005. The Boiler and Pressure Vessel Board and the Elevator Safety Board each consist of 9 volunteer members responsible for:

- Adopting rules necessary to protect public health, safety and welfare and to administer the duties of the Board,
- Hearing and deciding appeals concerning inspection reports relating to the installation, operation and maintenance of boiler and pressure vessel and conveyance inspection reports,
- Hearing and deciding appeals concerning actions by the Commissioner to deny, suspend or revoke conveyance operating permits and
- Establishing fees.

Both Boards are to perform a thorough review of all relevant administrative rules every 3 years and make any necessary changes. For example, as a result of the review performed in fiscal year 2008, the Elevator Safety Board determined lifts installed in wind towers were to be inspected and issued permits. Therefore, in fiscal year 2009, the Iowa Administrative Code (IAC) was revised to include the necessary administrative rules concerning wind tower lifts.

## Boiler and Pressure Vessel Safety Program (Boiler Program)

Chapter 89 of the *Code* authorizes DLS-IWD to administer the Boiler Program. To administer the regulations specified in the *Code*, IWD established the following chapters within IAC [875] Labor Services:

- Chapter 80, "Boiler and Pressure Board Administrative and Regulatory Authority" and
- Chapter 90, "Administration of the Boiler and Pressure Vessel Program."

DLS-IWD also references additional rules and technical guidance regarding the inspection of boilers and pressure vessels, such as the National Board Inspection Code (NBIC), the Boiler and Pressure Vessel Code and Standards established by the American Society of Mechanical Engineers (ASME), the Boiler and Combustion Systems Hazard Code established by the National Fire Protection Association and the manufacturers' installation, operation and maintenance documentation.

The purpose of the Boiler Program is to protect public health, safety and welfare by formulating definitions and rules relating to the safe and proper installation, repair, maintenance, alteration, use and operation of boilers and pressure vessels. A boiler is a vessel in which water or other liquids are heated, steam or other vapors are generated, steam or other vapors are superheated, or any combination thereof, under pressure or vacuum by the direct application of heat, which are governed by Chapter 89 of the *Code*. For the remainder of this report, all boilers and pressure vessels will be referred to as boilers, unless otherwise specified.

Boiler inspections may be completed by State inspectors or third-party inspectors. Third-party inspections are conducted at the discretion of insurance providers and copies of the completed inspection reports are submitted to DLS-IWD. Third-party inspectors must be representatives of a reputable insurance company and must submit an annual State of Iowa application to the Labor Commissioner. Examples of information which must be included in the inspector application are as follows:

- A signed and dated applicant certification documenting compliance with the National Board of Boiler and Pressure Vessel Inspectors requirements,
- A copy of the applicant's current, valid National Board of Boiler and Pressure Vessel Inspectors work card and
- The $40.00 annual fee.

DLS-IWD relies on owners to notify them of new boilers, items which have been scrapped or replaced and other major alterations. In addition, DLS-IWD obtains information from insurance companies to record known boilers in a database used to account for boilers throughout the State and track when inspections are due. Insurance companies require inspection certificates be obtained prior to insuring boilers. However, while the current methods help ensure all boilers are included in the DLS-IWD database, there is not a comprehensive method to ensure all boilers throughout the State have been included.

Owners of boilers found to be in violation of the provisions in Chapter 89 of the *Code* are guilty of a simple misdemeanor. Civil penalties not exceeding $500 may be assessed upon notice and hearing if the Labor Commissioner determines an owner has operated a facility in violation of a safety order. The Labor Commissioner may commence an action in district court to enforce payment of a civil penalty. However, based on a review of the State's financial records and information reported for the Boiler Program in the IWD Annual Report, there have been no instances of DLS-IWD assessing and collecting civil penalties. We also confirmed with DLS-IWD personnel no penalties have been assessed.

As previously stated, there is not a method to ensure all boilers have been reported to DLS-IWD. However, Chapter 89 of the *Code* does not contain civil penalties for lack of owner compliance with the requirements for notice to the Labor Commissioner of a new boiler and obtaining a certificate of inspection. See **Finding A**.

**Funding** – The Boiler Program is funded primarily through the collection of fees, including installation and construction permits, operating permits and inspections. Fees collected include:

- $25 for a 1-year certificate,
- $40 for inspection of a water heater supply boiler, as well as a $40 annual fee,
- $80 for inspection of a boiler rated at 20,000 to 100,000 pounds per hour and up to 450 pounds per square inch and
- $200 for inspection of a boiler rated at over 100,000 pounds per hour and 450 pounds per square inch.

Fees collected and any other revenues, such as interest, are recorded in the Boiler and Pressure Vessel Safety Fund (Boiler Safety Fund), which was established in accordance with section 89.8 of the *Code*. DLS-IWD is required to use the Boiler Safety Fund solely for the Boiler Program and any balance remaining at the end of each fiscal year is carried forward.

The primary expenditures of the Boiler Program are the salaries, benefits and travel costs of the staff responsible for inspecting, monitoring and accounting for all boilers in the State. Approximately 87% of the expenditures each fiscal year are for payroll costs and travel. The Boiler Program employed 8.8 full-time equivalent employees (FTEs) in both fiscal years 2009 and 2010, consisting of 4 boiler inspectors and 4.8 administrative staff. Each year more than 25,000 boiler inspections are completed by State and third-party inspectors. Because third-party

inspectors complete approximately 84% of all boiler inspections, DLS-IWD has more administrative staff than inspectors.

**Table 1** summarizes the revenues, expenditures and fund balances of the Boiler Program for fiscal years 2009 and 2010.

**Table 1**

| Description | Fiscal Year 2009 | Fiscal Year 2010 |
|---|---|---|
| Beginning balance | $ 514,513 | 546,864 |
| Total revenues | 828,977 | 824,210 |
| Total expenditures | (796,626) | (727,015) |
| Ending balance | $ 546,864 | 644,058 |

We examined the fund balances of the Boiler Program for fiscal years 2009 and 2010. As illustrated by the **Table**, the fund balance increased from $514,513 at July 1, 2008 to $644,058 at June 30, 2010, an increase of $129,545, or 25%. The fiscal year 2009 ending fund balance of $546,864 is 68.6% of total expenditures and the fiscal year 2010 ending fund balance of $644,058 is 88.6% of total expenditures.

According to representatives of DLS-IWD, future plans for the Boiler Program fund balance include approximately $275,000 for upcoming retiree payouts and $100,000 for estimated vehicle replacement costs. However, no formal plan has been developed for the use of these funds. While the *Code* allows DLS-IWD to carry-over funds each fiscal year, other State agencies typically do not have the option to set aside and carry forward funds for retirement costs. See **Finding B**. **Schedule 1** summarizes the expenditures of the Boiler Program by description for fiscal years 2009 and 2010.

## Elevator and Escalator Safety Program (Elevator Program)

DLS-IWD is authorized by Chapter 89A of the *Code* to administer the Elevator Program. To administer the regulations specified in the *Code*, IWD established the following chapters within IAC [875] Labor Services:

- Chapter 65, "Elevator Safety Board Administrative and Regulatory Authority,"
- Chapter 66, "Waivers or Variances From Administrative Rules by the Elevator Board,"
- Chapter 71, "Administration of the Conveyance Safety Program,"
- Chapter 72, "Conveyances Installed on or after January 1, 1975" and
- Chapter 73, "Conveyances Installed prior to January 1, 1975."

DLS-IWD also references additional rules and technical guidance regarding the inspection of elevators and escalators established by ASME and the safety and inspection standards established by the American National Standards Institute (ANSI).

The purpose of the Elevator Program is to establish safety standards covering the design, construction, installation, operation, inspection, testing, maintenance, alteration and repair of conveyances. A conveyance is any elevator, escalator, dumbwaiter, wind tower lift, construction personnel hoist or other equipment governed by Chapter 89A of the *Code*. A wind tower lift is a specific type of conveyance designed and utilized solely for movement of trained and authorized personnel and small loads in wind towers built for the production of electricity. For the remainder of this report, all conveyances will be referred to as elevators, unless otherwise specified.

