Department of Veterans Affairs
Office of Inspector General

Audit of Medical Oxygen Supply Management Practices
VA Medical Center San Juan, Puerto Rico

The Veterans Health Administration should continue monitoring the medical center's efforts to improve management of the medical oxygen supply.

Report No. 04-01901-19 **November 3, 2005**

VA Office of Inspector General
Washington, DC 20420

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DEPARTMENT OF VETERANS AFFAIRS
Office of Inspector General
Washington, DC 20420

To: Under Secretary for Health (10/10B5)

Subject: Audit of Medical Oxygen Supply Management Practices, VA Medical Center San Juan, Puerto Rico

Summary

A combination of problems contributed to the depletion of the liquid oxygen supply that occurred at VA Medical Center (VAMC) San Juan, Puerto Rico, on March 16, 2004. The problems included an undersized oxygen tank and inadequate oxygen supply replenishment and monitoring procedures. Immediately following the depletion incident, the VAMC and the Veterans Health Administration (VHA) conducted reviews of the incident and initiated corrective actions. The VAMC fast-tracked the installation of new, larger oxygen tanks that should meet usage and safety requirements; established formal ordering and delivery procedures with the contract distributor; increased the frequency of deliveries; revised oxygen supply and emergency response procedures and trained staff in their application; and corrected a number of oxygen system maintenance deficiencies. To help prevent similar occurrences, VHA issued a Patient Safety Alert requiring all VA medical facilities to comply with oxygen supply and system safety measures. In addition, the VA National Acquisition Center (NAC) strengthened and clarified contract administration requirements for the new national oxygen contracts awarded in April 2005. In June 2005, VHA issued a policy directive with new requirements for VA medical facility oxygen system installation, operation, and maintenance.

Because of the importance to patient safety of maintaining a sufficient oxygen supply and the seriousness of the depletion incident, we recommended that the Under Secretary for Health ensure that the VAMC updates its oxygen control policy, effectively administers contract requirements, continuously monitors the oxygen supply, periodically reevaluates usage requirements, and promptly addresses system maintenance issues. The Under Secretary agreed with the conclusions and recommendations and provided acceptable implementation plans. We will follow up on the planned actions until they are completed.

Introduction

The Office of Inspector General (OIG) conducted an audit of oxygen supply management practices at VAMC San Juan following the receipt of allegations that several patients had

died after the medical center's liquid oxygen supply was depleted on March 16, 2004. The results of the OIG review of the alleged patient deaths are presented in a separate report.

In performing this audit, we visited the VAMC where we interviewed managers and staff responsible for oxygen contract administration, supply management, and medical gas systems operations. We reviewed VAMC oxygen supply policies and procedures, contract documents, maintenance records, after-incident reports, and management improvement actions. To evaluate usage and replenishment practices, we reviewed receipts and invoices for the 53 oxygen deliveries made during the 54 weeks preceding the incident and the 34 deliveries made during the 17 weeks following the incident. We calculated oxygen usage rates based on the tank level readings and replenishment quantities as recorded on the delivery receipts and invoices. We reviewed VHA actions taken in response to the incident and discussed oxygen supply and system issues with VHA safety and logistics officials.

We also visited the NAC where we interviewed contracting officials and reviewed national oxygen contract documents. The review was performed from May to October 2004, with additional review in June 2005 of the status of post-incident corrective actions, in accordance with generally accepted government auditing standards.

