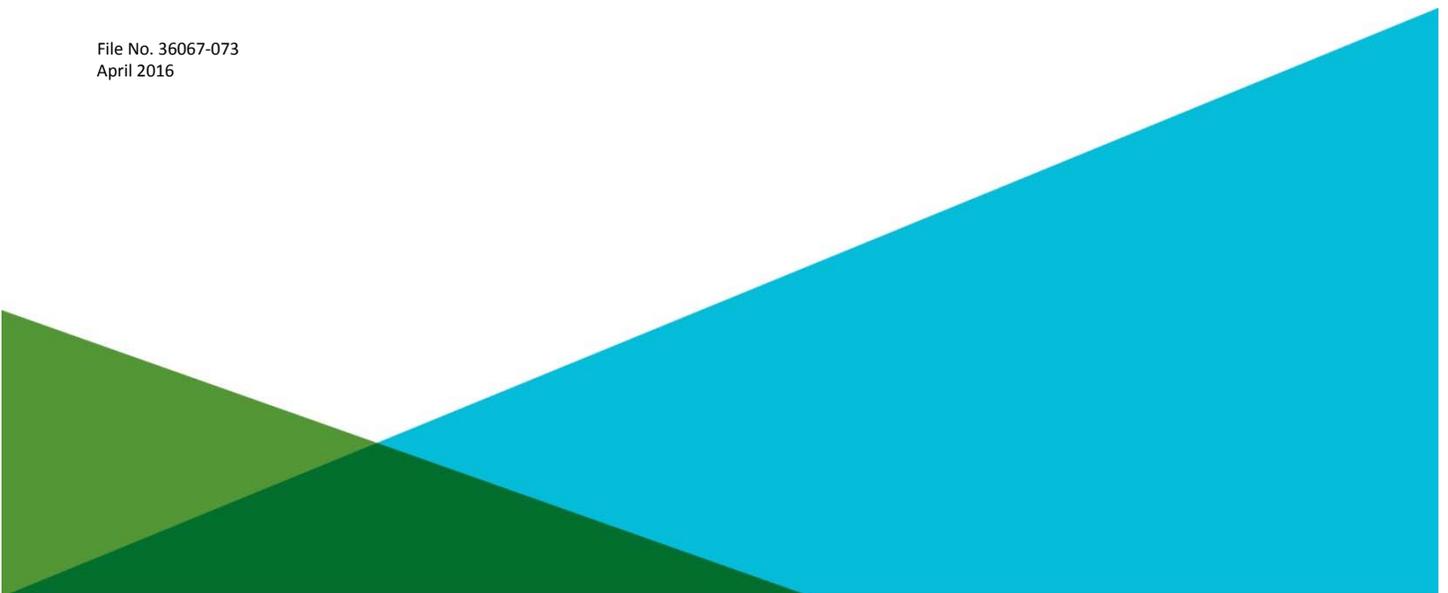


2015 ANNUAL VAPOR INTRUSION PROGRESS REPORT
MIDDLEFIELD-ELLIS-WHISMAN AREA AND
MOFFETT FIELD, CALIFORNIA

by Haley & Aldrich, Inc.
San Jose, California

File No. 36067-073
April 2016





Haley & Aldrich, Inc.
2107 N. 1st Street
Suite 380
San Jose, CA 95131
408.961.4805

15 April 2016
File No. 36067-073

United States Environmental Protection Agency, Region 9
75 Hawthorne Street, SFD-7-3
San Francisco, California 94105

Attention: Ms. Alana Lee
Project Manager, Superfund Division

Subject: 2015 Annual Vapor Intrusion Progress Report
Middlefield-Ellis-Whisman Area and Moffett Field, California

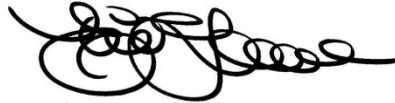
Dear Ms. Lee:

Please find attached the 2015 Annual Vapor Intrusion Progress Report for the Regional buildings included within the Middlefield-Ellis-Whisman Area and Moffett Field, California. This Annual Progress Report documents the work activities performed between 1 January and 31 December 2015 and was prepared pursuant to the United States Environmental Protection Agency's 16 September 2011 Statement of Work, Section 2.6.2.

Please call the undersigned if you have questions regarding this progress report.

Sincerely yours,
HALEY & ALDRICH, INC.


Jennifer Boyer
Project Manager


Elie H. Haddad, PE
Senior Vice President

Enclosures

c: MEW Distribution List

G:\36067_STC_MEW_VI\Progress Reports\Annual\2015 Annual Report - Regional\2016_0415_HAI_Annual_VI_Progress_Report_vF.docx

TABLE OF CONTENTS

	Page
List of Tables	ii
List of Figures	iii
List of Acronyms and Abbreviations	iv
1. Introduction	1
2. Vapor Intrusion Work Activities	3
2.1 PROGRESS REPORTS	3
2.2 SUMMARY OF BUILDING-SPECIFIC VI WORK ACTIVITIES	3
2.2.1 340 East Middlefield Road	3
2.2.2 440 East Middlefield Road	3
2.2.3 455 National Avenue	4
2.2.4 600 National Avenue	4
2.2.5 615 National Avenue	5
2.2.6 Moffett Field	5
2.3 QUALITY ASSURANCE/QUALITY CONTROL ACTIVITIES	8
2.3.1 Field Quality Control Procedures	8
2.4 COMMUNITY INVOLVEMENT AND MEETINGS	9
3. Vapor Intrusion Study Area	10
4. Delays Encountered in 2015	11
5. Anticipated Activities Planned for 2016	12
References	13

TABLES

FIGURES

List of Tables

Table No.	Title
1	Status of Air Sampling with No Response Action
2	Response Action for Tier 1, 2, and A Buildings
3	Air Sampling Results – 340 East Middlefield Road
4	Sub-slab Depressurization System Performance Monitoring Data – 440 East Middlefield Road
5	Sub-Slab Depressurization System Effluent Air Sampling Results - 440 East Middlefield Road
6	Air Sampling Results – 440 East Middlefield Road
7	Air Sampling Results – 455/465 National Avenue
8	Air Sampling Results – Building 20
9	Air Sampling Results – Building 109
10	Air Sampling Results – Building 153
11	Air Sampling Results – Building 156
12	Air Sampling Results – Building 547B
13	Air Sampling Results – Building 547D
14	Air Sampling Results – Building 572
15	Air Sampling Results – Building 945

List of Figures

Figure No.	Title
1	Site Location
2	Location of Existing Buildings, Vapor Intrusion Study Area, South of U.S. Highway 101
3	Location of Existing Buildings, Vapor Intrusion Study Area, Moffett Field
4	Location of Air Samples – 340 East Middlefield Road
5	Location of Air Samples, Suction Pits, and Pressure Monitoring Points – 440 East Middlefield Road
6	Location of Air Samples – 455 National Avenue
7	Location of Air Samples – Building 20
8	Location of Air Samples – Building 109
9	Location of Air Samples – Building 153
10	Location of Air Samples – Building 156
11	Location of Air Samples – Building 547B
12	Location of Air Samples – Building 547D
13	Location of Air Samples – Building 572
14	Location of Air Samples – Building 945

List of Acronyms and Abbreviations

Annual Progress Report	Annual Vapor Intrusion Progress Report
COCs	chemicals of concern
EPA	United States Environmental Protection Agency
Geosyntec	Geosyntec Consultants
Haley & Aldrich	Haley & Aldrich, Inc.
HVAC	heating, ventilation, and air conditioning
MEW	Middlefield-Ellis-Whisman
Moffett Field Sampling Report	“Building-Specific Vapor Intrusion Sampling and Evaluation Report, Buildings 20, 109, 153, 156, 547B, 547D, 572, and 945, Moffett Field, California”
Moffett Field Work Plan	“Building-specific Vapor Intrusion Sampling and Analysis Work Plan, Buildings 20, 109, 152, 547B, 547D, 572, and 945, Moffett Field, California”
NASA	National Aeronautics and Space Administration
OM&M	operations, maintenance, and monitoring
OM&M Plan	Building-specific Long-term Vapor Intrusion Operation, Maintenance, and Monitoring (OM&M) Plan
ROD Amendment	Record of Decision Amendment for the Vapor Intrusion Pathway
RPD	relative percent difference
SOW	United States Environmental Protection Agency’s Vapor Intrusion Statement of Work
SSD	sub-slab depressurization
SSV	sub-slab ventilation
TCE	trichloroethene
Tiering Work Plan	“Revised Site-wide Vapor Intrusion Sampling and Analysis Work Plan for Response Action Tiering, Middlefield-Ellis-Whisman Superfund Area, Mountain View, California”
VI	vapor intrusion
VI Study Area	Middlefield-Ellis-Whisman (MEW) Superfund Area and parts of Moffett Field in Mountain View, California

1. Introduction

Haley & Aldrich, Inc., (Haley & Aldrich) prepared this Annual Vapor Intrusion Progress Report (Annual Progress Report) to document the vapor intrusion (VI)-related work activities performed in 2015 as part of the Regional program for the Middlefield-Ellis-Whisman (MEW) Superfund Area and parts of Moffett Field (collectively referred to as the VI Study Area; Figure 1) in Mountain View, California. This Annual Progress Report was prepared pursuant to the United States Environmental Protection Agency's (EPA) 16 September 2011 Statement of Work (SOW) Section 2.6.2 (EPA, 2011). Each responsible party is providing annual progress reports under separate for its respective VI work.

The "Record of Decision Amendment for the Vapor Intrusion Pathway, Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View and Moffett Field, California," ([ROD Amendment]; EPA, 2010) lists the chemicals of concern (COCs)¹ for the VI Study Area. Tables 1 and 2 and Figures 2 and 3 summarize the status of air sampling conducted in all regional buildings since 2010, when EPA finalized the ROD Amendment.

Eleven commercial buildings were sampled during the 2015 reporting period. Tables 3 through 15 and Figures 4 through 14, provide a summary of air sampling and monitoring results obtained in each building and sample locations, respectively. The following summarizes the findings of the 2015 VI-related work activities.

- COC concentrations in indoor and outdoor air samples collected in the buildings located at 340 East Middlefield Road, which was constructed with a vapor barrier and a passive sub-slab ventilation [SSV] system, and 440 East Middlefield Road, which was retrofitted with an active sub-slab depressurization [SSD] system, were below their respective ROD commercial indoor air cleanup levels with the heating, ventilation, and air conditioning (HVAC) systems on and off.
- Indoor and outdoor air samples collected in the building located at 455/465 National Avenue showed no COCs above their respective ROD commercial indoor air cleanup levels with the HVAC system on. Indoor air samples were not collected with the HVAC system off because the HVAC system does not shut down on the weekend.
- Indoor and outdoor air samples collected in all spaces that are or can be occupied in the remaining eight buildings showed no COCs above their respective ROD commercial indoor air cleanup levels.

¹ EPA's 16 August 2010 ROD Amendment identifies seven chemicals of concern for the MEW VI Study Area: tetrachloroethene, trichloroethene (TCE), cis-1,2-dichloroethene, trans-1,2-dichloroethene, 1,1-dichloroethene, 1,1-dichloroethane, and vinyl chloride. The MEW VI Study area is the area where TCE concentrations in shallow groundwater are greater than 5 micrograms per liter.

The following table lists the requirements of the Annual Progress Report as described in the SOW, and identifies where in this report these requirements are addressed.

ITEM	LOCATION IN REPORT
Description of the VI work and activities taken to comply with the SOW during the reporting period (2015 for this Annual Progress Report), including a general description of all activities conducted during the reporting period.	Section 2 and Table 1
Work activities, including but not limited to: fieldwork, sampling, data collection, reporting, community involvement and meetings, laboratory results, interim VI measures, and remedial design and remedial action activities.	Section 2 and Tables 1 and 2
Summary of all sampling and monitoring data results by building or property address, including sampling location maps and figures, and data summary tables.	Section 2, Tables 3 through 15, and Figures 4 through 14
Annual reassessment of the extent of the VI Study Area using the most recent shallow A Zone groundwater concentration data and other lines of evidence, as appropriate. Updated shallow A aquifer zone TCE iso-concentration maps should be provided in the 2015 Annual Progress Report.	Section 3
Interpretation or explanation of the data collected during that period, including summary table updates of the response action tiering status of all buildings/properties.	Section 2; no tiers have been determined for existing buildings in the VI Study Area. The “Revised Site-wide Vapor Intrusion Sampling and Analysis Work Plan for Response Action Tiering” (Tiering Work Plan) was submitted to EPA on 22 March 2013.
Description of VI work planned for the next reporting period, with updated schedules that show overall VI work completed, VI work planned for the next reporting period, and the overall project schedule for VI work task completion.	Section 5 and Table 1
Description of all issues/problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated delays.	Section 4
Recommendations, follow-up actions, and proposed work schedules to address problems encountered.	Section 5 and Table 1

Information on the background of the VI Study Area is provided in the “Final Supplemental Remedial Investigation Report for Vapor Intrusion Pathway” (Haley & Aldrich, 2009) and is included herein by reference.

2. Vapor Intrusion Work Activities

On behalf of the Regional program, Haley & Aldrich collected indoor air samples in eleven commercial buildings in the VI Study Area during 2015. EPA was notified in advance of all field work.

2.1 PROGRESS REPORTS

In accordance with the SOW, sections 2.6.1 and 2.6.2, the following submittals to EPA document VI work activities performed in 2015.

- “Monthly Vapor Intrusion Field Activity and Progress Report,” dated 10 February 2015, 10 March 2015, 14 April 2015, 9 June 2015, 14 July 2015, 13 October 2015, 9 December 2015, and 12 January 2016 (Haley & Aldrich, 2015b; Haley & Aldrich, 2015e; Haley & Aldrich, 2015g; Haley & Aldrich, 2015i; Haley & Aldrich, 2015k; Haley & Aldrich, 2015m; Haley & Aldrich, 2015o; Haley & Aldrich, 2016a).
- “2014 Annual Vapor Intrusion Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, Mountain View, California,” dated 15 April 2015 (Haley & Aldrich, 2015h).

2.2 SUMMARY OF BUILDING-SPECIFIC VI WORK ACTIVITIES

The following is a summary of Building-specific VI work activities, findings, and mitigation measures, if any. The reports listed above provide the details of the VI work.

2.2.1 340 East Middlefield Road

In accordance with the “Building-specific Long-term Vapor Intrusion Operations, Maintenance, and Monitoring (OM&M) Plan” (OM&M Plan) dated 9 April 2014 (Haley & Aldrich, 2014b), confirmation air samples were collected in April 2014 and in January 2015 at the locations presented in Figure 4. As shown in Table 3, confirmation air sampling showed no COC concentrations above their respective ROD commercial indoor air cleanup levels. Haley & Aldrich submitted the results to EPA and the property owner via an email dated 23 February 2015 (Haley & Aldrich, 2015c).

2.2.2 440 East Middlefield Road

The following is a sequence of activities for 440 East Middlefield Road:

- The SSD pilot testing began in August 2014 and concluded in January 2015. As documented in the “Sub-slab Depressurization Pilot Test Results Memorandum” (Haley & Aldrich, 2015a), the SSD pilot testing results showed that adequate pressure differential across the building slab could be obtained via SSD.
- Haley & Aldrich submitted a “Building-specific Vapor Intrusion Control System Remedial Design” (Haley & Aldrich, 2015f), which was conditionally approved by EPA on 21 May 2015, and then revised and submitted (Haley & Aldrich, 2015j).

- Construction began on 26 June 2015, and the SSD system started operations on 12 September 2015. SSD system construction details and startup activities are documented in the “Building-Specific Vapor Intrusion Response Action Implementation Report, 440 East Middlefield Road, Mountain View, California” (Haley & Aldrich, 2015p).
- Haley & Aldrich submitted the “Building-specific Long-term Vapor Intrusion Operations, Maintenance, and Monitoring (OM&M) Plan” (Haley & Aldrich, 2015l).
- SSD system inspections were performed on 12, 14, 17, 24, 27 September, 3 and 12 October, 12 November, and 11 December 2015 in accordance with the OM&M Plan.

As shown in Table 4, the SSD system continues to achieve adequate pressure differential throughout the building footprint. Table 5 presents the results of the monthly effluent air samples, which show that the emissions comply with applicable Bay Area Air Quality Management District regulations. Haley & Aldrich collected confirmation indoor air samples on 27 September 2015 and 3 October 2015 with the HVAC system off and on, respectively, at the locations shown in Figure 5. As shown in Table 6, the air sampling in 2015 showed no COC concentrations above their respective ROD commercial indoor air cleanup levels.

2.2.3 455 National Avenue

In accordance with the “Update on Vapor Intrusion Activities Performed November 2013 and December 2013, (Haley & Aldrich, 2014a)” Haley & Aldrich collected confirmation indoor air samples on 28 January 2015 with the HVAC system on at the locations shown in Figure 6 (Haley & Aldrich, 2014a). The HVAC system continues to operate daily when the building is occupied. As shown in Table 7, all COC concentrations in 2015 were below their respective ROD commercial indoor air cleanup levels, indicating that the HVAC modifications are effective in reducing TCE concentrations in the building to below its ROD commercial indoor air cleanup level. Haley & Aldrich submitted the results to EPA and the property owner via an email dated 23 February 2015 (Haley & Aldrich, 2015d).

2.2.4 600 National Avenue

The following is a sequence of activities for 600 National Avenue:

- In 2014, National Avenue Partners, LLC purchased the 612-620 National Avenue, 630/634 National Avenue, and 640 National Avenue properties, and consolidated the three properties into a single address, 600 National Avenue.
- Geosyntec received comments from EPA on the “Draft Property-Specific Vapor Intrusion Control System Remedial Design” (Geosyntec, 2014), on 27 February 2015, and submitted a revised design report on 19 March 2015 (Geosyntec, 2015a). The design proposes the construction of an active SSD system and vapor barrier at the proposed building.
- Following receipt of EPA’s additional comments and conditional approval of the revised design report on 5 May 2015, a revised final design report for an active SSD system (Geosyntec, 2015b) and an OM&M Plan (Geosyntec, 2015c) were submitted to EPA .
- Redevelopment of the 600 National Avenue property began in May 2015. National Avenue Partners, LLC, is constructing a new building, with an SSD system and vapor barrier on the northern portion of the parcel and an open-air garage on the southern portion of the parcel.

- Construction of the SSD system and vapor barrier began in August 2015 and will be completed in 2016.

The system startup schedule depends on the developer's construction schedule, but will likely occur in the summer of 2016.

2.2.5 615 National Avenue

In 2015, the owner notified Haley & Aldrich of plans to perform tenant improvements on the first floor, including new carpeting. Haley & Aldrich visually examined the exposed concrete floor once the old carpeting was removed and observed cracks in the Retro-Coat™ floor coating system (Retro-Coat™) manufactured by Land Science™ Technologies of San Clemente, California. In December 2015, under the direction of Haley & Aldrich, American Industrial Coatings (an application contractor licensed by Land Science™ Technologies) scuffed the existing flooring and reapplied Retro-Coat™ in areas where cracks and joints needed repairs.

2.2.6 Moffett Field

Haley & Aldrich submitted the "Building-specific Vapor Intrusion Sampling and Analysis Work Plan, Buildings 20, 109, 152, 547B, 547D, 572, and 945, Moffett Field, California," ([Moffett Field Work Plan]; Haley & Aldrich, 2013b) on 3 September 2013. The Moffett Field Work Plan was updated on 30 January 2014 and 3 June 2014 to include Buildings 153 and 156, respectively. EPA conditionally approved the Moffett Field Work Plan (Haley & Aldrich, June 2014) on 19 November 2015 with some specific comments; Haley & Aldrich responded to these comments on 3 December 2015 (Haley & Aldrich, 2015n). All subsequent air sampling described below was conducted in accordance with the aforementioned plan, and the results were submitted to EPA and National Aeronautics and Space Administration (NASA) (Haley & Aldrich, 2016b).

2.2.6.1 Building 20

Building 20 is a two-story, wood-framed structure with a footprint of approximately 16,340 square feet. The building has an unoccupied basement beneath the southern wing of the building and an earthen crawlspace underlies the rest of the building. The basement is vacant and consists of a utility room containing exhaust fans and two empty storage rooms. Singularity University, a business and technology school, occupies the first floor and uses it primarily as classrooms and offices space. Scanadu, a mobile medical device company, occupies the second floor and uses it as office space. Normal occupancy hours are generally Monday through Friday from 8:00 AM to 8:00 PM, but some students may remain after hours or study on the weekends.

The building has no HVAC system. NASA initially collected indoor air samples in the building in 2003 and 2004, and those samples showed TCE concentrations above its EPA long-term commercial cleanup level. In 2008, NASA therefore installed two continuously-operating exhaust fans in the basement as a VI mitigation measure (Neptune and Company, Inc., 2009a and 2009b; Haley & Aldrich, Inc., 2009). Haley & Aldrich collected samples over a 24-hour duration between 23 and 24 November 2015 at the locations shown in Figure 7. As shown in Table 8, all COC concentrations in the indoor or outdoor air samples in all spaces that are or can be occupied were below their respective ROD commercial indoor air cleanup levels. This finding is consistent with the previous sampling activities conducted by NASA in July 2008 after startup of the basement mitigation system.

