



THE SECRETARY OF VETERANS AFFAIRS  
WASHINGTON

CENTRAL OFFICE  
WASH. D.C.  
U.S. OFFICE OF  
SPECIAL COUNSEL

September 9, 2002

2002 SEP 10 AM 11:15

Ms. Elaine Kaplan  
U.S. Office of Special Counsel  
1730 M Street, NW  
Suite 300  
Washington, DC 20036-4505

Dear Ms. Kaplan:

This is in response to your letter regarding public health and safety issues reported by an employee of the Department of Veterans Affairs (VA) Medical Center in Decatur, Georgia (OSC File No DI-01-0828). Following our request for an extension which your office granted, the report is now due on September 10, 2002.

The Veterans Health Administration (VHA) was asked to review issues related to this report. The allegations pertain to the improper configuration of drains for air handling units (AHU) in the Ambulatory Care Building and the Nursing Home, and the circulation of stale air to patient rooms in the Nursing Home due to closed and/or malfunctioning fire dampers. The employee suggests that these problems may have spread infectious disease in the facility. The employee further alleges that management officials at the facility committed a gross waste of funds in dealing with an air conditioner contractor, and that a former supervisor abused his authority by asking him to sign false documents.

VHA's findings regarding the AHUs, the fire dampers, and the potential spread of infectious diseases are set forth in the enclosed report. The remaining allegations are presently under criminal investigation by the Office of the Inspector General. Its findings will be reported separately.

Thank you for the opportunity to respond to these issues. If you have further questions about the investigative process, please contact Richard McCrone at (202) 273-5880.

Sincerely yours,

Anthony J. Principi

Enclosure

**REPORT TO OFFICE OF SPECIAL COUNSEL**

**Report of Complaint File No. DI-01-0828  
Office of Special Counsel**

**Prepared by:**

**Veterans Health Administration  
Department of Veterans Affairs**



**Table of Content**

**Table of Contents.....2**

**Summary.....3**

**I. Introduction and Summary of Complainant’s Allegations .....4**

**II. Methods for Conducting the Investigation.....5**

**III. Summary of the Evidence .....6**

**IV. Violation or Apparent Violation of Law, Rule, or Regulation .....8**

**V. Conclusions and Actions Taken .....9**

3.

### Summary

The Veterans Health Administration (VHA) was asked to review issues related to a complaint lodged with the Office of Special Counsel (OSC) by an Air Conditioning Equipment Mechanic (A/C Mechanic) at the Atlanta, Georgia Department of Veterans Affairs Medical Center. The allegations pertain to the improper configuration of Air Handling Units (AHU) drains in the Ambulatory Care Building and the Nursing Home, and the circulation of stale air to patient rooms in the Nursing Home due to closed fire dampers. The A/C Mechanic further alleges that the management officials at the VA Medical Center committed a gross waste of funds in dealing with an air conditioner contractor, and that a former supervisor abused his authority by asking him to sign documents that falsely verified the work performed by the contractor. A VHA team was assembled to review these allegations. After conducting an on-site inspection at the VA Medical Center, the team found that two AHU drains (# 11 and # 13) were improperly installed. This was reported to facility management, who advised that the problem has been corrected. The team found no evidence to indicate that the AHUs circulated microorganisms from sewage contamination.

With regard to the fire dampers, the team found they were open at the time of the inspection. Due to their location, the dampers are not easily visible, and the system does not include a device to record when a damper is closed or opened. Therefore, the team could not affirmatively establish the configuration of the dampers over the past four years. The team found that a new fire automatic fire suppression system has been installed to replace devices (including dampers) required under the old Engineered Smoke Control System. The team found no evidence of tuberculosis on the Nursing Home Care Unit.

The remaining allegations are presently under criminal investigation by the Office of the Inspector General. They will not be addressed in this report.

## **I. Introduction and Summary of Complainant's Allegations**

The Secretary of the Department of Veterans Affairs (VA) was asked by the Office of Special Counsel (OSC) to investigate allegations by an Air Conditioning Equipment Mechanic (A/C Mechanic) regarding the Atlanta VA Medical Center. These pertain to three main issues: the Air Handling Units (AHUs); the fire dampers on a unit; and financial and other irregularities pertaining to VA's relationship with the air conditioner contractor.

### **A. Allegations regarding the AHUs (AHU # 7, # 11, # 13, # 52, and # 54):**

1. The A/C Mechanic asserts that the present drain configuration of AHU # 13 violates manufacturer specifications and HVAC (heating, ventilation, and air conditioning) codes. Specifically, he asserts that the AHU is connected to a floor drain that leads to the sewage system, and that if the air handler is improperly vented, this can create a negative pressure vacuum that allows air or water from the sewer line to be sucked into the air handler.

