



Memorandum

MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT

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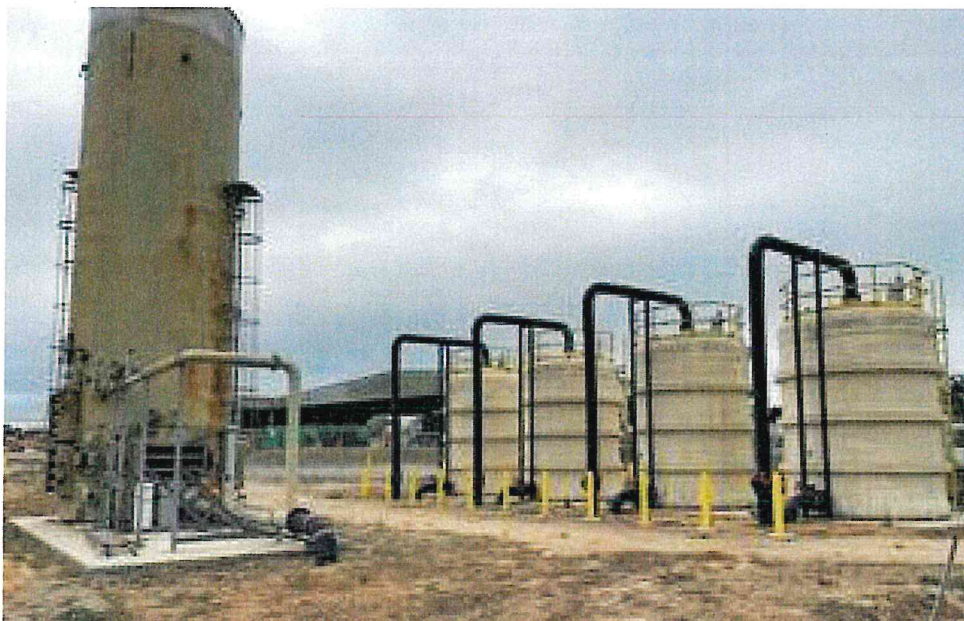
Reviewed by: AM Date: 1-14-22
General Manager

DATE: January 14, 2022
TO: General Manager
FROM: Director of Engineering & Compliance, District Engineer
SUBJECT: Approve the Purchase of H₂S Media from Unison Solutions, Inc. of Dubuque, Iowa in the Amount Not-to-Exceed \$130,000.

RECOMMENDATION: That the Board of Directors approve the Purchase of H₂S Media from Unison Solutions, Inc. of Dubuque, Iowa in the Amount Not-to-Exceed \$130,000.

BACKGROUND

On August 23, 2021 the District started operating the permanent hydrogen sulfide (H₂S) Treatment system for pre-treatment of the landfill gas (LFG) before it is distributed to the Gas Plant, LFG Flare, or new Biogas-to-rCNG Conditioning System. The H₂S Treatment system consists of four (4) storage tanks filled with a proprietary filter media that removes most of the H₂S from the LFG when the LFG is passed thru the tank. Two (2) of the four (4) tanks are used 'in parallel' as the operating scenario; with two (2) tanks on standby to be used once the media in the first two (2) tanks has become saturated with H₂S. The storage tanks are presented in the photo below.



DISCUSSION

Two (2) of the H₂S treatment tanks have been operating since August 2021 and are nearing the limits of their treatment capacity. Soon it will be necessary to switch over to the two (2) standby tanks in order to shutdown the first two (2) tanks and remove the 'spent' media and replace it with new media. The media is a proprietary product sold by Unison Solutions, Inc. of Dubuque, Iowa. The media is also specified in the Air Permit for the permanent treatment system as the material that is required to be used for the treatment system. The Unison Solutions media has demonstrated that it is effective in stripping H₂S from the LFG. H₂S concentrations in untreated LFG range from 500 to 700 parts per million (ppm). The prior temporary treatment system, using a different media and only treating a portion of the LFG, was accomplishing H₂S concentrations in treated LFG of 150 to 250 ppm before destruction in the Gas Plant or LFG Flare. In contrast, the permanent treatment system with the Unison Solutions filter media has been accomplishing H₂S concentrations in treated LFG of 15 to 60 ppm.

RECOMMENDATION

As the filter media provided by Unison Solutions has demonstrated its effectiveness to remove H₂S from the LFG and is a proprietary material that is specified in the Air Permit for the treatment system (a non-discretionary item), staff requests that the Board of Directors approve the purchase of H₂S media from Unison Solutions, Inc. of Dubuque, Iowa in the Amount Not-to-Exceed \$130,000. This expense will be incorporated into the current fiscal year budget as previously approved by the Board of Directors and will occur periodically on the monthly expense register, from time-to-time, as the cycle of media replacement continues to occur on an estimated four to six month replacement cycle.

Guy R. Petraborg, P.E., G.E.

Attachments:

Unison Solutions, Inc. Quotation dated December 21, 2021



Date: 12/21/2021
 Expires: 01/20/2022
 Attn: Guy Petraborg
 Location: Monterey, CA

Proposal Number: PM-421.1596_Monterey
 Proposal Name: MRWMD_H2S removal media

Dear Guy,
 Unison Solutions, Inc. is pleased to provide you with the following quote for replacement H2S removal media for two of your vessels.

| Description | Quantity | Unit Cost | Total |
|---|----------------|------------------|---------------|
| H2S Removal Media | | | |
| Unison Part Number UNI-H2SK, 2200 lb bags | 92,400.00 lbs. | \$ 1.20 /lb. | \$ 110,880.00 |
| Estimated Shipping | 1.00 | \$ 4,850.00 each | \$ 4,850.00 |
| 146" Diameter Foam Filter (for 12' diameter vessel) | 2.00 | \$ 1,560.00 each | \$ 3,120.00 |
| Estimated Shipping | 1.00 | \$ 400.00 each | \$ 400.00 |

Shipping prices are extremely volatile at this time. The estimate noted above is valid for 7 days. Actual shipping costs will be determined at the time of the order.

Grand Total: \$ 119,250.00

MEDIA: PRICING SUMMARY

- Prices do not reflect any taxes that may be applicable and are valid for 30 days
- Price does not include the following: labor for unloading media from the truck, disposal of spent media or labor for loading new media into vessels.
- Estimated delivery upon order receipt is 7- 21 days depending on availability

PAYMENT SCHEDULE

- 100% upon order acceptance. Net 30 days on all payments.

Thank you for giving Unison Solutions the opportunity to propose our services. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,
 Kim Murdock-Timmerman
 Unison Solutions, Inc.
 563-585-0967