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15 July 2016

Melanie Morash
Remedial Project Manager
U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street (SFD-7-1)
San Francisco, CA 94105

*RE: Response to EPA Comments Received 1 July 2016
Buildings L1, L2, K, and CYW
Offsite Operable Unit, Sunnyvale, California*

Dear Ms. Morash:

This letter is submitted on behalf of Philips Semiconductors Inc (Philips) in response to EPA comments received on 1 July 2016 with regard to the mitigation plan for the San Miguel to-be-constructed Buildings L1, L2, and K, and the existing CYW building. Responses to EPA comments are provided below.

General Comments

1. *Implementing mitigation activities in homes and schools needs to be performed efficiently and avoid multiple mobilizations whenever possible. Installing systems correctly during the first installation will save resources and provide greater assurance to the residents, school officials and parents that the program is credible and that their safety is being adequately addressed. Please work ahead of time with your staff and mitigation subcontractors to prepare for all reasonably anticipated contingencies and have materials on-hand to facilitate prompt completion of installation activities during one continuous work period.*

Response: Noted.

2. *There is no mention in the school building mitigation plans, especially the commercial type buildings, as to whether the regional air quality board will require air permits for the systems. The air boards generally waive the requirement for residential, but not for commercial applications. The regional air quality board should be contacted to determine if the commercial type buildings should be permitted and if mitigating more than a couple of houses is an issue.*

Response: The Bay Area Air Quality Management District (BAAQMD) has been contacted regarding Regulation 8 for Organic Compounds, Rule 47 Air Stripping and

Soil Vapor Extraction Operations as it relates to vapor intrusion mitigation system installations. A response is still pending.

Specific Comments

1. *Page 3, Proposed Mitigation Plan – L1, L2 & K, Description, first ¶ – The soil gas collector mat location under the slab should be provided in a plan view drawing.*

Response: At the time of this writing, building drawings with respect to the concrete foundation, pier and rat slab layout have been requested but not yet provided. The subject paragraph has been slightly revised for clarification with this submittal.

2. *Page 3, Proposed Mitigation Plan – L1, L2 & K, Description, fourth ¶ – The ASTM standard cited is for existing low rise residential building and not an appropriate reference for new construction. It should be ASTM 1465-08a, “Standard Practice for Radon Control Options for the Design and Construction of New Low-Rise Residential Buildings”.*

Response: A similar new construction standard will be used: RRNC 2.0 Reducing Radon in New Construction of 1 & 2 Family Dwellings and Townhouses.

3. *Page 3, Proposed Mitigation Plan – L1, L2 & K, Construction Sequence, first ¶, first bullet – please clarify whether the design and specifications be given to the construction contractor verbally or in writing.*

Response: The plan has been revised to indicate that the mitigation plan will be provided to the construction contractor.

4. *Page 4, Proposed Mitigation Plan – L1, L2 & K, Construction Sequence, second ¶ – based on this paragraph, it appears the design of the SSDS is going to be passive, with no fan. This needs to be clearly identified earlier in the plan. Text should include, “passive” sub-slab system, and additional wording that states it could be made active if post-construction testing indicates a problem. The text should also include that an electrical connection should be installed during construction in the area that a fan would be installed, so as to facilitate the fan’s incorporation into the system if it is needed in the future.*

Response: The introductory paragraph under *Proposed Mitigation Plan – L1, L2, and K* has been revised for clarification. The specifications header has also been revised for clarity, including the word ‘passive.’ If an active system is required, an electrical system will be installed at the time of fan installation. Additionally, the third paragraph of the *Description* has been revised to ensure that the vent stack placement can accommodate an electrical connection if needed at a later date.

5. *Page 5, Proposed Mitigation Plan – L1, L2 & K, Potential Alternatives, second ¶, first bullet – since the system will be a SSDS rather than a SMDS, there should be text that states the fan will be determined once the building is constructed and the system is tested to*

select the appropriate fan. EPA is not clear whether a high flow, low vacuum fan is going to be the correct selection for the SSDS, or a higher suction low flow fan (for example, GP501, etc.) will be warranted. Please clarify.

Response: The subject bullet has been revised to accommodate alternative fans, if necessary based on system performance.

6. *Page 5, Proposed Mitigation Plan – L1, L2 & K, Potential Alternatives, second ¶, third bullet – The Dwyer gauge specified may need to be modified if the fan selected is different than what is shown in the list under the first bullet. Text could be modified to state “gauge will be selected that has an appropriate scale for the final fan(s) chosen”.*

Response: Text revised to accommodate a gauge with an alternate measurement scale, if necessary.

7. *Page 5, Proposed Mitigation Plan – L1, L2 & K, Potential Alternatives, third ¶ – The paragraph assumes that the fan will be located on the exterior and not on the interior. Since previous text allows for either an interior installation or exterior installation, this should be updated to explain how the added components will be handled if the school chooses an interior installation.*

Response: At the time of this writing, building drawings with respect to ceiling/roof/attic configuration (if any) have not yet been provided. The subject paragraph has been revised for clarity while accommodating determination of fan location in the field and/or pending receipt and review of additional building plans from the school, which the school has promised as of 12 July. Similarly, the last sentence of paragraph three under the *Proposed Mitigation Plan – L1, L2, and K: Description* includes pre-emptive accommodation for a future fan at the time of the passive installation.

8. *Page 6, Proposed Mitigation Plan – CYW, Description, third ¶ – The paragraph assumes that the fan will be located on the exterior and not on the interior. Since previous text allows for either an interior installation or exterior installation, this should be updated to explain how the added components will be handled if the school chooses an interior installation.*

Response: The plan (Paragraph 2 of the CYW Description section) has been revised to accommodate the possibility of an interior vent stack. Since it is an active mitigation system an exterior vent stack is expected to successfully mitigate the building, but it is possible that the owner would prefer the vent stack to be located indoors. More detail regarding the configuration of an interior vent stack and the associated suction fan location will be available pending findings of a walk-through with the mitigation installer.

9. *Page 7, Proposed Mitigation Plan – CYW, SMDS Specifications, second ¶ last bullet – The Dwyer gauge specified may need to be modified if the fan selected is different than*

what is shown in the list under the first bullet. Text could be modified to state "gauge will be selected that has an appropriate scale for the final fan(s) chosen".

Response: Text revised to accommodate a gauge with an alternate measurement scale, if necessary.

10. Page 8, Proposed Mitigation Plan, Justification – Second footnote in section is incomplete or no reference to the appropriate ASTM standard.

Response: There is not a missing footnote; both references cite the same source.

If you have any questions regarding this correspondence, please call me at (415) 799-9937.

Sincerely,

A handwritten signature in black ink that reads 'John W. Hawthorne'.

J. Wesley Hawthorne, PE, PG
President

JWH/njl

cc: (electronic copies)
Shau-Luen Barker, Philips Semiconductors
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