

July 23, 2024

Mr. Howard Nobles, III
Director
New Orleans Department of Property Management
1300 Perdido St., Ste. 5W08
New Orleans, LA 70112

Re: HVAC Maintenance and Repair Policies and Procedures

Dear Mr. Nobles,

The mission of the New Orleans Office of Inspector General (OIG) is to prevent and detect fraud, waste, and abuse as well as to promote efficiency and effectiveness in the City's programs and operations. The OIG provides an independent and objective assessment of government policies, programs, and operations by conducting audits, evaluations, and investigations. The purpose of this letter is to discuss our assessment of maintenance and repair policies and practices regarding Heating, Ventilation, and Air Conditioning (HVAC) systems in City buildings serviced by the Department of Property Management (DPM).

The summer of 2023 was an especially warm season. As part of its 2024 hazard mitigation planning, the New Orleans Office of Homeland Security and Emergency Preparedness noted that the National Oceanic and Atmospheric Administration recorded twenty-one excessive heat days between July 16, 2023 and August 27, 2023.¹ During this same summer, media outlets reported on numerous HVAC system failures at public libraries, police stations, fire stations, and the Orleans Parish Civil District Court and Criminal District Court.² The OIG reviewed publicly available

¹ New Orleans Office of Homeland Security and Emergency Preparedness, *2023 Hazard Mitigation Annual Report* (New Orleans, LA: New Orleans Office of Homeland Security and Emergency Preparedness, 2024), p. 6, <https://nola.gov/nola/media/Homeland-Security/Files/Hazard-Mitigation/Orleans-Parish-2023-HM-Annual-Report.pdf>.

² Alyssa Curtis, "AC Issues, old HVAC systems; New Orleans buildings struggle during record heat," WWL-TV, August 24, 2023, <https://www.wwltv.com/article/news/local/new-orleans-hvac-ac-new-orleans-public-library/289-071fa76a-d6c5-4858-a8a8-28323d9151b3>; Sophie Kasakove, "Library branches close due to AC problems; staffer feels like 'my brain is being boiled,'" Nola.com, July 3, 2023, <https://www.nola.com/news/politics/new-orleans-library-branches-close-due-to-ac-problems-staffer->

information and DPM documents and policies, and also interviewed department staff to determine whether these issues were indicative of system-wide failures in departmental oversight of HVAC systems. Upon review, OIG evaluators did not find wholesale HVAC failures across the City. However, DPM policies and procedures potentially exacerbated conditions at individual sites under the department's responsibility.

The DPM is responsible for maintaining HVAC systems at all City buildings, with the exception of facilities owned by the New Orleans Public Library and the New Orleans Recreation Department.³ While most HVAC systems in City buildings use typical arrays of condensers, water heaters, and air handlers, six facilities contain larger HVAC plants composed of chillers, chilling towers, boilers, and other large-scale equipment. Facilities with HVAC plants are staffed by a team of licensed stationary mechanics (engineers) ranging from one (Gallier Hall) to seven members (City Hall). OIG Evaluators visited four of the City's six HVAC plants: City Hall, Criminal District Court, Municipal Traffic Court/New Orleans Police Department Headquarters (NOPD HQ), and Gallier Hall. Evaluators also visited the Allie Mae Williams Multi-Service Center, which does not have a HVAC plant, but does have a single dedicated on-site engineer.

Of the sites visited by OIG Evaluators, only the Municipal Traffic Court/NOPD HQ plant and the Allie Mae Williams Multi-Service Center site suffered mechanical failure in summer 2023.⁴ Engineers at the Municipal Traffic Court/NOPD HQ site stated the repairs involved major components of the plant. These repairs were costly and took a long time to complete due to backordered parts and the need to contract outside mechanics. They also noted that, unlike minor parts like filters and belts, it was difficult to find major replacement parts for HVAC systems that were so old. According to engineers at the Allie Mae center, repairs were completed at that site within a couple of months. However, mold was discovered in the ductwork, resulting in a year-long closure of the facility, including the library branch it housed, for mold remediation. No other site visited by evaluators suffered severe mechanical failure during the summer of 2023. Nevertheless, OIG Evaluators found significant issues with DPM policies and practices that prevented or restricted engineers' ability to identify and prepare for potential HVAC failures.

[feels-like-my-brain-is-being-boiled/article_64e3046a-19a9-11ee-af47-675dc8a77d2e.html](https://www.nola.com/news/new-orleans-police-headquarters-suffers-ac-outage/article_d2847414-15d4-11ee-89e5-5b7e4b0d67ac.html); Sophie Kasakove, "Air conditioning units at NOPD headquarters, other city buildings fail amid heat wave," Nola.com, June 28, 2023, https://www.nola.com/news/new-orleans-police-headquarters-suffers-ac-outage/article_d2847414-15d4-11ee-89e5-5b7e4b0d67ac.html.

