



# Memorandum

## MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT

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Reviewed by:  Date: 4/18/22  
General Manager

DATE: April 18, 2022  
TO: Finance Committee  
FROM: Director of Engineering and Compliance, District Engineer  
SUBJECT: Approve \$115,000 Capital Funding for Hydrogen Sulfide (H<sub>2</sub>S) Analyzer Addition to Remote Monitoring and Control System

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**RECOMMENDATION:** That the Board approve supplemental project funding of \$115,000 for the hydrogen sulfide (H<sub>2</sub>S) analyzer addition to the District's Remote Monitoring and Control System.

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### **BACKGROUND**

In 2021, the Board approved the installation of a Remote Monitoring and Control System (RMCS) at the landfill to monitor the LFG Flare, leachate pumps and storage tanks, and condensate pumps and storage tank. SCS Field Services assisted the District in the design and installation of the RMCS last year. The RMCS provides automated data acquisition and recording, as well as remote, real-time access to the equipment being monitored.

### **DISCUSSION**

Presently, staff manually monitors five (5) locations on the LFG transmission pipeline on a daily basis (including weekends and holidays) for recording the H<sub>2</sub>S concentration. Two monitoring points are located before (inlets) the H<sub>2</sub>S treatment system, two monitoring points are located after (outlets) the H<sub>2</sub>S treatment system, and one point is located downstream at the LFG bower skid that distributes the LFG to the enclosed flare and engine-generator sets in the Gas Plant. The H<sub>2</sub>S monitoring is conducted in association with a Federal requirement that limits the daily amount of sulfur oxides (SO<sub>x</sub>) emissions; a combustion byproduct of the destruction of H<sub>2</sub>S. With the addition of the Board approved RMCS last year for other landfill system elements, the daily H<sub>2</sub>S monitoring can be accomplished by an automated system with the addition of H<sub>2</sub>S analyzers. Having an automated system will relieve staff from approximately ten (10) hours per week (over 500 hours per year) associated with the manual monitoring process. Of notable benefit of an automated system is the relief of staff effort on weekends and holidays.

### **FINANCIAL IMPACT**

Staff estimates that \$115,000 supplemental project funding (inclusive of ~10% contingency) will be necessary to complete electrical design and permitting, purchasing equipment, control system amendments by SCS Field Services, and the public works construction installation of equipment to accomplish automated monitoring of hydrogen sulfide (H<sub>2</sub>S) before and after the H<sub>2</sub>S treatment system as LFG is delivered to the Gas Plant for destruction and abatement of emissions. The expenditure is planned for this summer in both the current and subsequent fiscal year. Available funding in the current budget would be used this fiscal year and the balance of funding would be included in the FY2022/23 draft preliminary budget. Annual savings of regular pay and overtime/holiday pay associated with manual monitoring of the hydrogen sulfide concentration in landfill gas is estimated to be on the order of \$40,000 - \$50,000. Therefore, the 'return on investment' of this capital expenditure of \$115,000 can be accomplished in less than three (3) years; a very favorable condition for a capital investment.

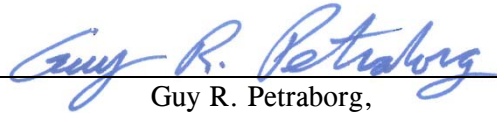
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**CONCLUSION**

The Finance Committee and staff recommend that the Board approve supplemental capital funding in the amount of \$115,000 to accomplish the addition of automated monitoring of hydrogen sulfide (H<sub>2</sub>S) into the existing RMCS project.

A handwritten signature in blue ink that reads "Guy R. Petraborg". The signature is written in a cursive style and is positioned above a horizontal line.

Guy R. Petraborg,  
Director of Engineering and Compliance