MEMO

Consent
Item #:7

Meeting Date: September 23, 2022

To: Board of Directors
From: Senior Engineer, David Ramirez
Approved by: General Manager, Felipe Melchor

Subject: Material Recovery Facility Fire Sprinkler Replacement (Pre-Sort Side)

RECOMMENDATION: That the Board authorize the General Manager to execute a contract with Western States Fire Protection Company of Roseville, CA for Materials Recovery Facility (MRF) Fire Sprinkler System Piping Replacement in the amount of $88,770.

BACKGROUND

The Material Recovery Facility (MRF) has been the centerpiece of the ReGen Monterey's recycling efforts since its construction in 1996. The 100,000 square foot building houses the dual line sorting equipment as well as the 'incoming' pre-sort materials area and the 'outgoing' post-sorted recyclable materials area. During the past few years the building's main overhead fire suppression sprinkler system has required increasingly frequent repairs of pin hole leaks. These types of leaks indicate the presence of corrosion within the fire sprinkler system water piping. These leaks are the result of trapped oxygen rich ambient air in the sprinkler lines which accelerate the corrosion of the metal pipes from the inside out. The existing fire suppression equipment was not part of the 2017 MRF 2.0 retrofit. Since the installation of the new sorting equipment in 2017, leaks have occurred in areas that are difficult to access and require the erection of scaffolding, a time consuming and relatively costly endeavor.

At the July 2021 Board Meeting, staff made a presentation on a fire that occurred at the MRF. In that presentation staff stressed the importance of having adequate fire suppression systems in place to ensure adequate protection if and when a fire occurs. MRF's are susceptible to fires caused by lithium batteries or other flammable materials that get illegally dumped into the recycling and waste streams. Prior to the fire in July, staff pursued a quote for full replacement of the existing sprinkler system and was quoted a price of about $450,000. Given that magnitude of cost, the amount of sprinkler piping to be replaced, the duration necessary to accomplish complete replacement, and the complexity of installing piping above the existing equipment while in operation, staff pursued a phased approach as an alternative to full piping replacement.

The alternative 'phased' replacement approach would consist of a mitigation element to retard the rate of corrosion in the piping system and an incremental replacement element of select portions of the piping system over time. Some initial steps in the process have been completed and consisted of the installation of a nitrogen-purge system which the Board approved at the August 2021 Board meeting. The nitrogen-purge system will have a large positive impact on

reducing the rate of corrosion in the piping system and thus, will protect both existing and new piping. The second step is the incremental replacement over time of portions of the piping system; prioritized to zones that demonstrate leaking which often occur near the 'high point' of the piping. The second step in the process was to replace the most difficult to reach piping on the 'post-sort' side of the building and that work has been completed. This staff report presents a third step in the process which will replace select piping located at the high point of the fire system on the 'pre-sort' side of the building. The fire sprinkler piping in this area has leaked several times over the past few years and caused partial shutdown of the leaking pipe until the piping can be repaired. Putting a section of the fire suppression system out of service for any period of time puts the building and equipment at risk if there were to be a fire during that time. Therefore, staff is recommending select replacement of the fire piping system in the 'pre-sort' area.

DISCUSSION

The MRF's proposed fire sprinkler replacements are inaccessible via ladder, scissor lift, or boom lift since it is located above the sorting equipment. Therefore, scaffolding will need to be erected to reach these areas and replace the piping. All of this work will need to take place over the weekend to ensure that the MRF can process recyclables during its normal operating hours. The requirement for scaffolding and the need for work outside of the MRF's operating hours increase the cost for the work. The work is non-discretionary and regulatorily required to comply with the approved Building Permit.

FINANCIAL IMPACT

This work in the MRF's 'pre-sort' area is included in the FY 2022/23 budget of the Facilities Maintenance section for the Material Recovery Facility (MRF). It is anticipated that these piping protection measures, in addition to the nitrogen-purge system, will reduce the frequency and cost of sprinkler system repairs in the MRF and will defer the replacement of the full MRF sprinkler piping system.

CONCLUSION

The MRF Fire Sprinkler System Piping is essential at mitigating losses due to fires. Replacing the piping that has been more prone to leaks historically will ensure system protection and not interfere with operations. Staff therefore recommends that the Board authorize the General Manager to execute a contract with Western States Fire Protection Company of Roseville, CA for Materials Recovery Facility (MRF) Fire Sprinkler System Piping Replacement in the amount of $88,770 (includes 10% contingency).