

# **CITY AUDITOR'S OFFICE**



## **AUDIT OF FIRE & RESCUE DEPARTMENT CONTROLLED SUBSTANCES INVENTORY MANAGEMENT**

**Report FR006-2425-04**

**June 26, 2025**

## EXECUTIVE SUMMARY

### Why This Audit is Important

Controlled substances are critical to patient care but pose risks of misuse and diversion. This audit assessed whether the City of Las Vegas Fire & Rescue Department (LVFR) maintains adequate internal controls and compliance with the policies of the Drug Enforcement Administration (DEA), the Southern Nevada Health District (SNHD), and the City of Las Vegas (CLV). Our evaluation of LVFR's operational efficiency, accountability, and regulatory adherence in managing controlled substances confirmed LVFR management's commitment to strong governance, safety, and transparency and identified areas for further improving safeguards against legal, financial, and reputational risks.

### Key Audit Results

The Office of the City Auditor audited LVFR's controlled substances inventory management to evaluate the adequacy of internal controls and the effectiveness of inventory management practices.

The audit examined key processes, including ordering, receiving, storing, and administering controlled substances. It assessed compliance with applicable regulations from the SNHD, the DEA, and the CLV policies and procedures. Additionally, a selection of inventory records was tested for accuracy and adherence to established protocols.

The audit identified no discrepancies in inventory counts, confirmed that medications were stored securely, and verified that expired controlled substances were adequately disposed of. These findings reflect LVFR's commitment to maintaining high standards with controlled substance inventory management.

Opportunities for improvement were identified in the following areas:

- **Policy Management:** Three versions of the policy governing the procurement, storage, handling, and disposal of controlled substances were identified, each differing in approval status, content, and operational alignment. LVFR's policy update and approval process needs improvement to align policies with current operational practices.
- **System Security:** The information security controls within the case management system used to document fire and medical incidents require review and enhancements to mitigate the risks to data confidentiality and integrity.
- **Procurement Process:** LVFR staff need to improve their controlled substance procurement process to ensure that controlled substance orders are accurately accounted for.
- **Inventory Management Automation:** Implementing an automated controlled substance inventory management system would improve security, transparency, and accountability in controlled substance inventory tracking.

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**BACKGROUND**

The City of Las Vegas Fire & Rescue Department (LVFR) is an ISO Class One fire department responsible for fire suppression, prevention, public education, and paramedic emergency medical services (EMS) for residents and visitors. LVFR also operates specialized teams, including a bomb squad, a hazardous materials team, and a technical rescue team, which provide services for the City of Las Vegas (CLV) and Clark County.

The LVFR Emergency Medical Services (EMS) Division manages EMS operations and oversees compliance with the EMS Standard Operating Procedures (SOPs) – 500 Series, which includes SOP FR510.31, governing the department’s controlled substance program. LVFR paramedics administer fentanyl (DEA Schedule II drug), ketamine (DEA Schedule III drug), and midazolam/Versed (DEA Schedule IV drug) under strict regulatory controls. LVFR procures these controlled substances from a single external vendor, based on Periodic Automated Replenishment (PAR) levels set by the Medical Director, to ensure availability while minimizing waste due to expiration.

The Medical Director, a licensed physician, ensures that controlled substances are properly handled, stored, secured, and documented in accordance with the Drug Enforcement Administration (DEA) regulations and the policies of the Southern Nevada Health District (SNHD). The Medical Director also oversees compliance monitoring, inventory, and training for paramedics on medication administration and documentation requirements.

LVFR’s medic units, staffed by EMTs, A-EMTs, and paramedics, transport patients to local hospitals. Paramedics administer controlled substances only when medically necessary, following established protocols and guidelines. LVFR securely stores controlled substances on board its vehicles in lock boxes and central supply locations to maintain operational readiness while minimizing inventory risks. The LVFR must balance inventory availability, regulatory compliance, and risk mitigation by monitoring expiration dates, addressing potential supply chain disruptions, and ensuring the secure storage and handling of medications.

LVFR utilizes ImageTrend as its case management software for documenting fire and EMS incidents, including medical incidents where controlled substances are administered to patients.

This audit examined LVFR’s controlled substance inventory management practices to assess compliance with federal, state, and local regulations, evaluate security and tracking controls, and identify opportunities to enhance efficiency, transparency, and oversight.

