



October 22, 2021

(Via electronic mail)

To:  
City of Richmond  
Joe Leach, P.E.  
Director of Public Works  
450 Civic Center Plaza  
City of Richmond, CA 94804

Subject: September - 2021 Monthly Operations Report

From:  
Brian K. Bruce  
General Manager, Veolia-Richmond  
Municipal Water  
VEOLIA NORTH AMERICA  
601 Canal Boulevard, Richmond, CA 94804

Dear Mr. Leach,

The following Monthly Operations Report is being submitted pursuant to Section 5.11 of the 2002 CITY OF RICHMOND WASTEWATER TREATMENT FACILITY CAPITAL IMPROVEMENTS, OPERATIONS, MAINTENANCE AND MANAGEMENT AGREEMENT BY AND BETWEEN THE CITY OF RICHMOND, CALIFORNIA AND VEOLIA WATER WEST OPERATING SERVICES, INC.

- I. Summary of work activities during the reporting month September - 2021
  - a. Safety
    - i. Monthly safety training was accomplished for all personnel
    - ii. Covid-19 restrictions require mask indoors for all employees and visitors
  - b. Capital Projects Management
    - i. Baykeeper Settlement Agreement Projects
      1. Capacity-related sewer projects
        - a. First Street Design
          - i. V. W. Housen & Associates delivered its 100% design drawings of the First Street sewer relief in August. Veolia transmitted copies of the 100% submittal to the City for review on 8/19/20.

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- ii. Pursuant to City direction, two pipe segments have been identified as problematic due to operational concerns that they could contribute to SSOs (First and Bissell); these segments were separated out as a separate project in August 2020. The First and Bissell Project construction was completed in January 2021. Record As-Built Drawings for 1st & Bissell will be transmitted to the City in September.
- iii. The First Street Relief Sewer and Pipeline Rehabilitation project Pre-bid meeting was conducted on December 4, 2020. Approximately 24 Contractors, subcontractors and suppliers attended the meeting.
  - 1. The City awarded this project to the low bid contractor, D'Arcy & Harty Construction, Inc. on 2/16/21.
  - 2. After the project was bid, Force Majeure conditions declaring shortage of C-900 PVC pipe was submitted as Change Order 1, which was approved by the City on May 24th.
  - 3. Notification to residents and sewer line replacement commenced in July 2021.
  - 4. NTP effective date June 14, 2021. Work commenced in Field on July 14, 2021.
  - 5. TA for Change Order #2 to remove and replace a manhole approved by the City and returned 8/4/21.
  - 6. TAs for Change Order #3 (differing site conditions, concrete encasement, added manhole) and Change Order #4 (replace entire line segment in lieu of point repair, added manhole) were submitted to the City 9/27/21.
  - 7. Sewer main replacement continues utilizing open trench and pipe bursting methods. The majority of 8" and 10" lines have been installed.
  - 8. In addition to Point Repairs and Pipe Bursting, the 12" and 18 " diameter Pipe Material was delivered and installed during September.
- b. Marina Bay Parkway Force Main Extension Project (aka Moody Underpass)
  - i. V.W. Housen completed design and delivered 100% design documents to Veolia for review on 2/22/21.
  - ii. Four (4) bids were received on 4/23/21 ranging from \$357,200 to \$589,000. Veolia has recommended the City award the contract to the low bidder, W.R. Forde. A TA was sent to the City on May 6, 2021. The Resolution for this project was approved at the June 15, 2021 City Council Meeting.

