2011 ANNUAL PROGRESS REPORT
MIDDLEFIELD-ELLIS-WHISMAN (MEW) AREA AND MOFFETT FIELD, CALIFORNIA

by

Haley & Aldrich, Inc.
San Jose, California

for

Fairchild Semiconductor Corporation
Raytheon Company

File No. 36067-013
16 April 2012

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

Tel: 408.961.4805
Fax: 408.453.8708
HaleyAldrich.com

HALEY & ALDRICH

16 April 2012
File No. 36067-013

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: 2011 Annual Progress Report
Middlefield-Ellis-Whisman Area and Moffett Field, California

Dear Ms. Lee:

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

Please feel free to call if you have questions regarding this document.

Sincerely yours,
HALEY & ALDRICH, INC.

Jennifer Boyer
Project Manager

Elie H. Haddad, PE
Senior Vice President

Enclosures

c: Distribution List (Appendix B)

G:\36067_STC_MEW_VI\Progress Reports\Annual\2011 Annual Report\2012_0416_HAI_Annual_VI_Progress_Report_2011_F.docx

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS AND ABBREVIATIONS

Annual Report	Annual Progress Report
COC	chemical of concern
EKI	Erler & Kalinowski, Inc.
EPA	United States Environmental Protection Agency
Haley & Aldrich	Haley & Aldrich, Inc.
MEW	Middlefield-Ellis-Whisman
ROD	Record of Decision
SOW	United States Environmental Protection Agency's Vapor Intrusion Statement of Work
Tiering Work Plan	Site-Wide Vapor Intrusion Sampling and Analysis Work Plan for Response Action Tiering
VI	vapor intrusion

1. INTRODUCTION

Haley & Aldrich, Inc. (Haley & Aldrich) prepared this Annual Progress Report (Annual Report) to report activities related to the vapor intrusion (VI) work performed in 2011 for the Middlefield-Ellis-Whisman (MEW) Superfund Area and parts of Moffett Field (collectively referred to as the VI Study Area), in Mountain View, California (Figure 1). This Annual Report combines VI-related work performed by Fairchild Semiconductor Corporation and Raytheon Company in the VI Study Area (Figures 2 and 3) and was prepared pursuant to the United States Environmental Protection Agency's (EPA's) 16 September 2011 Statement of Work (SOW) Section 2.6.2.

The SOW requires that the Annual Progress Report include the following:

- A description of the VI work activities performed in the reporting period, including, but are not limited to: fieldwork, sampling, data collection, reporting, community involvement and meetings, laboratory results, interim vapor IV measures, and remedial design and remedial action activities;
- A summary of sampling and monitoring data results by building or property address, including sampling location maps and data summary tables;
- An interpretation or explanation of the data collected during that period, including summary table updates of the response action tiering status of all buildings/properties;
- Description of VI Work planned for the next reporting period, with updated schedules; and
- Recommendations, follow-up actions, and proposed work schedules to address problems encountered.

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 ACTIVITIES

2.1 Sampling and Reporting

The following sections describe the field and reporting activities performed in 2011.

2.1.1 Walkthroughs and Building-Specific Sampling Plans

In accordance with the Indoor Air Sampling and Analysis Work Plan for Existing, Unsampled Commercial Buildings (Haley & Aldrich, 2011b) approved by EPA on 1 July 2011, Haley & Aldrich obtained access, scheduled, and performed walkthroughs in several buildings in the VI Study Area. EPA was notified in advance and accompanied Haley & Aldrich on walkthroughs. Subsequently, walkthroughs were performed and building-specific sampling work plans were submitted to EPA for the following buildings:

Building Address	Site Walk Performed	Work Plan Submitted
N. Whisman Road		
265/275 N. Whisman Rd.	4/20/2011	7/24/2011
276 N. Whisman Rd.	2/23/2011	7/24/2011
301 N. Whisman Rd.	8/16/2011	8/30/2011
310 N. Whisman Rd.	4/20/2011	8/1/2011
425 N. Whisman Rd.	4/20/2011	8/1/2011
435 N. Whisman Rd.	4/20/2011	8/1/2011
445 N. Whisman Rd.	4/20/2011	8/1/2011
455 N. Whisman Rd.	4/20/2011	8/1/2011
465 N. Whisman Rd.	4/20/2011	8/1/2011
475 N. Whisman Rd.	4/20/2011	8/1/2011
485 N. Whisman Rd.	4/20/2011	8/1/2011
495 N. Whisman Rd.	4/20/2011	8/1/2011
East Middlefield Road		
295 E. Middlefield Rd.	2/23/2011	7/24/2011
325 E. Middlefield Rd.	4/20/2011	8/1/2011
335 E. Middlefield Rd.	8/16/2011	8/30/2011
340/344/348/350 E. Middlefield Rd.	4/20/2011	8/1/2011
345 E. Middlefield Rd.	8/16/2011	8/30/2011
448/450 E. Middlefield Rd.	2/23/2011	8/1/2011
Ellis Street		
605 Ellis St.	2/1/2011	7/24/2011
625 Ellis St.	2/1/2011	7/24/2011
636 Ellis St./491 Fairchild Dr.	8/16/2011	8/30/2011
645 Ellis St.	2/23/2011	7/24/2011
Fairchild Drive		
277 Fairchild Dr.	4/8/2011	8/1/2011
411/415 Fairchild Dr.	2/1/2011	7/24/2011
465 Fairchild Dr.	4/8/2011	8/1/2011

Building Address	Site Walk Performed	Work Plan Submitted
National Avenue		
455/465 National Ave.	4/20/2011	8/1/2011
612/614/616/618/620 National Ave.	2/23/2011	8/1/2011
630/634 National Ave.	2/23/2011	7/24/2011
640 National Ave.	4/8/2011	7/24/2011

Haley & Aldrich met with EPA on 3 August 2011 to resolve comments on the building-specific work plans. EPA approved these work plans on 17 February 2012. Haley & Aldrich also obtained access, scheduled and performed walkthroughs in the following buildings on Moffett Field.

Building Address	Site Walk Performed	Work Plan Submitted
23	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.
48	6/24/2011	
146	6/23/2011	
503	6/24/2011	
543	6/24/2011	
554	6/23/2011, 6/24/2011	
569	7/1/2011	
583A	6/24/2011	
583B	6/24/2011	
583C	6/23/2011	
596	6/24/2011	
944	7/1/2011	

2.1.2 Air Sampling Activities

Haley & Aldrich collected indoor and outdoor air samples in 2011 in each of the following buildings and as approved by EPA.

- Building 23;
- Building 48;
- Building 146;
- Building 503;
- Building 543;
- Building 554;
- Building 569;
- Building 583A;
- Building 583B;
- Building 583C;
- Building 596; and
- Building 944.

Haley & Aldrich also collected indoor and outdoor air samples in January 2011 at 379 N. Whisman Road pursuant to a previously EPA-approved sampling plan.

2.1.3 Reporting

Haley & Aldrich submitted the results of indoor air samples collected in 2011 to EPA in the following reports:

- "Air Sampling Results, 379 N. Whisman Road, Mountain View, California," dated 24 February 2011 (Haley & Aldrich, 2011a); and
- "Building-Specific Air Sampling Report, Moffett Field, California," dated 13 September 2011 (Haley & Aldrich, 2011d).

The following reports were also submitted to EPA in accordance with the SOW:

- "Indoor Air Sampling and Analysis Work Plan for Existing, Unsampled Commercial Buildings, Middlefield-Ellis-Whisman Study Area, Mountain View, California," dated 7 June 2011 (Haley & Aldrich, 2011b) and approved by EPA on 1 July 2011.
- "Monthly Vapor Intrusion Field Activity and Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, California." dated 9 August 2011, 13 September 2011, 11 October 2011, 8 November, 13 December 2011, and 10 January 2012 (Haley & Aldrich, 2011c, 2011e, 2011g, 2011h, 2011i, 2012); and
- "Site-Wide Vapor Intrusion Sampling and Analysis Work Plan for Response Action Tiering, Vapor Intrusion Study Area, Middlefield-Ellis-Whisman Superfund Area, Mountain View, California," dated 29 September 2011 (Haley & Aldrich, 2011f).

Table I presents a summary of the activities performed during the reporting period. Figures 2 and 3 present the sampling status of buildings in the VI Study Area as of 31 December 2011.

2.2 Sampling Results

Haley & Aldrich collected samples from 12 buildings on Moffett Field in July 2011 (Section 2.1.2 above). All indoor air results from the July 2011 sampling event showed chemical of concern (COC) concentrations to be lower than EPA's indoor air cleanup levels for long-term exposure as established in the Record of Decision (ROD) Amendment. Further details of the sampling event are provided in the 13 September 2011 report "Building-Specific Air Sampling Report, Moffett Field, California" (Haley & Aldrich, 2011d). Sampling results are summarized below in chronological order.

- **Buildings 583A, 583B, and 583C:**

Eight indoor and two outdoor air samples were collected on 11 to 12 July 2011 in Buildings 583A, 583B, and 583C. Because of access limitations to some rooms, two indoor air samples in Building 583B originally scheduled to be collected on 11 to 12 July, were collected on 12 to 13 July 2011. The results of these sampling events are included in Table II and presented on Figures 4, 5, and 6.

- **Buildings 503, 554, and 596**:

  Six indoor and two outdoor air samples were collected on 12 to 13 July 2011. Results from these sampling events are included in Table II and presented on Figures 7, 8, and 9.

- **Buildings 48, 146, and 944:**

  Seven indoor (plus one duplicate) and three outdoor air samples (plus one duplicate sample) were collected on 13 to 14 July 2011. Results from these sampling events are included in Table II and presented on Figures 10, 11, and 12.

- **Buildings 23, 543, and 569:**

  Seven indoor (plus three duplicates) and three outdoor air samples were collected on 14 to 15 July 2011. Results from these sampling events are included in Table II and presented on Figures 13, 14, and 15.

Five indoor and one outdoor air samples were collected on 28 to 29 January 2011 at 379 N. Whisman Road in accordance to an EPA-approved sampling plan. These samples showed COC concentrations lower than EPA's cleanup levels established in the ROD Amendment. Results of these sampling events are included in Table II and presented on Figure 16. Further details of these sampling events were provided in the 24 February 2011 report "Air Sampling Results, 379 N. Whisman Road, Mountain View, California," (Haley & Aldrich, 2011a) and submitted to EPA.

2.3 Community Involvement and Meetings

Community involvement and meetings continue to be performed by EPA, including meetings with the Moffett Field Restoration Advisory Board.

2.4 Interim Vapor Intrusion Mitigation Measures

No interim VI mitigation measures were necessary in this reporting period. All indoor air samples collected during this reporting period showed COC concentrations lower than EPA's cleanup levels established in the ROD Amendment.

2.5 Remedial Design and Remedial Action Activities

No remedial designs were necessary in this reporting period. All indoor air samples collected during this reporting period showed COC concentrations lower than EPA's cleanup levels established in the ROD Amendment.

Haley & Aldrich inspected the operation of the crawl space ventilation system at Residence 4 on 2 February 2011. This included inspection of the blower, the timer, and the exterior control system. No problems were reported.

3. VAPOR INTRUSION STUDY AREA

The extent of the VI Study Area is presented on Figures 2 and 3 and is in accordance to maps posted by EPA on the EPA website (www.epa.gov/region9/mew).

4. DELAYS ENCOUNTERED

Implementation of the unsampled building work plan was delayed pending EPA approval of building-specific work plans submitted in July and August 2011 for buildings in the MEW Area South of U.S. Highway 101 (see Section 2.1.1). EPA subsequently approved these work plans on 17 February 2012 and Haley & Aldrich is now in the process of collecting indoor air samples in these buildings.

In accordance with the SOW, Haley & Aldrich submitted the work plan entitled "Site-Wide Vapor Intrusion Sampling and Analysis Work Plan for Response Action Tiering, Vapor Intrusion Study Area, Middlefield-Ellis-Whisman Superfund Area, Mountain View, California," ([Tiering Work Plan]; Haley & Aldrich, 2011f) to EPA on 29 September 2011. EPA provided draft comments on the work plan on 2 March 2012.

No other delays related to VI activities were encountered in 2011.

5. ANTICIPATED ACTIVITIES PLANNED FOR 2012

Haley & Aldrich anticipates implementation of the following activities in 2012:

- Haley & Aldrich is in the process of collecting indoor and outdoor air samples from the 30 unsampled buildings south of U.S. Highway 101 and Building 154 on Moffett Field subsequent to EPA's approval of the building-specific work plans on 17 February 2012. Building-Specific Indoor Air Sampling Reports will be submitted to EPA within 60 days of completing this sampling.
- The Tiering Work Plan will be revised per EPA's comments as appropriate and submitted to EPA for approval.

  Supplemental Building/Property-Specific Vapor Intrusion Sampling and Analysis Work Plans will be prepared per the schedule provided in the Tiering Work Plan.
- A Site-Wide Long-Term Operation, Maintenance, Monitoring, and Management Plan will be submitted to EPA within 60 days of EPA approval of the final Tiering Work Plan.
- An Institutional Controls Implementation, Management, and Monitoring Plan will be submitted within 60 days of EPA approval of the final Tiering Work Plan.
- Monthly Vapor Intrusion Progress Reports will be submitted to EPA on the second Tuesday of each month.

REFERENCES

1. Haley & Aldrich, Inc., 2009, "Final Supplemental Remedial Investigation for Vapor Intrusion Pathway, Middlefield-Ellis-Whisman Study Area, Mountain View and Moffett Field, California," June 2009.

2. Haley & Aldrich, Inc., 2011a, "Air Sampling Results, 379 N. Whisman Road, Mountain View, California," 24 February 2011.

3. Haley & Aldrich, Inc., 2011b, "Indoor Air Sampling and Analysis Work Plan for Existing, Unsampled Commercial Buildings, Middlefield-Ellis-Whisman Study Area, Mountain View, California," 7 June 2011.

4. Haley & Aldrich, Inc., 2011c, "Monthly Vapor Intrusion Field Activity and Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, California," 9 August 2011.

5. Haley & Aldrich, Inc., 2011d, "Building-Specific Air Sampling Report, Moffett Field, California," 13 September 2011.

6. Haley & Aldrich, Inc., 2011e, "Monthly Vapor Intrusion Field Activity and Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, California," 13 September 2011.

7. Haley & Aldrich, Inc., 2011f, "Site-Wide Vapor Intrusion Sampling and Analysis Work Plan for Response Action Tiering, Vapor Intrusion Study Area, Middlefield-Ellis-Whisman Superfund Area, Mountain View, California," 29 September 2011.

8. Haley & Aldrich, Inc., 2011g, "Monthly Vapor Intrusion Field Activity and Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, California," 11 October 2011.

9. Haley & Aldrich, Inc., 2011h, "Monthly Vapor Intrusion Field Activity and Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, California," 8 November 2011.

10. Haley & Aldrich, Inc., 2011i, "Monthly Vapor Intrusion Field Activity and Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, California," 13 December 2011.

11. Haley & Aldrich, Inc., 2012, "Monthly Vapor Intrusion Field Activity and Progress Report, Middlefield-Ellis-Whisman (MEW) Area and Moffett Field, California," 10 January 2012.

12. 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," 16 August 2010.

TABLES

TABLE I: STATUS - UNSAMPLED BUILDINGS

Note: Unbolded dates are estimated. Bolded dates indicate completion of task.