## AUDIT TEAM

Bryan L. Smith, CPA, CFE, City Auditor  
Joseph Throneberry, CFE, CIA, CISA, Senior Forensic Auditor

## OBJECTIVES

Our audit objectives were as follows:

1. **Assess the Adequacy of Controlled Substance Policies and SOPs**  
Evaluate whether the LVFR controlled substance policies and SOPs are comprehensive and are aligned with federal, state, and local regulations. Determine whether the policies adequately address the risks associated with the procurement, storage, handling, and disposal of controlled substances and effectively mitigate potential misuse or noncompliance.
2. **Evaluate Information Security in the ImageTrend Case Management System**  
Assess the adequacy of information security controls within the ImageTrend case management system, including a review of user account management procedures, system administration practices, role-based access configurations, and audit trail functionalities to ensure proper definition, implementation, and maintenance of user roles and permissions. Confirm that security controls safeguard data confidentiality, integrity, and availability while adhering to organizational policies and preventing unauthorized access.
3. **Review Controlled Substance Procurement Process**  
Examine the controlled substance procurement process to determine compliance with City policies and/or best practices. Assess the accuracy of recorded transactions and the effectiveness of internal controls governing the procurement process.
4. **Examine Controlled Substance Usage, Storage, Disposal, and the QI/QA Program**  
Evaluate the documentation, compliance, and control mechanisms for using and disposing of controlled substances during 2023 and 2024. Assess the LVFR EMS Quality Improvement/Quality Assurance (QI/QA) Program to determine whether safeguards are in place to prevent misuse, loss, or unauthorized access.
5. **Review Expired Controlled Substance Disposal Process**  
Review and evaluate the procedures for disposing of expired controlled substances to ensure compliance with applicable regulations and organizational policies. Determine whether sufficient controls are in place to prevent misuse, diversion, or environmental harm.

## SCOPE AND METHODOLOGY

The scope of our work was limited to the management controls within the context of the audit objectives. This audit was limited to LVFR's controlled substance management activities, information security within the ImageTrend case management system, the procurement process, and compliance with established policies and procedures. Unless otherwise noted, the audit covered the period from January 1, 2023, to December 31, 2024.

This audit did not involve a clinical or medical review of patient care, medical treatment decisions, or provider compliance with medical practice standards. Our audit focused on administrative, operational, and financial controls for controlled substances, procurement, and physical and informational security within LVFR.

Our audit methodology evaluated the adequacy of internal controls, compliance with applicable policies, and the effectiveness of key operational processes. Specifically, we:

- Conducted interviews with LVFR personnel, including management, EMS staff, procurement employees, and system administrators.
- Performed unannounced physical inspections of controlled substance storage sites to assess compliance with handling, security, and disposal requirements.
- Reviewed LVFR's controlled substance policies and SOPs for alignment with DEA and SNHD regulations and considered other city/county fire department practices.
- Evaluated user access controls within the ImageTrend case management system, including user account management, role-based access, and system security settings.
- Conducted testing of purchase order documentation to verify proper authorization, accuracy, and compliance with procurement policies and procedures.
- Reviewed the effectiveness of the LVFR EMS QI/QA Program to prevent fraud, waste, and abuse of controlled substances.
- Examined processes for disposing of expired controlled substances to determine compliance with environmental and security standards and the adequacy of safeguards against misuse or diversion.

The last fieldwork date of this audit was April 21, 2025.

## RESULTS

The results of our audit fieldwork for the five audit objectives are discussed below:

**Objective #1: Assess the Adequacy of Controlled Substance Policies and Standard Operating Procedures (SOPs)** Evaluate whether the LVFR controlled substance policies and SOPs are comprehensive and aligned with federal, state, and local regulations. Determine whether the policies adequately address the risks associated with the procurement, storage, handling, and disposal of controlled substances and effectively mitigate potential misuse or noncompliance.

**Conclusion:** LVFR's controlled substance policy and SOPs are aligned with federal, state, and local regulations, including SNHD protocols. However, we identified three versions of Policy FR510.31, each varying in approval status, content, and operational alignment. **Refer to Finding #1.**

**Objective #2: *Evaluate Information Security in the ImageTrend Case Management System***  
*Assess the adequacy of information security controls within the ImageTrend case management system, including reviewing user account management procedures, system administration practices, role-based access configurations, and audit trail functionalities to ensure proper definition, implementation, and maintenance of user roles and permissions. Confirm that security controls safeguard data confidentiality, integrity, and availability while adhering to organizational policies and preventing unauthorized access.*

**Conclusion:** LVFR utilizes ImageTrend as its case management software for documenting fire and EMS incidents. While ImageTrend effectively captures incident details, patient care, medication administration, and waste data, it lacks real-time, city-wide controlled substance tracking and automated reconciliation capabilities. Additionally, we identified areas for improvement in the information security controls surrounding this system, as outlined in **Finding #2.**

**Objective #3: *Review Controlled Substance Procurement Process***  
*Examine the controlled substance procurement process to determine compliance with City policies and/or best practices. Assess the accuracy of recorded transactions and the effectiveness of internal controls governing the procurement process.*

**Conclusion:** We reviewed all LVFR controlled substance purchases from January 1, 2023, to December 31, 2024. During our review of the procurement process for controlled substances, discrepancies were identified between data maintained in the City's financial system (Oracle), data input by Fire Logistics, and data maintained by the EMS Division. **Refer to Finding #3.**