³ The Department of Property Management is responsible for one library that is situated within the Allie Mae Williams Multi-Service Center and one New Orleans Recreation Department facility at the Andrew P. Sanchez and Copelin-Byrd Multi-Service Center.

⁴ The Municipal Traffic Court is now under major renovation and is not being serviced by DPM. The NOPD HQ is currently being cooled by a temporary chiller unit.

Documentation

First and foremost, OIG Evaluators found that DPM lacked any written policies and standard operating procedures to ensure HVAC systems were well-maintained and continued operating properly. DPM engineers at each facility followed procedures they described as common trade-knowledge, but each engineer implemented these procedures in their own way. Engineers recorded their inspections and maintenance activities in handwritten daily log books at each site. However, there were no checklists, manuals, guides or other materials setting out department-wide inspection protocols or expectations. While procedures followed by engineers at the various facilities may have been common practice in the field, the lack of standard procedures and documentation presented a barrier to verifying maintenance had been completed when required.

With the exception of the handwritten logs, DPM also lacked documentation about the equipment engineers maintained. Only one plant had regularly-posted maintenance sheets attached to individual pieces of equipment, while an additional site began posting maintenance sheets on equipment after the OIG began assessing the DPM's HVAC maintenance procedures. The DPM also did not have an inventory of its HVAC equipment until the OIG requested one. According to the list prepared by the DPM for OIG Evaluators, most HVAC systems under the DPM's responsibility were currently in operating condition, although the conditions varied. Further, the DPM could not provide the date when many of the HVAC units had been installed or serviced, or how many times a piece of equipment had been repaired in the last two years. Obtaining this information would have required a review of hand-written daily logs for each facility. This lack of readily available data was especially concerning since, according to the data DPM provided, the estimated ages of HVAC units ranged from "new" to "over twenty years," but most did not state the specific year of installation. This information could be useful in determining how long equipment should remain in service, anticipating potential failures, and planning for end-of life and replacement for certain pieces of equipment.

Preventative Maintenance

Evaluators found a patchwork of preventative maintenance practices across the buildings with on-site engineers. Preventative maintenance was conducted at these sites, but each engineer followed his or her own schedule and regimen. For example, evaluators found little consistency regarding frequency of preventive maintenance schedules across sites. Some equipment was inspected annually, while other pieces were inspected quarterly or biannually. Significantly, there was no routine preventative maintenance for those buildings that did not have on-site engineers.

According to the data provided by the DPM, HVAC systems in buildings without on-site engineers accounted for the vast majority of systems under the DPM's responsibility. Moreover, these

systems were primarily found in buildings used by the New Orleans Police Department (NOPD) and the New Orleans Fire Department (NOFD). DPM officials and engineers informed OIG evaluators that these smaller sites used to be serviced by “rovers,” which were engineers who travelled from site-to-site to provide regular maintenance and repairs. However, there had not been dedicated rovers at the DPM for some time. Instead, maintenance and repairs were conducted only on an as-needed basis by the DPM chief engineer and two chief operating engineers, or their designees. The lack of a roving team meant plant sites were short staffed while engineers serviced these smaller buildings.

All buildings visited by evaluators had building automation systems (BAS). The BAS primarily allowed engineers to monitor the operating conditions of the main components of the HVAC system in real-time and alerted engineers if a component of the HVAC was not working properly. In addition, the BAS allowed most engineers to turn equipment on and off, set temperatures, and set schedules from the BAS. The extent to which these systems aided engineers in their work varied by site. Several engineers noted that they often had to manually inspect and operate the HVAC equipment. Engineers found that sometimes actions taken through the BAS wouldn’t “stick” and the system sometimes sent false analyses. A major shortcoming of these systems at all sites was the inability to extract historical data for preventative maintenance purposes. While historical data of alerts and equipment failures apparently existed on computer displays attached to some of the HVAC equipment, DPM engineers could not access these data in order to troubleshoot HVAC issues.

To its credit, evaluators found that the DPM had begun to address some of the most glaring operational issues related to manpower shortages and equipment maintenance by the end of 2023. Specifically, DPM released a series of contracts for immediate and long-term maintenance. In November 2023 DPM issued five Invitations to Quote for HVAC Services for five separate geographic zones. The purpose of these Invitations to Quote was to procure vendors on an “on-call basis for immediate need repair projects that are deemed necessary for the continued operations of city-owned or city operated facilities.”⁵ The DPM also released Invitations to Bid for repair, scheduled inspections and maintenance service for HVAC systems in City facilities.⁶ Under these agreements, city buildings were grouped into five “clusters” of specific buildings,

⁵ City of New Orleans, Department of Property Management, *Invitation to Quote for HVAC Services – Zone 1*, ITQ No. 3674, November 10, 2023, p. 18.