Elevator inspections may be completed by State inspectors or third-party inspectors. Third-party inspectors may be hired by individual building owners or by private inspection companies. The third-party inspectors send notification to DLS-IWD of the contracted locations they inspect and

submit copies of the completed inspection reports. In addition, third-party inspectors must submit an annual State of Iowa Elevator Inspector Application to the Labor Commissioner. Information which must be included in the application is as follows:

- Documentation of inspector examinations passed,
- Documentation of work experience,
- A signed and dated applicant certification demonstrating at least 3 years of experience in the construction, installation, repair or inspection of devices regulated by the Iowa State Elevator Code and all other requirements,
- A copy of the applicant's current Qualified Elevator Inspector certification,
- Proof of insurance covering liability for death or injury caused by acts or omissions by the applicant and
- The $60.00 annual fee.

Elevator owners must apply to DLS-IWD for installation permits, construction permits, operating permits and alteration permits. DLS-IWD maintains records to account for all elevators and adds new elevators when notified of completion of building construction. Also, insurance companies may notify DLS-IWD of elevator installations. However, while the current methods help to ensure all elevators are included in the DLS-IWD database, there is not a comprehensive method to ensure all elevators throughout the State have been included.

It is the responsibility of the elevator owners to procure all necessary permits and pay the associated fees. Elevator owners are also required to post either the current operating permit or a notice of where the current operating permit may be observed in the elevator. Section 89A.17 of the *Code* allows the Labor Commissioner to refer non-compliant elevator owners to the Attorney General for prosecution of criminal penalties. Violators may be found guilty of a simple misdemeanor. In addition, section 89A.18 of the *Code* allows the Labor Commissioner, upon notice and hearing, to issue a civil penalty not exceeding $500 if an owner has operated an elevator after an order of the Commissioner suspending, revoking or refusing to issue an operating permit. However, based on a review of the State's financial records and information reported for the Elevator Program in the IWD Annual Report, there have been no instances of DLS-IWD assessing and collecting civil penalties. We confirmed with DLS-IWD personnel no such penalties have been assessed.

As previously stated, there is not a method to ensure all elevators have been reported. However, Chapter 89A of the *Code* does not contain civil penalties for lack of owner compliance with the requirements for registration of elevators and obtaining alteration, new installation and operating permits. See **Finding C**.

**Funding** – The Elevator Program is funded primarily through the collection of fees, including installation and construction permits, operating permits and inspections. Fees collected include:

- $60 for dumbwaiters, hand-powered elevators and wheelchair lifts,
- $75 for elevators and escalators,
- $150 for wind tower lifts and
- $300 for television tower elevators.

Fees collected and any other revenues, such as interest, are recorded in the Elevator Safety Fund, which was established in accordance with section 89A.19 of the *Code*. DLS-IWD is to use the Elevator Safety Fund solely for the Elevator Program and any balance remaining at the end of each fiscal year is carried forward.

The primary expenditures of the Elevator Program are the salaries, benefits and travel costs of the staff responsible for inspecting, monitoring and accounting for all elevators in the State. Approximately 86% of the expenditures each fiscal year are for payroll costs and travel. The

Elevator Program used 10 FTEs during fiscal year 2009 and 10.75 FTEs during fiscal year 2010 for elevator inspections. The 10 FTEs in fiscal year 2009 consisted of 7.5 elevator inspectors and 2.5 administrative staff. During fiscal year 2010, the 10.75 FTEs for the Elevator Program consisted of 8.25 elevator inspectors and 2.5 administrative staff.

The elevator inspectors are also responsible for conducting amusement park ride inspections. Therefore, the remaining .25 FTE for each inspector is allocated to this function. **Table 2** summarizes the revenues, expenditures and fund balances of the Elevator Program for fiscal years 2009 and 2010.

**Table 2**

| Description | Fiscal Year 2009 | Fiscal Year 2010 |
|---|---|---|
| Beginning balance | $ 381,091 | 514,539 |
| Total revenues | 1,054,314 | 1,136,417 |
| Total expenditures | (920,866) | (1,012,361) |
| Ending balance | $ 514,539 | 638,595 |

We examined the fund balances of the Elevator Program for fiscal years 2009 and 2010. As illustrated by the **Table**, the fund balance increased from $381,091 at July 1, 2008 to $638,595 at June 30, 2010, an increase of $257,504, or 67.6%. The fiscal year 2009 fund balance of $514,539 is 55.9% of total expenditures and the fiscal year 2010 fund balance of $638,595 is 63.1% of total expenditures.

According to representatives of DLS-IWD, future plans for the Elevator Program fund balance include approximately $350,000 for the purchase and implementation of a new computer system over the next 3 years, $216,000 for upcoming retiree payouts and the purchase of 5 new vehicles for the inspectors. However, no formal plan has been developed for the use of these funds. While the *Code* allows DLS-IWD to carry-over funds each fiscal year, other State agencies typically do not have the option to set aside and carry forward funds for retirement costs. See **Finding D**. **Schedule 2** summarizes the expenditures of the Elevator Program by description for fiscal years 2009 and 2010.

## OBJECTIVES, SCOPE AND METHODOLOGY

### Objectives

Our review was conducted to determine if the Boiler and Elevator Programs:

- Are administered by DLS-IWD to ensure desired results are achieved in compliance with applicable laws, rules and guidelines,
- Function as intended and operate in an effective and efficient manner and
- Assess fees which cover the Programs' expenses and are reasonable and appropriate.

We also determined if the Boiler and Elevator Programs are maintaining significant fund balances and if DLS-IWD has specific plans for those balances.

### Scope and Methodology

To gain an understanding of the Boiler and Elevator Programs, we:

- Interviewed DLS-IWD staff responsible for administering the Boiler and Elevator Programs to obtain an understanding of the administration, policies and procedures, controls and monitoring of the Boiler and Elevator Programs,

- Reviewed and evaluated the procedures and controls of the Boiler and Elevator Programs for adequacy,
- Reviewed applicable laws, rules and guidelines,
- Examined selected inspections completed by State and/or third-party inspectors to determine compliance with the *Code*, the IAC and DLS-IWD policies and guidelines,
- Examined selected inspection fees to determine if fees were properly assessed, collected and recorded in compliance with applicable administrative rules,
- Examined selected expenditures of the Boiler and Elevator Programs to determine if they were appropriate, reasonable, properly approved and supported by adequate documentation,
- Reviewed the financial activity and the accumulated fund balances of the Boiler and Elevator Programs for reasonableness and
- Compared the Boiler and Elevator Programs to similar safety programs administered by other states.

To select individual inspections for detailed testing, we selected items from the boiler and elevator databases maintained by DLS-IWD, which include owner name, location detail, item identification numbers, descriptions and inspection status. We selected 100 inspection reports for both the Boiler Program and the Elevator Program, as well as the related safety reports and fee invoices. We examined the inspection and safety reports submitted for compliance with the established criteria for inspections. We also examined the fee invoices to determine if the fees assessed were appropriate and were properly collected and recorded.

## PROGRAM ADMINISTRATION

The Boiler and Elevator Programs are administered by the Elevator, Boiler and Amusement Rides Bureau (Bureau) within DLS-IWD. Our review focused on the administration of the Boiler and Elevator Programs, including the completion of inspections and the related reports and the assessment of appropriate fees. We did not review and evaluate the technical aspects of the standards established and applied by the inspectors during the inspections and safety tests.

### Boiler and Pressure Vessel Safety Program

The Bureau oversees the Boiler Program and is responsible for completion of inspections or monitoring of third-party inspectors to ensure all boilers are inspected in accordance with established requirements. In addition, the Bureau is responsible for ensuring fees received under the Boiler Program are properly expended.

The Bureau is responsible for the following functions of the Boiler Program:

- Ensuring all boilers are identified by a State identification number,
- Receiving and tracking notices prior to all boiler installations,
- Performing annual inspections or ensuring inspections are properly completed by third-party inspectors,
- Issuing operating and inspection certificates,
- Assessing, collecting and recording fees and
- Monitoring boiler accidents and ensuring safety prior to allowing further use.