**Objective #4: *Examine Controlled Substance Usage, Storage, Disposal, and the QI/QA Program***  
*Evaluate the documentation, compliance, and control mechanisms for using and disposing of controlled substances during 2023 and 2024. Assess the LVFR EMS Quality Improvement/Quality Assurance (QI/QA) Program to determine whether safeguards are in place to prevent misuse, loss, or unauthorized access to controlled substances.*

**Conclusion:** We conducted unannounced inspections at multiple LVFR locations, including six fire stations, to evaluate compliance with controlled substance management policies. During these inspections, no discrepancies were found in inventory counts, security seals, key management, or log records. LVFR maintains a manual, paper-based logbook system for tracking controlled substances; however, this method poses risks to accuracy, efficiency, and real-time inventory oversight. The LVFR EMS QI/QA Program is also a manual process that potentially limits LVFR's ability to proactively detect anomalies, identify patterns of potential misuse, and facilitate data-driven decision-making in real time. **Refer to Finding #4.**

**Objective #5: Review Expired Controlled Substance Disposal Process** *Review and evaluate the procedures for disposing of expired controlled substances to ensure compliance with applicable regulations and organizational policies. Determine whether sufficient controls are in place to prevent misuse, diversion, or environmental harm.*

**Conclusion:** Fieldwork conducted on February 11, 2025, confirmed that LVFR maintains a secure, well-documented, and compliant disposal process. We observed the disposal process at the Fire Administration building, which involved the disposal of expired controlled substances accumulated from June 9, 2022, to February 11, 2025. The previous disposal occurred on June 6, 2022. Expired substances were accurately recorded in the LVFR controlled substance logbook, with detailed entries documenting quantities, disposal dates, and personnel signatures. The information was appropriately documented using DEA Form 222.

We verified that 211 vials of midazolam/Versed, 79 vials of ketamine, and 47 vials of fentanyl were properly segregated from active stock, secured, and returned to an approved vendor in accordance with DEA requirements. We found no evidence of misuse, diversion, or environmental harm related to expired controlled substances. The disposal process adheres to DEA and LVFR policy requirements, ensuring compliance with federal regulations and mitigating risks associated with improper handling. **No findings were identified.**

## **FINDINGS AND RECOMMENDATIONS**

### **1. Improvements Needed in the Policy Update and Approval Process**

LVFR relies on Policy FR510.31 to govern the procurement, storage, handling, and disposal of controlled substances. Strong policies ensure compliance with federal, state, and local regulations while preventing misuse, diversion, and operational inefficiencies. Given the critical nature of controlled substances, LVFR policies must be current, approved, posted, and aligned with regulatory standards and actual department operations.

During the audit, we identified three versions of Policy FR510.31, each differing in approval status, content, and operational alignment. The oldest version (effective September 24, 2018) was still posted on LVFR's SharePoint as of December 31, 2024, despite being superseded in practice by two more recent drafts: one dated October 17, 2023, and another that was still pending final approval from the Fire Chief as of the end of our review on December 31, 2024. The most recent draft introduces significant enhancements in security, tracking, and a QI/QA program. The process followed by LVFR in updating FR510.31 resulted in discrepancies between the officially posted policy and the actual operational practices. Delays in formal approval and posting of policies increase the risk of non-compliance, operational inefficiencies, and potential liability.

## **Recommendation**

- 1.1 LVFR management, in accordance with CLV Policy CM601 and union contracts, should review and enhance its policy update and posting process to ensure timely review and approval by the Fire Chief. LVFR should consider a structured, risk-based framework that prioritizes policy updates based on their impact on critical, high, medium, and low-risk functions while continuing the department's standard annual review of all policies. This will help ensure published policies remain current and aligned with evolving operational needs.

## **2. ImageTrend Case Management Enhancements Needed**

LVFR utilizes the ImageTrend case management system to document fire and medical incidents. While the system effectively captures essential patient care and medication administration data, it lacks real-time tracking and automated reconciliation for controlled substances. Specifically, the system records details such as the date, time, location, patient information, and medication administration or waste, including the name of the substance and the amount; however, it does not capture vial lot numbers or other identifying information necessary to trace the specific controlled substance from "cradle to grave." The authentication controls are limited to a signature for tracking wasted or non-administered disposal observations. The waste witness verification process does not require login authentication of the witness, which limits accountability. The provider/report writer can choose any name from a drop-down list, and no signature verification match occurs. Furthermore, the witness is not notified in real-time via ImageTrend that their name has been included in the report. It should be noted that LVFR requires that the waste disposal witness be an LVFR paramedic employee, and only LVFR paramedics are authorized to administer controlled substances as the provider.

A review of ImageTrend user access data identified generic accounts and numerous inactive users, some of whom had not logged in for 12 to 24 months or more, thereby increasing the risk of unauthorized access. The system does not currently have two-factor authentication (2FA) enabled and is not integrated with the CLV single sign-on (SSO) system using Okta.

