The Honorable Henry Kerner
Special Counsel
U.S. Office of Special Counsel
1730 M Street, NW, Suite 300
Washington, DC 20036

Re: Office of Special Counsel File No. DI-22-000099

Dear Mr. Kerner:

I am responding to your December 16, 2021, letter to the Department of Veterans Affairs (VA) regarding whistleblower allegations that staff at the VA Connecticut Healthcare System, West Haven Campus (hereinafter West Haven) in West Haven, Connecticut, engaged in conduct that may constitute a violation of law, rule or regulation and a substantial and specific danger to public health or safety.

The Deputy Under Secretary for Health, Performing the Delegable Duties of the Under Secretary for Health, directed the Office of the Medical Inspector to assemble and lead a VA team to conduct an investigation. We conducted a site investigation on this matter on March 22-24, 2022.

We do substantiate the three whistleblower allegations. We make 17 recommendations to West Haven and one recommendation to the Veterans Integrated Service Network 1. The signed report will be sent to the respective offices with a request for an action plan.

Thank you for the opportunity to respond.

Sincerely,

Denis McDonough

Enclosure
DEPARTMENT OF VETERANS AFFAIRS
Washington, DC

Report to the
Office of Special Counsel
OSC File Number DI-22-000099

VA Connecticut Healthcare System
West Haven Campus
West Haven, Connecticut

Report Date: June 24, 2022
TRIM 2022-C-3
Executive Summary

The Deputy Under Secretary for Health, Performing the Delegable Duties of the Under Secretary for Health, directed the Office of the Medical Inspector (OMI) to assemble and lead a Department of Veterans Affairs (VA) team to investigate allegations submitted to the Office of Special Counsel (OSC) concerning the VA Connecticut Healthcare System, West Haven Campus (hereinafter, West Haven) located in West Haven, Connecticut. The known whistleblower alleged conduct that may constitute a violation of law, rule or regulation and a substantial and specific danger to public health or safety. We conducted an onsite investigation at West Haven from March 22-24, 2022.

Specific Allegations of the Whistleblower

1. West Haven VA employees have not documented or utilized procedures to control hazardous energy from the main branch steam line and facility steam stations.

2. Facilities Management supervisors and employees do not receive adequate training on equipment procedures or hazard recognition for boiler room operations.

3. Employees do not conduct periodic inspections of energy control procedures for steam stations at the facility.

We substantiated allegations when the facts and findings supported that the alleged events or actions took place and did not substantiate allegations when the facts and findings showed the allegations were unfounded. We were not able to substantiate allegations when the available evidence was insufficient to support conclusions with reasonable certainty about whether the alleged event or action took place.

After careful review of the findings, we make the following conclusions and recommendations.

Conclusions for Allegation 1

- We substantiate West Haven VA employees have not documented or used procedures to control hazardous energy from the main branch steam line and facility steam stations.

- There is evidence of numerous new lockout/tagout (LOTO) procedures; however, we found a failure of staff and supervisors to follow and accurately execute proper lockout procedures in the March 6, 2022, boiler shutdown, thus placing employees at risk for severe injury or death.

- The procedures used during the March 6, 2022, boiler shut down did not isolate all potential energy sources by physical locks or tags to prevent premature re-energizing of the equipment.
• West Haven supervisors at multiple levels, including the Safety Office, failed to monitor and enforce LOTO procedures.

**Recommendations to West Haven**

1. Immediately conduct and document education on LOTO procedures and conduct a review of the LOTO procedures in place to ensure accuracy and understanding by staff. Evaluate the current LOTO process to ensure it is understood and effective (including staff signatures that the process was physically verified prior to proceeding). Ensure full compliance with 29 C.F.R § 1910.147, The Control of Hazardous Energy (Lockout/tagout); VA Connecticut Healthcare System Medical Center Policy (MCP) 138-075, Control of Hazardous Energy Lockout/Tagout Program; and LOTO procedures. Address any non-compliance as indicated.

2. Take appropriate administrative action for Safety Office and Facilities Management Services (FMS) leadership for the failure to follow policy during the March 6, 2022, boiler shutdown.

3. Ensure the Safety Office leads the oversight for compliance of the LOTO program and ensure all aspects of the supplement Standard Operations Procedure (SOP), Final to MCP 138-075 are followed for each lockout scenario.

**Conclusions for Allegation 2**

- We substantiate Facilities Management supervisors and employees do not receive adequate training on equipment procedures or hazard recognition for boiler room operations.

- There are violations of Veterans Health Administration (VHA) Directive 1810(1), Boiler and Boiler Plant Operations, dated February 6, 2017, related to required Safe Steaming and other training.

- The LOTO training documentation is inadequate as there are no content details or training methods documented.

- LOTO procedure failures during the steam shutdown on March 6, 2020, (discussed in Allegation 1) clearly demonstrate the lack of understanding and application of safety procedures by authorized employees.

- West Haven FMS has significant vacancies for both supervisors and staff.
Recommendations to West Haven

4. Develop a comprehensive safety training program for FMS that includes review of standards, training, demonstration and performance. Appropriately document training content and delivery to ensure continuity and standardization.