**Annual boiler inspections** – As required by section 89.3 of the *Code*, the Bureau is responsible for ensuring all boilers and pressure vessels are inspected at least once every 12 months, except as otherwise provided. For example, boilers meeting all the criteria listed in section 89.3(4)a of the *Code* must have their interior and exterior inspected at least once every 2 years while not under

pressure and the exterior must be inspected at least every 2 years while under pressure, unless the Labor Commissioner determines an earlier inspection is warranted. The purpose of the inspection is to determine whether all equipment is in a safe and satisfactory condition and properly constructed and maintained for the purpose for which it is intended in places of public assembly.

The process for installation, operation and inspection of boilers consists of the following:

- Owners must submit a written notice of intent to install a boiler which is subject to Chapter 89 of the *Code* to the Labor Commissioner at least 10 days prior to installation.
- Once the boiler is installed, it must pass inspection and be in compliance with the applicable rules. In addition, the owner must pay all required fees prior to operation.
- After passing inspection, a certificate to operate the boiler is issued by the Labor Commissioner.
- The current operating certificate, or a copy of the current operating certificate, must be conspicuously posted in the room where the boiler is installed.

**Table 3** summarizes the total number of Boiler Program inspections completed by State and third-party inspectors during fiscal years 2009 and 2010 based on data available from the Bureau as of September 14, 2010.

**Table 3**

| Fiscal Year | Number of State Inspections | Number of Third-Party Inspections | Total |
|---|---|---|---|
| 2009 | 4,059 | 21,603 | 25,662 |
| 2010 | 4,057 | 21,375 | 25,432 |

The number of boiler inspections completed exceeds the total number of boilers recorded by IWD in the boiler database because the number of inspections summarized in the **Table** includes both initial inspections and re-inspections. A breakdown of initial inspections and re-inspections is not readily available from DLS-IWD.

We judgmentally selected 100 boiler inspections completed during fiscal years 2009 and 2010 to review for compliance with Chapter 89 of the *Code* and IAC [875] – Chapter 90, including the following:

- The inspection was completed in accordance with the schedule set forth in section 89.3 of the *Code*.
- The inspection was completed by either a Bureau inspector or a third-party inspector acting as a representative of a reputable insurance company. Insurance companies are required to file a notice of insurance coverage stating the equipment is insured and the inspection will be performed in accordance with section 89.3 of the *Code*.
- The inspection was completed within a 60-day period prior to the expiration of the operating certificate or a written application noting just cause for waiver of the 60-day period was maintained by the Bureau.
- The inspection was conducted in accordance with the requirements of the NBIC.
- The inspection performed was an internal and/or external inspection, as required.
- Inspection records include evidence of review of the boiler log sheet and records of maintenance and feedwater treatment were completed by the inspector, as recommended by section 2.2.11 of the NBIC.
- The inspection report is sufficiently supported and all significant information included in the supporting documentation was reported.

- If performed by a third-party inspector, the completed report was provided to the Bureau within 30 days of the inspection.
- If the boiler is determined by the Labor Commissioner to constitute an imminent danger which could seriously injure or cause death to any person, the requirements included in section 90.6(7) of the IAC are followed and implemented.
- Fees are collected in accordance with established rates, deposited intact and timely and correctly recorded in the State's financial accounting system.
- Fees are sufficiently supported by an invoice or other documentation, as applicable.

We determined 3 of 100 inspections did not comply with the requirement for inspections to be performed annually. The 3 inspections identified were completed 34, 39 and 46 days past the inspection due date. Because a significant number of boiler inspections are conducted by third-party inspectors, the Bureau does not have complete control over their completion. However, the Bureau is responsible for ensuring compliance with the *Code* and IAC. See **Finding E**.

**Review of boiler log sheets** – Although it is not required, the Bureau instructs boiler inspectors to document their review of log sheets or maintenance records while inspecting boilers. IAC 875-90.6(1) requires all boilers to be inspected according to the requirements of the NBIC, which are adopted into the IAC by reference.

The NBIC suggests inspectors include evidence of a review of the boiler log sheet and maintenance records while completing annual inspections. However, 99 of the 100 inspections tested did not include evidence of this review. A lack of evidence of review of boiler log sheets and maintenance records may result in boilers operating in unsafe conditions which may have otherwise been detected. Also, it is important for inspectors to include evidence of review to help protect the State in the event of a law suit which may result if boilers were not sufficiently maintained and the inspectors did not notice deficiencies during an inspection. See **Finding F**.

## Elevator and Escalator Safety Program

The Bureau is responsible for elevator safety throughout the State. As a result, the Bureau monitors elevator inspections conducted by third-party inspectors and State inspectors. The functions within the Elevator Program include:

- Registration of elevators,
- Assignment of State identification numbers,
- Issuance of installation permits,
- Issuance of construction, controller upgrade and alteration permits,
- Issuance of operating permits,
- Inspection of all elevators annually,
- Completion of safety tests,
- Assessment, collection and recording of fees and
- Monitoring of elevator accidents to ensure safety prior to future use.

**Annual elevator inspections** – The Bureau is responsible for ensuring all elevators are inspected annually in accordance with section 89A.6 of the *Code,* which states, in part, "All new and existing conveyances, except dormant conveyances, shall be tested and inspected in accordance with the following schedule:

1. Every new or altered conveyance shall be inspected and tested before the operating permit is issued.

2. Every existing conveyance registered with the commissioner shall be inspected within one year after the effective date of the registration, except that the safety board may extend by rule the time specified for making inspections.
3. Every conveyance shall be inspected not less frequently than annually (emphasis added), except that the safety board may adopt rules providing for inspections of conveyances at intervals other than annually.
4. The inspections required by subsections 1 to 3 shall be made only by inspectors or special inspectors [third-party inspectors]...
5. A report of every inspection shall be filed with the commissioner by the inspector or special inspector, in a format required by the commissioner, after the inspection has been completed and within the time provided by rule, but not to exceed thirty days..."

To comply with the requirements established by the *Code*, the Bureau implemented IAC 875-71.11(2), which states, in part, "When the timing of two different types of inspection on a single conveyance coincide, a state inspector may perform both inspections in one visit.

a. Periodic inspections.

(1) Each CPH [construction personnel hoist] shall be inspected at intervals not to exceed three months. All other periodic conveyance inspections by state inspectors shall be conducted annually unless the labor commissioner determines resources do not allow annual inspections (emphasis added). If the labor commissioner determines quarterly inspections of CPHs and annual inspections of other state-inspected conveyances are not feasible due to insufficient resources, the labor commissioner shall determine the inspection schedule.

(2) Conveyance inspections by special inspectors shall be conducted at least annually."

Inspectors are also required to file annual inspection reports with the Bureau within 30 days of completion of each inspection in accordance with IAC 875-71.11(5).

As stated above, section 89A.6(3) of the *Code* allows for elevator inspections to be completed at intervals other than annually if such rules are adopted by the Elevator Safety Board. IAC 875-71.11(2), discussed above, allows the Labor Commissioner to establish an alternate inspection schedule if annual inspections are not feasible. However, during fieldwork, representatives from the Bureau did not provide documentation of an alternate inspection schedule and, according to a representative of the Bureau, the inspectors are still trying to meet the annual requirement specified in the *Code*.

The process for installation, operation and inspection of elevators consists of the following:

- The owner of each operable elevator not previously registered must register the elevator with the Bureau. An application to install a new conveyance also constitutes registration.
- The Bureau must assign an identification number to each elevator which must be stamped on a metal tag permanently attached to the controller, electrical disconnecting switch or wind tower lift cage.
- Installation must not begin until an installation permit has been issued by the Bureau. A separate installation permit must be issued for each elevator except identical wind tower lifts installed at a single wind farm as the result of one construction contract which are covered by a single installation permit.
- Use of an elevator must not begin until a construction permit authorizing the temporary, limited use of an elevator for construction purposes has been issued by the Bureau.