The absence of integration with inventory ordering and tracking, as well as two-factor authentication measures such as 2FA and SSO, coupled with infrequent monitoring and updating of user access permissions tied directly to the CLV Human Resources official database (e.g., API integration with Oracle), may lead to vulnerabilities. These deficiencies may expose LVFR to risks compromising data integrity and confidentiality.

## **Recommendations**

- 2.1 LVFR management should assess ImageTrend's capabilities to enhance security controls and strengthen controlled substance management. This evaluation should focus on the following key improvements:

- Real-Time Controlled Substance Tracking and Automated Reconciliation – Implement continuous monitoring and automated reconciliation features to enhance accountability and minimize discrepancies.
- Waste Witness Verification – Require individual user authentication via unique login credentials or PIN verification to improve oversight and accountability in medication disposal.
- Role-Based Access Management – Align access permissions with job responsibilities and establish a process for promptly deactivating inactive accounts to reduce security risks.

2.2 LVFR management should collaborate with the City’s Innovation & Technology Department and the ImageTrend vendor to evaluate feasibility, implementation requirements, and timelines for the following enhancements:

- Strengthening Authentication Security – Integrate two-factor authentication (2FA) and single sign-on (SSO) using Okta or a similar enterprise solution, ensuring accessibility for LVFR personnel operating in the field.
- Automating User Account Management – Integrate ImageTrend with HR systems to enable automated provisioning and de-provisioning of user accounts, ensuring timely removal of inactive accounts and reducing unauthorized access risks.
- Establishing Continuous Monitoring Protocols – Implement ongoing monitoring procedures, including quarterly reviews of user access permissions and activity logs, to maintain compliance with security policies and proactively address potential vulnerabilities.

### **3. Improvements Needed in the Procurement Process**

LVFR contracts exclusively with a single vendor for the procurement of controlled substances. As part of this audit, we reviewed the supporting documentation for all controlled substance purchases made from January 1, 2023, through December 31, 2024. A total of 14 purchase transactions occurred during this period.

During our testing, we confirmed that all purchases had been correctly requested and approved, as evidenced by a signed DEA 222 form required for each purchase. The box content lists matched the DEA 222 orders (items and quantities). However, we identified six purchase transactions with irregularities in Oracle, including missing product delivery confirmations, duplicate invoices, and instances where orders were invoiced, credited, and rebilled. Further investigation into these irregularities with the assistance of the CLV Finance Department and LVFR’s Logistics staff revealed the need for improved communication and coordination between Fire Logistics and EMS Operations personnel regarding the ordering and receipt of shipments of controlled substances.

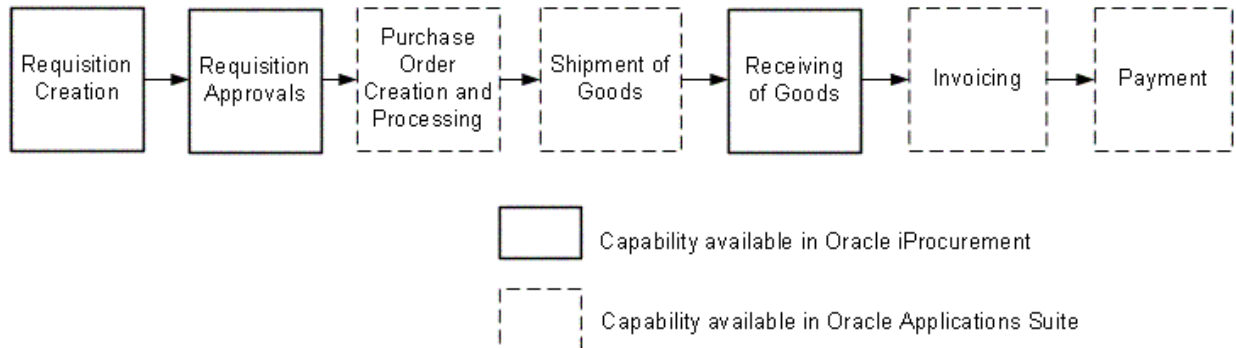
Additionally, there is a need for periodic reconciliation of controlled substances purchased and received to ensure that all controlled substances are accounted for.

We also identified that LVFR staff periodically bypass the City’s standard procurement and payment procedures by utilizing the “PO for Billing Only” option in Oracle to initiate a vendor payment. While permitted for emergency purchases, this should be an infrequent occurrence.

Proper procedures and recordkeeping must be strictly followed in the procurement of controlled substances to prevent loss.