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- iii. PreConstruction conference was held Tuesday August 10, 2021.
- iv. Traffic Control Plan approved. Encroachment permit received 8/27/2021.
- v. W.R. Forde will install the new Force Main via directional drilling in lieu of open trench.
- vi. Jacqueline Majors Associates started Public Outreach and
- vii. The Contractor started exploratory potholing 9/15/2021. On 9/22/21 the Contractor generated RFI #1 seeking resolution to existing utility conflicts in the route of the new force main.
- viii. Potholing and further exploration continue to find a viable route.
- c. 2021 Grade 5 RAA Line Replacement Project
  - i. Pre-Bid conference held Thursday July 8, 2021
  - ii. Bids received Thursday August 5, 2021
  - iii. Veolia has recommended the City award the contract to the low bidder W.R. Forde: \$317,000.00. A TA was sent to the City. This project was on the September 28, 2021 Regular Agenda and pushed to the October 5, 2021 Agenda for Action by City Council. .
- f. High Priority Sewer Line Replacement Project
  - i. Pre-Bid conference held Thursday July 8, 2021
  - ii. Bids received Thursday August 5, 2021
  - iii. Veolia has recommended the City award the contract to the low bidder D'Arcy & Harty \$680,000.00. A TA was sent to the City. This project was on the September 28, 2021 Regular Agenda and pushed to the October 5, 2021 Agenda for Action by City Council.
- ii. Wastewater Treatment Plant Projects
  - 1. The Grit/Screening and Aeration Upgrade Projects (as part of the Critical Improvements High Priority Project) was advertised for bidding on PlanetBids on September 15, 2020.
    - a. Review and response to RFIs and Submittals underway. Contractor started site clearing work on 5/10/2021. Contractor began site mobilization on 5/11/21 in advance of temporary utilities for construction trailers, planned for 5/12/21-5/14/21.
    - b. Shimmick continues submitting contract required documentation through EADOC.
    - c. Veolia, Carollo and Shimmick agreed to begin weekly site meetings to review construction progress and discuss potential u/g conflicts to facilitate work in progress. Veolia began weekly reporting to the City on Changed Conditions Extra Work on the project on 6-28-21.
    - d. Shimmick continues to work on the PS Tank column retrofit repair.

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- e. Shimmick began installing bypass piping in advance of tie-ins to IPS pump discharge piping 1-4 later in August/September.
  - f. Shimmick began working in ABs 3 & 4 in August and they will continue to work in AB 4 until November/December 2021.
  - g. Shimmick excavated at the new odor control and blower building facility locations.
  - h. Shimmick continues to investigate, repair, utilize, modify and replace inoperable utilities throughout the WWTP site.
  - i. Carollo issued DC001 Aeration Basin Slide Gate Modifications. This DC adds and deletes Aeration Basin Slide Gates due to configuration and operational changes in the basins.
  - j. Carollo issued DC004 Blower Building Louver Modification. This DC modifies the Blower Building Louvers to conform to approved louver submittal specifications.
  - k. Veolia provided copies of DC 2, 3 & 4 and the draft of 5 to Yader Bermudez on 9/16/21 per his request at the last Biweekly Meeting with Veolia
  - l. Carollo issued DC001 Aeration Basin Slide Gates. This DC adds and deletes slide gates within the basins due to revised operational conditions.
  - m. Carollo issued DC 2.1 Influent and ML Channel Walls. This DC adds concrete walls in the influent and mixed liquor channels to eliminate sewage backflow in these areas.
  - n. Shimmick completed installing blanking / stop plates within the PS Tanks influent channels in preparation for Grit Facility demolition.
  - o. Shimmick continues to submit FA cost pricing data for Veolia review and approval, prior to submission to the City.
  - p. The City approved Shimmick's Bid Alternate A cost proposal to furnish and install AB RAS piping, valving and flowmeters.
  - q. Shimmick completed installing the bypass piping, tie-in connections to IPS pump discharge lines and pressure testing of the bypass piping.
  - r. Shimmick began demolition of the existing Grit Facility on 9/27/21.
2. Cogen Project
- a. Veolia submitted a TA for BAAQMD permit revisions for this project on 4/5/21 and then resubmitted a revised TA with additional proposals on 4/27/21; the TA is

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under review and expected to go to City Council. The existing BAAQMD ATC permit is set to expire on 12/30/21.

- b. Veolia and the DB team conducted several workshops to define/clarify 75% design review comments to be incorporated into the final 100% design.
- c. Yorke Engineering submitted a BAAQMD permit application, which was forwarded to the City on 9/24/21 for City signature, prior to submitting this application to the Air Board.

### 3. The SCADA Conversion Upgrade Project

The SCADA (Supervisory Control and Data Acquisition) Phase I Project, which replaces the existing SCADA system and maintains the upgrade, was ongoing in August. The Phase I portion is expected to be complete by December 2021.

- a. Calcon continues to work on SCADA alarms and P&ID drawings.
- b. Veolia submitted and the City approved the change order request (#3) on 7-23-21 to upgrade the Wet Weather Station panel view controls and include SCADA system programming, allowing for data screen access reporting. The PSA was amended and executed on 8/12/21.
- c. Calcon began updating the remote site (lift station) P&IDs in mid-August. This work is anticipated to be completed by the end of October 2021.
- d. Calcon continues to work on Digester and Headworks PLC upgrades (Bid Item 10). This work is anticipated to be completed in December 2021 (due to material supply constraints) Materials are currently on back order and are not expected to be delivered until late October/ early November 2021.
- e. Calcon began meeting with Veolia to discuss how to close out the project by the end of the year (2021).