Results

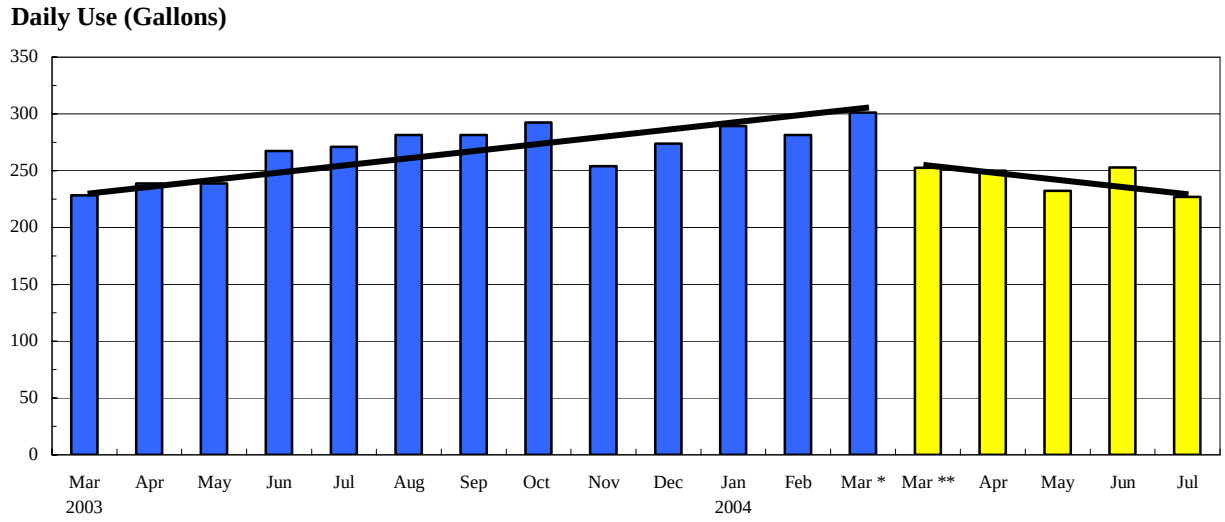
Issue: Ineffective Oxygen Supply Management Practices Contributed to Oxygen Depletion Incident

Oxygen Depletion Incident. At about 10:00 pm, Tuesday, March 16, 2004, the VAMC's oxygen system low-pressure alarm sounded in the Medical Intensive Care Unit (MICU). VAMC staff found that the main liquid oxygen supply tank was depleted and that the oxygen system was operating on the reserve supply of compressed oxygen gas cylinders. The depletion precipitated an emergency response by VAMC staff to deploy portable oxygen tanks to patient care areas, to monitor and provide therapy to affected patients, and to order an emergency delivery to refill the main oxygen tank. Because the reserve gas cylinders on hand provided only about a 2 to 3-hour supply, VAMC staff also had to request emergency deliveries of additional cylinders throughout the night and into the next morning. On March 17, the oxygen distributor replenished the main tank, a consultant certified that the oxygen system was safe to operate, and VAMC staff restored normal oxygen distribution throughout the medical center.

The depletion incident resulted from a combination of problems—the limited capacity of the main oxygen tank; inadequate ordering, delivery, and contract administration processes; and inadequate monitoring. For the 54 weeks preceding the incident, the average usage was 268 gallons per day, ranging from a low of 228 gallons per day for March 2003 to a high of 301 gallons per day for March 2004 through March 16, 2004,

the date of the incident. For the 17 weeks after the incident, the average usage was somewhat lower at 245 gallons per day, ranging from a low of 226 gallons per day for July 2004 to a high of 252 gallons per day for June 2004. Figure 1 shows the average daily usage by month before the incident (in blue), after the incident (in yellow), and the linear trend lines for usage.

Figure 1. VAMC San Juan Average Daily Oxygen Usage (March 2003–July 2004)



*Usage for March 1–16, 2004 (includes the day of the depletion incident).
**Usage for March 17–31, 2004 (after the depletion incident).

Source: OIG Analysis of VAMC Oxygen Delivery Receipts and Invoices

Small Tank Capacity Limited Oxygen Supply. The main oxygen tank had a stated capacity of 3,000 gallons and the normal fill level was 2,697 gallons. (Because of temperature and pressure variables for liquid oxygen, the tank was not completely filled to the stated 3,000-gallon capacity.) Based on the oxygen usage rates for the 54 weeks preceding the incident and the 2,697-gallon fill level, the tank provided a maximum of an 8–11-day supply. In addition, the reserve oxygen supply of gas cylinders provided about a 2–3-hour supply, which was inadequate to meet the reserve requirement of National Fire Protection Association (NFPA) standards (NFPA 2002 99C Standard on Gas and Vacuum Systems).