## Recommendations

- 3.1 LVFR management should establish a process to reconcile controlled substance purchase orders with the controlled substances received at least quarterly. This reconciliation should ensure a match between entries in the logbook in the EMS Coordinator/LVFR Administration safe, the DEA 222 Forms, Oracle, and the box content lists.
- 3.2 LVFR management should establish procedures to ensure that staff adhere to the City’s Oracle procurement process (see below) and standards, the DEA’s procurement procedures, and the Medical Director’s guidelines. The “PO for Billing Only” option should be used infrequently.



## 4. Automated Inventory Management System Evaluation Needed

Unannounced inspections were conducted at multiple LVFR locations, including six fire stations, to assess controlled substance management policy compliance. We reviewed inventory records, security seals, lockbox key management, and logbook accuracy to ensure alignment with LVFR policies and regulatory requirements. Additionally, physical inventory counts were cross verified against logbook records.

Three controlled substance safes—two at Station 1 and one at Station 5—were inspected, along with twelve lockboxes assigned to various units, including engines, rescue vehicles, and specialty

apparatus. The inspections found no discrepancies in inventory counts, security seals, key management, or log records.

LVFR relies on a manual, paper-based logbook system to track controlled substances, which poses risks to accuracy, efficiency, and real-time inventory oversight. The system relies on PAR values and manual entries, which limit end-to-end accountability for individual vials from receipt at the Fire Administration building through administration, waste disposal, or shipment to a third-party vendor for destruction due to expiration.

No comprehensive tracking mechanism exists to monitor each vial's unique identifier throughout its lifecycle or pinpoint its exact location at any stage of the process. Tracking is based on the total unit amounts received and expiration dates rather than individual vial identification. As a result, LVFR's inventory reconciliation process does not fully ensure that all controlled substances ordered, received, paid for, administered, and disposed of are accurately accounted for, increasing the risk of misuse, diversion, or compliance deficiencies. The absence of a centralized, real-time electronic tracking system necessitates reliance on manual and ad hoc updates, which limits oversight and reduces operational efficiency.

The LVFR EMS Quality Improvement/Quality Assurance (QI/QA) Program was evaluated for its effectiveness in preventing fraud, waste, and abuse in managing controlled substances. While the QI/QA team conducts a comprehensive review each Monday of all controlled substance administration and waste entries reported by paramedics into ImageTrend, the process remains largely manual. The QI/QA Coordinator manually reviews an automated weekly ImageTrend usage report, stores findings, and tracks their work in a Microsoft Access database developed within the department. No artificial intelligence or advanced analytics technology is used to automate quality assurance processes or to identify real-time trends. This reliance on manual data entry and review limits LVFR's ability to proactively detect anomalies, identify patterns of potential misuse, and perform data-driven decision-making.

Reliance on manual tracking and reconciliation processes presents significant risks to LVFR's controlled substance management. Human errors, data inconsistencies, and inefficient reconciliation methods hinder the ability to ensure accountability for all controlled substances ordered, received, administered, and disposed of. Without automated alerts or trend analysis, identifying potential misuse or diversion is delayed, thereby heightening the risks associated with operational inefficiencies or errors.

## **Recommendation**

- 4.1 LVFR management should evaluate the feasibility of purchasing an automated controlled substance management system that would improve security, accuracy, and compliance in the oversight of controlled substances. This evaluation should include a cost-benefit analysis and consideration of the efficiencies and risk reductions that could be achieved through an automated system.

Key system evaluation criteria should include:

- Lifecycle tracking from ordering and receipt through administration, waste disposal, or return to a third-party disposal vendor due to expiration.
- Automated reconciliation of controlled substances from “cradle to grave” to ensure accurate inventory counts and to flag discrepancies for further review.
- Exception-based alerts for anomalies, such as missing doses or unusual administration patterns.
- Integrated documentation workflow to streamline automated approvals between LVFR, the Medical Director, CLV Finance, and vendors.
- Advanced security measures that integrate with the software, including electronic safe locks, biometric controls, and video monitoring.
- Compliance with DEA recordkeeping requirements for audit readiness and regulatory adherence.
- Integration with other CLV and LVFR information technology systems.

## MANAGEMENT RESPONSE

### 1. Improvements Needed in the Policy Update and Approval Process

- 1.1 LVFR management, in accordance with CLV Policy CM601 and union contracts, should review and enhance its policy update and posting process to ensure timely review and approval by the Fire Chief. LVFR should consider a structured, risk-based framework that prioritizes policy updates based on their impact on critical, high, medium, and low-risk functions while continuing the department's standard annual review of all policies. This will help ensure published policies remain current and aligned with evolving operational needs.

### Management Action Plan

Las Vegas Fire & Rescue (LVFR) agrees with the fundamental premise of this recommendation—that clearly documented, up-to-date policies are critical for regulatory compliance, operational alignment, and accountability. We appreciate the audit's focus on the importance of strong internal controls, particularly concerning the procurement, storage, handling, and disposal of controlled substances. However, it is important to emphasize that LVFR has already implemented a comprehensive and structured methodology to address this concern. A core leadership principle of this administration is the deliberate solicitation of input from those performing the work. This inclusive approach has already yielded tangible results, including the completion of the department's first annual review of its Standard Operating Procedures (SOPs) in 2023. This effort was both exhaustive and foundational, establishing a culture and infrastructure for continuous procedural improvement.

