ON-PROPERTY VAPOR INTRUSION ASSESSMENT REPORT FOR WESTERN PARCELS (BUILDINGS A, B, C, E, F, M, AND W)

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TABLE OF CONTENTS

E.1 EXECUTIVE SUMMARY 1

1.0 INTRODUCTION AND BACKGROUND 3
- **1.1 Site Background 4**
  - **1.1.1 Geology 5**
  - **1.1.2 Hydrogeology 6**
  - **1.1.3 Site Contamination 6**
- **1.2 Fate and Transport Mechanisms and Potential Exposure Pathways 7**
- **1.3 Previous Vapor Intrusion Assessments 7**

2.0 SCOPE OF ASSESSMENT 7

3.0 FIELD INVESTIGATIONS 8
- **3.1 Pre-sampling Field Activities 9**
- **3.2 Field Activities 10**
- **3.3 Sampling Methodology 16**
  - **3.3.1 Indoor and Pathway Air Sample Collection 16**
  - **3.3.2 Ambient Air Sample Collection 17**
  - **3.3.3 Sub-Slab Vapor Sample Collection Methodology 18**
  - **3.3.4 Quality Control Sample Collection 19**

4.0 ANALYTICAL RESULTS AND DISCUSSION 19
- **4.1 Building A 20**
- **4.2 Building B 20**
- **4.3 Building C 21**
- **4.4 Building E 23**
- **4.5 Building F 24**
- **4.6 Building M 24**
- **4.7 Building W 25**

5.0 CONCLUSIONS 25

6.0 RECOMMENDATIONS 27

TABLES

FIGURES

APPENDICES

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ATTACHMENTS

LIST OF TABLES

Table 1 Groundwater Analytical Results, October 2013

Table 2 Description of Sample Locations

Table 3 Site Building Information

Table 4 Indoor, Pathway, and Ambient Air Analytical Results – December 2012 to April 2014

Table 5 Sub-Slab Analytical Results – December 2012 and April 2014

LIST OF FIGURES

Figure 1 Site Location Map

Figure 2 Site Plan

Figure 3 2013 TCE Groundwater Concentration Contours and Buildings Sampled

Figure 4 A-Aquifer Groundwater Elevation Contour Map October 2013

Figure 5 Interior Floor Plan and Air Handling Areas with Sample Locations – Building A-1

Figure 6 Interior Floor Plan and Air Handling Areas with Sample Locations – Building A-2

Figure 7 Interior Floor Plan and Air Handling Areas with Sample Locations – Building B

Figure 8 Interior Floor Plan and Air Handling Areas with Sample Locations – Building C-1

Figure 9 Interior Floor Plan and Air Handling Areas with Sample Locations – Building C-2

Figure 10 Interior Floor Plan and Air Handling Areas with Sample Locations – Building E-1

LIST OF FIGURES (Continued)

Figure 11 Interior Floor Plan and Air Handling Areas with Sample Locations – Building E-2

Figure 12 Interior Floor Plan and Air Handling Areas with Sample Locations – Building F

Figure 13 Interior Floor Plan and Air Handling Areas with Sample Locations – Building M-1 and M-2

Figure 14 Interior Floor Plan and Air Handling Areas with Sample Locations – Building W-1

Figure 15 Interior Floor Plan and Air Handling Areas – Building W-2

APPENDICES

Appendix A Indoor Air Building Survey and Sampling Form

Appendix B Photographs

Appendix C Laboratory Analytical Data

Appendix D Building C Sub-slab Depressurization System Design

ON-PROPERTY VAPOR INTRUSION ASSESSMENT REPORT
FOR WESTERN PARCELS (BUILDINGS A, B, C, E, F, M, AND W)
Texas Instruments Incorporated
2900 Semiconductor Drive
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E.1 EXECUTIVE SUMMARY

On behalf of Texas Instruments Incorporated (TI), Langan Treadwell Rollo (Langan) performed this on-property vapor intrusion assessment at TI's Santa Clara, California campus (site), in consultation with the United Stated Environmental Protection Agency (USEPA) and San Francisco Bay Regional Water Quality Control Board (Water Board). The overall objective of this assessment was to evaluate whether volatile organic compounds (VOCs) present in the groundwater beneath the site are migrating from the subsurface into indoor air at levels that may pose a risk to site workers or occupants. Overall eleven buildings (A, B, C, E, F, G, M, W, 9, 19, and 39) were evaluated at the site in December 2012, January and April 2013, and March and April 2014, by collecting and analyzing indoor, pathway, and ambient air samples and sub-slab vapor samples for selected constituents of concern (COCs) specified in the Work Plans approved by the Water Board. TI has sold portions of the campus and therefore, the results are reported in two separate reports: (i) the buildings sold to RREFII, an assignee of Lennar Commercial Investments, LLC and (ii) the buildings retained by TI.

This report contains the results associated with retained Assessor Parcel Numbers (APN) 205-39-022 and 205-39-025 which correspond to Buildings A, B, C, E F, M, and W (collectively defined as "Western Parcels"), respectively. The results associated with the sold portions APNs 205-38-021, 205-38-022, and 205-38-008, which correspond to Buildings G, 9, 19, and 39 (collectively defined as "Eastern Parcels"), have been presented in a separate report titled On-Property Vapor Intrusion Assessment Report for Eastern Parcels (Buildings 9, 19, 39, and G) dated 10 November 2014, submitted to the Water Board and USEPA. The Eastern Parcels were sold to a third party buyer on 12 December 2014. TI is retaining title to the Western Parcels and will continue to conduct its business operations – consisting of research, product development and administrative office use -- on those parcels.

The indoor air sample results were compared to the USEPA's Regional Screening Levels (RSLs) for industrial air quality criteria and the Water Board's Environmental Screening Levels (ESLs) for commercial air quality criteria. They were also compared to the interim trichloroethene

(TCE) response action levels (RALs) set forth in the 30 June 2014 EPA Region 9 technical memo, adopted as regional policy in the 9 July 2014 USEPA Region 9 policy memo (collectively, "USEPA July 2014 TCE Guidance"). For all Western Parcel buildings sampled, the results indicate that with heating ventilation and air conditioning (HVAC) units operating, indoor air concentrations in the areas normally occupied throughout a business day are below USEPA and Water Board screening criteria, and below the interim RALs in the USEPA July 2014 TCE Guidance.

A few indoor air and pathway samples collected with HVAC units off in Building C had detected concentrations of tetrachloroethene (PCE) above the Water Board's ESL, but below USEPA's RSL. TCE was below its associated USEPA RSL and Water Board ESL, and below the interim RALs in the USEPA July 2014 TCE Guidance. To address the potential vapor intrusion issues at Building C, mitigation efforts, including preferential pathway evaluation, penetration sealing and in situ remediation, have been performed. The combination of these mitigation and remediation efforts has contributed to significant reduction in VOCs in the subsurface and indoor air. Although no unacceptable risks to building occupants currently exists with HVAC systems operating, TI is installing a sub-slab depressurization system (SSDS) to control potential PCE vapor intrusion at Building C, which is scheduled to begin installation in early 2015.

Pathway samples collected from a locked tunnel beneath Building E had TCE concentrations in excess of screening criteria with both HVAC units operating and off. However, this location is normally unoccupied and is visited approximately once per quarter by workers for a brief 15 minute inspection. Thus, workers are present in the tunnel for significantly less time than the exposure frequency assumed in the calculation of the ESLs and RSLs (i.e. 8 hours a day for 250 days per year) and therefore, we conclude that there is no unacceptable risk to Building E occupants and site workers.

Access is controlled and a sign indicating that it is a "Restricted Area - Authorized Access Only – Contact EHS (Environmental Health and Safety Department) For Authorization" has been installed at the entrance to the tunnel to inform all personnel of the need to obtain TI EHS consent.

1.0 INTRODUCTION AND BACKGROUND

On behalf of Texas Instruments Incorporated (TI), Langan presents this *On-Property Vapor Intrusion Assessment Report for Western Parcels (Buildings A, B, C, E, F, M, and W)* (Report) associated with TI's site located at 2900 Semiconductor Drive in Santa Clara, California (Figures 1 and 2).

This report is organized as follows:

- Section 1 – Introduction and Background
- Section 2 - Objectives and Scope of Assessment
- Section 3 - Field Investigations
- Section 4 - Analytical Results and Discussion
- Section 5 - Conclusions
- Section 6 - Recommendations

This section discusses the history of vapor sampling conducted at the site since 2012 under the direction of the USEPA and the Water Board.

Although not referenced in the Water Board Orders or USEPA Record of Decision, the USEPA and Water Board required, in an email dated 30 August 2012, that additional vapor intrusion assessment be completed for buildings overlying 100 micrograms per liter (µg/L) of TCE in groundwater. Accordingly, a vapor intrusion assessment was performed in general accordance with our *Work Plan for On-Property Vapor Intrusion Assessment, Texas Instruments Incorporated, 2900 Semiconductor Way, Santa Clara, California* dated 4 December 2012, as approved by the USEPA and Water Board. The associated on-property assessment was conducted in December 2012, January 2013, and April 2013 on the site at Buildings C, E, and F based upon the TCE concentration contours presented in the approved Work Plan.

The results of indoor air sampling at Buildings C, E, and F were initially transmitted to the Water Board and USEPA in Technical Memorandum on 1 March 2013. On 19 July 2013, Langan submitted the *On-Property Vapor Intrusion Assessment, Buildings 9, 19, 39, C, E, F, and G*, summarizing the results of sampling events and assessment.

On 3 December 2013, the USEPA transmitted a letter to the Water Board requiring vapor intrusion assessments be completed for all buildings located on TI's Santa Clara site (on-property) shown on Figure 3, regardless of VOC concentrations in groundwater (USEPA, 2013).[1] As a result, the vapor intrusion study area was expanded to include Western Parcel Buildings A, B, M, and W on TI's site and additional vapor intrusion assessment was performed in general accordance with our approved *Work Plan for Additional On-Property Vapor Intrusion Assessment, Texas Instruments Incorporated, 2900 Semiconductor Way, Santa Clara, California* dated 9 April 2014. The additional on-property assessment was conducted in March and April 2014 and included Buildings A, B, M, W, and C, G, and 39. Buildings C, G, and 39 had been sampled in late 2012 and early 2013 and were sampled again in 2014, based on previous results. The results of all sampling conducted at Western Parcel Buildings A, B, C, E, F, M, and W are included in this report.

1.1 Site Background

The site was formerly owned and operated by the National Semiconductor Corporation (NSC). In 2011, NSC was acquired by TI, and TI assumed responsibility for compliance with regulatory requirements.

In July 1987, the NSC site was listed on the National Priorities List (NPL) of sites subject to regulation under the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also known as the federal "Superfund" law, 42 U.S.C. § 9601, et seq.). Under agreements with the USEPA, the Water Board provides lead regulatory oversight at the site. The buildings sampled are located within the footprint of Operable Unit 1 (OU1), Subunit 1, as defined in the USEPA Record of Decision dated 11 September 1991 (the ROD), which is generally bounded by Kifer Road to the south, the City of Sunnyvale/Santa Clara boundary to the west, East Arques Avenue to the north, and portions of the Lawrence Expressway to the east. The location and specific boundary of OU1, Subunit 1 is illustrated on Figure 4.

TI's campus on the Western Parcels (APNs 205-39-025, 205-39-022, and 205-39-018), is generally bordered by Central Expressway to the north, Kifer Road to the south, Semiconductor Drive to the east, and a private park to the west (Figure 3). TI's campus consists of 8 buildings and a parking garage. All the buildings are surrounded by paved parking areas and/or

[1] EPA Region 9 Guidelines and Supplemental Information Needed for Vapor Intrusion Evaluations at the South Bay National Priorities List (NPL) Sites), 3 December 2013.

landscaping. TI's campus and buildings are located in Subunit 1 of OU1 (Figures 3 and 4). The Western Parcel buildings located on TI's campus are either occupied by TI employees or are unoccupied. As previously noted, the Eastern Parcels of the former NSC campus were sold to a third party in December 2014.

The investigation and remediation of the site is currently under the jurisdiction of the Water Board and the USEPA. The Final Site Cleanup Requirements are detailed in Water Board Orders 91-137, 91-139, and 91-140 (Water Board Orders), and the ROD, which were issued in September 1991. Originally, eight soil source units were identified in the Water Board Orders on the Western Parcels (the Tank T13 and Leak L5 areas were previously identified as one source area). The locations of the former source areas on the Western Parcels are illustrated on Figure 2. Seven of the eight soil units have been identified as requiring no further action by the Water Board. No further action documents associated with the former source areas are referenced in the *Fourth Five-Year Remedial Action Status Report and Effectiveness Evaluation, Texas Instruments Incorporated, Santa Clara, California* dated 20 March 2013. The Leak L5 Area, which is associated with Building C, is the last remaining soil source area in the Soil Operable Unit requiring closure (Treadwell & Rollo, 2006). Significant remediation has taken place at the Leak L5 Area beneath Building C, including soil vapor extraction, soil excavation and disposal, and most recently, chemical oxidation. The remedial efforts at the Leak L5 Area have significantly reduced the subsurface contaminant mass associated with this area.

1.1.1 Geology

The site is underlain by a thick layer of unconsolidated quaternary alluvial sediments, which were deposited by primarily northward flowing streams draining from the Coast Range Mountains. Alluvial sediment deposits range from approximately 500 to 1,200 feet thick and consist of clays and silts interlayered with sands and gravels. The sand and gravel layers range from 1 foot to over 20 feet thick. The alluvial sands and gravels become finer and contain more clay and silt towards the ground surface. This trend is the result of a decrease in depositing stream energy as the area became filled with sediments and stream gradients decreased. Paleochannels consisting of more permeable sands and gravels were formed in the direction of the depositing streams in the south to north direction. The paleochannels act as preferential paths for groundwater flow. Bedrock underlies the alluvial sediments (HLA, 1991).

1.1.2 Hydrogeology

Depth to groundwater at the site generally ranges from 8 to 15 feet beneath ground surface (bgs). The A-aquifer is locally unconfined or partially confined, and separated from the underlying B-aquifers by a low permeability clay aquitard. There are areas where the A- and B-aquifers appear to be hydraulically connected. Historically, the subsurface in OU1 has been subdivided into the following general shallow aquifer units (Treadwell & Rollo, 2006):

- The A-aquifer, typically found between 5 to 30 feet bgs;
- The B1-aquifer, typically found between 30 to 45 feet bgs;
- The B2-aquifer, typically found between 45 to 60 feet bgs; and
- The B3-aquifer, typically found between 70 to 90 feet bgs.

A groundwater elevation contour map for the A-aquifer in OU1 illustrating general flow directions is shown on Figure 4.

1.1.3 Site Contamination

VOCs, including chlorinated solvents and aromatics, make up the majority of chemicals detected in site soils and in groundwater, although semi-VOCs have been detected historically in isolated locations at the site (Treadwell & Rollo, 2006).

The following chemicals were detected in groundwater at the site in 2013 (Table 1) and were analyzed in sub-slab vapor, indoor air, pathway air, and ambient air samples:

- TCE
- cis-1,2-dichloroethene (cis-1,2-DCE)
- 1,1,1-trichloroethane (1,1,1-TCA)
- 1,1-dichloroethene
- trichlorotrifluoroethane (Freon 113)
- PCE
- trans-1,2-dichloroethene
- vinyl chloride
- 1,1,2-trichloroethane
- 1,1-dichloroethane
- 1,2-dichloroethane
- Chloroethane
- chloroform
- dichloromethane
- 1,2,3-trichlorobenzene
- 1,2,4-trichlorobenzene
- 1,2-dichlorobenzene
- 1,3-dichlorobenzene
- 1,4-dichlorobenzene
- chlorobenzene
- toluene
- ethylbenzene
- xylenes
- trichlorofluoromethane

A TCE concentration contour map for the A-aquifer is shown on Figure 3.

1.2 Fate and Transport Mechanisms and Potential Exposure Pathways

Fate and transport mechanisms for VOCs may include migration in groundwater, adsorption to soil and organic matter in the subsurface, volatilization and migration in soil gas (advection and diffusion through the vadose zone), and volatilization and migration to air. VOCs may also accumulate beneath building foundations, in building crawl spaces and basements, and migrate into buildings via preferential pathways such as utility corridors, slab penetrations, or elevator shafts.

1.3 Previous Vapor Intrusion Assessments

A summary of previous vapor intrusion assessments conducted in 2004, 2006, 2007, and 2010 on the former NSC campus was presented in the approved Work Plan and several earlier documents. The results of these assessments showed no unacceptable risks to building occupants at the time of each assessment.

2.0 SCOPE OF ASSESSMENT

Based on the shallow groundwater level and the VOC concentrations in groundwater at the site, in 2012 the USEPA and Water Board requested that an additional vapor intrusion assessment be completed on the site to supplement earlier studies. The on-property vapor intrusion assessment scope for the Western Parcels included collecting and analyzing indoor air, pathway air, sub-slab vapor and ambient air samples from Buildings A, B, C, E, F, M, and W ("buildings to be sampled"), as detailed in the approved Work Plans.

The vapor intrusion assessments included the following work elements:

- **Building Surveys (2012 and 2014):** Conducting a building survey and inventory with USEPA and/or Water Board representatives at all buildings to be sampled to identify appropriate sample locations in 2012 (for Buildings C, E, and F) and in 2014 (for Buildings A, B, M, and W);

- **8-Hour Indoor Air and Pathway Sampling with HVAC On and Off (2012/2013):** Collecting indoor air and pathway samples over a period of 8 hours from Buildings C, E, and F with HVAC system operating normally and with HVAC systems turned off for a minimum of 36 hours prior to sampling. These samples were collected in December 2012 and January 2013;

- **10-Hour Indoor Air and Pathway Sampling with HVAC On and Off (2014):** Collecting indoor air and pathway samples over a period of 10 hours from Buildings A, B, C, M, and W with HVAC system operating normally and with the HVAC systems turned off for a minimum of 36 hours prior to sampling. These samples were collected in March and April 2014[2]. Due to the nature of work conducted in Building A and M, the HVAC systems associated with the first floors operate continuously 24 hours per day, 7 days a week. Therefore, air samples were not collected with HVAC units off in these buildings, as set forth in the approved Work Plan;

- **Sub-Slab Sampling (2012/2014):** Collecting sub-slab (or near-slab where slab thicknesses exceeded 12 inches) vapor samples from Buildings A, B, C, E, F, M, and W to assess sub-slab vapor concentrations over the same general timeframe as the indoor and pathway air sampling. Sub-slab and indoor air radon samples were also collected to develop site-specific sub-slab-to-indoor air attenuation factors from Buildings C, E, and F;

- **Outdoor Ambient Air Sampling (2012/2013/2014):** Collecting ambient air samples near the intakes of the HVAC systems at or near buildings to be sampled where indoor air samples were collected to evaluate potential non-groundwater sources of chemicals in indoor air for all sampling events;

- **Sample Analysis:** Analyzing the indoor, pathway, ambient air, and sub-slab/near-slab vapor samples for VOCs previously detected in the sub-surface (listed in Section 1.1.3) and radon (where collected);

- **Evaluation Summaries (2013/2014):** Evaluating and documenting the data in technical memoranda and transmitting to the USEPA and Water Board in 2013 and 2014; and

- **Western Parcels Summary Report (2014):** Preparing this Western Parcels vapor intrusion assessment report.

3.0 FIELD INVESTIGATIONS

Indoor air VOC concentrations can be attributed to volatilization from subsurface into the building, contributions from outdoor ambient air, and facility or occupational sources (such as building construction, operation, and occupancy). This investigation evaluated all these factors by collecting the following types of samples:

1. **Indoor Air Samples –** These samples were collected in areas normally occupied throughout the day at breathing zone height (between 3 to 5 feet).

[2] The sampling duration was changed from 8 hours to 10 hours based on the guidelines presented by the USEPA in the 3 December 2013 letter.

2. **Pathway Samples –** These samples were collected in areas not normally occupied throughout the day where potential conduits were observed that may act as a direct route for VOC migration into the building, and to evaluate if localized migration was occurring. Examples of these areas include floor penetrations, cracks in the floor slab, restrooms, sumps, and areas outside of elevators. These samples are representative of concentrations at preferential pathways and are not representative of direct exposure concentrations to occupants.

3. **Outdoor Ambient Air Samples –** These samples were collected outside the buildings, near the intakes of HVAC systems at buildings where indoor air samples were collected to evaluate potential non-groundwater sources of chemicals in outdoor air.

4. **Sub-Slab (or near-slab where slab thicknesses exceeded 12 inches) Vapor Samples -** These samples were collected to assess the sub-slab VOC and/or radon concentrations in order to develop building specific slab attenuation factors and assess whether any VOCs detected in indoor air were coming from the subsurface or from indoor sources of VOCs. Sub-slab samples were collected near indoor air sample locations and near former source areas, if possible, and to provide spatial coverage of the building footprint. In accordance with the approved work plan, open areas, rather than areas adjacent to walls or other obstructions, were selected as sampling locations.

5. **Quality Control Samples –** Field duplicates and laboratory control samples were analyzed to maintain an acceptable level of quality assurance.

3.1 Pre-sampling Field Activities

On 13 and 14 November 2012, building surveys were completed at Buildings C, E, and F to identify appropriate indoor and ambient air and sub-slab vapor sampling locations. On 21 February 2014, building surveys were completed at Buildings A, B, M, and W. The surveys were conducted in the presence of the USEPA and/or Water Board case managers. During the building surveys the following information was documented and/or inventoried:

- Building exterior and interior observations;
- Chemical use and storage;
- Presence of floor drains;

- Concrete slab conditions;
- Presence of HVAC units and operational areas;
- Operational parameters for HVAC units;
- Workers and type of work conducted in the building;
- Potential alternative indoor contaminant sources; and
- Presence of potential preferential pathways for soil vapor migration.

Field screening was conducted using a photoionization detector (PID) – ppbRAE Plus – with a detection limit in the low parts per billion (ppb) range, to further evaluate potential vapor intrusion pathways and identify locations with the greatest vapor intrusion potential. Potential preferential pathways for soil vapor migration include gaps and cracks in building foundations, piping, utility lines, and dewatering systems. PID readings were taken in areas with sub-slab openings and penetrations such as floor drains in the restrooms, sinks in the janitor closets, sub-slab electrical conduits and floor boxes. The PID readings were recorded on field logs and used to identify indoor air, pathway air, and sub-slab sample locations. Sample locations were selected during the building surveys with input from the USEPA and/or the Water Board.

Building layout plans and approved sample locations for Western Parcels Buildings A, B, C, E, F, M, and W are illustrated on Figures 5 through 15. These figures also show the distinct air handling areas, which were used to approximate areas of similar air composition during the selection of sampling locations.

A survey questionnaire of building condition, use, and chemicals present at all the buildings was completed by TI. The completed building surveys and inventory forms are included in Appendix A.

3.2 Field Activities

Indoor air and pathway air sampling have been completed with both HVAC units on and off at Western Parcels buildings, in accordance with the approved work plans. In addition, a second round of sampling has been completed for Building C. Indoor and pathway air sampling with the HVAC units on was conducted on 18 January 2013 (Buildings C, E, and F), 21 March 2014 (Building C), and 18 April 2014 (Buildings A, B, M, and W). Indoor air and pathway air sampling with the HVAC units off was conducted on 20 January 2013 (Buildings C, E, and F), 23 March

2014 (Building C), and 20 April 2014 (Buildings B and W). For indoor air and pathway samples collection with HVAC system off, the HVAC units in the buildings to be sampled were turned off at approximately 5 PM on Fridays. After a minimum of 36 hours, indoor air and pathway samples were collected on Sundays with HVAC units remaining off during sample collection. Sub-slab samples were collected on 15 December 2012 (Buildings C, E, and F) and 17 March 2014 (Buildings A, B, M, and W).