Building Address	Access Received	Site Walk Performed	Work Plan Submitted	EPA's Approval of Work Plan (Anticipated 1 Sep 2011)	Work Plan Implemented (60 days after EPA approval of Work Plan)	Report Submitted (60 days after completion of sampling)	Comments & Notes
N. Whisman Road							
265/275 N. Whisman Rd.	**3/7/2011**	**4/20/2011**	**7/24/2011**				
276 N. Whisman Rd.	**1/17/2011**	**2/23/2011**	**7/24/2011**				
301 N. Whisman Rd.	**8/1/2011**	**8/16/2011**	**8/30/2011**				
310 N. Whisman Rd.	**2/9/2011**	**4/20/2011**	**8/1/2011**				
425 N. Whisman Rd.	**4/18/2011**	**4/20/2011**	**8/1/2011**				
435 N. Whisman Rd.	**2/20/2011**	**4/20/2011**	**8/1/2011**				
445 N. Whisman Rd.	**2/15/2011**	**4/20/2011**	**8/1/2011**				
455 N. Whisman Rd.	**2/4/2011**	**4/20/2011**	**8/1/2011**				
465 N. Whisman Rd.	**2/4/2011**	**4/20/2011**	**8/1/2011**				
475 N. Whisman Rd.	**2/10/2011**	**4/20/2011**	**8/1/2011**				
485 N. Whisman Rd.	**3/23/2011**	**4/20/2011**	**8/1/2011**				
495 N. Whisman Rd.	**2/4/2011**	**4/20/2011**	**8/1/2011**				
East Middlefield Road							
295 E. Middlefield Rd.	**2/4/2011**	**2/23/2011**	**7/24/2011**				
325 E. Middlefield Rd.	**3/5/2011**	**4/20/2011**	**8/1/2011**				
335 E. Middlefield Rd.	**8/1/2011**	**8/16/2011**	**8/30/2011**				
340/344/348/350 E. Middlefield Rd.	**3/23/2011**	**4/20/2011**	**8/1/2011**		Postponed		The building is being vacated and is proposed to be demolished in May 2012 to construct a new office complex.
345 E. Middlefield Rd.	**8/1/2011**	**8/16/2011**	**8/30/2011**		Postponed		The building interior is being remodeled. Remodeling activities would be completed in mid-April and the space being occupied in May 2012.
448/450 E. Middlefield Rd.	**1/28/2011**	**2/23/2011**	**8/1/2011**				
Ellis Street							
605 Ellis St.	**1/13/2011**	**2/1/2011**	**7/24/2011**				
625 Ellis St.	**1/4/2011**	**2/1/2011**	**7/24/2011**				
636 Ellis St./491 Fairchild Dr.	**8/1/2011**	**8/16/2011**	**8/30/2011**				
645 Ellis St.	**1/4/2011**	**2/23/2011**	**7/24/2011**				

TABLE I: STATUS - UNSAMPLED BUILDINGS

Note: Unbolded dates are estimated. Bolded dates indicate completion of task.

Building Address	Access Received	Site Walk Performed	Work Plan Submitted	EPA's Approval of Work Plan (Anticipated 1 Sep 2011)	Work Plan Implemented (60 days after EPA approval of Work Plan)	Report Submitted (60 days after completion of sampling)	Comments & Notes
Fairchild Drive							
277 Fairchild Dr.	**3/21/2011**	**4/8/2011**	**8/1/2011**				
411/415 Fairchild Dr.	**1/21/2011**	**2/1/2011**	**7/24/2011**				
465 Fairchild Dr.	**2/10/2011**	**4/8/2011**	**8/1/2011**				
National Avenue							
455/465 National Ave.	**4/20/2011**	**4/20/2011**	**8/1/2011**		Postponed		The building is being sold. It is not known at this time what the new property owners plan to do with the building. The building is currently unoccupied.
612/614/616/618/620 National Ave.	**1/12/2011**	**2/23/2011**	**8/1/2011**				
630/634 National Ave.	**2/1/2011**	**2/23/2011**	**7/24/2011**				
640 National Ave.	**2/27/2011**	**4/8/2011**	**7/24/2011**				
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**	Indoor air concentrations are below cleanup levels
48	**6/15/2011**	**6/24/2011**			**7/13/2011**	**9/13/2011**	Indoor air concentrations are below cleanup levels
146	**6/15/2011**	**6/23/2011**			**7/13/2011**	**9/13/2011**	Indoor air concentrations are below cleanup levels
503	**6/15/2011**	**6/24/2011**			**7/12/2011**	**9/13/2011**	Indoor air concentrations are below cleanup levels
543	**6/15/2011**	**6/24/2011**			**7/14/2011**	**9/13/2011**	Indoor air concentrations are below cleanup levels
554	**6/15/2011**	**6/23/2011, 6/24/2011**			**7/12/2011**	**9/13/2011**	Indoor air concentrations are below cleanup levels
569	**6/15/2011**	**7/1/2011**			**7/14/2011**	**9/13/2011**	Indoor air concentrations are below cleanup levels
583A	**6/15/2011**	**6/24/2011**			**7/11/2011**	**9/13/2011**	Indoor air concentrations are below cleanup levels
583B	**6/15/2011**	**6/24/2011**			**7/11/2011**	**9/13/2011**	Indoor air concentrations are below cleanup levels
583C	**6/15/2011**	**6/23/2011**			**7/11/2011**	**9/13/2011**	Indoor air concentrations are below cleanup levels
596	**6/15/2011**	**6/24/2011**			**7/12/2011**	**9/13/2011**	Indoor air concentrations are below cleanup levels
944	**6/15/2011**	**7/1/2011**			**7/13/2011**	**9/13/2011**	Indoor air concentrations are below cleanup levels
154	**11/9/2011**	**11/29/2011**	**12/20/2011**				

TABLE II
AIR SAMPLING RESULTS 2011
MEW SUPERFUND AREA AND MOFFETT FIELD, CALIFORNIA

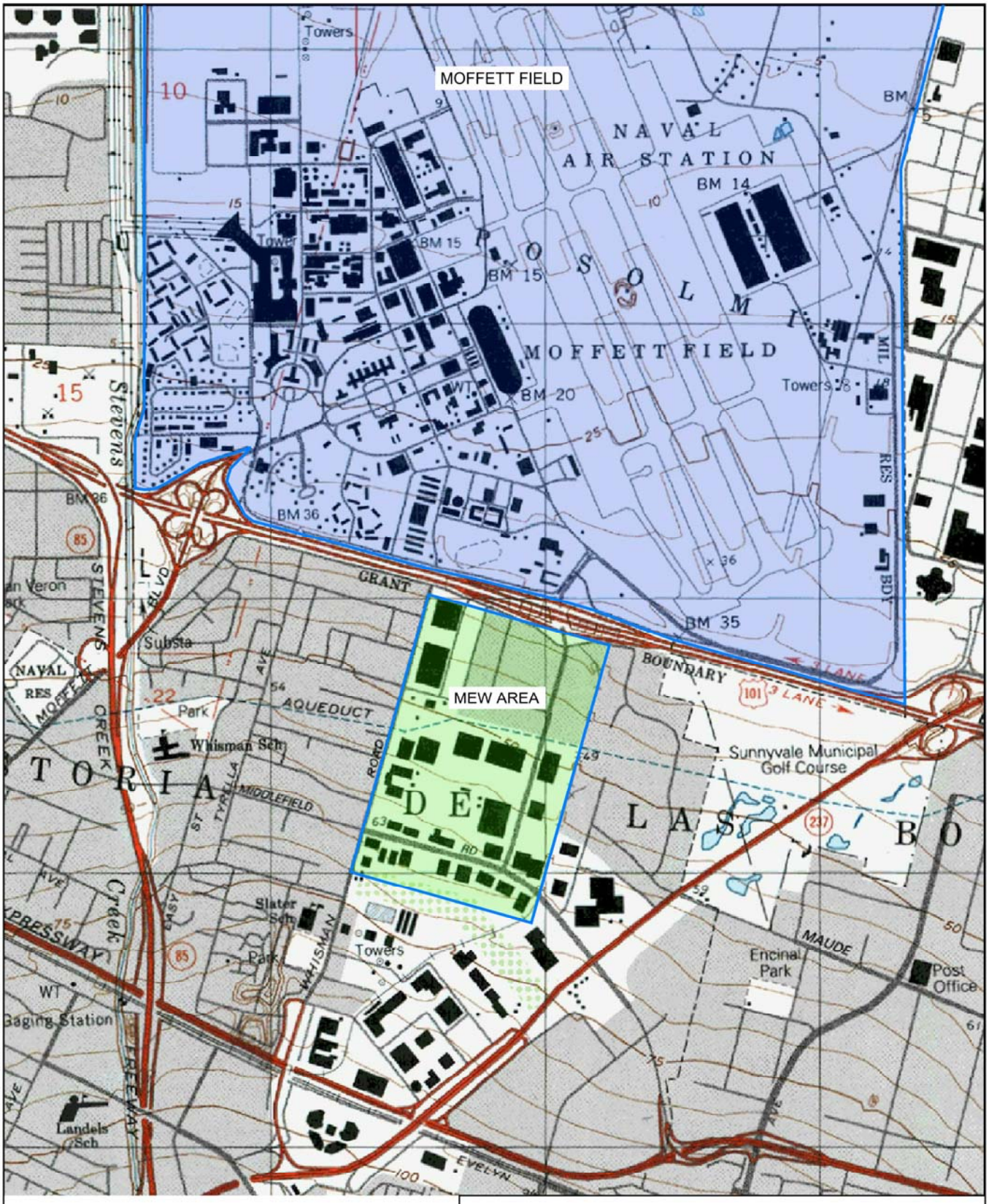
Building	Location / Sample ID	Sample Date	Ventilation Status	Sample Purpose	Sample Duration (hours)	Sample Type	1,1-DCA	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	Vinyl chloride
Air Sampling Results (HVAC On)													
23	23AMB-1	07/14/2011	On	Indoor	24	Primary	<0.020	<0.040	<0.056	<0.14	<0.056	0.12	<0.013
23	23DUP-1*	07/14/2011	On	Indoor	24	Duplicate	<0.020	<0.040	<0.055	<0.14	<0.055	0.12	<0.013
23	23AMB-2	07/14/2011	On	Indoor	24	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	0.12	<0.013
23	23AMB-3	07/14/2011	On	Indoor	24	Primary	<0.020	<0.040	0.12	<0.14	<0.056	0.27	<0.013
23	23DUP-2*	07/14/2011	On	Indoor	24	Duplicate	<0.020	<0.040	0.11	<0.14	<0.056	0.27	<0.013
23	23OUT-1	07/14/2011	On	Outdoor	24	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013
48	48AMB-1	07/13/2011	On	Indoor	10	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013
48	48AMB-2	07/13/2011	On	Indoor	10	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013
48	48AMB-3	07/13/2011	On	Indoor	10	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013
48	48DUP-2*	07/13/2011	On	Indoor	10	Duplicate	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013
48	48OUT-1	07/13/2011	On	Outdoor	10	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013
48	48DUP-1*	07/13/2011	On	Outdoor	10	Duplicate	<0.020	<0.040	<0.056	<0.14	<0.056	<0.027	<0.013
543	543AMB-1	07/14/2011	On	Indoor	24	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013
543	543AMB-2	07/14/2011	On	Indoor	24	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013
543	543DUP-1*	07/14/2011	On	Indoor	24	Duplicate	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013
543	543HVAC-1	07/14/2011	On	Outdoor	24	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013
569	569AMB-1	07/14/2011	On	Indoor	8	Primary	<0.020	<0.040	<0.056	0.16	<0.056	0.044	<0.013
569	569AMB-2	07/14/2011	On	Indoor	8	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013
569	569OUT-1	07/14/2011	On	Outdoor	8	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013
583	583CAMB-1	07/11/2011	On	Indoor	24	Primary	<0.020	<0.040	<0.056	<0.14	<0.056	0.065	<0.013
583	583CAMB-2	07/11/2011	On	Indoor	24	Primary	<0.020	<0.040	0.13	<0.14	<0.055	0.33	<0.013
583	583CAMB-3	07/11/2011	On	Indoor	24	Primary	<0.020	<0.040	0.078	<0.14	<0.056	0.26	<0.013
583	583CHVAC-1	07/11/2011	On	Outdoor	24	Primary	<0.020	<0.040	<0.056	<0.14	<0.056	0.041	<0.013
596	596AMB-1	07/12/2011	On	Indoor	24	Primary	<0.020	<0.040	0.14	<0.14	<0.055	1.0	<0.013
596	596AMB-2	07/12/2011	On	Indoor	24	Primary	<0.020	<0.040	0.16	<0.14	<0.055	1.9	<0.013
596	596HVAC-1	07/12/2011	On	Outdoor	24	Primary	<0.020	<0.040	0.14	<0.14	<0.055	0.098	<0.013
944	944AMB-1	07/13/2011	On	Indoor	24	Primary	<0.020	<0.040	<0.056	<0.14	<0.056	<0.027	<0.013
944	944DUP-1*	07/13/2011	On	Indoor	24	Duplicate	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013
944	944HVAC-1	07/13/2011	On	Outdoor	24	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013
Air Sampling Results (HVAC Off)													
146	146AMB-1	07/13/2011	Off	Indoor	10	Primary	<0.020	<0.040	<0.056	<0.14	<0.056	<0.027	<0.013
146	146AMB-2	07/13/2011	Off	Indoor	10	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013
146	146AMB-3	07/13/2011	Off	Indoor	10	Primary	<0.020	<0.040	<0.056	<0.14	<0.056	<0.027	<0.013
146	146OUT-1	07/13/2011	Off	Outdoor	10	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	<0.027	<0.013

TABLE II
AIR SAMPLING RESULTS 2011
MEW SUPERFUND AREA AND MOFFETT FIELD, CALIFORNIA

Building	Location / Sample ID	Sample Date	Ventilation 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
379 N. Whisman Rd	379AMB1	01/28/2011	Off	Indoor	10	Primary	0.019 J	0.02	0.029 J	0.26	<0.055	4.1	<0.013
379 N. Whisman Rd	379AMB2-012811	01/28/2011	Off	Indoor	10	Primary	<0.02	<0.02	<0.055	0.25	<0.055	2.9	<0.013
379 N. Whisman Rd	379AMB3-012811	01/28/2011	Off	Indoor	10	Primary	0.012 J	0.023	0.017 J	0.22	<0.055	1.8	0.006 J
379 N. Whisman Rd	379AMB4-012811	01/28/2011	Off	Indoor	10	Primary	0.017 J	0.042	<0.055	0.2	<0.055	2.3	<0.013
379 N. Whisman Rd	379AMB5-012811	01/28/2011	Off	Indoor	10	Primary	<0.02	0.029	0.018 J	0.3	<0.055	3.9	0.0063 J
379 N. Whisman Rd	379OUT1-012811	01/28/2011	Off	Outdoor	24	Primary	<0.02	<0.02	<0.055	0.12 J	<0.055	0.028	<0.013
503	503AMB-1	07/12/2011	Off	Indoor	8	Primary	<0.020	<0.040	0.16	0.42	<0.055	0.40	<0.013
503	503AMB-2	07/12/2011	Off	Indoor	8	Primary	<0.020	<0.040	<0.056	0.19	<0.056	0.19	<0.013
503/554	503/554OUT-1	07/12/2011	Off	Outdoor	24	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	0.031	<0.013
554	554AMB-1	07/12/2011	Off	Indoor	24	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	0.58	<0.013
554	554AMB-2	07/12/2011	Off	Indoor	24	Primary	<0.020	<0.040	<0.055	<0.14	<0.055	0.23	<0.013
583	583AAMB-1	07/11/2011	Off	Indoor	24	Primary	<0.02	<0.04	<0.056	<0.14	<0.056	0.035	<0.013
583	583AAMB-2	07/11/2011	Off	Indoor	24	Primary	<0.02	<0.04	<0.055	<0.14	<0.055	0.054	<0.013
583	583BAMB-1	07/11/2011	Off	Indoor	24	Primary	<0.020	0.14	<0.055	<0.14	<0.055	0.036	<0.013
583	583BAMB-2	07/12/2011	Off	Indoor	24	Primary	<0.020	0.079	<0.056	<0.14	<0.056	0.10	<0.013
583	583BAMB-3	07/12/2011	Off	Indoor	24	Primary	<0.020	<0.040	<0.056	<0.14	<0.056	0.044	<0.013
583A/B	583A/583BOUT-1	07/11/2011	Off	Outdoor	24	Primary	<0.02	<0.04	<0.056	<0.14	<0.056	0.079	<0.013
				Long-Term Cleanup Level									
				Commercial			6	700	210	2	210	5	700

Notes:
All units are micrograms per cubic meter ($\mu g/m^3$).
* - denotes duplicate co-located sample
<0.020 - denotes result was below respective reporting limit

FIGURES



SITE COORDINATES:37°24'17"N 122°3'15"W

N
W
E
S

U.S.G.S. QUADRANGLE: MOUNTAIN VIEW, CA

HALEY & ALDRICH

MEW STUDY AREA
MOUNTAIN VIEW, CALIFORNIA

PROJECT LOCUS

SCALE: 1:24,000
APRIL 2012

FIGURE 1

G:\36067\013\CAD\DRAWINGS\REPORT - 02APRIL12\36067-LOCUS (FIG-1).DWG

OUTER BOUNDARY OF VAPOR INTRUSION STUDY AREA

MEW

NAVY

NASA

NAVY WAREHOUSE

HANGAR No. 1

SOCCER GOALS

LEGEND:

- SAMPLES COLLECTED WITH HVAC SYSTEM OFF
- SAMPLES COLLECTED WITH HVAC SYSTEM ON
- SAMPLED – HVAC SYSTEM STATUS UNKNOWN

NOTES:

1. * STORAGE BUILDINGS – NOT SUITABLE FOR SAMPLING.
2. BOUNDARY OF MEW STUDY AREA IS DEFINED BY THE (5 MICROGRAMS PER LITER (UG/L) TRICHLOROETHENE) CONTOUR AS PRESENTED BY EPA IN DECEMBER 2011.
3. ALL OCCUPIED BUILDINGS IN THE MEW AREA OF RESPONSIBILITY HAVE BEEN SAMPLED. BUILDING 154 WILL BE RESAMPLED IN 2012.