- A State inspector is scheduled to inspect an elevator upon submission of the completed application and required fee.
- After passing inspection, a certificate to operate the elevator is issued by the Labor Commissioner. Operating permits are not issued prior to successful completion of an inspection and payment by owners of all permit and inspections fees.
- Current operating permits, or copies of current operating permits, shall be conspicuously displayed, as follows:
  - The operating permit for an elevator shall be posted in the car.
  - The operating permit for an escalator, dumbwaiter, wind tower lift, moving walk or wheelchair lift shall be posted on or near the conveyance.

**Table 4** summarizes the number of elevator inspections conducted by both State and third-party inspectors during fiscal years 2009 and 2010 based on data available from the Bureau as of December 15, 2010.

**Table 4**

| Fiscal Year | Number of State Inspections | Number of Third-Party Inspections | Total |
|---|---|---|---|
| 2009 | 5,869 | 2,439 | 8,308 |
| 2010 | 7,576 | 2,200 | 9,776 |

The inspections summarized in the **Table** include both initial elevator inspections and re-inspections. A breakdown of initial inspections and re-inspections is not readily available from DLS-IWD.

As illustrated by the **Table**, the number of State inspections increased from 5,869 in fiscal year 2009 to 7,576 in fiscal year 2010, an increase of 1,707. This increase was primarily due to an increase in the number of State inspectors from 10 in fiscal year 2009 to 11 for most of fiscal year 2010. The Bureau also hired 2 additional inspectors in late June 2010. According to a representative of the Bureau, management increased emphasis on reducing the backlog of overdue inspections.

We used a random number software program to select a total of 100 elevator inspections completed during fiscal years 2009 and 2010 to test for compliance with Chapter 89A of the *Code* and IAC [875] – Chapter 71, including the following:

- Periodic inspections must be comprehensive. Elevators subjected to major alterations, elevators being transferred from construction permits to operating permits, previously dormant elevators being returned to service, relocated elevators and new elevators must be inspected in their entirety.
- Inspections must be conducted in accordance with the *Code* and IAC [875] – Chapter 71.
- Acceptance inspections are conducted after each installation of an elevator in a newly constructed or remodeled building, alteration or relocation of an elevator, before an elevator subject to a construction permit receives an operating permit and before a previously dormant elevator is returned to service. An acceptance inspection ensures the conveyance is constructed properly and in compliance with all conveyance safety codes.
- Inspections must be performed in accordance with applicable inspection standards included in safety codes or documents.
- Inspection reports must be filed by an inspector within 30 days of each inspection.
- If an unsafe condition is noted in an inspection report, the condition should be corrected by the owner within 30 days of the inspection report. The owner may petition the Labor

Commissioner for up to 60 additional days to make necessary corrections. After unsafe conditions are corrected, a Bureau inspector must re-inspect to ensure unsafe conditions identified in the inspection report are corrected.

- A safety test must be performed before each new or altered installation is placed into service. Also, an annual, 3-year and 5-year safety test must be made on all elevators pursuant to the detailed schedules and procedures contained in ASME and ANSI guidance.
- A safety test report should be received by the Bureau within 30 days of the completed safety test.
- Inspection reports must be sufficiently supported and all significant information must be included in the supporting documentation, such as hard copy inspection reports and other relevant documentation.
- Fees are collected in accordance with established rates, deposited intact and timely and correctly recorded in the State's financial accounting system.
- Fees are sufficiently supported by an invoice or other documentation, as applicable.

We determined 68 of the 100 elevator inspections tested did not comply with the requirement for annual inspections. Some of the 68 elevators identified had been inspected but not in a timely manner. The rest of the 68 elevators identified had not been inspected at the time of our testing. The inspections were 6 days to more than 9 years past due at the time of our testing. Of the 68 elevator inspections identified:

- 43, or 63.2%, were less than 1 year past due,
- 12, or 17.6%, were 1 to 3 years past due,
- 8, or 11.8%, were 4 to 7 years past due and
- 5, or 7.4%, were more than 7 years past due.

**Table 5** summarizes examples of past due inspections identified.

**Table 5**

| Business Name | City | Period Past Due (Approximately) |
|---|---|---|
| Concrete Silo | Woden | 6 years, 8 months |
| Dubuque Sash and Door | Dubuque | 6 years, 9 months |
| East Park Avenue Parking | Waterloo | 2 years, 11 months |
| F.J. Krob and Company | Solon | 9 years, 4 months |
| McAuley Hall | Cedar Rapids | 1 year, 1 month |
| Monsanto | Davenport | 7 years, 2 months |
| Sisters of Mercy | Cedar Rapids | 4 years, 1 month |
| Sparboe Foods, LLC | Hampton | 8 years, 10 months |

In addition, we determined 1 of the 100 annual inspection reports reviewed was not filed within 30 days of completion, as required, and 1 of the 100 annual inspection reports was not available when requested from the Bureau.

We also judgmentally selected 6 locations to determine if operating permits were either properly posted in the elevators or filed in the building management offices of the selected locations. We observed 37 elevators at the 6 locations selected to test compliance with the posting and availability requirements, as follows:

- Hoover State Office Building – According to the posted operating permits, the 4 elevators were last inspected in December 2008 and the operating permits were issued in February 2009. These inspections appeared to be past due based on information included on the posted operating permits. According to the database maintained by the Bureau, 3 of the 4 elevators were last inspected on November 30, 2009 but no operating permit date was recorded.
- Liberty Parking Garage – The operating permits posted in the 2 elevators observed were dated February 11, 2010 and listed the most recent inspection date as September 30, 2009, which agrees with the date recorded in the database maintained by the Bureau.
- Lucas State Office Building – According to the posted operating permits, the 6 elevators were last inspected in November 2007 and the permits were issued in December 2007. Therefore, the inspections appeared to be over 2 years past due. However, based on a review of the database maintained by the Bureau, 2 of the 6 elevators had operating permits issued in June 2010. The remaining 4 were listed as having a safety order issued at some point but did not have a date indicated for issuance of new operating permits.
- Polk County Convention Center – Neither the operating permit nor a reference to where the operating permit could be observed were posted in the elevator observed.
- Principal Tower – The operating permits for the 5 elevators and 1 escalator selected for observation are not posted but are maintained in the building management office. A reference to the building management office was properly posted. We made several attempts to observe the operating permits; however, the staff responsible for maintaining the permits was not readily available.
- Ruan Center – According to the posted operating permits, the 14 elevators and 4 escalators selected for observation were last inspected in February 2010. However, based on discussions with Ruan Center business management office staff, the elevators had recently been inspected in February 2011. We observed copies of annual inspection reports on file evidencing the most recent inspection. However, the most recent operating permits had not yet been received from the Bureau.

To ensure accuracy of the operating permits posted, we requested annual inspection histories from the Bureau for the selected elevators. As a result of the procedures performed, we identified several findings regarding lack of compliance with the requirement for posting or availability of current operating permits, the annual inspection frequency requirement and timeliness of re-inspections, as follows:

- Operating permits – We identified 12 of the 37 elevators selected which have operating permits but the permits are not current, including 6 at the Lucas State Office Building, 4 at the Hoover State Office Building and 2 at the Liberty Parking Garage. In addition, the elevator observed at the Polk County Convention Center did not have either an operating permit posted or a reference to where the operating permit could be observed. Therefore, we could not determine whether the permit is current. See **Finding G**.
- Annual inspection – Of the 37 elevators selected for testing, 22, or 59%, of the elevators observed and tested at the 6 selected locations did not comply with the annual inspection frequency requirement during fiscal years 2009 and 2010. The 22 elevators, including 18 at the Ruan Center, 2 at the Liberty Parking Garage, 1 at the Hoover State Office Building and 1 at the Polk County Convention Center, were all less than 1 year past due, ranging from 5 to 363 days past due.

  As of April 2011, subsequent to the period reviewed, the annual inspection histories provided by the Bureau showed 7 of the 37 elevators, or 19%, still did not comply with the annual inspection frequency requirement. The 7 inspections were from 101 to 265 days past due.