The November 2015 sampling results confirm that the basement mitigation system was operating as designed and reducing TCE concentrations in the occupied and potentially occupied spaces to below its respective ROD commercial indoor air cleanup level. Other than the continued operation of the mitigation system, no further actions are necessary for Building 20. The results were submitted to EPA and NASA in the Moffett Field Sampling Report (Haley & Aldrich, 2016b) and also via an email dated 9 December 2015.

2.2.6.2 Building 109

Building 109 is a one-story, wood-framed structure with a footprint of approximately 5,500 square feet that includes office space, an exercise facility, locker rooms, and a pump room containing equipment and chemicals for the NASA Ames Exchange Swimming Pool. The building is slab-on-grade with no basement or crawlspace. Floor drains are located in the locker rooms, the gym, the storage area, and the pump room. The pump room also has a sump.

The building has no HVAC system. There is one heating/cooling unit that recirculates air in the exercise room with no outside makeup air. Exhaust fans continuously ventilate the bathrooms. The building is open for use Monday through Friday from 10:00 AM to 6:00 PM.

One indoor and one outdoor air sample was collected over a 24-hour duration between 23 through 24 November 2015 at the locations shown in Figure 8. The 2015 sampling showed that all COC concentrations were below their respective ROD commercial indoor air cleanup levels (Table 9).

2.2.6.3 Building 153

Building 153 has two floors, a partial basement, and a footprint of approximately 8,700 square feet. The building is occupied by Made In Space and used for research and development and office space. The eastern portion of the basement is connected to a utility corridor or tunnel underlying several buildings at Moffett Field. The basement is unoccupied and only used for storage. The tunnel access is restricted by a locked door. The building has no HVAC system. On 1 through 2 December 2015, Haley & Aldrich collected indoor air samples over a 24-hour duration at the locations shown in Figure 9. The 2015 sampling showed that all COC concentrations were below their respective ROD commercial indoor air cleanup levels (Table 10).

2.2.6.4 Building 156

Building 156 is similar to Building 153; it has two floors, a partial basement, and a footprint of approximately 8,700 square feet. The building is used for office space by Deep Space Industries. The eastern portion of the basement is connected to a utility corridor or tunnel underlying several buildings at Moffett Field. The basement is unoccupied and only used for storage. The access to the tunnel is restricted by a locked door. The building has no HVAC system. Haley & Aldrich collected samples over a 24-hour duration between 1 and 2 December 2015 at the locations shown in Figure 10. The 2015 sampling showed that all COC concentrations were below their respective ROD commercial indoor air cleanup levels (Table 11).

2.2.6.5 *Building 547B*

Building 547B is a slab-on-grade one-story, wood-framed structure with a footprint of approximately 2,700 square feet. The building has no basement or crawlspace. The building is used as a laundry facility and lounge and intermittently occupied by adult students undertaking continuing education courses in nearby buildings. The building is open 24 hours per day, seven days a week. The building has no HVAC system, but exhaust fans operate in the building. Indoor air samples were collected over a 24-hour duration between 10 and 11 December 2015 at the locations shown in Figure 11. The 2015 sampling showed that all COC concentrations were below the ROD commercial indoor air cleanup levels (Table 12).

2.2.6.6 *Building 547D*

Building 547D is a slab-on-grade three-story, wood-framed structure with a footprint of approximately 3,800 square feet. Adult students and interns use the building as a temporary residence. There is no centralized heating/cooling system for the building; heating and cooling are provided by wall units with no outside makeup air. Exhaust fans are found in the building's restrooms. The building has no basement or crawlspace. Indoor air samples were collected between 23 and 24 November 2015 at the locations shown in Figure 12. The 2015 sampling showed that all COC concentrations were below their respective ROD commercial indoor air cleanup levels (Table 13).

2.2.6.7 *Building 572*

Building 572 is a one-story, wood-framed structure with a footprint of approximately 1,800 square feet. The building, which consists of two racquetball courts, is ventilated by an exhaust fan and passive wind turbines and only occupied when used for racquetball play. Indoor air samples were collected between 23 and 24 November 2015 when the exhaust fans were not operational at the locations shown in Figure 13. The 2015 sampling showed that all COC concentrations were below their respective ROD commercial indoor air cleanup levels (Table 14).

2.2.6.8 *Building 945*

Building 945 is a one-story, wood-framed structure with a footprint of approximately 2,600 square feet, located next to a baseball field, and used for storage and locker rooms. The building has no basement or crawlspace. The restrooms and locker rooms are used when the baseball field is in use. The building is rarely occupied in the winter. Ventilation is provided by passive wind turbines.

Indoor air samples were collected over a 24-hour duration between 23 and 24 November 2015 at the locations shown in Figure 14. The 2015 sampling showed that all COC concentrations were below their respective ROD commercial indoor air cleanup levels (Table 15).

2.3 QUALITY ASSURANCE/QUALITY CONTROL ACTIVITIES

Quality assurance/quality control activities, which include data verification² and data validation³, complied with the requirements detailed in the Tiering Work Plan (Haley & Aldrich, 2013a). No deviations or discrepancies were identified for field techniques or sampling protocol. The laboratory followed media preparation procedures for the sampling canisters and the sample analysis. A Stage I or Stage II evaluation was completed for each analytical report and a data usability summary report generated for each evaluation.

The minimum requirements for the data validation and verification are specified in the Tiering Work Plan and were achieved in 2015. Additional validation and verification was performed based on detected COC concentrations in the indoor air samples (i.e., Stage II evaluations are performed when COC concentrations are above the ROD indoor air cleanup levels; otherwise, Stage II evaluations are typically performed at random). As shown in the following table, the required validation was performed on the collected data.

	% of Selected Data Validated Subjected to Stage I Evaluation	% of Selected Data Validated Subjected to Stage II Evaluation	% of Selected Data Validated Subjected to Stage III Evaluation
Requirement per Tiering Work Plan	80%	20%	0%
2015 Reporting Period	100% (101 of 101 samples)	31% (18 of 58 samples)	0% (0 of 20 samples)

2.3.1 Field Quality Control Procedures

In 2015, Haley & Aldrich collected 101 indoor air, outdoor air, and sub-slab soil vapor samples, including eight field duplicates (16 percent of primary samples), from eleven buildings in the VI Study Area. Precision was evaluated by assessing the relative percent difference (RPD) between primary and field duplicate samples. RPD was calculated when a given analyte was detected at a concentration above the laboratory reporting limit in both the primary sample and the field duplicate sample at a given location. No data were rejected during the data validation process. However, the “J” qualifier was applied to one sample to denote that the RPD between primary and field duplicate samples was greater than the project data quality objective of 30 percent.

² A process for evaluating the completeness, correctness, and conformance/compliance of a specific data set against the method, procedural, or contractual requirements.

³ An analyte and sample-specific process that extends data evaluation beyond method, procedural, or contractual compliance (i.e., data verification) to determine the analytical quality of a specific data set.

2.4 COMMUNITY INVOLVEMENT AND MEETINGS

Community involvement and meetings continue to be performed by EPA, including meetings with the Moffett Field Restoration Advisory Board. In addition, meetings with the Moffett-MEW Community Advisory Board (CAB) are held when scheduled by the CAB.

3. Vapor Intrusion Study Area

Figures 1, 2, and 3 depict the VI Study Area in accordance with current maps posted by EPA on its website (www.epa.gov/region9/mew). Updated TCE concentration contours for the A Zone are provided in the groundwater monitoring report “2015 Annual Progress Report” prepared by Geosyntec (Geosyntec, 2016), which Geosyntec is submitting concurrently with this Annual Progress Report.

4. Delays Encountered in 2015

The draft Tiering Work Plan was submitted to EPA on 22 March 2013, but since no approval or comments have been received from EPA, it has not yet been implemented. The Tiering Work Plan will be implemented once approved by EPA.

Delays were also encountered in implementing the Moffett Field Work Plan (Haley & Aldrich, 2014). On 12 November 2015, the MEW Companies notified EPA of their intent to implement the Moffett Field Work Plan; on 19 November 2015, EPA conditionally approved the Moffett Field Work Plan. Haley & Aldrich then attempted to schedule indoor air sampling at the buildings included in the Moffett Field Work Plan, but NASA denied access to sample Building 152 until spring 2016.

5. Anticipated Activities Planned for 2016

We anticipate the following activities for 2016:

- Monthly Vapor Intrusion Field Activity and Progress Reports will be submitted to EPA on the second Tuesday of each month in accordance with Section 2.6.2 of the SOW.
- Building-specific work:
 - Collect indoor and outdoor air samples at Building 556 on Moffett Field. A building-specific indoor air sampling report will be submitted to EPA within 60 days of completing the air sampling.
 - Collect indoor and outdoor air samples at 335 East Middlefield Road after completing renovations and prior to occupancy. A building-specific indoor air sampling report will be submitted to EPA within 60 days of completing the air sampling.
 - Obtain access from NASA and conduct indoor air sampling at Building 152 in accordance with the Moffett Field Work Plan (Haley & Aldrich, 2014). A building-specific indoor air sampling report will be submitted to EPA within 60 days of completing the air sampling.
 - Implement ongoing building-specific OM&M activities developed for the SSD system operating at 440 East Middlefield Road.
 - Implement ongoing building-specific OM&M activities developed for the passive SSV systems operating at 331 Fairchild Drive and 340 East Middlefield Road.
 - Implement ongoing building-specific OM&M activities for the crawlspace ventilation system operating at Residence 4.
 - Routinely inspect the HVAC system operations at 455 National Avenue.
 - Design an SSD system at 277 Fairchild Drive. The construction schedule is not yet known.
 - Complete construction oversight of the SSD system at 600 National Avenue and start operating and maintaining the system and collecting data in accordance with the OM&M Plan.

References

1. Geosyntec Consultants, 2014. "Draft Property-Specific Vapor Intrusion Control System Remedial Design, Building to be Located at 600 National Avenue (Formerly 612/614/616/618/620 National Avenue, 630/634 National Avenue, and 640 National Avenue), Mountain View, California," 19 March.
2. Geosyntec Consultants, 2015a. "Property-Specific Vapor Intrusion Control System Remedial Design, Building to be Located at 600 National Avenue (Formerly 612/614/616/618/620 National Avenue, 630/634 National Avenue, and 640 National Avenue), Mountain View, California," 19 March.
3. Geosyntec Consultants, 2015b. "Revised Final Property-Specific Vapor Intrusion Control System Remedial Design, Building to be Located at 600 National Avenue (Formerly 612/614/616/618/620 National Avenue, 630/634 National Avenue, and 640 National Avenue), Mountain View, California," 3 June.
4. Geosyntec Consultants, 2015c. "Building-Specific Long-Term Vapor Intrusion Operations, Maintenance, and Monitoring Plan, Building to be Located at 600 National Avenue (Formerly 612/614/616/618/620 National Avenue, 630/634 National Avenue, and 640 National Avenue), Mountain View, California," 2 July.
5. Geosyntec Consultants, 2016. "2015 Annual Progress Report, Middlefield-Ellis-Whisman Regional Groundwater Remediation Program, Mountain View, California," 15 April.
6. Haley & Aldrich, Inc., 2009. "Final Supplemental Remedial Investigation for the Vapor Intrusion Pathway, Middlefield-Ellis-Whisman Study Area, Mountain View and Moffett Field, California," 29 June.
7. Haley & Aldrich, Inc., 2013a. "Revised Site-Wide Vapor Intrusion Sampling and Analysis Work Plan for Response Action Tiering, Middlefield-Ellis-Whisman Superfund Area, Mountain View, California," 22 March.
8. Haley & Aldrich, Inc., 2013b. "Building-specific Vapor Intrusion Sampling and Analysis Work Plan, Buildings 20, 109, 152, 547B, 547D, 572, and 945, Moffett Field, California," 3 September.
9. Haley & Aldrich, Inc., 2014a. "Update on Vapor Intrusion Activities Performed November 2013 and December 2013, 455/465 National Avenue, Mountain View, California," 4 February.
10. Haley & Aldrich, Inc., 2014b. "Building-specific Long-term Vapor Intrusion Operation, Maintenance, and Monitoring (OM&M) Plan, 340 East Middlefield Road, Mountain View, California," 9 April.
11. Haley & Aldrich, Inc., 2015a. "Sub-slab Depressurization Pilot Test Results Memorandum, 440 East Middlefield Road, Mountain View, California," 6 February.
12. Haley & Aldrich, Inc., 2015b. "Monthly Vapor Intrusion Field Activity and Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, California," 10 February.

13. Haley & Aldrich, Inc., 2015c. "Transmittal of the Indoor Air Sampling Data from 340 East Middlefield Road, Mountain View," 23 February.
14. Haley & Aldrich, Inc., 2015d. "RE: 455 National Avenue Indoor Air Sampling Results" February 23
15. Haley & Aldrich, Inc., 2015e. "Monthly Vapor Intrusion Field Activity and Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, California," 10 March.
16. Haley & Aldrich, Inc., 2015f. "Building-specific Vapor Intrusion Control System Remedial Design, 440 East Middlefield Road, Mountain View, California," 7 April.
17. Haley & Aldrich, Inc., 2015g. "Monthly Vapor Intrusion Field Activity and Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, California," 14 April.
18. Haley & Aldrich, Inc., 2015h. "2014 Annual Vapor Intrusion Progress Report, Middlefield-Ellis-Whisman Area and Moffett Field, Mountain View, California," 15 April.
19. Haley & Aldrich, Inc., 2015i. "Monthly Vapor Intrusion Field Activity and Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, California," 9 June.
20. Haley & Aldrich, Inc., 2015j. "Final Building-specific Vapor Intrusion Control System Remedial Design, 440 East Middlefield Road, Mountain View, California," 23 June.
21. Haley & Aldrich, Inc., 2015k. "Monthly Vapor Intrusion Field Activity and Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, California," 14 July.
22. Haley & Aldrich, Inc., 2015l. "Building-Specific Long-term Vapor Intrusion Operations, Maintenance, and Monitoring (OM&M) Plan, 440 East Middlefield Road, Mountain View, California," 21 July.
23. Haley & Aldrich, Inc., 2015m. "Monthly Vapor Intrusion Field Activity and Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, California," 13 October.
24. Haley & Aldrich, Inc., 2015n. "RE: Transmittal of the Building-specific Vapor Intrusion Sampling and Analysis Work Plan - Moffett Field, Mountain View, December 2015.
25. Haley & Aldrich, Inc., 2015o. "Monthly Vapor Intrusion Field Activity and Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, California," 9 December.
26. Haley & Aldrich, Inc., 2015p. "Building-specific Vapor Intrusion Response Action Implementation Report, 440 East Middlefield Road, Mountain View, California," 18 December.
27. Haley & Aldrich, Inc., 2016a. "Monthly Vapor Intrusion Field Activity and Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, California," 12 January.
28. Haley & Aldrich, Inc., 2016b. "Building-Specific Vapor Intrusion Sampling and Evaluation Report, Buildings 20, 109, 153, 156, 547B, 547D, 572, and 945, Moffett Field, California," 22 February.
29. Neptune and Company, Inc., 2009a. "Final Report for May 2008 Vapor Intrusion Sampling in Buildings 16, 20, 107, and 126 at the NASA Research Park (NRP)," 7 January 2009.

30. Neptune and Company, Inc., 2009b. "Final Report for July 2008 Vapor Intrusion Sampling in Building B (20)," 28 January 2009.
31. United States Environmental Protection Agency, 2010. "Record of Decision Amendment for the Vapor Intrusion Pathway, Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View and Moffett Field, California," August.
32. United States Environmental Protection Agency, 2011. "Statement of Work for Remedial Design and Remedial Action to Address the Vapor Intrusion Pathway, Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View and Moffett Field, California," 16 September.

G:\36067_STC_MEW_VI\Progress Reports\Annual\2015 Annual Report - Regional\2016_0415_HAI_Annual_VI_Progress_Report_vF.docx

TABLES

TABLE 1
STATUS OF AIR SAMPLING WITH NO RESPONSE ACTION
MOUNTAIN VIEW, CALIFORNIA

Building Address	Access Received	Building Walkthrough Performed	Work Plan Submitted	EPA's Approval of Work Plan	Work Plan Implemented (60 days after EPA approval of Work Plan)	Report Submitted (60 days after completion of sampling)	Comments & Notes
North Whisman Road							
265/275 N. Whisman Rd.	3/7/2011	4/20/2011	7/24/2011	2/17/2012	3/30/2012	5/29/2012	
276 N. Whisman Rd.	1/17/2011	2/23/2011	7/24/2011	2/17/2012	3/20/2012	5/18/2012	
301 N. Whisman Rd.	8/1/2011	8/16/2011	8/30/2011	2/17/2012	4/27/2012, 4/29/2012	6/26/2012	
310 N. Whisman Rd.	2/9/2011	4/20/2011	8/1/2011	2/17/2012	3/20/2012	5/18/2012	
425 N. Whisman Rd. #100-800	3/11/2011	4/20/2011	8/1/2011	2/17/2012	4/13/2012, 4/15/2012	6/12/2012	
435 N. Whisman Rd. #100-400	3/11/2011	4/20/2011	8/1/2011	2/17/2012	4/13/2012, 4/15/2012	6/12/2012	
445 N. Whisman Rd. #100-400	3/11/2011	4/20/2011	8/1/2011	2/17/2012	4/13/2012, 4/15/2012	6/12/2012	
455 N. Whisman Rd. #100-400	3/11/2011	4/20/2011	8/1/2011	2/17/2012	4/13/2012, 4/15/2012, 4/16/2012	6/12/2012	
465 N. Whisman Rd. #100-600	3/11/2011	4/20/2011	8/1/2011	2/17/2012	4/13/2012, 4/15/2012	6/12/2012	
475 N. Whisman Rd. #100-400	3/11/2011	4/20/2011	8/1/2011	2/17/2012	4/13/2012, 4/15/2012	6/12/2012	
485 N. Whisman Rd. #100-400	3/11/2011	4/20/2011	8/1/2011	2/17/2012	4/13/2012, 4/15/2012	6/12/2012	
495 N. Whisman Rd. #100-500	3/11/2011	4/20/2011	8/1/2011	2/17/2012	4/13/2012, 4/15/2012, 4/16/2012	6/12/2012	
East Middlefield Road							
295 E. Middlefield Rd.	2/4/2011	2/23/2011	7/24/2011	2/17/2012	3/20/2012	5/18/2012	
325 E. Middlefield Rd.	3/5/2011	4/20/2011	8/1/2011	2/17/2012	3/30/2012	5/29/2012	
335 E. Middlefield Rd.	8/1/2011	8/16/2011	8/30/2011	2/17/2012	4/27/2012, 4/29/2012	6/26/2012	The building is being renovated, which includes cuts in the concrete slab and sealing of cracks and conduits, and will be sampled again upon completion of renovations.
345 E. Middlefield Rd.	8/1/2011	8/16/2011	8/30/2011	2/17/2012	5/23/2012, 6/3/2012	7/23/2012	
448/450 E. Middlefield Rd.	1/28/2011	2/23/2011	8/1/2011	2/17/2012	3/16/2012, 3/18/2012	5/15/2012	
460 E. Middlefield Rd.	9/3/2013	9/9/2013	10/31/2013	11/25/2013	12/13/2013, 12/15/2013	2/13/2014	
490 E. Middlefield Rd.	8/30/2012	9/19/2012	10/18/2012	10/26/2012	11/9/2012, 11/11/2012	1/8/2013	

