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

November 25, 2020

Ms. Shau-Luen Barker
Project Manager, Group Sustainability
Philips North America LLC
15313 W. 95th Street
Lenexa, KS 66219

SENT VIA EMAIL

Re: EPA Comments on (Final) Work Plan for Indoor Air / Vapor Intrusion Sampling and Analysis Removal, Triple Site Offsite Operable Unit, November 9, 2020 (CERCLIS Site ID CAN000900265)

Dear Ms. Barker:

This letter communicates EPA's approval of the final *Work Plan for Indoor Air / Vapor Intrusion Sampling and Analysis Removal, Triple Site Offsite Operable Unit* (Work Plan), dated November 9, 2020. The Work Plan was prepared by Locus Technologies (Locus) on behalf of Philips Semiconductor Inc. (Philips) to incorporate EPA's October 21, 2020 comments. The enclosed table documents EPA's final comments and concurrence on the Work Plan.

EPA looks forward to working with Philips and Locus on implementing the vapor intrusion sampling and analysis and removal actions at the Triple Site Offsite Operable Unit.

Sincerely,

Digitally signed by
MICHAEL SCHULMAN
Date: 2020.11.25
10:45:06 -08'00'

Michael Schulman
Remedial Project Manager

Enclosure

cc (via email): J. Wesley Hawthorne, Locus
Nancy-Jeanne LeFevre, Locus
Edwin Poalinelli, EPA
Cynthia Woo, Aptim Federal Services, LLC

EPA Comment: June 24, 2020	Locus Response: July 8, 2020	EPA Response: October 21, 2020	Locus Response: November 9, 2020	EPA Response: November 25, 2020
Addition EPA Comments – October 15, 2020				
n/a	n/a	The Revised Work Plan (WP) Section 3.0 has a typo: Access agreements are incorrectly noted as discussed in Section "0".	The reference has been updated to "10.4".	EPA concurs that the comment was addressed in the revised WP.
n/a	n/a	Appendix D: Vapor Intrusion Analysis by HAPSITE GC/MS Standard Operating Procedures for Screening: As an additional EPA comments, the calibration verifications (CCVs) and blanks should be run each day prior to and *after* sampling. To confirm HAPSITE results a TO-15 sample should be collected and analyzed by the laboratory for every 20 field grab samples collected.	Section 5.3.3 has been revised to include the recommended additional procedures.	EPA concurs that the comment was addressed in the revised WP.
Comment 1 - General				
1a) The title of Administrative Settlement Agreement and Order on Consent (ASAOC) required Building-Specific O&M Plan (with Post-Removal Site Controls) should be standardized throughout the Work Plan (WP). The ASAOC-required WPs, report, and document titles should be standardized throughout the WP, and the WP structure should make it clear that the following ASAOC documents are addressed: • Building-Specific Sampling Plan Addendum (Draft and Final). ASAOC SOW Section III(B). • Building-Specific Evaluation Air and Mitigation Measures Report. ASAOC SOW Section III(E) • Building-Specific O&M Plan. ASAOC SOW Sections III(E) and III(F) • Final Removal Action Report. ASAOC SOW Section III(G) • Plan for Additional PRSC. ASAOC SOW Section III(G) Additionally, for each ASAOC document above, include a generic template, or a citation to an existing document, as an appendix to a revised WP for U.S. Environmental Protection Agency (EPA) review. Additionally, see Comment #2, #7, and #21 requesting the inclusion of document templates in a revised WP.	The WP will be revised as recommended, including in accordance with the forthcoming process flow diagram (PFD).	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
1b) Include in a WP appendix templates for the logs that will be used to document the work conducted in this WP (e.g., outdoor air sampling, vent stack sampling, indoor air sampling, mitigation installation checklists, operations and maintenance).	Templates will be provided in the revised WP.	EPA concurs that the comment was addressed with field forms added to the revised WP. The field forms should include additional plain language as the field forms will also be submitted to homeowners who will likely not understand the abbreviated language use. EPA's specific comments on the revised WP field forms are included at the end of this table.	Refer to responses to comments on the field forms at the end of this table.	n/a
Comment 2 - Community Relations				
2a) ASAOC SOW Sections II B and III A (3)(d) specify community relations requirements that are missing from the WP. Specifically, SOW Section III (A)(3)(d) states that the WP "*… shall include criteria and procedures for the… Development of a community relations approach… including: 1. Development of a generic template for an offer of preemptive mitigation to property owners and tenants; 2. Plans for meetings with owners, occupants, and other stakeholders; and 3. Preparation and transmittal to property owners of written access forms for mitigation system installation and maintenance.*" An aggressive community relations program is a critical component of this project. Please revise the WP to include the development of the community relations approach. As an example, consider adding a new WP section for Community Relations. The WP should be revised to address the following:	The WP will be revised as recommended in a new Community Relations section and will include the requested mailing tracking log template. The WP will be revised to include an additional Quarterly VI Records Report deliverable to EPA, which will include the most current tracking log. In regards to Item 3 in the quoted text, the access agreement form is under EPA review. If it is finalized by the date of report revision, it will be included as a template.	EPA concurs that the comment was adequately addressed in added Section 10, along with adding a template of the communication tracking log. Also see EPA response to Comment 21 regarding community outreach templates. The revised WP adequately address access agreements. Access agreements with property owners should be established between Philips and the property owners with language additionally providing for EPA access; however, the access agreement will not be signed by the EPA.	n/a	n/a