### *Ongoing Policy Review Framework*

LVFR utilizes a hybrid policy management process that combines annual comprehensive reviews with an escalation pathway for critical, time-sensitive changes. The cornerstone of this framework is the Procedural Champion model, where designated personnel with subject matter expertise lead policy review efforts. The process is inclusive and relies on frontline feedback submitted through the chain of command. Captains and Supervisors are tasked with reviewing and vetting all proposals, ensuring they are complete before being submitted to Procedural Champions. Those Champions review submissions, seek clarification where needed, and determine whether the proposal should be escalated to Executive Staff. This process is not only structured and systematic but also risk-informed, as SOPs affecting high-risk or compliance-critical operations—such as controlled substance handling—are prioritized and subject to additional scrutiny and review. Moreover, Executive Staff reviews all proposed and non-adopted changes, ensuring leadership oversight and consistent implementation.

### *Timely Implementation of Critical Changes*

Recognizing that not all updates can be deferred to an annual review cycle, LVFR also adheres to the procedures outlined in LVFR Memorandum #9 (2022), which governs out-of-cycle SOP changes. This mechanism ensures that urgent updates—especially those with implications for compliance or public safety—can be fast-tracked through a documented process that includes Executive Staff review, Fire Chief approval, and formal notification to the bargaining unit as required under the Collective Bargaining Agreement (CBA).

### *Addressing the Specific Concern Regarding Policy FR510.31*

LVFR acknowledges the audit's finding that multiple versions of Policy FR510.31 were discovered. This anomaly stemmed from overlapping processes during our broader SOP revision effort. The version dated October 17, 2023, introduced substantial improvements aligned with DEA and industry best practices, including enhanced inventory tracking and QI/QA mechanisms. We are pleased to confirm that the final version of Policy FR510.31 has since been approved by the Fire Chief, shared with the Union in accordance with Article 9.I of the CBA, and officially posted on the department's SharePoint site for department-wide access and implementation.

### *Conclusion*

LVFR believes that our current policy management approach—founded on engagement, structure, and risk awareness—effectively addresses the core concerns raised in this recommendation. We remain committed to the continuous refinement of this framework and welcome continued auditor engagement to strengthen our internal controls. We are proud of the effort already undertaken by our members and Executive Staff to modernize and align our policies, and we encourage all personnel to stay engaged as we strive to build a culture of transparency, consistency, and operational excellence.

**Estimated Date of Completion:** January 2025

## **2. Image Trend Software Security Enhancements Needed**

2.1 LVFR management should assess ImageTrend's capabilities to enhance security controls and strengthen controlled substance management. This evaluation should focus on the following key improvements:

- Real-Time Controlled Substance Tracking and Automated Reconciliation – Implement continuous monitoring and automated reconciliation features to enhance accountability and minimize discrepancies.
- Waste Witness Verification – Require individual user authentication via unique login credentials or PIN verification to improve oversight and accountability in medication disposal.

- Role-Based Access Management – Align access permissions with job responsibilities and establish a process for promptly deactivating inactive accounts to reduce security risks.

### **Management Action Plan:**

LVFR management recognizes the importance of strengthening security controls around controlled substance management and is actively evaluating ImageTrend’s capabilities to support these enhancements. Below is our current progress on each recommendation:

#### *1. Real-Time Controlled Substance Tracking and Automated Reconciliation*

LVFR is collaborating with ImageTrend to determine whether its software platform supports real-time tracking and automated reconciliation of controlled substances. This capability would improve accountability and streamline reporting. As part of this evaluation, we are also exploring integration with existing workflows to ensure operational feasibility and compliance.

#### *2. Waste Witness Verification*

ImageTrend is developing a functionality that supports improved witness verification during narcotic waste disposal. The system will send an automated email to the designated witness confirming their participation. If the individual did not serve as a witness, the email will provide clear instructions for corrective action. This feature will enhance transparency, reinforce chain-of-custody integrity, and reduce the risk of falsified entries. Until the vendor develops the technology, the 40-hour EMS coordinator will review and email those who witnessed a narcotic waste with the same information as listed above.

#### *3. Role-Based Access Management*

To strengthen access control and reduce security risks:

- EMS Coordinators are responsible for deactivating user accounts when employees separate from the organization.
- Password expirations have been implemented. Any account inactive for 180 days will automatically require password reset authorization through the on-duty EMS Coordinator before access is restored.

Given the operational need for all responding personnel to appear on patient care records—even those who do not regularly complete reports, LVFR has opted to retain these users in the system. The password expiration mechanism ensures dormant accounts do not pose a security risk while maintaining essential system functionality.