5. Ensure that supervisors have appropriate resources to direct staff on technical issues (e.g., subject matter experts (SME) within their shops), provide guidance and/or training, and manage their role.

6. Review contractor produced LOTO procedures with internal SMEs, modify procedures as necessary and re-educate all staff on the new procedures. Monitor for compliance and address any non-compliance.

7. Complete and document all VHA Directive 1810(1) required training for all appropriate employees.

8. Evaluate conditions impacting recruitment and retention and ensure appropriate priority is given to critically needed vacant FMS positions.

Conclusions for Allegation 3

- We substantiate employees do not conduct periodic inspections of energy control procedures for steam stations at the facility.

Recommendations to West Haven

9. Develop procedures to ensure all LOTO permit procedures are inspected regularly and ensure staff physically demonstrate and document the process.

10. Monitor all aspects of the supplement SOP, Final to MCP 138-075, and ensure the appropriate procedures are followed before servicing and/or maintaining facility steam systems and other machines and equipment.

Conclusions for additional findings

- We found multiple areas of concern for employee safety and no formal mechanism for reporting concerns with equipment or systems, or for tracking trends.

- Safety systems designed to provide redundant protection, such as pressure reduction valves (PRV) and pressure system valves (PSV), were inoperative, failed or served only as single level protection.

- Although the boiler plant appears to be in reasonable order, we did not see evidence of inspections or preventive maintenance in other areas, and this is a violation of VHA Directive 1810(1).
• We found evidence of massive losses of steam (visible both inside and outside the building) indicating leaks, as well as large amounts of condensate water pooling in low spots.

• Communication between the boiler plant operators, plumbers, and heating, ventilation, and air conditioning (HVAC) technicians was erratic or non-existent despite the shared responsibility for servicing the steam system at various points in the affected facilities.

• Current delays in the supply of replacement parts caused by the pandemic are impacting proper maintenance due to failure to investigate options for abeyance on compliance.

• We found there was a lack of knowledge or process by staff regarding how to report problems (beyond just notifying their supervisor), such as a Joint Patient Safety Report (JPSR) or other mechanisms.

Recommendations to West Haven

11. Immediately address OMI identified safety concerns related to the leaking PSV; replace the failed PRV; address various steam leaks identified in this report; request Veterans Integrated Services Network (VISN) and VA Central Office assistance; and when necessary, request abeyance to correct dangerous conditions while awaiting permanent solutions.

12. Immediately establish, enforce and monitor interim safety policies and procedures when working on Building 2 house heat shutoff and monitor for other similar safety deficiencies. These policies and procedures should be similar to those for working in confined spaces.

13. Develop communication process for FMS to ensure efficient and accurate communication between the boiler plant operators and the HVAC and plumbing staff performing maintenance and repair activities.

14. Ensure formal communication occurs with the boiler plant prior to action involving steam lines outside of boiler plant. Note: Radio notifications do not meet the intent of formal communication. This communication must be in a traceable, written format.

15. Educate all FMS staff on how to submit a JPSR or other form for safety concerns and monitor submissions for at least 6 months.

16. Comply with VHA Directive 1810(1) regarding periodic inspection and preventive maintenance for all equipment affected by steam.

17. Ensure boiler plant operators receive welfare checks twice per shift and that these checks are documented as required by VHA Directive 1810(1).
Recommendations for VISN 1

1. Support funding to meet the immediate repair needs and ensure work is prioritized to mitigate identified risks as soon as possible.

Summary Statement

We developed this report in consultation with other VHA and VA offices to address OSC’s concerns that West Haven VA employees have not documented or used procedures to control hazardous energy, have not received adequate training on these procedures and have failed to conduct periodic inspections of energy control procedures. We reviewed the allegations and determined the merits of each, and the National Center for Ethics in Health Care provided a review. The whistleblower alleged the West Haven facility’s failure to address these concerns placed employees at risk. We found violations of VA policy and Occupational Safety and Health Administration requirements and a significant potential threat to safety.
### Table of Contents

Executive Summary .................................................................................................................................................. i

I. Introduction ......................................................................................................................................................... 1

II. Facility Profile ...................................................................................................................................................... 1

III. Specific Allegations of the Whistleblower .......................................................................................................... 1

IV. Conduct of Investigation .................................................................................................................................... 1

V. Background, Findings, Conclusions, and Recommendations ........................................................................... 3

   Allegation 1 ......................................................................................................................................................... 3

   Background ......................................................................................................................................................... 3

   Findings ............................................................................................................................................................... 4

   Conclusions for Allegation 1 ................................................................................................................................. 7

   Recommendations to West Haven ....................................................................................................................... 7

   Allegation 2 ......................................................................................................................................................... 7

   Background ......................................................................................................................................................... 7

   Findings ............................................................................................................................................................... 8

   Conclusions for Allegation 2 ................................................................................................................................. 9

   Recommendations to West Haven ....................................................................................................................... 9