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– How will project mailings (letters, postcards, etc.) to schools and residences be tracked? A mailing log should include mailing dates, responses received dates, and key notes. Previously, EPA and APTIM/Circlepoint tracked letters on EPA letterhead with shipping numbers for FedEx or with certified mail deliveries by U.S. Postal Service. – A template mailing tracking log should be added to the revised WP. – Specify how the tracking log will be made available to EPA. EPA requests that the log be made available to EPA near real-time and documented in the project records through regular reporting. – Also see Comment #21 regarding community outreach templates for mitigation offers, maintaining a phone log, and reporting results.				
2b) The WP should provide more detail for when, and how, the "results of VI sampling and/or mitigation" will be communicated to property owners, occupants, and facility managers. Will phone calls be made? Will post-mitigation update letters be sent out? How will post-mitigation communications be provided to EPA for review and for the project record?	The WP will be updated in accordance with the forthcoming PFD (phone calls and letters, as prescribed therein). Communication log will be kept and transmitted to EPA via Quarterly VI Records Reports.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
2c) Section 6.6.4, states that a carbon-copy of the preemptive mitigation offer letter will be provided to the tenant. If the owner declines the initial mitigation offer letter, what other opportunities will there be to inform the occupants?	Since the owner is not obligated to accept the pre-emptive mitigation, the WP will be revised to communicate with tenants only upon authorization from the owner. If tenants have already expressed interest in the status, they will be informed by letter when the preemptive mitigation offer is either implemented or rejected by the owner.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
Comment 3 - Site Background				
Section 2.1 of the WP states that the "*The VI study area is defined as areas overlying shallow groundwater trichloroethene (TCE) concentrations of 5 micrograms per liter (µg/L) or higher.*" Please add a citation to the applicable groundwater monitoring program WP and sampling and analysis plan. Because the mitigation decision framework is based on the groundwater TCE concentration, the groundwater monitoring Sampling and Analysis Plan (SAP) is a critical component of the VI Removal WP.	A citation to the existing SAP will be added. Additionally, a reference to the most current annual GW report will be added. Also, a statement will be added such as, "for the purposes of this WP the shallow groundwater will be defined as the "A" Aquifer."	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
Comment 4 - Nature and Extent of Chemicals at the Site				
4a) For cross-reference clarity within the WP, define "shallow groundwater" as the "A" aquifer in Sections 2.1, 3.1.1, and 3.9. This will also provide clarity for why WP Table 1 shows the maximum chemical of concern (COC) concentration for the "A" aquifer.	A statement will be added such as, "for the purposes of this WP the shallow groundwater will be defined as the "A" Aquifer."	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
4b) The COCs listed in Section 2.5 need to not only include the eight COCs presented in the June 1991 RWQCB Order but, additionally per the ASAOC for vapor intrusion (VI), chloroform and the TCE daughter product vinyl chloride. The COCs for VI should also match the parameters listed in Table 1 and Sections 5.6 and 6.3.	The WP will be revised accordingly.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
Comment 5 - Building Survey Implementation				
Section 3.2 states that "*The completed forms will be stored in a web-based database that contains an inventory of documented sampling and related activities for all of the project sites,*" with real-time access given to EPA for oversight. In addition, specify which report submittal for EPA review and records will include the completed survey forms.	The WP will be revised accordingly, the deliverables to be included in the forthcoming Quarterly VI Records Reports.	EPA concurs with the response and the comment was addressed in the revised WP.	n/a	n/a
Comment 6 - Building-Specific Evaluation Reports				
6a) Section 4.0 states that a "*Report on Building-Specific Evaluation of Indoor Air and Mitigation Measures and O&M Plans (Building-Specific Evaluation Report) will be provided to EPA.*" To be consistent with the ASAOC, only the *Report on Building-Specific Evaluation of Indoor Air and Mitigation Measures* (BSER) should be defined as the "Building-Specific Evaluation Report."	The WP will be revised accordingly, which will also be consistent with the forthcoming PFD.	EPA concurs with the response and the comment was addressed in the revised WP.	n/a	n/a

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6b) To streamline EPA's review and the project timeline, provide a template of the Report on Building-Specific Evaluation of Indoor Air and Mitigation Measures as an appendix to the WP. Additionally, see Comment #1 and #21.	The WP will be revised accordingly.	See Comment 21 for the EPA response on the project timeline and the template of the Report on Building-Specific Evaluation of Indoor Air and Mitigation Measures	n/a	n/a
Comment 7 - Indoor Air Samples				
Section 5.1.1: The WP states that, "*Indoor air sample locations will be selected in areas that are most representative of building occupancy, as well as other areas with characteristics that might facilitate VI.*" The WP should also note that per the ASAOC, indoor air sample locations will be selected based on building construction, such as foundation type (e.g., basement, slab-on-grade, crawlspace, or earthen floor), foundation condition, building size, ceiling heights, building use zones (e.g., school, residential), and building age.	The WP will be revised accordingly.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
Comment 8 - Outdoor Air Samples				
Section 5.1.3: Revise this section to match or reference the comprehensive Outdoor Air Evaluation presented in the Final Signetics Site Work Plan for Indoor Air/Vapor Intrusion Removal Site Evaluation and any Necessary Removal Action, dated May 29, 2020.	The WP will be revised accordingly; the evaluation will be pulled in by reference, with any OOU-specific content added, if/as applicable.	EPA concurs that the comment was addressed with the addition of Section 5.2, Sampling Strategy for Outdoor Air Evaluation to the revised WP.	n/a	n/a
Comment 9 - Passive Samplers				
Section 5.2.1 Passive Samplers: Please specify which Radiello sorbent will be used.	The WP will be revised accordingly (RAD145).	EPA concurs that the comment was addressed in Section 5.3.1.	n/a	n/a
Comment 10 - Field-Portable GC/MS with Tedlar Bags				
Sections 5.2.3 and 5.4.3: HAPSITE sampling should be conducted in survey mode without the use of Tedlar bags. Sampling into Tedlar bags would be most appropriate for higher concentration samples that may require dilution and for areas where the HAPSITE cannot access.	For past investigations, the HAPSITE has been found useful without Tedlar bags (including in survey mode) and with the use of Tedlar bags. The latter has been applicable to sampling from locations the HAPSITE cannot access. Therefore, the WP will be updated to allow for either approach.	EPA concurs with the response and the comment was addressed in Section 5.3.3. While not stated in the WP, EPA expects that Tedlar bags will be new and/or clean without any interferences, and that samples will be analyzed as quickly as practical, with holding times less than 6 hours.	Section 5.3.3 was revised with the suggested additional language regarding Tedlar bags and holding times.	EPA concurs that the comment was addressed in the revised WP.
Comment 11 - Sampling Conditions				
11a) Section 5.3, recommend that second to last paragraph noting that soil gas sampling will not be conducted during significant rain events be moved to Section 5.1.5 on Soil Gas Well Sampling.	The WP will be revised accordingly.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
11b) Section 5.3: Two different weather station websites are referenced in this section. Select one website to cite for consistency.	The WP will be revised accordingly.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
Comment 12 - Summa Canisters				
12a) In Section 5.4.2, provide a minimum distance into the crawlspace that samples will be collected. As well, indicate if permanent tubing will be installed in a crawlspace if the Summa canister will not fit inside the crawlspace.	The WP will be revised accordingly.	EPA concurs that the comment was addressed in Section 5.5.2.	n/a	n/a
12b) Section 5.4.2: Please revise the WP to note that the initial Summa vacuum needs to be ≥ 28 inches PSI using a calibrated gauge (understanding that lab gauges are often inaccurate).	The WP will be revised accordingly.	EPA concurs that the comment was addressed in Section 5.5.2 of the revised WP.	n/a	n/a
Comment 13 - Tier 1 Evaluation (Outdoor Air)				
Section 6.1: To improve clarity, EPA suggests that that Tier 1 header be renamed as Outdoor Air Evaluation Criteria. See also Comment #8 on establishing background outdoor air concentrations.	The WP will be revised accordingly.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
Comment 14 - Tier 2 (Short-term Screening Criteria)				
14a) Section 6.2: To improve clarity, EPA suggests that that Tier 2 header be renamed as: Tier 2 - Short-term and Urgent Response Criteria.	The WP will be revised accordingly.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a