TABLE 1
STATUS OF AIR SAMPLING WITH NO RESPONSE ACTION
MOUNTAIN VIEW, CALIFORNIA

Building Address	Access Received	Building Walkthrough Performed	Work Plan Submitted	EPA's Approval of Work Plan	Work Plan Implemented (60 days after EPA approval of Work Plan)	Report Submitted (60 days after completion of sampling)	Comments & Notes
Ellis Street							
480/488 Ellis St.	9/4/2012	9/20/2012	10/18/2012	10/26/2012	11/9/2012, 11/11/2012, 1/11/2013, 1/13/2013, 3/8/2013, 3/10/2013, 4/7/2013, 4/4/2014, 4/6/2014	2/11/2013	
500 Ellis St.	9/20/2012	9/20/2012	10/18/2012	10/26/2012	11/16/2012, 11/18/2012	1/15/2013	
515 Ellis St.	9/5/2012	9/19/2012	10/18/2012	10/26/2012	11/15/2012, 11/18/2012	1/14/2013	The building was renovated between 2014, which included cuts in the concrete slab and sealing of cracks and conduits. Post-renovation indoor air sampling was performed on 10 November 2014, and indoor air concentrations of all COCs were below their respective ROD long-term commercial indoor air cleanup levels.
550 Ellis St.	9/20/2012	9/20/2012	10/18/2012	10/26/2012	11/16/2012, 11/18/2012	1/15/2013	
555 Ellis St.	9/5/2012	9/19/2012	10/18/2012	10/26/2012	11/9/2012, 11/11/2012	1/8/2013	
605 Ellis St.	1/13/2011	2/1/2011	7/24/2011	2/17/2012	3/16/2012, 3/18/2012	5/15/2012	
625 Ellis St.	1/4/2011	2/1/2011	7/24/2011	2/17/2012	3/23/2012, 3/25/2012	5/22/2012	
636 Ellis St./491 Fairchild Dr.	8/1/2011	8/16/2011	8/30/2011	2/17/2012	5/23/2012, 6/3/2012	7/23/2012	
645 Ellis St.	1/4/2011	2/23/2011	7/24/2011	2/17/2012	3/23/2012, 3/25/2012	5/22/2012	
Fairchild Drive							
299 Fairchild Dr.	9/6/2012	9/19/2012	10/18/2012	10/26/2012	11/9/2012, 11/11/2012	1/8/2013	
411/415 Fairchild Dr.	1/21/2011	2/1/2011, 1/7/2014	7/24/2011	2/17/2012	4/13/2012 and 4/15/2012 (Suite 411), 2/7/2014 and 2/9/2014 (Suite 415)	6/12/2012 (Suite 411), 4/10/2014 (Suite 415)	
465 Fairchild Dr.	2/10/2011	4/8/2011	8/1/2011	2/17/2012	3/23/2012, 3/25/2012	5/22/2012	
National Avenue							
450 National Ave.	5/9/2014	5/27/2014	--	--	--	--	
615 National Ave	3/14/2012	3/26/2012	3/22/2012	3/22/2012	4/1/2012, 6/8/2012, 6/10/2012, 10/7/2012, 11/4/2012, 1/13/2013, 1/27/2013, 2/3/2013	5/31/2012	Potential conduits, such as cracks and joints in the floor, were sealed in December 2012. Subsequent confirmation samples collected with HVAC off and under normal building conditions showed TCE concentrations below its ROD long-term commercial indoor air cleanup level. Additional areas on the first floor were sealed in December 2015 when the carpet was replaced, and post-repair indoor air samples will be collected in 2016.
625/627 National Ave.	9/24/2012	10/4/2012	10/18/2012	10/26/2012	11/15/2012, 11/19/2012	1/14/2013	
645 National Ave.	9/6/2012	9/20/2012	10/18/2012	10/26/2012	11/29/2012, 12/02/2012	1/28/2013	

TABLE 1
STATUS OF AIR SAMPLING WITH NO RESPONSE ACTION
MOUNTAIN VIEW, CALIFORNIA

Building Address	Access Received	Building Walkthrough Performed	Work Plan Submitted	EPA's Approval of Work Plan	Work Plan Implemented (60 days after EPA approval of Work Plan)	Report Submitted (60 days after completion of sampling)	Comments & Notes
Moffett Field							
23	6/15/2011	6/24/2011	Sample location/duration approved by EPA during walkthroughs. Per agreement with EPA, building-specific work plans will not be submitted to EPA.		7/14/2011	9/13/2011	
48	6/15/2011	6/24/2011	Sample location/duration approved by EPA during walkthroughs. Per agreement with EPA, building-specific work plans will not be submitted to EPA.		7/13/2011	9/13/2011	
109	4/11/2013	5/1/2013	9/3/2013	11/19/2015	11/23/2015	--	
146	6/15/2011	6/23/2011	Sample location/duration approved by EPA during walkthroughs. Per agreement with EPA, building-specific work plans will not be submitted to EPA.		7/13/2011	9/13/2011	
152	3/7/2013	3/14/2013, 4/1/2013	9/3/2013	11/19/2015	--	--	
153	1/29/2014	5/1/2013	1/30/2014	11/19/2015	12/1/2015	--	
154	11/9/2011	11/29/2011	12/20/2011	2/17/2012	4/2/2012	6/1/2012	
156	5/28/2014	5/1/2013	6/3/2014	11/19/2015	12/1/2015	--	
503	6/15/2011	6/24/2011	Sample location/duration approved by EPA during walkthroughs. Per agreement with EPA, building-specific work plans will not be submitted to EPA.		7/12/2011	9/13/2011	
543	6/15/2011	6/24/2011	Sample location/duration approved by EPA during walkthroughs. Per agreement with EPA, building-specific work plans will not be submitted to EPA.		7/14/2011	9/13/2011	
547B	4/11/2013	5/1/2013	9/3/2013	11/19/2015	12/10/2015	--	

TABLE 1
STATUS OF AIR SAMPLING WITH NO RESPONSE ACTION
MOUNTAIN VIEW, CALIFORNIA

Building Address	Access Received	Building Walkthrough Performed	Work Plan Submitted	EPA's Approval of Work Plan	Work Plan Implemented (60 days after EPA approval of Work Plan)	Report Submitted (60 days after completion of sampling)	Comments & Notes
Moffett Field							
547D	4/11/2013	5/1/2013	9/3/2013	11/19/2015	11/23/2015	--	
554	6/15/2011	6/23/2011, 6/24/2011	Sample location/duration approved by EPA during walkthroughs. Per agreement with EPA, building-specific work plans will not be submitted to EPA.		7/12/2011	9/13/2011	
556	11/5/2015	12/11/2015	--	--	--	--	
569	6/15/2011	7/1/2011	Sample location/duration approved by EPA during walkthroughs. Per agreement with EPA, building-specific work plans will not be submitted to EPA.		7/14/2011	9/13/2011	
572	4/11/2013	5/1/2013	9/3/2013	11/19/2015	11/23/2015	--	
583A	6/15/2011	6/24/2011	Sample location/duration approved by EPA during walkthroughs. Per agreement with EPA, building-specific work plans were not submitted to EPA.		7/11/2011	9/13/2011	
583B	6/15/2011	6/24/2011	Sample location/duration approved by EPA during walkthroughs. Per agreement with EPA, building-specific work plans will not be submitted to EPA.		7/11/2011	9/13/2011	
583C	6/15/2011	6/23/2011	Sample location/duration approved by EPA during walkthroughs. Per agreement with EPA, building-specific work plans will not be submitted to EPA.		7/11/2011	9/13/2011	
596	6/15/2011	6/24/2011	Sample location/duration approved by EPA during walkthroughs. Per agreement with EPA, building-specific work plans will not be submitted to EPA.		7/12/2011	9/13/2011	
944	6/15/2011	7/1/2011	Sample location/duration approved by EPA during walkthroughs. Per agreement with EPA, building-specific work plans will not be submitted to EPA.		7/13/2011	9/13/2011	
945	4/11/2013	5/1/2013	9/3/2013	11/19/2015	11/23/2015	--	
Residences							
Residence 38	7/16/2012	11/29/2012	12/4/2012	12/4/2012	12/9/2012	12/19/2012	

Notes:

HVAC - Heating, ventilation, and air conditioning

SSD - Sub-slab depressurization

SSV - Sub-slab ventilation

COC - Chemicals of concern listed in the EPA's Record of Decision (ROD) Amendment for the vapor intrusion pathway including tetrachloroethene (PCE); trichloroethene (TCE); 1,1-dichloroethane; cis-1,2-dichloroethene (cis-1,2-DCE); trans-1,2-dichloroethene (trans-1,2-DCE); 1,1-dichloroethene; and vinyl chloride

SOW - EPA's Statement of Work, Remedial Design and Remedial Action to Address the Vapor Intrusion Pathway

-- - Not applicable

TABLE 2
RESPONSE ACTION FOR TIER 1, 2, AND A BUILDINGS
MOUNTAIN VIEW, CALIFORNIA

Building Address	Tier Designation	Type of Response Action	Pilot Test Work Plan Submitted (45 days after EPA's notification)	Pilot Test Results Memorandum Submitted to EPA (14 days after completion of Pilot Test)	Remedial Design Submitted (60 days after EPA written notification, or 60 days after submittal of Pilot Test Results)	EPA Approval of Remedial Design	OM&M Plan Submitted (60 days after EPA approval of design)	Initiation of construction of engineered vapor intrusion control system (90 days after EPA approval of design)	EPA Approval of OM&M Plan	Response Action Implementation Report Submitted (60 days after implementation of remedial action/response action, or 60 days after EPA written notification)	EPA Approval of Response Action Implementation Report	Comments & Notes
East Middlefield Road												
340 E. Middlefield Rd.	2 (pending)	Passive SSV and vapor barrier	Not Applicable	Not Applicable	11/15/2012	11/16/2012	4/9/2014	October 2012	Pending	6/26/2013	Pending	The building was constructed with a vapor barrier and a passive SSV system and is currently occupied. Air samples were collected on 21 July 2013 (HVAC off), 24 July 2013 (HVAC on), 25 April 2014 (HVAC on), 27 April 2014 (HVAC off), 16 January 2015 (HVAC on), and 18 January 2015 (HVAC off). Indoor air concentrations of all COCs were below their respective ROD long-term commercial indoor air cleanup levels.
440 E. Middlefield Rd.	2 (pending)	Active SSD	9/17/2013	2/6/2015	4/7/2015; Revised 6/23/2015	5/21/2015	7/21/2015	6/27/2015	Pending	12/18/2015	Pending	Interim mitigation measure included HVAC operation seven days per week when the building was occupied. In accordance with the SOW, a <i>Building-specific Vapor Intrusion Control System Remedial Design</i> was submitted to the EPA on 7 April 2015, approved on 21 May 2015, and submitted as final to the EPA on 23 June 2015. The SSD system was started up on 12 September 2015, and indoor air confirmation samples were collected on 27 September 2015 with the HVAC system off; HVAC on samples were collected on 3 October 2015. Based on our evaluation of the data collected subsequent to implementation of the SSD system and with the HVAC off, the SSD system has effectively reduced all COC concentrations in indoor air to below their respective ROD long-term commercial indoor air cleanup levels.
Fairchild Drive												
277 Fairchild Dr. - Proposed Development	2 (pending)	Active SSV and vapor barrier	Not Applicable	Not Applicable	--	--	--	--	--	--	--	Property is vacant and being redeveloped with an active vapor intrusion control system.
331 Fairchild Dr.	2 (pending)	Passive SSV and vapor barrier	Not Applicable	Not Applicable	2/13/2013	9/30/2013	11/27/2013	October 2012	Pending	1/31/2014	Pending	Building was constructed with a vapor barrier and a passive SSV system. Air samples were collected on 23 September 2013 (HVAC off), 25 September 2013 (HVAC on), 17 January 2014 (HVAC on), 19 January 2014 (HVAC off), 15 August 2014 (HVAC on), and 17 August 2014 (HVAC off). All indoor air concentrations of COCs were below their respective ROD long-term commercial indoor air cleanup levels. Indoor air sample results were provided to the EPA in the <i>Building-specific Vapor Intrusion Response Action Implementation Report</i> on 31 January 2014.
National Avenue												
455 National Ave.	2 (pending)	HVAC	7/17/2013	11/14/2013	--	--	--	--	--	2/4/2014	Pending	With the HVAC system on and during building occupancy, TCE concentrations were below its ROD long-term commercial indoor air cleanup level. With the HVAC system off, TCE concentrations were measured slightly above its ROD long-term commercial indoor air cleanup level. Based on the HVAC off sampling results, an SSD Pilot Test Work Plan was submitted to the EPA. The SSD pilot test showed that SSD is not feasible; the results were provided to the EPA in a Memorandum dated 14 November 2013. The EPA provided comments on the Memorandum on 27 November 2013, and a response to comments was submitted to the EPA on 11 December 2013. Since SSD is not feasible the HVAC operated seven days per week when the building is occupied as the mitigation measure. A report documenting HVAC modifications and the results of confirmation samples collected on 13 December 2013 was submitted to the EPA on 4 February 2014. Additional rounds of confirmation indoor air samples were collected with the HVAC system on on 25 July 2014 and 28 January 2015. All indoor air concentrations of COCs were below their respective ROD long-term commercial indoor air cleanup levels. Indoor air sample results were provided to the EPA on 23 February 2015.

TABLE 2
 RESPONSE ACTION FOR TIER 1, 2, AND A BUILDINGS
 MOUNTAIN VIEW, CALIFORNIA

Building Address	Tier Designation	Type of Response Action	Pilot Test Work Plan Submitted (45 days after EPA's notification)	Pilot Test Results Memorandum Submitted to EPA (14 days after completion of Pilot Test)	Remedial Design Submitted (60 days after EPA written notification, or 60 days after submittal of Pilot Test Results)	EPA Approval of Remedial Design	OM&M Plan Submitted (60 days after EPA approval of design)	Initiation of construction of engineered vapor intrusion control system (90 days after EPA approval of design)	EPA Approval of OM&M Plan	Response Action Implementation Report Submitted (60 days after implementation of remedial action/response action, or 60 days after EPA written notification)	EPA Approval of Response Action Implementation Report	Comments & Notes
600 National Ave.	2 (pending)	Active SSD and vapor barrier	Not Applicable	Not Applicable	8/25/2014 (as part of redevelopment plan); Revised 6/3/2015	5/5/2015	July 2015	6/12/2015	Pending	--	--	Property is being redeveloped with a vapor intrusion control system. A draft design for an SSV system for the proposed building was submitted to the EPA in August 2014 as part of a redevelopment plan. EPA provided comments on the draft design in a letter dated 27 February 2015 and the remedial design was conditionally approved on 5 May 2015. A revised remedial design for an active SSD system was submitted to the EPA on 3 June 2015 and is currently being constructed.
Moffett Field												
20	2 (pending)	Active SSV	Not Applicable	Not Applicable	--	--	--	2008	--	--	--	Basement ventilation system was designed and implemented by NASA in 2008 and operates 24 hours per day, seven days per week. Indoor air and pathway (e.g., crawlspace) air samples were collected on 23/24 November 2015 with the basement ventilation system on. With the exception of one sample collected from the crawlspace, all indoor and pathway air concentrations of COCs were below their respective ROD long-term commercial indoor air cleanup levels. The preliminary indoor air sampling results were provided to EPA on 9 December 2015.

Notes:

HVAC - Heating, ventilation, and air conditioning

OM&M - Operations, maintenance, and monitoring

COC - Chemicals of concern listed in the EPA's Record of Decision (ROD) Amendment for the vapor intrusion pathway including tetrachloroethene (PCE); trichloroethene (TCE); 1,1-dichloroethane; cis-1,2-dichloroethene (cis-1,2-DCE); trans-1,2-dichloroethene (trans-1,2-DCE); 1,1-dichloroethene; and vinyl chloride

SSV - Sub-slab ventilation

SSD - Sub-slab depressurization

SOW - EPA's Statement of Work, Remedial Design and Remedial Action to Address the Vapor Intrusion Pathway

-- Unknown or not available

TABLE 3
AIR SAMPLING RESULTS - 340 EAST MIDDLEFIELD ROAD
MOUNTAIN VIEW, CALIFORNIA

Location / Sample ID	Sample Date	Sample Purpose	Sample Duration (hours)	Sample Type	Chemicals of Concern						
					1,1-DCA	1,1-DCE	cis-1,2- DCE	PCE	trans-1,2- DCE	TCE	Vinyl chloride
Air Sampling Results (HVAC Off)											
340AMB1	07/21/2013	Indoor	8	Primary	<0.081	<0.079	<0.079	0.17	1.1	0.45	<0.051
340AMB1 (340DUP1)	07/21/2013	Indoor	8	Duplicate	<0.081	<0.079	<0.079	0.14	1.1	0.45	<0.051
340AMB1	04/27/2014	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	1.1	<0.051
340AMB1	01/18/2015	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	0.94	<0.051
340AMB1 (340DUP1)	01/18/2015	Indoor	8	Duplicate	<0.081	<0.079	<0.079	<0.14	<0.079	0.88	<0.051
340AMB2	07/21/2013	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	1.1	0.40	<0.051
340AMB2	04/27/2014	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	0.23	<0.051
340AMB2	01/18/2015	Indoor	8	Primary	<0.081	<0.079	<0.079	0.58	<0.079	0.46	<0.051
340AMB3	07/21/2013	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	1.1	0.39	<0.051
340AMB3	04/27/2014	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	<0.11	<0.051
340AMB3	01/18/2015	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	0.13	<0.051
340AMB4	07/21/2013	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	1.0	0.42	<0.051
340AMB4	04/27/2014	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	0.84	<0.051
340AMB4 (340DUP2)	04/27/2014	Indoor	8	Duplicate	<0.081	<0.079	<0.079	<0.14	<0.079	0.83	<0.051
340AMB4	01/18/2015	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	0.65	<0.051
340HVAC1	07/21/2013	Outdoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	<0.11	<0.051
340OUT1	04/27/2014	Outdoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	<0.11	<0.051
340OUT1	01/18/2015	Outdoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	<0.11	<0.051
Air Sampling Results (HVAC On)											
340AMB1	07/24/2013	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	0.11	<0.051
340AMB1 (340DUP1)	07/24/2013	Indoor	8	Duplicate	<0.081	<0.079	<0.079	<0.14	<0.079	0.12	<0.051
340AMB1	04/25/2014	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	<0.11	<0.051
340AMB1	01/16/2015	Indoor	8	Primary	<0.081	<0.079	<0.079	0.14	0.081	0.19	<0.051
340AMB1 (340DUP1)	01/16/2015	Indoor	8	Duplicate	<0.081	<0.079	<0.079	<0.14	<0.079	0.22	<0.051

TABLE 3
 AIR SAMPLING RESULTS - 340 EAST MIDDLEFIELD ROAD
 MOUNTAIN VIEW, CALIFORNIA

Location / Sample ID	Sample Date	Sample Purpose	Sample Duration (hours)	Sample Type	Chemicals of Concern						
					1,1-DCA	1,1-DCE	cis-1,2- DCE	PCE	trans-1,2- DCE	TCE	Vinyl chloride
340AMB2	07/24/2013	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	<0.11	<0.051
340AMB2	04/25/2014	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	<0.11	<0.051
340AMB2	01/16/2015	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	0.11	<0.051
340AMB3	07/24/2013	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	<0.11	<0.051
340AMB3	04/25/2014	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	<0.11	<0.051
340AMB3	01/16/2015	Indoor	8	Primary	<0.081	<0.079	<0.079	0.14	0.078	<0.11	<0.051
340AMB4	07/24/2013	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	0.12	<0.051
340AMB4	04/25/2014	Indoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	<0.11	<0.051
340AMB4 (340DUP2)	04/25/2014	Indoor	8	Duplicate	<0.081	<0.079	<0.079	<0.14	<0.079	<0.11	<0.051
340AMB4	01/16/2015	Indoor	8	Primary	<0.081	<0.079	<0.079	0.13	<0.079	<0.11	<0.051
340HVAC1	07/24/2013	Outdoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	<0.11	<0.051
340OUT1	04/25/2014	Outdoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	<0.11	<0.051
340OUT1	01/16/2015	Outdoor	8	Primary	<0.081	<0.079	<0.079	<0.14	<0.079	<0.11	<0.051
Long-term Commercial Indoor Cleanup Level					6	700	210	2	210	5	2

Notes:

All units are micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

<0.020 - Denotes chemical was not detected at or above the laboratory reporting limit shown.

Chemicals of Concern and ROD Commercial Indoor Air Cleanup Levels as defined in

EPA's "Record of Decision Amendment for the Vapor Intrusion Pathway, Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View and Moffett Field, California," 16 August 2010.

