



LETTER TO THE COMMISSION

LTC No: 26-045

TO: Honorable Mayor and Members of the Fort Lauderdale City Commission
FROM: Rickelle Williams, City Manager *AW*
DATE: February 23, 2026
SUBJECT: Emergency Purchase of Repairs to Liquid Oxygen Storage Tanks at the George T. Lohmeyer Wastewater Treatment Plant

The purpose of this Letter to the Commission (LTC) is to advise the City Commission of the emergency purchase and associated costs to repair three (3) liquid oxygen storage tanks at the George T. Lohmeyer Wastewater Treatment Plant (GTL) for a cost not-to-exceed \$250,000.

Pursuant to Section 2-181(f)(4)a., of the City of Fort Lauderdale, Code of Ordinances, emergency purchases are permitted in the event of an emergency, such as equipment failure, catastrophic damage to City property, or other similar unexpected events. All normal procurement procedures and requirements directly related to such emergency shall be suspended; and with the approval of the City Manager or designee, the head of any department may purchase any required emergency supplies, materials, equipment or services.

Due to an aging cryogenic plant which produced gaseous high purity oxygen at GTL, the City of Fort Lauderdale, via PCL Construction, Inc., constructed a new Vacuum Pressure Swing Absorption (VPSA) system in 2023. The VPSA system was completed in early 2024 and immediately failed to operate properly. Since the VPSA plant shut down in April 2024, GTL has been operating through the City's purchase of liquid oxygen via tanker truck deliveries eight (8) or nine (9) times per week. These deliveries are deposited in three (3) liquid oxygen storage tanks for use in the wastewater treatment process.

As a result of the reoccurring deliveries, the storage tanks are experiencing high wear and tear which require accelerated and more frequent maintenance and repairs. An inspection of the storage tanks by SolutionWerks, Inc. has identified multiple leaks and ancillary equipment that need intervention in the piping systems and valves and other equipment requiring maintenance.

These tanks are in immediate need of maintenance, which prompted this emergency purchase request by the Utility Services Department. Liquid oxygen is a critical component to the wastewater treatment process and operating without it creates

additional risks to providing water to its users. This repair is needed to ensure continuity of operations, the expected level of service, and mitigate the risk associated with a catastrophic failure. In addition, failure of the tanks would cause non-compliance with GTL's Florida Department of Environmental Protection (FDEP) Operating Permit.

The purchase order for the emergency repairs and maintenance has been issued. SolutionWerks has tentatively scheduled the repairs for March 23 through March 27, 2026. The primary scope of work should take one (1) week to complete with the painting of the tanks to occur the following week. Future maintenance will be scheduled if the tanks remain in service for more than two (2) years.

Currently, there are ongoing discussions focused on whether the City will take legal action against the designer/builder, PCL Construction, Inc., and its subcontractor, Airsep, Inc. If the City decides to file suit, then a decision will be made to file individually or jointly with Miami-Dade County, who is experiencing similar issues with the same designer/builder and subcontractor.

An updated evaluation of the VPSA and liquid oxygen systems is being proposed in parallel with the exploration of legal options. This evaluation and selection process will follow the standard competitive procurement procedures pursuant to the City's procurement ordinance.

I appreciate the support of the City Commission in completion of this emergency purchase and associated work.

For further information, please contact Albert Carbon, P.E., Director of Utility Services, at ACarbon@fortlauderdale.gov or 954-828-6563

Attachment:

1. Emergency Declaration Memorandum

c: Shari McCartney, City Attorney
David R. Soloman, City Clerk
Patrick Reilly, City Auditor
City Manager's Office
Department Directors



Memorandum

Date: December 31, 2025

To: Rickelle Willams, City Manager

From: Albert Carbon, P.E., Director - Utility Services 

Re: Request for Emergency Procurement Declaration for the Repairs of the Liquid Oxygen Storage Tanks - George T. Lohmeyer Wastewater Treatment Plant

This memorandum is to request a Procurement Emergency Declaration pursuant to Code Section 2-181(f)(4)a., for repairing the liquid oxygen storage tanks at the George T. Lohmeyer Wastewater Treatment Plant (GTL). This procurement emergency declaration is necessary to engage SolutionWerks to repair the tanks to ensure their continued function and reliability. The estimated cost of this repair is \$250,000.