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14b) Section 6.2: Define "significantly greater" than background (see also Comments #8 and #15).	The word "significantly" will be removed.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
14c) Section 6.2: Recommend starting a new paragraph for each source of screening values to improve readability and clarity. A single paragraph presenting (1) Agency for Toxic Substances and Disease Registry (ATSDR) minimal risk levels (MRLs), (2) California Office of Environmental Health Hazard Assessment (OEHHA) Reference Exposure Levels (RELs), and (3) EPA Regional Screening Levels (RSLs) is confusing.	The WP will be revised accordingly.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
14d) Section 6.2 should be revised so that the ASAOC project screening values are presented first in the paragraph. The ASAOC screening values are the basis for the preemptive mitigation Decision Framework comparison criteria and action levels. The other screening values are not used for decision-making and are, effectively, presented in the WP for general reference. See also Comment #26 on Table 5.	The WP will be revised accordingly.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
Comment 15 - Tier 3 (Long-term Screening Criteria)				
Section 6.3: To improve clarity, EPA suggests that that Tier 3 header be renamed: Tier 3 - Long-term Response Criteria.	The WP will be revised accordingly.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
Comment 16 - Evaluation Procedures				
Last paragraph states, "*If data indicates that VI is a potential source for the indoor air concentrations, mitigation measures and/or further monitoring will be evaluated and implemented.*" Will further monitoring potentially incorporate multiple lines of evidence, including groundwater, soil gas, sub-slab and indoor air results? Please revise the WP accordingly.	The WP will be revised to clarify that "further monitoring" may entail any of the listed media, if/as applicable, which will ultimately be determined property by property.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
Comment 17 - Mitigation Criteria and Response Times				
17a) Section 6.4 references "EPA's Risk Protective Range", should be rephrased as within EPA's "Risk Management Range."	The WP will be revised accordingly.	EPA concurs that the revision was made in the revised WP.	n/a	n/a
17b) Section 6.5.1: Standardize the ASAOC terms "short-term mitigation" or "interim mitigation" or "immediate mitigation" (Page 75) measures. If they are the same thing, use the term interim, or otherwise standardize.	This comment is relevant to wording only, and has no effect on the ASAOC (and corresponding WP) mitigation triggers and response timeframes. For clarity, the use of this terminology was investigated. These terms have been used on this project and in general EPA documentation to describe health risk, time frame for mitigation/action, and the duration of the mitigation solution. In the context of the 18 February 2015 EPA Action Memorandum for the Triple Site, 0.48 µg/m^3 is the "EPA Long-Term Screening Level", 2 µg/m^3 is the "EPA Short-Term Screening Level (Accelerated – Response in Weeks)", 6 µg/m^3 is the "EPA Short-Term Screening Level (Urgent – Response in Days)". For the latter two screening levels, the SOW uses the more generic "short-term" terminology rather than using the separate phrases "accelerated response" and "urgent". The 2014 EPA Region 9 TCE interim action levels memo referred to "Accelerated Response Action Levels" and "Urgent Response Action Levels". In the ASAOC SOW, "immediate implementation" is used in Section III.D.2 and 3, defined as "within days to weeks" and "within days" in the same paragraphs. Mitigation triggered within either of those timeframes can be "interim" mitigation or, in contrast, "permanent" mitigation, as stated in the same paragraphs. The phrase "long-term remediation options" is used in the same paragraphs, implying	EPA concurs with revisions made in the revised WP.	n/a (also refer to response to Comment 26 with respect to eliminating use of the term "precautionary" mitigation within the WP.)	n/a

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	mitigation measures that would be expected to be in place for the long-term and may take longer to design and implement. The term "immediate or short-term mitigation" is used in the Schedules table of the SOW. Section III.E. also refers to "immediate or interim mitigation measures." The SOW also refers to "short-term and long-term response action levels and response timeframes" as well as "long-term" and "short-term" health-based screening levels. For clarity in the description of activities, the WP will be revised to adopt the following terminology. There are three parallel scales (with proposed unique terms that have been used for WP revisions, both for WP text and Table 5): 1. Describing the potential health risk (short-term or long-term) 2. Describing the time frame for implementation (urgent response, accelerated response, preemptive response, precautionary) 3. Describing the time frame over which the system is will be in place (interim, sustained).			
Comment 18 - Decision Framework for Preemptive Mitigation				
Section 6.5.3 presents that a basis for preemptive mitigation includes, in part, where TCE groundwater concentrations in the "A" aquifer are greater than 100 µg/L. EPA disagrees with the "A" aquifer 100 µg/L TCE groundwater isoconcentration presented in Figure 3. The 100 µg/L TCE plume boundary should be revised to be consistent with the 2017 Annual Groundwater Monitoring Report (see Comment #29).	For the most current "A" Aquifer TCE isoconcentration, the WP will be revised to refer to the relevant figure in the most current annual report. For the purposes of preemptive mitigation criteria, the 2017 "A" Aquifer TCE isoconcentration will be used and mapped in the WP. Use of updated groundwater data for preemptive mitigation evaluation will be included with EPA approval.	EPA concurs with the response, and while Section 6.5.3 of the WP was not revised, the comment was addressed in Section 2.1 of the revised WP.	n/a	n/a
Comment 19 - Post-Removal Site Controls				
Consider moving Section 6.6.3 (Post-Removal Site Controls) into a subsection of Section 7 (Additional Post-Removal Site Controls). A section for Post-Removal Site Controls under Section 6.0 (Evaluation Criteria) is not a clear fit.	The WP will be revised accordingly.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
Comment 20 - Preemptive Mitigation Considerations				
Section 6.6.4: EPA acknowledges that the ASAOC Statement of Work specifies that at "a minimum, one phone call to the owner" will be conducted. However, please revise the WP to state that based on EPA's past outreach approach, two phone call attempts will be made, with at least one daytime and one evening attempt.	The WP will be revised to provide for two phone calls: one in the daytime and, if no response, one in the evening.	EPA concurs that the comment was addressed in Section 10 of the revised WP.	n/a	n/a
Comment 21 - Milestones and Reporting Schedule				
21a) Revise Section 10.4 to include clarification that the frequency of field inspection and monitoring reporting to EPA will be based on the frequency of monitoring, remedy installation, and routine operations and maintenance activities conducted under the WP. For example, if mitigation system inspections or indoor air sampling is conducted quarterly, then Philips will submit a single quarterly report to EPA within 90 days for review). All final data and records must be reported in a format that documents the quality of the work and that can be submitted to the EPA for review and documentation in the project record.	A new Quarterly VI Records Report (site-wide) deliverable will be included in the revised WP and will include the noted records as attachments. Additionally, BSERs will include the noted attachments.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a
21b) The timeline for Section 10.4.1, Residential Buildings for Preemptive Mitigation, is too long. To streamline the process, include within this WP the list of residential buildings for which preemptive mitigation is warranted (See also Comment #25d, and as well Comments #18 and	The WP will be revised accordingly.	EPA concurs generally with the addition of the generic community outreach letters, postcards, and door knockers; however, the templates need to be prominently watermarked as DRAFT. EPA will provide	The templates have been watermarked as DRAFT. Section 11.6.1 schedule and associated Gantt chart have been slightly revised in light of pending EPA	EPA concurs that the comments were addressed in the revised WP. EPA also concurs with the addition of language in the templates regarding COVID-19