### 4. Seismic Evaluation – The City selected ZFA Structural Engineers. The project kicked off on June 30, 2020. The next month was spent gathering documentation for the project (i.e., past Plant project documentation, record drawings, etc.);

- a. All contract work is complete; what remains includes final invoicing.
- b. The City agreed to notify Veolia and ZFA on the upcoming approval of Seismic Analysis PH II project, through the City budget process, beginning 7/1/21. Veolia submitted the Seismic Analysis PH II TA to the City on 7/13/21. Phase II is scheduled to go to Council on 9/28/21 for additional funding.

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- c. Veolia submitted the Seismic Analysis PH II TA to the City on 7/13/21. Phase II is scheduled to go to Council on 10/19/21 for award.
  5. Sludge Thickener Project (Design/Build) – RFQs were received on January 10, 2021, and evaluated on January 21, 2021.
    - a. The City, Veolia and Carollo staff interviewed the two DB firms on 3/29/21. On 4/13/2021, the City, Veolia and Carollo discussed the DB presentations, proposals and scoring criteria. The City requested Veolia not schedule additional follow-up discussions at this time, indicating they would contact Veolia when they were prepared to discuss the proposals again. The City informed Veolia on 4/26/21 that they chose Myers & Sons/ Lee & Ro for the Sludge Thickeners PH I design and directed Veolia to subcontract with them for this project.
    - b. Veolia submitted the TA to the City on 5/17/21 for Design only which was approved and returned 7/1/21; TA for ESDC to follow.
    - c. Veolia is drafting a subcontract to issue to the DB firm Myers & Sons on the project. Veolia issued the subcontract to Myers & Sons on 7-29-21 for their review and approval. Myers & Sons returned the Subcontract with proposed revisions to Veolia during the week of 8/30/31. The SubcontractContract remains under negotiation.
  6. Critical Plant Projects - SBS (Chemical Building) Facility
    - a. West County is proceeding with design utilizing Carollo Engineers. Construction will be done by Veolia.
    - b. On 7/2/21, Veolia recommended the award of this project by the City, to the apparent low bidder, Myers & Sons at the 7-20-21 City Council meeting. The City awarded the SBS Facility Improvements Project to Myers & Sons on 7-27-21.
    - c. Veolia prepared and submitted a (revised) TA to the City on 8/2/21 for review and approval. The TA was approved on 8/4/21.
    - d. Veolia has prepared a subcontract agreement for Myers & Sons; Veolia issued the revised subcontract agreement to Myers & Sons on September 13, 2021.
- iii. Storm Water Projects
  1. Trash Capture Device –
    - a. Other locations are currently being considered by the City and Caltrans for additional Trash Capture Device Installations.

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- b. A TA has been submitted to the City for design, equipment procurement and constructability review of a new device to be tentatively located on Bayview Avenue.
- c. Collections Systems and Wastewater Treatment Plant Operations and Maintenance
  - i. Collection Systems Operations and Maintenance
    - 1. 4-year-out wastewater system cleaning progress
      - a. 2004 Service Agreement annual cleaning miles objective is 49.8 miles
        - i. 2021 planned hotspot cleanings (altered by the BKSA) and pre-CCTV cleaning is 133.2 miles. The total cleaned year to date is 104.29 miles. On target to be completed by Dec 31, 2021.
        - ii. The unplanned cleanings, e.g., service calls, post construction, etc. is 17.42 miles
      - 2. 10-year-out wastewater system CCTV condition assessment progress
        - a. 2004 Service Agreement annual CCTV miles objective is 19.7 miles
          - i. Grade 4 and 5 miles planned annual condition assessments (altered by BKSA) and 70% or less is 43.3 miles. The total completed year to date is 41.82 miles. On target to be completed by Dec 31, 2021
          - ii. Unplanned completed post-construction CCTV is 1.34 miles
        - b. Total gravity pipe segments in system reporting in InfoNet is 3,645
          - i. Pipe segments with CCTV < 10-years and > 70% complete is 3,527
          - ii. Pipe segments with CCTV > 10-years is 118
            - 1. (18) are greater than 10 years
              - a. (5) need cleanouts changed to manholes or to be reevaluated when the new push camera arrives
              - b. (4) Need Contractor to pothole and locate
              - c. (3) Bypass required due to pipe surcharged
              - d. (2) Need City to obtain Railroad Permit
              - e. (2) Need Contractor to excavate and locate assets
              - f. (2) Point Repairs required - Repairs completed. CCTV pending.
            - 2. (78) have surveys within 10 years but are less < 70% complete and are on the inaccessible list.
            - 3. (22) are Inaccessible due to submerged pipes - (Keller Beach) awaiting future planning from the City
    - 4. Sanitary Sewer Overflows
      - a. Actual SSO's in Sept: 0
      - b. 2021 Actual SSO's, YTD: 9
        - i. 2021 Permissible SSOs per Baykeeper Settlement Agreement: 21