Table 2 indicates sample types (i.e., indoor air, pathway, ambient, or sub-slab) and a sample location description. The sample locations are presented on Figures 5 to 15. A brief description of each building and current usage is provided below and summarized in Table 3.

The sampling events at each building are discussed below with results presented in Section 4.0.

Building A

Building A is a two-story slab on-grade commercial/industrial building with approximately 110,000 total square feet of interior space, which primarily consists of office space and research labs (Figures 5 and 6). The concrete foundation is reinforced with steel and is several feet thick in most places due to its former use as a fabrication facility. Several areas of the building are utilized as 'clean room' laboratories and have an epoxy sealant/coating on the concrete floors, which were applied during renovation activities in 2011 and 2012. There are three distinct air handling areas on the first floor (Figure 5) and three distinct air handling areas on the second floor (Figure 6) of Building A. The testing laboratories located in the southern portion of Building A are located on a raised floor system that is elevated approximately 1.5 feet above the building slab. Due to the nature of work conducted in Building A, the HVAC systems associated with the first floor operate continuously 24 hours per day, 7 days a week. Therefore, in accordance with the approved Work Plan, no HVAC off samples were collected at Building A.

Former soil source areas Tank T9, Tank T10, Leak L6 and Leak L7 were present near or beneath Building A (Figure 2). As previously noted, these former soil source areas have been cleaned up and were identified by the Water Board as requiring 'No Further Action'.

Based on the building surveys, the approved Work Plan proposed four indoor air sample locations, five pathway sample locations including four on the first floor and one on the second floor, and one sub-slab sample location for Building A. On 18 April 2014, indoor air and pathway

samples were collected from Building A with HVAC units operating normally. A sub-slab sample was collected from Building A on 17 April 2014.

Building B

Building B is an approximately 20,800 square feet, one-story slab-on-grade commercial building, which primarily consists of kitchen and cafeteria space (Figure 7). The concrete foundation is reinforced with steel and the thickness of the floor slab is anticipated to vary between 6 inches and a foot. There are two distinct air handling areas and five supply air areas (associated with the gas stoves and ovens in the kitchen) in Building B (Figure 7). The HVAC systems in this building operate from 4 AM to 3 PM due to cafeteria occupancy patterns. The air supply units are associated with the stoves and ovens in the kitchen area.

Former soil source area Leak L4 was present approximately 100 feet east of Building B (Figure 2). As previously noted, this former soil source area was cleaned up and was identified by the Water Board as requiring 'No Further Action'.

Based on the building surveys, the approved Work Plan provided for three indoor air sample locations, three pathway sample locations, and two sub-slab sample locations for Building B. On 18 April 2014, indoor air and pathway samples were collected from Building B with HVAC units operating normally. On 20 April 2014, indoor air and pathway samples were collected from Building B with HVAC units off. Sub-slab samples were collected from Building B on 17 April 2014.

Building C

Building C is a two-story, flat-roofed, slab on-grade commercial/industrial building with approximately 140,000 total square feet of interior space, which primarily consists of office space and research labs (Figures 8 and 9). The concrete foundation is reinforced with steel and the thickness of the floor slabs varies between 6 inches to several feet. There are eight distinct air handling areas on the first floor of Building C (Figure 8). There are six distinct air handling areas on the second floor of Building C, including one area with multiple air handling unit influences (Figure 9).

Former soil source areas Tank T12, T13 and Leak L5 were present near or beneath Building C (Figure 2). As previously noted, former soil source areas Tank T12 and T13 were cleaned up and were identified by the Water Board as requiring 'No Further Action'. The Leak L5 area has had a

substantial amount of remediation and removal of soils exceeding the cleanup criteria down to 11 feet below ground surface. Additionally, soil vapor extraction was previously performed and chemical oxidation treatments are ongoing to further reduce concentrations in soil and groundwater.

Based on the building survey, the approved Work Plan provided for seven indoor air sample locations (including six on the first floor and one on the second floor), two pathway sample locations, and four sub-slab sample locations for Building C. On 18 January 2013, indoor air and pathway samples were collected from Building C with the HVAC units operating normally. On 20 January 2013, indoor air and pathway samples were collected from Building C with the HVAC units off. Sub-slab samples were collected from Building C on 15 December 2012.

The results of the initial round of sampling indicated PCE exceedances of the Water Board ESL, but not the USEPA RSL, at a few locations in samples collected with HVAC units off. Preferential pathways were identified and sealed subsequent to this sampling event in August and December 2013, and February 2014. A second round of sampling was conducted for Building C on 21 and 23 March 2014 with HVAC units operating and off, respectively.

Building E

Building E includes 170,000 total square feet of interior space over two floors and a mezzanine, consisting primarily of offices, computer server rooms, technology support and other miscellaneous uses (Figures 10 and 11). Building E is a slab on-grade structure with a historical utility tunnel located beneath the building that previously contained piping systems associated with the former fabrication areas. The tunnel is currently empty and unoccupied. The tunnel remains locked and is inspected once per quarter by facility staff for about 15 minutes. Since the building's use previously included fabrication facilities, the thickness of the floor slab appears to vary between 6 inches to 5 feet. The northern portion of the building previously had a fabrication area with secondary containment that has since been backfilled with concrete, resulting in a slab thickness of approximately 5 feet. Other areas of the building also have raised flooring (including the Site Data Center and Network Services Department) where the secondary containment was not backfilled.

No former soil source areas are associated with Building E (Figure 2).

The first and second floors of Building E have six distinct air handling units each (Figures 10 and 11). Building E also has a mezzanine level located between the first and second floor, which is occupied by the HVAC equipment. Based on the building survey, the approved Work Plan provided for six indoor air sample locations including five on the first floor (Figure 10) and one on the second floor (Figure 11), four pathway sample locations, and four sub-slab sample locations for Building E. No TI employees are currently located on the mezzanine level and therefore, no indoor air samples were proposed for this area. On 18 January 2013, indoor air and pathway samples were collected from Building E with the HVAC units operating normally. On 20 January 2013, indoor air samples were collected from Building E with the HVAC units off. Sub-slab samples were collected on 15 December 2012.

Building F

Building F is a single story, 3,250 square foot, slab on-grade, office building (Figure 12). Building F was formerly a temporary structure occupied by security personnel. The building was raised above the ground surface and a thick slab was poured beneath. The slab thickness is approximately three feet on the north side of the building and thins out in the southerly direction. The area immediately surrounding Building F is impervious. There are four distinct air handling areas in Building F (Figure 12). Building F is still occupied by security personal and is now also occupied by environmental health and safety and facilities personnel.

No former soil source areas are associated with Building F (Figure 2).

Based on the building survey, the approved Work Plan provided for two indoor air sample locations and one sub-slab sample location for Building F. As agreed to by USEPA and Water Board representatives during the building survey, due to the building slab thickness and the presence of asphalt and concrete around the building, a near-slab sample location was selected immediately outside the southeastern wall of the building in an impervious area covered by concrete and a sample was collected immediately beneath the concrete. The concentrations at this near slab location are expected to be representative of sub-slab concentrations. On 18 January 2013, indoor air samples were collected from Building F with the HVAC units operating normally. On 20 January 2013, indoor air samples were collected from Building F with the HVAC units off. The near-slab sample was collected on 15 December 2012.

Building M

Building M is located between Buildings A and C and is a two story, slab on-grade building with approximately 12,000 square feet of total interior space (Figure 13). The floor of the first floor is covered by an epoxy sealant/coating, which was applied during renovation activities in 2011 and 2012. There are two distinct air handling areas on the first floor and three distinct air handling areas on the second floor in Building M. Due to the nature of work conducted in Building M, the HVAC systems associated with the first floor operate continuously 24 hours per day, 7 days a week. Therefore, no HVAC off samples were collected at Building M.

No former soil source areas are associated with Building M (Figure 2).

Based on the building survey, the approved Work Plan provided for two indoor air sample locations, one pathway air sample location (on the second floor), and one sub-slab sample for Building M. As agreed to by USEPA and Water Board representatives during the building survey, due to the building slab thickness, epoxy coating, and the presence of concrete around Building M, a near-slab sample location was selected immediately outside the eastern wall of the building in an impervious area covered by concrete and a sample was collected immediately beneath the concrete. The concentrations at this near slab location are expected to be representative of sub-slab concentrations. On 18 April 2014, indoor air and pathway samples were collected from Building M with HVAC units operating normally. On 17 April 2014, the near-slab sample was collected from Building M.

Building W

Building W is located on the far western portion of TI's campus and is a two story, slab on-grade building with approximately 45,000 square feet of total interior space (Figures 14 and 15). There are three distinct air handling areas on the first floor and two distinct air handling areas on the second floor of Building W. The shipping and receiving portion of the building is not ventilated, as the overhead doors are typically open and the space is heated by natural gas heaters (Figure 14).

No former soil source areas are associated with Building W (Figure 2).

Based on the building survey and observations, the approved Work Plan provided for five indoor air sample locations on the first floor, one pathway sample, and one sub-slab sample location for Building W. As agreed to by USEPA and Water Board representatives during the building

survey, due to the building slab thickness and the presence of concrete around Building W, a near-slab sample location was selected immediately outside the eastern wall of the building in an impervious area covered by concrete and a sample was collected immediately beneath the concrete (Figure 14). The concentrations at this near slab location are expected to be representative of sub-slab concentrations. The second floor of Building W is not occupied and therefore, no samples were collected on the second floor.

On 18 April 2014, indoor air and pathway samples were collected from Building W with HVAC units operating normally. On 20 April 2014, indoor air and pathway samples were collected from Building W with HVAC units off. On 17 April 2014, the near-slab sample was collected from Building W.

Ambient Air Samples

If adjacent buildings were sampled on the same day, only one ambient air sample was collected for adjacent buildings. Indoor air sampling occurred on six different days with a total of seven ambient samples collected. Two ambient air samples were collected on 18 April 2014. Ambient air samples were collected on the roof, approximately 10 feet from the HVAC intakes of the buildings sampled.

3.3 Sampling Methodology

The following sections outline the sample collection methodology, analytical methods, field documentation, and quality control measures implemented. The number and type of samples collected at each building are presented in Table 3 and also outlined in Sections 3.2 of this report. Photographs are included in Appendix B.

3.3.1 Indoor and Pathway Air Sample Collection

All indoor air and pathway samples were collected using a 6-liter summa canister with an 8- or 10-hour flow controller provided by the laboratory. Following arrival at the site, Langan field personnel removed the Swagelok® nut cap from each 6-liter Summa™ canister, attached the designated, laboratory-supplied, 8- or 10-hour flow controller to the canister, and then fitted the Swagelok® nut cap to the top of the flow controller. The canisters were placed in their approved designated locations. Samples intended to be representative of the breathing zone were placed on desks, chairs, and/or other features such that the intake was at a level of approximately 3 to 5 feet above floor level. Pathway samples were placed on the floor adjacent

to the potential pathway intended for evaluation. Each canister was then opened to allow flow to begin. Approximately 1 hour after commencing sampling, the pressure meter on each canister was checked to ensure that air was flowing properly (i.e., by confirming that the vacuum had dropped from its initial reading). The pressure meter for each canister was checked every two hours thereafter. Approximately 10 (or 8) hours after commencing sampling, as described in the approved Work Plan, with a vacuum of approximately -5 to -7 in Hg remaining in each canister, the valve on each canister was closed. The flow controller was then removed from each canister, and the Swagelok® nut cap was replaced.

The indoor air and pathway samples collected from Buildings C, E, and F in January 2013, and indoor air and pathway samples collected from Buildings A, B, C, M, and W in 2014, were transported under chain of custody (COC) protocol to CalScience Environmental Laboratories, Inc. (CalScience) of Garden Grove, California.

Indoor air and pathway samples were analyzed using method TO-15 with selective ion monitoring (SIM) for VOCs as detailed in Section 1.1.3. As detailed in the approved Work Plan, the indoor air samples were sequentially identified as IA(sample number)-(building ID)-year-month-date (e.g., IA2-C-2014-03-21, the second indoor air sample collected at Building C on 21 March 2014). Pathway samples were sequentially identified as PS(sample number)-(building ID)-year-month-date (e.g., PS1-C-2014-03-21, the first pathway sample collected at Building C on 21 March 2014).

3.3.2 Ambient Air Sample Collection

Due to the multitude of influences on indoor air quality, ambient air samples were collected on the roof, approximately 10 feet from the intakes of HVAC systems at or near buildings where indoor air samples were collected to evaluate potential non-groundwater sources of chemicals in air. Ambient air samples were collected on the same day as the indoor air sampling at each building. If adjacent buildings were sampled on the same day, only one ambient air sample was collected for adjacent buildings. Ambient air samples were sequentially identified as AA(sample number)-(building ID)-year-month-date (e.g., AA1-C-2014-03-21, the first ambient air sample collected at Building C on 21 March 2014). Ambient air samples were collected following the same methodology outlined for indoor air and pathway sampling presented in Section 3.3.1. Following collection of ambient air samples, the samples were transported under COC protocol to CalScience. Ambient air samples were analyzed for VOCs by using EPA method TO-15.

3.3.3 Sub-Slab Vapor Sample Collection Methodology

As detailed in the approved Work Plan, sub-slab samples were collected using Vapor Pins™ manufactured by Cox-Colvin and Associates Incorporated. Sub-slab samples were collected in general accordance with Cox-Colvin and Associates Incorporated's Standard Operating Procedure for Installation and Extraction of the Vapor Pins™ and in general accordance with the California Department of Toxic Substances Control's (DTSC) documents titled "Advisory – Active Soil Gas Investigation" dated April 2012 and "Final, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air" dated October 2011. Vapor Pins™ allow for easy installation and removal and provide an air-tight seal between the slab and the exterior of the pin. New silicone sleeves were used at each sample location and discarded following the initial use.

The sub-slab sampling probes (i.e. Vapor Pins™) were installed just below the slab and allowed to equilibrate for a period of at least two hours prior to sampling. After the equilibration period, leak testing (using a shroud) and shut-in testing was performed at each location prior to purging and sample collection. Helium was used as a tracer gas during field sampling to confirm leakage did not occur during sampling. The sampling system was sealed within a shroud and a 20% concentration of helium was added inside the shroud and maintained at this concentration during sampling. Helium concentrations were tested at the laboratory to verify the quality of the field sampling program. In addition to laboratory testing, field instrumentation was (helium gas meter) used to evaluate whether leakage was occurring by testing pre-sample purge gas. One-liter summa canisters were used for both purging and sample collection along with flow controllers set to a maximum rate of 50 milliliters per minute (mL/min).

Sub-slab vapor samples were sequentially identified as SS(sample number)-(building ID)-year-month-date (e.g., SS1-A-2014-04-17, the first sub-slab sample collected at Building A on 17 April 2014). Sub-slab vapor samples were analyzed for VOCs as detailed in Section 1.1.3. Following the collection of the sub-slab vapor samples, the samples were transported under COC protocol to CalScience. All sub-slab samples were analyzed for VOCs by using USEPA method TO-15.

Buildings with slabs thicker than 6-inches and/or where an epoxy coating was present on the slab did not have sub-slab samples collected. The sampling associated with these buildings was performed as near to the building slab as possible and at locations approved by the Water Board and USEPA, but outside the building footprint. The 'near sub-slab samples' were

collected in impervious areas, adjacent to the building and are considered representative of sub-slab concentrations.

3.3.4 Quality Control Sample Collection

The purpose of collecting field quality assurance/Quality Control (QA/QC) samples is to demonstrate the reliability and defensibility of the data and to assess the consistency of the overall sampling effort, including collection, transport, and analysis. Field QC samples included field duplicate samples. Field duplicate samples are two samples collected at the same time, from the same source at the same depth and sample location as the associated field sample. Field duplicates were collected using the same sample collection methodologies described in Sections 3.3.1 to 3.3.3.

Field duplicates are submitted to the project laboratory as separate samples ("blind"). The purpose of submitting blind duplicate samples is to assess the consistency or precision of the laboratory's analytical system. Indoor air and sub-slab field duplicates were collected at a frequency of 10%, or one per laboratory submittal, whichever was greater. Duplicate samples used nomenclature sequentially identified as DUP (sample number)-(building ID)-year-month-date (e.g., DUP1-C-2014-03-21, the first duplicate sample collected at Building C on 21 March 2014). The primary sample and duplicate sample ID pairs are recorded in the field logs.

4.0 ANALYTICAL RESULTS AND DISCUSSION

This section describes the results of the indoor air investigation, including analytical laboratory analysis results, quality assurance/quality control (QA/QC) results, and adherence to data quality objectives (DQOs) specified in the Quality Assurance Project Plan (QAPP) that was attached to the approved Work Plan. Since all buildings sampled are currently zoned and utilized as commercial spaces, all indoor air results were compared to State of California ESLs for commercial/industrial air and the USEPA's RSLs for commercial/industrial air. In addition, results were compared to the interim Response Action Levels (RALs) for TCE described in the USEPA July 2014 TCE Guidance. Sub-slab results were compared to sub-slab vapor screening levels, derived by dividing the RSLs and ESLs for indoor air by USEPA's default sub-slab vapor to indoor air attenuation factor of 0.01 ("adjusted RSLs and adjusted ESLs"). The attenuation factor of 0.01 has been chosen based on an evaluation of the data presented in the USEPA's *Vapor Intrusion Database: Evaluation and Characterization of Attenuation Factors*, dated 16 March 2012.

Indoor air, pathway, ambient air, and sub-slab sample locations are described in Section 3.2 and are summarized on Table 2. The laboratory analytical results for VOCs in indoor air, pathway, and ambient air samples are summarized in Table 4; and the laboratory analytical results for VOCs in sub-slab vapor samples are summarized in Table 5. Copies of the laboratory analytical reports are presented in Appendix C.

4.1 Building A

Four indoor air sample locations, five pathway sample locations including four on the first floor and one on the second floor, and one sub-slab sample location were sampled at Building A in April 2014.

With the HVAC systems operating normally, all compounds tested were below USEPA RSLs and Water Board ESLs for commercial/industrial air at all indoor air and pathway sample locations. In addition, TCE was only detected in three of nine samples and all concentrations were significantly below interim RALs set forth in the USEPA July 2014 TCE Guidance. As approved and discussed in Section 3.2, no samples were collected from Building A with HVAC units off.

No compounds were detected in the sub-slab sample at concentrations exceeding their respective and adjusted commercial/industrial ESLs and RSLs.

Based upon the analytical data for Building A, VOCs in the subsurface do not cause an unacceptable risk to building occupants and indoor air quality. No further sampling or mitigation is recommended for Building A.

4.2 Building B

Three indoor air sample locations, three pathway sample locations, and two sub-slab sample locations were sampled at Building B in April 2014.

With the HVAC units operating normally and with HVAC units off, all compounds tested were below USEPA RSLs and Water Board ESLs for commercial/industrial air at all indoor air and pathway sample locations. In addition, TCE was significantly below interim RALs set forth in the USEPA July 2014 TCE Guidance.

No compounds were detected in the two sub-slab samples at concentrations exceeding their respective and adjusted commercial/industrial ESLs and RSLs.

Based upon the analytical data for Building B, VOCs in the subsurface do not cause an unacceptable risk to building occupants and indoor air quality. No further sampling or mitigation is recommended for Building B.

4.3 Building C

Seven indoor air sample locations (including six on the first floor and one on the second floor), two pathway sample locations, and four sub-slab sample locations were sampled at Building C in January 2013 and March 2014.

With the HVAC operating normally, all compounds tested were below USEPA RSLs and Water Board ESLs for commercial/industrial air at all indoor air and pathway sample locations.

A first round of indoor and pathway air sampling was conducted in January 2013 with HVAC units on and off. All compounds tested were below USEPA's RSLs and Water Board ESLs for commercial/industrial air at all indoor air and pathway sample locations with HVAC units on. With HVAC units off, all compounds tested (except for PCE) were below the commercial/industrial ESLs and RSLs at all locations in Building C. Additionally, TCE was not detected above the USEPA interim RALs in any samples collected with HVAC operating or off.

In January 2013 with HVAC units off, PCE was detected at six of nine sample locations at concentrations ranging from 2.7 to 18 $\mu g/m^3$, all of which are below the USEPA RSL of 47 $\mu g/m^3$, but above the Water Board ESL of 2.1 $\mu g/m^3$.

Considering the PCE exceedances with HVAC units off, a preferential pathway evaluation was completed, which identified interior groundwater monitoring wells, janitor closet slab penetrations and an elevator pit for sealing. The interior monitoring wells had the well boxes replaced in July 2013, and sealed with Liquid Boot® in August 2013. The janitor closet slab penetrations were also sealed with Liquid Boot® in December 2013. The elevator pit was cleaned and sealed with an epoxy coating in February 2014. Additionally, active soil and groundwater remediation activities (including, most recently, chemical oxidation) beneath Building C continue to significantly reduce VOC concentrations in the subsurface.

A second round of sampling was performed in March 2014 to evaluate the effectiveness of the sealing activities which had taken place since the initial sampling event.

On 21 and 23 March 2014, the same indoor air and pathway air locations were sampled, as in January 2013, with HVAC on and off. All compounds tested were again below USEPA's RSLs and Water Board ESLs for commercial/industrial air at all indoor air and pathway sample locations, with HVAC units on. TCE was not detected above laboratory reporting limits (< 0.13 µg/m^3) at any locations with HVAC on. It should be noted, with HVAC units on, PCE concentrations were significantly reduced from January 2013 concentrations. Four of nine sample locations (including pathway samples), showed PCE concentrations decreased from detectable levels (below screening criteria) to non-detect levels. Detected PCE concentrations ranged from 0.27 to 0.52 µg/m^3, which was down from a high of 1.8 µg/m^3 prior to sealing activities.

In March 2014 with HVAC units off, all compounds tested (except for PCE) were below the Water Board's commercial/industrial ESLs and USEPA's RSLs at all sample locations. PCE was detected at three of nine sample locations above the Water Board's ESL of 2.1 µg/m^3 , but below USEPA's RSL of 47 µg/m^3 at concentrations ranging from 4.0 to 8.8 µg/m^3 (down from six of nine sample locations at concentrations ranging up to 18 µg/m^3 in the January 2013 sampling event). It should be noted that no TCE ESL, RSL or interim RAL exceedances were observed. TCE was not detected (< 0.13 µg/m^3) in six of nine samples.

The combination of mitigation and remediation efforts has contributed to significant reduction of PCE concentrations in indoor air.

In the sub-slab vapor samples, PCE was detected at one of the four sampling locations. At sub-slab sample location SS1-C-2012-12-15, PCE was detected at a concentration of 5,200 µg/m^3 exceeding its adjusted commercial ESL of 210 µg/m^3 and adjusted commercial RSL of 4,700 µg/m^3. No other compounds detected in the sub-slab samples were above their adjusted commercial/industrial ESLs and RSLs.

Although no unacceptable risks to building occupants currently exists with HVAC systems operating, TI will begin the installation a sub-slab depressurization system for Building C in early 2015 to further reduce the potential for PCE vapor intrusion. The Sub-Slab Depressurization System design is included in Appendix D.

4.4 Building E

Six indoor air sample locations including five on the first floor and one on the second floor, four pathway sample locations, and four sub-slab sample locations were sampled at Building E.

With the HVAC operating normally and with the HVAC off, all compounds tested were below the commercial/industrial USEPA ESLs and Water Board RSLs and the USEPA interim TCE RALs in occupied areas at all indoor air sample locations in Building E.