Background

The City of Fort Lauderdale constructed a new Vacuum Pressure Swing Absorption (VPSA) system in 2023 to make gaseous high purity oxygen. The system shortly failed.

Since the VPSA plant shutdown in April 2024, the city has been purchasing liquid oxygen via tanker truck deliveries at about 8-9 trucks per week. These deliveries are deposited in the oxygen storage tanks to be used in the treatment process. As a result, the storage tanks are experiencing high wear and tear which requires frequent maintenance and repairs. An inspection of the old storage tanks by SolutionWerks has shown multiple leaks in the piping systems and valves and other equipment requiring maintenance. This repair is needed immediately while the VPSA system is down to ensure continuity of Operations and level of service.

Applicable Codes

Pursuant to Section 2-181(f)(4)a., Code of Ordinances of the City of Fort Lauderdale, Florida, emergency purchases are permitted in the event of an emergency, such as an equipment failure, catastrophic damage to city property, or other similar unexpected event, all normal procurement procedures and requirements directly related to such emergency shall be suspended; and with the approval of the city manager or designee, the head of any department may purchase any required emergency supplies, materials, equipment or services.

Attachment:

Memorandum CMO - Dated December 01, 2025

Approved  _____ Denied _____



Memorandum

Date: December 1, 2025

To: Albert Carbon, P.E., Director – Utility Services

From: Talal Abi-Karam, P.E., Assistant Director – Utility Services
Miguel Arroyo, Water and Wastewater Treatment Manager – Utility Services

Re: Vacuum Pressure Swing Absorption at the George T Lohmeyer Wastewater Treatment Plant

This memorandum provides details regarding the Vacuum Pressure Swing Absorption (VPSA) system recently installed at the City's George T Lohmeyer Wastewater Treatment Plant (GTL). The new system has failed, and recommendations for moving forward are needed.

Recommendations

It is recommended that City:

1. Issue an Emergency Declaration to engage SolutionWerks to repair the storage tanks to ensure their continued reliability at an estimated cost of \$250,000.
2. Retain SolutionWerks to repair/fix the VPSA system. The work will be done in two stages at a total cost of about \$3.8 million. This repair is not guaranteed to work but is less costly than complete replacement.
3. City Attorney's Office in possible coordination with Miami-Dade continue to pursue legal actions against AirSep and PCL.

More details, including details on the recommendation, are below.

Background

The City's George T. Lohmeyer Wastewater Treatment Plant (GTL) uses high-purity oxygen as a critical component in its treatment process. The original aging cryogenic plant which produced liquid oxygen, was well past its useful life. In 2021, the City contracted to replace the system with a new technology, Vacuum Pressure Swing Absorption (VPSA) system to make gaseous high purity oxygen.

The VPSA system at GTL was secured via contract 12323-496 (P11781 and 1197) with PCL Construction, Inc (PCL) CAM #20-0493. The Notice to Proceed (NTP) was issued in January 2021 and the contract was closed in December 2023. The cost of this project was about \$18 million and was delivered via the design/build method. PCL was the design/build; AirSep, Inc. was the subcontractor (VPSA provider), and the Engineer

for Design/Builder was Wade Trim. The design criteria package consultant was AECOM.

Following the initial start-up and testing phase in August 2023, issues and malfunctions arose, and the system was not performing. PCL/AirSep were not successful in addressing the issues, and the system completely shut down in April 2024. Since April 2024, the City has been purchasing liquid oxygen from a contracted provider (VirtAir, Inc) at an approximate cost of \$225,000 per month.