LVFR remains committed to continuously improving the integrity of its controlled substance tracking systems. We will continue to assess ImageTrend’s capabilities and implement features that align with our operational, legal, and security requirements.

**Estimated Date of Completion:** January 2026

2.2 LVFR management should collaborate with the City's Innovation & Technology Department and the ImageTrend vendor to evaluate feasibility, implementation requirements, and timelines for the following enhancements:

- Strengthening Authentication Security – Integrate two-factor authentication (2FA) and single sign-on (SSO) using Okta or a similar enterprise solution, ensuring accessibility for LVFR personnel operating in the field.
- Automating User Account Management – Integrate ImageTrend with HR systems to enable automated provisioning and de-provisioning of user accounts, ensuring timely removal of inactive accounts and reducing unauthorized access risks.
- Establishing Continuous Monitoring Protocols – Implement ongoing monitoring procedures, including quarterly reviews of user access permissions and activity logs, to maintain compliance with security policies and proactively address potential vulnerabilities.

**Management Action Plan:**

LVFR acknowledges the importance of improving authentication security, automating user account management, and establishing continuous monitoring protocols to bolster our system's security and ensure compliance. We are committed to working closely with the City's Innovation & Technology Department and the ImageTrend vendor to evaluate the proposed enhancements' feasibility, implementation requirements, and timelines.

Below is our action plan:

*1. Strengthening Authentication Security*

LVFR is actively exploring options to integrate two-factor authentication (2FA) and Single Sign-On (SSO) using solutions like Okta or equivalent enterprise-level tools. Our goal is to balance security enhancements with operational efficiency. While traditional 2FA, such as using a YubiKey, may not be feasible due to the use of shared tablets in the field, we are exploring alternative methods that minimize disruption to patient care. We are researching 2FA solutions that are less time-consuming and do not require additional electronics for providers in the field.

*2. Automating User Account Management*

To improve efficiency and reduce security risks, LVFR is working to integrate ImageTrend with HR systems to enable automated user account provisioning and de-provisioning. This would ensure that accounts for employees who have separated from the organization are promptly and accurately deactivated, mitigating the risk of unauthorized access. Currently, the EMS Coordinators are responsible for manually deactivating accounts when notified of an employee's separation by the department's Management Analyst. While we are discussing the possibility of

automating this process with ImageTrend, we recognize that the vendor may face technical challenges in fully accommodating this request. We will continue to collaborate with them to explore potential solutions and improve this process.

### *3. Establishing Continuous Monitoring Protocols*

To ensure compliance with security policies and proactively address vulnerabilities, LVFR is implementing structured continuous monitoring protocols. As part of this effort, quarterly reviews of user access permissions will be conducted to ensure role-based access remains current and appropriate—particularly following promotions or reassignment. This includes an existing process where EMS Coordinators review access for personnel promoted to Captain and Battalion Chief. Additionally, LVFR is evaluating ImageTrend’s capabilities to support routine activity log monitoring to detect unusual access patterns or potential security risks. These measures will provide greater oversight and ensure our systems remain aligned with both operational responsibilities and security best practices.

**Estimated Date of Completion:** January 2026

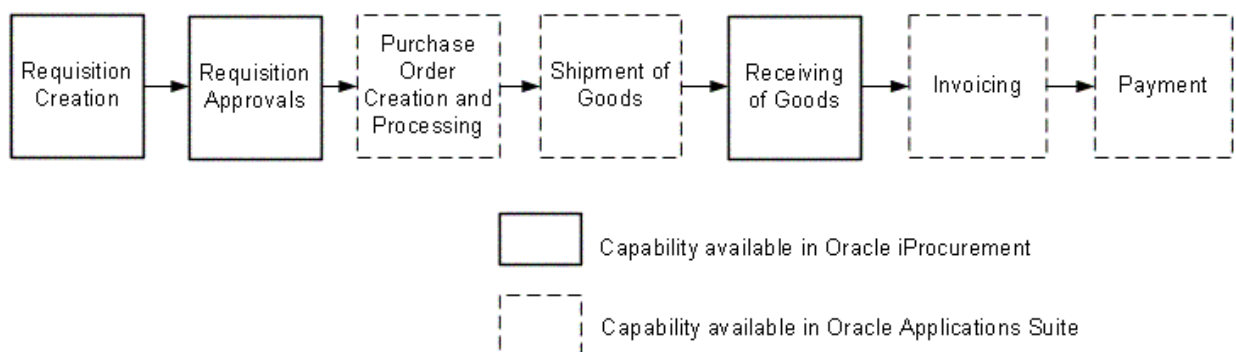
### **3. Improvements Needed in the Procurement Process**

- 3.1 LVFR management should establish a process to reconcile controlled substance purchase orders with the controlled substances received at least quarterly. This reconciliation should ensure a match between entries in the logbook in the EMS Coordinator/LVFR Administration safe, the DEA 222 Forms, Oracle, and the box content lists.