   Allegation 3 ......................................................................................................................................................... 10

   Background ......................................................................................................................................................... 10

   Findings ............................................................................................................................................................... 10

   Conclusions for Allegation 3 ................................................................................................................................. 11

   Recommendations to West Haven ....................................................................................................................... 11

   Additional or related allegations of wrongdoing discovered during the investigation ................................. 11

   Background ......................................................................................................................................................... 11

   Findings ............................................................................................................................................................... 11

   Conclusions for additional findings ................................................................................................................... 15

   Recommendations to West Haven ....................................................................................................................... 16

   Recommendations for VISN 1 ............................................................................................................................. 17

VI. Summary Statement .......................................................................................................................................... 17

Attachment A ........................................................................................................................................................... 18
I. Introduction

The Deputy Under Secretary for Health, Performing the Delegable Duties of the Under Secretary for Health, directed the Office of the Medical Inspector (OMI) to assemble and lead a Department of Veterans Affairs (VA) team to investigate allegations submitted to the Office of Special Counsel (OSC) concerning the VA Connecticut Healthcare System, West Haven Campus (hereinafter, West Haven) located in West Haven, Connecticut. The known whistleblower alleged conduct that may constitute a violation of law, rule or regulation and a substantial and specific danger to public health or safety. We conducted an onsite investigation at West Haven from March 22 to 24, 2022.

II. Facility Profile

West Haven, part of the VA New England Healthcare System, Veterans Integrated Service Network (VISN) 1, consists of West Haven and Newington, Connecticut facilities and seven community-based outpatient clinics. It serves Veterans in Connecticut and southern New England. West Haven is a 191-bed tertiary care facility classified as a facility complexity level 1a facility.¹

III. Specific Allegations of the Whistleblower

1. West Haven VA employees have not documented or utilized procedures to control hazardous energy from the main branch steam line and facility steam stations.

2. Facilities Management supervisors and employees do not receive adequate training on equipment procedures or hazard recognition for boiler room operations.

3. Employees do not conduct periodic inspections of energy control procedures for steam stations at the facility.

IV. Conduct of Investigation

The VA team conducting the onsite investigation consisted of a Senior Medical Investigator and a Clinical Program Manager, both from OMI; the Director, Office of Healthcare Engineering; and a Veterans Health Administration (VHA) General Safety Program Manager. The team toured the boiler plant, multiple locations in the basement and sub-basement of Buildings 1 and 2, and the site of the November 2020 steam line rupture incident. The team interviewed the whistleblower on February 22, 2022, and again on March 24, 2022.

¹ Level 1a-Highest complexity: Facilities with high-volume, high-risk patients; most complex clinical programs; and large research and teaching programs.
An entrance brief was conducted on March 22, 2022, with the following:

- Acting Medical Center Director
- Acting Deputy Medical Center Director
- Assistant Director
- Chief of Staff
- Associate Director Patient Care Services (ADPCS)
- Deputy Chief of Staff, Deputy ADPCS
- Executive Assistant (EA) to the Director
- Health Systems Specialist (HSS) to the Deputy Director
- VISN 1 Capital Asset Manager (CAM)
- Chief of Facilities Management Service (FMS)
- Acting Deputy Chief of FMS
- Safety Officer
- Graduate Health Administrative Training Program (GHAPT) Fellow
- Chief of Quality

An exit brief was conducted on March 24, 2022, with the following:

- Acting Medical Center Director
- Acting Deputy Medical Center Director
- Assistant Director
- Chief of Staff
- ADPCS
- Deputy Chief of Staff
- Deputy ADPCS
- EA to the Director
- HSS to the Deputy Director
- VISN 1 CAM
- Chief of FMS
- Acting Deputy Chief of FMS
- Safety Officer
- GHAPT Fellow
- Chief of Quality

The following staff were interviewed:

- Maintenance and Operations Supervisor
- Boiler Plant Supervisor
- Safety Officer
- Acting Medical Center Director
- 6 Boiler Plant Operators
- 8 Heating, Ventilation, and Air Conditioning (HVAC) Technicians
- 4 Plumbers
- VISN 1 CAM
V. Background, Findings, Conclusions, and Recommendations

Allegation 1

West Haven VA employees have not documented or utilized procedures to control hazardous energy from the main branch steam line and facility steam stations.

Background

29 C.F.R § 1910.147, The Control of Hazardous Energy (Lockout/tagout), applies to the control of energy during servicing or maintenance of machines and equipment. This Occupational Safety and Health Administration (OSHA) regulation outlines procedures for affixing lockout or tagout devices to disable machines or equipment to prevent unexpected energization, start up or release of stored energy that have the potential to injure employees. The following definitions also are provided:

- **Lockout.** The placement of a lockout device on an energy isolating device in accordance with an established procedure. This placement ensures that the energy isolating device and the equipment being controlled by it cannot be operated until the lockout device is removed.

- **Lockout device.** A device that uses a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Blank flanges and bolted slip blinds also are considered lockout devices.

