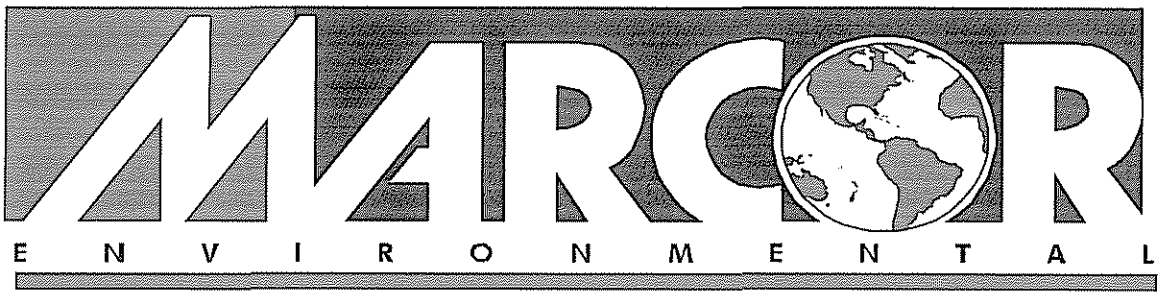


Report of Final Clearance Sampling Results

FOR

5401 Broken Sound Blvd.
Boca Raton, FL
January 7, 2007

Designed by
MARCOR Remediation, Inc.
540 Trestle Place
Downingtown, PA 19335
(610)269-3250
(610)269-3393 Fax

Report of Final Clearance Sampling Results
5401 Broken Sound Boulevard, Boca Raton, Florida

Prepared by: Bruce Lippy, Ph.D., CIH, CSP
Environmental Profiles, Inc.
Catonsville, Maryland 21228

Prepared for: 5401 Broken Sound Boulevard Technical Working Group

Date: January 7, 2007

1. Background

In the fall of 2001, the first case of anthrax caused by terrorist action occurred in the AMI building in Boca Raton, Florida, which was considered contaminated and subsequently closed. The Palm Beach County Health Department issued a quarantine of the building and restricted access. The FBI, EPA, and CDC collected samples in the facility and the latter two organizations made their sampling results available to the owner. The building was fumigated with chlorine dioxide gas beginning on July 11, 2004.

Following the procedure, 2,000 biological indicator spore strips were positioned in 162 sampling locations of 100 square feet each to test the effectiveness of the fumigation throughout the building. All showed a 100 percent kill rate.[1] In addition, 952 surface samples were collected in the facility and analyzed by the New Jersey Department of Health and Senior Services State Laboratory, which reported all results as negative for *B. anthracis* growth.[2] After the surface sampling was completed, aggressive air samples were collected using three methods: dry filter units, high volume samplers, and Anderson cascade impactors. All samples were found to be negative by the New Jersey Department of Health and Senior Services State Laboratory.[3] Finally, building-wide stratified aggressive air sampling was conducted with the sampler intakes positioned directly in front of the air handler return ducts for each zone of the building. All samples were found to be negative for growth by the New Jersey Department of Health and Senior Services State Laboratory.[4] MARCOR Environmental successfully removed the boxes containing office files and photographs that had been stored on pallets in the basement garage as part of the fumigation effort in the upper three floors and transported them for autoclaving. Most of the boxes, after passing tests at the facility for successful autoclaving, were buried

[1] National Research Council. (2005). Reopening public facilities after a biological attack: A decision making framework. National Academies Press: Washington, D.C. p.153.
[2] Ibid. 154.
[3] Ibid. 154.
[4] Ibid. 154.

in a landfill. A limited number of boxes were returned to 5401 Broken Sound Boulevard so the contents could be examined, but they were examined in trailers outside the building and never taken back inside the building. Following a sampling plan and Health and Safety Plan approved by the Technical Working Group, HEPA sock and wet wipe samples were collected in the basement on floor, wall and column surfaces. All samples were reported as negative for *Bacillus anthracis*.

MARCOR Environmental was then retained by the owner to create a sampling plan and Health and Safety Plan to enable the firm to collect sufficient samples in the upper three floors of the building for the Technical Working Group to recommend lifting of the quarantine.