Similarly, with the HVAC operating normally and with HVAC off, all compounds tested were below the commercial/industrial USEAP ESL's and Water Board RSL's for all pathway sample locations, except for one. TCE was detected above its Water Board ESL and USEPA RSL at one pathway sample location (PS4-E) in an unoccupied, locked tunnel located beneath Building E, with HVAC systems both on and off. TCE was detected in pathway samples (PS4-E-2013-01-18 and PS4-E-2013-01-20) collected in the tunnel at concentrations of 16 and 18 µg/m^3, with HVAC systems on and off, respectively. The tunnel is locked at all times and only briefly accessed for inspections (for about 15 minutes) on a quarterly basis by facility staff. Additionally, a sign indicating that it is a "Restricted Area - Authorized Access Only – Contact EHS (Environmental Health and Safety Department) For Authorization" has been installed at the entrance to the tunnel to inform all personnel attempting to enter the tunnel of the need to obtain permission from the TI EHS department to enter the tunnel. Considering how infrequently the tunnel is accessed, the exposure frequency for this area is significantly less than the assumed 250 days per year exposure frequency used in the calculation of the USEPA ESLs and Water Board RSLs.

With HVAC off, 1,4-DCB was detected at a concentration of 1.8 µg/m^3 in the pathway sample (PS1-E-2013-01-20) collected in front of the elevator located in the southern part of the building. The 1,4-DCB concentration exceeded both the commercial/industrial ESL and RSL of 1.1 µg/m^3. 1,4-DCB was not detected in sub-slab results and therefore, the detected concentrations are likely related to a small, indoor source, and not subsurface conditions. According to the Agency for Toxic Substances and Disease Registry (ATSDR), 1,4-DCB is used as a fumigant and is commonly found in disinfectants and space deodorants for toilets and refuse containers. No other commercial/industrial exceedances were reported at this location.

TCE was detected at one of two sub-slab sample locations collected at Building E. At sub-slab sample location SS2-E-2012-12-15, TCE was detected at a concentration of 800 µg/m^3, which

exceeds its adjusted commercial ESL and RSL of 300 µg/m^3. However, apart from the locked subterranean tunnel, there is no evidence of TCE intrusion into Building E. No other compounds detected in the sub-slab samples were above their adjusted commercial/industrial ESLs and RSLs.

Based upon the analytical data for Building E, VOCs in the subsurface do not result in an unacceptable risk to indoor air quality within normally occupied working areas. Since no TCE was detected above ESL, RSLs or USEPA interim TCE RALs in any occupied area of Building E (with HVAC on and HVAC off) and because access to the tunnel beneath the building is very limited and controlled, no further sampling or mitigation is recommended for Building E.

4.5 Building F

Two indoor air sample locations and one sub-slab sample location were tested at Building F. With HVAC units operating normally and with HVAC units off, all compounds tested were below their respective USEPA RSLs and Water Board ESLs for commercial/industrial air at both indoor air sample locations. TCE was also significantly below interim RALs set forth in the USEPA July 2014 TCE Guidance.

No compounds were detected in the sub-slab sample at concentrations exceeding their respective adjusted commercial/industrial USEPA ESLs and Water Board RSLs.

Based upon the analytical data for Building F, VOCs in the subsurface do not cause an unacceptable risk to building occupants and indoor air quality. No further sampling or mitigation is recommended for Building F.

4.6 Building M

Two indoor air sample locations, one pathway air sample location (on the second floor) and one near-slab sample location were sampled at Building M.

With HVAC units operating normally, all compounds tested were below RSLs and ESLs and the interim USEPA TCE RAL for commercial/industrial air at all indoor air and pathway sample locations. TCE was not detected above the laboratory's reporting limit in any samples collected. As approved and discussed in Section 3.2, no samples were collected from Building M with HVAC units off.

No compounds were detected in the near-slab sample at concentrations exceeding their respective adjusted commercial/industrial ESLs and RSLs.

Based upon the analytical data for Building M, VOCs in the subsurface do not cause an unacceptable risk to building occupants and indoor air quality. No further sampling or mitigation is recommended for Building M.

4.7 Building W

Five indoor air sample locations on the first floor, one pathway sample location, and one near-slab sample location were sampled at Building W. All compounds tested were below RSLs and ESLs for commercial/industrial air at both indoor air sample locations with HVAC units operating normally and with HVAC units off. TCE was not detected above the laboratory's reporting limit in any samples collected, and thus there were no exceedances of the USEPA interim RALs.

No compounds were detected in the near-slab sample at concentrations exceeding their respective commercial/industrial ESLs and RSLs.

Based upon the analytical data for Building W, VOCs in the subsurface do not cause an unacceptable risk to building occupants and indoor air quality. No further sampling or mitigation is recommended for Building W.

5.0 CONCLUSIONS

The on-property vapor intrusion assessment for the Western Parcels at the site was conducted in consultation with the USEPA and Water Board. All work was conducted in general accordance with the approved Work Plans dated 4 December 2012 and 9 April 2014. The overall objective of this assessment was to evaluate whether VOCs present in the groundwater beneath the site are migrating from the subsurface into indoor air at levels that may pose a risk to site workers or building occupants. The assessment consisted of the collection of indoor, pathway, and ambient air, and sub-slab vapor samples from Western Parcels Buildings A, B, C, E, F, M, and W located at the TI's campus in Santa Clara in January 2013, and March and April 2014. Sample locations were selected and finalized based on the pre-sampling surveys conducted with the USEPA and/or Water Board.

The indoor air sample results were compared to the USEPA RSLs for industrial air quality criteria and the Water Board ESLs for commercial air quality criteria. The results were also

compared to interim RALs in USEPA's July 2014 Guidance, which were issued after the work plans were approved. The results indicate that indoor air concentrations in the areas occupied throughout a normal business day are below USEPA and Water Board screening criteria and below the USEPA interim TCE RALs, both with HVAC on and HVAC off. Pathway samples and/or indoor air samples collected with HVAC units off with concentrations of VOCs above either the Water Board's ESLs or USEPA's RSLs are discussed below.

Building C

As noted, with HVAC operating normally, all compounds tested were below USEPA RSLs, Water Board ESLs, and USEPA interim TCE RALs for commercial/industrial air at all indoor air and pathway sample locations. With HVAC systems off, PCE was detected above its ESL of 2.1 $\mu g/m^3$ at a total of six locations in Building C in 2013 at concentrations ranging from 2.7 to 18 $\mu g/m^3$. Following the 2013 indoor air sampling, a preferential pathway evaluation was completed at Building C. The evaluation identified interior monitoring wells, janitor closet slab penetrations and an elevator pit for sealing and vapor intrusion mitigation. The interior monitoring well protective boxes were replaced and the annular space was sealed with Liquid Boot®. The janitor closet slab penetrations were also sealed with Liquid Boot®. The elevator pit was cleaned and sealed with an epoxy coating. Additionally, active soil and groundwater remediation activities (including, most recently, chemical oxidation) beneath Building C continue to significantly reduce VOC concentrations in the subsurface.

During the most recent sampling event (March 2014) and following preferential pathway sealing, the indoor air and pathway results were much improved. Again, no exceedances of PCE or other compounds were reported with HVAC units operating. With HVAC units off, PCE was detected above its Water Board ESL (but below its USEPA RSL) at only three of the nine sample locations, but at significantly lower concentrations than previously detected. No other exceedances were reported.

The combination of these mitigation efforts and the continued remediation efforts has contributed to a significant reduction of PCE indoor air concentrations. Although no unacceptable risks to building occupants currently exists with HVAC systems operating, TI will be installing a sub-slab depressurization system to further reduce the potential for PCE vapor intrusion at Building C. Installation is expected to begin in early 2015.

Building E

TCE concentrations were detected in a pathway sample collected from an unoccupied, locked tunnel beneath Building E, with HVAC systems on and off, at concentrations above USEPA RSLs and Water Board ESLs. The tunnel beneath Building E is unoccupied and is locked at all times. It is visited only briefly (for about 15 minutes for inspection) on a quarterly basis by facility staff. A sign indicating that it is a "Restricted Area - Authorized Access Only – Contact EHS (Environmental Health and Safety Department) For Authorization" has been installed at the entrance to the tunnel to inform all personnel attempting to enter the tunnel of the need to obtain permission from the EHS department to enter the tunnel. Therefore, the exposure frequency for this area is significantly less than the assumed 8 hours per day, 250 days per year exposure frequency used in the calculation of the USEPA ESLs and Water Board RSLs and there is no unacceptable risk to building occupants and site workers.

6.0 RECOMMENDATIONS

Indoor air VOC concentrations in the occupied areas at all the buildings sampled as part of the on-property assessment for Western Parcels at TI's Santa Clara campus (Buildings A, B, C, E, F, M, and W) are below USEPA and Water Board screening criteria and the USEPA's interim RALs for TCE, under normal operating conditions, (HVAC units operating). Based on data presented in this report, there are no unacceptable health risks in Western Parcel buildings. With the exception of voluntary proactive mitigation measures to reduce potential PCE vapor intrusion at Building C, no further action is recommended for any of the on-property Western Parcels buildings. As vapor mitigation systems (if any) are designed and installed, vapor mitigation system operation and maintenance plans will be prepared and provided to the Water Board and USEPA.

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USEPA, 2013a. Regional Screening Levels for Chemical Contaminants. November. Available Online at: <http://www.epa.gov/region9/superfund/prg/>

USEPA, 2013b. EPA Region 9 Guidelines and Supplemental Information Needed for Vapor Intrusion Evaluations at the South Bay National Priorities List (NPL) Sites. December 3.

TABLES

Table 1
Groundwater Analytical Results, October 2013
Operable Unit 1
Texas Instruments
Santa Clara, California

Chemical Name			1,1,1-TCA	1,1,2-TCA	1,1-DCA	1,1-DCE	1,2,3-TCB	1,2,4-TCB	1,2-DCB	1,2-DCA	1,3-DCB	1,4-DCB	Carbon Disulfide	Chloro-benzene	Chloroform	cis-1,2-DCE	Ethyl-benzene	Freon 113	m,p-Xylenes	MTBE	O-Xylene	PCE	trans-1,2-DCE	TCE	Vinyl Chloride	All Other VOCs	Perchlorate
	Unit		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Well ID	Sample Date	DUP																									
Cleanup Standard (µg/L)			**200**	**--**	**5**	**6**	**--**	**--**	**60**	**--**	**--**	**5**	**--**	**--**	**5**	**6**	**68**	**1,200**	**175[A]**	**--**	**175[A]**	**5**	**10**	**5**	**0.5**	**--**	**--**
A-Aquifer Wells																											
11A	10/15/13		0.6	< 0.5	**9.5**	2.7	< 0.5	3.7	3.7	< 0.5	0.5	0.9	< 0.5	< 0.5	< 0.5	1.7	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	3.5	0.5	4.1	< 0.5	ND	NA
18A	10/15/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**15**	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	1	**12**	< 0.5	ND	NA
21A	10/15/13		< 0.5	< 0.5	4.1	3.2	< 0.5	0.6	0.9	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**59**	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	1.2	1.5	**100**	**2.3**	ND	NA
	10/15/13	DUP-1	< 0.5	< 0.5	4.2	3.6	< 0.5	0.6	0.9	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**58**	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	1.2	1.1	**96**	**2.4**	ND	NA
30A	10/15/13		1.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**18**	< 1.0	7.4	< 1.0	< 1.0	< 1.0	**6.8**	< 1.0	**110**	< 1.0	ND	NA
32A	10/16/13		< 1.7	< 1.7	**5.8**	3	< 1.7	< 1.7	4.9	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	**220**	< 1.7	65	< 1.7	< 1.7	< 1.7	2.5	4.1	**84**	**30**	ND	NA
	10/16/13	DUP-2	< 1.7	< 1.7	**5.1**	2.4	< 1.7	< 1.7	4.4	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	**200**	< 1.7	61	< 1.7	< 1.7	< 1.7	2.5	3	**79**	**28**	ND	NA
38A	10/16/13		1.1	< 0.5	1.3	0.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	1.7	< 0.5	1.1	< 0.5	ND	NA
39A	10/15/13		4.2	< 1.7	**12**	< 1.7	< 1.7	25	**61**	< 1.7	89	**250**	< 1.7	25	< 1.7	**28**	< 1.7	< 6.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	**18**	ND	NA
44A	10/17/13		1.1	< 0.5	1	0.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.7	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	1.6	< 0.5	0.5	< 0.5	ND	NA
46A	10/16/13		3.7	< 3.6	**10**	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6	**220**	< 3.6	15	< 3.6	< 3.6	< 3.6	< 3.6	3.9	**610**	< 3.6	ND	NA
48A	10/16/13		< 1.7	< 1.7	4.8	2.5	< 1.7	< 1.7	5.8	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	**190**	< 1.7	110	< 1.7	< 1.7	< 1.7	2.5	2.9	**87**	**25**	ND	NA
50A	10/16/13		< 0.7	< 0.7	4.7	1	< 0.7	< 0.7	3.6	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	**140**	< 0.7	< 2.9	< 0.7	< 0.7	< 0.7	< 0.7	3.1	**6.5**	**74**	ND	NA
58A	10/16/13		< 2.5	< 2.5	**5.1**	4.2	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	**100**	< 2.5	12	< 2.5	< 2.5	< 2.5	< 2.5	3.2	**500**	< 2.5	ND	NA
62A	10/15/13		5.9	< 0.5	3.1	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**46**	< 0.5	4.4	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**58**	< 0.5	ND	NA
68A	12/23/13		0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	4.1	< 0.5	5.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	ND	NA
69A	12/23/13		0.6	< 0.5	< 0.5	0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.7	6.5	< 0.5	3.9	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**41**	< 0.5	ND	NA
70A	10/16/13		< 1.7	< 1.7	2.9	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	**140**	< 1.7	6.8	< 1.7	< 1.7	< 1.7	< 1.7	1.8	**250**	< 1.7	ND	NA
72A	10/16/13		< 1.7	< 1.7	**7**	2.3	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	**250**	< 1.7	< 6.7	< 1.7	< 1.7	< 1.7	2.4	2.8	**230**	< 1.7	ND	NA
89A	10/15/13		2.7	2	**48**	**14**	< 0.5	< 0.5	36	1.4	< 0.5	< 0.5	< 0.5	2.1	< 0.5	**8.4**	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	**60**	2.1	**35**	ND	NA
101A	10/16/13		< 0.5	< 0.5	1.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**9.3**	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	4.7	< 0.5	ND	NA
103A	10/16/13		< 1.3	< 1.3	1.4	1.8	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	**48**	< 1.3	7.4	< 1.3	< 1.3	< 1.3	1.7	< 1.3	**210**	< 1.3	ND	NA
113A	10/16/13		0.8	< 0.5	0.7	0.9	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.6	**8.3**	< 0.5	2.8	< 0.5	< 0.5	< 0.5	**5.2**	< 0.5	**38**	< 0.5	ND	NA
128A	10/16/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**11**	< 0.5	4.4	< 0.5	< 0.5	< 0.5	< 0.5	0.8	**6.8**	< 0.5	ND	NA
136A	10/16/13		< 0.5	< 0.5	2.4	0.9	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**90**	< 0.5	6.1	< 0.5	< 0.5	< 0.5	< 0.5	0.8	**62**	**0.6**	ND	NA
139A	12/23/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	ND	NA
141A	12/23/13		< 1.0	< 1.0	< 1.0	< 1.0	27	< 1.0	3.6	< 1.0	8.3	17	< 1.0	2.4	< 1.0	**8.3**	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	1.0	**27**	**1.6**	ND	NA
142A	12/23/13		< 0.5	< 0.5	< 0.5	0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**38**	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	2.9	1.2	**88**	< 0.5	ND	NA
143A	12/23/13		140	< 100	< 100	< 100	310	970	**340**	< 100	260	**1,200**	< 100	170	< 100	< 100	**9,600**	< 400	**31,000**	< 100	**9,000**	< 100	< 100	< 100	< 100	ND	NA
145A	10/15/13		< 2.5	< 2.5	4	4.8	< 2.5	< 2.5	38	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	**230**	< 2.5	< 10	< 2.5	< 2.5	< 2.5	< 2.5	5.3	**5.3**	**130**	ND	NA
146A	10/17/13		< 0.5	< 0.5	**13**	1.1	< 0.5	1.5	42	< 0.5	0.8	**6.9**	< 0.5	< 0.5	< 0.5	**35**	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	3.1	< 0.5	1.3	< 0.5	ND	NA
	10/17/13	DUP-3	< 0.5	< 0.5	**13**	1.1	< 0.5	2.9	**75**	< 0.5	1.5	**13**	< 0.5	< 0.5	< 0.5	**53**	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	4.9	< 0.5	1.9	< 0.5	ND	NA
147A	12/23/13		< 1.3	< 1.3	3.8	3.4	< 1.3	1.5	24	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	**210**	< 1.3	< 5.0	< 1.3	< 1.3	< 1.3	3.1	4.2	**54**	14	ND	NA
147A	10/16/13		< 1.0	< 1.0	3.1	2.6	< 1.0	< 1.0	24	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**200**	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0	3.2	3.9	**51**	**15**	ND	NA
	10/16/13	DUP-4	< 1.0	< 1.0	3.4	3.1	< 1.0	< 1.0	25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**180**	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0	3.1	4.5	**51**	**16**	ND	NA
148A	10/16/13		< 1.7	< 1.7	**5.1**	< 1.7	< 1.7	< 1.7	50	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	**210**	< 1.7	< 6.7	< 1.7	< 1.7	< 1.7	< 1.7	5.3	3.8	**76**	ND	NA
149A	10/16/13		< 2.5	< 2.5	**5.9**	2.9	< 2.5	< 2.5	12	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	**420**	< 2.5	< 10	< 2.5	< 2.5	< 2.5	< 2.5	**10**	**49**	**39**	ND	NA
150A	10/17/13		< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	**5,100**	**27,000**	**4,700**	**95,000**	< 250	**29,000**	< 250	< 250	**1,700**	**500**	ND	NA
151A	12/23/13		2.6	< 10	**21**	4.4	< 1.0	< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**180**	< 1.0	12	< 1.0	< 1.0	< 1.0	4.4	4.8	**25**	**24**	ND	NA
153A	10/15/13		14	< 1.0	**28**	**95**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	14	< 1.0	< 1.0	< 1.0	**6.3**	< 1.0	**5.3**	< 1.0	ND	NA
154A	10/17/13		< 20	< 20	**170**	< 20	< 100	270	**8,000**	< 20	210	**1,200**	< 20	< 20	< 20	**300**	**3,200**	< 80	**11,000**	< 20	**2,600**	**2,600**	< 20	**760**	< 20	ND	NA
	10/17/13	DUP-5	< 50	< 50	**170**	< 50	51	430	**8,000**	< 50	220	**1,300**	< 50	< 50	< 50	**240**	**3,400**	< 200	**11,000**	< 50	**2,500**	**2,800**	< 50	**710**	< 50	ND	NA
155A	10/17/13		1.5	< 0.5	**5.4**	< 0.5	< 0.5	< 0.5	7.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	3.5	0.8	< 2.0	3	< 0.5	3	**84**	< 0.5	2.1	< 0.5	ND	NA
156A	12/23/13		< 0.5	< 0.5	**5.0**	0.7	< 0.5	6.6	**69**	< 0.5	7.6	**14**	< 0.5	11	< 0.5	**66**	< 0.5	< 2.0	0.6	< 0.5	< 0.5	< 0.5	4.7	3.9	130	ND	NA
157A	12/23/13		< 0.5	< 0.5	**6.5**	1.6	< 0.5	21	**88**	< 0.5	11	**24**	< 0.5	12	< 0.5	**76**	< 0.5	< 2.0	0.9	< 0.5	< 0.5	< 0.5	5.0	3.4	320	ND	NA
LF07	10/17/13		1.9	< 0.5	0.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.9	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**98**	< 0.5	ND	< 4.0
	10/17/13	DUP-6	1.9	< 0.5	0.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.9	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**93**	< 0.5	ND	< 4.0
LF19	10/17/13		1.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**92**	< 0.5	ND	61
LF21	10/17/13		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 4.0
	10/17/13	DUP-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 4.0
M19A	10/17/13		1.8	< 0.5	1.3	0.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.4	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**44**	< 0.5	ND	NA
ME43A	10/15/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	6.5	< 0.5	< 0.5	< 0.5	< 0.5	2.8	< 0.5	**98**	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	**8.3**	1.9	**38**	**0.8**	ND	NA
MM01A	10/15/13		< 1.0	< 1.0	2.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**130**	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0	1.3	2.3	**9.5**	< 1.0	ND	NA
MM07A	10/16/13		< 2.5	< 2.5	4	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	98	< 2.5	**370**	< 2.5	< 10	< 2.5	< 2.5	< 2.5	**9.9**	3.8	**71**	**8.2**	ND	NA
MM17A	10/17/13		< 1.0	< 1.0	2.5	< 1.0	< 1.0	< 1.0	1.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**75**	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0	**34**	1.8	**120**	**2.2**	ND	NA
MM31A	10/17/13		< 1.7	< 1.7	2.4	< 1.7	< 1.7	< 1.7	2.9	< 1.7	< 1.7	< 1.7	< 1.7	2	< 1.7	**100**	< 1.7	< 6.7	< 1.7	< 1.7	< 1.7	**7.2**	1.7	**190**	< 1.7	ND	NA
	10/17/13	DUP-8	< 1.7	< 1.7	2.7	< 1.7	< 1.7	< 1.7	3.1	< 1.7	< 1.7	< 1.7	< 1.7	2	< 1.7	**100**	< 1.7	< 6.7	< 1.7	< 1.7	< 1.7	**7.7**	2	**210**	< 1.7	ND	NA
MM33A	10/17/13		< 0.5	< 0.5	0.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**32**	< 0.5	3.5	< 0.5	21	< 0.5	< 0.5	< 0.5	2.7	**1.4**	ND	NA
MM34A	10/15/13		0.6	< 0.5	4	1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**92**	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	1.4	1.7	**60**	**2.3**	ND	NA
MM37A	10/17/13		< 1.3	< 1.3	2.9	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	**65**	< 1.3	< 5.0	< 1.3	< 1.3	< 1.3	< 1.3	2.3	**220**	< 1.3	ND	NA
MM40A	10/15/13		< 0.5	< 0.5	2	**8.6**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**89**	< 0.5	4.7	< 0.5	< 0.5	< 0.5	< 0.5	1.2	**19**	**2.5**	ND	NA
MW18AR	10/16/13		< 1.0	< 1.0	2	< 1.0	< 1.0	< 1.0	17	< 1.0	< 1.0	< 1.0	< 1.0	18	< 1.0	**90**	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0	**17**	2.3	**130**	< 1.0	ND	NA
RC4A	12/23/13		< 1.3	< 1.3	**5.2**	5.5	1.9	8.6	42	< 1.3	< 1.3	1.8	< 1.3	< 1.3	< 1.3	**220**	< 1.3	< 5.0	< 1.3	< 1.3	< 1.3	< 1.3	4.0	**6.6**	**58**	ND	NA

Table 1
Groundwater Analytical Results, October 2013
Operable Unit 1
Texas Instruments
Santa Clara, California