W S N E

0 200 400 600 800

SCALE IN FEET

HALEY & ALDRICH

MOFFETT FIELD, CALIFORNIA

LOCATION OF EXISTING BUILDINGS
VAPOR INTRUSION STUDY AREA
MOFFETT FIELD

SCALE: AS SHOWN
APRIL 2012

FIGURE 2

G:\36067\013\CAD\DRAWINGS\REPORT - 02APRIL12\36067-MOFFETT_FIELD_HVAC_SMPLS_R1.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 OFF
- SAMPLES COLLECTED WITH HVAC SYSTEM ON **AND OFF**

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.
2. BUILDINGS IN RESIDENTIAL AREA WEST OF WHISMAN ROAD ARE NOT SHOWN.

HALEY & ALDRICH

MOUNTAIN VIEW, CALIFORNIA

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

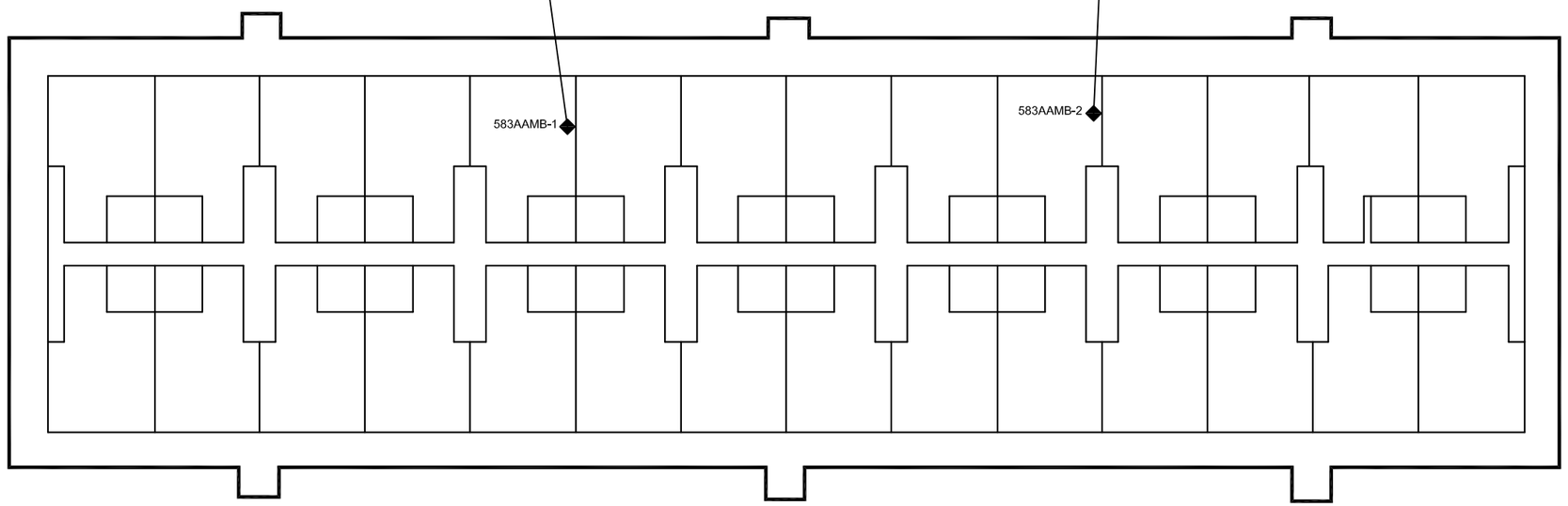
SCALE: AS SHOWN
APRIL 2012

FIGURE 3

G:\36067\013\CAD\DRAWINGS\REPORT - 02APRIL12\36067-EXISTING_BUILDINGS_HVAC_SMPLS_R1.DWG

583AAMB-1	07/11/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.056)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	0.035
Vinyl chloride	ND (0.013)

583AAMB-2	07/11/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	0.054
Vinyl chloride	ND (0.013)



583A/583BOUT-1

583A/583BOUT-1	07/11/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.056)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	0.079
Vinyl chloride	ND (0.013)

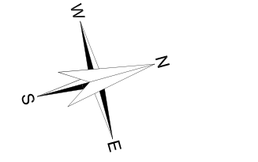
LEGEND:

◆ INDOOR AIR SAMPLING LOCATION

○ OUTDOOR AIR SAMPLING LOCATION

NOTES:

1. BUILDINGS AND INTERIOR FEATURES WERE DIGITIZED FROM A DRAWING PROVIDED BY OTHERS, AND FROM BUILDING WALKTHROUGH.
2. ALL LOCATIONS APPROXIMATE.
3. CHEMICAL CONCENTRATIONS IN MICROGRAMS PER CUBIC METER (ug/m³).
4. ND DENOTES CHEMICAL WAS NOT DETECTED AT THE LEVEL SHOWN.
5. SAMPLE DURATION IS 24 HOURS.



HALEY & ALDRICH

BUILDING 583A
MOFFETT FIELD, CALIFORNIA

LOCATION OF AIR SAMPLES AND RESULTS - BUILDING 583A

SCALE: AS SHOWN
APRIL 2012

FIGURE 4

G:\360670\13\CAD\DRAWINGS\REPORT - 02APRIL12\360067-583_DAILEY_RD-CHEM_DATA_R1.DWG

583A/583BOUT-1	07/11/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.056)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	0.079
Vinyl chloride	ND (0.013)

583A/583BOUT-1

583BAMB-3	07/12/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.056)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	0.044
Vinyl chloride	ND (0.013)

583BAMB-3

583BAMB-2

583BAMB-2	07/12/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	0.079
cis-1,2-Dichloroethene	ND (0.056)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	0.10
Vinyl chloride	ND (0.013)

583BAMB-1

583BAMB-1	07/11/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	0.14
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	0.036
Vinyl chloride	ND (0.013)

LEGEND:

◆ INDOOR AIR SAMPLING LOCATION

○ OUTDOOR AIR SAMPLING LOCATION

NOTES:

1. BUILDINGS AND INTERIOR FEATURES WERE DIGITIZED FROM A DRAWING PROVIDED BY OTHERS, AND FROM BUILDING WALKTHROUGH.
2. ALL LOCATIONS APPROXIMATE.
3. CHEMICAL CONCENTRATIONS IN MICROGRAMS PER CUBIC METER (ug/m³).
4. ND DENOTES CHEMICAL WAS NOT DETECTED AT THE LEVEL SHOWN.
5. SAMPLE DURATION IS 24 HOURS.

N E W S

0 20 40

APPROXIMATE SCALE IN FEET

HALEY & ALDRICH

BUILDING 583B
MOFFETT FIELD, CALIFORNIA

LOCATION OF AIR SAMPLES AND RESULTS - BUILDING 583B

SCALE: AS SHOWN
APRIL 2012

FIGURE 5

G:\360670\13\CAD\DRAWINGS\REPORT - 02APRIL12\360670-583_DAILEY_RD-CHEM_DATA_R1.DWG

583CAMB-1	07/11/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.056)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	0.065
Vinyl chloride	ND (0.013)

583CAMB-3	07/11/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	0.078
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	0.26
Vinyl chloride	ND (0.013)

583CAMB-2	07/11/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	0.13
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	0.33
Vinyl chloride	ND (0.013)

583CHVAC-1	07/11/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.056)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	0.041
Vinyl chloride	ND (0.013)

583CAMB-1
583CAMB-2
583CAMB-3
583CHVAC-1

MECHANICAL ROOM
CLOSET
MOVEABLE PARTITION
RESTROOMS
KITCHEN
JANITORIAL ROOM AND ROOF ACCESS

APPROXIMATE LOCATION OF HVAC SYSTEMS, SOLAR PANEL ARRAY, AND OUTDOOR SAMPLE

LEGEND:

◆ INDOOR AIR SAMPLING LOCATION

○ OUTDOOR AIR SAMPLING LOCATION

NOTES:

1. BUILDINGS AND INTERIOR FEATURES WERE DIGITIZED FROM A DRAWING PROVIDED BY OTHERS, AND FROM BUILDING WALKTHROUGH.
2. ALL LOCATIONS APPROXIMATE.
3. CHEMICAL CONCENTRATIONS IN MICROGRAMS PER CUBIC METER (ug/m³).
4. ND DENOTES CHEMICAL WAS NOT DETECTED AT THE LEVEL SHOWN.
5. SAMPLE DURATION IS 24 HOURS.

N W E S

0 15 30
APPROXIMATE SCALE IN FEET

HALEY & ALDRICH

BUILDING 583C
MOFFETT FIELD, CALIFORNIA

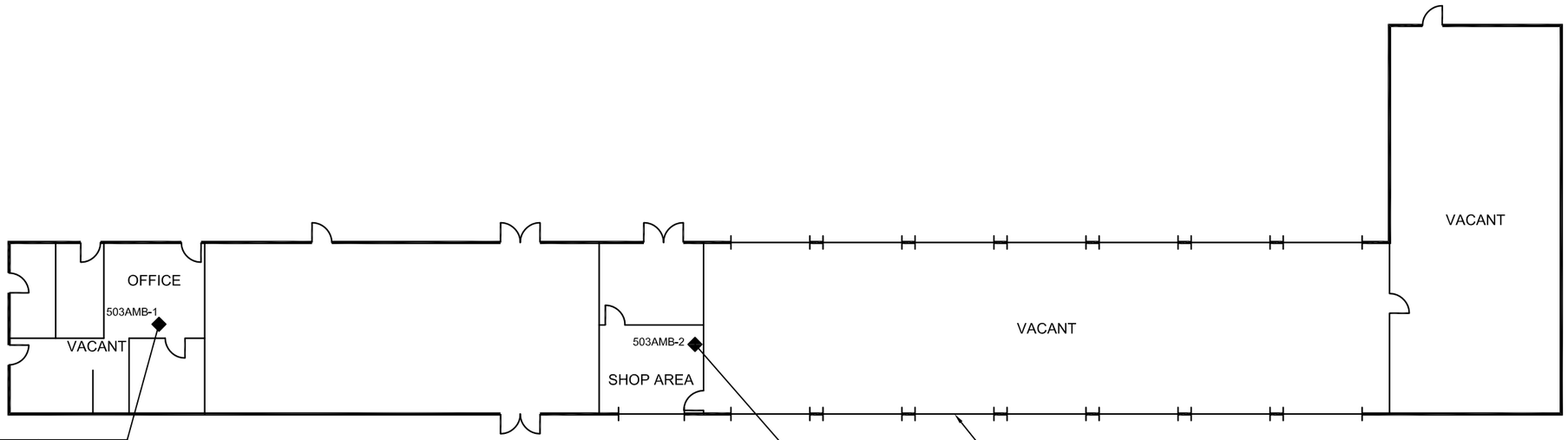
LOCATION OF AIR SAMPLES AND RESULTS - BUILDING 583C

SCALE: AS SHOWN
APRIL 2012

FIGURE 6

G:\360670\13\CAD\DRAWINGS\REPORT - 02APRIL12\360670-583_DAILEY_RD-CHEM_DATA_R1.DWG

503/554OUT-1	07/12/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	0.031
Vinyl chloride	ND (0.013)



503AMB-1	07/12/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	0.16
Tetrachloroethene	0.42
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	0.40
Vinyl chloride	ND (0.013)

503AMB-2	07/12/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.056)
Tetrachloroethene	0.19
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	0.19
Vinyl chloride	ND (0.013)

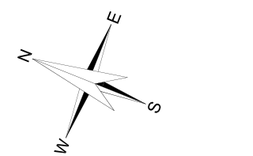
LEGEND:

◆ INDOOR AIR SAMPLING LOCATION

○ OUTDOOR AIR SAMPLING LOCATION

NOTES:

1. BUILDINGS AND INTERIOR FEATURES WERE DIGITIZED FROM A DRAWING PROVIDED BY OTHERS, AND FROM BUILDING WALKTHROUGH.
2. ALL LOCATIONS APPROXIMATE.
3. CHEMICAL CONCENTRATIONS IN MICROGRAMS PER CUBIC METER (ug/m³).
4. ND DENOTES CHEMICAL WAS NOT DETECTED AT THE LEVEL SHOWN.
5. SAMPLE DURATION IS 8 HOURS.