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#29 regarding groundwater with TCE concentrations greater than 100 µg/L). Additionally: – Include generic templates of the homeowner and tenant letters, postcards, and door knockers offering preemptive mitigation as an appendix to the WP for EPA to review (versus submittal to the EPA 60 days after approval of this WP). – Letter and postcards should be prepared and sent to each property owner/tenant within 21 days of EPA approval (versus the current WP duration of 120 days). – Follow-up postcards and phone calls after the initial outreach should occur over the next 30 days (versus the current WP duration of up to 12 weeks)		additional comments and revisions on the final templates prior to delivery to homeowners and tenants. The timeline for when public outreach will occur is addressed in the EPA response to Comment 21.	approval. Formerly the timeline assumed pre-approval from EPA as a part of WP approval. For community outreach documents recommending activities that entail home entry during the COVID-19 pandemic and associated public health orders, Locus suggests the final versions include language that acknowledges the ongoing COVID-19 concerns within Santa Clara County and assures that effective precautions will be taken.	and health and safety concerns / precautions.
21c) Section 10.4.1 states that "*… phone calls will be made to the property owner.*". The WP should be revised to note that a phone log will be maintained to document all phone calls to community members and stakeholders. A template of the phone log should be added to the WP as an appendix for EPA review. See also Sections 6.6.4 (Preemptive Mitigation Considerations) and 10.4.1 (Residential Buildings for Preemptive Mitigation). For context, the phone log maintained by the EPA included the following fields: (a) name of community member, (b) RES number/address, (c) phone number(s), (d) date and time of attempts, (e) if a message was left and nature of message, and (c) a summary of the phone conversation.	The WP will be revised accordingly.	EPA concurs that the comments were addressed in the revised WP.	n/a	n/a
21d) The schedule timeline for Section 10.4.2 Buildings Previously Mitigated, is too long, potentially taking up to 1.5 years to complete. To streamline the project schedule and EPA review include in a revised WP: – Generic templates of the (a) "Building-Specific Evaluation Reports (BSER)" for school properties and (b) the "BSER" for residential properties. – A revised timeline to submit both school and residential "BSERs" within 21 days of EPA's approval of the Final WP.	Templates will be provided with the WP. The timeline to submit both school and residential BSERs will be compressed, but 21 days may not be feasible given the number of relevant buildings (24).	EPA concurs with the addition of the BSER template with the following general comments: • EPA accepts the format of the BSER template; however, in an update WP, each page of the BSER template needs to be watermarked as **DRAFT**. EPA will have more specific comments during its review and approval of forthcoming BSER submittals. • The BSER contains technical information that may be difficult for the homeowner to follow. As a general comment, EPA requests that the BSER use more plain language and to remove superfluous information that may create confusion to the homeowner if it is information that the EPA would already know. While the BSER needs to be technically complete for the EPA, the format and language of the BSER can also be streamlined for the property owner. EPA will work with Philips and Locus to provide additional time if preparing BSERs within 21 days is not reasonably feasible.	• The subject templates have been watermarked as **DRAFT**. Additionally, a statement has been added to the WP (last sentence of the introductory paragraph of Section 11.6), which acknowledges that the BSER schedule is dependent upon EPA approval of a template. In this manner, the preparation and EPA review/approval process of individual BSERs will be streamlined, an assumption of the BSER aggressive schedule. A corresponding footnote has been added to the Figure 6 Gantt Chart. • Locus acknowledges EPA's recommendation for more plain language, where possible. This will be considered in the BSER preparation.	EPA concurs that the comments were addressed in the revised WP.
21e) For better transparency, include a Gantt chart to show the project action plan schedule by month for each of the WP bulleted action items in the following sections: – 10.4.1 Residential Buildings for Preemptive Mitigation – 10.4.2 Buildings Previously Mitigated – 10.4.3 Residential Buildings with Completed Investigations – 10.4.4 Residential Buildings with Investigation in Progress – 10.4.5 Buildings Not Previously Investigated	The WP will be revised accordingly.	EPA concurs with the schedules presented in the Gannt chart, other than for the schedule for Section 11.6.4 (Residential Buildings with Investigation in Progress) where the 180 days to prepare Draft BSERs is too long. In a revised WP please revise the schedule so that buildings requiring a winter sampling event will have their BSERs submitted for review within 30 days so that the buildings can be sampled this winter 2020/2021 season. Specific examples include [redacted] and [redacted] which have only had one wintertime sampling event.	The schedule for Draft BSERs for Section 11.6.4 has been revised as suggested (text and Gantt chart). Additionally, the WP has been revised in accordance with 27 October conversation between EPA and Locus on this topic (text and Table 3). The properties that do not trigger mitigation and have at least two events of winter sampling data are now identified as NFA (i.e. buildings formerly noted as "Investigation in Progress" are now noted as "NFA" if they have two winters (or more) of sampling data). Locus acknowledges that COVID case counts in Santa Clara County remain high, the CDC has identified airborne (aerosolized) exposure risk, and the virus survives for longer periods in cold weather.	EPA concurs that the comments were addressed in the revised WP. EPA acknowledges the consideration and potential limitations presented by COVID-19 health and safety precautions. This will be considered on a case-by-case basis and working closely with the homeowners to determine if indoor air sampling can safely be conducted. Additionally, EPA may require that 2020/2021 winter season scheduled worked proceed with a virtual component to the field sampling. For example, at another

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			EPA protocol for indoor air conditions for TCE sampling (i.e. reducing outdoor air exchanges) contrasts with protocols for protection from COVID (i.e. increasing outdoor air exchanges). Additionally, Locus acknowledges that the subject properties have already been sampled for TCE and the risk of TCE exposure above accelerated response action levels (2.0 µg/m^3 TCE) are low. Furthermore, Locus acknowledges that the acute risk of contracting COVID-19 is arguably a greater threat to the subject residents than the potential health risk of potential TCE exposure conditions above EPA screening levels, screening levels established on the basis of 24-hr exposure over 70 years. However, if EPA requires sampling in Winter 2020/2021 with full consideration of the current COVID-19 concerns, Locus will proceed with this schedule.	site, EPA is planning a field event working with the resident via Zoom, where the resident is being guided through the indoor building survey with EPA remotely completing the field documentation and establishing the sampling locations. EPA understands that a virtual component to field sampling will require a high level of resident cooperation and inherently need to be considered on a case-by-case basis.
Comment 22 - Table 1 (2018 A Aquifer Maximum Concentrations)				
Add a column to Table 1 showing the remedial cleanup concentration value for each COC; also include a footnote to define µg/L.	The WP will be revised accordingly.	EPA concurs with the WP revision, noting that µg/L is not defined in the Table.	Table 1 has been revised to define µg/L.	EPA concurs that the comment was addressed in the revised WP.
Comment 23 - Table 2 (VI Investigation Analytical Results)				
Table 2 presenting all analytical results is 343 pages and is too lengthy to include in the main part of the WP before getting to other main body WP tables and figures. Revise Table 2 so that it presents maximum detections, or a detections-only summary, and move the full-length Table 2 into an appendix.	The WP will be revised accordingly.	EPA acknowledges that Table 2 is now Appendix U.	n/a	n/a
Comment 24 - Table 3 (Status of Vapor Intrusion Mitigations)		**(Revised to Table 2)**		
24a) Revise table headings or add column(s) or footnotes to indicate that status of each ASAOC required plan and/or document for each mitigated building. As an example, it is unclear what the difference is between "Mitigation Plan" status and "O&M Plan" Status.	Table 3 will be revised to include a footnote indicating that the previously-submitted O&M Plans meet the 2019 ASAOC definition of the Initial O&M Plans. An additional footnote will be added to clarify that the previously-submitted Mitigation Plans are similar to a component of the template/s for Draft BSERs to be included with WP. WP text will be updated with additional detail in this regard. With regard to other 2019 ASAOC deliverables, "reports" of data evaluation have previously taken the form of letters to residences and do not fully meet the criteria of the 2019 ASAOC concept of BSERs, although some of the content is similar.	EPA concurs with the response and the comment was addressed in Table 2 of the revised WP, except for: • The title for Table 2 would be better renamed to add "Installed"; specifically: Status of Installed Vapor Intrusion Mitigations. • Table 2 is missing RES129 (the building crawlspace). RES129 should also be in include in revised Table 2 as RES129/143/144, the same as noted in revised Table 3.	• The Table 2 title has been revised to include "Installed or Initiated" in light of RES136 where mitigation has not yet been installed due to owner refusal to date. • Table 2 has been revised to include RES129 nomenclature.	EPA concurs that the comment was addressed in the revised WP.
24b) Why are electrical permits from the City of Sunnyvale not applicable for San Miguel School?	The City of Sunnyvale Building Department informed Locus directly that they do not issue building permits for Public Schools. Permits for public schools fall under the jurisdiction of the Division of the State Architect. This information is consistent with explanations provided to Locus by the Chief Operations Officer of the Sunnyvale School District.	EPA concurs with the response.	n/a	n/a
Comment 25 - Table 4 (List of Sampled Residences for NFA)		**(Revised to Table 3)**		
25a) Add a footnote symbol to any building that already has preemptive mitigation installed.	The NFA list (Table 4) does not include any buildings having preemptive mitigation. However, Table 4 will be revised as suggested in Comment 25d to include for residential buildings the VI investigation status and the next deliverable under the WP; the table will indicate which properties were mitigated preemptively. Furthermore, a footnote will be added to Table 3 indicating which buildings were mitigated preemptively.	EPA recognizes that the table was substantially revised to greatly improve usability. However, because new columns were added, the format of Table 3 now spans 3 large format pages, which is confusing to follow. For usability, EPA the table should be revised as follows: • The table size be changed from 22.37 x 14.47 inches to 11 x 17, which has the same aspect ratio and a standard printer size.	Table 3 was revised as recommended.	EPA concurs that the comment was addressed in the revised WP.

