UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 9

75 Hawthorne Street
San Francisco, CA 94105-3901

December 28, 2021

MEMORANDUM (sent via email only)

SUBJECT: TRW Microwave Response to Comments, 825 Stewart Drive, Sunnyvale, California

FROM: Mathew Plate, Environmental Scientist
Quality Assurance Branch

THROUGH: Audrey L Johnson, Manager
Quality Assurance Branch

TO: Michael Schulman, Remedial Project Manager
Superfund Division California Sites

Responses to EPA comments provide by AECOM on November 5, 2021 was reviewed.

The QA Brach reviewed the response to comments and was not able to verify proper HVAC operations with the test and balance report provided. It is recommended that the HVAC system be further evaluated to confirm that it is not contributing to potential vapor intrusion.

Specific evaluations follow.

Questions or comments regarding this review should be referred to me at (415) 972-3799.

DRAFT

Evaluation

1. [SSD System Vent Pipes] The previous comment stands, it is recommended that vent pipe be relocated and or raised to avoid the potential for subsurface vapors to be pulled into the ventilation system and to improve SSD operations.

2. [HVAC Operation] The HVAC test and balance report provided is from October 2015 and may not reflect current building configuration and operations. Additionally, the test and balance report provided is limited in scope and does not evaluate ventilation rates in each zone and other elements of ventilation effectiveness. The following items were noted in the report:

    - All zones were adjusted to design specifications.
    - It appears that test and balance may have been done by the company that installed the HVAC system. An independent test and balance report is preferred.
    - The report did not include a written summary, including what was found, adjusted, and noted.
    - It appears that the air handlers were tested only in the recirculation mode with the outdoor air dampers fully closed. It is unclear if system performance when providing minimum and maximum outdoor air was assessed.
    - Two of the HVAC systems appear to have balancing power exhaust, AHU-3/4 and EF-10/11/12/13 on the Building B roof and AHU-1/2 and EF-14/15/16/17 on the Building C roof. Based on the design specificaitons these appear to be capable of operating as single pass 100% outdoor air systems. However, the test and balance of the supply only appears to represent recirculation.
    - It is unclear from the test and balance if local exhaust is properly balanced with makeup air.
    - Based on the system configuration (chambers included as part of the main HVAC system) it appears that there may be some ducted returns. These are not individually evaluated in the report.
    - For system AHU-3/4 that includes workshop areas, lab areas, and chambers, it is unclear how air is handled to prevent recirculation of indoor air contaminants (including chemicals from potential vapor intrusion present in negatively pressurized zones not intended for occupancy). This comment may also apply to other building HVAC systems.

    Assuming there are no more recent test and balance reports, available information on the current system design and the HVAC sequence of operations would be needed to evaluate any system impacts on vapor intrusion potential.

3. [Sub-slab Sampling Ports] The response notes that exact measurements may not be possible for subslab ports due to interior building configuration changes. Exact measurements perpendicular from at least two exterior walls should be provided so ports can be reliable located in the future.

4. [SSD System Maintenance and Inspections] Response noted.