HALEY & ALDRICH

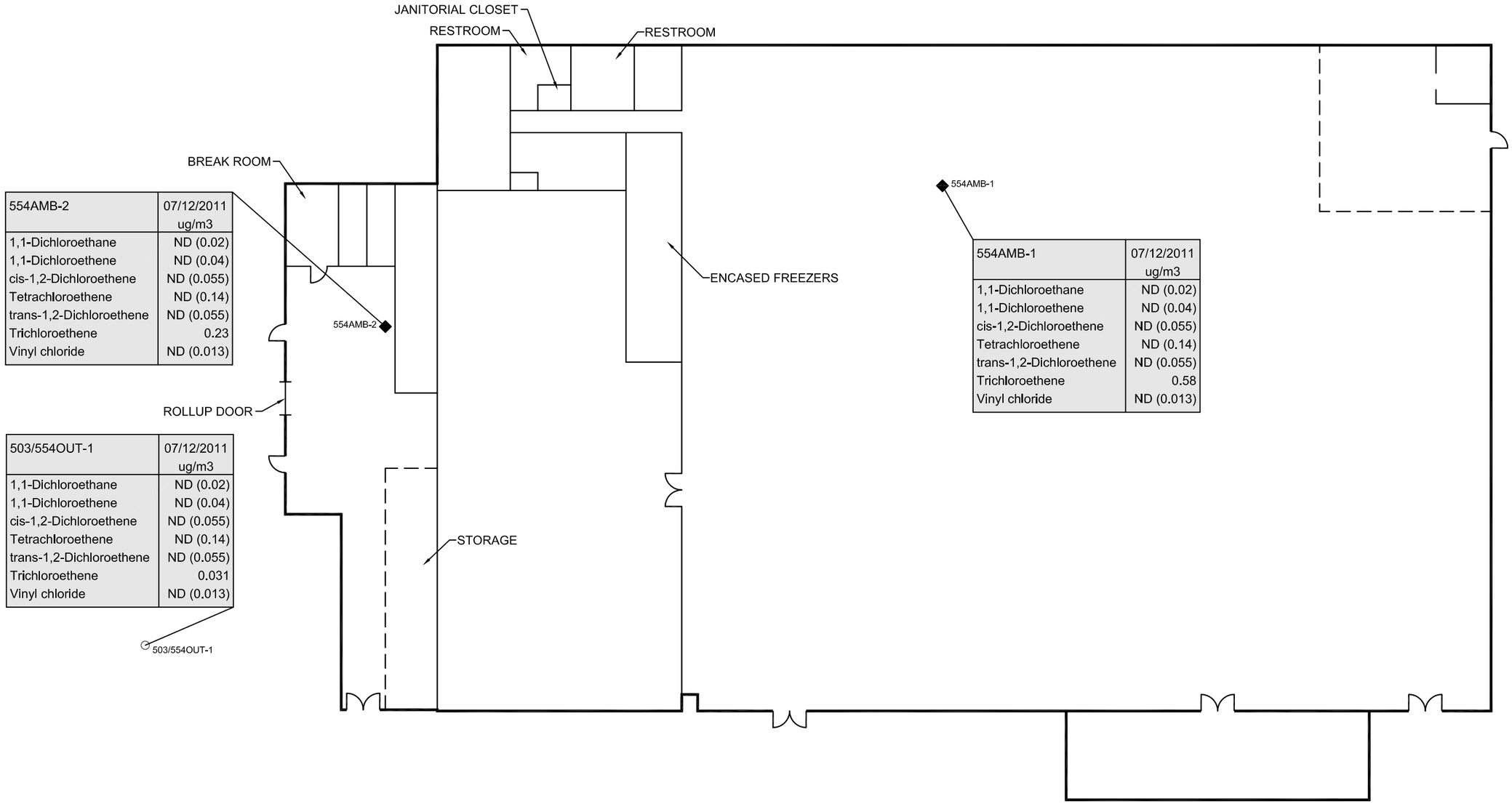
BUILDING 503
MOFFETT FIELD, CALIFORNIA

LOCATION OF AIR SAMPLES AND RESULTS - BUILDING 503

SCALE: AS SHOWN
APRIL 2012

FIGURE 7

G:\136067013\CAD\DRAWINGS\REPORT - 02APRIL12\136067-503_CODY_RD-CHEM_DATA_R1.DWG



554AMB-2	07/12/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	0.23
Vinyl chloride	ND (0.013)

554AMB-1	07/12/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	0.58
Vinyl chloride	ND (0.013)

503/554OUT-1	07/12/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	0.031
Vinyl chloride	ND (0.013)

LEGEND:

◆ INDOOR AIR SAMPLING LOCATION

○ OUTDOOR AIR SAMPLING LOCATION

NOTES:

1. BUILDINGS AND INTERIOR FEATURES WERE DIGITIZED FROM A DRAWING PROVIDED BY OTHERS, AND FROM BUILDING WALKTHROUGH.
2. ALL LOCATIONS APPROXIMATE.
3. CHEMICAL CONCENTRATIONS IN MICROGRAMS PER CUBIC METER (ug/m³).
4. ND DENOTES CHEMICAL WAS NOT DETECTED AT THE LEVEL SHOWN.
5. SAMPLE DURATION IS 24 HOURS.

N E S W

0 20 40

APPROXIMATE SCALE IN FEET

HALEY & ALDRICH

BUILDING 554
MOFFETT FIELD, CALIFORNIA

LOCATION OF AIR SAMPLES AND RESULTS - BUILDING 554

SCALE: AS SHOWN
APRIL 2012

FIGURE 8

G:\36067\013\CAD\DRAWINGS\36067-554_CODY_RD-CHEM_DATA_R1.DWG

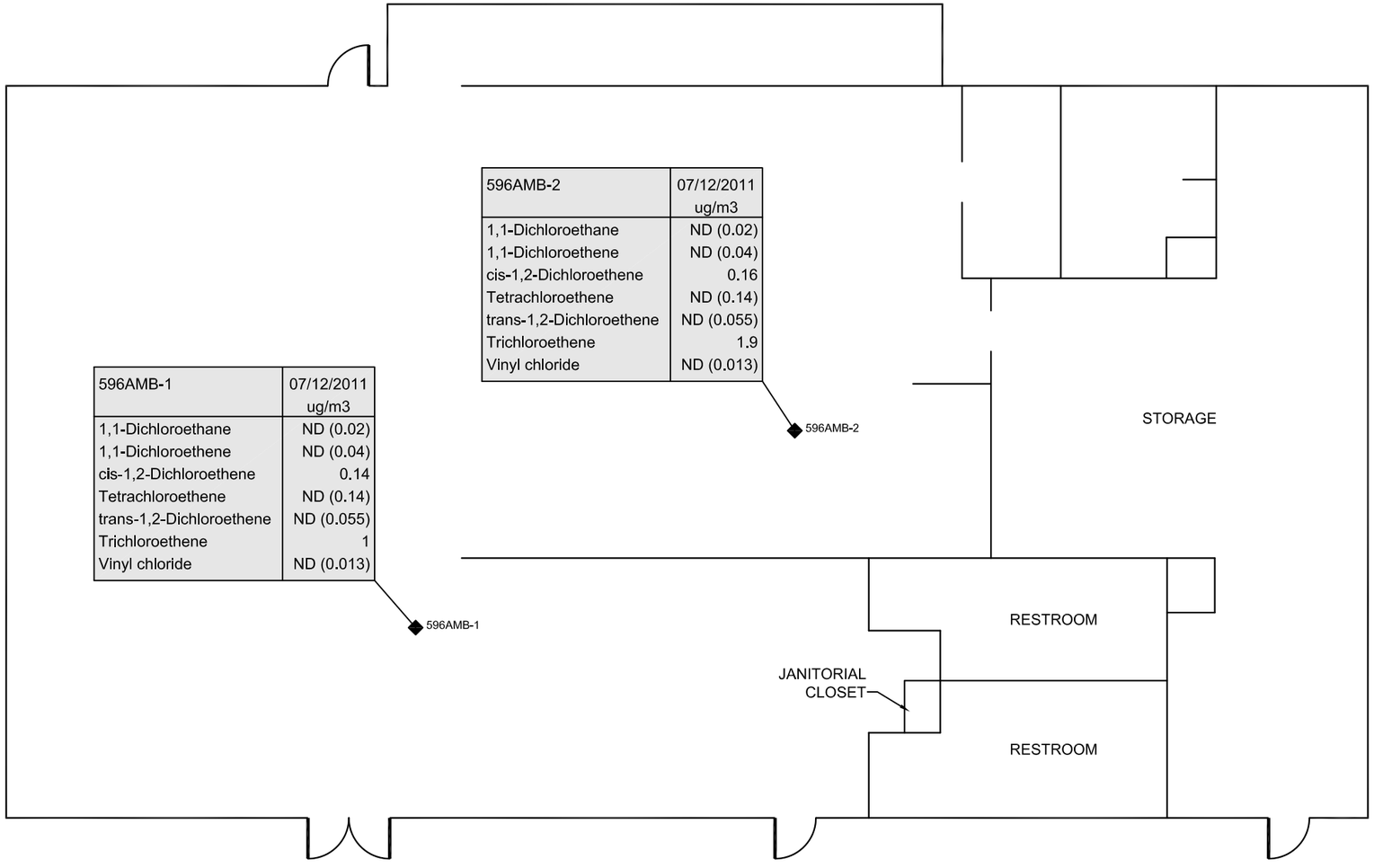
LEGEND:

◆ INDOOR AIR SAMPLING LOCATION

○ OUTDOOR AIR SAMPLING LOCATION

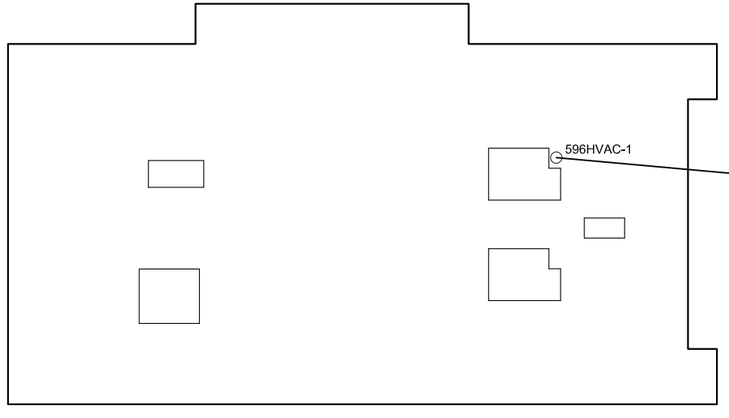
NOTES:

1. BUILDINGS AND INTERIOR FEATURES WERE DIGITIZED FROM A DRAWING PROVIDED BY OTHERS, AND FROM BUILDING WALKTHROUGH.
2. ALL LOCATIONS APPROXIMATE.
3. CHEMICAL CONCENTRATIONS IN MICROGRAMS PER CUBIC METER (ug/m³).
4. ND DENOTES CHEMICAL WAS NOT DETECTED AT THE LEVEL SHOWN.
5. SAMPLE DURATION IS 24 HOURS.



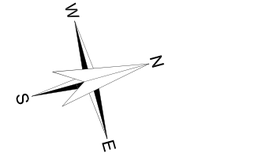
596AMB-2	07/12/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	0.16
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	1.9
Vinyl chloride	ND (0.013)

596AMB-1	07/12/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	0.14
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	1
Vinyl chloride	ND (0.013)



596HVAC-1	07/12/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	0.14
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	0.098
Vinyl chloride	ND (0.013)

APPROXIMATE LOCATION OF HVAC SYSTEMS AND OUTDOOR SAMPLE



HALEY & ALDRICH

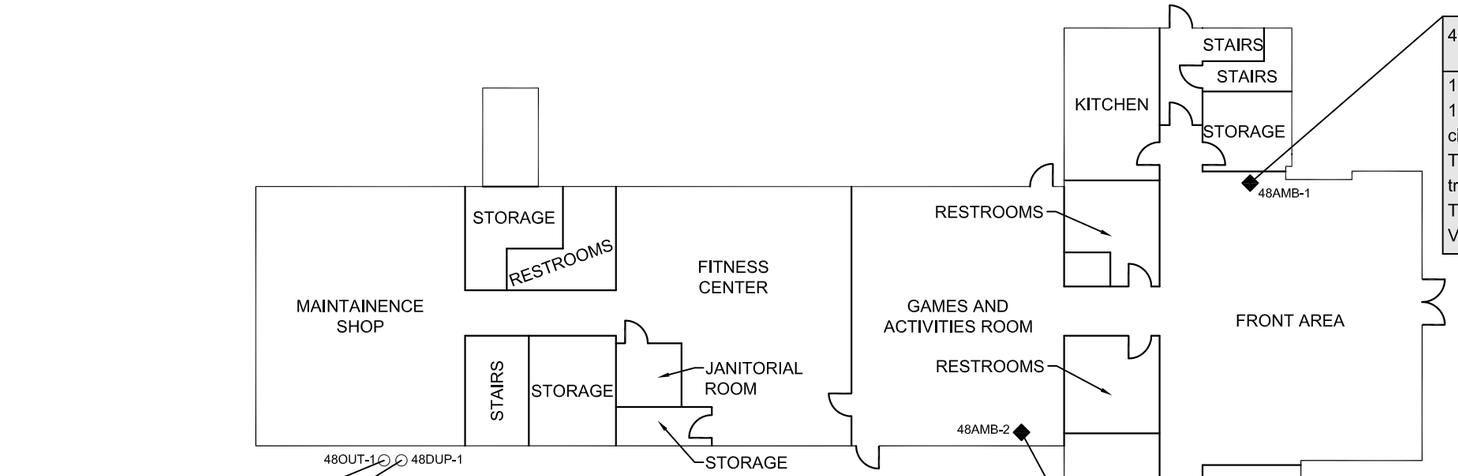
BUILDING 596
MOFFETT FIELD, CALIFORNIA

LOCATION OF AIR SAMPLES AND RESULTS - BUILDING 596

SCALE: AS SHOWN
APRIL 2012

FIGURE 9

G:\360670131CAD\DRAWINGS\REPORT - 02APRIL12\360670131_EDQUIBA_RD-CHEM_DATA_R1.DWG



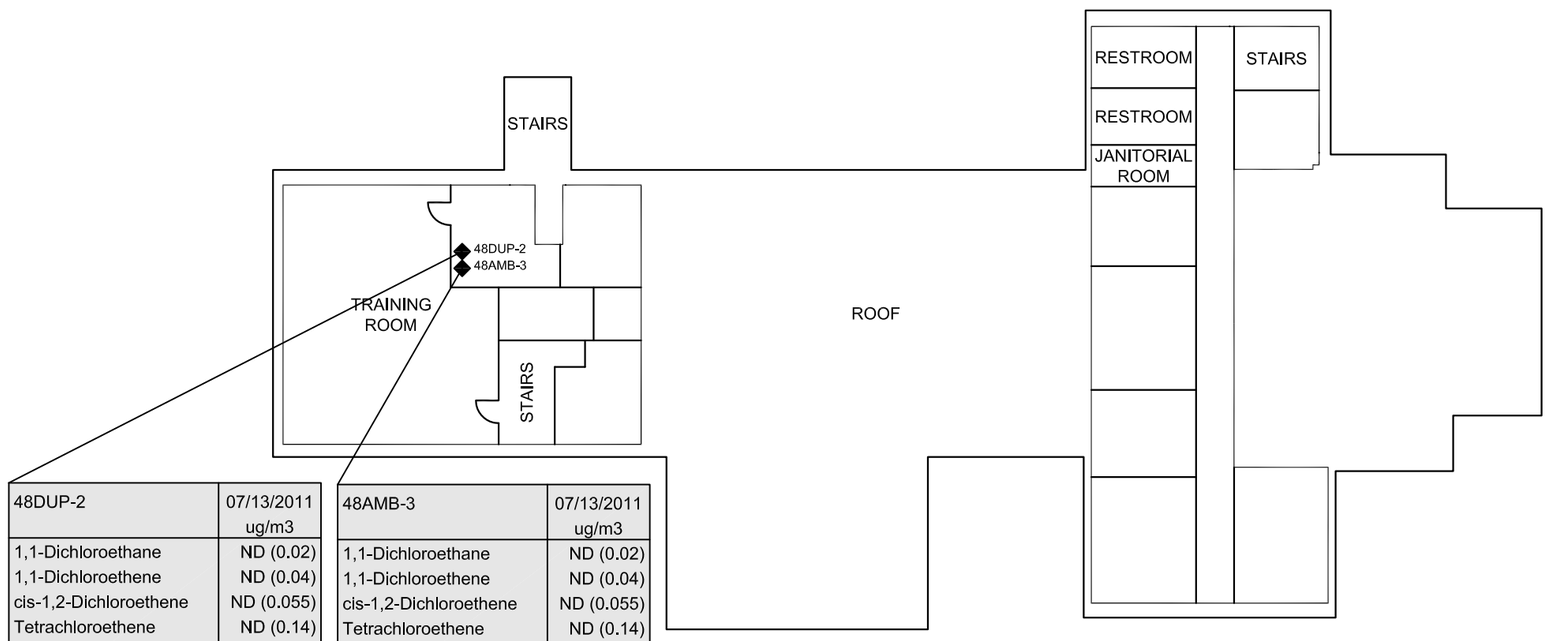
48AMB-1	07/13/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

48OUT-1	07/13/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

48DUP-1	07/13/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.056)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

48AMB-2	07/13/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

FIRST FLOOR



48DUP-2	07/13/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

48AMB-3	07/13/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

SECOND FLOOR

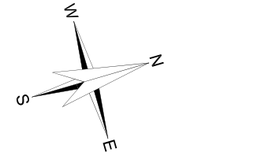
LEGEND:

◆ INDOOR AIR SAMPLING LOCATION

○ OUTDOOR AIR SAMPLING LOCATION

NOTES:

1. BUILDINGS AND INTERIOR FEATURES WERE DIGITIZED FROM A DRAWING PROVIDED BY OTHERS, AND FROM BUILDING WALKTHROUGH.
2. ALL LOCATIONS APPROXIMATE.
3. CHEMICAL CONCENTRATIONS IN MICROGRAMS PER CUBIC METER (ug/m³).
4. ND DENOTES CHEMICAL WAS NOT DETECTED AT THE LEVEL SHOWN.
5. SAMPLE DURATION IS 10 HOURS.