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		• Break Table 3 into two separate tables (either as Tables 3 and 4 or as Tables 3a and 3b). • Columns height and widths should maximize space, by narrowing column and row widths and by using footnotes. For example, revise the "*Trigger 4" column header to "Trigger 4: TCE Indoor >0.48, Pathway, >1.0 µg/m3, GW >100**." The "*" footnote would then present the full Decision Framework mitigation description.		
25b) Add a column to show what street each residence (RES) is on (but not the street address number).	The WP will be revised accordingly.	EPA concurs that the comment was addressed in Table 3 of the revised WP.	n/a	n/a
25c) Add a column to show the street address number for each RES. The WP should be clear in its submittal and for the record which addresses are being proposed for No Further Action (NFA). The intent of adding a separate column showing just the street number is to make the table easier to redact the personally identifiable information (PII) at a later date, as needed.	The WP will be revised accordingly.	EPA concurs that the comment was addressed in revised Table 3 of the WP. However, the building street address *only* needs to be shown in the 2nd column in Table 3, which will help streamline the table. Additionally, please add a column to Revised Table 3 to present the anonymized building number for each address. For example, RES100 is also Building #66.	The column Building's Street Address Number now includes the address numbers *only* (and excludes, e.g., "(West Bldg)"). In accordance with email communication from EPA to Locus on 26 October 2020, Table 3 does not in fact need to be revised to including "Building #".	EPA concurs that the comment was addressed in the revised WP.
25d) Revise Table 4, or add a new summary table to the WP, that accounts for the status of all OOU buildings (NFA, mitigated, preemptive mitigation). Include a notes column in the table stating why NFA or preemptive mitigation is warranted. If a new table is added to the WP, it would be helpful to group NFA, mitigated, and preemptive mitigation buildings together under separate table subheadings.	The WP will be revised accordingly.	EPA concurs that the comment was addressed in Table 3 of the revised WP. However, the following technical comments should be addressed in an updated WP: • Some building locations have different maximum TCE result values than what is available on the Locus data sharing portal. For example: [redacted] San Patricio; [redacted] San Luisito; [redacted] and San Miguel; [redacted] Carmel; [redacted] Brea; and [redacted] and [redacted] San Juan (e.g., [redacted] is shown with a maximum AMB value of 1.4 vs 2.2 µg/m3). The maximum TCE results for [redacted] Lakehaven and [redacted] Carmel may also be typos. • The addresses [redacted] San Luisito and [redacted] Duane are within the 100 µg/L TCE isoconcentration boundary. They are incorrectly shown in the table as being within the 5-100 µg/L TCE isoconcentration boundary. • The table should be updated to reflect that nine locations between [redacted] Brea Ter have slab on grade construction. As well, [redacted] San Luisito is slab on grade. • Six residents on [redacted] are noted as "VI Investigation in Progress"; however, based on the ASAOC Decision Criteria these residents may warrant no further action (NFA) if they have slab on grade foundations. • [redacted] may warrant NFA if it is not within the 100 µg/L TCE boundary or within 100 ft of a mitigated building. • Evaluate if [redacted] may warrant NFA if it has had 2 wintertime sampling events. • For buildings where the investigation is still in progress, the Decision Framework Trigger Criteria should be changed from "N" to "TBD" [to be	• Table 3 max TCE results for the properties noted were reconfirmed against the Locus database. Values in the database were consistent with Table 3 (including Note 1 of Table 3) with two exceptions: 1) [redacted] (RES046) AMB max was revised from 0.05 to 0.38 µg/m3 TCE. The Investigation Status for the property remains unchanged. The issue was due to the nomenclature of a single field sample ID, which was therefore incorrectly interpreted by spreadsheet formulas embedded in Table 3. Ultimately, the subject nomenclature for each individual field sample ID was reviewed to ensure the issue did not occur elsewhere; the same issue was found in one other instance (RES104), but that instance did not affect the maximum values observed at that building. 2) [redacted] (RES100) TCE data in Table 3 were based on data collected through the date of the original work plan submittal (Nov 6, 2019); the table has been revised to include all data available as of Nov 5, 2020. The Investigation Status is unaffected. Table 3 analytical data and Investigation Status of all other properties are affected by the incorporation of data from the time period subsequent to Nov 6, 2019. • [redacted] (RES135) Groundwater TCE Concentration has been correctly revised to ≥100; the Investigation Status (NFA) is unaffected. Regarding [redacted] (RES170), in accordance with the language of the ASAOC's Decision Framework the "structure" is not within the 100 µg/L TCE isoconcentration boundary and, therefore, it is correctly identified as being within the 5-100 µg/L TCE isoconcentration boundary. • [redacted] was already noted as slab-on-grade. The subject [redacted] properties have been revised with the identification of slab-on-grade where it was not already identified.	EPA concurs that the comments were addressed in the revised WP. For the buildings noted in Table 3 as "VI Investigation In Progress", EPA asks that Locus coordinate with EPA post work plan approval to go over the building's current status in more depth. Additional buildings may warrant NFA, for example, based on past sampling results. As a final comment, by necessity, the contents of Table 3 will change over time as new information is obtained (new sampling data, buildings determined to be NFA, changes to groundwater plume isoconcentration potentially changing what buildings need to be evaluated for preemptive mitigation). EPA will work with Philips and Locus on how the information in Table 3 will be maintained as a living document throughout the project to track and add transparency to the VI mitigation decision process.