Chemical Name			1,1,1-TCA	1,1,2-TCA	1,1-DCA	1,1-DCE	1,2,3-TCB	1,2,4-TCB	1,2-DCB	1,2-DCA	1,3-DCB	1,4-DCB	Carbon Disulfide	Chloro-benzene	Chloroform	cis-1,2-DCE	Ethyl-benzene	Freon 113	m,p-Xylenes	MTBE	O-Xylene	PCE	trans-1,2-DCE	TCE	Vinyl Chloride	All Other VOCs	Perchlorate
	Unit		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Well ID	Sample Date	DUP																									
Cleanup Standard (µg/L)			**200**	**--**	**5**	**6**	**--**	**--**	**60**	**--**	**--**	**5**	**--**	**--**	**5**	**6**	**68**	**1,200**	**175[A]**	**--**	**175[A]**	**5**	**10**	**5**	**0.5**	**--**	**--**
A/B1-Aquifer Wells																											
17A/B1	10/15/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**28**	< 0.5	ND	NA
45A/B1	10/15/13		< 1.0	< 1.0	1	< 1.0	< 1.0	< 1.0	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**29**	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0	**5.3**	< 1.0	**100**	< 1.0	ND	NA
52A/B1	10/15/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**59**	< 0.5	2.1	< 0.5	< 0.5	< 0.5	**13**	1.6	**57**	< 0.5	ND	NA
71A/B1	10/16/13		14	< 1.3	**6.2**	3.7	< 1.3	< 1.3	2.7	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	**160**	< 1.3	24	< 1.3	< 1.3	< 1.3	1.7	< 1.3	**180**	**7.9**	ND	NA
97A/B1	10/16/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	14	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	ND	NA
98A/B1	10/16/13		6.8	< 1.3	**7.9**	2.8	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	**180**	< 1.3	24	< 1.3	< 1.3	< 1.3	3.5	1.9	**160**	< 1.3	ND	NA
102A/B1	10/16/13		0.6	< 0.5	0.6	0.7	< 0.5	< 0.5	0.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**19**	< 0.5	2.9	< 0.5	< 0.5	< 0.5	0.5	1.3	**65**	< 0.5	ND	NA
104A/B1	10/16/13		2	< 0.5	3	1.4	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**41**	< 0.5	3.8	< 0.5	< 0.5	< 0.5	1.3	< 0.5	**67**	< 0.5	ND	NA
105A/B1	10/16/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	ND	NA
106A/B1	10/16/13		2.2	< 0.5	2.6	2.4	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**45**	< 0.5	4.2	< 0.5	< 0.5	< 0.5	0.6	< 0.5	**150**	< 0.5	ND	< 4.0
108A/B1	10/15/13		1.3	< 0.5	0.6	1.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**6.2**	< 0.5	ND	< 4.0
110A/B1	10/15/13		3	< 0.5	1.7	2.1	< 0.5	0.7	3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**44**	< 0.5	14	< 0.5	< 0.5	< 0.5	1.5	< 0.5	**80**	< 0.5	ND	NA
111A/B1	10/17/13		1.9	< 0.5	1	4.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.4	< 0.5	4.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**27**	< 0.5	ND	NA
112A/B1	10/15/13		0.9	< 0.5	0.7	1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	5.6	< 0.5	2.1	< 0.5	< 0.5	< 0.5	2.3	< 0.5	**46**	< 0.5	ND	NA
114A/B1	10/16/13		0.7	< 0.5	0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	3.6	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	**6.6**	< 0.5	**53**	< 0.5	ND	NA
115A/B1	10/15/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**25**	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**96**	< 0.5	ND	NA
B1-Aquifer Wells																											
14B1	10/16/13		0.8	< 0.5	0.6	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**34**	< 0.5	9.9	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**72**	< 0.5	ND	NA
15B1	10/15/13		< 1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**91**	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**110**	< 1.0	ND	NA
	10/15/13	DUP-9	< 1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0	1.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**95**	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**100**	< 1.0	ND	NA
21B1	10/16/13		< 3.1	< 3.1	4.8	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	**320**	< 3.1	< 13	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	**65**	**3.7**	ND	NA
72B1	10/16/13		7.6	< 1.7	2.8	3.2	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	**180**	< 1.7	38	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	**180**	**7.3**	ND	NA
77B1	10/17/13		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**150**	< 1.0	6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**59**	< 1.0	ND	NA
83B1	10/15/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	ND	NA
100B1	10/16/13		< 1.0	< 1.0	1.8	2.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**150**	< 1.0	21	< 1.0	< 1.0	< 1.0	< 1.0	1	**220**	< 1.0	ND	NA
107B1	10/16/13		1.2	< 0.5	0.7	1.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.8	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**7.5**	< 0.5	ND	< 4.0
	10/16/13	DUP-10	1.2	< 0.5	0.7	1.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.9	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**7.3**	< 0.5	ND	< 4.0
124B1	10/16/13		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**100**	< 1.0	12	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	< 1.0	ND	NA
125B1	10/16/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	4.7	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	ND	NA
126B1	10/16/13		1.5	< 1.3	< 1.3	2.8	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	**160**	< 1.3	20	< 1.3	< 1.3	< 1.3	< 1.3	2.2	**120**	< 1.3	ND	NA
127B1	10/16/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**23**	< 0.5	3.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**9.8**	< 0.5	ND	NA
140B1	10/17/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**20**	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	ND	NA
LF02	10/17/13		5	< 0.5	3.2	**6.2**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**1.1**	**79**	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	5.3	**190**	**2.6**	ND	< 4.0
LF06	10/17/13		3.2	< 0.5	2.1	2.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.3	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**55**	< 0.5	ND	< 4.0
MM14B1	10/16/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.3	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.6	< 0.5	ND	NA
ME07B1	10/17/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**22**	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**57**	< 0.5	ND	NA
MM17B1	10/17/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.9	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**1.3**	< 0.5	ND	NA
B2-Aquifer Wells																											
39B2	10/15/13		< 0.5	< 0.5	< 0.5	1.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	2	< 0.5	**3.9**	< 0.5	< 0.5	< 0.5	**5.7**	< 0.5	**78**	< 0.5	ND	NA
71B2	10/16/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**15**	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**10**	< 0.5	ND	NA
ME19B2	10/15/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.9	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.4	< 0.5	ND	NA
MM33B2	10/17/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	4.1	< 0.5	ND	NA
Other Wells																											
HILTONC	10/16/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	ND	NA
Trip Blank Samples																											
TB-1	10/15/13		< 0.5	< 0.5	< 0.5	< 0.5	0.8	3.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	ND	NA
TB-2	10/16/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	ND	NA
TB-3	10/17/13		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	ND	NA

Notes:
A. Cleanup standard is for total xylenes.
µg/L - micrograms per Liter
VOCs - Volatile Organic Compounds
1,1,1-TCA - 1,1,1-Trichloroethane
1,1,2-TCA - 1,1,2-Trichloroethane
1,1-DCA - 1,1-Dichloroethane
1,1-DCE - 1,1-Dichloroethene
1,2,3-TCB -1,2,3-Trichlorobenzene
1,2,4-TCB - 1,2,4-Trichloro-benzene
1,2-DCB - 1,2-Dichlorobenzene
1,2-DCA - 1,2-Dichloroethane
1,3-DCB - 1,3-Dichlorobenzene
1,4-DCB - 1,4-Dichlorobenzene
cis-1,2-DCE - cis-1,2-Dichloroethene
PCE - Tetrachloroethene
trans-1,2-DCE - trans-1,2-Dichloroethene
Bold - Analytes detected above the laboratory reporting limit and cleanup standard are shown in bold lettering.
ND - Not detected above the laboratory reporting limit
NA - Not Analyzed
TB: - Trip Blank Sample
DUP - Duplicate field Sample

Table 2
Description of Sample Locations
Texas Instruments Incorporated
Santa Clara, California
Project: 750620701

Sample ID	Matrix	HVAC On	HVAC Off	Location
Building A				
SS1-A-2014-mm-dd	Sub-Slab	X		Utility room in the western area
IA1-A-2014-mm-dd	Indoor Air	X		Northwestern lab area
IA2-A-2014-mm-dd	Indoor Air	X		Northeastern lab area
IA3-A-2014-mm-dd	Indoor Air	X		Southern lab area
IA4-A-2014-mm-dd	Indoor Air	X		Western lab area
PS1-A-2014-mm-dd	Pathway	X		Infront of the elevator (western side)
PS2-A-2014-mm-dd	Pathway	X		Women's bathroom (western side)
PS3-A-2014-mm-dd	Pathway	X		Mechanical room
PS4-A-2014-mm-dd	Pathway	X		Women's bathroom (eastern side)
PS5-A-2014-mm-dd	Pathway	X		Second floor (infront of the staircase)
AA-A-2014-mm-dd	Ambient Air [1]	X		Roof, within 10 feet of HVAC
Building B				
SS1-B-2014-mm-dd	Sub-Slab	X		Utility room in the southwestern area
SS2-B-2014-mm-dd	Sub-Slab	X		Utility room in the southeastern area
IA1-B-2014-mm-dd	Indoor Air	X	X	Northern portion of the cafeteria space
IA2-B-2014-mm-dd	Indoor Air	X	X	South-central portion of the cafeteria space
IA3-B-2014-mm-dd	Indoor Air	X	X	Kitchen area (southeastern corner)
PS1-B-2014-mm-dd	Pathway	X	X	Southern portion of the kitchen, near the floor drains
PS2-B-2014-mm-dd	Pathway	X	X	Dishwasher area in the kitchen (northeastern corner)
PS3-B-2014-mm-dd	Pathway	X	X	Women's bathroom
AA-B-2014-mm-dd	Ambient Air [1]	X	X	Roof, within 10 feet of HVAC
Building C				
SS1-C-2012-mm-dd	Sub-Slab	X		Office area (southwestern portion)
SS2-C-2012-mm-dd	Sub-Slab	X		Mechanical room
SS3-C-2012-mm-dd	Sub-Slab	X		Storage room (eastern side)
SS4-C-2012-mm-dd	Sub-Slab	X		Office area (southeastern portion)
IA1-C-2014-mm-dd	Indoor Air	X	X	Lab 2 area
IA2-C-2014-mm-dd	Indoor Air	X	X	Office area (southeastern portion)
IA3-C-2014-mm-dd	Indoor Air	X	X	Office area (northeastern portion)
IA4-C-2014-mm-dd	Indoor Air	X	X	Mechanical room
IA5-C-2014-mm-dd	Indoor Air	X	X	Office area (central portion)
PS1-C-2014-mm-dd	Pathway	X	X	Office area (southwestern portion)
PS2-C-2014-mm-dd	Pathway	X	X	Second Floor (infront of the stairs)
PS3-C-2014-mm-dd	Pathway	X	X	Men's restroom (to the west of mechanical room)
PS4-C-2014-mm-dd	Pathway	X	X	In front of the Elevator
AA-C-2014-mm-dd	Ambient Air [1]	X	X	Roof, within 10 feet of HVAC
Building E				
SS1-E-2012-mm-dd	Sub-Slab	X		Mechanical room
SS2-E-2012-mm-dd	Sub-Slab	X		In the vicinity of western Elevator
IA1-E-2012-mm-dd	Indoor Air	X	X	Office area (southwestern portion)
IA2-E-2012-mm-dd	Indoor Air	X	X	Office area (southeastern portion)
IA3-E-2012-mm-dd	Indoor Air	X	X	Data Center
IA4-E-2012-mm-dd	Indoor Air	X	X	Large open area to the south of Training Room
IA5-E-2012-mm-dd	Indoor Air	X	X	Conference center
IA6-E-2012-mm-dd	Indoor Air	X	X	Second floor (infront of the southwestern elevator)
PS1-E-2012-mm-dd	Pathway	X	X	In front of the southwestern Elevator
PS2-E-2012-mm-dd	Pathway	X	X	In front of the western Elevator
PS3-E-2012-mm-dd	Pathway	X	X	In front of the northwestern Elevator
PS4-E-2012-mm-dd	Pathway	X	X	Inside the basement tunnel
AA-E-2012-mm-dd	Ambient Air [1]	X	X	Roof, within 10 feet of HVAC
Building F				
SS1-F-2012-mm-dd	Sub-Slab	X		Immediately outside the southeastern wall
IA1-F-2012-mm-dd	Indoor Air	X	X	Office area (northwestern portion)
IA2-F-2012-mm-dd	Indoor Air	X	X	Security personnel office area (southern portion)
AA-F-2012-mm-dd	Ambient Air [1]	X	X	Roof, within 10 feet of HVAC
Building M				
SS1-M-2014-mm-dd	Near-Slab	X		Immediately outside the eastern wall
IA1-M-2014-mm-dd	Indoor Air	X		Lab area (central portion)
IA2-M-2014-mm-dd	Indoor Air	X		File storage area (southern portion)
PS1-M-2014-mm-dd	Pathway	X		Second floor (infront of the staircase)
AA-M-2014-mm-dd	Ambient Air [1]	X		Roof, within 10 feet of HVAC
Building W				
SS1-W-2014-mm-dd	Near-Slab	X		Immediately outside the eastern wall
IA1-W-2014-mm-dd	Indoor Air	X	X	Southeastern office area
IA2-W-2014-mm-dd	Indoor Air	X	X	Southern conference room
IA3-W-2014-mm-dd	Indoor Air	X	X	Southwestern office area
IA4-W-2014-mm-dd	Indoor Air	X	X	Western office area
IA5-W-2014-mm-dd	Indoor Air	X	X	Northwestern lab area
PS1-W-2014-mm-dd	Pathway	X	X	Women's bathoom (south-central area)
AA-F-2012-mm-dd	Ambient Air [1]	X	X	Roof, within 10 feet of HVAC

Notes:
1 - Ambient air samples will be collected at a frequency of one per day.
mm = month
dd= day

Table 3
Site Building Information
Texas Instruments Incorporated
Santa Clara, California

Building Identification	Pertinent Construction Information	Size (SF)	Historical Use	Current Use	Contamination Source Areas	Anticipated Depth to Groundwater (feet below ground surface)	Remediation Information
Building A	- Two story building - Most of foundation several feet thick due to former fabrication facilities - Testing labs at southern portion of building located on a raised floor system - First floor HVAC systems operate continuously 7 days a week	Total: 110,000 1st Floor: 55,000	Former fabrication facilities	Office and laboratory space	- Tank T9/ Leak L6 (no further action required) - Tank 10/ Leak L7 (no further action required)	12-14	- **Soil Vapor Extraction:** The SVE system was located to the east and south of Building A. A total of eight SVE wells were used for the Tank T9/Leak L6 area and operated from August 1993 to January 1996 for the removal of a total of 490 lbs of VOCs. A total of six SVE wells operated in the Tank 10/Leak L7 area from November 1994 to January 1996 and removed a total of 1,037 lbs of VOCs. Closure for these two areas was requested in April 1996 and granted by the RWQCB in July 1997.
Building B	- One story building - Slab thickness not available, anticipated to be less than 1 foot.	20,800	Cafeteria	Cafeteria	- Upgradient and cross-gradient sources, including Tank T12 and Leak L4	10-12	None directly underneath building
Building C	- Two story building - Foundation several feet thick in some areas due to former fabrication facilities - Former SVE system predominately abandoned in place. Three wells exist in the building along with an infiltration gallery for remediation.	Total: 140,000 1st Floor - 70,000	Former fabrication facilities and research and development activities	Office and laboratory space	- Tank T12 (no further action required) - Tank T13 (no further action required) - Leak L5 (remediation ongoing)	12-14	**- Soil Vapor Extraction:** The SVE system was located outside of western wall of building, with associated wells located within the building. SVE was implemented at the Tank T12 source area during 1992 and 1994. In 1995, it was documented that soil cleanup goals were attained at Tank T12 and SVE system operation was discontinued. Less than ten lbs of VOCs were removed from the Tank T12 source area. SVE was also implemented at Tank T13 and Leak L5 source areas, which resulted in the removal of more than 23,400 lbs of VOCs. SVE operations at the Tank T13 and Leak L5 source areas were discontinued in 2005. **- Soil Removal Action:** Approximately 1,440 tons of impacted soil was excavated from the Leak L5 source area between 21 December 2009 and 2 January 2010. **- Chemical Oxidation Treatment:** To address existing groundwater contamination beneath and downgradient of Building C and residual soil contamination in the capillary fringe, chemical oxidation treatment has been implemented. Klozur® Activated Persulfate (manufactured by FMC) along with a sodium hydroxide activator was injected across the footprint of the 2009-2010 excavation at the Leak L5 source area. Three injection events were conducted in March 2012, July 2012, and June 2013 with approximately 7,000 gallons of persulfate injected during each event. Water quality cleanup standards have not yet been achieved, though significant reductions in total VOC concentrations have occurred. Additional injection activities are anticipated to further reduce VOCs beneath and downgradient of Building C.
Building E	- Two story building with a mezzanine - Northern half of building secondary containment filled with concrete slurry to yield 5-foot "slab" - Southern half of building secondary containment is unfilled but includes computer use that necessitated raised floor	Total: 170,000 1st Floor - 90,000	Northern half of the building included fabrication facilities	Office and miscellaneous use include Site Data Center and Network Services Department	- Upgradient sources	10-12	**- Groundwater Extraction:** Groundwater extraction continues to take place to the west and north of Building E. The groundwater extraction system is working to contain the plume's migration downgradient.

Table 3
Site Building Information
Texas Instruments Incorporated
Santa Clara, California

Building Identification	Pertinent Construction Information	Size (SF)	Historical Use	Current Use	Contamination Source Areas	Anticipated Depth to Groundwater (feet below ground surface)	Remediation Information
Building F	Modular structure - temporary building		None	Site security, occupational health nurse and offices			None in building, although source removals conducted upgradient
Building M	- Small two-story building between Buildings A and C - Slab thickness approximately 6-inches to several feet	Total: 12,000 1st Floor - 6,000	Various uses	Office and laboratory space	- Cross-gradient sources include Tank T10 and Tank T12	12-14	None directly underneath building
Building W	- Slab thickness ranges from 6 inches to several feet, with a thicker slab in the shipping and receiving warehouse area rated for forklift traffic	Total: 45,000	Office space	Office and laboratory space, shipping and receiving warehouse	None	12-14	None

Table 4
Indoor, Pathway and Ambient Air Analytical Results
- December 2012 to April 2014
Texas Instruments Incorporated
Santa Clara, California

Chemical of Concern	Sample Date	1,2,3-TCB	1,1,1-TCA	Freon 113	1,1,2-TCA	1,1-DCA	1,1-DCE	1,2,4-TCB	1,2-DCB	1,2-DCA	1,3-DCB	1,4-DCB	Chloro-benzene	Chloro-ethane	Chloroform	Ethyl-benzene	Methylene Chloride	PCE	Toluene	TCE	Trichloro-fluro-methane	Vinyl Chloride	cis-1,2-DCE	Total Xylenes	trans-1,2-DCE
Unit																									
Comparison to Short-Term Health Based Screening Criteria[1]																									
Acute Exposure MRL[2]		NE	10,914	NE	NE	NE	NE	NE	NE	NE	NE	12,025	NE	39,583	488	21,710	NE	1,357	3,768	NE	NE	1,278	810	8,685	810
Intermediate Exposure MRL[3]		NE	3,820	NE	NE	NE	79	NE	NE	NE	NE	1,203	NE	NE	244	8,684	NE	NE	NE	NE	NE	77	810	2,605	810
USEPA Regional Screening Levels [4]																									
Residential Screening Level [5]		NE	5,200	31,000	0.15	1.5	210	NE	210	0.094	NE	0.22	52	10,000	0.11	0.97	96	9.4	5,200	0.43	730	0.16	NE	100	63
Industrial/Commercial Screening Level [6]		NE	22,000	130,000	0.77	7.7	880	NE	880	0.47	NE	1.1	220	44,000	0.53	4.9	1,200	47	22,000	3	3,100	2.8	NE	440	260
RWQCB Environmental Screening Level [7]																									
Residential		NE	5,200	NE	0.15	1.5	210	NE	210	0.12	NE	0.22	1,000	31,000	0.46	0.97	5.2	0.41	310	0.59	NE	0.031	7.3	100	63
Commercial or Industrial		NE	22,000	NE	0.77	7.7	880	NE	880	0.58	NE	1.1	4,400	130,000	2.3	4.9	26	2.1	1,300	3.0	NE	0.16	31	440	260
Building A with HVAC																									
IA1-A-2014-04-18	04/18/14	< 0.19	< 0.14	0.33	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.180	< 0.15	< 0.15	< 0.12	< 0.066	< 0.12	0.14	0.2	< 0.17	0.87	< 0.13	1.3	< 0.026	< 0.099	0.63	< 0.099
IA2-A-2014-04-18	04/18/14	< 0.19	< 0.14	0.52	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.140	< 0.15	< 0.15	< 0.12	< 0.066	< 0.12	0.22	0.32	< 0.17	1.1	< 0.13	1.4	< 0.026	< 0.099	0.81	< 0.099
IA3-A-2014-04-18	04/18/14	< 0.19	0.16	0.39	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.15	0.17	0.23	0.21	1	0.3	1.6	< 0.026	< 0.099	0.78	< 0.099
IA4-A-2014-04-18	04/18/14	< 0.19	< 0.14	0.34	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	0.21	< 0.066	< 0.12	0.17	0.23	< 0.17	0.95	< 0.13	1.5	< 0.026	< 0.099	0.77	< 0.099
PS1-A-2014-04-18	04/18/14	< 0.19	< 0.14	0.31	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	< 0.12	0.12	0.17	< 0.17	0.72	< 0.13	1.2	< 0.026	< 0.099	0.46	< 0.099
PS2-A-2014-04-18	04/18/14	< 0.19	< 0.14	0.56	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.22	0.2	0.24	0.23	0.96	0.51	1.3	< 0.026	< 0.099	0.69	< 0.099
PS3-A-2014-04-18	04/18/14	< 0.19	< 0.14	0.59	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.100	< 0.15	< 0.15	< 0.12	< 0.066	0.13	0.19	0.25	< 0.17	0.81	< 0.13	1.5	< 0.026	< 0.099	0.96	< 0.099
PS4-A-2014-04-18	04/18/14	< 0.19	< 0.14	0.37	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	< 0.12	0.11	0.2	< 0.17	0.71	< 0.13	1.3	< 0.026	< 0.099	0.49	< 0.099
PS5-A-2014-04-18	04/18/14	< 0.19	< 0.14	0.35	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	0.087	< 0.12	0.27	0.19	< 0.17	0.84	2.7	1.5	0.029	1.70	0.66	< 0.099
Building B with HVAC																									
1A1-B-2014-04-18	04/18/14	0.19	< 0.14	0.47	< 0.14	< 0.10	< 0.099	0.38	0.21	0.12	0.35	0.45	0.15	< 0.066	< 0.12	0.31	0.17	< 0.17	0.82	< 0.13	1.9	< 0.026	< 0.099	0.94	< 0.099
DUP1-2014-04-18	04/18/14	< 0.19	< 0.14	0.33	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.19	0.14	0.19	0.23	0.85	0.29	2.1	< 0.026	< 0.099	0.57	< 0.099
IA2-B-2014-04-18	04/18/14	< 0.19	< 0.14	0.53	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	< 0.12	0.15	0.19	< 0.17	0.83	< 0.13	1.9	< 0.026	< 0.099	0.56	< 0.099
IA3-B-2014-04-18	04/18/14	< 0.19	< 0.14	0.35	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	0.15	< 0.066	0.32	0.21	0.26	< 0.17	2.6	< 0.13	2.4	< 0.026	< 0.099	1.12	< 0.099
PS1-B-2014-04-18	04/18/14	< 0.19	< 0.14	0.55	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	< 0.12	0.12	0.31	< 0.17	0.82	< 0.13	2.0	< 0.026	< 0.099	0.50	< 0.099
PS2-B-2014-04-18	04/18/14	< 0.19	< 0.14	0.63	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.13	0.11	0.27	< 0.17	0.62	0.20	2.1	< 0.026	0.19	0.42	< 0.099
PS3-B-2014-04-18	04/18/14	< 0.19	< 0.14	0.51	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	< 0.12	0.13	0.18	0.67	0.81	0.27	2.1	< 0.026	< 0.099	0.54	< 0.099
Building B without HVAC																									
1A1-B-2014-04-20	04/20/14	< 0.19	< 0.14	0.58	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.23	0.11	0.19	< 0.17	0.66	< 0.13	3.0	< 0.026	0.14	0.42	< 0.099
DUP1-2014-04-20	04/20/14	< 0.19	< 0.14	0.51	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.11	< 0.15	< 0.15	< 0.12	< 0.066	1.0	0.17	0.29	< 0.17	0.65	0.16	2.7	< 0.026	< 0.099	0.52	< 0.099
1A2-B-2014-04-20	04/20/14	< 0.19	< 0.14	0.51	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.13	< 0.11	0.16	0.28	0.64	0.15	2.7	< 0.026	< 0.099	0.40	< 0.099
1A3-B-2014-04-20	04/20/14	< 0.19	< 0.14	0.41	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.13	0.87	0.24	1.1	0.81	0.27	4.0	< 0.026	< 0.099	1.08	< 0.099
PS1-B-2014--04-20	04/20/14	< 0.19	< 0.14	0.31	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.12	< 0.15	< 0.15	< 0.12	< 0.066	0.13	0.54	0.16	0.19	3.5	< 0.13	3.6	< 0.026	< 0.099	2.92	< 0.099
PS2-B-2014--04-20	04/20/14	< 0.19	< 0.14	0.35	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.13	0.12	0.17	0.54	0.68	0.49	3.9	< 0.026	< 0.099	0.6	< 0.099
PS3-B-2014--04-20	04/20/14	< 0.19	< 0.14	0.34	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.13	< 0.11	0.16	0.98	0.52	0.32	2.2	< 0.026	< 0.099	0.27	< 0.099
Building C with HVAC																									
IA1-C-2013-01-18	01/18/13	NA	< 0.11	0.48	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.080	NA	0.23	< 0.092	< 0.053	0.25	0.84	1.1	0.44	4.9	0.17	1.2	< 0.026	< 0.079	3.9	< 0.40
IA1-C-2014-03-21	03/21/14	< 0.19	< 0.14	0.56	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.16	0.22	0.73	< 0.17	1.6	< 0.13	1.2	< 0.026	< 0.099	0.98	1.3
IA2-C-2013-01-18	01/18/13	NA	< 0.11	0.47	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.074	NA	0.21	< 0.092	< 0.053	0.21	0.69	0.93	0.31	3.9	0.13	1.1	< 0.026	< 0.079	3.34	< 0.40
IA2-C-2014-03-21	03/21/14	< 0.19	< 0.14	0.55	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.15	0.22	0.71	< 0.17	1.5	< 0.13	1.2	< 0.026	< 0.099	0.97	1.8
IA3-C-2013-01-18	01/18/13	NA	< 0.11	0.45	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.07	NA	0.2	< 0.092	0.053	0.19	0.60	0.78	0.22	3.5	0.12	1.0	< 0.026	< 0.079	2.94	< 0.40
IA3-C-2014-03-21	03/21/14	< 0.19	< 0.14	0.56	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.14	0.21	0.56	< 0.17	1.4	< 0.13	1.2	< 0.026	< 0.099	0.87	10
IA4-C-2013-01-18	01/18/13	NA	0.13	0.59	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.12	NA	0.32	< 0.092	< 0.053	0.32	1.0	1.2	0.86	5.7	0.22	1.4	< 0.026	< 0.079	5.1	< 0.40
IA4-C-2014-03-21	03/21/14	< 0.19	< 0.14	0.57	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.17	0.23	0.77	0.27	1.5	< 0.13	1.2	< 0.026	< 0.099	1.04	8.3
IA5-C-2013-01-18	01/18/13	NA	0.11	0.48	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.11	NA	0.22	< 0.092	< 0.053	0.21	0.99	0.89	1.1	4.2	0.14	1.1	< 0.026	< 0.079	3.8	< 0.40
IA5-C-2014-03-21	03/21/14	< 0.19	< 0.14	0.56	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.16	0.28	0.82	0.42	1.6	< 0.13	1.1	< 0.026	< 0.099	1.14	0.19
IA6-C-2013-01-18	01/18/13	NA	0.22	0.50	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.081	NA	0.23	< 0.092	< 0.053	0.22	0.74	0.86	1.8	4.3	0.16	1.1	< 0.026	< 0.079	3.5	< 0.40
DUP4-C-2013-01-18	01/18/13	NA	0.18	0.49	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.077	NA	0.16	< 0.092	< 0.053	0.24	0.85	1.5	1.5	4.4	0.16	1.1	< 0.026	< 0.079	3.8	< 0.40
IA6-C-2014-03-21	03/21/14	< 0.19	< 0.14	0.56	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.22	0.34	0.62	0.52	1.6	< 0.13	1.1	< 0.026	< 0.099	1.48	0.11
DUP6-C-2014-03-21	03/21/14	< 0.19	< 0.14	0.58	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.17	0.32	0.67	0.46	1.7	< 0.13	1.2	< 0.026	< 0.099	1.36	0.11
IA7-C-2013-01-18	01/18/13	NA	< 0.11	0.48	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.084	NA	0.26	< 0.092	< 0.053	0.21	0.71	0.97	0.23	4.5	0.14	1.1	< 0.026	< 0.079	3.33	< 0.40
IA7-C-2014-03-21	03/21/14	< 0.19	< 0.14	0.63	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.18	0.22	1.1	< 0.17	1.7	< 0.13	1.5	< 0.026	< 0.099	0.96	0.36
PS1-C-2013-01-18	01/18/13	NA	0.13	0.50	0.13	< 0.081	< 0.040	NA	< 0.12	0.076	NA	0.18	< 0.092	< 0.053	0.26	0.75	0.86	1.3	4.3	0.15	1.1	< 0.026	< 0.079	3.5	< 0.40