2. The A/C Mechanic asserts that the improper installation of AHU # 13, and the past installation of the other units (AHU # 7, # 11, # 52 and # 54) may be spreading disease in the facility. The A/C Mechanic asserts that AHU # 11 is a particular concern, as air and water from the sewage system (possibly including sewage from the microbiology lab) were sucked into this unit in the past. He asserts that it is virtually impossible to rid the air handler of all of the microorganisms left by the sewage water, and that AHU # 11 may still circulate harmful bacteria throughout the affected building. According to the A/C Mechanic, these problems were reported to the Facilities Supervisors, the Safety Officer, and the Chief of Facilities Management Service, but management took no action regarding these reports.

### **B. Closed fire dampers on Nursing Home Care Unit (NHCU) # 2:**

1. The A/C Mechanic asserts that NHCU # 2 is not adequately ventilated because the fire dampers on the third floor have been kept closed for at least four years. According to the A/C Mechanic, they are kept closed because the electronic controls that automatically close the dampers in the event of fire are not working. The A/C Mechanic asserts that the Safety Officer told him to keep the dampers closed.

2. According to the A/C Mechanic, inadequate ventilation may be contributing to the spread of disease at the facility. He reports that several years ago, the Nursing Home Director asked him whether the air conditioning system might be partly responsible for the unusually high incidence of tuberculosis on the second and third floors of the nursing home.

5.

C. Irregularities in the contract with the air conditioner contractor:

1. The A/C Mechanic asserts that the Chief Engineer, who arrived in 1998, instructed him to inspect and report on the contractor's work. The A/C Mechanic found that a significant portion of the equipment that the contractor was paid to install and maintain was never installed, was installed improperly, and/or was in poor working condition. These problems regarding the contractor's work were never corrected.

2. The A/C Mechanic compiled documents and a written report while he was monitoring the contractor. When the Chief Engineer who asked him to compile this information left VA employ, the A/C Mechanic states that he was ordered to turn over this material to two Facilities Supervisors.

3. The A/C Mechanic asserts that despite the contractor's incompetence, the VA Medical Center continued to award contracts to this contractor.

4. The A/C Mechanic asserts that an Assistant Chief Engineer and a Lead Air Conditioner Mechanic (both now retired) approved invoices submitted by the contractor when they knew the work was never completed.

5. The A/C Mechanic states that the Lead Air Conditioner Mechanic asked the A/C Mechanic to sign documents verifying that the contractor had performed work that was not completed, and suggested that the A/C Mechanic would be in trouble if he did not comply. The Lead Air Conditioner Mechanic knew, or should have known, that the work had not been completed.

**NOTE:** Allegations pertaining to the contract (paragraph C, above) are presently under criminal investigation by the VA Office of the Inspector General. Therefore, they will not be considered within the context of this investigation and report.

## **II. Methods for Conducting the Investigation**

A team comprised of the Senior Operations Engineer, the Director of Occupational Health Program, a Chief Engineer from another VA Medical Center, and an Electronic Industrial Controls Mechanic went to the VA Medical Center on June 3, 2002, to gather information concerning the allegations. The team reviewed documents, conducted interviews, and toured the facility.

A. The team reviewed the following documents:

- Purchase order/contract air conditioner equipment contractor
- Engineering drawings
- Employee health records

6.

Infection control committee minutes 1997-2002  
NHCU Quality Improvement Committee minutes from 2000-2002  
Contract file with the air conditioner equipment contractor.

B. The team conducted interviews with the following individuals

Infection Control Practitioner/Manager  
Hospital Epidemiologist  
Employee Health Nurse  
Medical Director, Extended Care Service Line  
Nursing Home Care Unit Supervisor  
Two Charge Nurses (2nd and 3<sup>rd</sup> floor)  
Designated Union Representative  
Facility Industrial Hygienist  
Complainant  
3 A/C Mechanics (including the complainant)  
Two Contracting Officers  
Chief Biomedical Engineering Shop  
Chief Facilities Officer  
Chief Maintenance and Operations  
Chief Engineer/Safety Officer  
Shop Supervisor  
Shop work leader  
Two electricians

The team re-interviewed six of the individuals on the list to clarify discrepancies, differences in interpretation, and conflicting statements.

C. The team conducted tours through the hospital, nursing home care unit, and mechanical systems on several occasions. These included:

Walk-through AHU # 2, # 11, # 13, # 52, # 54, # 7 with the A/C Mechanic, who reported these allegations, and union steward  
Walk-through Nursing Home Care Unit (NHCU): once with complainant, once with two supervisors, once unaccompanied  
Air Handling Unit serving Surgery, ICU, Nuclear Med with work leader

### III. Summary of the Evidence

A. Allegations regarding AHU (# 7, # 11, # 13, # 52, and # 54):

AHU # 13 and AHU # 11 were piped incorrectly without trap or air gap. Such practice is not in accord with VA design criteria nor does it comply with manufacturer's recommendation for proper installation of equipment. Once the team reported these findings, engineering staff immediately began inspecting and modifying Air Handler Unit drains that lacked traps and an air gap.

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As noted above, the A/C Mechanic asserts that the improper installation of AHU # 13, and the past installation of the other units (AHU # 7, # 11, # 52 and # 54) may be spreading of disease in the facility. He identifies AHU # 11 as a particular concern because air and water from the sewage system (and possibly including sewage from the microbiology lab) were sucked into this unit. He asserts that it is virtually impossible to rid the air handler of all of the microorganisms left by sewage water, and that AHU # 11 may still circulate harmful bacteria throughout the affected building.