DCA - Dichloroethane

DCE - Dichloroethene

PCE - Tetrachloroethene

TCE - Trichloroethene

TABLE 4

**SUB-SLAB DEPRESSURIZATION SYSTEM PERFORMANCE MONITORING DATA - 440 EAST MIDDLEFIELD ROAD
MOUNTAIN VIEW, CALIFORNIA**

		Date	9/12/2015 ¹					9/14/2015 ¹	9/17/2015		9/24/2015	9/27/2015	10/3/2015	10/12/2015	11/12/2015	12/11/2015	
		Time	8:30 AM	9:22 AM	9:55 AM	10:25 AM	12:00 PM	1:48 PM	7:10 AM	7:45 AM	10:30 AM	11:45 AM	9:30 AM	11:00 AM	7:30 AM	7:30 AM	
Location	Device ID	Description	Units/Action														
SP-01	PI-101	Vacuum gauge	inH2O	-0.031	-2.68	-29.5	-29.5	-28.5	-28.5	-28.0	NM	-28.0	-27.5	-27.5	-27.5	-28.0	-28.0
	SP-101	Sample port/valve	ppmv	NM	0.0	2.5	NM	NM	NM	NM	NM	0.2	NM	NM	NM	0.1	NM
	SP-101	Anemometer	SCFM	NM	NM	NM	NM	NM	NM	NM	NM	70	NM	NM	84	70	77.5
	V-101	Ball valve	Open/Closed	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open
SP-02R	PI-201	Vacuum gauge/Micro-manometer	inH2O	0.000	-0.001	0.003	-12.0	-14.0	-12.0	-12.0	NM	-16.0	-16.0	-16.0	-12.5	-12.0	-12.0
	SP-201	Sample port	ppmv	NM	NM	NM	NM	NM	NM	NM	NM	0.2	NM	NM	NM	0.0	NM
	SP-201	Anemometer	SCFM	NM	NM	NM	NM	NM	NM	NM	NM	15	NM	NM	21	50	32
	V-201	Ball valve	Open/Closed	Closed	Closed	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open
SP-03	PI-301	Vacuum gauge	inH2O	-0.005	-2.090	-22.0	-27.0	-26.0	-26.0	-25.0	NM	-23.5	-23.0	-22.0	-25.0	-23.5	-23.0
	SP-301	Sample port	ppmv	NM	0.1	0.2	NM	NM	NM	NM	NM	0.3	NM	NM	NM	0.0	NM
	SP-301	Anemometer	SCFM	NM	NM	NM	NM	NM	NM	NM	NM	28	NM	NM	72	37	64.5
	V-301	Ball valve	Open/Closed	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open
SP-04	PI-401	Vacuum gauge	inH2O	-0.026	-2.700	-26.5	-28.0	-27.5	-27.5	-26.5	NM	-27.0	-27.0	-25.5	-27.3	-26.0	-26.5
	SP-401	Sample port	ppmv	NM	0.1	4.6	NM	NM	NM	NM	NM	NM	NM	NM	0.1	NM	
	SP-401	Anemometer	SCFM	NM	NM	NM	NM	NM	NM	NM	NM	12	NM	NM	32	50	62
	V-401	Ball valve	Open/Closed	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open
SP-05	PI-501	Vacuum gauge/Micro-manometer	inH2O	-0.028	-0.020	-0.230	-26.5	-0.018	-27.3	-25.5	NM	-25.0	-24.0	-24.0	-25.5	-25.0	-25.0
	SP-501	Sample port	ppmv	NM	NM	75	NM	NM	NM	NM	NM	0.2	NM	NM	NM	0.0	NM
	SP-501	Anemometer	SCFM	NM	NM	NM	NM	NM	NM	NM	NM	45	NM	NM	24	30	30
	V-501	Ball valve	Open/Closed	Closed	Closed	Closed	Open	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Open
SS-09	--	Micro-manometer/Vacuum gauge	inH2O	0.000	0.010	0.003	-0.030	-0.035	Abandoned ²		Abandoned ²						
SS-10	--	Micro-manometer/Vacuum gauge	inH2O	-0.016	-0.123	-0.345	-0.512	-0.374	-0.532	-0.578	NM	-0.621	-0.660	-0.710	-0.680	-0.640	-0.812
SS-11	--	Micro-manometer/Vacuum gauge	inH2O	-0.025	-0.088	-0.432	-0.275	-0.348	-0.277	-0.314	NM	-0.303	-0.320	-0.320	-0.295	-0.320	-0.338
Enclosure	V-600	Air dilution valve	% open	100	100	0	0	0	0	0	0	0	0	0	0	0	0
	PI-600	Influent vacuum gauge	inH2O	NM	NM	-31	-21	-23	-23	-24	NM	-27	-27	-28	-24	-25	-25
	SP-600	Sample port (influent)	ppmv	NM	NM	NM	0.3	NM	0.1	0.1	NM	0.4	NM	NM	NM	0.1	NM
	SP-601	Sample port (effluent)	ppmv	NM	NM	NM	0.6	NM	0.2	0.1	NM	0.4	NM	NM	0.1	0.0	NM
	Flow - influent	Flow measurement port (before S-101)	SCFM	NM	NM	127	144	NM	155	172	NM	164	NM	NM	162	160	133
	SP-601	Flow/temp measurement port (after blowers)	SCFM	NM	NM	126	124	NM	150	169	NM	158	NM	NM	145	130	137
	SP-601	Flow/temp measurement port (after blowers)	deg F	NM	NM	129	120	NM	86	114	NM	130	NM	NM	147	128	125
	B-101	Regenerative blower with sound enclosure	On/Off	Off	On	On	On	On	On	On	On	Off	On	On	On	On	On
B-102	Regenerative blower with sound enclosure	On/Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Noise	Noise Meter	Footpath next to equip. enclosure door	dba	NM	NM	60.5	60.9	NM	NM	61.3	60.3	NM	NM	NM	60.0	63.0	66.0
	Noise Meter	Front of garbage enclosure	dba	NM	NM	60.1	60.6	NM	NM	60.7	60.0	NM	NM	NM	60.2	64.0	66.0
	Noise Meter	Footpath at corner of property	dba	NM	NM	60.7	61.6	NM	NM	61.4	60.3	NM	NM	NM	60.0	60.0	63.0
	Noise Meter	Parking stall north of equip. enclosure	dba	NM	NM	61.3	63.1	NM	NM	63.5	60.0	NM	NM	NM	60.0	60.0	63.0
	Noise Meter	Parking stall next to light standard	dba	NM	NM	60.4	60.4	NM	NM	60.5	60.0	NM	NM	NM	60.2	63.0	61.0
	Noise Meter	Parking stall west of garbage enclosure	dba	NM	NM	NM	NM	NM	NM	60.3	60.1	NM	NM	NM	60.0	60.0	70.0

Notes:

- dba - decibels
- deg F - degrees Fahrenheit
- inH2O - inches of water column
- NM - data not measured
- ppmv - parts per million by volume
- SCFM - standard cubic feet per minute

Additional Comments:

¹ Blower B-101 was activated at 9:00 AM on 9/12/2015. Startup activities were completed between 9/12/2015 and 9/14/2015.

² Temporary interior pressure monitoring point SS-09 was abandoned on 9/12/2015.

TABLE 5

SUB-SLAB DEPRESSURIZATION SYSTEM EFFLUENT AIR SAMPLING RESULTS - 440 EAST MIDDLEFIELD ROAD
MOUNTAIN VIEW, CALIFORNIA

Chemical ¹	Sample Date	Analytical Result (µg/m ³)	Flow Rate (SCFM)	Comparison with BAAQMD Toxic Air Contaminant Trigger Levels ³				
				Total SSD Emissions ² (lb/hr)	BAAQMD Acute (1-hr. max.) Trigger Level (lb/hr)	Total SSD Emissions ⁴ (lb/yr)	BAAQMD Chronic Trigger Level (lb/yr)	Meets BAAQMD Trigger Level ³
2-Butanone (Methyl Ethyl Ketone)	9/17/2015	19	169	1.2E-05				
	10/12/2015	20	145	1.1E-05	2.9E+01	1.0E-02	NA	Yes
	12/11/2015	2.7	137	1.4E-06				
Tetrachloroethene	9/17/2015	6.4	169	4.1E-06				
	10/12/2015	7.0	145	3.8E-06	4.4E+01	6.8E-03	1.8E+01	Yes
	12/11/2015	5.5	137	2.8E-06				
Toluene	9/17/2015	2.1	169	1.3E-06				
	10/12/2015	2.8	145	1.5E-06	8.2E+01	1.1E-03	1.2E+04	Yes
	12/11/2015	< 1.5	137	ND				
Trichloroethene	9/17/2015	37	169	2.3E-05				
	10/12/2015	70	145	3.8E-05	NA	8.2E-02	5.4E+01	Yes
	12/11/2015	76	137	3.9E-05				
Methylene Chloride	9/17/2015	< 1.4	169	ND				
	10/12/2015	< 1.4	145	ND	3.10E+01	6.6E-03	1.1E+02	Yes
	12/11/2015	8.9	137	4.6E-06				

Notes:

µg/m³ - micrograms per cubic meter

< 3.1 - Denotes chemical was not detected at or above the laboratory reporting limit shown.

BAAQMD - Bay Area Air Quality Management District

lb/hr - pounds per hour

lb/yr - pounds per year

NA - BAAQMD Toxic Air Contaminant Trigger Level not established for chemical

ND - Not detected

SCFM - standard cubic feet per minute

¹ Only detected compounds for which BAAQMD Toxic Air Contaminant Trigger Levels were established are shown in this table.

² Emissions are calculated using the flow rate measured in the effluent flow measurement port and the corresponding detected concentrations of the effluent sample.

³ BAAQMD Toxic Air Contaminant Trigger Levels are established in BAAQMD Table 2-5-1.

⁴ Emissions are cumulative for the year since startup on 9/12/2015.

TABLE 6

AIR SAMPLING RESULTS - 440 EAST MIDDLEFIELD ROAD
MOUNTAIN VIEW, CALIFORNIA

Location / Sample ID	Sample Date	Sample Purpose	Sample Duration (hours)	Sample Type	Chemicals of Concern							
					1,1-DCA	1,1-DCE	cis-1,2- DCE	PCE	trans-1,2- DCE	TCE	Vinyl chloride	
Air Sampling Results (HVAC On)												
440AMB1	10/07/2009	Indoor	10	Primary	< 0.020	< 0.040	< 0.055	0.35	< 0.055	0.78	< 0.013	
440AMB1 (440DUP)	10/07/2009	Indoor	10	Duplicate	< 0.020	< 0.040	< 0.055	0.38	< 0.055	0.81	< 0.013	
440AMB1	11/13/2012	Indoor	8	Primary	< 0.14	< 0.068	< 0.14	< 0.23	< 0.68	0.93	< 0.044	
440AMB1 (440DUP1)	11/13/2012	Indoor	8	Duplicate	< 0.14	< 0.068	< 0.14	< 0.23	< 0.68	0.92	< 0.044	
440AMB1 ¹	10/03/2015	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
440AMB1 (440DUP1) ¹	10/03/2015	Indoor	8	Duplicate	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
440AMB2 ²	10/07/2009	Indoor	10	Primary	< 0.020	< 0.040	< 0.055	0.36	< 0.055	0.34	< 0.013	
440AMB3	10/07/2009	Indoor	10	Primary	< 0.020	< 0.040	< 0.055	0.48	< 0.055	0.30	< 0.013	
440AMB3	11/13/2012	Indoor	8	Primary	< 0.14	< 0.067	< 0.13	< 0.23	< 0.67	0.64	< 0.043	
440AMB3 ¹	10/03/2015	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
440AMB4	10/07/2009	Indoor	10	Primary	< 0.020	< 0.040	< 0.055	0.32	< 0.055	0.27	< 0.013	
440AMB4	11/13/2012	Indoor	8	Primary	< 0.14	< 0.067	< 0.13	< 0.23	< 0.67	0.53	< 0.043	
440AMB4 ¹	10/03/2015	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
440AMB5	11/13/2012	Indoor	8	Primary	< 0.14	< 0.067	< 0.13	< 0.23	< 0.67	0.94	< 0.043	
440AMB5 ¹	10/03/2015	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
440HVAC1	10/07/2009	Outdoor	10	Primary	< 0.020	< 0.040	< 0.056	0.20	< 0.056	0.080	< 0.013	
440HVAC1	11/13/2012	Outdoor	8	Primary	< 0.13	< 0.065	< 0.13	< 0.22	< 0.65	< 0.18	< 0.042	
440OUT1 ¹	10/03/2015	Outdoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
Air Sampling Results (HVAC Off)												
440AMB1	11/11/2012	Indoor	8	Primary	< 0.14	< 0.068	< 0.14	0.74	< 0.68	8.0	< 0.044	
440AMB1 (440DUP1)	11/11/2012	Indoor	8	Duplicate	< 0.14	< 0.068	< 0.14	0.75	< 0.68	7.9	< 0.044	
440AMB1	01/13/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	0.94	< 0.079	13	< 0.051	
440AMB1 1	09/27/2015	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	0.17	0.13	< 0.051	
440AMB1 (440DUP1) ¹	09/27/2015	Indoor	8	Duplicate	< 0.081	< 0.079	< 0.079	< 0.14	0.17	0.16	< 0.051	
440AMB3	11/11/2012	Indoor	8	Primary	< 0.13	< 0.065	< 0.13	0.66	< 0.65	7.2	< 0.042	
440AMB3	01/13/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	0.93	< 0.079	12	< 0.051	
440AMB3 ¹	09/27/2015	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	0.16	0.12	< 0.051	
440AMB4	11/11/2012	Indoor	8	Primary	< 0.14	< 0.067	< 0.13	0.66	< 0.67	6.6	< 0.043	
440AMB4	01/13/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	0.73	< 0.079	10	< 0.051	

TABLE 6

AIR SAMPLING RESULTS - 440 EAST MIDDLEFIELD ROAD
MOUNTAIN VIEW, CALIFORNIA

Location / Sample ID	Sample Date	Sample Purpose	Sample Duration (hours)	Sample Type	Chemicals of Concern						
					1,1-DCA	1,1-DCE	cis-1,2- DCE	PCE	trans-1,2- DCE	TCE	Vinyl chloride
440AMB4 ¹	09/27/2015	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	0.16	0.13	< 0.051
440AMB5	11/11/2012	Indoor	8	Primary	< 0.14	< 0.069	< 0.14	0.72	< 0.69	7.8	< 0.045
440AMB5	01/13/2013	Indoor	8	Primary	< 0.081	< 0.079	0.080	0.97	< 0.079	14	< 0.051
440AMB5 ¹	09/27/2015	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	0.17	0.12	< 0.051
440OUT1	11/11/2012	Outdoor	8	Primary	< 0.13	< 0.065	< 0.13	< 0.22	< 0.65	< 0.18	< 0.042
440OUT1	01/13/2013	Outdoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051
440OUT1 ¹	09/27/2015	Outdoor	8	Primary	< 0.11	< 0.10	< 0.10	< 0.18	< 0.10	0.25	< 0.066
Long-term Commercial Indoor Air Cleanup Level					6	700	210	2	210	5	2

Notes:

All units are micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

<0.020 - Denotes chemical was not detected at or above the laboratory reporting limit shown.

Chemicals of Concern and ROD Commercial Indoor Air Cleanup Levels as defined in

EPA's "Record of Decision Amendment for the Vapor Intrusion Pathway, Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View and Moffett Field, California," 16 August 2010.

¹ Sub-slab depressurization system began operation on 12 September 2015.

² Sample 440AMB2 was moved outside the conference room and renamed 440AMB5 because the conference room was not accessible.

DCA - Dichloroethane

DCE - Dichloroethene

PCE - Tetrachloroethene

TCE - Trichloroethene

TABLE 7
AIR SAMPLING RESULTS - 455 NATIONAL AVENUE
MOUNTAIN VIEW, CALIFORNIA

Location / Sample ID	Sample Date	Sample Purpose	Sample Duration (hours)	Sample Type	Chemicals of Concern							
					1,1-DCA	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	Vinyl chloride	
Air Sampling Results (HVAC Off)												
455AMB1	01/27/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	0.19	< 0.079	1.1	< 0.051	
455AMB1 (455DUP1)	01/27/2013	Indoor	8	Duplicate	< 0.081	< 0.079	< 0.079	0.18	< 0.079	1.1	< 0.051	
455AMB2	01/27/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	0.32	0.22	5.6	< 0.051	
455AMB3	01/27/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	0.35	< 0.079	6.4	< 0.051	
455AMB4	01/27/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	1.2	< 0.079	4.2	< 0.051	
455AMB5	01/27/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	0.85	< 0.079	0.64	< 0.051	
455AMB6	01/27/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	1.2	< 0.079	2.4	< 0.051	
455OUT1	01/27/2013	Outdoor	8	Primary	< 0.081	< 0.079	< 0.079	0.76	< 0.079	< 0.11	< 0.051	
Air Sampling Results (HVAC On)												
455AMB1	01/11/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	2.3	< 0.079	0.62	< 0.051	
455AMB1	12/13/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	0.14	< 0.051	
455AMB1 (455DUP1)	12/13/2013	Indoor	8	Duplicate	< 0.081	< 0.079	< 0.079	0.14	0.078	0.15	< 0.051	
455AMB1	07/25/2014	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
455AMB1	01/28/2015	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
455AMB1 (455DUP1)	01/28/2015	Indoor	8	Duplicate	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	0.15	< 0.051	
455AMB2	01/11/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	0.70	< 0.079	1.8	< 0.051	
455AMB2	12/13/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	0.14	< 0.051	
455AMB2	07/25/2014	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
455AMB2	01/28/2015	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
455AMB3	01/11/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	0.74	< 0.079	1.3	< 0.051	
455AMB3	12/13/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	0.11	< 0.051	
455AMB3	07/25/2014	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
455AMB3	01/28/2015	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
455AMB4	01/11/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	0.71	< 0.079	1.9	< 0.051	
455AMB4	12/13/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
455AMB4	07/25/2014	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
455AMB4	01/28/2015	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
455AMB5	01/11/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	0.54	< 0.079	0.38	< 0.051	
455AMB5	12/13/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	0.13	< 0.051	
455AMB5	07/25/2014	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
455AMB5	01/28/2015	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	

TABLE 7

AIR SAMPLING RESULTS - 455 NATIONAL AVENUE
MOUNTAIN VIEW, CALIFORNIA

Location / Sample ID	Sample Date	Sample Purpose	Sample Duration (hours)	Sample Type	Chemicals of Concern						
					1,1-DCA	1,1-DCE	cis-1,2- DCE	PCE	trans-1,2- DCE	TCE	Vinyl chloride
455AMB6	01/11/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	0.80	< 0.079	4.3	< 0.051
455AMB6	12/13/2013	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	0.21	< 0.079	0.78	< 0.051
455AMB6	07/25/2014	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	0.29	< 0.079	< 0.11	< 0.051
455AMB6	01/28/2015	Indoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	0.82	< 0.051
455HVAC	01/11/2013	Outdoor	8	Primary	< 0.081	< 0.079	0.12	0.16	< 0.079	< 0.11	< 0.051
455OUT1	12/13/2013	Outdoor	8	Primary	< 0.081	< 0.079	< 0.079	0.29	< 0.079	< 0.11	< 0.051
455OUT1	07/25/2014	Outdoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051
455OUT1	01/28/2015	Outdoor	8	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	1.5	< 0.051
Long-term Commercial Indoor Air Cleanup Level					6	700	210	2	210	5	2

Notes:

All units are micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

<0.020 - Denotes chemical was not detected at or above the laboratory reporting limit shown.

Chemicals of Concern and ROD Commercial Indoor Air Cleanup Levels as defined in

EPA's "Record of Decision Amendment for the Vapor Intrusion Pathway, Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View and Moffett Field, California," 16 August 2010.

Heating, ventilation, and air conditioning (HVAC) system was modified on 5 December 2013, to continuously operate seven days a week while workers are in the building.