VAMC officials had been aware of the limited tank capacity prior to the incident and had planned to address it. After a VA CARES (Capital Asset Realignment for Enhanced Services) assessment, the VAMC submitted a proposal in April 2002 for a $600,000 nonrecurring maintenance (NRM) Medical Gases project to Veterans Integrated Services Network (VISN) 8 for approval and funding. The NRM project included the installation of significantly larger tanks to replace the existing undersized main oxygen tank and the reserve compressed gas cylinder supply. In August 2002, the VISN approved the project. However, in April 2003 the VAMC requested that the Medical Gases project be deferred

until 2004 because other construction project priorities and funding issues had delayed it. At the time of the March 2004 incident, the Medical Gases project was included in the Fiscal Year 2004 VISN NRM operating plans and had been re-funded, but actual project design and construction had not yet begun.

Inadequate Ordering and Delivery Processes. Because of the undersized oxygen tank, the VAMC needed frequent and consistent replenishments to maintain an uninterrupted oxygen supply. However, VAMC monitoring, ordering, and delivery procedures did not ensure that the oxygen supply would be adequately replenished by the contract distributor. Since January 2000, the VAMC had been procuring its liquid oxygen from AGA Gas, Inc. under a national contract awarded by the NAC. The VAMC and the contractor's distributor had an informal arrangement whereby the distributor made weekly deliveries to the VAMC. However, this informal arrangement was not consistent with the requirements of either the contract or the VAMC oxygen supply control policy.

The contract statement of work required the distributor and the VAMC contracting officer's technical representative (COTR) to finalize ordering procedures and to clarify the specific details of the delivery instructions in a Memorandum of Understanding (MOU) to be signed by both parties. According to the contract, the VAMC's delivery requirements were shown as 7 days after receipt of order and did not include any other specific instructions. However, the contractor and the COTR had not developed a written mutual agreement to formalize the specific ordering and delivery instructions. The VAMC oxygen control policy required the Supply, Processing, and Distribution (SPD) section to request an oxygen delivery when the tank level reached 55 inches, the equivalent of 957 gallons, or about a 3-day supply (Center Memorandum No. BO-01-34, *Control of Oxygen Supply*, December 2001).

For the 53 replenishments preceding the incident, the distributor made deliveries to the medical center once per week, usually on Tuesdays, but sometimes on Mondays, Wednesdays, or Thursdays. Because the deliveries did not always occur on the same day of the week, the intervals between deliveries ranged from 5 to 9 days, with 12 deliveries (23 percent) occurring more than 7 days after the preceding delivery, including 9 with an 8-day interval and 3 with a 9-day interval.

In addition, the distributor did not always fill the tank to its capacity. For 8 of the 53 deliveries (15 percent), the quantity replenished did not bring the oxygen supply to the normal fill level of 2,697 gallons. In these instances, the quantity of oxygen on hand after delivery ranged from 1,878 gallons (70 percent of normal fill level) to 2,493 gallons (92 percent of normal fill level). According to VAMC staff, the distributor's truck sometimes arrived at the medical center after making deliveries to other customers and did not have a sufficient quantity of oxygen left to fill the tank. This inconsistent pattern of deliveries and replenishment quantities provided an inadequate margin of safety and led to the depletion incident.

On the day of the depletion incident, Tuesday, March 16, 2004, the distributor did not make the usual weekly delivery. On the day before the incident, the distributor had called the VAMC and requested a tank level reading. However, VAMC staff did not follow through on this request and did not provide the requested tank reading to the distributor. In addition, on Tuesday, March 9, the day of the last delivery before the incident, the distributor had replenished the oxygen supply to only the 2,288-gallon level, or 85 percent of the normal fill level. This delivery provided only about a 7½-day supply based on the 299-gallon per day average usage for the 4 weeks preceding the incident and provided virtually no margin of safety for a delay in the next delivery.

Given the small tank capacity and the variability in the days of delivery and the quantities replenished, the VAMC had been susceptible to oxygen depletion if deliveries had been late on other occasions. For 14 (26 percent) of the 53 deliveries preceding the incident, the tank had less than a 2-day supply at the time of replenishment, including 3 deliveries (6 percent) when the tank had only about a 1-day supply remaining.