The sampling plan went through several reviews; the final version entitled, "Final Sampling and Analysis Plan for Clearing the Upper Three Floors at 5401 Broken Sound Boulevard, Boca Raton, Florida, Version 9.0, 11-10-06" was approved by the Technical Working Group after a conference call. The other document, "Health & Safety Plan, Version 2.0, for Final Clearance of the Upper Three Floors, 5401 Broken Sound Boulevard, Boca Raton, Florida 33486, 10-24-06" was approved by the EPA on November 21, 2006, with two caveats that were subsequently addressed.

2. Sampling rationale

The approved sampling approach followed a risk-based strategy that employed multiple air and bulk sampling techniques to verify the effectiveness of chlorine dioxide fumigation and post-remedial sampling activities performed by others in 2004. The sampling goal was to use recognized aggressive air sampling techniques to draw sample volumes three times larger than the space of each floor, using differing sampling equipment in conjunction with wet wipe and HEPA vacuum sock techniques to corroborate the success demonstrated by the previous findings so the quarantine could be lifted and the building opened. The target clearance level was straightforward: any finding of a viable spore of *Bacillus anthracis* would represent a failed sample that would require additional action on the floor where the sample was collected. Negative air machines with HEPA filters were employed to create negative pressure on each floor during the aggressive sampling so that follow-up action for any positive result could be limited to the floor where the sample was collected. The plan focused much more intensely in those first floor rooms where significant numbers of *Bacillus anthracis* spores were initially measured, specifically, the mailroom (MR1), legal department (LD1), and office services (OS1). The plan also employed the federal guidance of including focused, biased and random samples.

3. Current sampling effort

The current sampling effort began on Monday, November 27th when the sampling team from MARCOR arrived on site in the afternoon. They were met by Fred Stroud of the EPA Environmental Response Team, Commander Larry Cseh from ATSDR and Lieutenant Commander Robert L. Williams from ATSDR, who were representing

the Technical Working Group. The five-person crew from MARCOR Remediation arrived late that evening, after driving the equipment and supplies from Atlanta.

A site briefing of the approved health and safety plan was provided by Bruce Lippy on the morning of Tuesday November 28th to meet the requirements of OSHA's HAZWOPER standard, at 1910.120(b)(4)(iii). All team members entering containment were required to be current on HAZWOPER training certification and to successfully pass a quantitative respirator fit test. Measurements were made with a calibrated TSI Portacount, a condensation nuclei counter, and recorded in an Excel spreadsheet. That afternoon the MARCOR crew constructed an airlock in the basement entering into the stairwell.

On the morning of November 29th, an initial entry was made into the building to observe conditions, identify hazards, and verify whether all aspects of the sampling plan could be executed. The team noted that there was sprayed-on insulation on the metal deck above the drop ceiling on every floor and the space served as a return air plenum, which greatly impacted the initial plan to divide each floor into two zones with plastic barriers. The crew would have to scrape a large amount of insulation from the deck to attach plastic barriers, which risked overloading samples with airborne insulation. The team also observed that only one of the HVAC units on the roof was operating and apparently only at the minimum setting.

After discussion with the other federal support experts onsite, it was decided that establishing vertical barriers on each floor was unrealistic and could prove deleterious to the sampling effort. The decision was made to have the MARCOR crew establish barriers between floors and treat each floor as a complete sampling area. The original plan called for operating each roof unit while sampling was being conducted in the half of the third and second floors controlled by that unit. On 11-30-06 an HVAC technician verified that there were no suitable means to repair or control the roof units without access to the roof, which would require a crane. The entry team noted significant damage to the non-operative unit that may have precluded any emergency repair. The technician was able to start one of the units in the basement so air movement was provided to the first floor, but the compressor would not hold a charge so no cooling was provided to the building.

