



# City of Sunnyvale

## Agenda Item-No Attachments (PDF)

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### **REPORT TO COUNCIL**

#### **SUBJECT**

Award a Contract for the Installation of Landfill Gas Condensate Retrofit Pumps and Ancillary Equipment (F18-275) and Approve Budget Modification No. 2

#### **REPORT IN BRIEF**

Approval is requested to award a contract in the amount of \$175,774 to Real Environmental Products of Jackson, California to install 12 Landfill Gas Condensate Retrofit Kits.

#### **EXISTING POLICY**

Pursuant to 2.08 of the Sunnyvale Municipal Code, City Council approval is required for contracts exceeding \$100,000. Consistent with the provision of Sunnyvale Municipal Code Section 2.08.070(b) (4), contracts for the procurement of sole source goods or services may be exempted from the competitive bidding process.

Pursuant to Sunnyvale Charter Section 1305, at any meeting after the adoption of the budget, the City Council may amend or supplement the budget by motion adopted by affirmative votes of at least four members so as to authorize the transfer of unused balances appropriated for one purpose to another, or to appropriate available revenue not included in the budget.

#### **ENVIRONMENTAL REVIEW**

This project is exempt from environmental review under the California Environmental Quality Act (CEQA) pursuant to CEQA Guideline Section 15302 in that it involves replacement and/or alteration of mechanical equipment at an existing facility with equipment of substantially the same size, purpose, and capacity as the equipment replaced with no expansion of the existing use of the facility and CEQA Guideline Section 15301 as it involves the maintenance or repair of an existing facility involving negligible or no expansion of use beyond which presently exists.

#### **BACKGROUND AND DISCUSSION**

One of the services provided by the Environmental Services Department is post-closure monitoring, involving maintenance and repair of the environmental control systems at the 100-acre Sunnyvale Landfill, located behind the north curb of Caribbean Drive. One of the control systems is the landfill gas (LFG) collection system, which was installed in 1987 to comply with a Bay Area Air Quality Management District requirement.

The LFG includes 40% methane, a byproduct produced as anaerobic bacteria which decomposes the organic matter buried in the landfill. The 79 LFG collection wells are under vacuum and connected to pipelines that deliver the gas to the Water Pollution Control Plant (WPCP). There, the LFG is blended with utility natural gas and methane gas generated by the sewage treatment digesters, and used as fuel for generators that produce electricity that powers the WPCP. Although

the landfill has been closed for 28 years, its biological processes still produce more than 200 cubic feet per minute of LFG.

Deep in the landfill, the gas is warm and full of water vapor. When the LFG is collected and pulled to the surface it cools, and liquid condensate “drops out” and collects in pipelines, just as water condenses on cold windows on a cold winter morning. This LFG condensate is somewhat acidic (i.e. has a low pH), quite odorous, and contains trace contaminants, and must be collected and removed to prevent the pipelines from filling with liquid and blocking the flow of LFG. The collection system was designed with 12 low spots around the perimeter of the landfill into which the condensate drains into “traps” (tanks) that extend to depths of 8 to 10 feet below the surface.

Each trap is covered by a large plastic vault box that extends several feet above the surface. These vaults are visible at various locations around the perimeter of the landfill, including locations next to maintenance roads accessed by members of the public for walking and biking. At each trap, there is a pump, driven by compressed air, that pumps the condensate to the WPCP. Above-ground pipes and hoses carry compressed air to each vault and condensate away from each vault. At the WPCP, a pre-treatment system adjusts (raises) the pH, filters out contaminants, and discharges the liquid to the WPCP for treatment.

In late 2016, the condensate in some of the traps suddenly became more acidic than it had been during the previous 30 years of LFG system operation. The acidic condensate is damaging the air-driven pumps and creates concerns about the safety of maintenance staff who can be exposed to the liquid condensate.

Staff has taken several steps to address various risks associated with this issue. These include placing appropriate labels on the air and condensate lines around the entire site, using appropriate personal protective equipment and work practices when working around the sites, and confirming that the pre-treatment system at the WPCP is appropriately permitted. The remaining concern is the vaults themselves and the condition of their pumps.

City staff and the consultant (SCS Engineers and Golder) worked collaboratively to research solutions to manage the condensate pH within the system. Real Environmental Products, a vendor that is qualified and specializes in LFG condensate removal systems, was asked to prepare a custom-designed solution. Currently, the traps vary in design and extend far below the surface and are not easily accessed, so staff used a remote camera to provide the vendor with video showing the pipe sizes and layouts. Even so, there remains some uncertainty on the details of the traps proposed to be retrofitted that is best clarified during the work itself. Therefore, due to the specialized and custom nature of the work, Staff is recommending award of a contract to Real Environmental Products LLC under a competitive bidding exemption to replace the pumps and vaults with new, acid-resistant pumps and shorter, more secure vaults that reduce human exposure to the condensate.

### **FISCAL IMPACT**

Staff recommends that Council approve Budget Modification No. 2 to create a new project to fund this work. Funding is available in the Rate Stabilization Reserve in the Solid Waste Management Fund. As this is a one-time expenditure, there is no long term impact on solid waste rates.

**Budget Modification No. 2  
FY 2018/19**

	<b>Current</b>	<b>Increase/ (Decrease)</b>	<b>Revised</b>
<b>Solid Waste Management Fund</b>			
<u>Expenditures</u>			
New Project - Landfill Gas	\$0	\$175,774	\$175,774
Condensate Trap Retrofit Pumps			
 <u>Reserves</u>			
Rate Stabilization Reserve	\$9,498,845	(\$175,774)	\$9,323,071

Funding Source

This project will be funded by the Solid Waste Fund (Fund 485)

**PUBLIC CONTACT**

Public contact was made by posting the Council agenda on the City's official-notice bulletin board outside City Hall, at the Sunnyvale Senior Center, Community Center and Department of Public Safety; and by making the agenda and report available at the Sunnyvale Public Library, the Office of the City Clerk and on the City's website.

**RECOMMENDATION**

Award a contract in substantially the same form as Attachment 1 to the report and in the amount of \$175,774 to Real Environmental Products, LLC, authorize the City Manager to execute the contract when all the necessary conditions have been met, and approve Budget Modification No. 2 in the amount of \$175,774.

Prepared by: Gregory S. Card, Purchasing Officer  
Reviewed by: Timothy J. Kirby, Director of Finance  
Reviewed by: Ramana Chinnakotla, Director of Environmental Services  
Reviewed by: Teri Silva, Assistant City Manager  
Approved by: Kent Steffens, City Manager

**ATTACHMENTS**

1. Draft Service Agreement