HALEY & ALDRICH

BUILDING 48
MOFFETT FIELD, CALIFORNIA

LOCATION OF AIR SAMPLES AND RESULTS - BUILDING 48

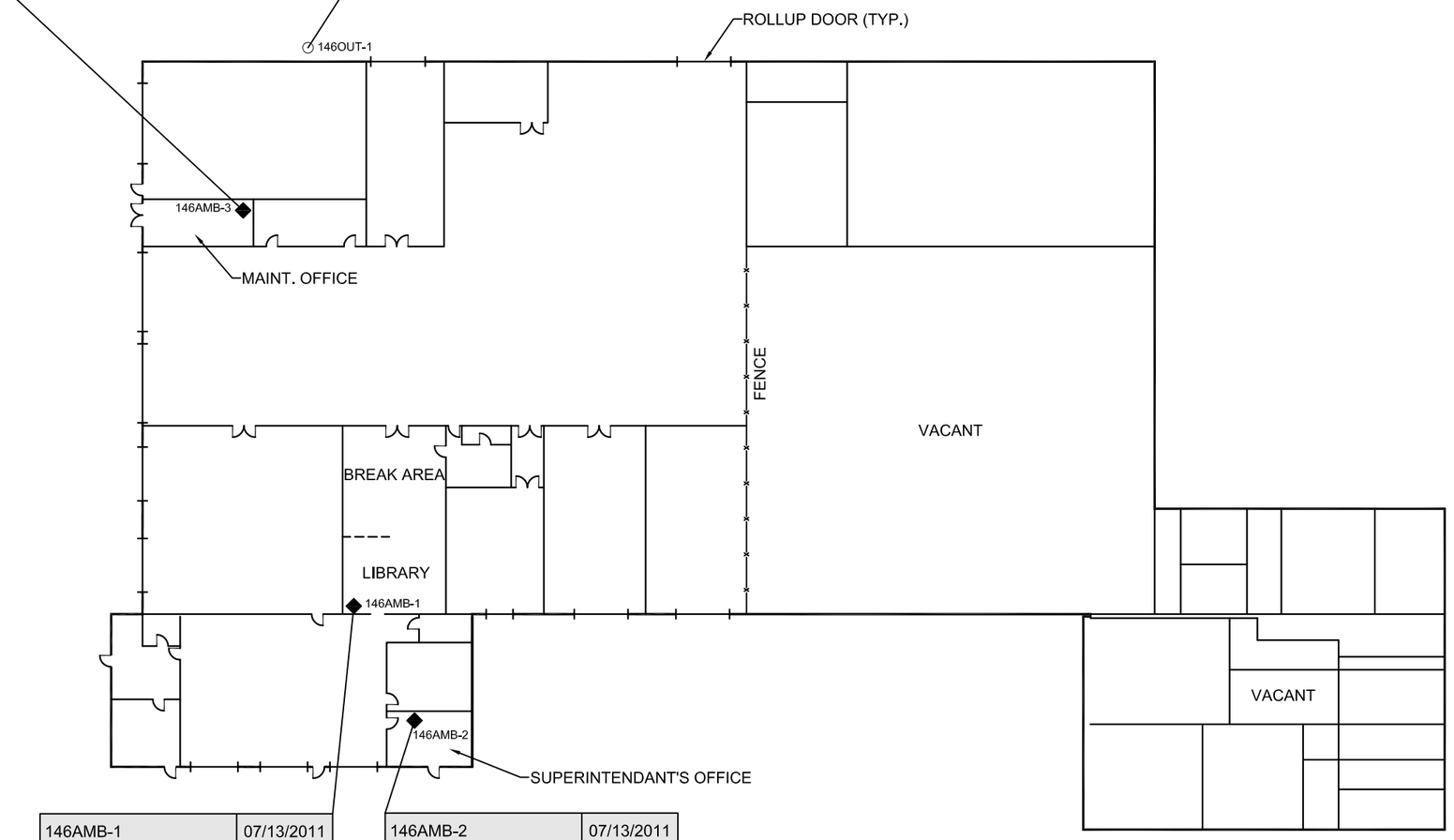
SCALE: AS SHOWN
APRIL 2012

FIGURE 10

G:\360671013\CAD\DRAWINGS\REPORT - 02APRIL12\360671013-48_WESCOAT_CT-CHEM_DATA_R1.DWG

146AMB-3	07/13/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.056)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

146OUT-1	07/13/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)



146AMB-1	07/13/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.056)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

146AMB-2	07/13/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

LEGEND:

◆ INDOOR AIR SAMPLING LOCATION

○ OUTDOOR AIR SAMPLING LOCATION

NOTES:

1. BUILDINGS AND INTERIOR FEATURES WERE DIGITIZED FROM A DRAWING PROVIDED BY OTHERS, AND FROM BUILDING WALKTHROUGH.
2. ALL LOCATIONS APPROXIMATE.
3. CHEMICAL CONCENTRATIONS IN MICROGRAMS PER CUBIC METER (ug/m³).
4. ND DENOTES CHEMICAL WAS NOT DETECTED AT THE LEVEL SHOWN.
5. SAMPLE DURATION IS 10 HOURS.

N E W S

0 30 60

APPROXIMATE SCALE IN FEET

HALEY & ALDRICH

BUILDING 146
MOFFETT FIELD, CALIFORNIA

LOCATION OF AIR SAMPLES AND RESULTS - BUILDING 146

SCALE: AS SHOWN
APRIL 2012

FIGURE 11

G:\136067\013\CAD\DRAWINGS\REPORT - 02APRIL12\136067-146_GIRARD_RD-CHEM_DATA_R1.DWG

LEGEND:

◆ INDOOR AIR SAMPLING LOCATION

○ OUTDOOR AIR SAMPLING LOCATION

NOTES:

1. BUILDINGS AND INTERIOR FEATURES WERE DIGITIZED FROM A DRAWING PROVIDED BY OTHERS, AND FROM BUILDING WALKTHROUGH.
2. ALL LOCATIONS APPROXIMATE.
3. CHEMICAL CONCENTRATIONS IN MICROGRAMS PER CUBIC METER (ug/m³).
4. ND DENOTES CHEMICAL WAS NOT DETECTED AT THE LEVEL SHOWN.
5. SAMPLE DURATION IS 24 HOURS.

944HVAC-1	07/13/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

944DUP-1	07/13/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

944AMB-1	07/13/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.056)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

944HVAC-1

944DUP-1

944AMB-1

RESTROOMS

VACANT

VACANT

VACANT

N

W

E

S

0 15 30

APPROXIMATE SCALE IN FEET

HALEY & ALDRICH

BUILDING 944
MOFFETT FIELD, CALIFORNIA

LOCATION OF AIR SAMPLES AND RESULTS - BUILDING 944

SCALE: AS SHOWN
APRIL 2012

FIGURE 12

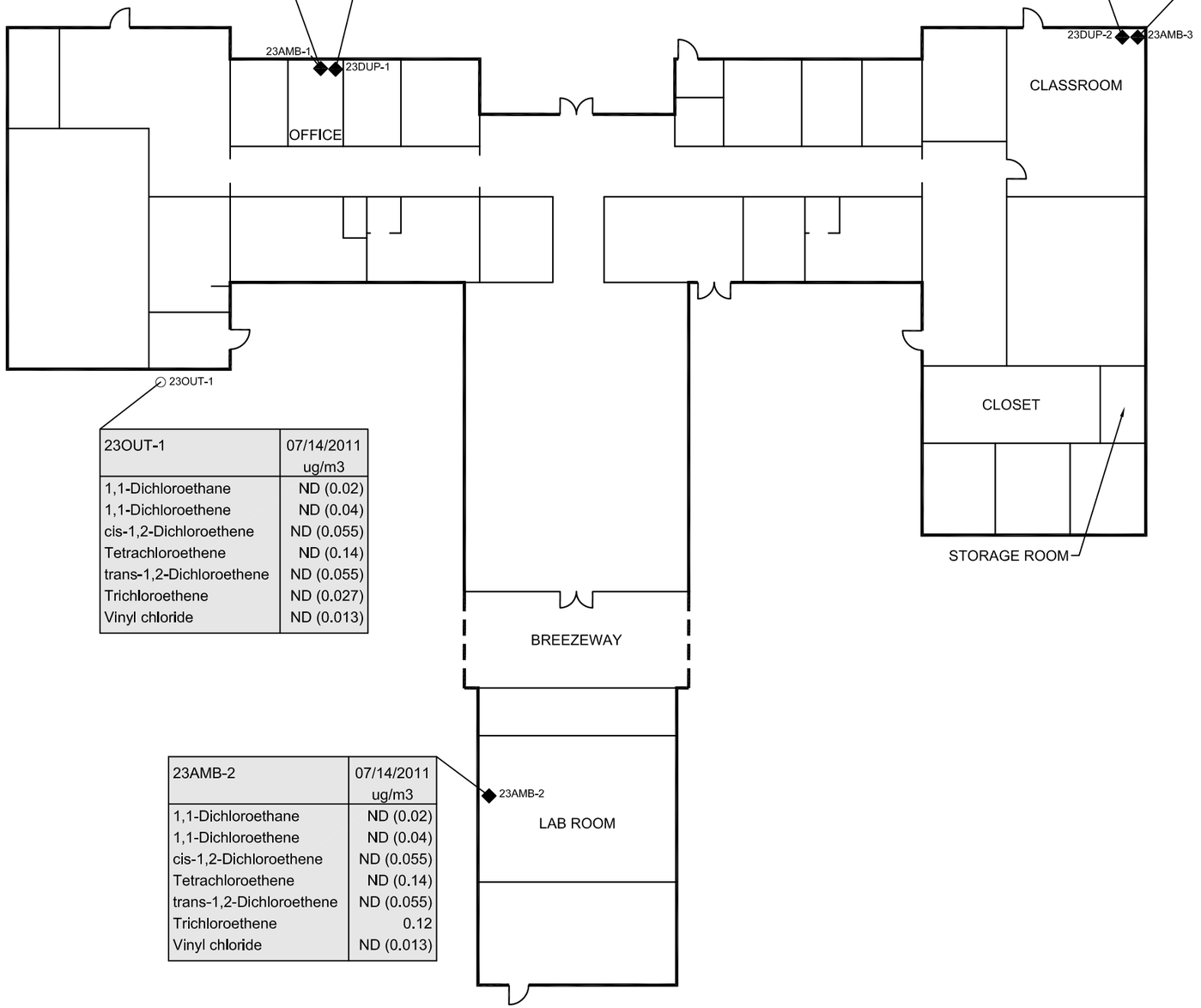
G:\360670\13\CAD\DRAWINGS\REPORT - 02APRIL12\360670-944_BETTIO_RD-CHEM_DATA_R1.DWG

23AMB-1	07/14/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.056)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	0.12
Vinyl chloride	ND (0.013)

23DUP-1	07/14/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	0.12
Vinyl chloride	ND (0.013)

23DUP-2	07/14/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	0.11
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	0.27
Vinyl chloride	ND (0.013)

23AMB-3	07/14/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	0.12
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	0.27
Vinyl chloride	ND (0.013)



23OUT-1	07/14/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

23AMB-2	07/14/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	0.12
Vinyl chloride	ND (0.013)

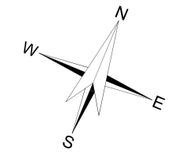
LEGEND:

◆ INDOOR AIR SAMPLING LOCATION

○ OUTDOOR AIR SAMPLING LOCATION

NOTES:

1. BUILDINGS AND INTERIOR FEATURES WERE DIGITIZED FROM A DRAWING PROVIDED BY OTHERS, AND FROM BUILDING WALKTHROUGH.
2. ALL LOCATIONS APPROXIMATE.
3. CHEMICAL CONCENTRATIONS IN MICROGRAMS PER CUBIC METER (ug/m³).
4. ND DENOTES CHEMICAL WAS NOT DETECTED AT THE LEVEL SHOWN.
5. SAMPLE DURATION IS 24 HOURS.



0 20 40

APPROXIMATE SCALE IN FEET

HALEY & ALDRICH

BUILDING 23
MOFFETT FIELD, CALIFORNIA

LOCATION OF AIR SAMPLES AND RESULTS - BUILDING 23

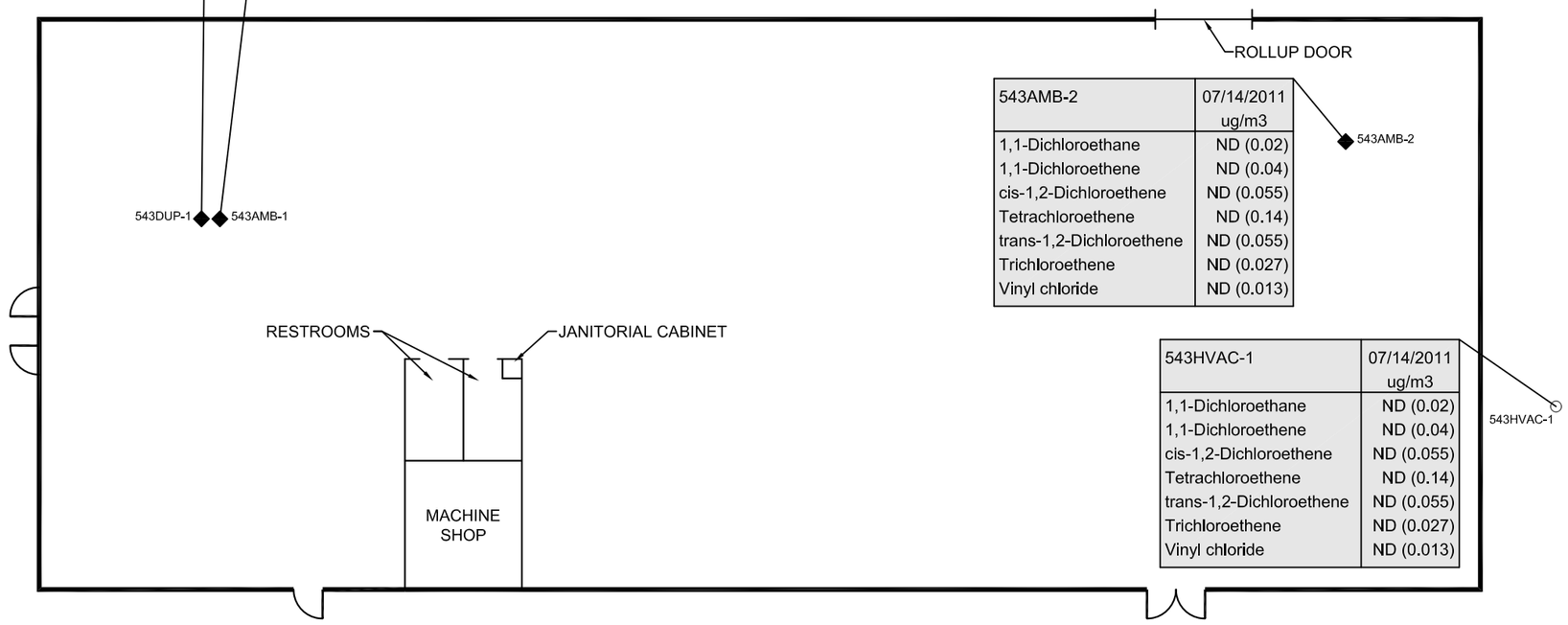
SCALE: AS SHOWN
APRIL 2012

FIGURE 13

G:\360667\013\CAD\DRAWINGS\REPORT - 02APRIL12\360667-23 S_AKRON_RD-CHEM_DATA_R1.DWG

543DUP-1	07/14/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

543AMB-1	07/14/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)



543AMB-2	07/14/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

543HVAC-1	07/14/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

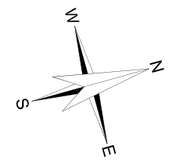
LEGEND:

◆ INDOOR AIR SAMPLING LOCATION

○ OUTDOOR AIR SAMPLING LOCATION

NOTES:

1. BUILDINGS AND INTERIOR FEATURES WERE DIGITIZED FROM A DRAWING PROVIDED BY OTHERS, AND FROM BUILDING WALKTHROUGH.
2. ALL LOCATIONS APPROXIMATE.
3. CHEMICAL CONCENTRATIONS IN MICROGRAMS PER CUBIC METER (ug/m³).
4. ND DENOTES CHEMICAL WAS NOT DETECTED AT THE LEVEL SHOWN.
5. SAMPLE DURATION IS 24 HOURS.