All other aspects of the original sampling plan were maintained. Of particular importance, the four key objectives of the plan were achieved: 1) sampling volumes collected per floor exceeded three times the space of the floor; 2) aggressive air sampling was performed to ensure that settled particulate was stirred up and kept suspended by fans operated throughout the floor during sampling; 3) High Efficiency Particulate Air (HEPA) ventilation units were operated during sampling to keep the space under negative pressure, which was documented to range between 0.002 and 0.007 inches water gauge (w.g.); and 4) the buildings ventilation system was operated during sampling, albeit not at the capacity ideally envisioned.

Two types of high volume samplers were used on the site, as indicated in the plan: Nine Dry Filter Units (DFUs), rugged sampling pumps created for military applications that operate at approximately 15 cubic feet per minute (cfm), were shipped by the EPA from storage on the west coast and 16 Total Suspended Particulate (TSPs) samplers that nominally operate between 40 and 60 cfm were obtained by MARCOR from two rental sources. Also, as requested by the TWG, Teflon (PTFE) filters were ordered for both the DFUs and TSPs. Additionally, PTFE-coated filters were ordered for the TSP units in case the pure Teflon filters created too much resistance.

On November 30th, wipe samples were collected from supply diffusers on every floor. All wipe and HEPA sock samples identified in the plan were collected over the entire sampling period. Based on recommendations of the federal experts onsite the following additional samples were collected on Thursday, December 7th:

- Wipe sample of the top of ceiling tiles in the mail room on the first floor;
- HEPA sock sample of all three filters on one of the negative air machines; and
- One wipe sample in each of the stairwells.

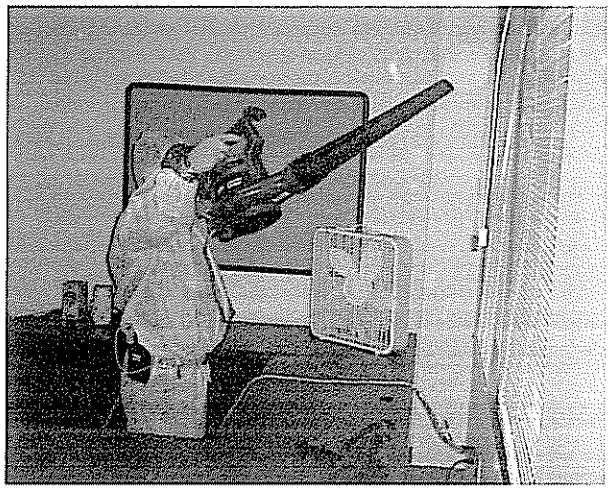
On November 30th, sampling locations previously indicated in the plan were verified by a representative of the independent third party firm hired by the owner to conduct air sampling, URS Corporation, to ensure the pumps could be operated in those locations. Very few adjustments were needed. On December 1st, all of the DFU and TSP samplers were calibrated following procedures recommended by the manufacturers. The final sampling locations were approved that afternoon by two Certified Industrial Hygienists.

On December 4th, the TSP samplers were calibrated with both the pure Teflon 8x10 filters and Teflon-coated glass fiber filters. The pure Teflon 8x10 filters were found to be too resistant to allow acceptable airflow (10 cfm). The Teflon-coated glass fiber filters, however, calibrated at approximately 49 cfm, a significantly greater flow than the pure Teflon filters. Consequently, the decision was made, in conjunction with the federal experts on the site, to utilize the Teflon-coated filters for all TSP samples.

URS commenced the air sampling program on the third floor on December 4th, after the MARCOR crew had placed all pumps, HEPA filtration units, and fans in the chosen locations on the third floor and completed sealing all major penetrations between the third and second floors.

Three members of the MARCOR crew used leaf-blowers to direct a stream of air against all surfaces in the floor, including computers, to stir up settled dust. (See photo 1).