- **Tagout.** The placement of a tagout device on an energy isolating device in accordance with an established procedure. This placement indicates that the energy isolating device and the equipment being controlled by it may not be operated until the tagout device is removed.

- **Tagout device.** A prominent warning device (such as a tag) and a means of securely attaching it to an energy isolating device in accordance with an established procedure. This warning indicates that the energy isolating device and the equipment being controlled by it may not be operated until the tagout device is removed.

29 C.F.R § 1910.147 further states:

The employer shall establish a program consisting of energy control procedures, employee training and periodic inspections to ensure that before any employee performs any servicing or maintenance on a machine or equipment where the unexpected energizing, startup or release of stored energy could occur and cause injury, the machine or
equipment shall be isolated from the energy source and rendered inoperative.

29 C.F.R § 1910.147(c)(7)(i) also states:

The employer shall provide training to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees.

West Haven Medical Center Policy (MCP) 138-075, Control of Hazardous Energy Lockout/Tagout Program, dated September 10, 2020, states:

The initial survey shall be conducted by Authorized employee to identify all energy sources and determine which switches, valves, or other energy isolating devices apply to the equipment being locked out. More than one energy source (electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or others) may be involved.

The MCP further states:

The authorized employee shall verify that isolation and de-energization of the machine or equipment have been accomplished prior to starting work on machines.

Findings

We reviewed West Haven’s lockout/tagout (LOTO) program for the boiler plant and found multiple examples of individual procedures developed by HGS Engineering (hereinafter, the contractor). These procedures were posted directly on or in proximity to the equipment and included laminated step-by-step procedures and photographs of the individual valves or switches that would need to be set to safely de-energize and prevent equipment from being accidently turned on. We reviewed several examples of these documents and saw them posted on equipment in other parts of the West Haven facility. The Safety Office provided a complete list of these LOTO procedures for West Haven (203 as of the date of our site visit). During interviews with various staff in HVAC, boiler plant and plumbing shops, we found that the implementation of the LOTO program was highly variable. For example, one interviewee indicated he used the system consistently, while others stated they had never used the procedures. In addition, others indicated they had not worked on anything that would require the LOTO procedure.

West Haven conducted a planned boiler shut down on March 6, 2022, approximately 6 weeks after a visit by OSHA that had resulted from the citations issued by OSHA for the

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3 Authorized employee: A person who locks out or tags out machines or equipment to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee’s duties include performing servicing or maintenance covered under this section.

November 2020 steam line rupture incident. The shutdown was planned to allow for the installation of the double block and bleed valves inside the boiler plant (see Photo 1) and at least two other maintenance operations involving steam lines in other buildings on the West Haven campus. The newly installed double block and bleed system improves safety by placing a second valve in series with the first, providing a means to vent or release stored energy between the two closed (or isolated) valves.

Photo 1. New double block and bleed valves installed

During interviews, we learned there was a failure to follow the LOTO procedures during the shutdown on March 6, 2022. We requested the LOTO permit from West Haven and found it required 18 individual locks to be applied for each boiler (there are 3 boilers at West Haven). We interviewed a VISN staff member who was on site during the shutdown procedure. He stated that when he checked on the physical locks for the equipment impacted by the LOTO procedures, he found only 1 lock on the boiler on the main electrical supply and not the 18 locks required by the permit. In addition, there was no indication the other individuals involved (authorized staff) in the maintenance shutdown had verified isolation or placed their locks in the boiler plant as required by both West Haven policy and OSHA regulations.

We reviewed a Report of Contact (ROC) written by the VISN staff member about the incident. The ROC indicated that the boiler operator he questioned regarding the missing locks stated the boiler plant supervisor told him only one lock was required for the shutdown. The boiler plant operator and supervisor attended training for LOTO procedures on April 29, 2021, and again on November 19, 2021; the latter training included the list of LOTO procedures developed by the contractor. However, we could not determine if there was a hands-on component for either training event.

The West Haven LOTO permit (Attachment A of West Haven MCP 138-075) states immediately above the signature blocks: "Notice to Proceed is given ONLY once LOCKOUT/TAGOUT procedure is complete and verified by the undersigned." We interviewed the two individuals who signed the permit for March 6, 2022. Neither
individual verified compliance with the LOTO procedure for the boilers as required by MCP 138-075 nor did they determine if authorized employees affixed a lock to the energy sources. Both individuals stated they were busy in other parts of the facility outside the boiler plant overseeing contractors performing work (authorized employees). Both permit signers stated that although the form stated the requirement to verify the process, West Haven standard operation did not follow this process. The permit signers indicated their responsibility was for the plan, while the verification of physical locks/tags was the responsibility of the supervisor. Their rationale was that the supervisor was a subject matter expert (SME) on boiler operations and the permit signers were not. We noted the design of the LOTO checklists included written descriptions and photographs of the equipment to ensure anyone could review the procedures (see Photos 2 and 3).