Table 4
Indoor, Pathway and Ambient Air Analytical Results
- December 2012 to April 2014
Texas Instruments Incorporated
Santa Clara, California

Chemical of Concern	Sample Date	1,2,3-TCB	1,1,1-TCA	Freon 113	1,1,2-TCA	1,1-DCA	1,1-DCE	1,2,4-TCB	1,2-DCB	1,2-DCA	1,3-DCB	1,4-DCB	Chloro-benzene	Chloro-ethane	Chloroform	Ethyl-benzene	Methylene Chloride	PCE	Toluene	TCE	Trichloro-fluro-methane	Vinyl Chloride	cis-1,2-DCE	Total Xylenes	trans-1,2-DCE
Unit																									
Comparison to Short-Term Health Based Screening Criteria[1]																									
Acute Exposure MRL[2]		NE	10,914	NE	NE	NE	NE	NE	NE	NE	NE	12,025	NE	39,583	488	21,710	NE	1,357	3,768	NE	NE	1,278	810	8,685	810
Intermediate Exposure MRL[3]		NE	3,820	NE	NE	NE	79	NE	NE	NE	NE	1,203	NE	NE	244	8,684	NE	NE	NE	NE	NE	77	810	2,605	810
USEPA Regional Screening Levels [4]																									
Residential Screening Level [5]		NE	5,200	31,000	0.15	1.5	210	NE	210	0.094	NE	0.22	52	10,000	0.11	0.97	96	9.4	5,200	0.43	730	0.16	NE	100	63
Industrial/Commercial Screening Level [6]		NE	22,000	130,000	0.77	7.7	880	NE	880	0.47	NE	1.1	220	44,000	0.53	4.9	1,200	47	22,000	3	3,100	2.8	NE	440	260
RWQCB Environmental Screening Level [7]																									
Residential		NE	5,200	NE	0.15	1.5	210	NE	210	0.12	NE	0.22	1,000	31,000	0.46	0.97	5.2	0.41	310	0.59	NE	0.031	7.3	100	63
Commercial or Industrial		NE	22,000	NE	0.77	7.7	880	NE	880	0.58	NE	1.1	4,400	130,000	2.3	4.9	26	2.1	1,300	3.0	NE	0.16	31	440	260
PS1-C-2014-03-21	03/21/14	< 0.19	< 0.14	0.69	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.18	0.27	0.52	0.41	1.7	< 0.13	1.7	< 0.026	< 0.099	1.11	0.11
PS2-C-2013-01-18	01/18/13	NA	0.14	0.50	0.14	< 0.081	< 0.040	NA	< 0.12	0.083	NA	0.29	< 0.092	< 0.053	0.24	0.75	1.0	1.2	4.3	0.34	1.1	< 0.026	0.12	3.6	< 0.40
PS2-C-2014-03-21	03/21/14	< 0.19	< 0.14	0.84	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.15	< 0.15	0.16	< 0.12	< 0.066	0.25	0.47	1.4	0.40	3.3	< 0.13	2.3	< 0.026	< 0.099	1.89	0.71
Building C without HVAC																									
IA1-C-2013-01-20	01/20/13	NA	0.28	0.72	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.11	NA	0.33	< 0.092	< 0.053	0.34	1.1	2.5	**2.7**	7.1	0.19	2.1	< 0.026	< 0.079	4.7	4.7
IA1-C-2014-03-23	03/23/14	< 0.19	< 0.14	0.61	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.13	0.2	0.84	1.1	1.7	< 0.13	1.2	< 0.026	< 0.099	0.74	2.0
IA2-C-2013-01-20	01/20/13	NA	0.22	0.68	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.12	NA	0.31	< 0.092	< 0.053	0.34	0.94	1.3	1.7	4.9	0.17	1.7	< 0.026	< 0.079	3.5	1.0
IA2-C-2014-03-23	03/23/14	< 0.19	< 0.14	0.56	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.13	0.14	0.56	0.55	0.84	< 0.13	1.2	< 0.026	< 0.099	0.52	0.25
IA3-C-2013-01-20	01/20/13	NA	0.23	0.65	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.14	NA	0.28	< 0.092	< 0.053	0.33	0.89	1.3	1.7	5.0	0.17	1.7	< 0.026	< 0.079	3.6	1.1
IA3-C-2014-03-23	03/23/14	< 0.19	< 0.14	0.56	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.13	0.39	0.58	0.51	1.2	< 0.13	1.1	< 0.026	< 0.099	1.55	0.57
IA4-C-2013-01-20	01/20/13	NA	0.16	0.85	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.19	NA	0.4	< 0.092	< 0.053	0.5	0.86	1.1	0.83	5.0	0.16	1.9	< 0.026	< 0.079	3.8	< 0.40
IA4-C-2014-03-23	03/23/14	< 0.19	< 0.14	0.50	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.17	0.29	1.0	0.23	21	< 0.13	1.4	< 0.026	< 0.099	1.15	0.20
IA5-C-2013-01-20	01/20/13	NA	1.2	0.76	< 0.11	< 0.081	0.041	NA	< 0.12	0.14	NA	0.31	< 0.092	< 0.053	0.39	0.84	1.2	**12**	4.7	0.29	1.4	< 0.026	0.41	3.5	< 0.40
IA5-C-2014-03-23	03/23/14	< 0.19	0.40	0.65	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.12	< 0.15	< 0.15	< 0.12	< 0.066	0.16	0.17	1.5	**4.7**	1.1	0.13	1.1	< 0.026	< 0.099	0.65	0.84
IA6-C-2013-01-20	01/20/13	NA	1.9	0.83	< 0.11	0.11	0.054	NA	< 0.12	0.15	NA	0.27	< 0.092	< 0.053	0.41	0.86	1.2	**18**	4.8	0.37	1.4	< 0.026	0.63	3.6	< 0.40
DUP4-2013-01-20	01/20/13	NA	1.8	0.80	< 0.11	0.10	0.05	NA	< 0.12	0.14	NA	0.29	< 0.092	< 0.053	0.41	0.78	1.2	**16**	4.4	0.33	1.4	< 0.026	0.57	3.24	< 0.40
IA6-C-2014-03-23	03/23/14	< 0.19	0.81	0.77	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.23	0.17	1.7	**8.1**	1.1	0.30	1.1	< 0.026	< 0.099	0.6	0.99
DUP6-C-2014-03-23	03/23/14	< 0.19	0.86	0.79	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.16	0.20	1.8	**8.8**	1.1	0.25	1.1	< 0.026	< 0.099	0.73	1.1
IA7-C-2013-01-20	01/20/13	NA	0.63	0.68	< 0.11	< 0.081	< 0.04	NA	< 0.12	0.16	NA	0.21	< 0.092	< 0.053	0.4	0.77	2.5	**5.0**	5.3	0.26	1.5	< 0.026	0.22	3.08	0.9
IA7-C-2014-03-23	03/23/14	< 0.19	< 0.14	0.56	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	0.46	< 0.066	0.15	0.18	1.2	0.89	1.0	< 0.13	1.0	< 0.026	< 0.099	0.77	0.46
PS1-C-2013-01-20	01/20/13	NA	0.9	0.71	< 0.11	< 0.081	< 0.04	NA	< 0.12	0.13	NA	0.28	< 0.092	< 0.053	0.35	0.88	1.2	**9.8**	5.0	0.2	1.4	< 0.026	0.2	3.9	< 0.40
PS1-C-2014-03-23	03/23/14	< 0.19	0.35	0.65	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.14	0.14	1.3	**4.0**	0.88	< 0.13	1.1	< 0.026	< 0.099	0.51	0.67
PS2-C-2013-01-20	01/20/13	NA	1.8	0.82	< 0.11	0.12	0.053	NA	< 0.12	0.16	NA	0.28	< 0.092	< 0.053	0.42	1.0	1.7	**17**	4.9	0.4	1.5	< 0.026	0.75	4.0	< 0.40
PS2-C-2014-03-23	03/23/14	< 0.19	0.16	0.58	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.12	< 0.15	< 0.15	< 0.12	< 0.066	0.15	0.19	3.6	0.98	1.6	0.18	1.1	< 0.026	< 0.099	0.71	2.4
Building E with HVAC																									
IA1-E-2013-01-18	01/18/13	NA	< 0.11	0.53	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.088	NA	0.2	< 0.092	< 0.053	0.22	0.67	< 0.69	< 0.14	4.0	0.3	1.3	< 0.026	< 0.079	3.34	< 0.40
DUP3-E-2013-01-18	01/18/13	NA	< 0.11	0.53	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.085	NA	0.18	< 0.092	< 0.053	0.22	0.68	< 0.69	< 0.14	3.9	0.31	1.3	< 0.026	< 0.079	3.2	< 0.40
IA2-E-2013-01-18	01/18/13	NA	< 0.11	0.62	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.091	NA	0.2	< 0.092	< 0.053	0.24	0.67	< 0.69	< 0.14	4.0	0.35	1.4	< 0.026	< 0.079	3.19	< 0.40
IA3-E-2013-01-18	01/18/13	NA	< 0.11	0.67	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.089	NA	0.13	< 0.092	< 0.053	0.24	0.5	< 0.69	< 0.14	3.2	0.2	1.6	< 0.026	< 0.079	2.49	< 0.40
IA4-E-2013-01-18	01/18/13	NA	< 0.11	0.61	< 0.11	< 0.081	< 0.40	NA	< 0.12	0.12	NA	0.16	< 0.092	< 0.053	0.27	0.62	< 0.69	< 0.14	4.3	0.19	1.5	< 0.26	< 0.079	3.21	< 0.40
IA5-E-2013-01-18	01/18/13	NA	< 0.11	0.51	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.075	NA	< 0.12	< 0.092	< 0.053	0.2	0.58	< 0.69	< 0.14	3.6	0.19	1.2	< 0.026	< 0.079	2.8	< 0.40
IA6-E-2013-01-18	01/18/13	NA	< 0.11	0.51	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.076	NA	0.14	< 0.092	< 0.053	0.21	0.62	< 0.69	< 0.14	3.6	0.25	1.3	< 0.026	< 0.079	3.04	< 0.40
PS1-E-2013-01-18	01/18/13	NA	< 0.11	0.48	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.076	NA	0.14	< 0.092	< 0.053	0.21	0.68	< 0.69	< 0.14	3.7	0.25	1.2	< 0.026	< 0.079	3.19	< 0.40
PS2-E-2013-01-18	01/18/13	NA	< 0.11	0.5	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.079	NA	0.12	< 0.092	< 0.053	0.18	0.6	1.8	0.22	3.6	0.23	1.2	< 0.026	< 0.079	2.83	< 0.40
PS3-E-2013-01-18	01/18/13	NA	< 0.11	0.47	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.064	NA	0.13	< 0.092	< 0.053	0.14	0.79	0.82	0.15	8.9	0.16	1.1	< 0.026	< 0.079	3.15	< 0.40
PS4-E-2013-01-18	01/18/13	NA	0.51	3.3	< 0.11	0.08	0.059	NA	< 0.12	0.078	NA	0.13	< 0.092	< 0.053	0.27	0.89	0.7	1.6	3.7	**16**	1.6	< 0.026	0.96	3.9	< 0.40
Building E without HVAC																									
1A1-E-2013-01-20	01/20/13	NA	0.12	0.71	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.13	NA	0.2	< 0.092	< 0.053	0.3	0.54	0.81	0.14	3.0	0.36	2.2	< 0.026	< 0.079	2.24	< 0.40
DUP3-E-2013-01-20	01/20/13	NA	0.12	0.71	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.13	NA	0.18	< 0.092	< 0.053	0.3	0.53	0.79	0.14	2.9	0.35	2.2	< 0.026	< 0.079	2.1	< 0.40
IA2-E-2013-01-20	01/20/13	NA	< 0.11	0.68	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.10	NA	0.17	< 0.092	< 0.053	0.26	0.45	0.78	< 0.14	2.7	0.3	2.2	< 0.026	< 0.079	2.04	< 0.40
1A3-E-2013-01-20	01/20/13	NA	< 0.11	0.64	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.086	NA	0.13	< 0.092	< 0.053	0.22	0.24	< 0.69	< 0.14	1.7	0.12	2.2	< 0.026	< 0.079	1.02	< 0.40
1A4-E-2013-01-20	01/20/13	NA	< 0.11	0.69	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.11	NA	0.19	< 0.092	0.093	0.31	0.53	0.79	< 0.14	3.2	0.14	2.5	< 0.026	< 0.079	2.82	< 0.40
1A5-E-2013-01-20	01/20/13	NA	< 0.11	0.63	< 0.11	< 0.081	< 0.40	NA	< 0.12	0.11	NA	0.2	< 0.092	< 0.053	0.29	0.58	1.0	0.15	3.3	0.22	2.1	< 0.026	< 0.079	2.56	< 0.40
1A6-E-2013-01-20	01/20/13	NA	0.15	0.68	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.11	NA	0.28	< 0.092	< 0.053	0.32	0.53	0.7	0.21	3.1	0.3	1.8	< 0.026	< 0.079	2.38	< 0.40
PS1-E-2013-01-20	01/20/13	NA	0.14	0.68	0.18	< 0.081	< 0.040	NA	1.3	0.17	NA	**1.8**	0.21	< 0.053	0.32	0.62	0.75	0.2	3.3	0.42	1.9	< 0.026	< 0.079	2.78	< 0.40
PS2-E-2013-01-20	01/20/13	NA	< 0.11	0.64	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.098	NA	0.22	< 0.092	< 0.053	0.26	0.48	< 0.69	0.25	2.9	0.57	1.8	0.031	0.16	2.23	< 0.40
PS3-E-2013-01-20	01/20/13	NA	< 0.11	0.66	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.11	NA	0.32	< 0.092	< 0.053	0.34	0.57	0.87	0.33	3.3	0.36	2.1	< 0.026	< 0.079	2.52	< 0.40
PS4-E-2013-01-20	01/20/13	NA	0.53	3.6	< 0.11	0.11	0.1	NA	< 0.12	0.11	NA	0.2	< 0.092	< 0.053	0.3	0.74	< 0.69	1.8	2.3	**18**	2.2	< 0.026	1.0	2.71	< 0.40

Table 4
Indoor, Pathway and Ambient Air Analytical Results
- December 2012 to April 2014
Texas Instruments Incorporated
Santa Clara, California