DCA - Dichloroethane

DCE - Dichloroethene

PCE - Tetrachloroethene

TCE - Trichloroethene

TABLE 8
AIR SAMPLING RESULTS - BUILDING 20
MOFFETT FIELD, CALIFORNIA

Location / Sample ID	Sample Date	Basement Ventilation System Status	Sample Purpose	Sample Duration (hours)	Sample Type	Chemicals of Concern						
						1,1-DCA	1,1-DCE	cis-1,2- DCE	PCE	trans-1,2- DCE	TCE	Vinyl chloride
20-1-24B	12/11/2003	Pre-mitigation	Indoor	24	Primary	0.040	0.059	0.632	0.18	0.037	3.137	< 0.021
20-1-24A	12/19/2003	Pre-mitigation	Indoor	24	Primary	< 0.086	0.038	0.587	0.424	0.026	4.206	< 0.021
20-1-24A	12/29/2003	Pre-mitigation	Indoor	24	Primary	0.068	0.075	1.456	0.121	0.039	5.241	< 0.021
20-1-24A	01/09/2004	Pre-mitigation	Indoor	24	Primary	0.026	0.038	0.464	0.216	0.017	2.912	< 0.021
20-1-24A	01/15/2004	Pre-mitigation	Indoor	24	Primary	0.052	0.071	0.883	0.237	0.037	6.834	< 0.021
20-1-24A	01/22/2004	Pre-mitigation	Indoor	24	Primary	0.043	0.064	0.636	0.558	0.036	3.731	< 0.021
20-1-24A	01/28/2004	Pre-mitigation	Indoor	24	Primary	0.048	0.068	1.227	1.014	0.036	4.871	< 0.021
20-1-24B	01/28/2004	Pre-mitigation	Indoor	24	Duplicate	0.048	0.076	1.269	1.014	0.038	5.158	< 0.021
20-1-24A	02/06/2004	Pre-mitigation	Indoor	24	Primary	0.039	0.059	1.104	0.414	0.030	3.852	< 0.021
20-1-24A	02/12/2004	Pre-mitigation	Indoor	24	Primary	0.025	0.040	0.59	0.49	0.031	2.51	< 0.021
20-1-24A	02/20/2004	Pre-mitigation	Indoor	24	Primary	0.035	0.063	0.796	0.509	0.031	2.61	< 0.021
20-1-24A	02/25/2004	Pre-mitigation	Indoor	24	Primary	0.051	0.096	1.247	0.114	0.035	2.59	< 0.021
20-1-24A	03/04/2004	Pre-mitigation	Indoor	24	Primary	0.043	0.076	0.881	0.165	0.030	2.67	< 0.021
20-1-24A	03/11/2004	Pre-mitigation	Indoor	24	Primary	0.030	0.042	0.545	0.294	0.031	2.782	< 0.021
20-1-24A	03/19/2004	Pre-mitigation	Indoor	24	Primary	0.030	0.042	0.502	0.258	0.024	2.722	< 0.021
20-1-24A	03/24/2004	Pre-mitigation	Indoor	24	Primary	0.028	0.036	0.42	0.129	0.020	2.217	< 0.021
20-1-24A	04/01/2004	Pre-mitigation	Indoor	24	Primary	< 0.083	0.027	0.28	0.125	0.013	2.806	< 0.02
20-1-24A	04/08/2004	Pre-mitigation	Indoor	24	Primary	0.024	0.031	0.447	0.097	0.017	2.149	< 0.02
20-1-24A	04/16/2004	Pre-mitigation	Indoor	24	Primary	0.158	< 0.041	0.53	0.195	< 0.057	1.655	< 0.02
20-1-24A	04/22/2004	Pre-mitigation	Indoor	24	Primary	0.087	< 0.041	0.367	0.265	0.065	2.155	< 0.021
20-1-24A	04/30/2004	Pre-mitigation	Indoor	24	Primary	0.071	< 0.041	0.449	0.14	< 0.057	1.933	< 0.021
20-1-24A	05/05/2004	Pre-mitigation	Indoor	24	Primary	< 0.083	< 0.041	0.398	0.104	0.033	1.816	< 0.02
20-1-24C	05/05/2004	Pre-mitigation	Indoor	24	Duplicate	< 0.141	< 0.069	0.65	< 0.236	< 0.691	2.201	< 0.045
20-1-24A	06/10/2004	Pre-mitigation	Indoor	24	Primary	0.117	< 0.041	0.175	0.251	< 0.057	1.38	< 0.021
20-1-24A	06/17/2004	Pre-mitigation	Indoor	24	Duplicate	0.145	< 0.041	0.138	0.146	< 0.057	0.879	< 0.02
20-1-24C	06/17/2004	Pre-mitigation	Indoor	24	Primary	0.195	< 0.069	0.146	< 0.236	< 0.689	0.934	< 0.044
20-1-24A	06/23/2004	Pre-mitigation	Indoor	24	Primary	0.137	< 0.041	0.334	0.118	< 0.057	2.206	< 0.02
20-1-24A-2008-2008	05/28/2008	Off	Indoor	24	Primary	NA	NA	3.395	0.406	NA	4.21	< 0.042
20-1-24A-2008-2008	05/30/2008	Off	Indoor	24	Primary	NA	NA	4.917	< 0.21	NA	5.106	< 0.04
20-1-24A-2008-2008	07/28/2008	On	Indoor	24	Primary	NA	NA	< 0.143	< 0.245	NA	< 0.194	0.053
20-1-24A-2008-2008	07/30/2008	On	Indoor	24	Primary	NA	NA	< 0.151	< 0.258	NA	< 0.204	0.058
20AMB1	11/23/2015	On	Indoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	0.39	< 0.051
20-2-24A ^a	12/03/2003	Pre-mitigation	Indoor	24	Primary	0.035	0.046	0.844	0.447	0.028	3.657	< 0.021
20-2-24A	12/19/2003	Pre-mitigation	Indoor	24	Primary	0.033	0.046	0.546	0.675	0.032	7.388	< 0.021
20-2-24A	12/29/2003	Pre-mitigation	Indoor	24	Primary	< 0.085	< 0.042	0.341	0.278	0.017	2.761	< 0.021

TABLE 8

AIR SAMPLING RESULTS - BUILDING 20
MOFFETT FIELD, CALIFORNIA

Location / Sample ID	Sample Date	Basement Ventilation System Status	Sample Purpose	Sample Duration (hours)	Sample Type	1,1-DCA	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	Vinyl chloride
20-2-24A	01/09/2004	Pre-mitigation	Indoor	24	Primary	< 0.086	0.020	0.257	0.202	0.013	2.683	< 0.021
20-2-24A	01/15/2004	Pre-mitigation	Indoor	24	Primary	0.056	0.097	0.841	0.295	0.050	9.681	< 0.021
20-2-24A	01/22/2004	Pre-mitigation	Indoor	24	Primary	0.043	0.085	0.551	0.537	0.042	6.315	< 0.021
20-2-24A	01/28/2004	Pre-mitigation	Indoor	24	Primary	0.048	0.085	0.973	1.014	0.041	8.597	< 0.021
20-2-24A	02/06/2004	Pre-mitigation	Indoor	24	Primary	0.034	0.064	0.807	0.516	0.035	6.325	< 0.021
20-2-24A	02/12/2004	Pre-mitigation	Indoor	24	Primary	0.047	0.039	0.548	0.504	0.015	4.963	< 0.021
20-2-24B	02/12/2004	Pre-mitigation	Indoor	24	Duplicate	0.025	0.046	0.548	0.497	0.031	3.594	< 0.021
20-2-24A	02/20/2004	Pre-mitigation	Indoor	24	Primary	0.040	0.088	0.587	0.272	0.041	6.808	< 0.021
20-2-24C	02/20/2004	Pre-mitigation	Indoor	24	Duplicate	< 0.128	0.113	0.587	0.208	< 0.628	6.241	< 0.041
20-2-24A	02/25/2004	Pre-mitigation	Indoor	24	Primary	< 0.085	0.030	0.262	0.114	0.015	1.971	< 0.021
20-2-24A	03/04/2004	Pre-mitigation	Indoor	24	Primary	0.047	0.092	0.839	0.179	0.042	4.261	< 0.021
20-2-24A	03/11/2004	Pre-mitigation	Indoor	24	Primary	0.029	0.042	0.503	0.323	0.034	3.293	0.008
20-2-24A	03/19/2004	Pre-mitigation	Indoor	24	Primary	0.031	0.050	0.461	0.265	0.027	3.799	< 0.021
20-2-24A	03/24/2004	Pre-mitigation	Indoor	24	Primary	0.030	0.050	0.374	0.136	0.024	3.922	< 0.021
20-2-24A	04/08/2004	Pre-mitigation	Indoor	24	Primary	0.040	0.077	0.569	0.097	0.035	6.611	< 0.02
20-2-24A	04/16/2004	Pre-mitigation	Indoor	24	Primary	0.15	< 0.041	0.53	0.195	< 0.057	4.027	< 0.02
20-2-24A	04/22/2004	Pre-mitigation	Indoor	24	Primary	0.067	< 0.041	0.408	0.202	0.038	3.647	< 0.021
20-2-24A	04/30/2004	Pre-mitigation	Indoor	24	Primary	0.071	< 0.041	0.53	0.167	0.049	4.364	< 0.021
20-2-24A	05/05/2004	Pre-mitigation	Indoor	24	Primary	0.062	< 0.041	0.378	0.104	0.041	4.017	< 0.02
20-2-24A	05/13/2004	Pre-mitigation	Indoor	24	Primary	0.137	< 0.041	0.448	0.132	< 0.057	4.747	< 0.02
20-2-24A	05/19/2004	Pre-mitigation	Indoor	24	Primary	< 0.083	< 0.041	0.102	0.098	< 0.057	0.883	< 0.02
20-2-24A	06/10/2004	Pre-mitigation	Indoor	24	Primary	0.112	< 0.041	0.061	0.119	< 0.057	0.718	< 0.021
20-2-24B	06/10/2004	Pre-mitigation	Indoor	24	Duplicate	0.071	< 0.041	0.065	0.105	< 0.057	0.718	< 0.021
20-2-24A	06/17/2004	Pre-mitigation	Indoor	24	Primary	0.050	< 0.041	0.26	0.763	< 0.057	0.187	< 0.02
20-2-24A	06/23/2004	Pre-mitigation	Indoor	24	Primary	0.145	< 0.041	0.118	0.111	< 0.057	1.103	< 0.02

TABLE 8
AIR SAMPLING RESULTS - BUILDING 20
MOFFETT FIELD, CALIFORNIA

Location / Sample ID	Sample Date	Basement Ventilation System Status	Sample Purpose	Sample Duration (hours)	Sample Type	1,1-DCA	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	Vinyl chloride
20-2-24A-2008	05/28/2008	Off	Indoor	24	Primary	NA	NA	0.364	0.238	NA	2.493	< 0.045
20-2-24A-2008	07/28/2008	On	Indoor	24	Primary	NA	NA	< 0.151	< 0.259	NA	< 0.205	0.174
20-2-24A-2008	07/30/2008	On	Indoor	24	Primary	NA	NA	< 0.155	< 0.265	NA	< 0.21	0.263
20AMB2	11/23/2015	On	Indoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	1.0	< 0.051
20AMB3	11/23/2015	On	Indoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	0.28	< 0.051
20AMB3 (20DUP1)	11/23/2015	On	Indoor	24	Duplicate	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	0.32	< 0.051
20CRAWL1	11/23/2015	On	Pathway	24	Primary	< 0.081	< 0.079	0.22	< 0.14	< 0.079	7.4	< 0.051
20CRAWL2	11/23/2015	On	Pathway	24	Primary	< 0.081	< 0.079	0.080	< 0.14	< 0.079	3.8	< 0.051
20-3-24A	04/28/2004	Pre-mitigation	Pathway	24	Primary	0.135	0.235	2.433	0.233	0.111	26.808	< 0.021
20-3-24A	05/19/2004	Pre-mitigation	Pathway	24	Primary	0.124	< 0.042	2.136	0.136	0.092	27.221	< 0.021
20-3-24A	06/17/2004	Pre-mitigation	Pathway	24	Primary	0.163	0.374	2.669	0.232	0.131	35.029	< 0.021
20PATH1	11/23/2015	On	Pathway	24	Primary	< 0.081	< 0.079	0.53	< 0.14	< 0.079	1.0	< 0.051
20-109OUT1	11/23/2015	On	Outdoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051
Long-term Commercial Indoor Air Cleanup Level						6	700	210	2	210	5	2

Notes:

All units are micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

<0.020 - Denotes chemical was not detected at or above the laboratory reporting limit shown.

NA - Denotes results were not reported for the analyte.

Chemicals of Concern and ROD Commercial Indoor Air Cleanup Levels as defined in

EPA's "Record of Decision Amendment for the Vapor Intrusion Pathway, Middlefield-Ellis-Whisman (MEW)

Superfund Study Area, Mountain View and Moffett Field, California," 16 August 2010.

The results of samples collected between 2003 and 2008 were provided by others.

The basement ventilation system began operation in 2008.

Samples collected in November 2015 had their sample IDs changed to match the sample nomenclature used at other buildings in the MEW area. Sample 20AMB1 was collected in approximately the same location as sample 20-1; sample 20AMB2 was collected in approximately the same location as 20-2; and sample 20PATH1 was collected in approximately the same location as 20-3.

Locations 20AMB3, 20CRAWL1, and 20CRAWL2 were not sampled previously.

DCA - Dichloroethane

DCE - Dichloroethene

PCE - Tetrachloroethene

TCE - Trichloroethene

TABLE 9
AIR SAMPLING RESULTS - BUILDING 109
MOFFETT FIELD, CALIFORNIA

Location / Sample ID	Sample Date	Sample Purpose	Sample Duration (hours)	Sample Type	Chemicals of Concern						
					1,1-DCA	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	Vinyl chloride
Air Sampling Results (No HVAC System)											
109AMB1	11/23/2015	Primary	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	0.54 J	< 0.051
109AMB1 (109DUP1)	11/23/2015	Duplicate	24	Duplicate	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	0.32 J	< 0.051
20-109OUT1	11/23/2015	Primary	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051
Long-term Commercial Indoor Air Cleanup Level					6	700	210	2	210	5	2

Notes:

All units are micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

<0.020 - Denotes chemical was not detected at or above the laboratory reporting limit shown.

J - Denotes estimated concentration.

Chemicals of Concern and ROD Commercial Indoor Air Cleanup Levels as defined in

EPA's "Record of Decision Amendment for the Vapor Intrusion Pathway, Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View and Moffett Field, California," 16 August 2010.

DCA - Dichloroethane

DCE - Dichloroethene

PCE - Tetrachloroethene

TCE - Trichloroethene

TABLE 10
 AIR SAMPLING RESULTS - BUILDING 153
 MOFFETT FIELD, CALIFORNIA

Location / Sample ID	Sample Date	Sample Purpose	Sample Duration (hours)	Sample Type	Chemicals of Concern							
					1,1-DCA	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	Vinyl chloride	
Air Sampling Results (No HVAC System)												
153AMB1	12/01/2015	Indoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	0.97	< 0.051	
153AMB2	12/01/2015	Indoor	24	Primary	< 0.081	< 0.079	0.53	< 0.14	0.082	0.80	< 0.051	
153PATH1	12/01/2015	Pathway	24	Primary	0.097	< 0.079	2.4	< 0.14	0.15	3.2	< 0.051	
153-156OUT1	12/01/2015	Outdoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
Long-term Commercial Indoor Air Cleanup Level					6	700	210	2	210	5	2	

Notes:

All units are micrograms per cubic meter (µg/m³).

<0.020 - Denotes chemical was not detected at or above the laboratory reporting limit shown.

Chemicals of Concern and ROD Commercial Indoor Air Cleanup Levels as defined in

EPA's "Record of Decision Amendment for the Vapor Intrusion Pathway, Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View and Moffett Field, California," 16 August 2010.

DCA - Dichloroethane

DCE - Dichloroethene

PCE - Tetrachloroethene

TCE - Trichloroethene

TABLE 11
 AIR SAMPLING RESULTS - BUILDING 156
 MOFFETT FIELD, CALIFORNIA

Location / Sample ID	Sample Date	Sample Purpose	Sample Duration (hours)	Sample Type	Chemicals of Concern						
					1,1-DCA	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	Vinyl chloride
Air Sampling Results (No HVAC System)											
156AMB1	12/01/2015	Indoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	0.26	< 0.051
156AMB2	12/01/2015	Indoor	24	Primary	< 0.081	< 0.079	0.20	< 0.14	< 0.079	0.47	< 0.051
156PATH1	12/01/2015	Pathway	24	Primary	< 0.081	< 0.079	1.1	< 0.14	0.10	1.7	< 0.051
156PATH1 (156DUP1)	12/01/2015	Pathway	24	Primary	< 0.081	< 0.079	1.2	< 0.14	0.11	1.8	< 0.051
153-156OUT1	12/01/2015	Outdoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051
Long-term Commercial Indoor Air Cleanup Level					6	700	210	2	210	5	2

Notes:

All units are micrograms per cubic meter (µg/m³).

<0.020 - Denotes chemical was not detected at or above the laboratory reporting limit shown.

Chemicals of Concern and ROD Commercial Indoor Air Cleanup Levels as defined in

EPA's "Record of Decision Amendment for the Vapor Intrusion Pathway, Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View and Moffett Field, California," 16 August 2010.

DCA - Dichloroethane

DCE - Dichloroethene

PCE - Tetrachloroethene

TCE - Trichloroethene

TABLE 12
 AIR SAMPLING RESULTS - BUILDING 547B
 MOFFETT FIELD, CALIFORNIA

Location / Sample ID	Sample Date	Sample Purpose	Sample Duration (hours)	Sample Type	Chemicals of Concern						
					1,1-DCA	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	Vinyl chloride
Air Sampling Results (No HVAC System)											
547BAMB1	12/10/2015	Indoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051
547BAMB1 (547BDUP1)	12/10/2015	Indoor	24	Duplicate	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051
547BOUT1	12/10/2015	Outdoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051
Long-term Commercial Indoor Air Cleanup Level					6	700	210	2	210	5	2

Notes:

All units are micrograms per cubic meter (µg/m³).

<0.020 - Denotes chemical was not detected at or above the laboratory reporting limit shown.

Chemicals of Concern and ROD Commercial Indoor Air Cleanup Levels as defined in

EPA's "Record of Decision Amendment for the Vapor Intrusion Pathway, Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View and Moffett Field, California," 16 August 2010.

DCA - Dichloroethane

DCE - Dichloroethene

PCE - Tetrachloroethene

TCE - Trichloroethene

TABLE 13
AIR SAMPLING RESULTS - BUILDING 547D
MOFFETT FIELD, CALIFORNIA

Location / Sample ID	Sample Date	Sample Purpose	Sample Duration (hours)	Sample Type	Chemicals of Concern						
					1,1-DCA	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	Vinyl chloride
Air Sampling Results (No HVAC System)											
547DAMB1	11/23/2015	Indoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051
547DAMB2	11/23/2015	Indoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051
547D-572-945OUT1	11/23/2015	Outdoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051
Long-term Commercial Indoor Air Cleanup Level					6	700	210	2	210	5	2

Notes:

All units are micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

<0.020 - Denotes chemical was not detected at or above the laboratory reporting limit shown.

Chemicals of Concern and ROD Commercial Indoor Air Cleanup Levels as defined in

EPA's "Record of Decision Amendment for the Vapor Intrusion Pathway, Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View and Moffett Field, California," 16 August 2010.

DCA - Dichloroethane

DCE - Dichloroethene

PCE - Tetrachloroethene

TCE - Trichloroethene

TABLE 14
AIR SAMPLING RESULTS - BUILDING 572
MOFFETT FIELD, CALIFORNIA

Location / Sample ID	Sample Date	Sample Purpose	Sample Duration (hours)	Sample Type	Chemicals of Concern						
					1,1-DCA	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	Vinyl chloride
Air Sampling Results (No HVAC System)											
572AMB1	11/23/2015	Outdoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051
547D-572-945OUT1	11/23/2015	Indoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	2.3	< 0.051
Long-term Commercial Indoor Air Cleanup Level					6	700	210	2	210	5	2

Notes:

All units are micrograms per cubic meter (µg/m³).

<0.020 - Denotes chemical was not detected at or above the laboratory reporting limit shown.

Chemicals of Concern and ROD Commercial Indoor Air Cleanup Levels as defined in

EPA's "Record of Decision Amendment for the Vapor Intrusion Pathway, Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View and Moffett Field, California," 16 August 2010.

DCA - Dichloroethane

DCE - Dichloroethene

PCE - Tetrachloroethene

TCE - Trichloroethene

TABLE 15
 AIR SAMPLING RESULTS - BUILDING 945
 MOFFETT FIELD, CALIFORNIA

Location / Sample ID	Sample Date	Sample Purpose	Sample Duration (hours)	Sample Type	Chemicals of Concern							
					1,1-DCA	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	Vinyl chloride	
Air Sampling Results (No HVAC System)												
945AMB1	11/23/2015	Indoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	0.34	< 0.051	
547D-572-945OUT1	11/23/2015	Outdoor	24	Primary	< 0.081	< 0.079	< 0.079	< 0.14	< 0.079	< 0.11	< 0.051	
Long-term Commercial Indoor Air Cleanup Level					6	700	210	2	210	5	2	

Notes:

All units are micrograms per cubic meter (µg/m³).

<0.020 - Denotes chemical was not detected at or above the laboratory reporting limit shown.

Chemicals of Concern and ROD Commercial Indoor Air Cleanup Levels as defined in

EPA's "Record of Decision Amendment for the Vapor Intrusion Pathway, Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View and Moffett Field, California," 16 August 2010.