**Management Action Plan:** Please see detailed plan from the Logistics Division [below](#).

**Estimated Date of Completion:** April 2025

- 3.2 LVFR management should establish procedures to ensure that staff adhere to the City’s Oracle procurement process (see below) and standards, the DEA's procurement procedures, and the Medical Director’s guidelines. The “PO for Billing Only” option should be used infrequently.



### **Management Action Plan:**

Las Vegas Fire & Rescue (LVFR) acknowledges the importance of adhering to all applicable procurement standards, including City financial protocols, DEA regulations, and directives from our Medical Director. To ensure consistency, transparency, and compliance, LVFR has implemented a structured narcotics procurement procedure. This process integrates Oracle iProcurement for financial transactions, enforces strict handling of DEA 222 forms, and limits the use of “PO for billing only” to exceptional cases. The outlined procedure supports accountability across all stages—from order initiation to invoice reconciliation.

#### **Revised Narcotics Ordering & Processing Procedure**

1. Notification of Need
  - Notification for narcotics orders will come from the Medical Director, the EMS Battalion Chief, or the EMS Battalion Chief designee.
  - Logistics must be notified at least three (3) days before the 222 form (manual or electronic) is created.
2. Quote & Requisition Process
  - Upon notification, Logistics will request a price quote from Henry Schein.
  - A requisition will then be created for the purchase order (PO).
3. PO Assignment & Documentation
  - Once a PO number is assigned, Logistics will notify the requesting individual.
  - For paper 222 forms:
    - A post-it note will be attached to the form for the vendor (Henry Schein’s Verification Department), indicating the PO number to reference on the invoice.
    - A copy of the paper 222 form will be filed at the Logistics Warehouse.
  - For electronic 222 forms:
    - The PO number will be entered at the time of filing.
    - An electronic copy will be sent to the Logistics Warehouse for filing.
4. Receipt & Verification
  - Upon receipt, signed paperwork will be forwarded to the Logistics Warehouse.
  - Any discrepancies must be reported to Logistics immediately.
  - Logistics will receive the narcotics in Oracle iProcurement based on the paperwork received.
  - Invoices will be matched with 222 forms before filing.
5. Record-Keeping
  - A separate folder will be maintained for the vendor (Henry Schein) narcotics paperwork.
  - To the extent possible, we will minimize the use of "PO for billing only" orders moving forward.

**Estimated Date of Completion:** April 2025

#### **4. Automated Inventory Management System Evaluation Needed**

- 4.1 LVFR management should evaluate the feasibility of purchasing an automated controlled substance management system that would improve security, accuracy, and compliance surrounding the oversight of controlled substances. This evaluation should include a cost-benefit analysis and consideration of the efficiencies and risk reductions that could be achieved through an automated system.

Key system evaluation criteria should include:

- Lifecycle tracking from ordering and receipt through administration, waste disposal, or return to a third-party disposal vendor due to expiration.
- Automated reconciliation of controlled substances from “cradle to grave” to ensure accurate inventory counts and to flag discrepancies for further review.
- Exception-based alerts for anomalies, such as missing doses or unusual administration patterns.
- Integrated documentation workflow to streamline automated approvals between LVFR, the Medical Director, CLV Finance, and vendors.
- Advanced security measures that integrate with the software, including electronic safe locks, biometric controls, and video monitoring.
- Compliance with DEA recordkeeping requirements for audit readiness and regulatory adherence.
- Integration with other CLV and LVFR information technology systems.

#### **Management Action Plan**

LVFR EMS has initiated the evaluation process by meeting with one vendor to better understand available system capabilities, implementation requirements, and cost estimates. Preliminary figures suggest the full deployment of such a system could exceed \$1 million, depending on the selected solution, number of units deployed, and level of integration required.

As part of the ongoing assessment, we are taking the following steps:

- Vendor and Capability Review: We will engage additional vendors to compare features, security controls, integration potential, and support services.
- Scalability and Phased Implementation: We are exploring options for phased implementation to align with budget constraints and operational demands, focusing on high-priority units or locations first.
- Cost-Benefit Analysis: A formal cost-benefit analysis will evaluate potential risk reduction, labor savings, compliance improvements, and long-term value.
- System Evaluation Criteria: Our assessment will incorporate key criteria, including:
  - Full lifecycle tracking from procurement to disposal;
  - Automated reconciliation and exception-based alerts for discrepancies;

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- Streamlined approval workflows involving LVFR, the Medical Director, CLV Finance, and vendors;
- Integration with existing CLV and LVFR systems;
- DEA compliance readiness;
- Security features such as biometric access, electronic safe locks, and optional video monitoring.

**Estimated Date of Completion:** Fiscal Year 2028