During the March 6, 2022, boiler shutdown, the boiler plant supervisor decided to modify the procedure after the plan was approved. The supervisor's modified plan (not written or communicated to staff) required only one lock on the electrical energy source. This plan indicates a lack of understanding of the LOTO program and OSHA requirements, a disregard of safety procedures, or both.

New Haven MCP 138-075 states that in the event of procedures being performed by more than one individual, the supervisor is responsible for carrying out all steps of the lockout procedure and coordinating with authorized staff to ensure continuity of protection. We found no evidence that VA employees or contractors signed Attachment F of MCP 138-075 that requires each authorized individual to affix an individual lock or tag to the equipment. Neither the supervisor nor the Safety Office correctly articulated the procedures necessary to ensure employee safety in the LOTO program. They also failed to verify locks were placed in the boiler plant prior to work commencing in either the boiler plant or other facilities on campus. This failure to follow OSHA policy and VA policy resulted in a situation that may have resulted in serious harm or fatality.

Photos 2 and 3. *Left*, LOTO procedures (first part of instructions); *right*, LOTO procedures (second part of instructions).
Conclusions for Allegation 1

- We **substantiate** West Haven VA employees have not documented or used procedures to control hazardous energy from the main branch steam line and facility steam stations.

- There is evidence of numerous new LOTO procedures; however, we found a failure of staff and supervisors to follow and accurately execute proper lockout procedures in the March 6, 2022, boiler shutdown, placing employees at risk for severe injury or death.

- The procedures used during the March 6, 2022, boiler shut down did not isolate all potential energy sources by physical locks or tags to prevent premature re-energizing of the equipment.

- West Haven supervisors at multiple levels, including the Safety Office, failed to monitor and enforce LOTO procedures.

Recommendations to West Haven.

1. Immediately conduct and document education on LOTO procedures and conduct a review of the LOTO procedures in place to ensure accuracy and understanding by staff. Evaluate the current LOTO process to ensure it is understood and effective (including staff signatures that the process was physically verified prior to proceeding). Ensure full compliance with 29 C.F.R § 1910.147, MCP 138-075, and LOTO procedures. Address any non-compliance as indicated.

2. Take appropriate administrative action for Safety and FMS leadership for the failure to follow policy during the March 6, 2022, boiler shutdown.

3. Ensure the Safety Office leads the oversight for compliance of the LOTO program and ensure all aspects of Supplement Standard Operational Procedure (Final) to MCP 138-075 are followed for each lockout scenario.

Allegation 2

*Facilities Management supervisors and employees do not receive adequate training on equipment procedures or hazard recognition for boiler room operations.*

Background

VHA Directive 1810(1), Boiler and Boiler Plant Operations, dated February 6, 2017, amended September 11, 2018, states:

A qualified boiler operator is an individual who has met the requirements as a Boiler Plant Operator, WG-5402 as described in the Office of Personnel Management (OPM) qualification standard and can demonstrate knowledge and competency in boiler plant operations,
systems, theory, safety devices, and safety topics (covered in this directive and in the referenced VA training, safety device and steam generation system publications). The operator shall be provided a minimum of 3 months continuous, full-time on-the-job training with high pressure steam generation systems under the supervision of an experienced operator before being eligible for qualified boiler operator designation.

VHA Directive 1810(1) also states in Appendix A:

Written policies and procedures must be established, which, at a minimum, must include... A written program for ongoing training to develop, maintain, and regularly refresh qualified boiler operator proficiency in safe boiler and boiler plant operations. The training program must include the requirement for documentation of formal and on-the-job training (OJT) for every specific piece of equipment that the individual is to obtain and maintain qualifications. OJT must be conducted by experienced instructors and be verified and signed off on by the boiler plant supervisor or Chief Engineer. The program must include among other requirements, the following:

Steam Boilers training courses (Safe Steaming 1 and 2 in VA's Training Management System [TMS]) MUST be completed by all Boiler Plant Operators triennially and/or when there is an update in the training.

The Boiler Plant Supervisor or Lead and Contracting Officer Representative (COR) for the Third-Party Safety Device Inspection/Testing shall complete triennial refreshers on the Safe Steaming 2 course in TMS.

The Boiler Plant Supervisor, Lead and/or COR (two persons are preferred) shall be designated as the Site Boiler Plant Boiler Safety Device Training Champions. The Champions shall be responsible for training other boiler plant staff members in safety device testing.

VHA Directive 1810(1) also states:

A written steam conservation program focused particularly on maintaining steam traps, condensate pumps, and the integrity of piping systems and pipe insulation. Steam and condensate leaks and other necessary repairs must be reported to the boiler plant supervisor.