Inadequate VAMC Monitoring of Oxygen Supply and System. VAMC staff were not routinely monitoring oxygen levels or tracking usage and therefore were not aware of the low oxygen supply levels when they occurred or the increasing demand. The VAMC's oxygen control policy required SPD staff to monitor and record the oxygen supply level daily in a logbook. However, SPD staff had not been routinely monitoring the tank levels or maintaining a logbook. According to a VAMC Facilities Management Service (FMS) report prepared after the incident, SPD staff stated that they understood that their monitoring responsibilities had been transferred to another activity about 2 years prior to the incident. However, at the time of the incident, there had been no such revision to the 2001 VAMC policy that assigned monitoring responsibilities to SPD. Because of the lack of monitoring, VAMC staff were not aware that oxygen usage had increased over time and the safety margin provided by once-a-week deliveries had diminished.

In addition, the low-level alarm for the main oxygen tank was not properly calibrated at the time of the incident and did not activate until the tank was empty or nearly empty. The alarm setting did not provide any advance warning to allow staff to arrange an emergency delivery before the supply had been depleted. VAMC staff did not know what the alarm set point was or when it had last been calibrated. Current NFPA standards require that the alarm be calibrated to activate before the main supply reached a level no lower than that of an average day's usage.

Further, VAMC staff had not ensured that all previously identified oxygen system safety deficiencies had been corrected, which may have impeded the emergency response to the depletion incident. The contractor who conducted safety inspections of the medical gas systems in 2001, 2002, and 2003 found deficiencies identical to ones reported on the prior inspections. For example, emergency instructions and contact information, such as the distributor's phone number, were not posted at the master and area alarm sites.

During the emergency response, staff had trouble locating the distributor's phone number. Oxygen source valve labels were not posted at the tank site and staff had difficulty properly manipulating valves between reserve tank manifolds during the emergency response. The last two inspections noted that bulbs needed replacement in master alarms including the Emergency Room's reserve-in-use alarm. This alarm was not operational at the time of the incident.

Reasons for Change in Oxygen Usage Rate Unclear. The apparent reduction in the rate of oxygen usage in the weeks after the incident could not be explained by VAMC data. As shown in Figure 1, page 3, the estimated oxygen usage had been increasing over the 54 weeks preceding the incident but then decreased in the weeks after the incident. The average daily usage had increased from 228 gallons in March 2003 to 301 gallons for March 2004 through March 16, the date of the incident. For the 17 weeks after the incident, March 17, 2004–July 13, 2004, daily usage averaged only 245 gallons. However, VAMC officials could not explain what caused this apparent drop in usage. The number of patients receiving oxygen therapy, which VAMC officials considered to be a representative indicator of oxygen demand, was at similar levels before and after the incident even though the usage based on tank readings was lower after the incident.

Although available VAMC information did not definitively explain the changes in usage patterns, some possibilities were suggested. First, the oxygen system may have had unidentified leaks or other losses, such as from an improperly closed valve, in the weeks leading up to the incident. During the week following the incident, a preventive maintenance review of the oxygen system identified at least seven minor leaks in the oxygen system and tank connections. In addition, modifications to the system in conjunction with the relocation of the MICU in late February 2004 might have contributed to oxygen loss. Second, before the incident VAMC staff were not tracking oxygen quantities on hand before and after deliveries or verifying the quantities replenished. The only documentation available to show usage was the distributor's delivery tickets and invoices, which may not have always been accurate. After the incident, VAMC staff began recording oxygen supply levels each day and when deliveries were made, which may have provided more accurate information on actual quantities on hand and replenished. Any combination of these conditions may have adversely affected the oxygen supply during the period when usage was apparently increasing.

VHA and VAMC Corrective Actions. VHA and VAMC management initiated a number of corrective actions immediately following the incident. A VHA Special Purpose Review Team comprised of VA engineering and safety experts arrived at the VAMC 2 days after the incident and issued a report within 8 days. The VHA report identified a number of factors that led to the incident as well as problems in the VAMC's emergency response including: confusing emergency policies and procedures; off-hour inter-service communication problems; alarms and a reserve oxygen system that were not

code-compliant, insufficient tank size; and the missed delivery. The team made recommendations to the VAMC for improvement in these areas.