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		determined], or "N"/TBD, or N/A (if the meaning of N/A is defined). • For buildings that have not been sampled, "N/A" is used for Decision Framework Trigger Criteria 1, 2, and 5, while "N" is used for Trigger Criteria 3 and 4. It is not clear why "N/A" is used for some of the criteria, while "N" for others. If N/A is retained, it needs to be defined in the table footnotes.	• In light of historic residential results letters provided to Locus by EPA on 10/30/2020, 11/4/2020, and 11/9/2020, additional properties have been previously identified as NFA by EPA under the 2015 ASAOC. For the relevant properties, the revised WP reflects a change in the investigation status from "In Progress" to "NFA." • [redacted] (RES053) was a no-show at the first attempted sampling event. No data has been collected from this property and no results/next steps have been communicated to residents/owners regarding this property. Therefore, like any other unsampled property that is also ineligible for preemptive mitigation, RES053 has been removed from the table entirely. • Building [redacted] (RES024/038) was sampled in January 2015, February 2015, and February 2018. In accordance with EPA's comment, this building has been identified as NFA in Table 3. • The column "Mitigation Triggered Under Decision Framework?" has been revised to include a footnote that clarifies data collected to date has been evaluated but that future data collection would entail reevaluation against the Decision Framework. For the purposes of this property status summary, the table benefits from a straight answer on the point of whether data collected to date triggers mitigation under the Decision Framework. • N/A has been defined in the Notes.	
Comment 26 - Table 5 [Indoor Air Quality Evaluation Criteria]		**(Revised to Table 4)**		
EPA requests the following revisions to Table 5 to improve clarity to the public: – Present the Trichloroethene (TCE) column first as a detached column to reinforce the point that TCE is the only COC current driving mitigation. – Add columns and screening values for the VI COCs chloroform and vinyl chloride. – Move the rows "Lab RLs" and "Mitigation Criteria" from the bottom of the table to the top of the table. This will give context for the Tier 2 and 3 criteria that follow. – Add a "Tier 1" to the table with a merged row for "Exceed Outdoor Air Concentration", otherwise, it seems odd that "Tier 1" is not present. Tier 1 screening values can be "TBD", with a footnote defining "to be determined" and a reference to the outdoor air evaluation WP section. – Within Tier 2 and Tier 3, present the ASAOC screening Criteria and Risk Range Mitigation Criteria first (i.e., for Tier 2, present the ASAOC Short-Term Mitigation Criteria before ATSDR, OEHHA, RWQCB, and EPA RSLs. And, for Tier 3, present the ASAOC Risk Range Mitigation Criteria before OEHHA, ATSDR and RWQCB screening values).	The WP will be revised accordingly. Notably, the intent of Table 5 was to be consistent with significant digits as presented by agencies. In particular, the 18 February 2015 EPA Action Memorandum for the Triple Site identifies "0.48" µg/m³ as the "EPA Long-Term Screening Level", "2" µg/m³ as the "EPA Short-Term Screening Level (Accelerated – Response in Weeks)", and "6" µg/m³ as the "EPA Short-Term Screening Level (Urgent – Response in Days)". Also refer to response to Comment 17b.	EPA concurs with the response and that the EPA's comments were largely addressed in revised Table 4. However, the table should be additionally revised as follows: • Delete the use of the "Precautionary" Mitigation Criteria as it is redundant with the Preemptive Mitigation Criteria[1]; however, the Precautionary Mitigation Criteria can and should be changed to show the most conservative applicable long-term regulatory screening value. For example, the long-term residential screening value for cis-1,2-DCE and vinyl chloride are, respectively, the RWQCB ESLs of 8.3 µg/m³ and 0.0095 µg/m³. • The Urgent and Accelerated response Mitigation Criteria are terms specific to TCE and the ASAOC and the 2014 EPA Region 9 TCE interim action levels memo (also see Locus response to Comment 17b). As such, the ASAOC and the 2014 memo should be noted and cited in the table footnotes.	• Use of the word "precautionary" mitigation has been eliminated from the WP including Table 4 and the values for the subject two line-items have been revised as recommended. The phrase "most conservative" mitigation criteria has been used, where applicable. • The ASAOC and the 2014 memo have been cited in the table footnotes. • NA has been removed except for preemptive mitigation criteria, where applicable.	EPA concurs that the comments were addressed in the revised WP. Note that the term "precautionary" is still used in the Notes section of Table 4.

[1] The ASAOC specifies that Risk Management Activities may include "preemptive or precautionary mitigation". However, the term "precautionary" is only used once in the ASAOC. The intent of the ASAOC is to conduct "preemptive" mitigation based on how the term is used throughout the ASAOC Statement of Work.

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– Within Tier 2 and Tier 3, use solid lines across a row to group criteria together by authority (e.g., use a single row line between RWQCB and EPA RSLs criteria). – Define "Mitigation Criteria", "Urgent Mitigation", and "Short-Term Mitigation". in the footer. – Change NA to "Not Established" or use a "-" instead (a "-" presents less text, which makes the table easier to read). Not Applicable implies there is not a risk, which may not be true. Not available implies that perhaps the database or source was down. – Revise: "residential" to "residential/school" – Use significant digits (e.g., 2.0 vs. 2). – For ATSDR MRL define "acute" and "intermediate" by adding (1–14 days) and (14–365 days) in parenthesis at the end of each line.		• The screening value of "NA" [not applicable] should only be used for the "Preemptive" Mitigation Criteria.		
Comment 27 - Figure 1 [Site Plan]				
EPA requests the following Figure 1 revisions to improve clarity: – Rename to Triple Site Operable Units as multiple OUs are being shown in the figure. – Revise figure so it is clear that the AMD 915 is not part of the Triple Site. AMD 915 is also shown in Figures 2 and 3, so it needs to be clear in Figure 1 and WP Section 2.1 that AMD 915 is not part of the Triple Site.	The WP will be revised accordingly.	EPA concurs that the comment was addressed in Figure 1. However, EPA requests that all WP figures be saved in a PDF vector vs. raster format. This will greatly improve screen readability and allow the figure labels and IDs to be searchable.	We have investigated this matter. Although Figures 1-4 are in fact vector files, they are not text-searchable because of the version of AutoCAD we are currently using. In light of your request, we will provide text-searchable PDFs of future deliverables upon our next software upgrade, expected within a year. Regarding Figures 7 to 9, as noted in the work plan text, we had planned to improve/upgrade these figures over time. In light of your request, we are currently moving these to an alternative native format, which we believe will be text-searchable and more crisp when zooming. We will provide them as soon as they are available.	EPA concurs with the response and notes that future figure revisions are forthcoming.
Comment 28 - Figures 2 to 3				
28a) Remove the reference to the USGS satellite imagery as the figures are using a line/polygon base map.	The WP will be revised accordingly.	EPA concurs with the comment was addressed in the revised Figures	n/a	n/a
28b) Use a more readable screen color, and font for well ID labels where characters do not bleed as much together, perhaps by increasing character kerning spacing.	The WP will be revised accordingly.	EPA concurs with the response. Also see EPA response to Comment 27 above.	n/a (refer also to response to Comment 27)	n/a
28c) Figures 2 and 3 are redundant, with the only difference between the two being Figure 3 is showing the groundwater "A" aquifer TCE isoconcentrations. As a figure is needed in the WP to show where the VI samples presented are located, Figure 2 can be deleted and replaced with a figure showing the location for all VI indoor and outdoor air sampling locations (i.e., Table 2, and where they are being proposed in the WP). Additionally, revise Figure 2 to show the locations of residential (i.e., RES) buildings and schools (i.e., Rainbow, Kings Academy, etc.).	Figure 2 shows all wells, not just the "A" Aquifer. Consideration will be made to retain Figure 2. A new map will be prepared that identifies RES numbers and school names. With regard to air sampling locations, placing all the air sampling locations on a single report map (a print layout) may not be a functional format for such information. Furthermore, the naming convention of air sample is straight forward as far as the first six characters (+/-) being the residential/school building number, and the air sample locations were provided to EPA in the 27 March 2020 file geodatabase.	EPA acknowledges that a new Figure 4 was added to the revised WP that includes all of the RES numbers and schools. Also, see EPA response to Comment 27 above.	n/a (refer also to response to Comment 27)	n/a
Comment 29 - Figure 3 ['A' Aquifer TCE Concentration Contours]				
EPA disagrees with the TCE "A" aquifer 100 µg/L isoconcentration presented in Figure 3, which is based on the 2018 Annual Groundwater Monitoring Report. The 2018 Annual Groundwater Monitoring Report has not been approved by EPA. The TCE isoconcentrations presented in Figure 3 should be generally consistent with the isoconcentrations presented in the 2017 Annual Groundwater Monitoring report. There is insufficient groundwater data to revise the conceptual groundwater plume south of E Duane Ave. Additionally, see Comment #18 on the Decision Framework for Preemptive Mitigation.	The WP will be revised accordingly.	EPA concurs that the comment was addressed in the revised WP.	n/a	n/a