Findings

We requested training documentation for required Safe Steaming and found 8 of the 13 (or 62%) employees on the list showed incomplete training for Safe Steaming 1, and 9 of 13 (or 69%) showed incomplete or no records for Safe Steaming 2. We also requested documentation on LOTO training for authorized and affected employees and found initial VA Central Office training on November 25, 2020, along with an associated PowerPoint slide show. According to interviewees, this training was usually done live,
but due to the pandemic concerns at the time, the training was conducted virtually. We did not find evidence of any hands-on training on this date. There was training on MCP 138-075 provided to boiler plant employees on April 29, 2021, but there are no associated details to describe the type of training conducted. West Haven Safety Office provided training on LOTO and general safety training to supervisors on May 26, 2021, which lasted 1 hour. As indicated in Allegation 1, a contractor developed a multitude of LOTO procedures that were presented to supervisors and shop leads on November 19, 2021. This training does not specify the content but does imply these staff were trained on LOTO procedures and how to use the new procedure database. On this same date, staff in the boiler plant, plumbing, HVAC and electrical shops were provided training; however, no description is attached to the documents. It appears that training covered the LOTO equipment list and procedures developed by the contractor, as a list of these procedures was attached to the sign-in rosters; however, it is unclear what was conveyed. We received one document that provided minimal details on training content and time spent in each activity, but the document was not dated. With few exceptions (HVAC technicians), interviewees stated the training was either computer-based or lecture format with no performance demonstration or other skills evaluation as required by OSHA. We did not review qualification training for boiler operators or supervisors.

We found numerous supervisors in FMS in acting roles and were informed that there had been six different FMS chiefs in the last 6 years. FMS leadership told us there are approximately 50 vacancies in a service with approximately 200 authorizations.

Conclusions for Allegation 2

- We substantiate FMS supervisors and employees do not receive adequate training on equipment procedures or hazard recognition for boiler room operations.
- There are violations of VHA Directive 1810(1) related to required Safe Steaming and other training.
- The LOTO training documentation is inadequate as there are no content details or training methods documented.
- LOTO procedure failures during the steam shutdown on March 6, 2020 (discussed in Allegation 1), clearly demonstrate the lack of understanding and application of safety procedures by authorized employees.
- West Haven FMS has significant vacancies for both supervisors and staff.

Recommendations to West Haven

4. Develop a comprehensive safety training program for FMS that includes review of standards, training, demonstration and performance. Appropriately document training content and delivery to ensure continuity and standardization.
5. Ensure that supervisors have appropriate resources to direct staff on technical issues (e.g., SMEs within their shops); provide guidance and/or training; and manage their role.

6. Review contractor produced LOTO procedures with internal SMEs, modify procedures as necessary and re-educate all staff on the new procedures. Monitor for compliance and address any non-compliance.

7. Complete and document all VHA Directive 1810(1) required training for all appropriate employees.

8. Evaluate conditions impacting recruitment and retention and ensure appropriate priority is given to critically needed vacant FMS positions.

Allegation 3

_employees do not conduct periodic inspections of energy control procedures for steam stations at the facility._

Background

29 C.F.R § 1910.147 requires the following regarding periodic inspections:

1910.147(c)(6)(i). The employer shall conduct a periodic inspection of the energy control procedure at least annually to ensure that the procedure and the requirements of this standard are being followed.

1910.147(c)(6)(i)(A). The periodic inspection shall be performed by an authorized employee other than the ones(s) utilizing the energy control procedure being inspected.

1910.147(c)(6)(i)(B). The periodic inspection shall be conducted to correct any deviations or inadequacies identified.

1910.147(c)(6)(ii). The employer shall certify that the periodic inspections have been performed.

The supplement Standard Operations Procedure (SOP), Final to MCP 138-075 further stipulates: If this is a new procedure, an annual inspection (requiring two people) MUST be completed during the work.

Findings

We received numerous examples of properly documented periodic inspections under the supplemental SOP. However, the evidence of work for the steam shutdown conducted March 6, 2022, contained no periodic inspection. Interviews with facility staff confirmed that a periodic inspection was not performed; if an inspection had been
completed, it likely would have uncovered the major lockout procedure deviation and led to its correction before work could be conducted.

Conclusions for Allegation 3

- We substantiate employees do not conduct periodic inspections of energy control procedures for steam stations at the facility.

Recommendations to West Haven

9. Develop procedures to ensure all LOTO permit procedures are inspected regularly and ensure staff physically demonstrate and document the process.

10. Monitor all aspects of the supplement SOP, Final to MCP 138-075 and ensure the appropriate procedures are followed before servicing and/or maintaining facility steam systems and other machines and equipment.

Additional or related allegations of wrongdoing discovered during the investigation

Background

VHA Directive 1810(1), Appendix A states:

All components of the utility system associated with the production and use of steam at the VA medical facility, including fuel, must be individually reviewed for inclusion in the preventive maintenance program. All safety devices must be considered critical utility system components. Inspection, testing, and maintenance records are required for all critical components of the utility system.

Findings

We toured the boiler plant and downstream portions of the steam system. The boiler plant appeared to be in good order. As a result of information obtained in interviews, we decided to tour the steam stations and elevator pits in Buildings 1 and 2. Interviewees informed us that the condensate system leaked badly. In fact, in some low point areas such as elevator pits, approximately 80,000 gallons of condensate had accumulated. This condition required multiple sump pumps to correct the situation. We toured the elevator pits and found evidence of prior water incursion (see Photos 4 and 5) and continued leaks controlled with sump pumps.
Photos 4 and 5. *Left*, elevator pit with pumps and source of condensate; *right*, leak with evidence of continued moisture.