According to representatives of the Bureau, although progress has been made over the past few years, the Bureau is not yet able to consistently comply with the annual inspection requirement. This is due, in part, to the significant backlog which accumulated over several years. Also, the additional demands of required wind tower lift inspections have dramatically impacted the Bureau's ability to reduce the backlogged inspections. See **Findings H** and **I**.

**Re-inspections** – As previously stated, if unsafe conditions are identified during an annual inspection, up to 30 days is allowed for correction of unsafe conditions and a re-inspection is required to be conducted by a State inspector. IAC 875-71.11(7) requires re-inspections be completed or sufficient written documentation be obtained to verify unsafe conditions identified in the original inspection report are corrected. Elevators requiring a re-inspection cannot be used by the public until a State inspector has verified the unsafe conditions have been corrected. The Bureau establishes and documents a due date for re-inspection on each inspection report that includes unsafe conditions identified during the original inspection.

Of the 100 inspection reports reviewed, we identified 21 which required a re-inspection due to unsafe conditions identified during the original inspection. Of the 21 re-inspections identified, 19, or 90%, were not completed by the re-inspection due date established by the Bureau. According to representatives of the Bureau, the added responsibility of inspecting wind tower lifts has limited the ability to perform timely inspections and re-inspections.

We also identified 10 of 37 elevators at the 6 locations previously identified which required re-inspections due to unsafe conditions identified during the original inspection. As a result of procedures performed, we determined all 10 of the elevators identified as requiring a re-inspection were not completed by the re-inspection due date documented on the inspection reports.

In addition, 2 of the 10 identified had not been re-inspected as of April 5, 2011, based on information recorded in the annual inspection reports/histories obtained from the Bureau. The 2 re-inspections were 131 days past due as of April 5, 2011. See **Finding J**.

**Safety tests** – The Bureau is also responsible for ensuring safety tests of all elevators are completed on new and altered installations before they are placed in service and either annually, every 3-years or every 5-years, as required by IAC 875-71.14(1). Specifically, safety tests must be completed in accordance with schedules and procedures contained in specific ASME and ANSI standards and guidance, which are incorporated by reference into the IAC. In addition, IAC 875-71.14(2) requires safety test reports be filed within 30 days of the completion of the safety test.

Safety tests include evaluating compliance with specific requirements, such as full load tests and testing of cables, hydraulics, brakes, alarms and other mechanical aspects to determine if an elevator has been maintained in a safe operating condition. The safety tests are completed by elevator mechanics and are in addition to the annual inspections. Within 30 days after completion of a safety test, the elevator mechanic must file a report, on a Bureau approved form, with the Labor Commissioner. A copy of this report must also be provided to the owner of the elevator.

Of the 100 annual inspections selected for review, we identified 16 for which the required safety test had not been completed within the annual, 3-year or 5-year frequency requirement. In addition, for 2 of the 16 safety tests identified, the required report was not available and 1 safety test report had not been filed with the Labor Commissioner within 30 days of the completed safety test, as required. See **Finding K**.

## Boiler and Elevator Programs

While reviewing Bureau policies and procedures, we determined the Bureau has not developed a written complaint resolution policy for the Programs. Currently, the Bureau resolves complaints on a case by case basis. It is important to ensure consistent procedures are completed for all complaints received regarding boilers and elevators. A lack of written policies and procedures

regarding complaints, from intake through resolution, may result in inconsistent treatment and documentation when complaints are encountered. See **Finding L**.

Based on our observations, the functions performed by the Bureau, such as planning, overseeing program funding, completing inspections and reviewing inspection reports, were adequately performed. Findings and recommendations are included in this report to provide opportunities for further improvement to the Programs and compliance with Program requirements.

## COMPARATIVE INFORMATION

We compared the technical guidance, inspection frequency and fees used for the Bureau's inspections of boilers to 5 surrounding states. The results of this comparison are summarized in **Appendix A.** As illustrated by the **Appendix**, all states reviewed use the NBIC and ASME for technical guidance while completing inspections. Illinois and Nebraska also use guidance contained in the Petroleum Institute Pressure Vessel Inspection Code.

The frequency of boiler inspections is also similar among the states reviewed. All states generally require annual inspections. However, there are some differences regarding the frequency of internal inspections and inspections while under or not under pressure. For example, Iowa requires internal and external inspections once every 2 years while not under pressure and once every 2 years while under pressure if the boiler is rated at over 100,000 pounds per hour. The frequency of inspections for pressure vessels is once every 2 years for the states reviewed, except Illinois and Wisconsin, which require pressure vessel inspections once every 3 years.

The inspection fees for boilers vary among the states reviewed depending on the various types and factors summarized in **Appendix A**. For example, fees range from:

- $30 to $160 in Illinois,
- $40 to $200 in Iowa,
- $35 to $80 in Minnesota,
- $25 to $60 in Missouri,
- $25 to $170 in Nebraska and
- $35 to $630 in Wisconsin.

We also compared the technical guidance, inspection frequency and fees used for the Bureau's inspections of elevators to 5 surrounding states. The results of this comparison are summarized in **Appendix B**. As illustrated by the **Appendix**, all states reviewed use ASME for technical guidance while completing inspections. Illinois, Iowa, Missouri and Wisconsin also use ANSI. In addition, Illinois uses American Society of Civil Engineers (ASCE) guidance and Minnesota uses the International Building Code.

Inspection fees for elevators vary dramatically among the states reviewed, as summarized in **Appendix B**. For example, fees range from:

- $75 to $200 in Illinois,
- $60 to $300 in Iowa,
- $50 to $1,000 in Minnesota,
- $125 plus any costs incurred in Missouri and
- $640 to $820 in Wisconsin.

As demonstrated by the examples listed, there is a wide range of inspection fees among the states reviewed. Iowa's inspection fees are generally lower than those in Minnesota, Missouri and Wisconsin, depending on which type of boiler or elevator is inspected. The inspection fee range for Iowa is most similar to Illinois.

## FINDINGS AND RECOMMENDATIONS

We reviewed the Boiler and Pressure Vessel Safety Program (Boiler Program) and Elevator and Escalator Safety Program (Elevator Program) to determine if the Programs are in compliance with the *Code of Iowa* and IWD policies and procedures. As a result, we identified certain findings and recommendations regarding the Programs which should be considered by the Governor, the General Assembly and IWD. Our findings and recommendations are summarized below.

**Finding A – Boiler reporting and inventory**

The Bureau currently does not have a comprehensive method to ensure all boilers throughout the State have been reported. According to representatives of the Bureau, on occasion they become aware of the existence of boilers which have not been previously identified and are not included in the item and location inventories. The Bureau is to be notified by building owners and insurance companies of any installations and/or major changes to boilers. Although Chapter 89 of the *Code* contains civil penalties for violation of a safety order, there is no provision for assessing penalties for lack of compliance with notification requirements.

Recommendation – The Bureau, in conjunction with the Boiler and Pressure Vessel Board and the General Assembly, should explore additional methods for ensuring all new installations and major changes of boilers are communicated to the Bureau. For example, the Bureau could request notification from cities of building permits issued for construction of all new buildings which include boilers. Also, the Bureau could request notification of all demolitions and remodeling of buildings containing boilers. IWD and the General Assembly should also consider establishing civil penalties or fines in Chapter 89 of the *Code* for lack of compliance with notification requirements by boiler owners.

Response – We utilize many different methods to ensure that all regulated boilers and pressure vessels are registered with our office. We engage the special instructions and the state inspectors to find and inspect regulated objects. We solicited assistance from inspectors in the Department of Public Safety, who remind building owners that they need to register their boilers and pressure vessels with us. We have posted a notice and the appropriate form on our web page, and we include a notice on all the operating certificates for equipment that is inspected.

While we believe our efforts to date have been comprehensive, we will request that City governments notify us when new boilers and pressure vessels are installed. However, it should be noted that there is no statutory requirement concerning "major changes to boilers."

Conclusion – Response accepted.