Chemical of Concern	Sample Date	1,2,3-TCB	1,1,1-TCA	Freon 113	1,1,2-TCA	1,1-DCA	1,1-DCE	1,2,4-TCB	1,2-DCB	1,2-DCA	1,3-DCB	1,4-DCB	Chloro-benzene	Chloro-ethane	Chloroform	Ethyl-benzene	Methylene Chloride	PCE	Toluene	TCE	Trichloro-fluro-methane	Vinyl Chloride	cis-1,2-DCE	Total Xylenes	trans-1,2-DCE
Unit																									
Comparison to Short-Term Health Based Screening Criteria[1]																									
Acute Exposure MRL[2]		NE	10,914	NE	NE	NE	NE	NE	NE	NE	NE	12,025	NE	39,583	488	21,710	NE	1,357	3,768	NE	NE	1,278	810	8,685	810
Intermediate Exposure MRL[3]		NE	3,820	NE	NE	NE	79	NE	NE	NE	NE	1,203	NE	NE	244	8,684	NE	NE	NE	NE	NE	77	810	2,605	810
USEPA Regional Screening Levels [4]																									
Residential Screening Level [5]		NE	5,200	31,000	0.15	1.5	210	NE	210	0.094	NE	0.22	52	10,000	0.11	0.97	96	9.4	5,200	0.43	730	0.16	NE	100	63
Industrial/Commercial Screening Level [6]		NE	22,000	130,000	0.77	7.7	880	NE	880	0.47	NE	1.1	220	44,000	0.53	4.9	1,200	47	22,000	3	3,100	2.8	NE	440	260
RWQCB Environmental Screening Level [7]																									
Residential		NE	5,200	NE	0.15	1.5	210	NE	210	0.12	NE	0.22	1,000	31,000	0.46	0.97	5.2	0.41	310	0.59	NE	0.031	7.3	100	63
Commercial or Industrial		NE	22,000	NE	0.77	7.7	880	NE	880	0.58	NE	1.1	4,400	130,000	2.3	4.9	26	2.1	1,300	3.0	NE	0.16	31	440	260
Building F with HVAC																									
IA1-F-2013-01-18	01/18/13	NA	< 0.11	0.51	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.067	NA	< 0.12	< 0.092	< 0.053	0.51	0.49	< 0.69	< 0.14	3.1	0.27	3.9	< 0.026	< 0.079	2.19	< 0.40
IA2-F-2013-01-18	01/18/13	NA	< 0.11	0.47	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.061	NA	< 0.12	< 0.092	< 0.053	0.15	0.39	< 0.69	< 0.14	2.4	0.11	1.7	< 0.026	< 0.079	1.92	< 0.40
Building F without HVAC																									
1A1-F-2013-01-20	01/20/13	NA	< 0.11	0.67	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.081	NA	0.19	< 0.092	< 0.053	0.47	0.47	< 0.69	0.17	2.6	0.31	5.9	< 0.026	< 0.079	1.83	< 0.40
1A2-F-2013-01-20	01/20/13	NA	< 0.11	0.67	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.097	NA	0.24	< 0.092	< 0.053	0.3	0.73	< 0.69	0.16	4.1	0.31	48	< 0.026	< 0.079	2.62	< 0.40
Building M with HVAC																									
1A1-M-2014-04-18	04/18/14	< 0.19	< 0.14	0.32	< 0.14	0.12	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	< 0.12	0.11	0.21	< 0.17	0.69	< 0.13	1.3	< 0.026	< 0.099	0.45	< 0.099
1A2-M-2014-04-18	04/18/14	< 0.19	< 0.14	0.53	< 0.14	0.12	< 0.099	< 0.19	< 0.15	0.12	< 0.15	< 0.15	< 0.12	< 0.066	< 0.12	0.14	0.87	< 0.17	0.8	< 0.13	1.4	< 0.026	< 0.099	0.53	< 0.099
PS1-M-2014-04-18	04/18/14	< 0.19	< 0.14	0.50	< 0.14	0.12	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	0.11	0.13	0.13	0.36	0.60	0.90	< 0.13	1.3	< 0.026	< 0.099	0.68	< 0.099
Building W with HVAC																									
IA1-W-2014-04-18	04/18/14	< 0.19	< 0.14	0.45	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	< 0.12	0.23	0.28	< 0.17	1.30	< 0.13	1.0	< 0.026	< 0.099	1.02	< 0.099
IA2-W-2014-04-18	04/18/14	< 0.19	< 0.14	0.31	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	0.068	0.16	0.26	0.20	0.19	1.2	< 0.13	1.3	< 0.026	< 0.099	1.15	< 0.099
IA3-W-2014-04-18	04/18/14	< 0.19	< 0.14	0.52	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	< 0.12	0.16	0.25	< 0.17	0.71	< 0.13	1.4	< 0.026	< 0.099	0.74	< 0.099
IA4-W-2014-04-18	04/18/14	< 0.19	< 0.14	0.51	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	0.068	< 0.12	0.25	0.20	< 0.17	0.98	< 0.13	1.4	< 0.026	< 0.099	0.22	< 0.099
DUP2-2014-04-18	04/18/14	< 0.19	< 0.14	0.58	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.16	0.24	0.37	< 0.17	0.88	< 0.13	1.6	< 0.026	< 0.099	1.12	< 0.099
IA5-W-2014-04-18	04/18/14	< 0.19	< 0.14	0.59	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	< 0.12	0.12	0.21	0.28	0.73	< 0.13	1.6	< 0.026	< 0.099	0.50	< 0.099
PS1-W-2014-04-18	04/18/14	< 0.19	< 0.14	0.60	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.11	< 0.15	< 0.15	< 0.12	< 0.066	0.15	0.21	0.22	0.37	0.82	< 0.13	1.5	0.03	< 0.099	0.79	< 0.099
Building W without HVAC																									
IA1-W-2014-04-20	04/20/14	< 0.19	< 0.14	0.26	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.19	0.21	0.18	< 0.17	1.1	< 0.13	1.1	< 0.026	< 0.099	0.77	< 0.099
IA2-W-2014-04-20	04/20/14	< 0.19	< 0.14	0.52	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.19	0.27	0.33	< 0.17	0.94	< 0.13	1.3	< 0.026	< 0.099	1.21	< 0.099
IA3-W-2014-04-20	04/20/14	< 0.19	< 0.14	0.40	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	< 0.12	0.24	0.22	< 0.17	0.95	< 0.13	1.2	< 0.026	< 0.099	0.92	< 0.099
IA4-W-2014-04-20	04/20/14	< 0.19	< 0.14	0.32	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	0.17	0.45	0.18	< 0.17	1.1	< 0.13	1.2	< 0.026	< 0.099	1.69	< 0.099
IA5-W-2014-04-20	04/20/14	< 0.19	< 0.14	0.46	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.11	< 0.15	< 0.15	< 0.12	< 0.066	0.14	0.31	0.16	0.38	1.0	< 0.13	1.1	< 0.026	< 0.099	0.88	< 0.099
PS1-W-2014-04-20	04/20/14	< 0.19	< 0.14	0.28	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.19	< 0.15	< 0.15	< 0.12	< 0.066	0.14	0.19	0.26	0.28	0.94	< 0.13	1.1	< 0.026	< 0.099	0.78	< 0.099
Laboratory Reporting Limit			0.028	0.39	0.028	0.021	0.02		0.031	0.021		0.031	0.024	0.014	0.025	0.022	0.18	0.035	0.019	0.028	0.29	0.013	0.02	0.066	0.02
Comparison to Background/Outdoor Ambient																									
Background (outdoor ambient for Buildings C, E, and F) AA1-F-2013-01-18	01/18/13	NA	< 0.11	0.45	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.066	NA	< 0.12	< 0.092	< 0.053	0.14	0.62	2.2	0.28	3.4	0.17	1.2	< 0.026	< 0.079	3.1	< 0.40
Background (outdoor ambient for Buildings C,E, and F) AA1F-2013-01-20	01/20/13	NA	< 0.11	0.61	< 0.11	< 0.081	< 0.040	NA	< 0.12	0.092	NA	0.13	< 0.092	0.061	0.17	0.39	< 0.69	< 0.14	2.0	0.089	1.4	< 0.026	< 0.079	1.7	< 0.40
Background (outdoor ambient for Buildings C,E, and F) AA1C-2014-03-21	03/21/14	< 0.19	< 0.14	0.50	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.14	< 0.15	< 0.15	< 0.12	< 0.066	0.13	0.34	0.48	< 0.17	2.6	< 0.13	1.5	< 0.026	< 0.099	1.83	0.43
Background (outdoor ambient for Buildings C,E, and F) AA1C-2014-03-23	03/23/14	< 0.19	< 0.14	0.55	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	< 0.066	< 0.12	< 0.11	0.39	< 0.17	0.82	< 0.13	1.1	< 0.026	< 0.099	0.25	< 0.099
Background (outdoor ambient for Buildings C,E, and F) AA1C-2014-04-20	04/20/14	< 0.19	< 0.14	0.33	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	0.069	0.24	< 0.11	0.19	< 0.17	0.58	< 0.13	1.3	< 0.026	< 0.099	0.22	< 0.099
Background (outdoor ambient for Buildings C,E, and F) AA2C-2014-04-18	04/18/14	< 0.19	< 0.14	0.31	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	< 0.10	< 0.15	< 0.15	< 0.12	0.34	< 0.12	0.11	0.18	< 0.17	0.59	< 0.13	1.2	< 0.026	< 0.099	0.24	< 0.099
Background (outdoor ambient for Building M) AA1M-2014-04-18	04/18/14	< 0.19	< 0.14	0.44	< 0.14	< 0.10	< 0.099	< 0.19	< 0.15	0.16	< 0.15	< 0.15	< 0.12	< 0.066	< 0.12	0.31	0.17	< 0.17	1.7	< 0.13	1.2	< 0.026	< 0.099	1.37	< 0.099

Table 4
Indoor, Pathway and Ambient Air Analytical Results
- December 2012 to April 2014
Texas Instruments Incorporated
Santa Clara, California

Chemical of Concern	Sample Date	1,2,3-TCB	1,1,1-TCA	Freon 113	1,1,2-TCA	1,1-DCA	1,1-DCE	1,2,4-TCB	1,2-DCB	1,2-DCA	1,3-DCB	1,4-DCB	Chloro-benzene	Chloro-ethane	Chloroform	Ethyl-benzene	Methylene Chloride	PCE	Toluene	TCE	Trichloro-fluro-methane	Vinyl Chloride	cis-1,2-DCE	Total Xylenes	trans-1,2-DCE
Unit																									
Comparison to Short-Term Health Based Screening Criteria[1]																									
Acute Exposure MRL[2]		NE	10,914	NE	NE	NE	NE	NE	NE	NE	NE	12,025	NE	39,583	488	21,710	NE	1,357	3,768	NE	NE	1,278	810	8,685	810
Intermediate Exposure MRL[3]		NE	3,820	NE	NE	NE	79	NE	NE	NE	NE	1,203	NE	NE	244	8,684	NE	NE	NE	NE	NE	77	810	2,605	810
USEPA Regional Screening Levels [4]																									
Residential Screening Level [5]		NE	5,200	31,000	0.15	1.5	210	NE	210	0.094	NE	0.22	52	10,000	0.11	0.97	96	9.4	5,200	0.43	730	0.16	NE	100	63
Industrial/Commercial Screening Level [6]		NE	22,000	130,000	0.77	7.7	880	NE	880	0.47	NE	1.1	220	44,000	0.53	4.9	1,200	47	22,000	3	3,100	2.8	NE	440	260
RWQCB Environmental Screening Level [7]																									
Residential		NE	5,200	NE	0.15	1.5	210	NE	210	0.12	NE	0.22	1,000	31,000	0.46	0.97	5.2	0.41	310	0.59	NE	0.031	7.3	100	63
Commercial or Industrial		NE	22,000	NE	0.77	7.7	880	NE	880	0.58	NE	1.1	4,400	130,000	2.3	4.9	26	2.1	1,300	3.0	NE	0.16	31	440	260

Notes:

Units in micrograms per cubic meter (μg/m^3) at 25° Celsius and 1 atmosphere.

Bold values indicate an exceedance of the commercial/industrial Residential Screening Level (RSL) or the Environmental Screening Level (ESL).

Samples identified with 'IA' were collected from areas of buildings normally occupied whereas, samples identified with 'PS' were collected from areas not occupied for 8-hours a day.

[1] - Short-term health risk based screening criteria obtained from the Agency for Toxic Substances & Disease Registry (ATSDR), Minimal Risk Levels (MRLs) for hazardous substances (July 2013)

[2] - Acute screening levels (Acute MRSs) are derived for exposure durations of 1 to 14 days.

[3] - Intermediate MRLs are derived for exposure durations of >14 to 364 days

[4] - Long-term health risk based screening criteria obtained from the United States Environmental Protection Agency (USEPA), RSLs for chemical contaminants, THQ=1.0 (November 2013).
http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf

[5] - Residential screening levels (Residential Air RSLs) are derived for exposure durations of 350 days per year and 30 years.

[6] - Commercial/Industrial screening levels (Industrial Air RSLs) are derived for exposure durations of 8 hours per day, 250 days per year and 25 years.

[7] - Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL) indoor air from Table E-3, December 2013.

1,1,1-TCA - 1,1,1-trichloroethane
1,1,2_TCA - 1,1,2-trichloroethane
1,1-DCA - 1,1-dichloroethane
1,1-DCE - 1,1-dichloroethene
1,2-DCB - 1,2-dichlorobenzene
1, 2-DCA - 1,2-dichloroethane
1, 4-DCB - 1,4-dichlorobenzene
Freon 113 - trichlorotrifluoroethane

chloroethane - ethyl chloride
cis-1,2-DCE - cis-1,2-dichloroethene
Methylene Choride - Dichloromethane
PCE - tetrachloroethene
Freon 11 - trichlorofluoromethane
trans-1,2-DCE - trans-1,2-dichloroethene
TCE - trichloroethene
NE = Not established

* - Sample PS4-G was collected at the same sample location as IA5-G. Since the sample is representative of pathway conditions, the sample designation was changed during the 2014 sampling event.

USEPA recommends the use of Interim TCE Indoor Air Short-Term Response Action Levels for TCE Inhalation exposure from subsurface vapor intrusion at South Bay National Priority List Sites. Commercial/Industrial prompt response action levels are calculated as the time-weighted average from the RfC - 9 μg/m^3 for an 8-hour workday; 7 μg/m^3 for a 10-hour workday. Based on input from commercial building owners and tenants, EPA Region 9 recommends use of the 10-hour workday for determining the appropriate response action levels for Commercial/Industrial buildings at the South Bay Sites. Time-weighted adjustments can be made as needed for workplaces with longer work schedules.

Table 5
Sub-Slab Analytical Results - December 2012 and April 2014
Texas Instruments Incorporated
Santa Clara, California

Chemical of Concern	Sample Date	Helium	1,2,3-TCB	1,1,1-TCA	1,2,4-TCB	1,3-DCB	Freon 113	Chloro-benzene	Chloro-ethane	Chloroform	1,2-DCB	1,4-DCB	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Ethyl-benzene	Methylene Chloride	PCE	Toluene	1,1,2-TCA	TCE	Trichloro-fluoro-methane	Vinyl Chloride	Xylenes Total
Unit		%	(µg/m³)																							
Building A																										
SS1-A-2014-04-17	04/17/14	< 0.005	< 11	13	< 15	< 3.0	38	< 2.3	< 1.3	< 2.4	< 3.0	< 3.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.5	< 17	7.6	15	< 2.7	150	< 5.6	< 1.3	13.1
Building B																										
SS1-B-2014-04-17	04/17/14	< 0.005	< 16	< 3.8	< 21	< 4.2	< 16	< 3.2	< 1.8	< 3.4	< 4.2	< 4.2	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 3.0	< 24	< 4.7	< 2.6	< 3.8	< 3.8	< 7.9	< 1.8	< 15.0
SS2-B-2014-04-17	04/17/14	< 0.005	< 11	< 2.7	< 15	< 3.0	< 11	< 2.3	< 1.3	3.8	< 3.0	< 3.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.2	< 17	17	10	< 2.7	3.7	< 5.6	< 1.3	3.8
Dup-2014-04-17	04/17/14	< 0.005	< 11	< 2.7	< 15	< 3.0	< 11	< 2.3	< 1.3	2.5	< 3.0	< 3.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.1	< 17	11	14	< 2.7	4.8	< 5.6	< 1.3	18.7
Building C																										
SS1-C-2012-12-15	12/15/12	0.031	NA	850	NA	NA	69	< 9.4	< 5.4	< 2.2	< 12	< 4.4	< 8.2	< 1.9	< 8.1	< 8.1	< 1.9	< 8.8	< 7.1	**5,200**	17	< 3.0	< 11	< 11	< 1.3	< 27
SS2-C-2012-12-15	12/15/12	< 0.005	NA	24	NA	NA	69	< 9.4	< 5.4	< 2.2	< 12	< 4.4	< 8.2	< 1.9	< 8.1	< 8.1	< 1.9	< 8.8	< 7.1	110	< 7.7	< 3.0	69	24	< 1.3	< 27
SS3-C-2012-12-15	12/15/12	0.019	NA	21	NA	NA	69	< 9.4	< 5.4	< 2.2	< 12	< 4.4	< 8.2	< 1.9	< 8.1	< 8.1	< 1.9	< 8.8	< 7.1	23	52	< 3.0	< 11	< 11	< 1.3	< 27
SS4-C-2012-12-15	12/15/12	< 0.005	NA	< 11	NA	NA	69	< 9.4	< 5.4	< 2.2	< 12	< 4.4	< 8.2	< 1.9	< 8.1	< 8.1	< 1.9	< 8.8	< 7.1	< 8.2	36	< 3.0	< 11	< 11	< 1.3	< 27
Building E																										
SS1-E-2012-12-15	12/15/12	< 0.005	NA	< 11	NA	NA	< 16	< 9.4	< 5.4	< 2.2	< 12	< 4.4	< 8.2	< 1.9	< 8.1	< 8.1	< 1.9	< 8.8	< 7.1	< 8.2	< 7.7	< 3.0	< 11	< 11	< 1.3	< 27
SS2-E_2012-12-15	12/15/12	< 0.005	NA	46	NA	NA	190	< 9.4	< 5.4	8.7	< 12	< 4.4	< 8.2	< 1.9	< 8.1	< 8.1	< 1.9	< 8.8	< 7.1	81	8.7	< 3.0	**800**	38	< 1.3	< 27
Building F																										
SS1-F-2012-12-15	12/15/12	0.017	NA	< 11	NA	NA	< 16	< 9.4	< 5.4	< 2.2	< 12	< 4.4	< 8.2	< 1.9	< 8.1	< 8.1	< 1.9	< 8.8	< 7.1	< 8.2	9.4	< 3.0	< 11	< 11	< 1.3	< 27
Building M																										
SS1-M-2014-04-17	04/17/14	< 0.005	< 11	< 2.8	< 15	< 3.1	< 12	< 2.4	< 1.4	< 2.5	< 3.1	< 3.1	< 2.1	< 2.1	< 2.0	< 2.0	< 2.0	5.1	< 18	< 3.5	68	< 2.8	< 2.8	< 5.8	< 1.3	27.1
Building W																										
SS1-W-2014-04-17	04/17/14	< 0.005	< 11	< 2.8	< 15	< 3.1	< 12	< 2.4	< 1.4	3.1	< 3.1	< 3.1	< 2.1	< 2.1	< 2.0	< 2.0	< 2.0	3.7	< 18	< 3.5	23	< 2.8	< 2.8	< 5.8	< 1.3	14
RSLs [1]																										
Industrial/Commercial Screening Level			NE	22,000	NE	NE	130,000	220	44,000	0.53	880	1.1	7.7	0.47	880	NE	260	4.9	1,200	47	22,000	0.77	3	3,100	2.8	440
RWQCB ESLs [2]																										
Commercial			NE	22,000	NE	NE	NE	4,400	130,000	2.3	880	1.1	7.7	0.58	880	31	260	4.9	26	2.1	1,300	0.77	3	NE	0.16	440
Commercial RSL Adjusted using 0.01 Slab Attenuation Factor [3]			NE	2,200,000	NE	NE	13,000,000	22,000	4,400,000	53	88,000	110	770	47	88,000	NE	26,000	490	120,000	4,700	2,200,000	77	300	310,000	280	44,000
Commercial ESL Adjusted using 0.01 Slab Attenuation Factor [3]			NE	2,200,000	NE	NE	NE	440,000	13,000,000	230	88,000	110	770	58	88,000	3,100	26,000	490	2,600	210	130,000	77	300	NE	16	44,000

Notes:
Bold values indicate an exceedance of the Commercial/Industrial ESL or RSL corrected using a 0.01 slab attenuation factor.
[1] - Commercial/Industrial screening levels (Industrial Air RSLs) are derived for exposure durations of 8 hours per day, 250 days per year and 25 years.
[2] - Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL) indoor air from Table E-3, December 2013.
RWQCB ESLs can be access at: http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.shtml
[3] - Indoor air screening levels have been adjusted using an assumed attenuation factor of 0.01 for commercial buildings based on an evaluation of the data presented in the USEPA's Vapor Intrusion Database: Evaluation and Characterization of Attenuation Factors for Chlorinated Volatile Organic Compounds and Residential Buildings. EPA 530-R-10-002. March 16.
USEPA RSL = United States Environmental Protection Agency, Regional Screening Levels
ESL = Environmental Screening Level
RWQCB = Regional Water Quality Control Board, San Francisco Bay Region

1,2,3-TCB - 1,2,3-Trichlorobenzene
1,1,1-TCA - 1,1,1-trichloroethane
1,1,2_TCA - 1,1,2-trichloroethane
1,1-DCA - 1,1-dichloroethane
1,1-DCE - 1,1-dichloroethene
1,2-DCB - 1,2-dichlorobenzene
1, 2-DCA - 1,2-dichloroethane
1, 4-DCB - 1,4-dichlorobenzene
1,2,4-TCB - 1,2,4-Trichlorobenzene
chloroethane - ethyl chloride
cis-1,2-DCE - cis-1,2-dichloroethene
Methylene Choride - Dichloromethane
PCE - tetrachloroethene
Freon 11 - trichlorofluoromethane
trans-1,2-DCE - trans-1,2-dichloroethene
TCE - trichloroethene
1,3-DCB - 1,3-dichlorobenzene
Freon 113 - trichlorotrifluoroethane
NE = Not established

FIGURES

Notes:

1. Basemap provided © 2010 NAVTEQ © AND © 2013 Microsoft Corporation.
2. Map displayed in California State Plane Coordinate System, Zone III, North American Datum of 1983 (NAD83), US Survey Feet.

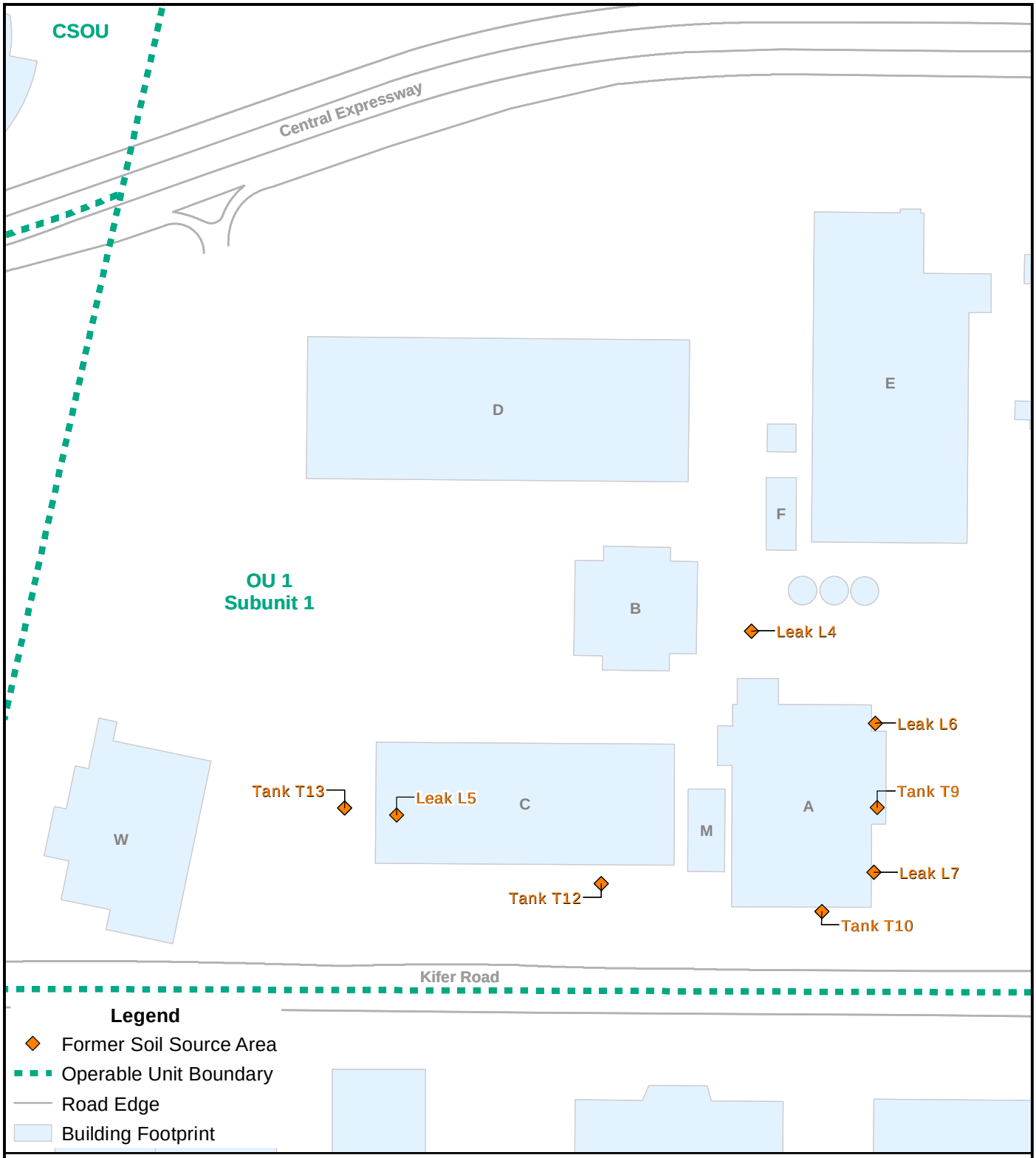
TEXAS INSTRUMENTS INCORPORATED
Santa Clara, California

SITE LOCATION MAP

LANGAN TREADWELL ROLLO

Date 3/13/2014	Project 750620701	Figure 1

\\langan.com\data\SF\data9\730377972\ArcGIS\arcmap_doc\2013\WorkPlan\SiteLocationMap.mxd



Notes:

1. All locations are considered approximate.
2. Map displayed in California State Plane Coordinate System, Zone III, North American Datum of 1983 (NAD83), US Survey Feet.