0 15 30

APPROXIMATE SCALE IN FEET

HALEY & ALDRICH

BUILDING 543
MOFFETT FIELD, CALIFORNIA

LOCATION OF AIR SAMPLES AND RESULTS - BUILDING 543

SCALE: AS SHOWN
APRIL 2012

FIGURE 14

G:\360667\013\CAD\DRAWINGS\REPORT - 02APRIL12\360667-543_S_PERIMETER-CHEM_DATA_R1.DWG

LEGEND:

◆ INDOOR AIR SAMPLING LOCATION

○ OUTDOOR AIR SAMPLING LOCATION

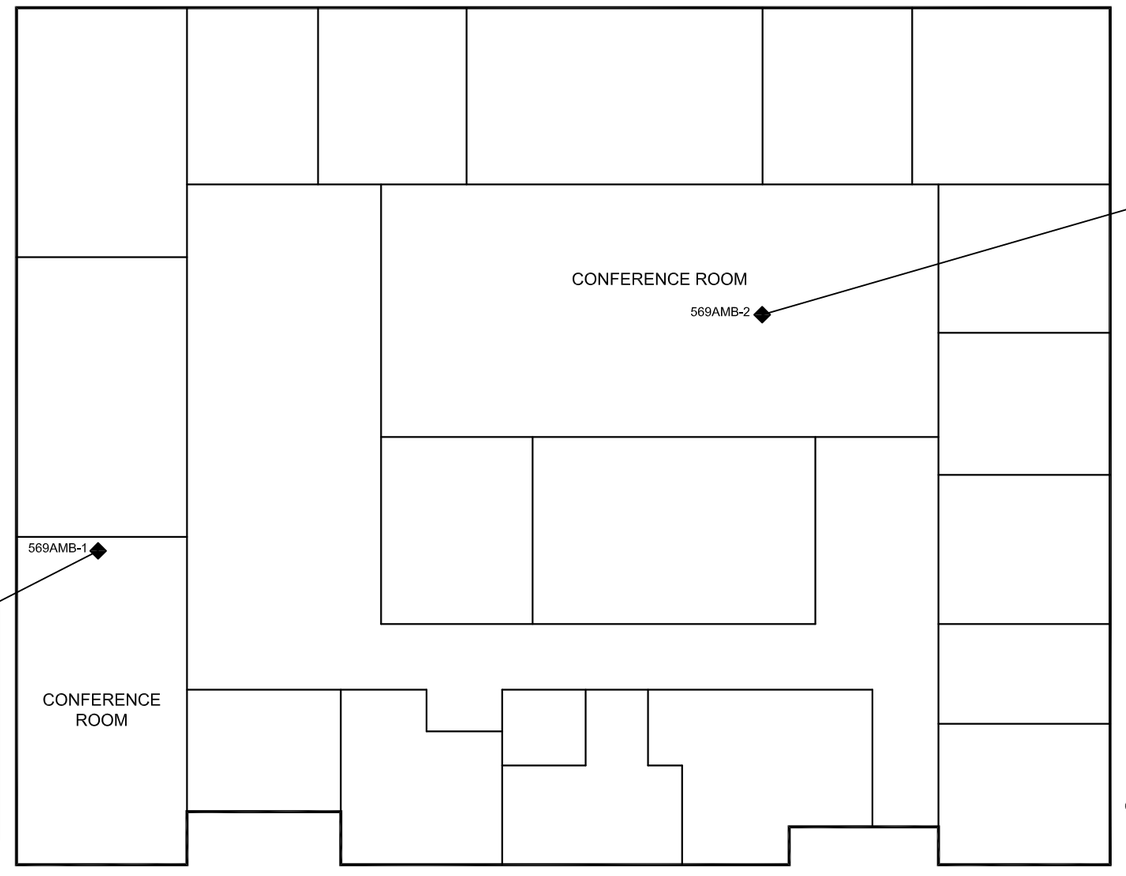
NOTES:
1. BUILDINGS AND INTERIOR FEATURES WERE DIGITIZED FROM A DRAWING PROVIDED BY OTHERS, AND FROM BUILDING WALKTHROUGH.

2. ALL LOCATIONS APPROXIMATE.

3. CHEMICAL CONCENTRATIONS IN MICROGRAMS PER CUBIC METER (ug/m³).

4. ND DENOTES CHEMICAL WAS NOT DETECTED AT THE LEVEL SHOWN.

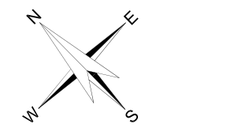
5. SAMPLE DURATION IS 8 HOURS.



569AMB-2	07/14/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)

569AMB-1	07/14/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.056)
Tetrachloroethene	0.16
trans-1,2-Dichloroethene	ND (0.056)
Trichloroethene	0.044
Vinyl chloride	ND (0.013)

569OUT-1	07/14/2011 ug/m3
1,1-Dichloroethane	ND (0.02)
1,1-Dichloroethene	ND (0.04)
cis-1,2-Dichloroethene	ND (0.055)
Tetrachloroethene	ND (0.14)
trans-1,2-Dichloroethene	ND (0.055)
Trichloroethene	ND (0.027)
Vinyl chloride	ND (0.013)



0 10 20

APPROXIMATE SCALE IN FEET

HALEY & ALDRICH

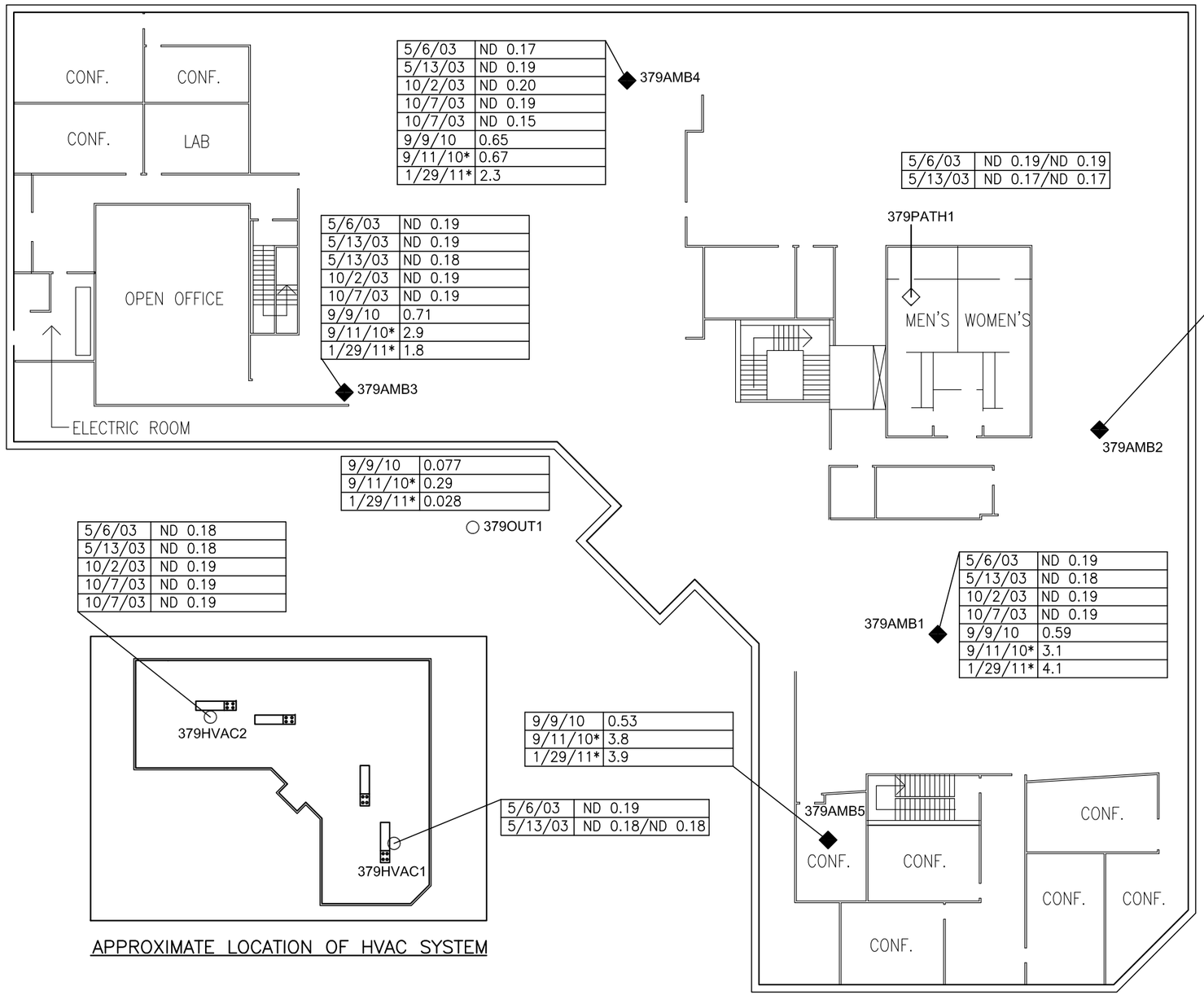
BUILDING 569
MOFFETT FIELD, CALIFORNIA

LOCATION OF AIR SAMPLES AND RESULTS - BUILDING 569

SCALE: AS SHOWN
APRIL 2012

FIGURE 15

G:\36067\013\CAD\DRAWINGS\REPORT - 02APRIL12\36067-569_BUSHNELL_RD-CHEM_DATA_R1.DWG



5/6/03	ND 0.17
5/13/03	ND 0.19
10/2/03	ND 0.20
10/7/03	ND 0.19
10/7/03	ND 0.15
9/9/10	0.65
9/11/10*	0.67
1/29/11*	2.3

5/6/03	ND 0.19
5/13/03	ND 0.19
5/13/03	ND 0.18
10/2/03	ND 0.19
10/7/03	ND 0.19
9/9/10	0.71
9/11/10*	2.9
1/29/11*	1.8

5/6/03	ND 0.19/ND 0.19
5/13/03	ND 0.17/ND 0.17

5/6/03	ND 0.19
5/6/03	ND 0.29
5/13/03	ND 0.19/ND 0.19
10/2/03	ND 0.17
10/7/03	0.19 J
9/9/10	0.48
9/11/10*	3.6
1/29/11*	2.9

9/9/10	0.077
9/11/10*	0.29
1/29/11*	0.028

5/6/03	ND 0.18
5/13/03	ND 0.18
10/2/03	ND 0.19
10/7/03	ND 0.19
10/7/03	ND 0.19

5/6/03	ND 0.19
5/13/03	ND 0.18
10/2/03	ND 0.19
10/7/03	ND 0.19
9/9/10	0.59
9/11/10*	3.1
1/29/11*	4.1

9/9/10	0.53
9/11/10*	3.8
1/29/11*	3.9

5/6/03	ND 0.19
5/13/03	ND 0.18/ND 0.18

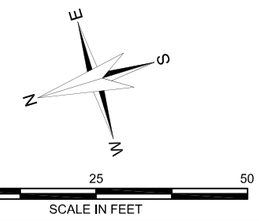
APPROXIMATE LOCATION OF HVAC SYSTEM

LEGEND:

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

NOTES:

1. THIS FIGURE IS BASED ON AN AUTOCAD DRAWING PROVIDED BY LOCUS TECHNOLOGIES.
2. ALL LOCATIONS ARE APPROXIMATE.
3. TCE = TRICHLOROETHENE.
4. TCE CONCENTRATIONS IN MICROGRAMS PER CUBIC METER (ug/m³).
5. AN ASTERISK (*) AFTER THE SAMPLE DATE DENOTES HVAC OFF FOR INDOOR AIR SAMPLE RESULT.
6. ND DENOTES TCE WAS NOT DETECTED AT THE LEVEL SHOWN. J DENOTES AN ESTIMATED VALUE.



HALEY & ALDRICH

379 N. WHISMAN ROAD
MOUNTAIN VIEW, CALIFORNIA

LOCATION OF AIR SAMPLES AND TCE RESULTS - 379 N. WHISMAN ROAD

SCALE: AS SHOWN
APRIL 2012

FIGURE 16

G:\136067013\CAD\DRAWINGS\REPORT - 02APRIL12\136067-379_N.WHISMAN ROAD_FEB2011_R1.DWG

APPENDIX A

2011 Quality Assurance/Quality Control Summary

APPENDIX A

2011 QUALITY ASSURANCE/QUALITY CONTROL SUMMARY

TABLE OF CONTENTS

LIST OF TABLES

APPENDIX A

2011 QUALITY ASSURANCE/QUALITY CONTROL SUMMARY

LIST OF ACRONYMS AND ABBREVIATIONS

DQO	data quality objective
DUSR	Data Usability Summary Report
EPA	United States Environmental Protection Agency
LCS	laboratory control sample
MEW	Middlefield-Ellis-Whisman
NELAP	National Environmental Laboratory Accreditation Program
PARCCS	precision, accuracy, representativeness, completeness, comparability, and sensitivity
QA	quality assurance
QC	quality control
SDG	Sample Delivery Group
SIM	selective ion mode

APPENDIX A

2011 QUALITY ASSURANCE/QUALITY CONTROL SUMMARY

1. INTRODUCTION AND PURPOSE

This appendix describes project quality assurance and quality control (QA/QC) objectives as well as data management, verification, and validation procedures followed in the 2011 Annual Progress Report (Annual Report). These QA/QC procedures meet the standardized requirements for environmental laboratory data verification and validation of indoor and outdoor air samples collected for the Middlefield-Ellis-Whisman (MEW) Superfund Area and parts of Moffett Field (collectively referred to as the VI Study Area), in Mountain View, California. These QA/QC procedures are also intended to ensure that all analytical data meet suitable measurement performance criteria identified as precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS). Evaluation of the PARCCS criteria was used for decision making and reporting purposes. QA/QC procedures in the Annual Report were performed in accordance with the Haley & Aldrich, Inc., "Indoor Air Sampling and Analysis Work Plan for Existing, Unsampled Commercial Buildings, Middlefield-Ellis-Whisman Study Area, Mountain View, California," (Unsampled Buildings Work Plan), dated 7 June 2011 and approved by the United States Environmental Protection Agency (EPA) on 1 July 2011.

APPENDIX A

2011 QUALITY ASSURANCE/QUALITY CONTROL SUMMARY

2. DATA QUALITY

This section describes the procedures and methods used to determine the quality and usability of the data collected during indoor and outdoor air sampling at the VI Study Area in 2011; these activities are summarized in Tables A-I and A-II.

2.1. Methodology

Fifty indoor and outdoor samples, including six field duplicates (12% of samples) were collected from 13 buildings in the VI Study Area; the methodology used to collect these samples are presented in the Unsampled Buildings Work Plan.

Air samples were analyzed for the chemicals of interest by a laboratory certified under the National Environmental Laboratory Accreditation Program (NELAP) using the laboratory reporting limits provided in the Unsampled Buildings Work Plan. All samples collected for the Annual Report were analyzed by TestAmerica in Costa Mesa, California, a NELAP-certified laboratory, using EPA Method TO-15 with selective ion mode (SIM). Results were reported for the seven Site chemicals of concern for the vapor intrusion pathway: tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, 1,1-dichloroethene, 1,1-dichloroethane, and vinyl chloride.

Available methods and limitations for indoor air sampling, including their applicability at the VI Study Area, were evaluated and presented in the Unsampled Buildings Work Plan. Refer to the aforementioned work plans for methods, procedures, and analysis used for indoor air data collection efforts.