**Finding B – Boiler Safety Fund**

As previously stated, we reviewed the fund balances of the Boiler Program for fiscal years 2009 and 2010. As of June 30, 2006, the Boiler Program had an ending fund balance of $180,336, which has gradually increased to $644,058 as of June 30, 2010. Bureau staff periodically discuss potential plans for use of the balance of the Boiler Safety Fund, which are documented in the meetings of the Boiler and Pressure Vessel Board. However, the Bureau does not have a formal written plan for use of the balance.

Recommendation – The Bureau, in conjunction with the Boiler and Pressure Vessel Board, should develop a written plan for the use of the balance of the Boiler Safety Fund. In addition, the Bureau and the Board should periodically review the fees established for the Boiler Program to determine if fees are appropriate to meet current and future needs.

Response – We will prepare a written plan for the funds. The Boiler and Pressure Vessel Board is authorized to set fees to cover the costs of the program and we will bring this matter before the Board if necessary. We periodically review the status of the fund with the Board.

Conclusion – Response accepted.

**Finding C – Elevator reporting and inventory**

The Bureau currently does not have a comprehensive method to ensure all elevators throughout the State have been reported. According to representatives of the Bureau, on occasion they become aware of the existence of elevators which have not been previously identified and are not included in the item and location inventories. The Bureau is to be notified by building owners and insurance companies of any installations and/or major changes to elevators. Although Chapter 89A of the *Code* contains civil penalties for violation of a suspension or revocation of an operating permit, there is no provision for assessing penalties for lack of compliance with notification requirements.

Recommendation – The Bureau, in conjunction with the Elevator Safety Board and the General Assembly, should explore additional methods for ensuring all new installations and major changes of elevators are communicated to IWD. For example, the Bureau could request notification from cities of building permits issued for construction of all new buildings including elevators. Also, the Bureau could request notification of all demolitions and remodeling of buildings containing elevators. IWD and the General Assembly should also consider establishing civil penalties or fines in Chapter 89A of the *Code* for lack of compliance with notification requirements by owners.

Response – We will request that City governments notify us when new elevators are installed. We will also seek assistance from the Department of Public Safety, representatives of the elevator industry, and elevator special inspectors. It should be noted that insurance company employees do not inspect elevators in Iowa.

Conclusion – Response accepted.

**Finding D – Elevator Safety Fund**

We reviewed the fund balances of the Elevator Program for fiscal years 2009 and 2010. As of June 30, 2006, the Elevator Program had an ending fund balance of $325,882, which has gradually increased to $638,595 as of June 30, 2010. Bureau staff periodically discuss potential plans for use of the balance of the Elevator Safety Fund, which are documented in the meetings of the Elevator Safety Board. However, the Bureau does not have a formal written plan for use of the balance.

Recommendation – The Bureau, in conjunction with the Elevator Safety Board, should develop a written plan for the use of the balance of the Elevator Safety Fund, including plans to use the balance for hiring 2 additional elevator inspectors, a new computer system, upcoming retiree payouts and vehicle purchases. In addition, the Bureau and the Board should periodically review the fees established for the Elevator Program to determine if fees are appropriate to meet current and future needs.

Response – We will prepare a written plan for the funds. In addition, it should be noted that in recent weeks a $217,859 expenditure was made for our new computer software. The Elevator Safety Board is authorized to set the fees to cover the costs of the program and we will bring this matter before the Board if necessary. We periodically review the status of the fund with the Board.

Conclusion – Response accepted.

**Finding E – Annual boiler inspection requirements**

Section 89.3 of the *Code* requires the Bureau to inspect all boilers used in places of public assembly at least every 12 months. We identified 3 of 100 boiler inspections tested which did not comply with this requirement. The 3 inspections were completed 34, 39 and 46 days past the inspection due date. The lack of consistent completion and monitoring of timeliness of boiler inspections could potentially lead to danger to the public if unsafe conditions go undetected.

Recommendation – The Bureau should notify State and private inspectors prior to each certificate passing the required annual inspection date to ensure inspections are conducted in a timely manner.

Response – We will provide electronic notification to the inspectors at the beginning of each month.

Conclusion – Response accepted.

**Finding F – Review of boiler log sheets during inspections**

Although not a requirement, inspectors are instructed by the Bureau to document review of boiler log sheets while inspecting boilers. The IAC requires all boilers to be inspected according to the requirements of the NBIC, which suggests inspectors include evidence of review of the boiler log sheets and maintenance records while completing annual inspections.

We determined 99 of the 100 inspections tested did not include evidence of such review. A lack of review, or lack of documentation of the review, of log sheets or maintenance records may result in missing potentially unsafe conditions which should be examined more closely to ensure boilers are operating safely.

Recommendation – The Bureau should implement required and best practice inspection procedures, including, but not limited to, consistent review and documentation of log sheets and maintenance records while inspecting boilers. These procedures should be emphasized to inspectors. Also, the Bureau should consider establishing inspector review and documentation of log sheets and maintenance as a requirement within IAC [875] – Chapter 90.

Response – We will modify our inspection form to include log review. The Chief Inspector will continue his practice of discussing log review at the inspectors' meetings.

Conclusion – Response accepted.

**Finding G – Elevator operating permit posting requirements**

Administrative rules regarding the elevator operating permits require either permits be conspicuously posted in or nearby the referenced elevators by the owner or a reference to where current operating permits are located must be posted. We observed several elevators which had operating permits posted but the permits were not current. In addition, 1 of the elevators observed did not have either an operating permit posted or a reference to where the operating permit could be observed. Therefore, we could not determine whether the permit was current.

Recommendation – The Bureau should implement monitoring procedures to ensure owners either post the current operating permits or have a reference to where they are available.

Response – The inspectors check for operating certificates. The new computer software will print a reminder for building owners that will be mailed with the operating certificates.

Conclusion – Response accepted.

**Finding H – Annual elevator inspection requirements**

The Bureau is required to ensure inspections of all elevators are completed not less frequently than annually in accordance with section 89A.6 of the *Code*. However, we identified 68 of the 100 elevator inspections tested which did not comply with the annual inspection requirement. Some of the 68 elevators identified had been inspected, but not in a timely manner. The rest of the 68 elevators identified had not been inspected at the time of our testing. The inspections were 6 days to more than 9 years past due at the time of our testing.

In addition, inspectors are required to file annual inspection reports with the Bureau within 30 days of the completion of the inspection. However, we identified 1 of the 100 annual inspection reports reviewed which was not filed in accordance with this requirement. In addition, 1 of the 100 annual inspection reports was not available when requested from the Bureau.

Recommendation – The Bureau should use a portion of the Elevator Safety Fund carry-over balance to implement procedures to ensure compliance with the annual inspection requirement to ensure all elevators are safe for public and private use and consistently maintain supporting documentation for inspections completed.

Response – The Labor Commissioner and his staff are committed to totally eliminating the backlog of overdue inspections in the near future. We strongly believe inspections are preferable to normalizing the backlog by writing an alternative inspection schedule. The backlog of overdue inspections has been falling at a rapid pace and this week the Division of Labor Services received permission to hire 2 new elevator inspectors. We intend to fill these vacancies as quickly as possible. While too many inspections are overdue, we also believe that some of the equipment appears on the overdue list by mistake and the new computer system will assist in correcting these errors.

Conclusion – Response accepted.

**Finding I – Elevator inspection backlog**

According to representatives of the Bureau, they have been making progress toward compliance with the annual inspection requirement contained in section 89A.6 of the *Code* but still are not able to consistently comply due to the addition and constantly increasing number of wind tower lifts which must be inspected and a significant backlog of past due inspections. The Bureau completes an initial inspection of all wind tower lifts after they are constructed to ensure safety, as required, before issuing an operating permit. However, the Bureau purposely has not completed subsequent inspections of wind tower lifts due to the constantly increasing number of wind towers being constructed and to continue eliminating the backlog of past due inspections of elevators throughout the State.

Recommendation – The Bureau, in conjunction with the Elevator Safety Board and the General Assembly, should explore methods to alleviate the backlog of inspections and/or consider revising inspection frequency requirements. Consideration could be given to a risk-based approach to inspections based on items such as a history of past safety issues or deficiencies cited in inspection reports, the age of the elevators and other significant factors identified by the Bureau. A written formal plan should be established if a decision is made to use an alternate schedule or method for completing inspections.