VHA also took prompt action to address oxygen supply and safety issues and requirements nationwide. VHA officials discussed oxygen supply during conference calls with VISN and VAMC managers. On April 5, 2004, VHA issued a Patient Safety Alert that instructed facilities to implement new oxygen requirements by April 30, 2004. The Alert required that all VA medical facilities review their oxygen systems to ensure that alarm set points complied with codes; at least two independent, constantly monitored alarm monitoring stations were operational; the delivery schedule provide an adequate oxygen supply; trained staff monitored tank refills; an adequate supply of portable oxygen tanks was maintained for emergency deployment to patient care areas, preventative maintenance system protocols were established; and interim life safety measures were implemented to compensate for code noncompliance conditions. VHA staff also conducted site visits to selected VAMCs to verify compliance with the Alert.

The VAMC took a number of steps immediately after the incident, such as hourly monitoring of the oxygen supply and checking the system for leaks. VAMC officials began a root cause analysis of the incident and the emergency response on March 17, 2004, and completed it on April 27, 2004. In May 2004, the VAMC developed a detailed action plan to address the recommendations of the VHA special purpose review and the root cause analysis and to comply with the Patient Safety Alert.

Within a week of the incident, a certified consultant recalibrated the main tank low-level alarm to activate when the oxygen reached a 1½-day supply level. On March 23, 2004, the VAMC executed a signed written delivery agreement with the contract distributor requiring scheduled deliveries twice a week, on Tuesdays and Fridays, and specifying that the tank should be replenished to the 2,697-gallon fill level at each delivery. For the deliveries occurring between March 23 and July 13, 2004, the replenishments were made on schedule and filled the tank to the proper level with one exception. On May 25, 2004, the distributor replenished the tank to about the 2,246-gallon level, or only about 83 percent of the required 2,697-gallon fill level. However, the VAMC staff monitoring the tank levels identified the short replenishment, contacted the distributor, and a delivery to fill the tank to the proper level was made the next day. Under the twice-a-week delivery schedule, the oxygen quantity on hand did not drop below about a 5½-day supply level, which provided a greater margin of safety than did the previous once-a-week deliveries.

In June 2004, the VAMC issued an updated and expanded oxygen control policy to clarify responsibilities and procedures (Center Memorandum 001FM-04-50). The new policy assigned SPD responsibility for performing daily tank inspections, recording the oxygen level, and monitoring the reorder point level. FMS was responsible for performing system and alarm inspections and preventive maintenance on a scheduled basis, observing and documenting tank refills, and providing oxygen-related training on a scheduled basis. The policy specified the levels for the reorder point and alarm settings.

The number of compressed gas cylinders to be maintained in the reserve supply was increased from 40 to 120 and the emergency contact list and notification and response procedures were updated. SPD and FMS employees were provided training on the new responsibilities and procedures. In addition, new emergency instructions and labels were posted at alarm and zone valve locations.

In April 2004, the VAMC received funding for the previously deferred Medical Gases project and planning and design of the oxygen system were fast-tracked. In June 2005, the first phase of the new oxygen system became operational and included two new 6,000-gallon tanks, which at a 300-gallon per day usage rate should provide about a 40-day supply capacity, and a 1,500-gallon reserve tank to replace the compressed gas cylinder backup system, which should provide a 5-day emergency supply. This substantial increase in storage capacity should better ensure that normal oxygen demand and fluctuations can be safely met, reduce the frequency of replenishment deliveries, and provide an adequate reserve supply to meet potential emergency situations, such as hurricanes or other disasters, that might increase demand or interrupt or delay replenishments. New master alarms were installed and alarm panel lights and audible alarms were made functional.

In April 2005, the NAC awarded a new oxygen supply contract for the VAMC to a different vendor, Praxair Puerto Rico, effective June 1, 2005. In June 2005, the designated VAMC COTR and the contractor's representative signed a MOU containing ordering and delivery instructions as required by the new contract. According to the MOU, VAMC staff will place an order when either of the main tanks drops to the 3,000-gallon level, which should ensure that the VAMC would have at least a 30-day supply on hand when replenishment deliveries, which are anticipated to occur about every 10 days, are made.

However, the June 2004 VAMC policy on oxygen control now needed to be updated to describe the new alarm settings, reorder points, contact information for the new distributor, and ordering and delivery instructions that have changed as a result of the new oxygen tanks and supply contract. In addition, the VAMC should revise the MOU to clarify contract requirements for the contractor to provide initial training to medical center staff on the protocols for emergency shutdowns during the refilling process and for alarm set point testing and verification. These two requirements were shown as "not applicable" in the MOU. As needed, the VAMC should modify the MOU to reflect new procedures and to be consistent with the revised oxygen policy.