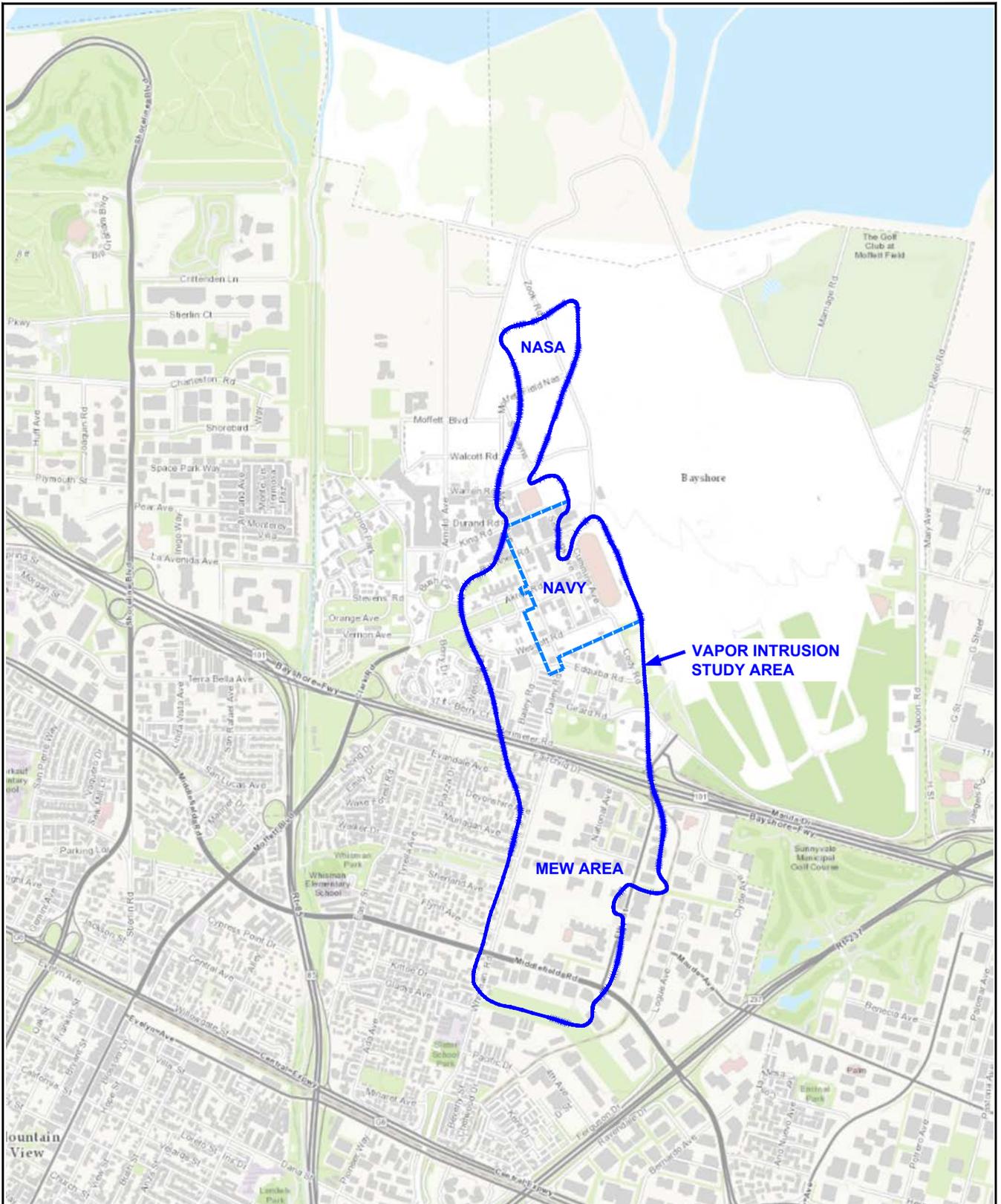
DCA - Dichloroethane

DCE - Dichloroethene

PCE - Tetrachloroethene

TCE - Trichloroethene

FIGURES



G:\36067\064\CAD\36067-064-0001-LOCUS-APR2016.DWG

MAP SOURCE: ESRI

SITE COORDINATES: 37°24'41"N, 122°3'33"W



**HALEY
ALDRICH**

VAPOR INTRUSION STUDY AREA
MOUNTAIN VIEW & MOFFETT FIELD, CALIFORNIA

SITE LOCATION

SCALE: 1 IN = 2000 FT
APRIL 2016

FIGURE 1

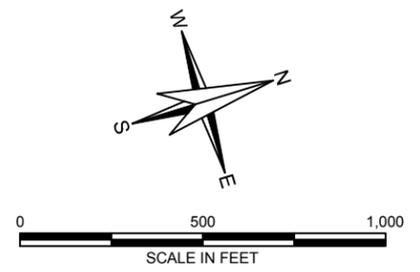
\\SJC\COMMON\36067_STC_MEW_VICAD\0732016-03\36067_073_0002_MTNVIEW_STUDY_AREA.DWG



LEGEND

- SLURRY WALL
- E ELLIS STREET
- M EAST MIDDLEFIELD ROAD
- F FAIRCHILD DRIVE
- W NORTH WHISMAN ROAD
- N NATIONAL AVENUE
- SAMPLES COLLECTED WITH HVAC SYSTEM ON & OFF
- SAMPLES COLLECTED WITH HVAC SYSTEM ON
- SAMPLES COLLECTED WITH HVAC SYSTEM OFF
- SAMPLES COLLECTED WITH NO HVAC SYSTEM

- NOTES**
1. BOUNDARY OF MEW STUDY AREA IS DEFINED BY THE 5 MICROGRAMS PER LITER (UG/L) TRICHLOROETHENE CONTOUR AS PRESENTED BY EPA IN DECEMBER 2011 AND AUGUST 2014.
 2. BUILDINGS IN RESIDENTIAL AREA ARE NOT SHOWN. EPA HAS SAMPLED MORE THAN 130 RESIDENCES WEST OF WHISMAN ROAD.
 3. THIS FIGURE DEPICTS THE STATUS OF ALL COMMERCIAL BUILDINGS WITHIN THE VI STUDY AREA. DETAILS REGARDING THE FORMER PROPERTIES OF OTHER POTENTIALLY RESPONSIBLE PARTIES ARE PROVIDED IN SEPARATE VI ANNUAL REPORTS.

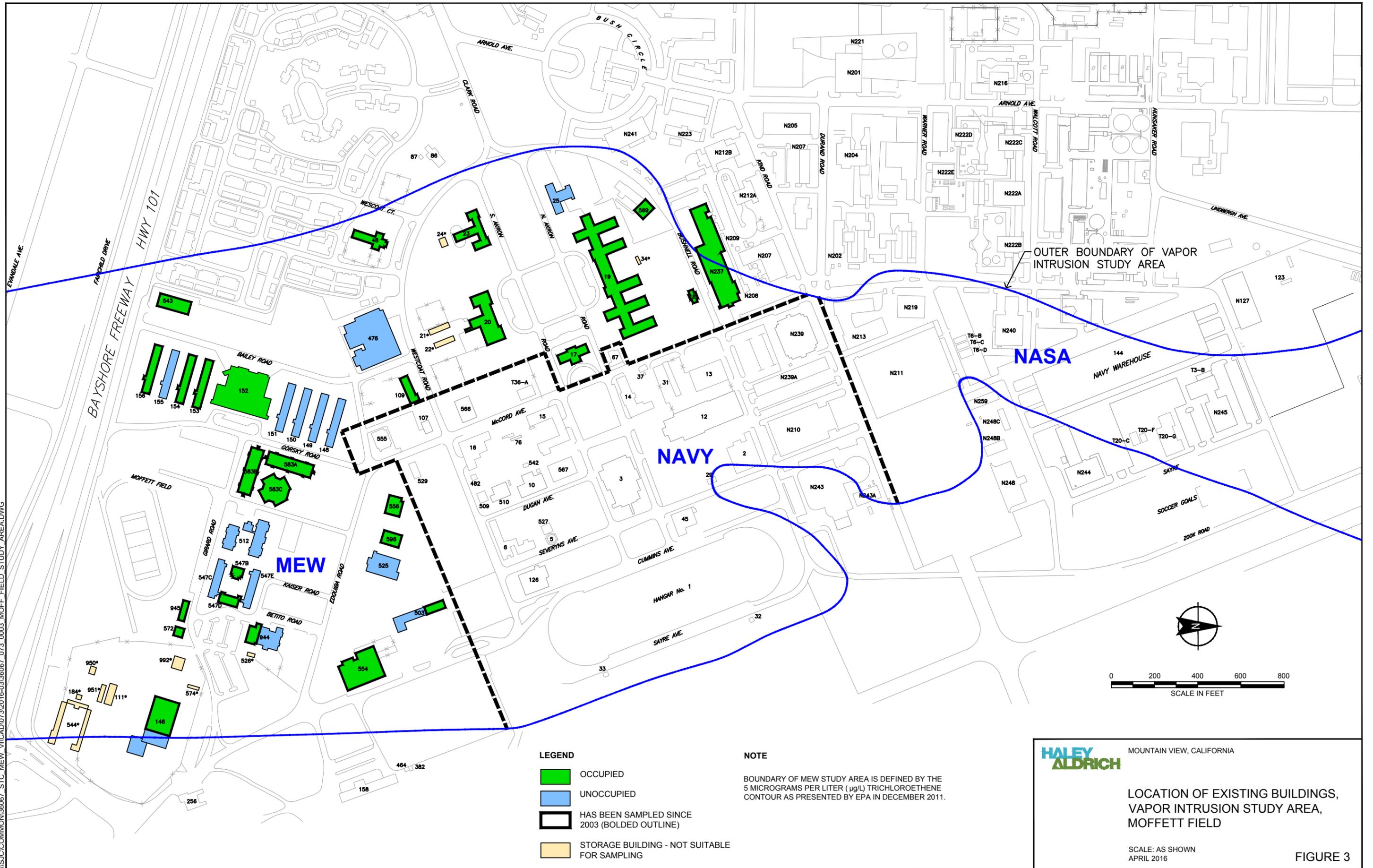


HALEY ALDRICH MOUNTAIN VIEW, CALIFORNIA

LOCATION OF EXISTING BUILDINGS, VAPOR INTRUSION STUDY AREA, SOUTH OF U.S. HIGHWAY 101

SCALE: AS SHOWN
APRIL 2016

FIGURE 2



- LEGEND**
- OCCUPIED
 - UNOCCUPIED
 - HAS BEEN SAMPLED SINCE 2003 (BOLDED OUTLINE)
 - STORAGE BUILDING - NOT SUITABLE FOR SAMPLING

NOTE

BOUNDARY OF MEW STUDY AREA IS DEFINED BY THE 5 MICROGRAMS PER LITER (µg/L) TRICHLOROETHENE CONTOUR AS PRESENTED BY EPA IN DECEMBER 2011.

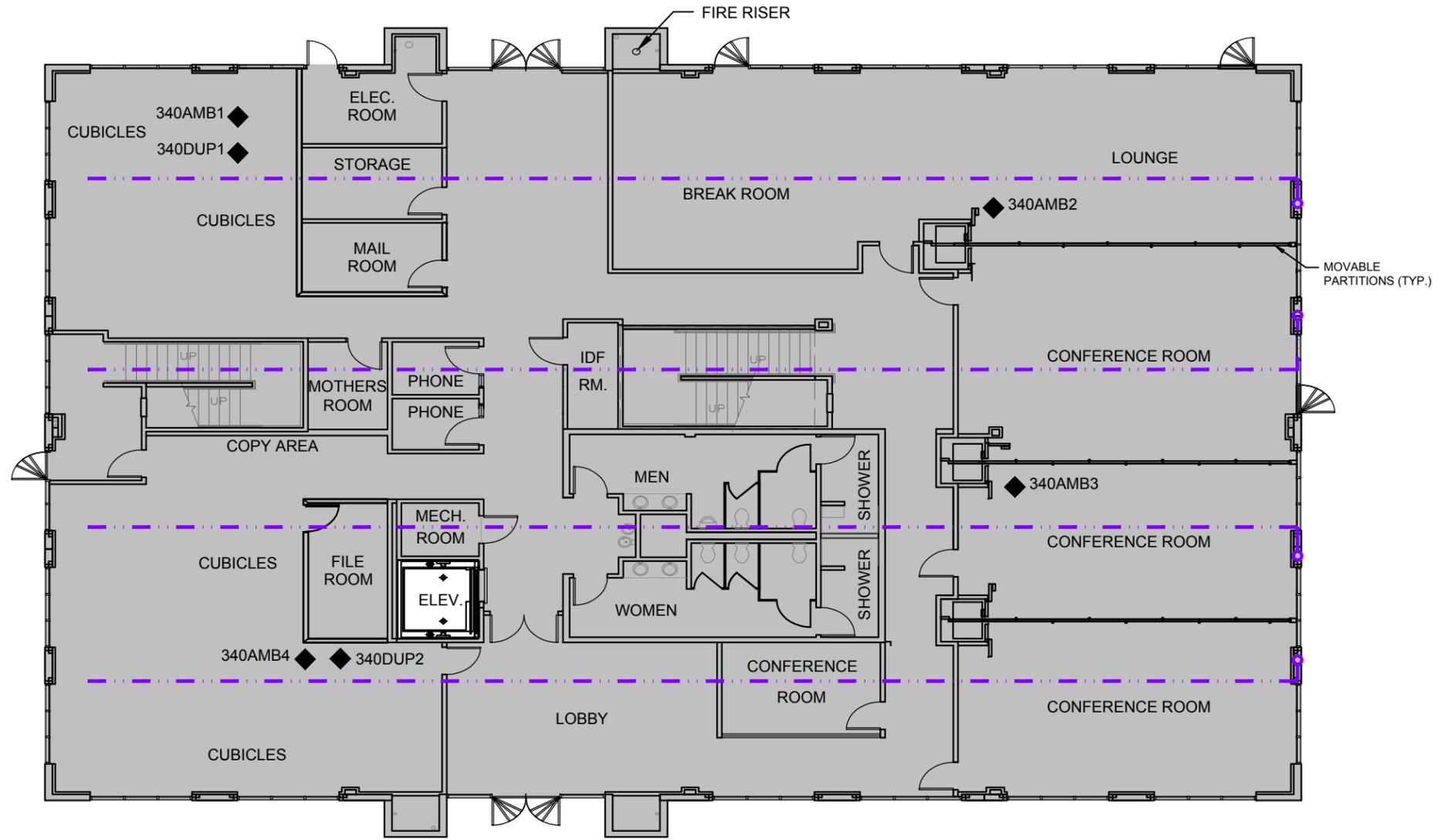
HALEY ALDRICH MOUNTAIN VIEW, CALIFORNIA

LOCATION OF EXISTING BUILDINGS, VAPOR INTRUSION STUDY AREA, MOFFETT FIELD

SCALE: AS SHOWN
 APRIL 2016

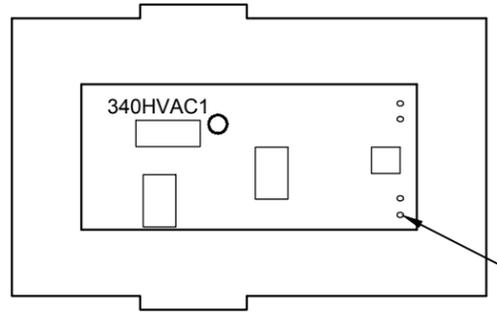
FIGURE 3

\\SJC\COMMON\36067_STC_MEW_V\ICAD\0732016-03\36067_073_0004_340_EMIDFIELD.DWG



- LEGEND**
- ◆ INDOOR AIR SAMPLING LOCATION
 - OUTDOOR AIR SAMPLING LOCATION
 - PERFORATED SUB-SLAB VENTILATION PIPING
 - SUB-SLAB VENTILATION SYSTEM VENT RISER
 - LIQUID BOOT@ VAPOR BARRIER MEMBRANE

- NOTES**
1. BASEMAP WAS PROVIDED BY DEVCON, THEN MODIFIED TO MATCH ACTUAL BUILDING FOOTPRINT.
 2. ALL LOCATIONS ARE APPROXIMATE.
 3. SECOND FLOOR IS NOT SHOWN. NO INDOOR AIR SAMPLES WERE COLLECTED ON THE SECOND FLOOR.



APPROXIMATE LOCATION OF HVAC SYSTEMS AND OUTDOOR SAMPLE

SUB-SLAB VENTILATION SYSTEM VENT RISER EXHAUST POINT (TYP.)

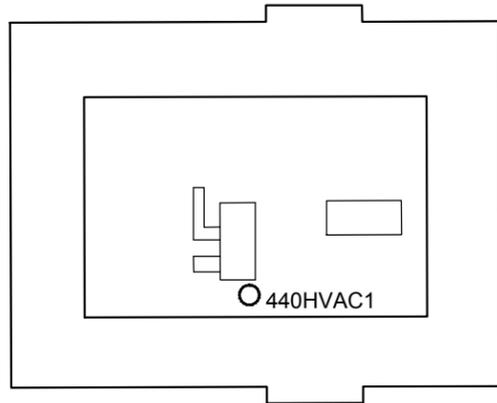


HALEY ALDRICH MOUNTAIN VIEW, CALIFORNIA

LOCATION OF AIR SAMPLES - 340 EAST MIDDLEFIELD ROAD

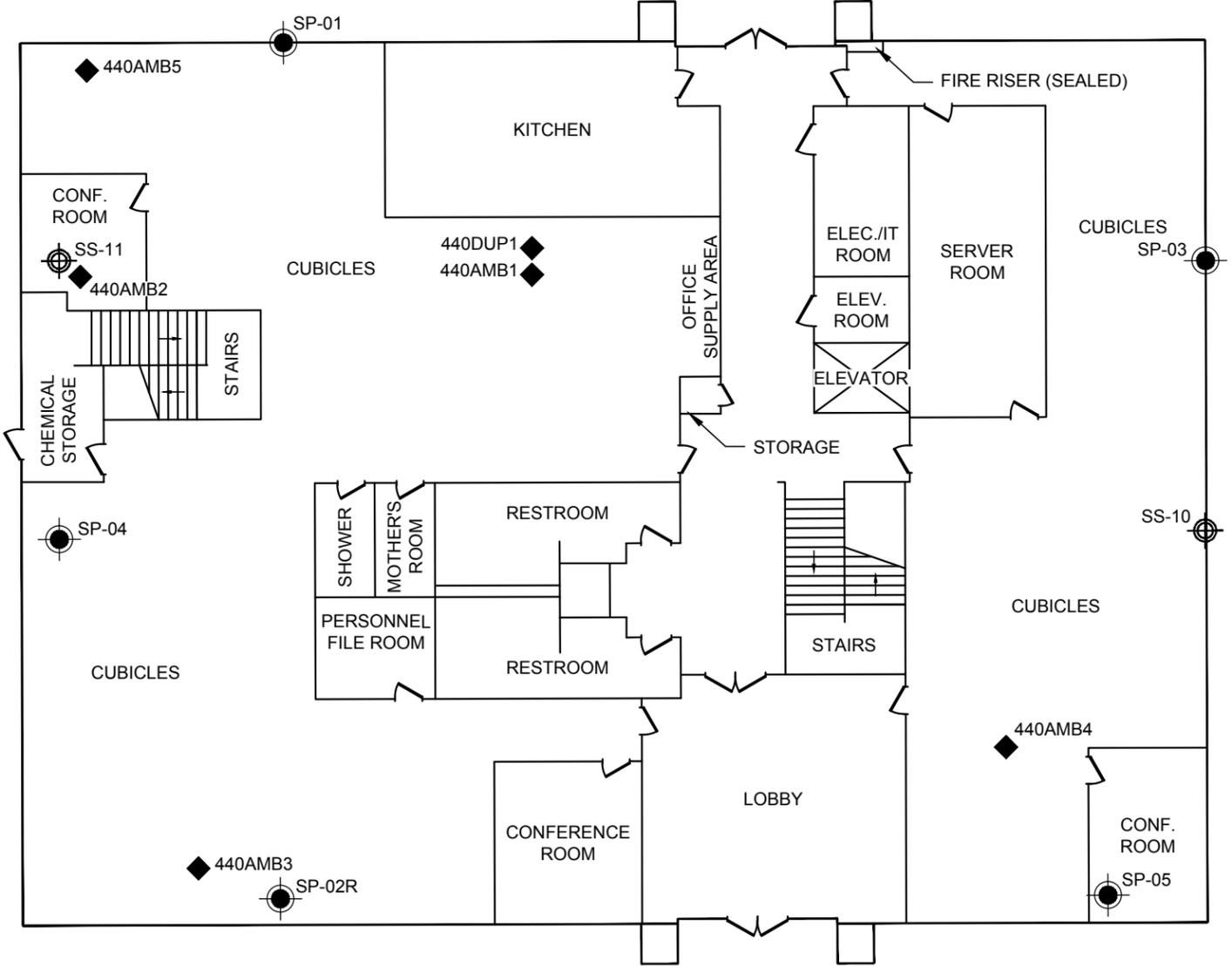
SCALE: AS SHOWN
APRIL 2016

FIGURE 4



APPROXIMATE LOCATION OF HVAC SYSTEMS AND OUTDOOR SAMPLE

440OUT1



LEGEND

- ◆ INDOOR AIR SAMPLING LOCATION
- OUTDOOR AIR SAMPLING LOCATION
- SUCTION PIT LOCATION
- ⊕ PRESSURE MONITORING POINT LOCATION

NOTES

1. BUILDINGS AND SURROUNDING SITE FEATURES WERE DIGITIZED FROM AN AERIAL IMAGE OBTAINED FROM GOOGLE EARTH PRO. INTERIOR FEATURES WERE DIGITIZED FROM A DRAWING PROVIDED BY THE BUILDING OWNER.
2. ALL LOCATIONS ARE APPROXIMATE.
3. INDOOR AIR SAMPLING LOCATION 440AMB2 WAS NOT ACCESSIBLE. THEREFORE, 440AMB5 WAS ADDED.
4. SECOND FLOOR IS NOT SHOWN. NO INDOOR AIR SAMPLES WERE COLLECTED ON THE SECOND FLOOR.