Response – The Labor Commissioner and his staff are committed to totally eliminating the backlog of overdue inspections in the near future. We strongly believe inspections are preferable to normalizing the backlog by writing an alternative inspection schedule. The backlog of overdue inspections has been falling at a rapid pace and this week the Division of Labor Services received permission to hire 2 new elevator inspectors. We intend to fill these vacancies as quickly as possible. While too many inspections are overdue, we also believe that some of the equipment appears on the overdue list by mistake and the new computer system will assist in correcting these errors.

Conclusion – Response accepted.

**Finding J – Elevator re-inspection requirements**

The Bureau is required to re-inspect elevators when unsafe conditions are identified during the annual inspection. We identified 21 of the 100 inspections tested which required re-inspection. Although the re-inspections were performed, 19 of the 21 identified were not completed by the re-inspection due date included by the Bureau on the previously completed annual inspection report.

Recommendation – The Bureau should implement procedures to ensure re-inspections are completed by the re-inspection due dates.

Response – The current language of our inspection report form can be interpreted in a manner that is inconsistent with our administrative rules and our administrative practices. We have a large number of expensive, 4-part inspection report forms on hand. The paper forms will be obsolete in a few months when our new computer system is fully implemented. We will ensure that the new, computer-generated inspection reports are more clearly worded.

Conclusion – Response accepted.

**Finding K – Elevator safety test and reporting requirements**

Safety tests must be completed by the Bureau on new and altered installations prior to being placed in service and either annually, every 3 years or every 5 years, as required by the IAC. We identified 16 of 100 safety tests which were not completed within the timelines required by the IAC. In addition, safety reports were not available when requested for 2 of the 16 safety tests identified. Also, 1 of the 100 elevator safety test reports completed was not received by the Labor Commissioner within 30 days of the completed safety test, as required.

Recommendation – The Bureau should implement procedures to ensure compliance with the safety test schedule and 30-day timeline for filing safety test reports, as required by the IAC, and ensure all safety test reports submitted are maintained.

Response – The new computer software is being designed to bring us into compliance with the safety test schedule.

Conclusion – Response accepted.

**Finding L – Lack of a written complaint resolution policy**

The Bureau has not developed a written complaint resolution policy for the Programs to ensure consistent procedures are completed for all complaints received regarding boilers and elevators. A lack of written policies and procedures regarding complaints from intake through resolution may result in inconsistent treatment and documentation when complaints are encountered.

Recommendation – The Bureau should develop and implement written policies and procedures regarding complaints for boilers and elevators including, but not limited to, intake, investigations, observations, significant communications and resolution of each complaint. The written policies and procedures should also require documentation regarding complaint activity and resolution or status to be maintained in each relevant inspection file.

Response – By providing good customer service, our staff handles most elevator and boiler complaints with one phone call or one e-mail. The complaints cover a very wide range of topics. Our support staff can handle many of the inquiries. Other issues are referred to the chief inspector, legal staff, or management staff.

Conclusion – Response acknowledged. The Bureau should summarize its complaint resolution policy and practices in writing to help ensure consistent treatment and documentation from when significant complaints are encountered.

**A Review of the Boiler and Pressure Vessel and Escalator Safety Programs Administered by Iowa Workforce Development**

**Schedules**

A Review of the Boiler and Pressure Vessel and the Elevator and Escalator Safety Programs
Administered by
Iowa Workforce Development

Boiler Program Expenditures by Fiscal Year by Description
Fiscal years 2009 and 2010

| | Fiscal Year | |
|---|---|---|
| **Description** | **2009** | **2010** |
| Personal Services | $ 595,657.85 | 616,495.96 |
| In State Travel | 12,504.84 | 11,440.76 |
| State Vehicle Operation | 13,771.88 | 13,977.23 |
| State Vehicle Depreciation | 24,887.07 | *(10,968.96) |
| Out Of State Travel | 3,899.24 | 146.60 |
| Office Supplies | 15,523.92 | 7,802.80 |
| Facility Maintenance Supplies | 33.70 | - |
| Other Supplies | 2,028.94 | 6,621.59 |
| Printing and Binding | 2,974.00 | - |
| Uniforms and Related Items | 424.79 | 100.00 |
| Postage | 7,107.90 | 6,530.58 |
| Communications | 7,890.64 | 6,971.31 |
| Rentals | - | 796.00 |
| Utilities | 1,643.69 | 1,016.16 |
| Outside Services | 2,647.29 | 1,023.10 |
| Intra-State Transfers | 1,460.42 | - |
| Advertising and Publicity | 178.00 | - |
| Reimbursements to Other Agencies | 31,997.41 | 6,336.09 |
| ITE Reimbursements (1) | 180.09 | 300.88 |
| Office Equipment | 4,659.80 | - |
| IT Equipment and Software (2) | 12,451.43 | 1,573.68 |
| Other Expenses and Obligations | 53,478.52 | 55,496.45 |
| Refunds-Other | 1,225.00 | 1,355.00 |
| Total | $ 796,626.42 | 727,015.23 |

(1) – ITE - Information Technology Enterprise of the Department of Administrative Services.

(2) – IT - Information Technology.

***** - The Department of Administrative Services (DAS) was directed by House File 809, signed on May 26, 2009, to stop billing departments for vehicle depreciation payments and to return the depreciation monies paid into the departments' accounts. DAS returned the amount owed IWD by processing a negative expenditure adjustment which reduced IWD's expenditures.

A Review of the Boiler and Pressure Vessel and the Elevator and Escalator Safety Programs
Administered by
Iowa Workforce Development

Elevator Program Expenditures by Fiscal Year by Description
Fiscal years 2009 and 2010

| | Fiscal Year | |
|---|---|---|
| **Description** | **2009** | **2010** |
| Personal Services | $ 691,524.53 | 760,797.69 |
| In State Travel | 29,538.04 | 46,809.33 |
| State Vehicle Operation | 29,299.32 | 36,912.20 |
| State Vehicle Depreciation | 30,516.09 | 19,608.24 |
| Out Of State Travel | 7,594.95 | 1,262.21 |
| Office Supplies | 6,629.74 | 11,799.89 |
| Facility Maintenance Supplies | - | 34.91 |
| Other Supplies | 14,679.36 | 15,773.07 |
| Uniforms and Related Items | 333.13 | 539.21 |
| Postage | 5,828.89 | 5,323.70 |
| Communications | 17,666.68 | 11,301.32 |
| Rentals | 900.00 | 372.50 |
| Utilities | 2,025.01 | 752.70 |
| Outside Services | 203.38 | 2,701.97 |
| Intra-State Transfers | 2,922.42 | - |
| Advertising and Publicity | 175.00 | - |
| Outside Repairs/Service | - | 90.00 |
| Reimbursements to Other Agencies | 8,362.90 | 6,889.29 |
| ITE Reimbursements (1) | 233.36 | 405.95 |
| Office Equipment | 1,444.65 | - |
| IT Equipment and Software (2) | 2,149.47 | 13,399.85 |
| Other Expenses and Obligations | 62,810.49 | 70,029.58 |
| Fees | 1.05 | - |
| Refunds-Other | 6,028.00 | 7,557.00 |
| Total | $ 920,866.46 | 1,012,360.61 |

(1) – ITE - Information Technology Enterprise of the Department of Administrative Services.

(2) – IT - Information Technology.

A Review of the Boiler and Pressure Vessel and the Elevator and Escalator Safety Programs
Administered by
Iowa Workforce Development

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**Appendices**

A Review of the Boiler and Pressure Vessel and the Elevator and Escalator Safety Programs
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Iowa Workforce Development

A Comparison of Technical Guidance, Inspection Frequency
and Inspection Fees for the Boiler Program to Other States

**Illinois:**

Technical Guidance:

NBIC, ASME and American Petroleum Institute Pressure Vessel Inspection Code

Inspection Frequency:

Annual internal and external required for boilers. Frequency established by the Board if no corrosion applicable. Also, annual external while under pressure, if possible. Every 3 years (if subject to internal corrosion) for pressure vessels.