Other National Oxygen Contracting and Management Actions. The depletion incident raised questions about how well other VAMCs understood and complied with the ordering and delivery requirements of the national oxygen contracts. In October 2004, we issued an interim advisory to the NAC with several suggestions for the new

national oxygen contract solicitation being prepared at that time.[1] We suggested several clarifications and revisions to the solicitation, including the responsibilities for establishing or modifying the contract ordering and delivery requirements and for VAMC submissions of accurate data for their tank capacities and estimated oxygen demand. The NAC incorporated these suggestions into the solicitation issued in November 2004. NAC officials also said they planned to strengthen their oversight of COTRs and contract administration at VAMCs under the new contracts. In April 2005, the NAC awarded 16 national oxygen contracts covering 155 VA medical facilities and 13 other government facilities.

In addition, in June 2005, VHA issued Directive 2005-028, *Oxygen Distribution Systems*, establishing policy and requirements for the safe installation, operation, and maintenance of oxygen utility systems at all VA medical facilities.

Conclusion — VAMC Oxygen Supply Management and System Maintenance Practices Should Continue To Be Monitored

The VAMC and VHA took prompt action to address the deficiencies in procedures and systems. The VAMC developed new oxygen control procedures, required more frequent deliveries, and fast-tracked the project to modernize the oxygen system and increase storage capacity. VHA issued a national Patient Safety Alert and a new policy directive on the safe installation, operation, and maintenance of VA oxygen systems at all medical facilities. In addition, the NAC strengthened and clarified contract administration requirements for the recently awarded national oxygen contracts.

Ensuring a continuous supply of oxygen is essential to patient safety and efficient medical center operations. Because of the seriousness of the depletion incident and past monitoring weaknesses, we believe that it would be prudent for VHA to provide continued oversight of the VAMC San Juan oxygen supply and system management processes to ensure that they have been effectively implemented. In addition, the upgraded oxygen tanks and the award of a contract to a new distributor will require that the VAMC update its policy to reflect changes in fill levels, reorder points, alarm settings, emergency contacts, and frequency of deliveries. The VAMC should ensure that the requirements of the MOU with the distributor meet all contract requirements and are consistent with the medical center's oxygen control policy.

[1] Assistant Inspector General for Auditing, *Interim Advisory, Office of Inspector General Evaluation of VA Medical Center Oxygen Supply Management and Contracting Practices*, October 7, 2004.

Recommendation

1. We recommended that the Under Secretary for Health ensure that the VAMC:

a. Updates and effectively administers the medical center oxygen policy and the MOU with the contractor to reflect the new oxygen system and replenishment requirements.

b. Continuously monitors oxygen supply levels, verifies replenishments, and periodically reassesses usage and adjusts replenishment requirements accordingly.

c. Promptly addresses oxygen system maintenance issues.

Comments

The Under Secretary for Health agreed with the conclusions and recommendations and provided acceptable implementation plans. The Under Secretary stated that the VAMC's oxygen policy will be appropriately updated and the MOU modified. Program managers in the Office of the Deputy Under Secretary for Health for Operations will monitor the revisions through completion. VHA engineering and safety experts will conduct a follow-up visit to VAMC San Juan early next year to confirm safeguards are in place. Program managers will continue to provide oversight to ensure lapses do not occur and will intervene as necessary to assure compliance with system maintenance requirements.

The Under Secretary also reiterated that VHA has taken definitive steps to systematically improve oxygen management processes at all VA medical facilities, noting that the requirements of the new directive on oxygen distribution systems exceed NFPA safety standards. (See Appendix A, pages 11–13, for the complete text of the Under Secretary's comments.) We will follow up on the planned actions until they are completed.

