UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

December 6, 2022

Mr. Joshua Nandi
Northrop Grumman Systems Corporation
One Space Park Mail Stop: NGC CER-XE6D21
Redondo Beach, CA 90278

SENT VIA EMAIL

Re: Northrop Grumman Vapor Intrusion Work Plan Addendum #3. Former TRW Microwave Site, 825 Stewart Dr., Sunnyvale, California, TRW Microwave Superfund Site (CERCLIS ID# CAD009159088)

Dear Mr. Nandi:

Thank you for submitting the Northrop Grumman Systems Corporation (Northrop Grumman) Vapor Intrusion Work Plan Addendum #3. EPA requests the Addendum be revised to improve its readability and to address the following technical comments below:

1. Edit the Addendum's main text to include a summary description of the standard operation procedures (SOP) for the activities to be performed (e.g., soil gas installation and sampling, indoor/outdoor air sampling, differential pressure monitoring) and include the SOPs as attachments (or clearly reference the SOP location in the document).

2. Include an SOP for differential pressure monitoring and describe the associated QA/QC criteria. The monitoring should be performed over a period of one week and measurements recorded every five minutes.

3. Add laboratory reporting limits to Table 1.

4. Include a footnote in Table 1 to indicate that EPA will be notified immediately if indoor air results for TCE are above the accelerated response value of 7 $\mu g/m^3$ for commercial/industrial exposure and appropriate actions will be taken to confirm the results and implement mitigation measures.

5. Include a table (Table 2) for soil gas screening levels and laboratory reporting limits. Define the soil gas screening levels by using the indoor air levels for long-term exposure in Table 1 divided by the attenuation factor of 0.03.

6. Include a summary of the QA/QC metrics (e.g., QA/QC criteria for duplicated samples).

7. Include additional long-term (seven days) indoor air sampling using passive samplers in four locations (IA-2, IA-3, IA-4, IA-7). Include one long-term outdoor air sampling. Include a summary and SOP for the long-term passive sampling.

8. Include one additional sub-slab sampling location (SS-12) for spatial coverage as indicated in the figure attached.

9. Move sampling location IA-2 to the cubicles next to SS-7 (pending building walk through).

10. Provide the sequence of activities. EPA recommends the following sequence:
    1. Day Zero: Building walk through, check sub-slab ports and install SS-12
    2. Day 1: Start sampling
        a. Begin differential pressure monitoring at tree sub-slab ports SS-2, SS-7 and SS-10
        b. Start long-term passive indoor air sampling at four locations IA-2, IA-3, IA-4, and IA-7; and one outdoor location at HVAC intake.
    3. Day 2: One week after start of sampling on Day 1
        a. Start the 10-hour indoor air sampling with SUMMA™ canisters in all indoor air locations (IA-1 to IA-9), and one outdoor location at HVAC intake
        b. Stop and remove the differential pressure monitoring from sub-slab ports
        c. Perform the sub-slab sampling in all sub-slab locations

11. Include a statement that after data collection and evaluation is completed, reviewed, and approved by EPA, the sub-slab ports will be decommissioned, upon consultation and approval by EPA.

12. Include a statement that a report will be submitted to EPA within 30 days of receipt of the results from the laboratory.

EPA requests that Northrop Grumman provide a Revised Work Plan Addendum within 30-days from the receipt of this letter. Please feel free to contact me anytime at [HYPERLINK "mailto:abreu.lilian@epa.gov"] or 415-972-3010 if you have any questions or comments.

Sincerely,

Lilian Abreu, PhD
Remedial Project Manager
Superfund and Emergency Management Division

cc: Holly Holbrook, AECOM
Cynthia Woo, Aptim Federal Services, LLC