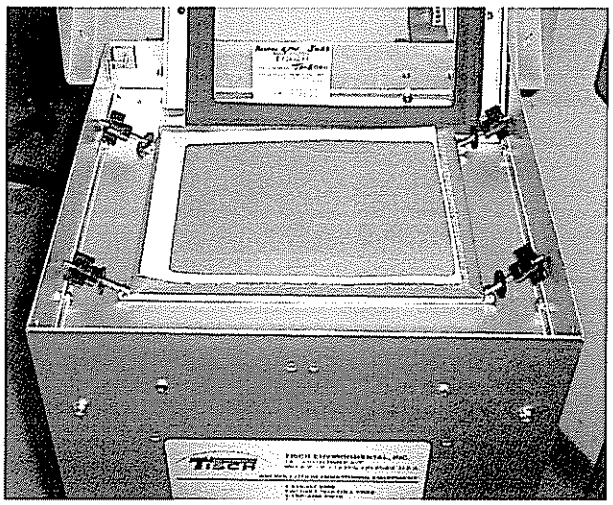
Photo 1. Leafblowing prior to sampling at 5401 Broken Sound Boulevard.



Sampling consisted of using fourteen total TSP units (one instrument had a broken recorder and one was held in reserve) and seven DFUs (one, again, held in reserve). A sampling period of 20 hours was calculated as a conservative target for achieving three air changes with the sampling equipment available.

URS staff members entered the containment approximately every three hours to log the flow rates of the pumps and ensure there were no problems. Flow was checked on the TSP units by observing the built-in chart recorder and a flow meter was used to check flow in the DFUs. Observations of the TSP samplers indicated an even distribution of fine dust on the filters and very little pressure drop from loading over the 20 hours. (See photo 2).

Photo 2. TSP unit after sampling showing coating of dust on filter.



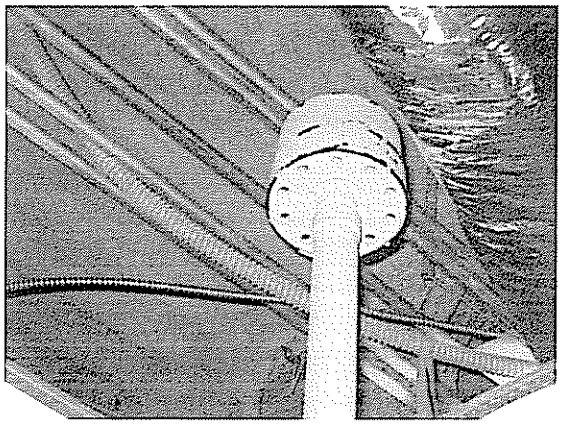
By agreement with the TWG, filters were to be changed whenever a sample experienced a 20 percent pressure drop. No samples had to be changed due to pressure drop on any floor during the entire sampling period.

On December 5th, after the requisite 20-hour sampling period, the samples were removed from the samplers. It took approximately 7 hours to decontaminate and move the HEPA filtration units, fans, electric cords and sampling pumps to the second floor. After this equipment movement, the procedures were the same as on the third floor: the pumps were loaded with filter media, then the fans and HEPA ventilation units were started and finally three members of the crew walked throughout the floor forcing air from leaf blowers onto all surfaces, window blinds and all equipment, particularly computers. The leaf-blowing took approximately 45 minutes.

The process was repeated on December 6th for the first floor, but Tony Intrepido, a member of the TWG who arrived that day, raised concerns about the need to sample

in the plenum. Consequently, with the approval of the federal experts on site, two of the DFU units were equipped with extended sampling probes so they could pull air out of the ceiling plenum. (See photo 3). Recognizing that the ventilation flow in the plenum was insufficient to stir dust settled on the tops of ceiling tiles, leaf blowers were used to blow the dust off of ceiling tiles near the sample inlets.

Photo 3. DFU sampling probe in return air plenum.



These special DFU pumps were moved every four hours so other areas of the plenum could be sampled. Samples were removed from the pumps in the late evening. Shortly after the samples were removed, a representative of MSI, the laboratory performing the analysis of the samples, arrived on site to arrange for a formal exchange of the samples through an executed chain of custody, signed by a representative of URS for the air samples and a representative of MARCOR for the wipe and HEPA sock samples.

The samples had been maintained inside the containment in sealed boxes prior to the exchange. Each DFU sample had been placed in a 50 milliliter conical tube and the cap screwed tight. The tube was placed into a biohazard bag that was sealed after excess air had been removed. This was then placed into a large ziplock bag that was sealed and then further protected with duct tape over the sealed top.