0 100 200 400
Feet

N

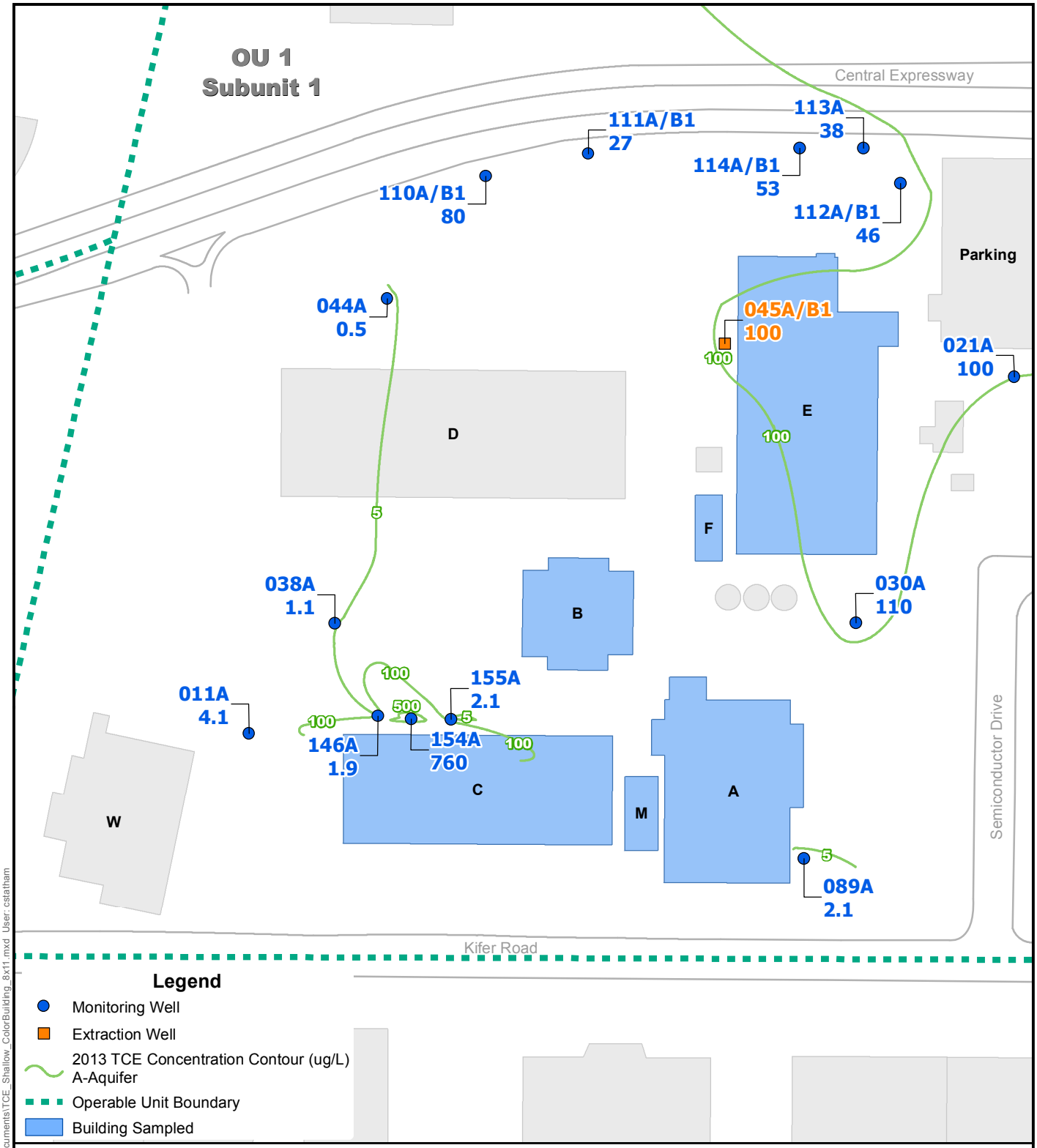
TEXAS INSTRUMENTS INCORPORATED
Santa Clara, California

SITE PLAN

LANGAN TREADWELL ROLLO

Date 11/21/2014	Project 750620701	Figure 2

\\langan.com\data\SF\data9\730377972\ArcGIS\arcmap_doc\2013\WorkPlan\SitePlanZoom.mxd User: cstatham



Notes:

1. Contour interval as shown.
2. Concentration contours displayed in micrograms per liter (µg/L).
3. Map displayed in California State Plane Coordinate System, Zone III, North American Datum of 1983 (NAD83), US Survey Feet.

0 110 220 440
Feet

N

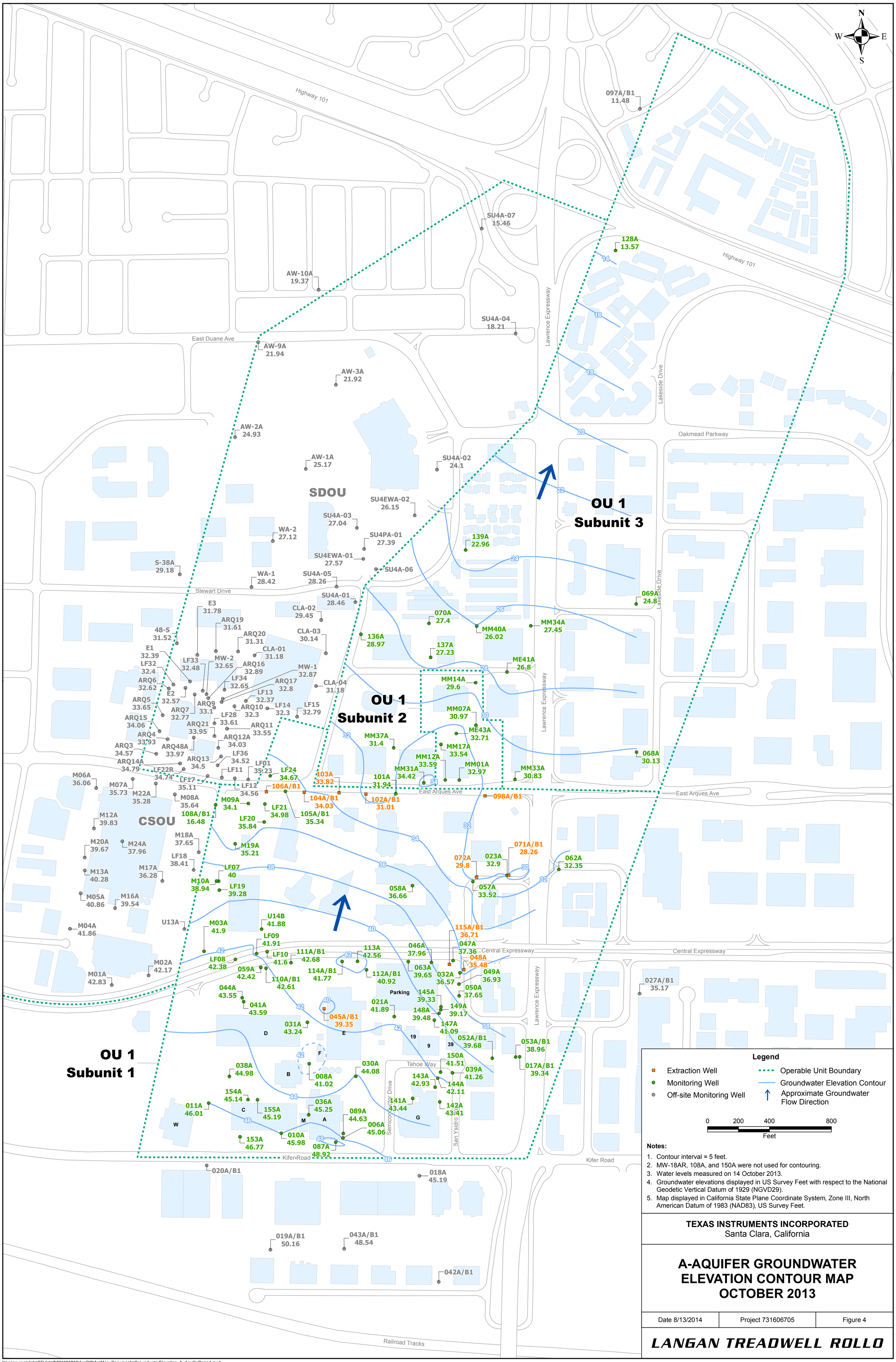
TEXAS INSTRUMENTS INCORPORATED
Santa Clara, California

LANGAN TREADWELL ROLLO

2013 TCE GROUNDWATER CONCENTRATION CONTOURS AND BUILDINGS SAMPLED

Date 1/23/2015	Project 750620701	Figure 3

\\langan.com\data\OA\data7\750620701\ArcGIS\ArcMap_Documents\TCE_Shallow_ColorBuilding_8x11.mxd User: cstatham



Notes:

1. Contour interval = 5 feet.
2. MW-18AR, 108A, and 150A were not used for contouring.
3. Water levels measured on 14 October 2013.
4. Groundwater elevations displayed in US Survey Feet with respect to the National Geodetic Vertical Datum of 1929 (NGVD29).
5. Map displayed in California State Plane Coordinate System, Zone III, North American Datum of 1983 (NAD83), US Survey Feet.

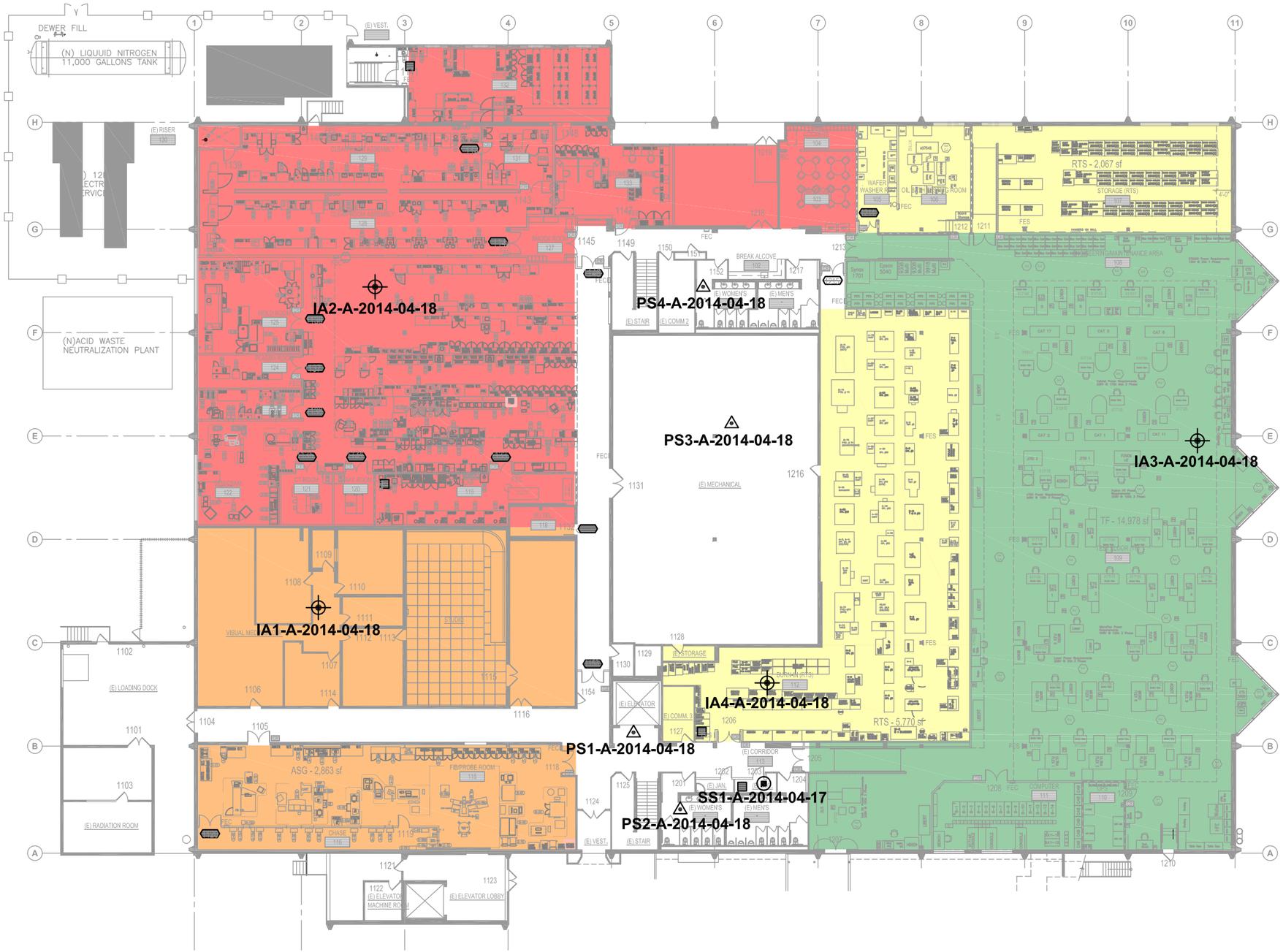
TEXAS INSTRUMENTS INCORPORATED
Santa Clara, California

A-AQUIFER GROUNDWATER ELEVATION CONTOUR MAP OCTOBER 2013

Date 8/13/2014	Project 731606705	Figure 4

LANGAN TREADWELL ROLLO

\\langan.com\data\SF\data7\731606710\ArcGIS\ArcMap_Documents\GroundwaterElevation_A_AquiferReport.mxd



EXPLANATION

- Air Handling 4, operates continuously
- Air Handling 5, operates continuously
- Air Handling 11, operates continuously
- Air Handling 4 Fresh air, operates continuously
- IA — Indoor air sample
- PS — Pathway sample
- SS — Sub-slab sample

Note: HVAC off samples will not be collected in areas where HVAC operates continuously (24/7)

0 30 Feet
Approximate scale

TEXAS INSTRUMENTS
Santa Clara, California

INTERIOR FLOOR PLAN AND AIR HANDLING AREAS WITH SAMPLE LOCATIONS - BUILDING A-1

Date 03/03/14	Project No. 750620701	Figure 5

LANGAN TREADWELL ROLLO

Reference: Base map from a drawing titled, "Building A-1 AsBuilt," by Texas Instruments, dated 11/16/12.

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EXPLANATION

- Air Handling 4
- Air Handling 5
- Air Handling 6

PS ◬ Pathway sample

0 30 Feet
Approximate scale

Reference: Base map from a drawing titled, "Building A-2 AsBuilt," by Texas Instruments, dated 06/20/13.

TEXAS INSTRUMENTS
Santa Clara, California

INTERIOR FLOOR PLAN AND AIR HANDLING AREAS WITH SAMPLE LOCATIONS - BUILDING A-2

Date 03/03/14	Project No. 750620701	Figure 6

LANGAN TREADWELL ROLLO

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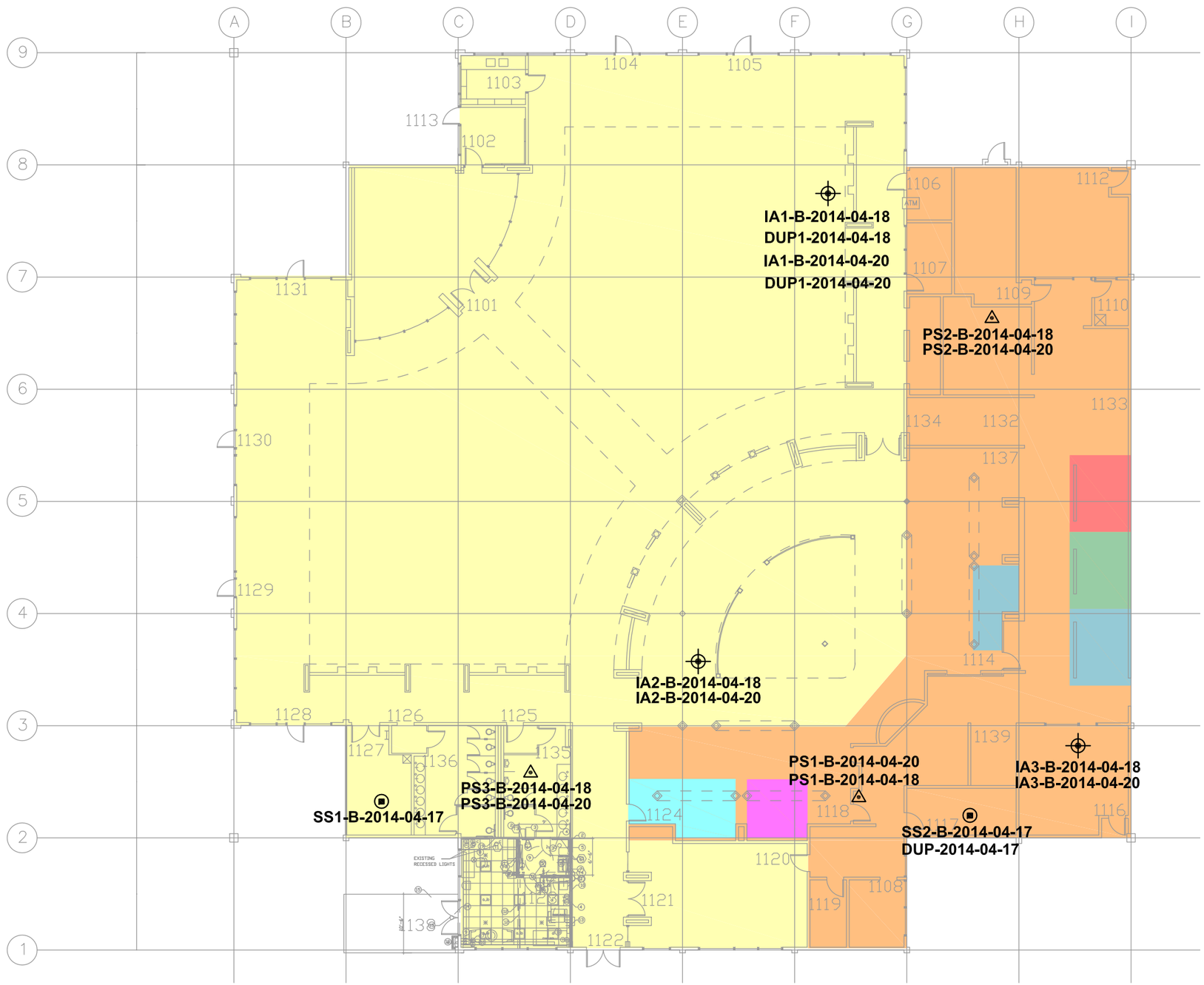

EXPLANATION

- Air Handling 1
- Air Handling 2
- Supply Unit 1
- Supply Unit 2
- Supply Unit 3
- Supply Unit 4
- Supply Unit 5
- IA — Indoor air sample
- PS — Pathway sample
- SS — Sub-slab sample

0 20 Feet
Approximate scale

TEXAS INSTRUMENTS
Santa Clara, California

INTERIOR FLOOR PLAN AND AIR HANDLING AREAS WITH SAMPLE LOCATIONS - BUILDING B

Date 02/24/14	Project No. 750620701	Figure 7

LANGAN TREADWELL ROLLO

Reference: Base map from a drawing titled, "Building B AsBuilt," by Texas Instruments, dated 06/14/13.

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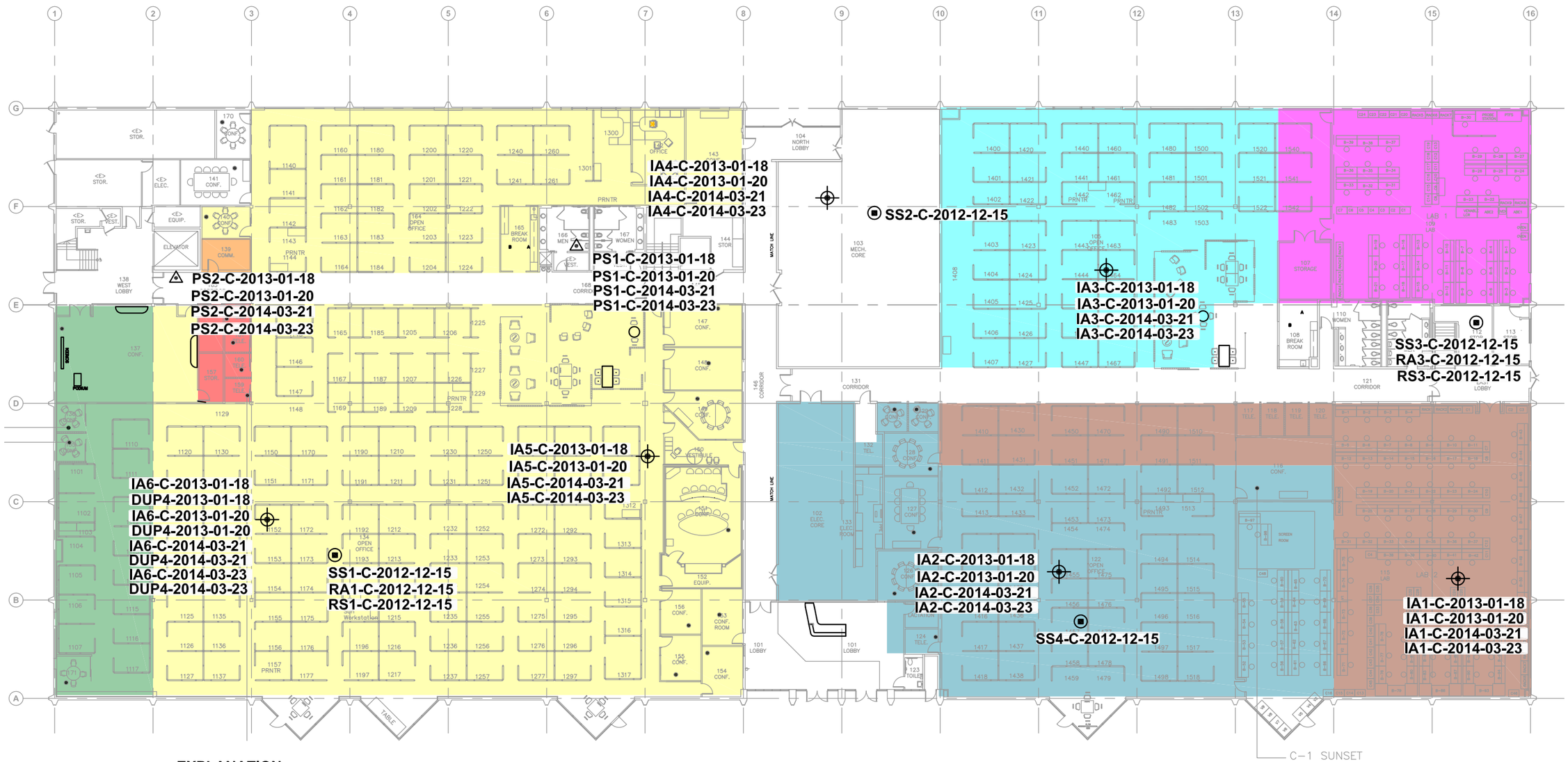

EXPLANATION

- Air Handling 1
- Fan Coil 1
- Fan Coil 2
- Fan Coil 3
- Air Handling 1
- Air Handling 2
- Air Handling 3
- Air Handling 4
- IA — Indoor air sample
- SS — Sub-slab sample
- PS — Pathway sample

0 — 30 Feet
Approximate scale

TEXAS INSTRUMENTS
Santa Clara, California

INTERIOR FLOOR PLAN AND AIR HANDLING AREAS WITH SAMPLE LOCATIONS - BUILDING C-1

Date 06/17/13	Project No. 750620701	Figure 8

LANGAN TREADWELL ROLLO

Reference: Base map from a drawing titled, "Building C-1 Asbuilt Office Layout," by Texas Instruments, dated 10/02/12.

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EXPLANATION

- Air Handling 1
- Air Handling 2
- Air Handling 3
- Air Handling 4
- Air Handling 5
- Air Handling 6
- IA Indoor air sample

0 30 Feet
Approximate scale

Reference: Base map from a drawing titled, "Building C-2 Asbuilt Office Layout," by Texas Instruments, dated 10/03/12.