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EPA will work with Philips on means of updating the groundwater conceptual site model (CSM). A refined CSM for groundwater within the OOU should be revised based on adequate data and within the context of implementing a short- and long-term remedy that addresses vapor intrusion, which would be addressed through a focused feasibility study and record of decision amendment.				
Comment 30 - Figure 4 [Decision Flow Chart VI Sampling]				
Revise Figure 4 Decision Flow Chart Vapor Intrusion Sampling Results Evaluation to include the ASAOC required plans and report submittals and approval steps.	The WP will be revised accordingly and consistent with the forthcoming PFD.	EPA concurs that the comments were addressed in revised Figure 5.	n/a	n/a
Comment 31 - Appendix C QAPP				
Revise the QAPP to include a table with the 10 ASAOC COC, see also Comment # 4.	The QAPP will be revised accordingly.	EPA concurs that the comment was addressed in the revised QAPP.	n/a	n/a
Comment 32 – QAPP Table 3				
Revise the QAPP to add that all documents and project files will be submitted to EPA for the project record archive.	The QAPP will be revised accordingly.	EPA concurs that the comment was addressed in the revised QAPP.	n/a	n/a
Comment 33 - QAPP Data Review				
The bullet items listed for basic data review are incomplete. Revise the QAPP to note that basic data review must include evaluation of analytical and field blanks and basic laboratory QC (precision and accuracy). Additionally, data review/validation at EPA Stage 2A is the criteria for standard for basic data review. Higher levels of data review may not be necessary, but basic Stage 2A should be routine for every set of data collected.	The QAPP will be revised accordingly.	EPA concurs that the comment was addressed in the revised QAPP.	n/a	n/a

EPA COMMENTS ON THE REVISED VI WORK PLAN FIELD LOGS AND FORMS				
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Appendix A Appendix B	Residential and Non-Residential Survey Forms	1. Each Part 1 to 4 of the field form should have a line added for who is conducting the survey, their title, and their license number, as applicable. This information is particularly important for Part 4 (Bldg Ventilation) where licensed expert knowledge of HVAC systems is required and trips to a building roof may be required to adequately answer the survey questions. 2. Add a line to note who is responsible for the "Typical Days/Hours of the ventilation system." 3. It would help to give an example of what is evidence of "negative pressure" as this is not clear how this would be described, especially given there is line space for only about 30 characters. Would negative pressure be measured? 4. It is unclear what defines ventilation for: "What times / days is building likely to receive ventilation." Open doors and window without wind or mechanical means of moving air may not mean there is going to be ventilation. 5. Add in parentheses 1 or 2 short examples (i.e., the general intent is for a question to be 1 to maybe 3 lines) of what Locus looks for to identify if the building slab is constructed with post-tension concrete. 6. Pathways to the subsurface is an important survey question to answer. Provide some examples in a few words to give the surveyor and property owner an idea of what is being looked for (examples include crawlspace openings, floor drains]	1. Revised as recommended. 2. Revised as recommended. 3. Revised as recommended. Negative pressure would be noted through qualitative observations for this survey form. 4. Revised to solicit more detailed responses. 5. Revised as recommended. 6. Revised as recommended.	EPA concurs that the comments were addressed in the revised WP.
Appendix N	SSDS and SMDS Post-Installation	1. For simplicity, consider combining the SSDS and SMDS Post-Installation Sampling Field Forms (Appendix N) and the SSDS and SMDS O&M Inspection Forms (Appendix R). The shorter Post-Installation Sampling Field Forms contains the same questions as the O&M Inspection Form. For a combined Post-Installation and O&M Form not all log fields	1. The SSDS and SMDS Post-Installation Sampling Field Forms (Appendix N) forms have been combined into one. The SSDS and SMDS O&M Inspection Forms (Appendix R) have been combined into one. Content of the O&M forms in contrast to post-installation sampling forms appear to serve their unique	EPA concurs that the comments were addressed in the revised WP.