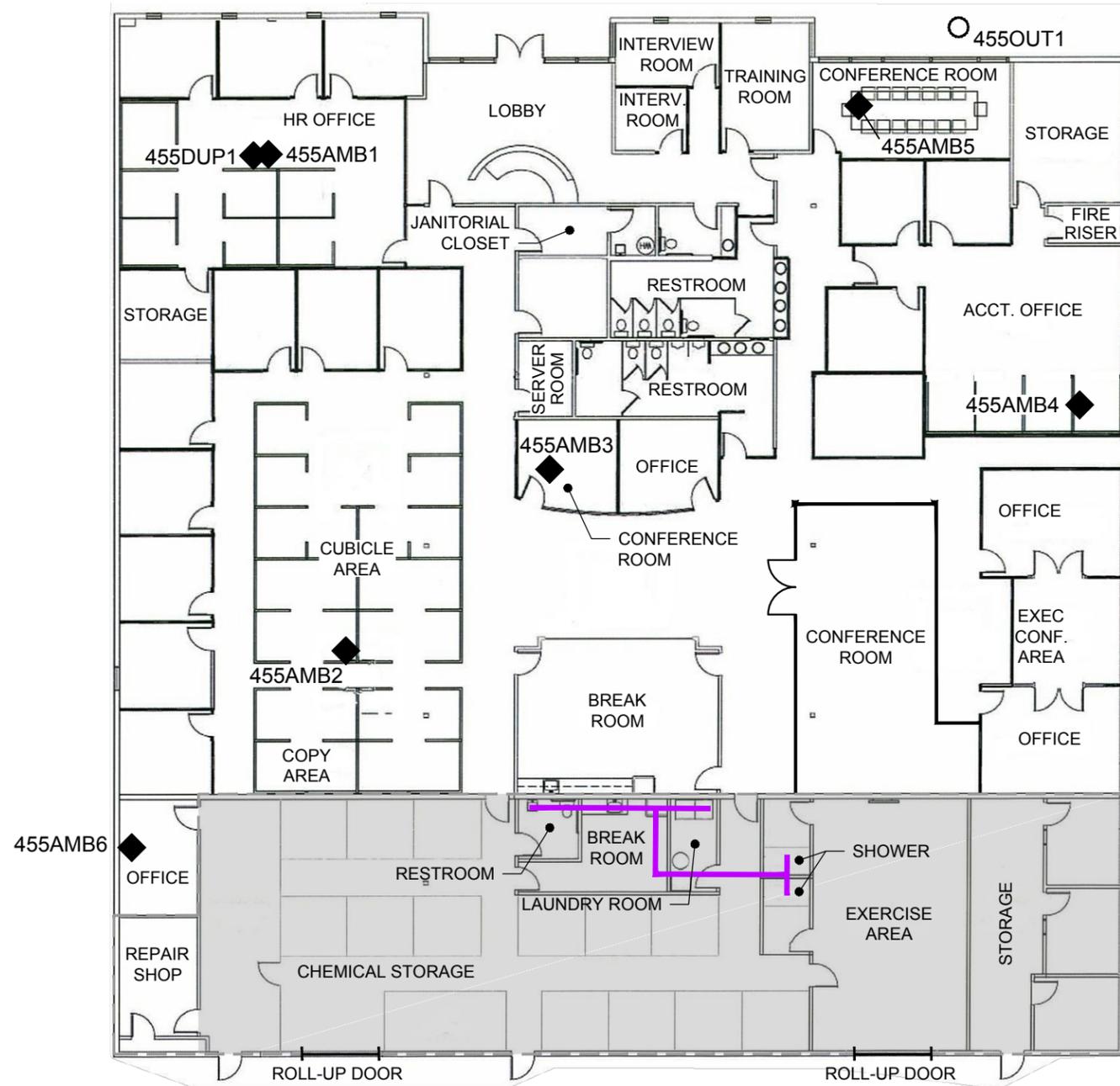
MOUNTAIN VIEW, CALIFORNIA

LOCATION OF AIR SAMPLES,
 SUCTION PITS, AND PRESSURE
 MONITORING POINTS -
 440 EAST MIDDLEFIELD ROAD

SCALE: AS SHOWN
 APRIL 2016

FIGURE 5

\\SJC\COMMON\36067_STC_MEW_VICAD\0732016-03\36067_073_0006_455 NATL_AVE.DWG

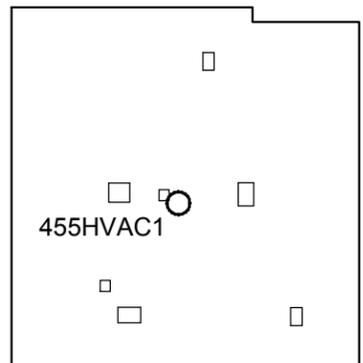


LEGEND

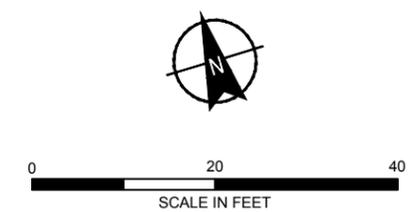
- ◆ INDOOR AIR SAMPLING LOCATION
- OUTDOOR AIR SAMPLING LOCATION
- ▨ NO MECHANICAL VENTILATION - ONLY NATURAL VENTILATION VIA ROLL-UP DOORS AND ROOF VENTS
- APPROXIMATE UTILITY TRENCH LOCATION (2012)

NOTES

1. THIS FIGURE IS BASED ON A SITE PLAN PROVIDED BY THE BUILDING OWNER AND AN AERIAL IMAGE OBTAINED FROM GOOGLE EARTH PRO.
2. ALL LOCATIONS ARE APPROXIMATE.



APPROXIMATE LOCATION OF HVAC SYSTEMS AND OUTDOOR SAMPLE



HALEY ALDRICH MOUNTAIN VIEW, CALIFORNIA

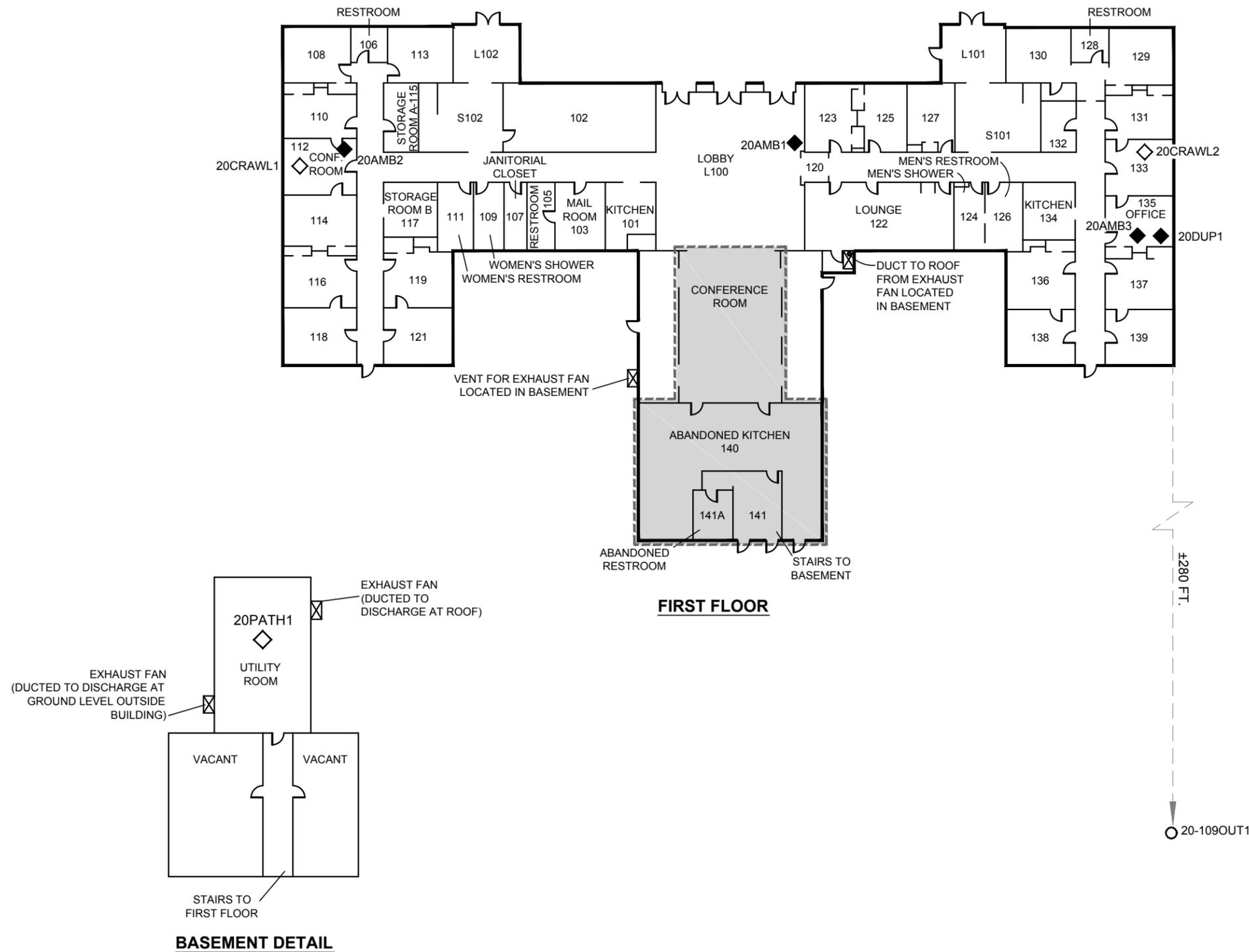
LOCATION OF AIR SAMPLES - 455 NATIONAL AVENUE

SCALE: AS SHOWN
APRIL 2016

FIGURE 6

- LEGEND**
- ◆ INDOOR AIR SAMPLING LOCATION
 - ◇ PATHWAY AIR SAMPLING LOCATION
 - OUTDOOR AIR SAMPLING LOCATION
 - ▭ LOCATION OF BASEMENT BELOW FIRST FLOOR. OTHER AREAS UNDERLAIN BY CRAWLSPACE.

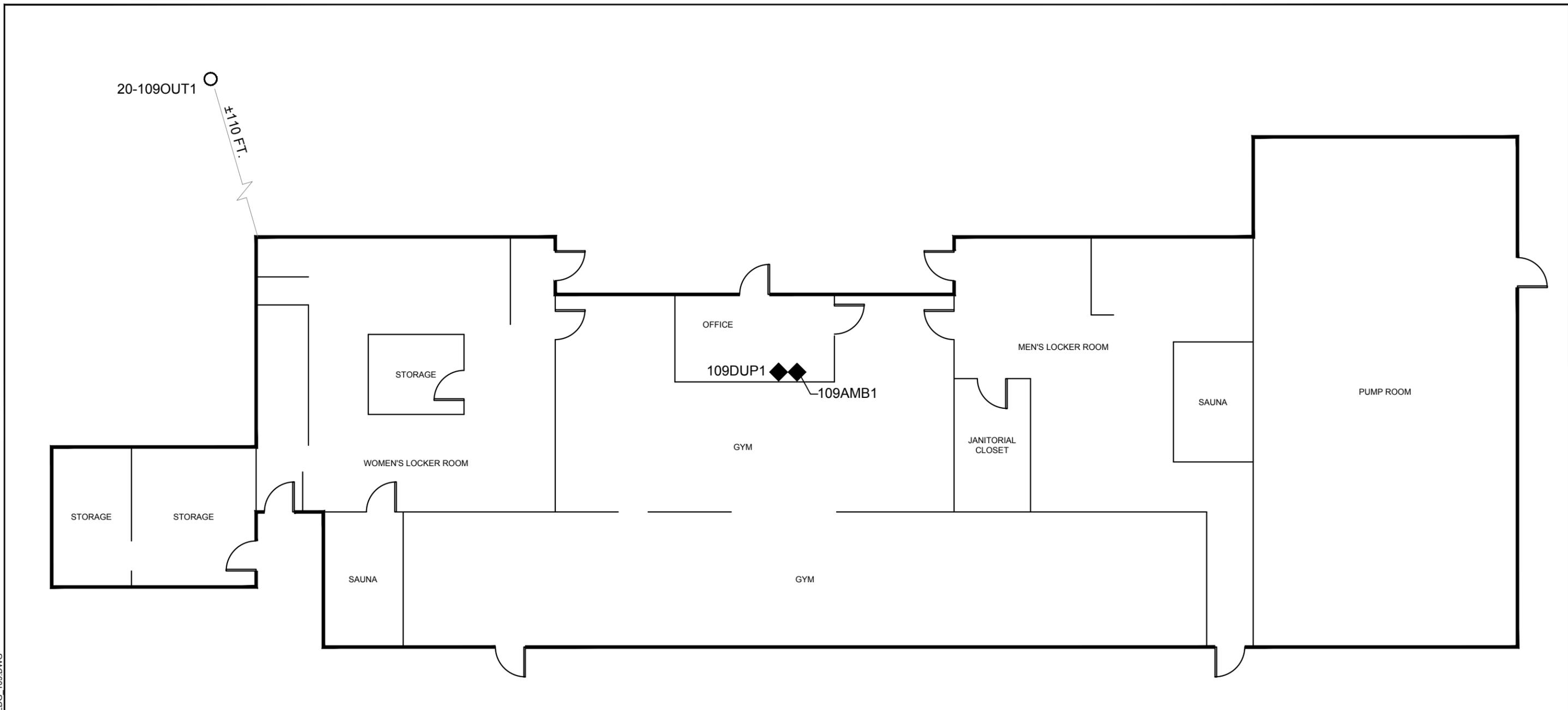
- NOTES**
1. THIS FIGURE IS BASED ON A SITE PLAN PROVIDED BY THE BUILDING OWNER.
 2. ALL LOCATIONS ARE APPROXIMATE.
 3. SECOND FLOOR IS NOT SHOWN BECAUSE NO INDOOR AIR SAMPLES WERE COLLECTED.
 4. BUILDING USED FOR OFFICE AND CLASSROOM SPACE.
 5. THE BASEMENT VENTILATION / MITIGATION SYSTEM BEGAN OPERATION IN 2008.



HALEY ALDRICH BUILDING 20
 MOFFETT FIELD, CALIFORNIA

**LOCATION OF AIR SAMPLES -
 BUILDING 20**

SCALE: AS SHOWN
 APRIL 2016

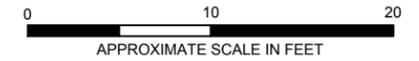


LEGEND

- ◆ INDOOR AIR SAMPLING LOCATION
- OUTDOOR AIR SAMPLING LOCATION

NOTES

1. THIS FIGURE IS BASED ON A SITE PLAN PROVIDED BY THE BUILDING OWNER AND AN AERIAL IMAGE OBTAINED FROM GOOGLE EARTH PRO.
2. ALL LOCATIONS ARE APPROXIMATE.
3. BUILDING USED AS POOL HOUSE AND GYM.

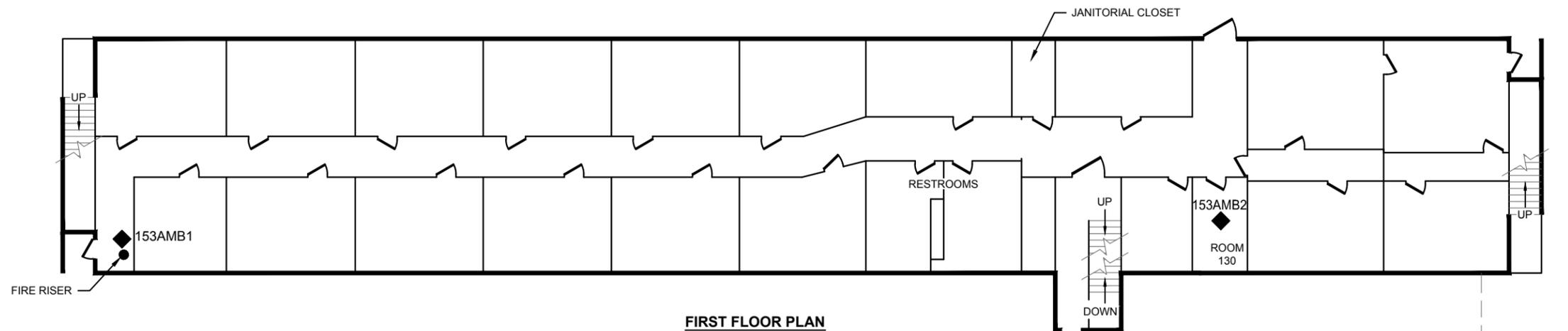


BUILDING 109
MOFFETT FIELD, CALIFORNIA

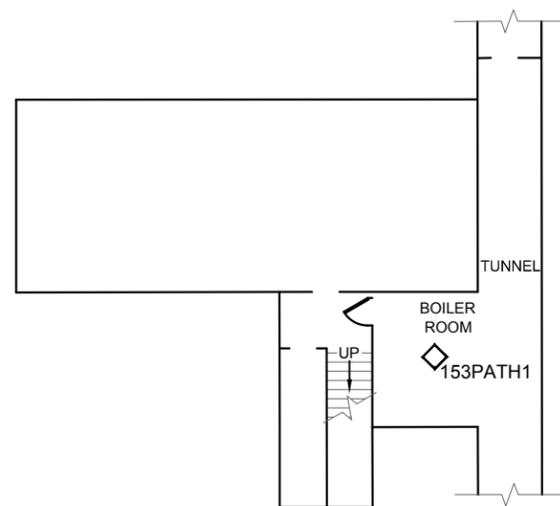
**LOCATION OF AIR SAMPLES -
BUILDING 109**

SCALE: AS SHOWN
APRIL 2016

FIGURE 8

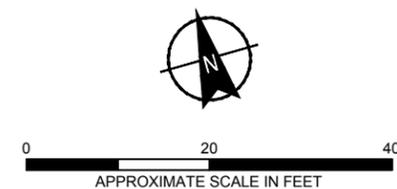


FIRST FLOOR PLAN



BASEMENT PLAN

436 FT.
○ 153-156OUT1



LEGEND

- ◆ INDOOR AIR SAMPLING LOCATION
- OUTDOOR AIR SAMPLING LOCATION
- ◇ PATHWAY AIR SAMPLING LOCATION

NOTES

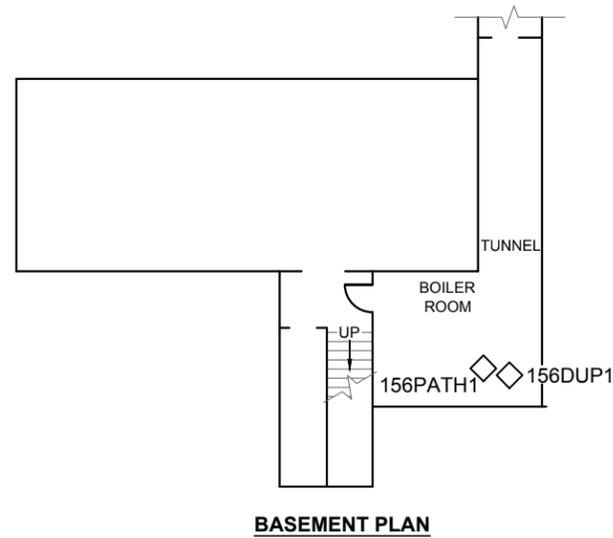
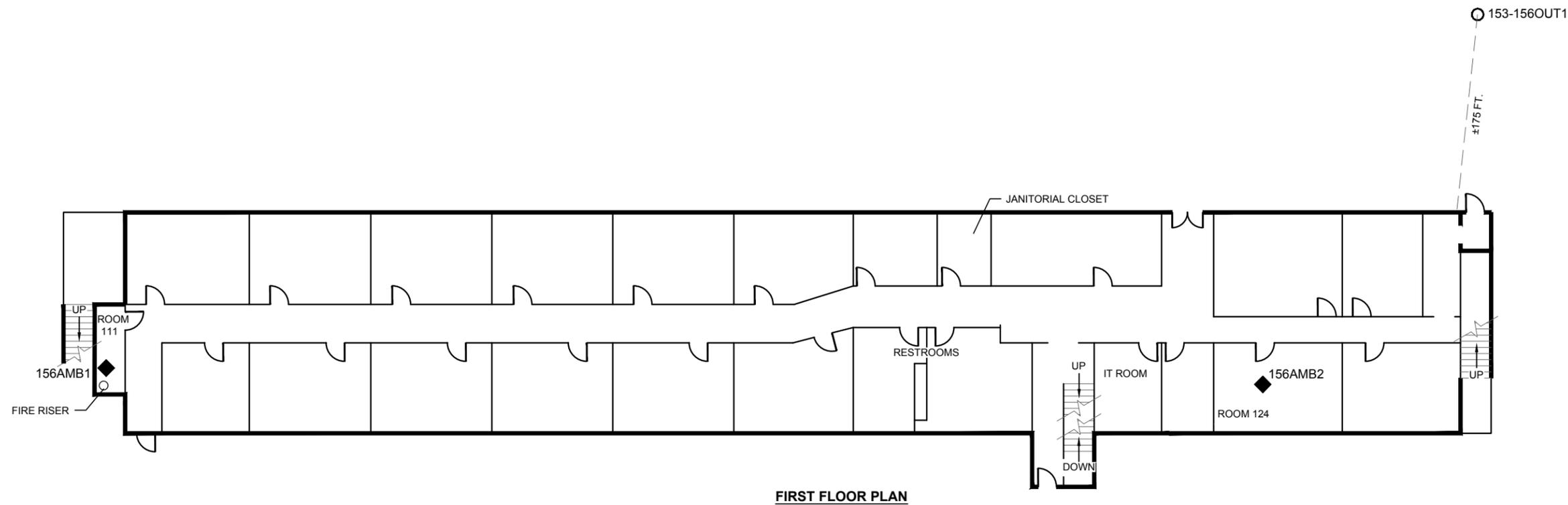
1. THIS FIGURE IS BASED ON SITE SKETCHES, A SITE PLAN PROVIDED BY THE BUILDING OWNER, AND AN AERIAL IMAGE OBTAINED FROM GOOGLE EARTH PRO.
2. ALL LOCATIONS ARE APPROXIMATE.
3. THE SECOND FLOOR IS NOT SHOWN BECAUSE NO INDOOR AIR SAMPLES WERE COLLECTED.
4. BUILDING IS USED FOR RESEARCH AND DEVELOPMENT AND OFFICE SPACE.