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5. Customer Service Calls = 7
  6. Emergency & Miscellaneous Repairs
    - a. Wastewater point repairs = 2
    - b. Manhole cover repair = 0
    - c. Stormwater point repairs = 0
  7. Storm water collection response calls
    - a. Customer service calls = 0
    - b. City service calls = 0
    - c. Catch basins cleaned = 0
    - d. Trash capture devices cleaned = 0
    - e. Pipe segment cleaned = 0
    - f. V-ditched cleaned = 0-Ft
- ii. Wastewater Treatment Plant Operations

Permit Violations – There was one NPDES Permit variance to report for the Month of September. EFF 002 TSS for the week of September 5 -11, 2021 was 55.28 mg/L.

This was a direct result of the Richmond, CA Water Pollution Control Plant struggling in August with an electrical VFD failure of aeration basin mixer #1B on Tuesday August 24, 2021 reducing the capacity of the plant to generate enough dissolved oxygen for effective treatment. We still have temporary floating aerators in #2B as we wait for its replacement to be fabricated. The recent high heat limits the aerator motor operation and restrict the units ability to run over 85% without tripping failures. The VFD for 1B failed to restart during routine preventative maintenance. This failure was unresolvable and VFD 1B was replaced and the aerator was returned to limited service on Thursday August 26, 2021. PLC Programing was accomplished and the unit was incorporated back into our control system and full automatic control was restored by Monday August 30, 2021.

After the loss of aeration and appropriate DO, sludge bulking was noted in all clarifiers and manual adjustments were made to clarifier flows and RAS rates with insufficient results. Problematic influent flows in excess of 11.0 MGD seemed to compromise the biomass with abundant filament growth yet again. We have suspected bay infiltration of seawater into the collection system that as of now cannot be controlled and coincidentally the "king tides" this past week would align somewhat with this abnormally high influent. At the same time we are experiencing heavy sediments at the low flow operation during the early mornings from 2AM to 6AM creating problematic odors and high influent TSS. Friday September 3, 2021 RAS chlorination was implemented and again temporary polymer was added. We relocated polymer dosing points for more effective application.

These measures did not effectively provide enough recovery, in time to avoid the high weekly effluent TSS average. All other regulated parameters were met for the month of September 2021.

One additional 40 HP floating aerator is onsite for any immediate needs, and our order for the new gear drive to complete a full rebuild for the rotating aerator, as previously communicated, is being fabricated. We have requested approval for an additional

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mechanical assembly as we have now committed the one under manufacture to replace #2B.

All monitored discharge water quality parameters were met for September.

- a. Average effluent daily flow = 4.68 MGD
- b. Maximum effluent daily flow = 5.40 MGD
- c. Peak influent daily flow = 11.0 MGD
- d. Influent BOD/TSS mg/l = 493 mg/l / 612 mg/l
- e. Effluent BOD/TSS mg/L = 23.2 mg/l / 30.1 mg/l
  - i. Permit Limits for Effluent BOD/TSS mg/L = 30/30
- f. Effluent Coliform = (Monthly Median) 3 MPN / 100 ml
  - i. Permit Limits for Effluent Coliform = (Monthly Median) 240 MPN /100 ml
- g. Plant Odor complaints = 6 YTD Odor Complaints = 9

Non-standard operating conditions – Plant is struggling to maintain dissolved oxygen in the aeration basins because of the age and failure rate of the mechanical aerators. This puts us a risk for exceeding the CA regulatory discharge limits for Ammonia.

Regulatory agency reporting – All standard monthly reports submitted in a timely manner with no exceptions reported back from the regulator

## iii. Collection System Pump Station and Wastewater Treatment Plant Equipment/Facility Maintenance

Total preventive maintenance work orders completed = 217

Total corrective maintenance work orders completed = 23

All wastewater treatment plant mission-critical and redundant systems and equipment were observed and/or maintained and/or repaired as scheduled and/or required

All Storm and wastewater collection system pump stations were routinely checked and maintained as scheduled

- a. Stormwater pumps stations monitored = 8
- b. Wastewater pump stations monitored = 15

Maintenance projects

- a. Complete annual digester heat exchange boiler preventative maintenance.
- b. Complete annual plant facility & wet-weather generator preventative maintenance.