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	Sampling Field Forms	would need to be entered during a field visit (e.g., by using NM, Not Inspected, or N/A). As well, slightly changing the organization of a combined Post-Installation and O&M Field Form's will make it clear what fields would be used during a cursory site visit check vs. a scheduled O&M visit. 2. Generally, a few words should be added to define what a "Good" condition means. For example: Sampling Port (working, free of obstruction). Or: System IDs Labeled Clearly. Or: Information Placards Present and Readable. 3. A dedicated manometer should be present at each system as a standard best practice (vs. if present. Also see comment on Appendix R). 4. Are the initial post-installation data measurements the same as the design specifications? To understand if the system is working properly, the design specifications need to be included on the form (also see Field Forms for SMDS and SSDS O&M Inspections).	purpose and are not difficult to follow for project staff. No consolidation has been made of the post-installation sampling form with the O&M form. 2. Revised as recommended. 3. Sampling teams are instructed to measure vacuum if a system-dedicated manometer is not present. The subject "if" clause has been removed. Refer also to response to Comment 8 on Appendix R. 4. Refer to response to Comment 1 on Appendix R with respect to the target operating range, as established during the post-installation sampling period.	
Appendix O	Field Form for Vent Stack Sampling and Analysis by FROG	1. How is "Stack" being defined (in all field forms)? Is the stack just the portion of the pipe above the fan? If so, confirm if all field measurements and sampling will be collected above the fan? 2. Flow rate is relative to velocity and would be clearer if this field was moved to the Velocity Measurements section of the form.	1. A footnote has been added to clarify that field measurements and sampling will be collected downstream of (above) the fan. Applicable column headers labeled as 'vacuum' have therefore been updated to reflect this measurement position and now say 'pressure'. Mitigation plan components of applicable BSERs will be updated accordingly throughout implementation of the WP. 2. Although flow rate is relative to velocity, the intent of Velocity Measurements is to identify the point (probe/tube insertion depth into pipe) at which the average velocity is achieved. The Field Measurements (including flow rate) are then recorded at the identified insertion depth. Therefore, no change has been made to the presentation of the form in this regard.	EPA concurs that the response. Note, a footnote was not included in Appendix O to clarify that field measurement will be collected downstream of the fan.
Appendix P Appendix Q	Field Form: SMDS Installation Checklist Field Form for SSDS Mitigation Installation	1. A line should be added for the inspector's license number and type. Some code items such as is insulated wires used should be assess by in licensed individual. 2. Why are vent stacks specified to be 3-inch diameter for SMDSs and 4-inches in diameter for SSDSs? 3. Clarify that supports for vent piping is installed at least every 6 ft on horizontal runs. Vertical runs need be secured at least every 8 ft (ASTM E-2121–03). 4. Clarify that vent stack piping shall be fastened to the building (hangers, strapping). 5. Record if horizontal piping is sloped to ensure that water from rain or condensation drains downward into the ground. 6. Note, vent stacks should extend to 2 ft above the roofline if the pipe is within 10 feet of a window or opening (ASTM E 2121-03). 7. Are vent stacks always required to be painted (vs. "if"). Does the City of Sunnyvale require stacks be painted for UV protection or to match the color of the building? 8. For "system manometer required", a manometers should be required as a standard best practice (vs. *if* required). ASTM E-2121–03 also notes that manometer type pressure gauges, should be clearly marked to indicate the initial pressure readings. 9. A specified model or field to record the manometer type is not included in the SMDS installation log form. 10. The log should note if sampling ports are located and installed meeting the criteria so that flow measurement can be collected via EPA Method 1. 11. Why is the need for a fan muffler and fan guard and a condensate bypass not noted on the SMDS installation log form? 12. Document what information should be on the installed placards (e.g., the installer's name and phone number? date of installation? Air flow direction?) 13. Will air velocity and flow really be collected from the top of the vent stack? Collecting the readings from the vent stack sampling ports would be safer, likely more accurate, and is recommended. 14. Add a footnote that the installation shall be in compliance with all applicable mechanical, electrical, building, plumbing, energy and fire prevention codes and standards. 15. Do provisions for a communication or pressure-field extension test need to be recorded in the installation checklist?	1. Revised as recommended. 2. In fact, vent stack diameter can vary based on building construction (in particular, subgrade material and fan selection). Ultimately 3 or 4 inch vent stacks may be installed for either SSDS or SMSDS systems and is case-specific. The forms have been revised accordingly. 3. Revised as recommended. 4. Revised as recommended. 5. Revised as recommended. 6. Per ANSI/AARST SGM-SF 2017 (including Figures 7.4.3 and 7.4.6), the vent stack should exhaust a) not less than 2 feet above or not less than 10 feet away (horizontally) from openings in a structure (operable windows, doors, etc) and b) not less than 1 foot above the roof (if roof is penetrated by piping) and not less than 6 inches above the edge of roof (if piping is attached to side of building). This language has been added to the forms. 7. The City of Sunnyvale requires vent stacks to be painted for UV protection. Therefore, the "If" clause has been removed. Only once has the owner requested the paint to match the color of the building. 8. Refer to language of EPA-approved mitigation plans submitted to date. Locus acknowledges they may be applicable, but they have not always been required as a part of the project. Refer also to BSER template language as a part of this WP, language which is to be finalized as individual BSERs are submitted to EPA for review. Please also note that some property owners have previously objected to the installation of a visible manometer near the vent stack. No change has been made to the subject appendices. 9. Revised as recommended. 10. In light of revised EPA guidance as compared to earlier years of implementation, the sample ports are now to be installed above (downstream of) the fan. This revision and the recommended reference to EPA Method 1 have been made. 11. The SMDS installation checklist preceded the SSDS installation checklist, between which EPA started asking specifically about mufflers/guards/condensate bypass. BSER template language (yet to be approved by EPA) reflects the history and past handling of this matter. Ultimately, a muffler would be needed only if the fan is noisy because it does add restriction to the system. Usually fan guards (and associated condensate bypass) are not needed because the Sunnyvale rain climate does not warrant it and the fans are water hardened. The SMDS form has been revised to include	EPA concurs that the comments were addressed in the revised WP. EPA requests that applicable signage be added to all existing and planned mitigation systems covered under this Work Plan.

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Appendix	**Log/Form Name**	**EPA Comment: October 21, 2020**	**Locus Response: November 9, 2020**	**EPA Response: November 25, 2020**
			these details; both forms acknowledge the potential for varied installation scenarios. 12. Revised as recommended in accordance with signage components noted in the BSER template. Additionally, the following will be included on new mitigation systems, going forward: air flow direction, date of installation. 13. In fact, velocity and flow are collected from sample ports. The forms have been updated accordingly. 14. Revised as recommended. 15. The SSDS form already includes a section regarding diagnostic testing (including communication / pressure-field extension testing), where applicable. An additional line-item has been added for receipt of diagnostic testing field notes (e.g. log of locations/measurements), if testing was applicable. To date, diagnostic testing has not been needed for SMDS applications.	
Appendix R	Field Forms for SMDS and SSDS O&M Inspections	1. A field for the SSDS/SMDS design criteria should be added to the form to readily assess if the Initial and Current System Measurement readings are within design specifications and acceptable. 2. Consider moving the Date and Time columns to the top of the form. This would simplify the use of the form and allow for field notes to be taken in a wider "Condition (Good or Poor") field with more space. 3. Check if the footnote for the O&M Plan for 52nd St Motorola Superfund Site is applicable.	1. Design criteria for the subject measurements are building-specific. System readings vary with weather (e.g. cooler/wetter versus hotter/drier soil conditions). The fan selected for installation is based on building construction (in particular, subgrade materials). The goal is generating a vacuum. If suction is too low, the fan is moving a lot of air, which may create noise issues but not necessarily performance issues with respect to VI mitigation. A noisy fan would be cause for a muffler or a different fan, an issue which can be identified during the installation mobilization. Ultimately, if through the second winter of operation a vacuum is generated by the system and indoor air concentrations meet mitigation effectiveness criteria, then going forward the system is understood to be effective for VI mitigation if the vacuum/CFM/amperage measurements are around the range of the measurements taken during the post-installation sampling period. Therefore, the vacuum/CFM/amperage criteria on the form has been changed accordingly. Instead of comparing current system measurements with initial readings (and a 25% threshold), current system measurements are compared to the operating range of the post-installation sampling period. 2. The form has been revised accordingly. 3. The footnote has been removed.	EPA concurs that the comments were addressed in the revised WP.