Inspection Fees:

Boilers:

$30 without manhole.
$30 for hot water supply.
$60 with manhole.
$130 maximum for any 1 boiler during any 1 year.

Pressure vessels:

$25 for 51 to 150 feet.
$50 for 50 feet or less.
$75 for over 150 feet.
$160 maximum for any 1 pressure vessel during any 1 year.

**Iowa:**

Technical Guidance:

NBIC and ASME

Inspection Frequency:

Annual external and internal required for all boilers and pressure vessels, except as otherwise provided by Code Section 89.3. For example, externally and internally once every 2 years for boilers while not under pressure and once every 2 years while under pressure if rated at or over 100,000 lbs/hr. For pressure vessels, internal once every 2 years and annual external if over 15 lbs psi.

Inspection Fees:

Boilers:

$80 for 20,000 to 100,000 lbs/hr and up to 450 lbs psi.
$200 for over 100,000 lbs/hr and 450 lbs psi.

Pressure Vessels:

$40 for a water heater supply boiler, in conjunction with a $40 annual fee and a $25 fee for the 1-year certificate.

Note:

btu/hr - british thermal units per hour.
lbs/hr - pounds per hour.
psi - per square inch.

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**Minnesota:**

Technical Guidance:

NBIC and ASME

Inspection Frequency:

Annual for boilers and every 2 years for pressure vessels.

Inspection Fees:

Boilers:

$55 for internal, in conjunction with an hourly rate of $80 for internal over 2,000 square feet or requiring more than half a day.

Pressure Vessels:

$35 and $10 for the annual registration.

**Missouri:**

Technical Guidance:

NBIC and ASME

Inspection Frequency:

For boilers, annual external and internal every 2 years if the boiler generates more than 400,000 lbs/hr. For pressure vessels, external every 2 years and internal when believed necessary.

Inspection Fees:

Power Boilers:

$35 for internal and $25 for external of 4,000 lbs/hr capacity or less.
$35 for external over 4,000 lbs/hr capacity.
$60 for internal over 4,000 but less than 16,000 lbs/hr capacity.
$35/hr up to 8 hrs and $50/hr over 8 hrs for internal over 16,000 lbs/hr capacity.

Heating Boilers, Water Heaters, Pool Heaters and Fired Vessels:

$18 for external of fired vessels.
$25 for external of water heaters, pool heaters, etc less than or equal to 15 psi.
$35 for internal of 4,000 lbs/hr capacity or less.
$45 for internal of over 4,000 lbs/hr capacity
$60 for internal of 4,000 to 16,000 lbs/hr.

Pressure Vessels:

$16 for 1,000 cubic feet or less in volume.
$25 for over 1,000 cubic feet.
$35 hourly rate up to 8 hrs for internal requiring entry.
$50 hourly rate for internal requiring entry if over 8 hrs.
Generally, no more than $120 shall be charged for any 1 pressure vessel.

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and Fees for the Boiler Program to Other States

**Nebraska:**

Technical Guidance:

NBIC, ASME and American Petroleum Institute Pressure Vessel Inspection Code

Inspection Frequency:

Annual for boilers and once every 2 years for boilers used as a water heater to supply potable hot water.

Inspection Fees:

Boilers:

$25 for internal or external of 800,000 btu/hr rated capacity or less.
$45 for internal or external of over 800,000 but less than 1.6 million btu/hr.
$90 for internal or $45 for external of 1.6 to 3.2 million btu/hr.
$130 for internal or $65 for external of 3.2 to 8 million btu/hr.
$170 for internal or $85 for external of over 8 million btu/hr.

Pressure Vessels:

$25 for 50 square feet or less.
$10 for each additional 100 square feet.
Not more than $55 for any single vessel.

**Wisconsin:**

Technical Guidance:

NBIC and ASME

Inspection Frequency:

For boilers, internal or external at least once each year. For pressure vessels, internal or external at least once every 3 years.

Inspection Fees:

Boilers:

$35 fee for internal or external of 20 square feet or less.
$80 fee for internal or external of 21 to 250 square feet.
$180 for internal and $120 for external of 251 to 1,000 square feet.
$240 for internal and $170 for external of 1,001 to 10,000 square feet.
$630 for internal and $290 for external of over 10,000 square feet.

Heating Boilers with Manhole:

$60 external.
$130 internal without manhole.
$140 for internal.

Multiple Boilers:

$60 per boiler or $320 for each 4 hr period, whichever is less.

Pressure Vessels:

No fee for all with less than 15 operating pressure and/or 11 cubic feet or less.
$50 for 12 to 200 cubic feet.
$120 for 201 to 500 cubic feet.
$140 for over 500 cubic feet.

Multiple Pressure Vessels:

$50 per vessel or $320 for each 4 hr period, whichever is less.

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A Comparison of Technical Guidance, Inspection Frequency
and Fees for the Elevator Program to Other States

**Illinois:**

Technical Guidance:
ASME, ANSI and ASCE

Inspection Frequency:
Annual, as well as random.

Safety Test:
*No requirements.*

Fees:
Permits:
$100 for material alteration.
$200 for new installation.
Certificate of Operation:
$75 for annual renewal.
$100 for initial certificate.
$100 for renewal of expired certificate.
$200 for temporary certificate.

**Iowa:**

Technical Guidance:
ASME and ANSI

Inspection Frequency:
Annual.

Safety Test:
Acceptances must be completed after relocations, alterations or installations. Periodically, every 1, 3 or 5 years.

Fees:
Annual Inspections:
$60 for dumbwaiters.
$60 for hand-powered elevators.
$60 for wheelchair lifts.
$75 for elevators.
$75 for escalators.
$150 for wind tower lifts.
$300 for television tower elevators.

**Minnesota:**

Technical Guidance:
ASME and International Building Code

Inspection Frequency:
Annual.

Safety Test:
Periodically, either every 1 or 5 years.

Fees:
Permit to Install, Alter or Remove:
$100.
Inspection Fees for Installations and Alterations:
1.5% of the total cost of the permitted work not to exceed $1,000, including 2 inspections.
Inspection Fees for Existing Elevators:
$50 for a 2 stop.
$75 for a 3 stop.
$100 for a 4 stop.
$125 for a 5 stop.
$150 for 6 or more stops.
$100 for escalators and moving sidewalks.

**Missouri:**

Technical Guidance:
ASME and ANSI

Inspection Frequency:
Annual.

Safety Test:
At least every 5 years.

Fees:
Plan Review for New Construction:
$150 plus $25 for each opening.
Temporary Operating Fees:
$75 for each 30-day permit.
State Operating Certificate:
$25.
Initial Inspection and Re-inspection:
$125 plus any costs incurred.
Installation/Alteration Permit:
$25.

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A Comparison of Technical Guidance, Inspection Frequency
and Fees for the Elevator Program to Other States

**Nebraska:**

Technical Guidance:
ASME

Inspection Frequency:
Annual.

Safety Test:
*No requirements.*

Fees:
Commissioner establishes fees. Fee schedule was not readily available.

**Wisconsin:**

Technical Guidance:
ASME and ANSI

Inspection Frequency:
Completed based on ASME.

Safety Test:
Periodic test.

Fees:

Plan Examinations:
$160 for alterations of hydraulic elevators, dumbwaiters, escalators or moving walks.
$200 for alterations of traction elevators.
$320 for new installation of hydraulic elevators, dumbwaiters, escalators or moving walks.
$400 for new installation of traction

Acceptance or Acceptance Re-inspections:

New Installations:
$640 for dumbwaiters.
$720 for hydraulic elevators.
$800 for traction elevators.
$820 for escalators or moving walks.

Alterations:
$320 for dumbwaiters.
$360 for hydraulic elevators.
$400 for traction elevators.
$160 for dumbwaiters.
$240 for hydraulic elevators.
$320 for traction elevators.
$320 for escalators or moving walks.