TEXAS INSTRUMENTS
Santa Clara, California

INTERIOR FLOOR PLAN AND AIR HANDLING AREAS WITH SAMPLE LOCATIONS - BUILDING C-2

Date 06/17/13	Project No. 750620701	Figure 9

LANGAN TREADWELL ROLLO

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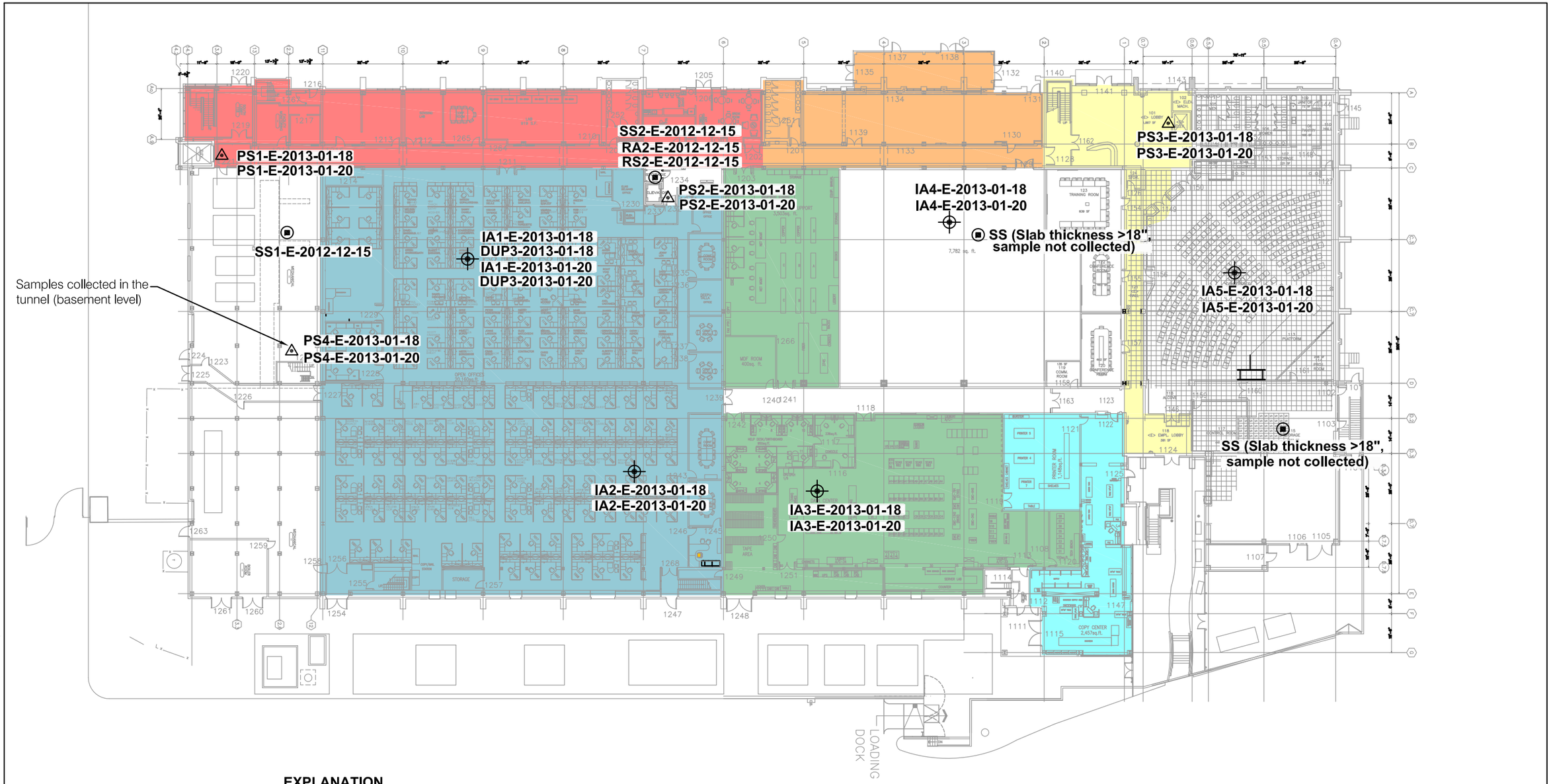

EXPLANATION

- Outside Conditioner Unit AHU-8
- Outside Conditioner Unit AHU-11
- Outside Conditioner Unit AHU-12
- Outside Conditioner Unit AHU-21
- Outside Conditioner Unit AHU-26
- Outside Conditioner Unit AHU-32
- IA — Indoor air sample
- SS — Sub-slab sample
- PS — Pathway sample

0 — 40 Feet
Approximate scale

Reference: Base map from a drawing titled, "Building E-1 Asbuilt Office Layout," by Texas Instruments, dated 10/03/12.

TEXAS INSTRUMENTS
Santa Clara, California

INTERIOR FLOOR PLAN AND AIR HANDLING AREAS WITH SAMPLE LOCATIONS - BUILDING E-1

Date 06/17/13	Project No. 750620701	Figure 10

LANGAN TREADWELL ROLLO

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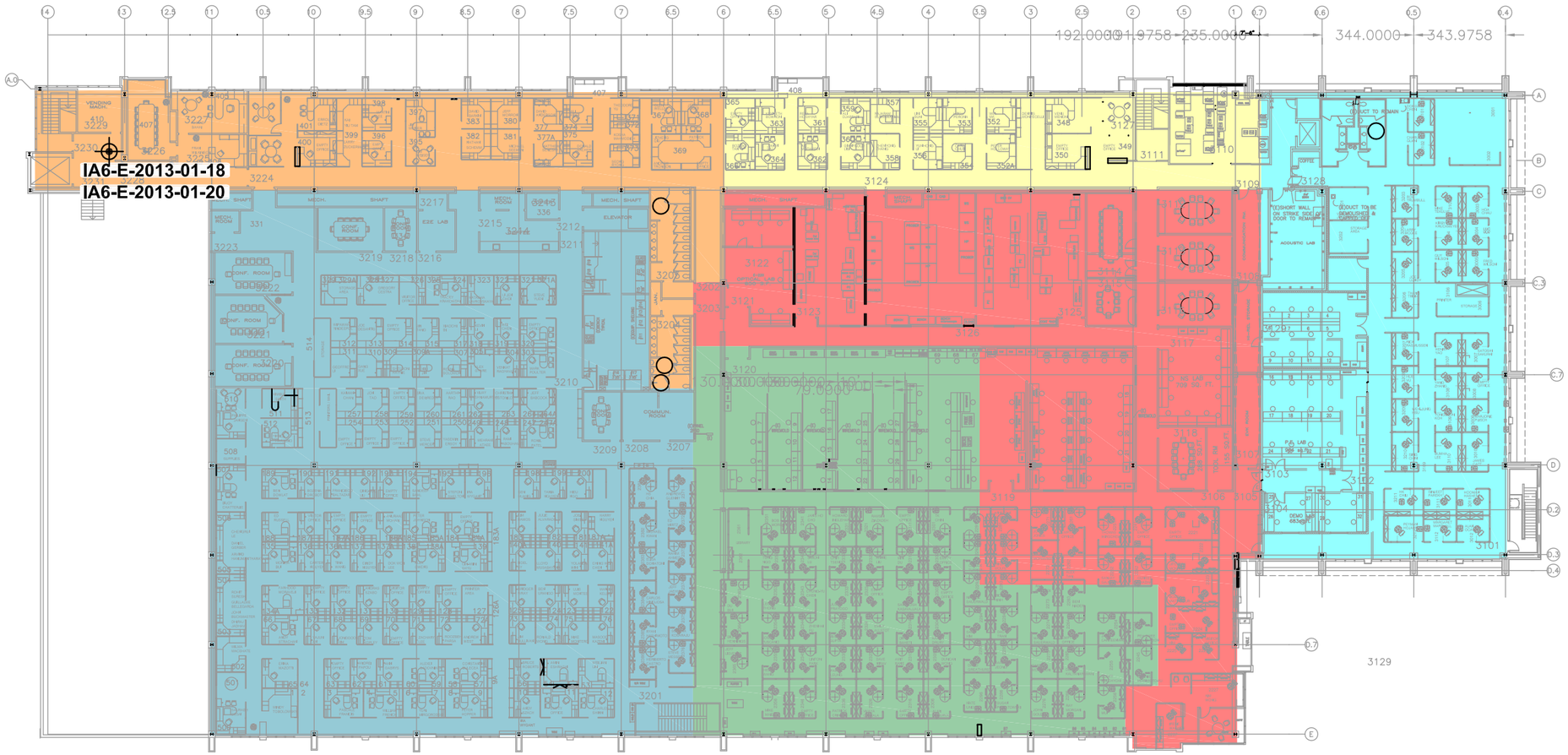

EXPLANATION

- Outside Conditioner Unit OCU-1
- Outside Conditioner Unit OCU-2
- Air Conditioner Unit ACU-2
- Air Conditioner Unit ACU-3
- Air Conditioner Unit ACU-6
- Air Handling Unit AH-1
- IA — Indoor air sample

0 — 40 Feet
Approximate scale

TEXAS INSTRUMENTS
Santa Clara, California

INTERIOR FLOOR PLAN AND AIR HANDLING AREAS WITH SAMPLE LOCATIONS - BUILDING E-2

Date 06/17/13	Project No. 750620701	Figure 11

LANGAN TREADWELL ROLLO

Reference: Base map from a drawing titled, "Building E-3 Asbuilt Office Layout," by Texas Instruments, dated 10/03/12.

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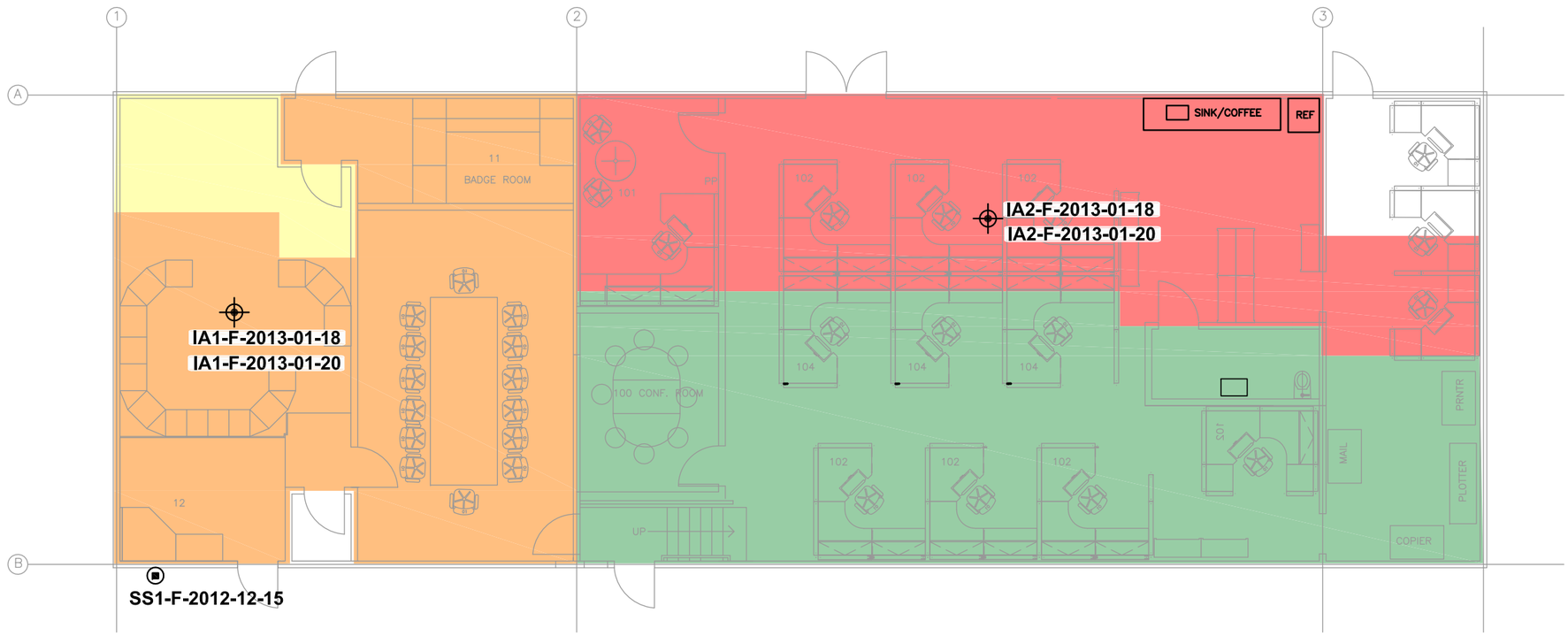

EXPLANATION

- Air Conditioning 1
- Air Handling 1
- Air Conditioning 2
- Air Handling 2

IA — Indoor air sample

SS — Sub-slab sample

0 10 Feet

Approximate scale

Reference: Base map from a drawing titled, "Building F Floor Plan," by Texas Instruments, dated 12/13/11.

TEXAS INSTRUMENTS
Santa Clara, California

INTERIOR FLOOR PLAN AND AIR HANDLING AREAS WITH SAMPLE LOCATIONS - BUILDING F

Date 06/17/13	Project No. 750620701	Figure 12

LANGAN TREADWELL ROLLO

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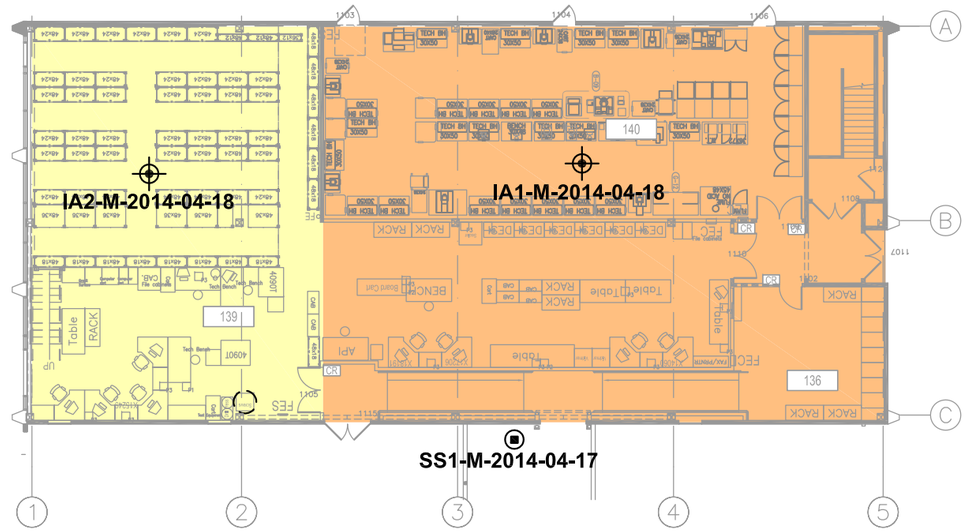
BUILDING M1

EXPLANATION

- Air Conditioning 1, operates continuously
- Air Conditioning 2, operates continuously
- IA — Indoor air sample
- SS — Sub-slab sample

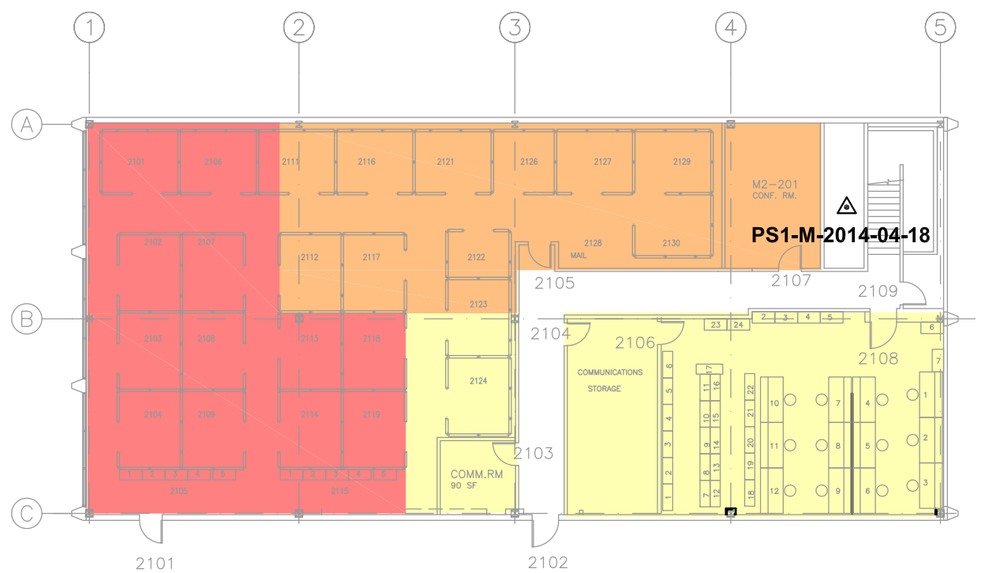
Note: HVAC off samples will not be collected in areas where HVAC operates continuously (24/7)



BUILDING M2

EXPLANATION

- Air Conditioning 3
- Air Conditioning 4
- Air Conditioning 5
- PS — Pathway sample



0 20 Feet

Approximate scale

TEXAS INSTRUMENTS
Santa Clara, California

INTERIOR FLOOR PLAN AND AIR HANDLING AREAS WITH SAMPLE LOCATIONS - BUILDING M-1 & M-2

Date 03/03/14	Project No. 750620701	Figure 13

LANGAN TREADWELL ROLLO

Reference: Base map from a drawing titled, "Building M-1" and "Building M-2," by Texas Instruments, dated 06/14/13 and 06/20/13 respectively.

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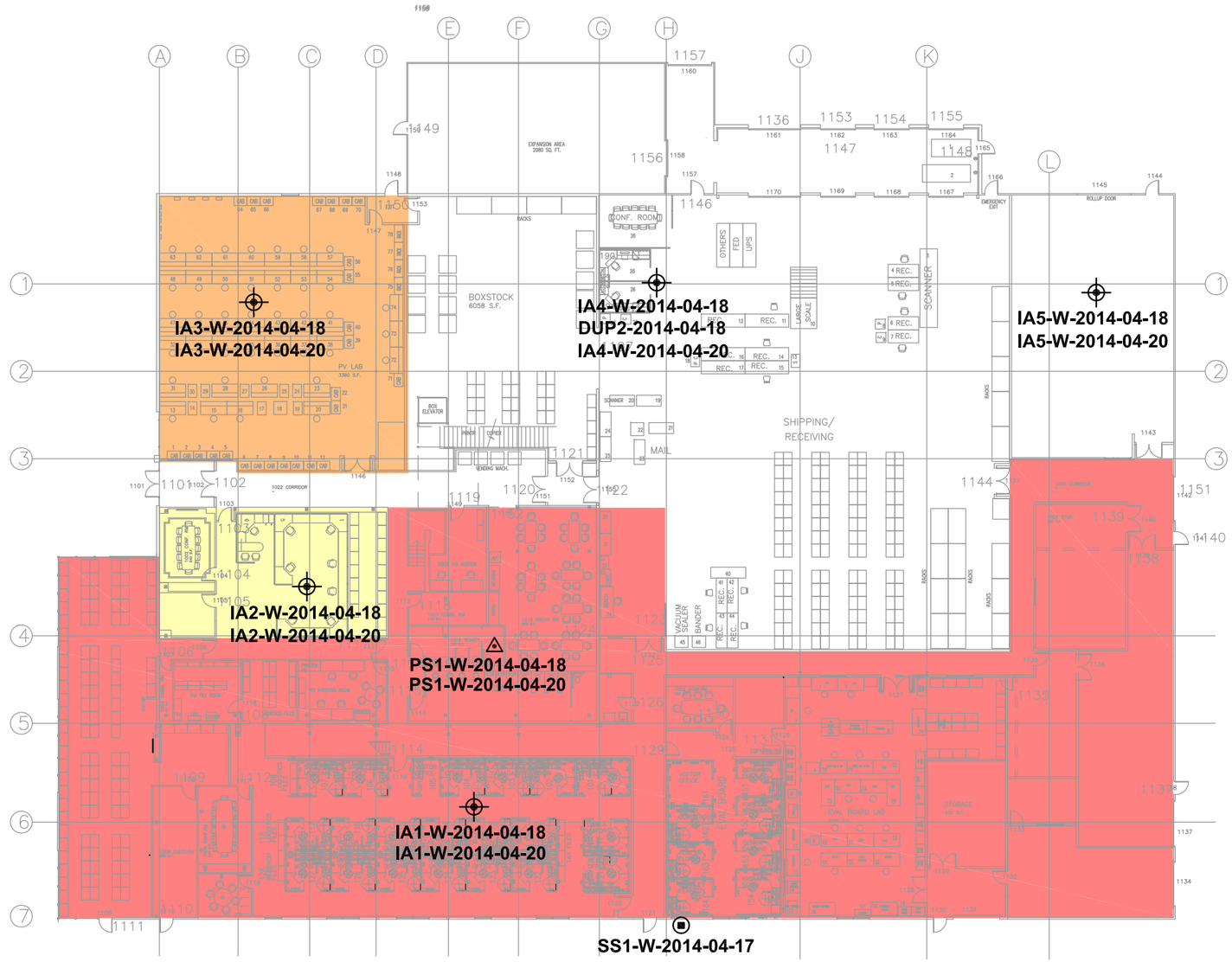

EXPLANATION

- Air Conditioning 6
- Air Conditioning 7
- Air Conditioning 9
- Shipping and Receiving Area (not part of building AC system)

- IA — Indoor air sample
- PS — Pathway sample
- SS — Sub-slab sample

0 30 Feet
Approximate scale

Reference: Base map from a drawing titled, "Building W-1 AsBuilt," by Texas Instruments, dated 06/24/13.

TEXAS INSTRUMENTS
Santa Clara, California

INTERIOR FLOOR PLAN AND AIR HANDLING AREAS WITH SAMPLE LOCATIONS - BUILDING W-1

Date 03/03/14	Project No. 750620701	Figure 14

LANGAN TREADWELL ROLLO

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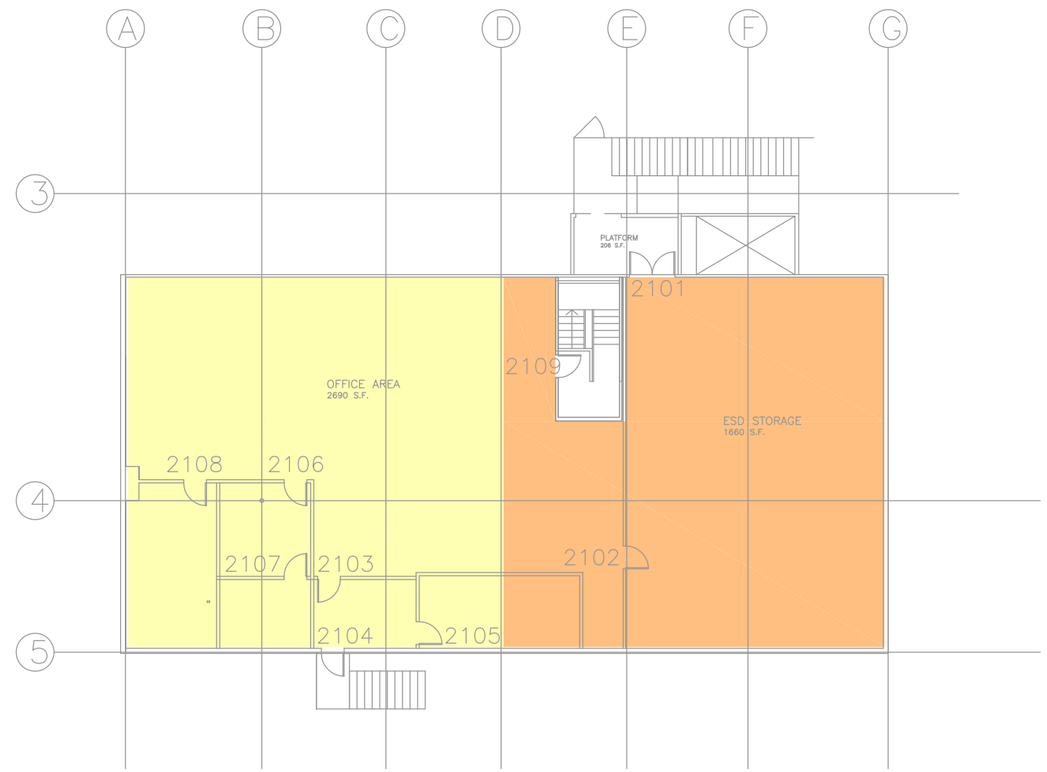

EXPLANATION

Air Conditioning 1

Air Conditioning 2

1. No sampling is proposed at Building W, Floor 2, because the space is unoccupied.

0 20 Feet

Approximate scale

Reference: Base map from a drawing titled, "Building W-2 AsBuilt," by Texas Instruments, dated 06/24/13.

TEXAS INSTRUMENTS
Santa Clara, California

INTERIOR FLOOR PLAN AND AIR HANDLING AREAS - BUILDING W-2

Date 02/24/14	Project No. 750620701	Figure 15

LANGAN TREADWELL ROLLO

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