(original signed by:)
MICHAEL L. STALEY
Assistant Inspector General for Auditing

Appendix A

Under Secretary for Health Comments

Department of Veterans Affairs

Memorandum

Date: Sep 23 2005

From: Under Secretary for Health (10/10B5)

Subj: OIG Draft Report: **Audit of Medical Oxygen Supply Management Practices, VA Medical Center San Juan, Puerto Rico (EDMS 321398)**

To: Assistant Inspector General for Auditing (52VH)

1. I have reviewed the draft report and agree with your conclusions and recommendations regarding oxygen management concerns at our San Juan facility. Our plan of corrective action is attached. Since you initiated your review almost a year and a half ago, VHA has taken definitive steps to systematically improve oxygen management processes in all of our facilities, not just in San Juan. In my August 11, 2005, comments to the Assistant Inspector General for Healthcare Inspections, responding to their related report*, Allegations of Suspicious Deaths, VA Medical Center, San Juan, Puerto Rico and Inspection of Bulk Oxygen Systems*, I detailed some of these key initiatives. For example, this past June VHA published a national directive on oxygen distribution systems. As you know, a Patient Safety Alert was also issued in April 2004. In addition, on April 25, 2005, a new national bulk oxygen delivery contract was awarded. The requirements set forth in the new directive actually exceed National Fire Protection Association requirements. Our VACO program specialists are working closely with network safety officers to assure that all facilities are in full compliance with related safety standards.

2. Your review relates specifically to actions taken at San Juan, and accurately reports the progress already made at this facility. As you know, our program managers and the San Juan staff worked closely with your reviewers as improvements were implemented. I am confident that facility administrators will continue to carefully monitor compliance. In Central Office, the Office of the Deputy Under Secretary for Health for Operations and Management also plans a follow-up site visit to San Juan by technical engineering and safety staff to confirm implementation of safeguards. This visit is tentatively scheduled early in the next calendar year.

3. Thank you for the opportunity to respond to this report. If additional information is required, please contact Margaret M. Seleski, Director, Management Review Service (10B5), at (202) 565-7638.

Original signed by
Jonathan B. Perlin, MD, PhD, MSHA, FACP

Attachment

Appendix A

VETERANS HEALTH ADMINISTRATION
Action Plan Response
OIG Draft Report: **Audit of Medical Oxygen Supply Management Practices, VA Medical Center San Juan, Puerto Rico**

Recommendations/ Actions	Status	Completion Date

Recommended Improvement Action 1. We recommend that the Under Secretary for Health ensure that the VAMC:

a. Updates and effectively administers the medical center oxygen policy and the MOU with the contractor to reflect the new oxygen system and replenishment requirements.

Concur

The VAMC policy on oxygen control will be appropriately updated to describe the new alarm settings, reorder points, contact information for the new distributor, and ordering and delivery instructions, as OIG suggests. In addition, the MOU will be modified to reflect new procedures and to be consistent with the revised oxygen policy. Program managers in the Office of the Deputy Under Secretary for Health for Operations and Management will monitor these revisions through completion, and copies of the revised documents will be provided to OIG as part of our action plan implementation update.

Planned December 2005

b. Continuously monitors oxygen supply levels, verifies replenishments, and periodically reassesses usage and adjusts replenishment requirements accordingly.

Concur

Again, program managers in the Office of the Deputy Under Secretary for Health for Operations and Management will maintain communication with facility technical managers and provide periodic oversight of the San Juan operation to assure that compliance monitoring is sustained. A follow-up site visit to San Juan by VHA technical engineering and safety experts is also planned early in the new calendar year to verify activity.

In Process February 2006 and Ongoing

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VHA Action Plan/OIG Draft Report: **Audit of Medical Oxygen Supply Management Practices, VAMC San Juan, Puerto Rico (EDMS 321398)**

c. Promptly addresses oxygen system maintenance issues.

Concur

As OIG reports, San Juan VAMC has taken prompt action to address identified system maintenance issues, and VACO and VISN program officials have worked closely with the facility to assure that appropriate processes have been established. We agree that these improvements must be maintained and that ongoing oversight is needed by facility managers to confirm that lapses do not occur. VHA technical engineering and safety staff will have an opportunity to re-assess consistency of oversight implementation during the planned site visit to San Juan early next year, and will intervene as necessary.

In Process February 2006

Appendix B

OIG Contact and Staff Acknowledgments

OIG Contact	Jay M. Johnson, Director, Veterans Benefits and Healthcare Audit Division (202) 565-8283
Acknowledgments	Joyce E. Moeder, Project Manager Nick Jathar

Appendix C

Report Distribution

VA Distribution

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