VHA steam stations have redundant equipment to ensure the control of steam pressure and flow. The high-pressure steam system is used to transport steam energy from the boiler plant to the buildings and to equipment using steam. The steam pressure is reduced at the steam stations by means of a pressure reduction valve (PRV). Immediately downstream from the PRV is the pressure safety valve (PSV) that vents high pressure steam in the event of a PRV failure, to ensure the pressure required from that steam station is not exceeded. In Building 1, we found multiple steam leaks (see Photo 5) and a PSV that was constantly venting pressure, indicating a failed PRV upstream, a faulty PSV, or both. This area also had dangerous noise levels that exceeded 100 dB (see Photo 7); however, there were no warning signs. The only hint that noise levels in this area were dangerous was an ear protection dispenser on the wall in an outside hallway a distance from the area.

Photos 6 and 7. *Left*, pipe condition in Building 1; *right*, hazardous noise level near PSV leak.
Photos 8 and 9. *Left*, pressure safety valve venting; *right*, steam leak in Building 1.

Photos 8 and 9 show the PSV leak (the noise level in Photo 7 was measured approximately 20 feet from this leak) and is one example of multiple leaks in the same area.

In Building 2, we found a dangerous situation with the house heat control valve. Of primary concern was that staff are exposed to live steam when operating the valve for house heat for Building 2. Photos 8 and 9 show the valve condition. It should be noted that the control valve is in a "doghouse," an enclosed space sealed by a locked door in the back of the basement room. Staff placed the t-handle (see Photo 10) because the pit below is a confined space and not easily entered. While that modification is reasonable, the degradation has created additional risk even at grade due to live steam emission and the small working space of the doghouse. As seen in the photos, the valves and pipes are corroded. The humidity and temperature in the doghouse were excessive due to the continuous steam leak. The large ventilation fan in the enclosure that was required for other areas was necessary to push the steam outside and prevent it from entering the main building.

We did not see warning placards except for the "confined space" sign on the now unused access point near the doghouse entry door. There appeared to be no consideration for operator safety given the live steam leak. There was no requirement for more than one employee to be assigned to serve as a safety back up nor any reasonable way to secure the doghouse entry door in the open position. The main room where the doghouse was located also did not have a mechanism to keep the exit door open in the event of an overpressure or pipe rupture. The door opens inward, meaning that even minimal overpressure in the room would effectively lock the door and prevent exit. These are similar physical conditions that occurred in the November 2020 fatalities. None of the interviewees could identify a formal mechanism to report concerns except notification of their supervisor. We requested all written concerns, incident reports, etc., presented to supervisors by HVAC, plumbing or boiler plant employees related to lack of training, procedures or safety issues from January 2020 to present, and found no evidence of an incident reporting system for FMS.
We interviewed employees from the various trades affected by the steam system (boiler plant, HVAC and plumbing). Boiler plant operators stated they could not leave the plant or be farther than 50 feet away from the boiler during their shift. They also stated they were responsible for the systems until the steam left the building. Outside the boiler plant building, the plumbing shop was responsible for the pipes and other equipment associated with steam. The HVAC technicians indicated that they were responsible for equipment that used steam (heating units, sterilizers, etc.). This division of labor complicated communications between the steam producer (boiler plant operators) and users downstream. In addition, boiler plant operators are not involved with equipment outside the boiler plant building and thus do not get involved with preventive maintenance of such equipment. Boiler plant operators were all aware of the issues with return (condensate) water leaking out of the system at a high rate, because they had to add large amounts of water to the system each day. Boiler plant operators estimated a 60-80% loss of water in the system daily. The Boiler Efficiency Institute (BEI) surveyed the facility March 7 through 9, 2022, and found the boiler plant makeup water rate was 90-100% or approximately 50,000 gallons of treated water lost per day. The BEI found the excessive makeup rate was due to multiple steam leaks and condensate loss across the system. The BEI report indicated that this was a very urgent issue.

There was also evidence of poor preventative and basic maintenance. For example, in the same area where the Building 2 house heat control valve was located, we found a large and obviously longstanding leak in a condensate return line (see Photo 12).
We also identified potential issues with procuring replacement equipment. The use of cast iron valves is prohibited in VHA due to the brittle nature of the material. Replacement valves must be constructed of steel. However, due to supply constraints of the pandemic, these valves are months to years away from availability. Nevertheless, West Haven needs immediate replacement of some of these valves. We discussed the concerns with VHA Healthcare Engineering. They indicated that in this instance an abeyance could be approved to allow for the temporary installation of the more available cast iron valves while waiting for delivery of the required steel valves.