2.2. Quality Control Criteria

The PARCCS criteria assess whether the collected data quality satisfy the data quality objectives (DQOs). Acceptable criteria limits are established based on data characteristics such as sample matrix or analyte and the generated data are then evaluated against these limits to determine data usability. Analytical QC is assessed by verifying the PARCCS parameters defined in the Unsampled Buildings Work Plan.

2.3. Tiered Approach for Data Verification and Validation

The key elements of the tiered data validation and verification approach include:

- Each tier requires more stringent data review;
- The percentages of the analytical data and methods/analytes subject to verification and validation vary based on the type of work being performed; and
- The tier of validation performed varies based upon the nature and sensitivity of the work being performed.

No data were rejected during the data validation process. The "J" qualifier was applied to nine samples

to denote that the result was estimated; the analyte was detected at a level less than the reporting limit but greater than or equal to the method detection limit.

2.3.1. Validation Tiers

Data validation was conducted as shown in the following table.

	% of All Laboratory Data to be Validated [1]	% of Selected Data Validated Subject to Tier I Evaluation [2]	% of Selected Data Validated Subject to Tier II Evaluation [2]	% of Selected Data Validated Subject to Tier III Evaluation [2]
Air Sampling at MEW VI Study Area	25%	80%	20%	0%
Moffett Field (July 2011)	27%	67%	33%	0%

(1) This % represents the portion of laboratory data collected in a task that was subject to validation; data were selected at random from the laboratory data set for validation.

(2) These are the percentages of the subset of data selected for validation (i.e., if 100 samples are collected in a sampling event, 25 samples were collected for overall validation. Of those 25 samples, 20 were subject to Tier I evaluation and 5 were subject to Tier II evaluation). The subset of data was randomly divided into the 80/20 split for Tier I and Tier II evaluation.

2.3.2. Tier I Evaluation

The goal of a Tier I evaluation is to provide a brief summary of key analytical issues/deficiencies that might affect data quality and user decisions based on the data. Tier I data review that includes verification of the PARCCS parameters, including an evaluation of accuracy and precision indicators such as holding times, reporting limits, lab control sample (LCS) recoveries, matrix spike/matrix spike duplicate and lab duplicate results, surrogate recoveries, and method and field QC blank contamination. Possible applications include recurrent monitoring activities, emergency or time-critical situations, and "non-critical" assessment activities.

During the July 2011 sampling event at Moffett Field, 12 of the 44 samples collected were validated (27% of all samples). A Tier I evaluation was applied to three sample delivery groups ([SDGs]; 75% of all SDGs selected for validation), which included eight samples (67% of the 12 samples selected for validation). The data were validated without qualification. Data Usability Summary Reports (DUSRs) were provided in the Moffett Field sampling report submitted to EPA on 13 September 2011.

Tier I evaluations were performed and DUSRs were prepared for the samples collected in Building 503, Building 569, and Building 596. Analytical results for the project samples were

reviewed to evaluate the data usability. The following items/criteria applicable to the analysis of project samples and associated QA/QC procedures were reviewed: holding times, project-specific reporting limits, blank sample analysis, system monitoring compound recoveries, laboratory control samples, matrix spike/matrix spike duplicate recoveries, sample data reporting format, and data qualifiers. The results presented in each report were found to be compliant with the DQOs for the project and usable

2.3.3. Tier II Evaluation

Tier II evaluation is an intermediate level of data evaluation that includes the elements of Tier I plus a more detailed review of summarized calibration and instrument performance criteria and the option to focus validation review on specific analytes of interest or task-specific DQOs. Tier II evaluation can be performed by the same methods as Tier I plus the associated calibration summaries, lab bench sequence logs, and instrument performance summaries such as gas chromatography-mass spectroscopy tuning, interference checks, and internal standards. A Tier II evaluation was applied to one SDG, which included four samples.

During the July 2011 sampling event at Moffett Field, 12 of the 44 samples collected were validated (27% of all samples). A Tier II evaluation was applied to one SDG (25% of all SDGs selected for validation), which included four samples (33% of the 12 samples selected for validation). The data were validated without qualification. DUSRs are provided in the Moffett Field sampling report submitted to EPA on 13 September 2011.

A Tier II evaluation was performed and a DUSR was prepared for the samples collected in Building 583C. Analytical results for the project samples were reviewed to evaluate the data usability. The following items/criteria applicable to the analysis of project samples and associated QA/QC procedures were reviewed: holding times, project-specific reporting limits, initial calibration procedures, continuing calibration procedures, blank sample analysis, system monitoring compound recoveries, laboratory control samples, matrix spike/matrix spike duplicate recoveries, internal standard recoveries, target compound identification, sample data reporting format, and data qualifiers. The results presented in each report were found to be compliant with the DQOs for the project and usable

2.3.4. Tier III Evaluation

Tier III evaluations were not performed in the Annual Report in accordance with the Unsampled Buildings Work Plan. However, the laboratory was notified that Tier III level data packages must be available in the future, if needed, to resolve discrepancies in the data set.

3. FIELD QC PROCEDURES

Field QC procedures were used to assure that sampling results achieved the DQOs presented in the Unsampled Buildings Work Plan.

3.1. Sample Methodology Field QC

Field duplicates were collected at a rate of one per ten field samples in accordance with the Unsampled Buildings Work Plan. The field duplicates were 'blind' to the laboratory, meaning they were numbered similar to the other samples so the laboratory cannot differentiate between the field samples and the duplicate samples. The sampling schedule was reviewed by the project manager to determine when field duplicates were to be collected to achieve the rate of one per ten field samples.

Six field duplicate samples were collected for the Annual Report (12% of all samples). Field duplicates were collected for 14% of samples collected during the July 2011 Moffett Field sampling event. The duplicate samples were analyzed by EPA Method TO-15 SIM, and the results reported for the seven chemicals of concern for the vapor intrusion pathway. Table A-III presents the relative percent difference (RPD) in concentrations for primary and field duplicate samples collected for the Annual Report. For field duplicates, both sample and duplicate results will be considered "estimated" for any analyte that exceeds a 30% RPD. RPDs were not calculated when analytes were not detected. RPDs were calculated for three samples: in two of the samples, the RPD was 0%; in another sample, the RPD was 9%.

3.2. Sample Custody and Documentation

This section discusses QC that can be maintained when collecting and transporting samples to the laboratory. The ability to trace samples from the time they are collected to receipt of final data is essential to the sampling program.

Field Sample Custody and Documentation: Samples were labeled in the field to ensure proper location identification and all information relevant to field sampling was documented on field logs and on chain of custody forms. Samples were stored and shipped at ambient temperature to the laboratory via common courier with accompanied chain of custody forms. Precautions were taken to label the samples to avoid sample interference, such as using pens or markers that may contain solvents.

Laboratory Sample Custody and Documentation: All samples were shipped to the laboratory via Federal Express. Samples were delivered to the laboratory person authorized to receive samples who inspected and noted the condition of the canisters and entered the samples into laboratory record for analysis.

Custody Documentation Corrections: As with corrections made in the field, any changes made to the chain of custody form were made by striking the item and initialing and dating the correction in ink.

4. ANALYTICAL QC PROCEDURES

This section describes analytical QC procedures, including laboratory qualification, QC procedures and samples and calibration.

4.1. Laboratory Qualification and QC Procedures

The analytical laboratory selected to analyze samples, TestAmerica, is NELAP-certified and able to provide necessary turnaround times and data deliverables. The laboratory has written operating procedures that define the instrumentation, maintenance, calibration, method detection limits, QC analysis, acceptance criteria, etc., for the analytical methods used. The procedures are available to the laboratory chemists performing the work and meet or exceed the requirements of the method to be used for analysis (EPA Method TO-15 SIM). The laboratory maintains records of all activities that impact the quality of the results.

4.2. Laboratory Calibration and QC Samples

The laboratory calibrates all instruments and equipment in accordance with the method specifications. Calibrations are conducted when the method is initially set up and whenever the calibrations fail to meet the acceptance criteria. If instrumentation undergoes significant repairs or maintenance, a valid initial calibration is conducted. QC samples collected or prepared included field duplicates, method blanks, and LCSs.

5. DATA QUALITY MANAGEMENT

5.1. Data Review and Validation

The laboratory conducted the initial review and data validation. As part of the review process, if necessary, data were flagged with qualifiers such as those described in the Unsampled Buildings Work Plan. The data validation process involves the evaluation and calculation of the PARCCS parameters.

5.2. Data Deliverables and Management

The laboratory provided the appropriate deliverables as identified in the Unsampled Buildings Work Plan for reporting, verification, and validation. Laboratory data deliverables included a non-conformance narrative. The narrative included a description of any and all sample handling and analytical anomalies and method performance issues. The laboratory will maintain all relevant raw data and documentation for at least two years. The laboratory will provide notification prior to the disposal of any relevant records. Copies of all chain of custody forms and laboratory reports were maintained in accordance with applicable Consent Decree and 106 Order requirements.

Analytical results from all 50 air samples were imported into the MEW database maintained by Haley & Aldrich in accordance with the Data Management and Reporting Plan presented in the Haley & Aldrich, Inc. "Site-Wide Vapor Intrusion Sampling and Analysis Work Plan for Response Action Tiering, Vapor Intrusion Study Area, Middlefield-Ellis-Whisman Superfund Area, Mountain View, California," submitted to EPA on 29 September 2011.

6. QA OVERSIGHT

QA oversight included system field activity and laboratory procedure audits.

System audits involve the inspection of equipment for sampling and data gathering and are usually conducted in the initial stages of field activity. Performance audits would include an inspection of field and laboratory activities to verify that standard procedures were followed and conform to the necessary specifications to provide accurate data generation. Performance audits are typically completed at the onset of the sampling program and at the same time as field audits to verify procedures are understood and implemented over the course of the program as intended by the Unsampled Buildings Work Plan. System and performance audits were not performed by Haley & Aldrich for the Annual Report, as there was no sample collection concerns or data quality concerns observed. As such, no corrective actions were required.

The EPA may perform field or laboratory audits, submit performance evaluations or split samples for analysis, perform data validation, and/or perform other QA oversight activities. In July 2011, the EPA observed sample deployment at several buildings on Moffett Field.

7. REPORTING

Upon completion of data verification and validation, the data validator prepared a brief DUSR for validated samples. The report included the following: project information; laboratory data validated (SDG number and/or lab batch number); evaluation tier utilized; description of qualifiers assigned to any data set; discrepancies or deviations from acceptable QC criteria; and a narrative assessment of the data usability. DUSRs were provided in the Moffett Field sampling report submitted to EPA in on 13 September 2011.

REFERENCES

1. Haley & Aldrich, Inc., "Indoor Air Sampling and Analysis Work Plan for Existing, Unsampled Commercial Buildings, Middlefield-Ellis-Whisman Study Area, Mountain View, California," 7 June 2011.

2. Haley & Aldrich, Inc., "Site-Wide Vapor Intrusion Sampling and Analysis Work Plan for Response Action Tiering, Vapor Intrusion Study Area, Middlefield-Ellis-Whisman Superfund Area, Mountain View, California," 29 September 2011.

TABLE A-I
SUMMARY OF SAMPLING QA/QC FOR 2011
2011 ANNUAL VAPOR INTRUSION PROGRESS REPORT
MIDDLEFIELD-ELLIS-WHISMAN (MEW) AREA AND MOFFETT FIELD, CALIFORNIA

CRITERIA	DESCRIPTION
Sampling Company	**Haley & Aldrich** **2107 N. First Street, Suite 380** **San Jose, California 94043** **Ms. Jennifer Boyer, 408.961.4808**
Were chain of custody forms completed for all samples?	**YES**
Was there sufficient sample volume?	**YES**
Was there acceptable residual vacuum in canisters?	**YES**
Were required field QA/QC samples collected?	**YES**

TABLE A-II
SUMMARY OF ANALYTICAL QA/QC FOR 2011
2011 ANNUAL VAPOR INTRUSION PROGRESS REPORT
MIDDLEFIELD-ELLIS-WHISMAN (MEW) AREA AND MOFFETT FIELD, CALIFORNIA

CRITERIA	DESCRIPTION
Laboratory	TestAmerica 3585 Cadillac Avenue, Suite A Costa Mesa, California 92626 Ms. Beth Riley, 714.258.8610
Analytical method	EPA Method TO-15 SIM
Is lab NELAP-certified?	YES
Were canisters and flow controllers individually SIM-certified?	YES
Were sample holding times met?	YES
Were analyses performed according to standard methods?	YES
Were QA/QC analyses run consistent with analytical methods?	YES
Were acceptable reporting limits used?	YES
Were analytical results reported for all values above the method detection limit?	YES
Did QA/QC results meet all acceptance criteria?	YES
Are QA/QC results and acceptance criteria on file?	YES

SUMMARY OF RESULTS FOR DUPLICATE SAMPLES COLLECTED DURING 2011
2011 ANNUAL VAPOR INTRUSION PROGRESS REPORT
MIDDLEFIELD-ELLIS-WHISMAN (MEW) AREA AND MOFFETT FIELD, CALIFORNIA

Sample Date	Contaminant	23AMB-1	23AMB-1 DUP	RPD
14-Jul-11	Tetrachloroethene	< 0.14	< 0.14	--
	Trichloroethene	0.12	0.12	0
	cis-1,2-Dichloroethene	< 0.056	< 0.055	--
	trans-1,2-Dichloroethene	< 0.056	< 0.055	--
	1,1 Dichloroethene	< 0.040	< 0.040	--
	1,1-Dichloroethane	< 0.020	< 0.020	--
	Vinyl Chloride	< 0.013	< 0.013	--

Sample Date	Contaminant	23AMB-3	23AMB-3 DUP	RPD
14-Jul-11	Tetrachloroethene	< 0.14	< 0.14	--
	Trichloroethene	0.27	0.27	0
	cis-1,2-Dichloroethene	0.12	0.11	9
	trans-1,2-Dichloroethene	< 0.056	< 0.056	--
	1,1 Dichloroethene	< 0.040	< 0.040	--
	1,1-Dichloroethane	< 0.020	< 0.020	--
	Vinyl Chloride	< 0.013	< 0.013	--

Sample Date	Contaminant	48AMB-3	48AMB-3 DUP	RPD
13-Jul-11	Tetrachloroethene	< 0.14	< 0.14	--
	Trichloroethene	< 0.027	< 0.027	--
	cis-1,2-Dichloroethene	< 0.055	< 0.055	--
	trans-1,2-Dichloroethene	< 0.055	< 0.055	--
	1,1 Dichloroethene	< 0.040	< 0.040	--
	1,1-Dichloroethane	< 0.020	< 0.020	--
	Vinyl Chloride	< 0.013	< 0.013	--

Sample Date	Contaminant	48OUT-1	48OUT-1 DUP	RPD
13-Jul-11	Tetrachloroethene	< 0.14	< 0.14	--
	Trichloroethene	< 0.027	< 0.027	--
	cis-1,2-Dichloroethene	< 0.055	< 0.056	--
	trans-1,2-Dichloroethene	< 0.055	< 0.056	--
	1,1 Dichloroethene	< 0.040	< 0.040	--
	1,1-Dichloroethane	< 0.020	< 0.020	--
	Vinyl Chloride	< 0.013	< 0.013	--

Sample Date	Contaminant	543AMB-1	543AMB-1 DUP	RPD
14-Jul-11	Tetrachloroethene	< 0.14	< 0.14	--
	Trichloroethene	< 0.027	< 0.027	--
	cis-1,2-Dichloroethene	< 0.055	< 0.055	--
	trans-1,2-Dichloroethene	< 0.055	< 0.055	--
	1,1 Dichloroethene	< 0.040	< 0.040	--
	1,1-Dichloroethane	< 0.020	< 0.020	--
	Vinyl Chloride	< 0.013	< 0.013	--

Sample Date	Contaminant	944AMB-1	944AMB-1 DUP	RPD
13-Jul-11	Tetrachloroethene	< 0.14	< 0.14	--
	Trichloroethene	< 0.027	< 0.027	--
	cis-1,2-Dichloroethene	< 0.056	< 0.055	--
	trans-1,2-Dichloroethene	< 0.056	< 0.055	--
	1,1 Dichloroethene	< 0.040	< 0.040	--
	1,1-Dichloroethane	< 0.020	< 0.020	--
	Vinyl Chloride	< 0.013	< 0.013	--