Contractual Dispute

Between August 2023, and February 2024, City operational and legal staff had multiple meetings, contractual notices, and letters with the VPSA Subcontractor AirSep, Inc., and the Design/Builder, PCL Inc., regarding the issues experienced with the new plant.

- The City's position is that PCL system failed to perform per the contract and that PCL should fix the problem as these problems arose during the warranty period.
- PCL alleges that it performed its contractual responsibilities and that the City accepted the project (final completion). PCL further alleges that the problems are the results of the negligence of City staff to maintain and operate the system in accordance with the O&M Manuals, instructions, and training provided to City Staff.

The City entered a mediation session with PCL and AirSep. on March 12, 2025. The mediation was not as productive and resulted in an impasse.

In March/April 2024, GTL operational managers requested a proposal from SolutionWerks, a third-party consultant familiar with the design and maintenance of this specific equipment and technology on how to restore the functionality of the VPSA system, versus simply replacing the sieve as suggested by PCL/AirSep.

Repairs of the Liquid Oxygen Storage Tanks

Since the VPSA plant shutdown in April 2024, the City has been purchasing liquid oxygen via tanker truck deliveries at about 8-9 trucks per week. These deliveries are deposited in the oxygen storage tanks to be used in the treatment process. As a result, the storage tanks are experiencing high wear and tear which requires frequent maintenance and repairs. An inspection of the old storage tanks by SolutionWerks has shown multiple leaks in the piping systems and valves and other equipment requiring maintenance. This repair is needed while the VPSA system is down.

Risks to GTL Operational

Logistics risks: The City relies on an outside single provider of liquid oxygen, secured via a bid, for 100 percent of its oxygen needs. This can present a large risk, especially during hurricanes when gas producing plants located near Melbourne (NASA) shut

down their facilities for safety reasons. Trucks carrying oxygen gas are not allowed on the highway when wind speed exceeds 40 miles/hour.

Financial risks: The cost of purchasing liquid oxygen (\$225,000/month) far exceeds our budget for producing oxygen.

Legal risks: Discussions focus on whether the City will take legal action (lawsuit) against PCL and AirSep, and/or whether the City does it jointly with Miami-Dade County. While legal action is always present, this is a long-term strategy, and it could take years for a verdict/resolution in the court system.

Conclusion and Recommendations

It is recommended that City:

1. Issue an Emergency Declaration to engage SolutionWerks to repair the storage tanks to ensure their continued reliability at an estimated cost of \$250,000.

Move to repair the liquid oxygen storage tanks immediately to ensure their reliability. The 3 existing storage tanks have a total liquid oxygen capacity of 180 tons. The storage tanks are to remain in service as backup and will be used on a necessary basis and emergencies should the VPSA not produce sufficient gaseous oxygen.

2. Retain SolutionWerks to repair/fix the VPSA system. The work will be done in two stages at a total cost of about \$3.8 million. This repair is not guaranteed to work but is less costly than complete replacement.

First Stage with an approximate cost of \$1.8 million and taking four (4) to six (6) months. Second Stage with an approximate cost of \$1.5-\$2 million and taking six (6) to nine (9) months.

The city will need to continue purchasing liquid oxygen during stages 1 and 2 described above.

SolutionWerks was the City contractor who performed annual turnover maintenance and frequent repairs on the older Cryogenic plant and storage tanks. Any expedited actions and investment that would bring the system back into production quickly would result in:

- A large saving of not buying oxygen at \$225,000/month (\$2.7 million/year); and
- Eliminate the risk of relying on a single source of liquid oxygen supply.

Once the recommendation is approved, staff will move forward with contracting options and expediting those.

3. City Attorney's Office in possible coordination with Miami-Dade continue to pursue legal actions against AirSep and PCL.

Attachments:

Memorandum CMO - Dated May 15, 2025
Coordination with Miami-Dade County
Proposal - Repairs of Liquid Oxygen Storage Tanks- SolutionWerks
Proposal - Repairs of the VPSA Plant- SolutionWerks

123125 Emergency Procurement Declaration GTL - Approval

Final Audit Report

2025-12-31

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