BUILDING 153
MOFFETT FIELD, CALIFORNIA

LOCATION OF AIR SAMPLES -
BUILDING 153

SCALE: AS SHOWN
APRIL 2016



FIRST FLOOR PLAN

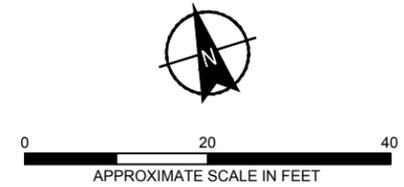
BASEMENT PLAN

LEGEND

- ◆ INDOOR AIR SAMPLING LOCATION
- ◇ PATHWAY AIR SAMPLING LOCATION
- OUTDOOR AIR SAMPLING LOCATION

NOTES

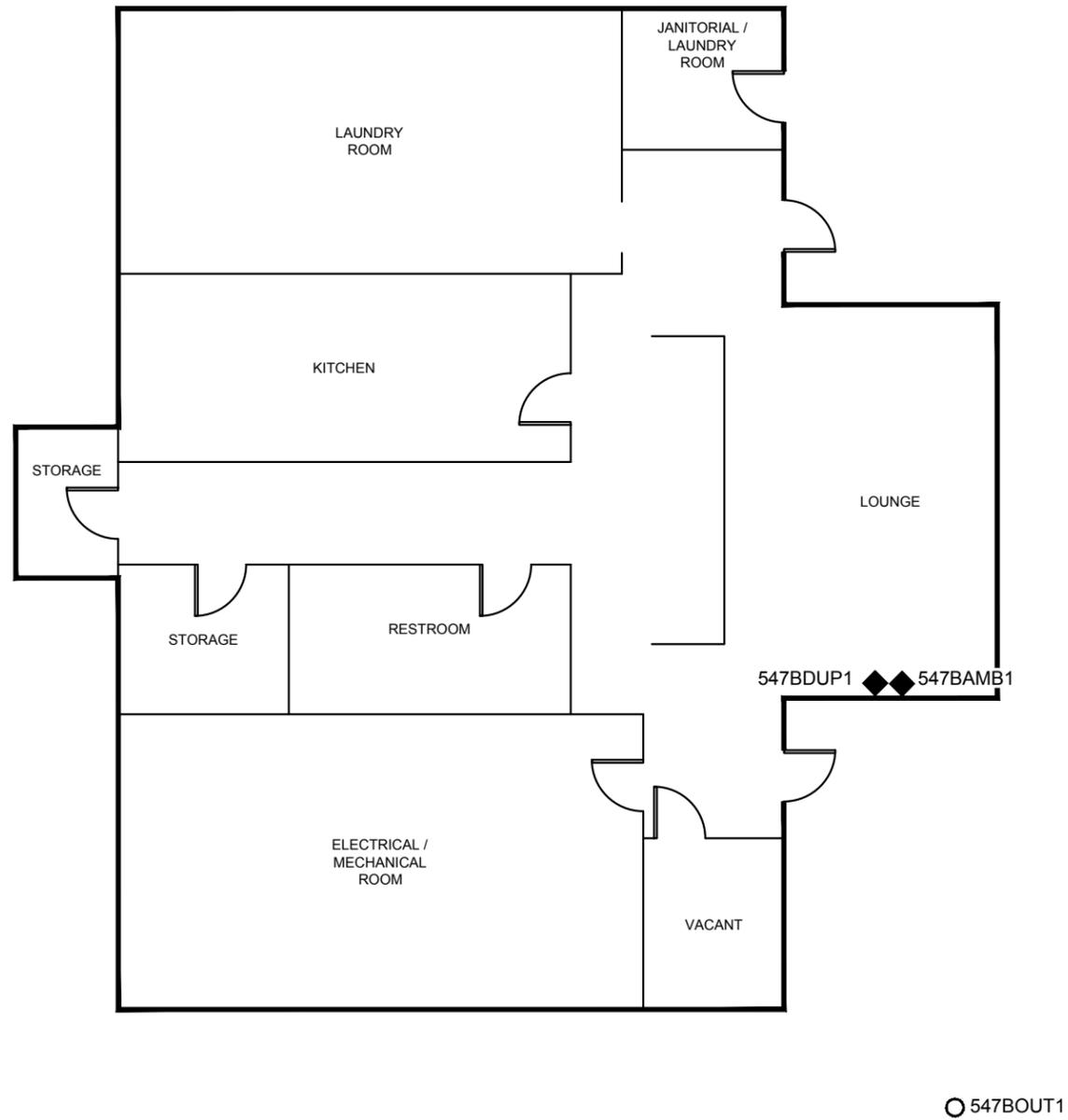
1. THIS FIGURE IS BASED ON SITE SKETCHES, A SITE PLAN PROVIDED BY THE BUILDING OWNER, AND AN AERIAL IMAGE OBTAINED FROM GOOGLE EARTH PRO.
2. ALL LOCATIONS ARE APPROXIMATE.
3. THE SECOND FLOOR IS NOT SHOWN BECAUSE NO INDOOR SAMPLES WERE COLLECTED.
4. BUILDING IS USED FOR OFFICE SPACE.



HALEY ALDRICH BUILDING 156
 MOFFETT FIELD, CALIFORNIA

LOCATION OF AIR SAMPLES -
 BUILDING 156

SCALE: AS SHOWN
 APRIL 2016

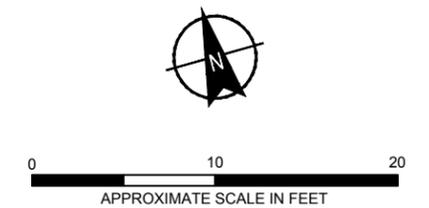


LEGEND

- ◆ INDOOR AIR SAMPLING LOCATION
- OUTDOOR AIR SAMPLING LOCATION

NOTES

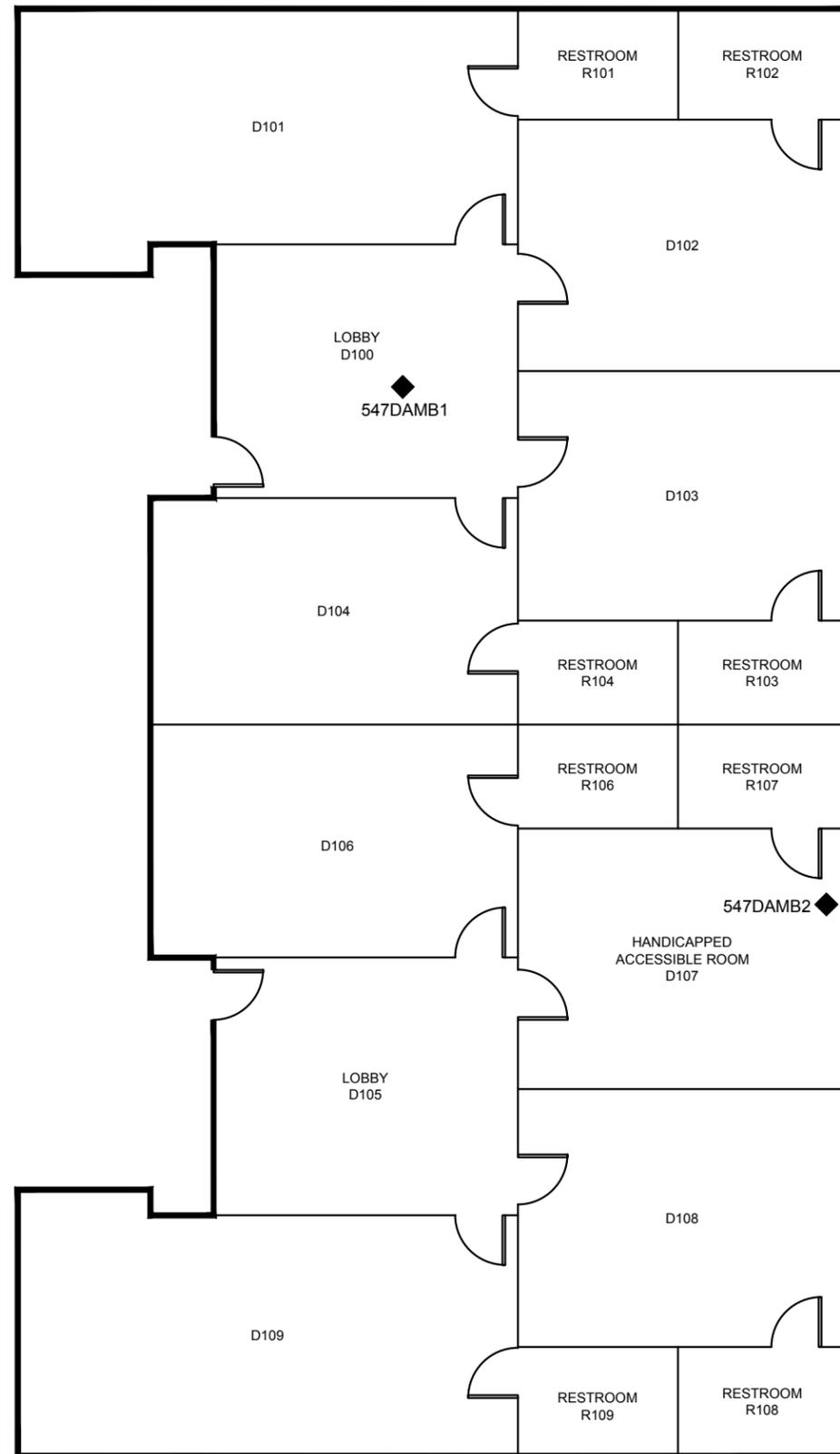
1. THIS FIGURE IS BASED ON SITE SKETCHES AND AN AERIAL IMAGE OBTAINED FROM GOOGLE EARTH PRO.
2. ALL LOCATIONS ARE APPROXIMATE.
3. BUILDING USED AS LAUNDRY ROOM AND LOUNGE.



HALEY ALDRICH BUILDING 547B
MOFFETT FIELD, CALIFORNIA

**LOCATION OF AIR SAMPLES -
BUILDING 547B**

SCALE: AS SHOWN
APRIL 2016

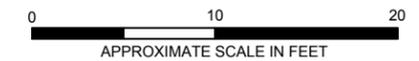


LEGEND

- ◆ INDOOR AIR SAMPLING LOCATION
- OUTDOOR AIR SAMPLING LOCATION

NOTES

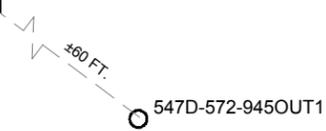
1. THIS FIGURE IS BASED ON A DRAWING PROVIDED BY THE BUILDING OWNER AND AN AERIAL IMAGE OBTAINED FROM GOOGLE EARTH PRO.
2. ALL LOCATIONS ARE APPROXIMATE.
3. SECOND AND THIRD FLOORS ARE NOT SHOWN BECAUSE NO INDOOR AIR SAMPLES WERE COLLECTED.
4. BUILDING USED AS TEMPORARY RESIDENCE.

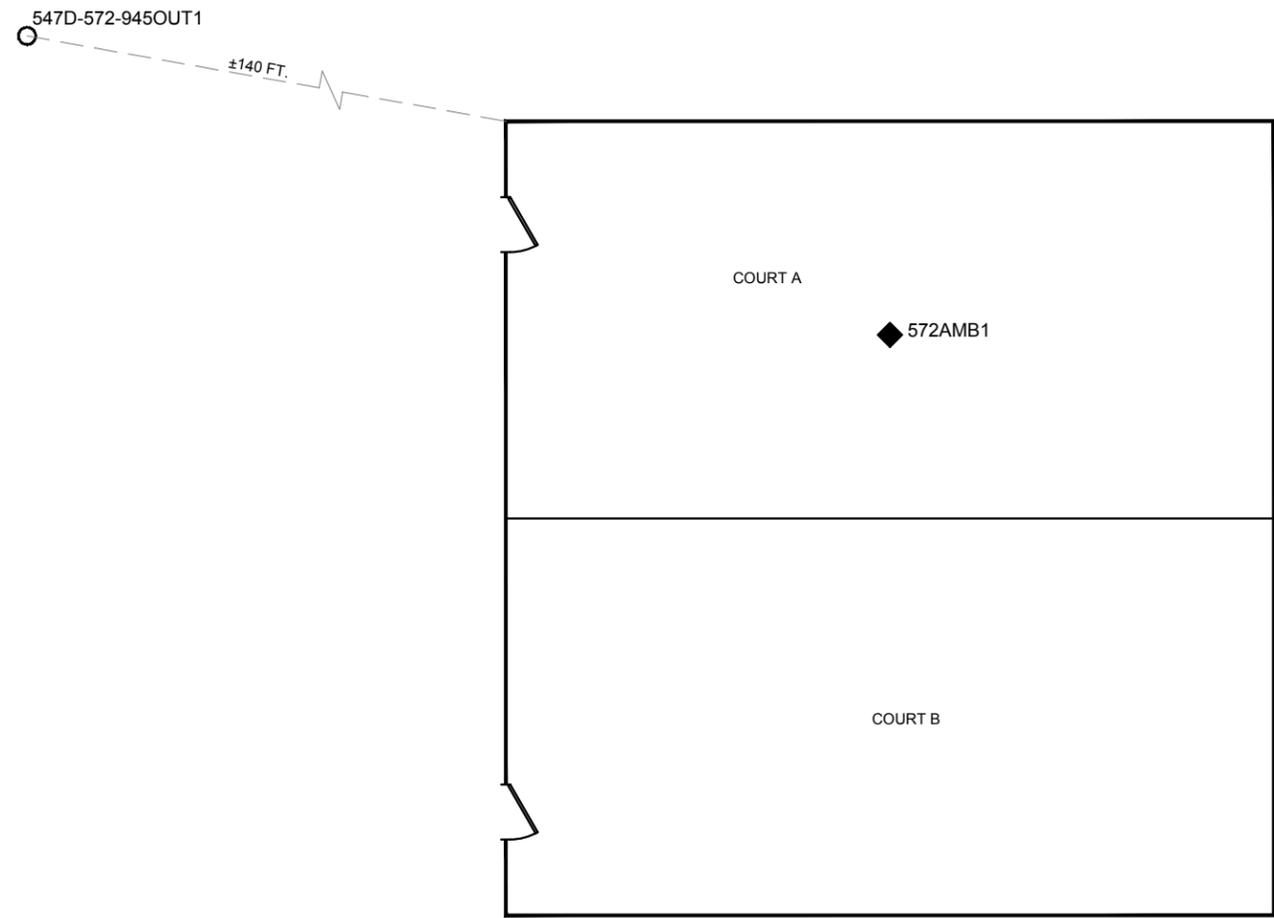


BUILDING 547D
MOFFETT FIELD, CALIFORNIA

**LOCATION OF AIR SAMPLES -
BUILDING 547D**

SCALE: AS SHOWN
APRIL 2016



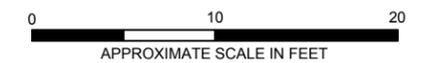


LEGEND

- ◆ INDOOR AIR SAMPLING LOCATION
- OUTDOOR AIR SAMPLING LOCATION

NOTES

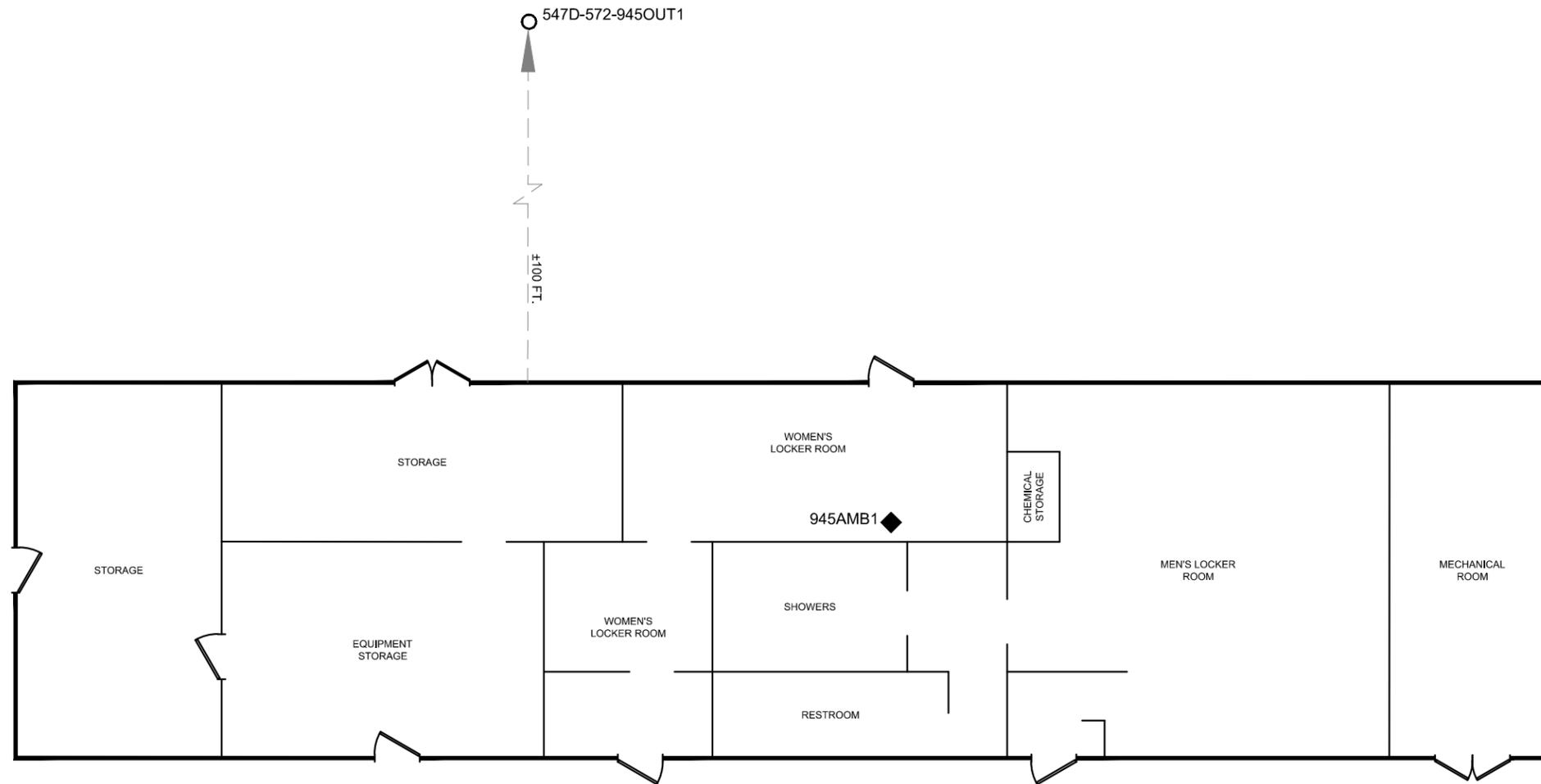
1. THIS FIGURE IS BASED ON A DRAWING PROVIDED BY THE BUILDING OWNER AND AN AERIAL IMAGE OBTAINED FROM GOOGLE EARTH PRO.
2. ALL LOCATIONS ARE APPROXIMATE.
3. BUILDING USED AS RACQUETBALL COURTS.



BUILDING 572
MOFFETT FIELD, CALIFORNIA

LOCATION OF AIR SAMPLES -
BUILDING 572

SCALE: AS SHOWN
APRIL 2016

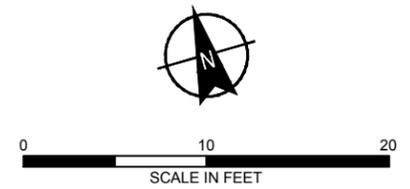


LEGEND

- ◆ INDOOR AIR SAMPLING LOCATION
- OUTDOOR AIR SAMPLING LOCATION

NOTES

1. THIS FIGURE IS BASED ON A SITE PLAN PROVIDED BY THE BUILDING OWNER AND AN AERIAL IMAGE OBTAINED FROM GOOGLE EARTH PRO.
2. ALL LOCATIONS ARE APPROXIMATE.
3. BUILDING USED FOR STORAGE, OFFICE, AND LOCKER ROOMS.



**HALEY
ALDRICH**

BUILDING 945
MOFFETT FIELD, CALIFORNIA

**LOCATION OF AIR SAMPLES -
BUILDING 945**

SCALE: AS SHOWN
APRIL 2016