Notes:

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

< not detected above the laboratory reporting limit

RPD relative percent difference = $|X_1-X_2|/X_3 \times 100$

where: X_1 = concentration of the sample

X_2 = concentration of the duplicate

X_3 = average X_1 and X_2

APPENDIX B

Distribution List

DISTRIBUTION LIST
MIDDLEFIELD-ELLIS-WHISMAN SUPERFUND STUDY AREA

FAIRCHILD SEMICONDUCTOR CORPORATION/SCHLUMBERGER TECHNOLOGY CORPORATION	
Vic Cocianni Schlumberger Technology Corporation 300 Schlumberger Drive Sugar Land, TX 77478 E-Mail: cocianni-v@slb.com Phone: (281) 285-4747 *(1 electronic copy)*	Kirsten Wilson Schlumberger Technology Corporation 300 Schlumberger Drive Sugar Land, TX 77478 E-Mail: kwilson4@slb.com Phone: (281) 285-1689 *(1 electronic copy)*
Richard C. Coffin, Esq. Barg Coffin Lewis & Trapp, LLP 350 California Street, 22nd Floor San Francisco, CA 94104-1435 E-Mail: rcc@bcltlaw.com Phone: (415) 228-5400 FAX: (415) 228-5450 *(1 electronic copy)*	Alok Kolekar Weiss Associates 453 Ravendale Drive, Suite C Mountain View, CA 94043 E-Mail: adk@weiss.com Phone: (650) 968-7000 x7011 FAX: (510) 968-7034 *(1 electronic copy; 2 hard copies)*
Joyce Adams / MEW Repository Weiss Associates 453 Ravendale Drive, Suite C Mountain View, CA 94043 E-Mail: jea@weiss.com Phone: (510) 450-6162 FAX: (510) 547-5043 *(1 electronic copy)*	Nancy Bice Geosyntec Consultants 1111 Broadway, 6th Floor Oakland, CA 94607 E-Mail: nbice@geosyntec.com Phone: (510) 285-2726 Fax: (510) 836-3036 *(1 electronic copy)*
John D. Gallinatti Geosyntec Consultants 1111 Broadway, 6th Floor Oakland, CA 94607 E-Mail: jgallinatti@geosyntec.com Phone: (510) 285-2750 Fax: (510) 836-3036 *(1 electronic copy)*	Deepa Gandhi Geosyntec Consultants 1111 Broadway, 6th Floor Oakland, CA 94607 E-Mail: dgandhi@geosyntec.com Phone: (510) 285-2745 Fax: (510) 836-3036 *(1 electronic copy)*

DISTRIBUTION LIST
MIDDLEFIELD-ELLIS-WHISMAN SUPERFUND STUDY AREA

VISHAY GSI, INC./MITSUBISHI SILICON AMERICA	
Donald M. Clark Vishay Intertechnology, Inc. 8601 Six Forks Road Suite 400 Raleigh, NC 27615 E-Mail: donald.clark@vishay.com Phone: (919) 676-5324 FAX: (919) 676-5326 *(meeting notice only)*	Maria P. Hoye, Esq. Latham & Watkins 355 South Grand Avenue Los Angeles, CA 90071-1560 E-Mail: maria.hoye@lw.com Phone: (213) 891-7540 FAX: (213) 891-8763 *(1 electronic copy)*
Harold Rush AMEC Geomatrix, Inc. 2101 Webster Street, 12th Floor Oakland, CA 94612 E-Mail: harold.rush@amec.com Phone: (510) 663-4234 FAX: (510) 663-4141 *(1 electronic copy)*	
INTEL CORPORATION	
Tom Cooper Intel Corporation 2200 Mission College Blvd., RNB-2-103 Santa Clara, CA 95052-8119 E-Mail: tom.cooper@intel.com Phone: (408) 765-2170 FAX: (408) 765-3362 *(meeting notice only)*	
Anja Verce Weiss Associates 2200 Powell Street, Suite 925 Emeryville, CA 94608-1879 E-Mail: av@weiss.com Phone: (510) 450-6160 FAX: (510) 547-5043 *(1 electronic copy)*	Mary Stallard Weiss Associates 2200 Powell Street, Suite 925 Emeryville, CA 94608-1879 E-Mail: mls@weiss.com Phone: (510) 450-6132 FAX: (510) 547-5043 *(1 electronic copy)*

DISTRIBUTION LIST
MIDDLEFIELD-ELLIS-WHISMAN SUPERFUND STUDY AREA

NASA	
Don Chuck NASA-Ames Research Center Mail Stop 237-14, Bldg. 237, Room 104 Moffett Field, CA 94035-1000 E-Mail: donald.m.chuck@nasa.gov Phone: (650) 604-0237 FAX: (650) 604-0680 *(1 electronic copy)*	Dr. Ann H. Clarke NASA Ames Research Center Mail Stop 237-14, Bldg. 237, Room 103 Moffett Field, CA 94035-1000 E-Mail: ann.clarke@nasa.gov Phone (650) 604-2350 FAX: (650) 604-0680 *(1 electronic copy)*
T. Mark Hightower NASA-Ames Research Center Mail Stop 237-14, Bldg. N237 Moffett Field, CA 94035-1000 E-Mail: t.m.hightower@nasa.gov Phone: (650) 604-4443 *(1 electronic copy)*	Joe Lukas NASA-Ames Research Center Mail Stop T20G-4, Room 144 Moffett Field, CA 94035-1000 E-Mail: joseph.r.lukas@nasa.gov Phone: (650) 604-2057 FAX: (650) 604-2034 *(1 electronic copy)*
Lili Pirbazari NASA-Ames Research Center Mail Stop 237-14, Bldg. N237 Moffett Field, CA 94035-1000 E-Mail: lili.pirbazari-1@nasa.gov Phone: (650) 604-1767 *(1 electronic copy)*	
NATIONAL SEMICONDUCTOR CORPORATION	
Contact (To Be Determined)	

DISTRIBUTION LIST
MIDDLEFIELD-ELLIS-WHISMAN SUPERFUND STUDY AREA

NAVY	
Scott Anderson BRAC Program Management Office West 1455 Frazee Road, Suite 900 San Diego, CA 92108-4310 E-Mail: scott.d.anderson@navy.mil Phone: (619) 532-0938 *(1 electronic copy; 1 hard copy - Regional reports only)*	Valerie Harris BRAC PMO / NAVFAC SW 1455 Frazee Road, Suite 900 San Diego, CA 92108-4310 E-Mail: valerie.j.harris@navy.mil Phone: (619) 532-0981 FAX: (619) 532-0940 *(1 electronic copy)*
Marvin Norman, Esq. BRAC Program Management Office West E-Mail: marvin.norman@navy.mil *(1 electronic copy - Regional reports only)*	Wilson Doctor BRAC PMO / NAVFAC SW 1455 Frazee Road, Suite 900 San Diego, CA 92108-4310 E-Mail: wilson.doctor@navy.mil Phone: (619) 532-0928 *(1 electronic copy – Vapor Intrusion only)*

RENESAS ELECTRONICS AMERICA INC./NEC ELECTRONICS, INC.	
John I. Jeter Renesas Electronics America Inc. 2880 Scott Blvd., M/S SC400 Santa Clara, CA 95050-2554 E-Mail: john.jeter@renesas.com Phone: (408) 588-6185 FAX: (408) 588-6271 *(1 electronic copy)*	Carolyn Kneiblher Geosyntec Consultants 1111 Broadway, 6th Floor Oakland, CA 94607 E-Mail: ckneiblher@geosyntec.com Phone: (510) 285-2724 FAX: (510) 836-3036 *(1 electronic copy)*
Eric Suchomel Geosyntec Consultants 1111 Broadway, 6th Floor Oakland, CA 94607 E-Mail: esuchomel@geosyntec.com Phone: (510) 285-2786 FAX: (510) 836-3036 *(1 electronic copy)*	

DISTRIBUTION LIST
MIDDLEFIELD-ELLIS-WHISMAN SUPERFUND STUDY AREA

RAYTHEON COMPANY	
Greg Taylor Raytheon Company 2000 E. El Segundo Blvd. E07/S175 El Segundo, CA 90245 E-Mail: gstaylor@raytheon.com Phone: (310) 647-2495 FAX: (310) 616-1042 *(1 electronic copy)*	Nicholas Targ Holland & Knight LLP 50 California St., Suite 2800 San Francisco, CA 94111 E-Mail: nicholas.targ@hklaw.com Phone: (415) 743-6926 *(1 electronic copy)*
Elie H. Haddad, P.E. Haley & Aldrich 2107 N. 1st St., Suite 420 San Jose, CA 95131-2028 E-Mail: ehaddad@haleyaldrich.com Phone: (408) 961-4806 FAX: (408) 453-8708 *(1 electronic copy)*	Wes (John) Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043 E-Mail: hawthornej@locustec.com Phone: (650) 960-1640 FAX: (650) 960-0739 *(1 electronic copy)*
SMI HOLDING LLC	
Chuck Hunnewell SMI Holding LLC 170 Wood Avenue South, 7th Floor Iselin, NJ 08830 E-Mail: chuck.hunnewell@siemens.com Phone: (732) 476-3449 FAX: (732) 321-3888 *(1 electronic copy)*	Susan Gahry PES Environmental, Inc. 1682 Novato Boulevard, Suite 100 Novato, CA 94947-7021 E-Mail: sgahry@pesenv.com Phone: (415) 899-1600 FAX: (415) 899-1601 *(1 electronic copy, 1 CD for large reports only)*
Gary Jones SMI Holding LLC 47 Hallow Road Skillman, NJ 08558 E-Mail: gary.a.jones@me.com Phone: (732) 841-9923 *(1 electronic copy)*	
SUMITOMO MITSUBISHI SILICON CORPORATION	
Greg Hedger SUMCO Phoenix Corporation 19801 North Tatum Blvd. Phoenix, AZ 85050 E-Mail: greg.hedger@sumcousa.com Phone: (480) 473-6603 *(1 electronic copy)*	

DISTRIBUTION LIST
MIDDLEFIELD-ELLIS-WHISMAN SUPERFUND STUDY AREA

SPECTRACE/TRACOR X-RAY	
Dina C. Kuykendall Baker Hughes Incorporated 2929 Allen Parkway, Suite 2100 Houston, TX 77019-2118 E-Mail: dina.kuykendall@bakerhughes.com Phone: (713) 439-8789 *(1 electronic copy)*	

UNION CARBIDE CORPORATION	
Shannon Slowey Callahan The Dow Chemical Company 100 Independence Mall West Philadelphia, PA 19106-3227 E-Mail: sslowey@dow.com Phone: (215) 592-3404 FAX: (215) 592-3227 *(1 electronic copy)*	Tom Gieck The Dow Chemical Company 2754 Compass Drive, Suite 280 Grand Junction, CO 81506 E-Mail: gieckte@dow.com Phone (970) 256-8889 FAX: (970) 260-2249 *(1 electronic copy)*

U.S. ENVIRONMENTAL PROTECTION AGENCY	
Alana Lee EPA Region 9, Superfund Division 75 Hawthorne Street, SFD-7-3 San Francisco, CA 94105 E-Mail: Lee.Alana@epa.gov Phone: (415) 972-3141 FAX: (415) 947-3528 *(All - 1 electronic copy, Vapor Intrusion - 2 CDs, 2 hard copies); Groundwater – 1 CD, 1 hard copy)*	Penny Reddy EPA Region 9, Superfund Division 75 Hawthorne Street, SFD-7-3 San Francisco, CA 94105 E-Mail: Reddy.Penny@epa.gov Phone: (415) 972-3108 FAX: (415) 947-3520 *(All - 1 electronic copy; Groundwater - 2 CDs, 2 hard copies)*
Jenny Ledesma CH2M HILL 155 Grand Avenue, Suite 800 Oakland, CA 94612 E-Mail: jennifer.ledesma@ch2m.com Phone: (510) 587-7566 FAX: (510) 622-9066 *(All - 1 electronic copy; Vapor Intrusion - 1 CD, 1 hard copy)*	Joe Sterling CH2M HILL 155 Grand Avenue, Suite 800 Oakland, CA 94612 E-Mail: joe.sterling@ch2m.com Phone: (510) 587-7525 FAX: (510) 893-8205 *(Groundwater Only - 1 electronic cop, 1 CD, 1 hard copy)*

DISTRIBUTION LIST
MIDDLEFIELD-ELLIS-WHISMAN SUPERFUND STUDY AREA

OTHER AGENCIES/INTERESTED PARTIES	
Robert Balas Iris Environmental 1615 Broadway, Suite 1003 Oakland, CA 94612 E-Mail: rbalas@irisenv.com Phone: (510) 834-4747, ext. 17 FAX: (510) 834-4199 *(1 electronic copy)*	Brenda Rian AOL 22000 AOL Way Dulles, VA 20166 E-Mail: brenda.rian@teamaol.com Phone: (703) 265-2505 FAX: (703) 265-2805 *(1 electronic copy, 1 CD)*
Jonathan Bauer Hewlett Packard 1501 Page Mill Road, M/S 1254 Palo Alto, CA 94304 E-Mail: jonathan.bauer@hp.com Phone: (408) 209-2782 *(1 electronic copy)*	Luigi Sciabarrasi Symantec 350 Ellis Street Mountain View, CA 94043 E-Mail: luigi_sciabarrasi@symantec.com Phone: (650) 527-5011 *(1 electronic copy)*
Candace Bowers Mountain View Public Library 585 Franklin Street Mountain View, CA 94041 Phone: (650) 903-6877 *(1 electronic copy on CD)*	Lenny Siegel, MEW TAG Administrator Center for Public Environmental Oversight c/o PSC, 278-A Hope Street Mountain View, CA 94043 E-Mail: lsiegel@cpeo.org Phone: (650) 969-1545 FAX: (650) 961-8918 *(1 electronic copy on CD)*
George Cook Santa Clara Valley Water District 5750 Almaden Expressway San Jose, CA 95118 E-Mail: gcook@valleywater.org Phone: (408) 265-2607 FAX: (408) 979-5694 *(1 electronic copy to groundwater@valleywater.org)*	Peter Strauss, MEW TAG Advisor PM Strauss & Associates 317 Rutledge Street San Francisco, CA 94110 E-Mail: petestrauss1@comcast.net Phone: (415) 647-4404 *(1 electronic copy on CD)*
Pam Cox Verizon One Verizon Way, VC34W414 Basking Ridge, NJ 07920 E-Mail: pam.m.cox@verizon.com Phone: (908) 559-3691 *(1 electronic copy)*	Elizabeth Wells San Francisco Bay Regional Water Quality Control Board 1515 Clay Street, 14th Floor Oakland, CA 94612 E-Mail: ewells@waterboards.ca.gov Phone: (510) 622-2440 FAX: (510) 622-2458 *(1 CD, Regional reports only)*

DISTRIBUTION LIST
MIDDLEFIELD-ELLIS-WHISMAN SUPERFUND STUDY AREA

OTHER AGENCIES/INTERESTED PARTIES (continued)	
Kevin Woodhouse Office of the City Manager 500 Castro Street, P.O. Box 7540 Mountain View, CA 94039-7540 E-Mail: kevin.woodhouse@mountainview.gov Phone: (650) 903-6215 FAX: (650) 962-0384 *(1 electronic copy)*	
MEETING NOTICES ONLY	
Tom Cooper *(see Intel Corporation)*	
Barbara Cook Department of Toxic Substances Control 700 Heinz Avenue, Suite 200 Berkeley, CA 94710 E-Mail: bcook@dtsc.ca.gov Phone: (510) 540-3843 FAX: (510) 540-3819	
MEW REPOSITORY	
cc: Shari Blackwell Weiss Associates MEW Repository 453 Ravendale Drive, Suite C Mountain View, CA 94043 E-mail: slb@weiss.com	