⁶ City of New Orleans, Department of Property Management, *Invitation to Bid, Inspections, Maintenance and Repairs of Heating, Ventilation and Air Conditioning (HVAC) Systems for Various City Facilities – Cluster 1*, Bid No. 3123, May 26, 2023; City of New Orleans, Department of Property Management, *Invitation to Bid, Inspections, Maintenance, and Repairs for HVAC Cluster 3 – NOFD Facilities*, Bid No. 3760, December 20, 2023.

each cluster having its own two-year maintenance contract.⁷ The first of these contracts, covering City Hall, Civil District Court, Orleans Parish Prison, NOPD Headquarters, Gallier Hall, and Orleans Parish Criminal Court became effective in August 2023. An additional Invitation to Bid was issued during the scope of the OIG’s review on December 20, 2023 and covered NOFD facilities.⁸

Finally, in March 2024 DPM entered into a non-competitive contract for updated BAS-centered HVAC preventative maintenance and troubleshooting services.⁹ Deliverables include trouble shooting and diagnostics, building control system database protection, quarterly reporting of preventative maintenance, central equipment performance testing, alarm notification, trend logs, and standardized reports on alarms and trend logs.¹⁰ This contract covers many of the sites visited by OIG Evaluators, such as City Hall, Orleans Parish Criminal Court, and Gallier Hall, as well as several NOPD buildings, among other facilities.¹¹

Improving HVAC Policies and Practices

While recognizing the efforts of the DPM to improve its HVAC repair and maintenance operations by issuing contracts for maintenance and on-call services, the OIG nevertheless recommends DPM take additional steps to help ensure its overarching HVAC policies and practices are comprehensive and effective. First, the OIG recommends DPM adopt and implement a comprehensive equipment management program, such as the one adopted by the Louisiana Division of Administration’s Office of Risk Management.¹² An effective equipment management program explicitly designates personnel responsibilities, outlines preventative maintenance procedures and schedules for each piece of equipment, and documents appropriate staff training. It also establishes audit and record-keeping protocols, including those for maintaining documentation of preventative maintenance, performance test results, and equipment repair and replacement history. Such a program may also include loss prevention audits.¹³ The equipment management program should explicitly address smaller sites that do not have plants and dedicated engineers. While the OIG understands that mechanical failures can happen

⁷ City of New Orleans, Department of Property Management, *Invitation to Bid, Inspections, Maintenance, and Repairs for HVAC Cluster 3 – NOFD Facilities*, p. 6.

⁸ City of New Orleans, Department of Property Management, *Invitation to Bid, Inspections, Maintenance, and Repairs for HVAC Cluster 3 – NOFD Facilities*.

⁹ City of New Orleans, *Contract by and between the City of New Orleans and Synergy Building Solutions, LLC: BAS Troubleshooting and Preventative Maintenance*, Contract No. K24-163, March 27, 2024.

¹⁰ Synergy Building Solutions, LLC, *Proposal: BAS Troubleshooting and Preventative Maintenance Service Agreement*, October 15, 2023, pp. 2-5.

¹¹ *Ibid.*, p. 1.

¹² State of Louisiana, Division of Administration, *Equipment Management Program* (Baton Rouge, LA: Office of Risk Management, 2023), <https://www.doa.la.gov/media/qazdo1d5/2024-equipment-management-program.pdf>.

¹³ *Ibid.*, pp. 4-6.

without warning, adopting such a program would help the DPM identify and track potential trouble spots, mitigate damage where possible, and respond quickly to breakdowns when they occur.

Second, DPM should assess staffing needs for adequate in-house maintenance. Several DPM officials and engineers indicated the need for more engineers to handle the load of HVAC maintenance, especially when considering the smaller sites that did not have dedicated staff. Many of these sites were at critical public safety offices of the NOPD and the NOFD, yet they received less attention in terms of regular inspection and preventative maintenance than plant sites. In an effort to ensure adequate staffing for all sites, the department should weigh the benefits of reinstating the practice of roving staff against continuing to contract for maintenance and on-call services.

Finally, the OIG is aware that the City issued an RFP for a new asset management system that will be used across several City departments, including the DPM. This system is expected to “encompass such modules as asset tracking, inspections, inventory management, work orders, service requests, job costing, project planning, workflow automation, integration with GIS, resource and maintenance scheduling.”¹⁴ A multi-departmental asset management system could be an important tool in assisting the department monitor and maintain the City’s HVAC systems if developed and implemented properly. DPM should therefore take all necessary actions to ensure these new systems are integrated into their comprehensive equipment management program.

Respectfully,

A handwritten signature in blue ink that reads "Edward Michel".

Edward Michel, CIG
Inspector General

¹⁴ City of New Orleans, *Request for Proposals for Asset Management System*, RFP No. 3649, November 1, 2023. [5505](#)