The team determined that in order for sewage to actually be sucked into the AHU under the conditions that were in place, three things would have to occur simultaneously. First, both the outside air damper and the recirculation damper would have to be closed. Second, there would have to be a sewage backup deep enough to cover the end of the AHU drain line. Third, the AHU fan would have to remain on.

In this case, the team found no evidence that sewage backflow had occurred. All of the witnesses interviewed, including the A/C Mechanic, universally described the observed liquid as clear water, without evidence of odor, floater, or toilet paper. Further, the team found no evidence or statements that the drains have required unclogging. Spontaneous clearing of drains is unheard of.

Based on this information, the team concluded that sewage had never been sucked into AHU # 11. Based on this determination, the team determined that the AHU is not circulating sewage microorganisms. Therefore, the theoretical problem of ridding the AHU of microorganisms from sewage is not an issue in this situation. The review of infection control committee minutes from the years 1997 through 2002, and the NHCU Quality Improvement Committee minutes from the years 2000 through 2002, and interviews with infection control personnel support this determination, as this data suggested no incidence of disease that would be caused by the circulation of air contaminated by microorganisms from sewage.

B. Allegations regarding closed fire dampers on NHCU # 2:

The complainant asserts that NHCU # 2 is not adequately ventilated because the fire dampers on the third floor were been kept closed for at least four years. He asserts that his was because the electronic controls that automatically close the dampers in the event of fire are not working. In order to consider this issue, the team inspected the dampers and reviewed the ventilation system in place on the unit. Under the system in place at this facility, fresh ("outside") air is provided to patient rooms from individual units with an exterior source of fresh air in each patient room rather than from a central system. The

8.

central system provides outside air to administrative space, showers, corridors, service areas, and bathrooms.

When the team inspected the dampers in question, they were in an open position. The team noted that the tubes that control the pneumatic devices to position the dampers had been cut and repaired at some point in the past. Information obtained during the facility visit indicates that the dampers were closed on one occasion when a contractor performed inappropriate maintenance. In response to this incident, the dampers were in fact closed until the system could be realigned. Beyond this, it is difficult to determine the positioning of the dampers over the past four years. The dampers are above ceilings or in walls and not easily visible. Further, some experience is required to determine if the damper is open or closed, and the system does not include a recording device for open and closing of dampers. Therefore, there is no evidence to definitely establish when the dampers were opened or closed. With the exception of this specific period noted above, the team cannot definitively determine when the dampers were opened or closed during the past four years.

The damper system identified by the A/C Mechanic is part of an Engineered Smoke Control System that was used in the past and has now been replaced by a sprinkler system. The nursing home was fully equipped with fire sprinklers as part of a VA system-wide effort, Sprinkler 2000. A project has subsequently been underway for about one and one-half years to eliminate superfluous devices (mainly smoke dampers) previously required under the old Engineered Smoke Control System. As this project moves forward, most dampers are removed or fixed open.

The A/C Mechanic reported that inadequate ventilation may be contributing to the spread of disease, and noted that the Nursing Home Care Unit (NHCU) Director asked him whether this might contribute to the high incidence of tuberculosis on the second and third floor of the facility. In order to consider the incidence of tuberculosis, the team reviewed infection control committee minutes from the years 1997 through 2002, and the NHCU Quality Improvement Committee minutes from the years 2000 through 2002. The team also interviewed the Infection Control Practitioner/Manager and the NHCU Medical Director. Based on this information, the team determined that there have been no cases of tuberculosis in the NHCU. Further, no airborne diseases in the NHCU appeared related to the ventilation system. During that period, tuberculosis was identified in a hospital employee elsewhere in the facility; however, there was no evidence to indicate that this was spread into or through the NHCU.

#### **IV. Violations or Apparent Violations of Law, Rule, or Regulations**

As reported earlier, the team determined AHU #13 and #11 were piped incorrectly without trap or air gap. Such practice is not in accord with VA design

9.

criteria nor does it comply with manufacturer's recommendation for proper installation of equipment. However, the team found no violation of applicable code, law, rule, or regulation.

## **V. Conclusions**

The team advised the engineering staff at the VA Medical Center about the problems with the piping for AHU # 13 and #11. The team also recommended that the facility undertake a complete review of all AHUs to evaluate whether they are properly piped. As of the date of the report, the facility reports that incorrectly piped drains have been corrected.

The team determined that when the inspection took place at the facility, the dampers identified by the A/C Mechanic were open. The team also determined that modifications are underway at the facility that will render the damper system obsolete for fire/smoke control purposes.

A review of facility records, including infection control committee minutes from the years 1997 through 2002, and the NHCU Quality Improvement Committee minutes from the years 2000 through 2002, revealed no incidence of tuberculosis in the NHCU, and no evidence of disease based on the circulation of microorganisms from the sewage system.