## II. List of upcoming activities

- a. Continue discussions with City staff regarding prioritization and procurement delivery method for various maintenance and construction projects noted previously

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b. Continue planned CPM and O&M activities previously described in section I.b and I.c, respectively, above

## 3. List of Task Authorizations (TAs) delivered to the City:

### a. CPM

- I. Sludge Leachate Line Condition Assessment Update - submitted on 3/26/21; still outstanding
- II. Seismic II Analysis TA - submitted 7/13/21; still outstanding
- III. 2021 Grade 5 RAA Line Replacement - submitted 8/30/21
- IV. High Priority Sewer Line Replacement - submitted 8/30/21
- V. New 2021 Trash Capture Project - submitted 9/3/21

### b. O&M

- i. RAA/SECAP/Master Plan TA – Submitted March 27, 2020, COR responded. TA was not signed but capital work was completed and third party engineer was paid by Veolia. Payment is under dispute.
- ii. Boiler Burner #2 TA – Submitted May 20<sup>th</sup>, COR responded June 3<sup>rd</sup>. New Boiler Burner was purchased and installed and the contractor was paid by Veolia. Payment is under dispute.
- iii. NASSCO upgrade from 6.0 to 7 TA – Submitted May 19<sup>th</sup>, Rejected by the COR on 9/23/20. This item is the July 20, 2021 City Council Agenda for approval. Was approved at City Council Agenda on July 22. Delivery has been delayed until Oct 2021
- iv. Collection Camera Cable Replacement TA – Submitted on 5/22, COR requested detail on 7/15, we provided on 7/21. Rejected by the City on 9/23/20. Collections Camera Cable was replaced by Vendor and paid for by Veolia. Payment is under dispute.
- v. Collection Gas Detectors TA – Submitted 6/23/2020, COR asked further detail on 6/24, we provided requested detail on 6/26, COR asked further detail on 7/21, we provided on 8/10, Rejected by the COR on 9/23/20. Gas detectors were purchased by Veolia. Payment is under dispute.
- vi. Emergency Sludge Leachate Vault Repair TA - Submitted 2/26/21 - Received written approval by email from Mary/Yader on 2/23/21 to proceed with the engineers design proposal. Design for repairs was completed. Received the fully executed TA on July 1, 2021. Job is being submitted to the City's prequalified contractors list.
- vii. Replacement Mechanical Aerator TA - Submitted 4/28/21, received City Council approval on 5/18/21 and fully executed TA on 5/20/21. Provided PO to the vendor to order. Delivery has been delayed until late Oct 2021.
- viii. DAFT Gear Box Drive Unit TA - Submitted 5/12/21, received signed TA on 5/13/21, provided PO to vendor begin prelim work, on 6/15/21 City Council agenda for approval, which was granted. Delivery has been delayed until late Oct 2021.
- ix. Second Mechanical Aerator Gear Box Drive Unit TA - Submitted 8/4/21, purchase to establish an inventoried spare unit. Have not received approval yet.

## IV. List of submittal scheduled for the following month

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a. To be determined

V. Listing of Permit Violations

a. Weekly Limit TSS variance for 9/5/21-9/11/21 with 55.28 mg/L

VI. Updated critical path schedule

a. There are no current projects operating under a critical path method of delivery

VII. Other Project Discussion

a. CPM

i. None

b. O&M

i. Rolling Stock Inventory

a. Audit completed and provided to the City on May 19, 2020. Review and recommendations provided to the City on August 24, 2020

b. Veolia is renting and/or leasing any rolling stock inventory that is needed to perform the daily operations of the system and will continue to bill the City until the City can provide the necessary Vehicles as per the contract for Veolia to perform the work

c. Veolia provided the new Vactor truck specs and quote on November 25, 2020 as requested. As per previous conversations, we have provided specs/quotes for a new push camera on Dec 10, 2020 and for the new Camera truck and Jetter truck on Dec 13, 2020. The new push camera is on the July 20 City Council Agenda for approval. Push Camera was approved and ordered, it should arrive at the vendor by the end of October for initialization and testing. Delivery to Veolia and training will be scheduled there after. The new Vactor Trucks and Camera Truck were submitted in the City's Proposed 21/22 Budget. The City approved the purchase of two new Vactors at September City Council Meeting. The new Camera truck is on the October City Council Meeting for approval.