During the boiler plant tour, we noted the boiler plant had multiple levels. The boiler operator was required to climb to the highest level of the catwalk to service or shut off steam. On the weekend, holidays, evenings and night hours, there is only one operator in the building. At West Haven, the Police Service is required to check on the boiler operator hourly. However, interviewees informed us that this check involved a phone call—with perhaps one in-person visit, if at all—and there was no documentation of the effort being made. VHA Directive 1810(1) requires that:

A written procedure for checking on the condition of the boiler operator or attendant at a minimum of twice a shift to ensure that the ability to perform assigned duties has not been impaired due to an accident or other event; for example, radio or phone checks by security police officers or remote alarms that the operators must carry.

Conclusions for additional findings

- We found multiple areas of concern for employee safety and no formal mechanism for reporting concerns with equipment or systems, or for tracking trends.
- Safety systems designed to provide redundant protection, such as PRVs and PSVs, were inoperative, failed or served only as single level protection.
• Although the boiler plant appears to be in reasonable order, we did not see evidence of inspections or preventive maintenance in other areas, and this is a violation of VHA Directive 1810(1).

• We found evidence of massive losses of steam (visible inside and outside the building) indicating leaks, as well as large amounts of condensate water pooling in low spots.

• Communication among the boiler plant operators, plumbers and HVAC technicians was erratic or non-existent despite the shared responsibility for servicing the steam system at various points in the affected facilities.

• Current delays in the supply of replacement parts caused by the pandemic are impacting proper maintenance due to failure to investigate options for abeyance on compliance.

• We found there was a lack of knowledge or process by staff regarding how to report problems (beyond just notifying their supervisor), such as Joint Patient Safety Report (JPSR) or other mechanisms.

Recommendations to West Haven

11. Immediately address OMI identified safety concerns related to the leaking PSV; replace the failed PRV; address various steam leaks identified in this report; request VISN and VA Central Office assistance; and, when necessary, request abeyance to correct dangerous conditions while awaiting permanent solutions.

12. Immediately establish, enforce and monitor interim safety policies and procedures when working on Building 2 house heat shutoff and monitor for other similar safety deficiencies. These policies and procedures should be similar to those for working in confined spaces.

13. Develop communication process for FMS to ensure efficient and accurate communication between the boiler plant operators and the HVAC and plumbing staff performing maintenance and repair activities.

14. Ensure formal communication occurs with the boiler plant prior to action involving steam lines outside of boiler plant. Note: radio notifications do not meet the intent of formal communication. This communication must be in a traceable, written format.

15. Educate all FMS staff on how to submit a JPSR or other form for safety concerns and monitor submissions for at least 6 months.

16. Comply with VHA Directive 1810(1) regarding periodic inspection and preventive maintenance for all equipment affected by steam.
17. Ensure boiler plant operators receive welfare checks twice per shift and that these checks are documented as required by VHA Directive 1810(1).

Recommendations for VISN 1

1. Support funding to meet the immediate repair needs and ensure work is prioritized to mitigate identified risks as soon as possible.

VI. Summary Statement

We developed this report in consultation with other VHA and VA offices to address OSC concerns that West Haven VA employees have not documented or used procedures to control hazardous energy, have not received adequate training on these procedures and have failed to conduct periodic inspections of energy control procedures. We reviewed the allegations and determined the merits of each, and the National Center for Ethics in Health Care provided a review. The whistleblower alleged the West Haven facility's failure to address these concerns placed employees at risk. We found violations of VA policy and OSHA requirements and a significant potential threat to safety.
Attachment A


29 C.F.R § 1910.147, The Control of Hazardous Energy (Lockout/tagout).


Various training documents and sign out sheets for FMS relating to LOTO procedures.

All LOTO permits for 2021-2022.

West Haven LOTO Inventory list.

OSHA on the Certification of Corrective Action Worksheet for Inspection number 1502795 dated May 12, 2021.

Photos used in the document were taken by OMI during the site visit.
Key to Investigative Team Members

- (B6) M.D., MPH, Acting ADUSH, 10ORE, Chief Senior Medical Investigator
- (B6) DNP, RN, Clinical Program Manager
- (B6) (HEFP/19HEF), Director, Office of Healthcare Engineering
- (B6) (HEFP/19HEF) General Safety Program Manager

Key to Interviewees

- (B6) (Maintenance and Operations Supervisor)
- (B6) (Boiler Plant Supervisor)
- (B6) Safety Officer
- (B6) (Acting Medical Center Director)
- (B6) (Boiler Plant Operator)
- (B6) (HVAC Technician)
- (B6) Plumbing Shop
- (B6) (HVAC Technician)
- (B6) (HVAC Technician)
- (B6) Plumbing Shop
- (B6) (Boiler Plant Operator)
- (B6) (HVAC Technician)
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- (B6) Plumbing Shop
- (B6) (Boiler Plant Operator)
- (B6) (HVAC Technician)
- (B6) (Boiler Plant Operator)
- (B6) (HVAC Technician)
- (B6) Plumbing Shop
- (B6) (VISN 1 CAM) (via Teams)
- (B6) (Boiler Plant Operator)
- (B6) (HVAC Technician)
- (B6) Safety Specialist
- (B6) (Chief Facilities Management Service)