TSP filters were placed into a ziplock bag that had excess air removed before being sealed shut. Some bags had tops folded over for ease of insertion into an outer, second ziplock bag. This exterior bag was sealed and secured with duct tape at the top, as well.

All sample bags were then brought into the decon section of the airlock and the exterior surfaces were rinsed with an aqueous bleach solution and then lightly rinsed with a water solution. Sample bags were then patted dry with paper towels. All waste materials were placed into trash bags within the contaminated section of the airlock.

The onsite lab representative transferred the sealed bags into DOT-approved shipping containers. She had received the requisite DOT training to ship hazardous materials and had previously shipped the samples collected in the basement at 5401 Broken Sound Boulevard in May 2006. The bags were not opened until after being placed in a biosafety hood at the lab in Texas, just prior to analysis.

4. Worker Safety and Health

The protection of all entrants into the building was given primacy over all other aspects of the sampling effort. The HASP entitled "Health and Safety Plan, Version 2.0, for Final Clearance Sampling of the Upper Three Floors, 5401 Broken Sound Boulevard", dated October 24, 2006 was approved by Terry Stilman, the Federal On-Scene Coordinator on November 21, 2006, after two issues had been address. As much as practicable, the HASP was closely followed. No entry was permitted without Level C protection including full-face PAPR respirators, Tyvec suit with hood, and two pairs of nitrile gloves. Entrants were quantitatively fit tested onsite. All entry team members recorded body temperature and duration of entry in the building.

5. Quality Assurance/Quality Control

The QA/QC program identified in section 5.3 of the sampling plan was followed with only one field adjustment. Duplicate samples were not collected because it was considered less important to place samplers side-by-side than to assure every major area of the floors was represented. Field blanks were collected for air sample filters in the mail room on December 7th. Field blanks for wipe samples and HEPA sock samplers were collected in the mail room, as well.

All media types were carefully transferred to plastic bags in the trailer, away from containment, so they could serve as lab blanks, allowing MSI to look for contamination in the manufacturing process.

Also, as a critical element of the QA/QC program, a fully-executed chain-of-custody form accompanied the shipment to the laboratory. Microbiology Specialists, Inc., the AIHA-accredited laboratory that will be performing the analyses, provided a certified transportation specialist to package and ship the samples back to their laboratory in Houston Texas, following all DOT requirements for biohazards and the CDC requirements for interstate shipment of etiologic agents, found at 42 CFR Part 72 in the Federal Register, Vol. 45, No. 141-Monday, July 21, 1980.

6. Results

All sample results were reported by the lab to be negative for *Bacillus anthracis*. See Appendix A for sample descriptions and locations. Appendix B contains the actual certificates of analysis from MSI.

7. Conclusions

The sampling plan, approved by a technical working group of federal experts, was executed with minor alterations, apart from the pragmatic decision not to build vertical barriers on each floor. The original intent for splitting each floor into two

sections had been to ensure negative pressure could be achieved and to reduce the area that would have to be considered contaminated if a sample revealed a viable *Bacillus anthracis* spore.

All samples were reported by the lab as negative, i.e. the certificates of analysis indicated "no *Bacillus anthracis* isolated" (see Appendix B). The laboratory performing the testing is a Sentinel (formerly Level A) laboratory in the Laboratory Response Network. Sentinel Laboratories follow procedures for screening isolates for *Bacillus anthracis* that must include checking gram stain, hemolysis on blood agar, and motility. An isolate presumed to be *B. anthracis* screened by these methods would be a large gram-positive rod, non-hemolytic and nonmotile. All *Bacillus* species screened during this project were either beta-hemolytic or motile, so none fit the criteria for inclusion as presumptive *Bacillus anthracis*. Of interest, the field blanks were growing the same Bacillus species as the samples since the filters were not sterile.

These negative results, particularly after the thousands of previous negative results for spore strips, wipe samples and air tests in the building, reinforces that all criteria for removing the quarantine and opening the building have been met.

Appendix A:
Air sampling data and locations

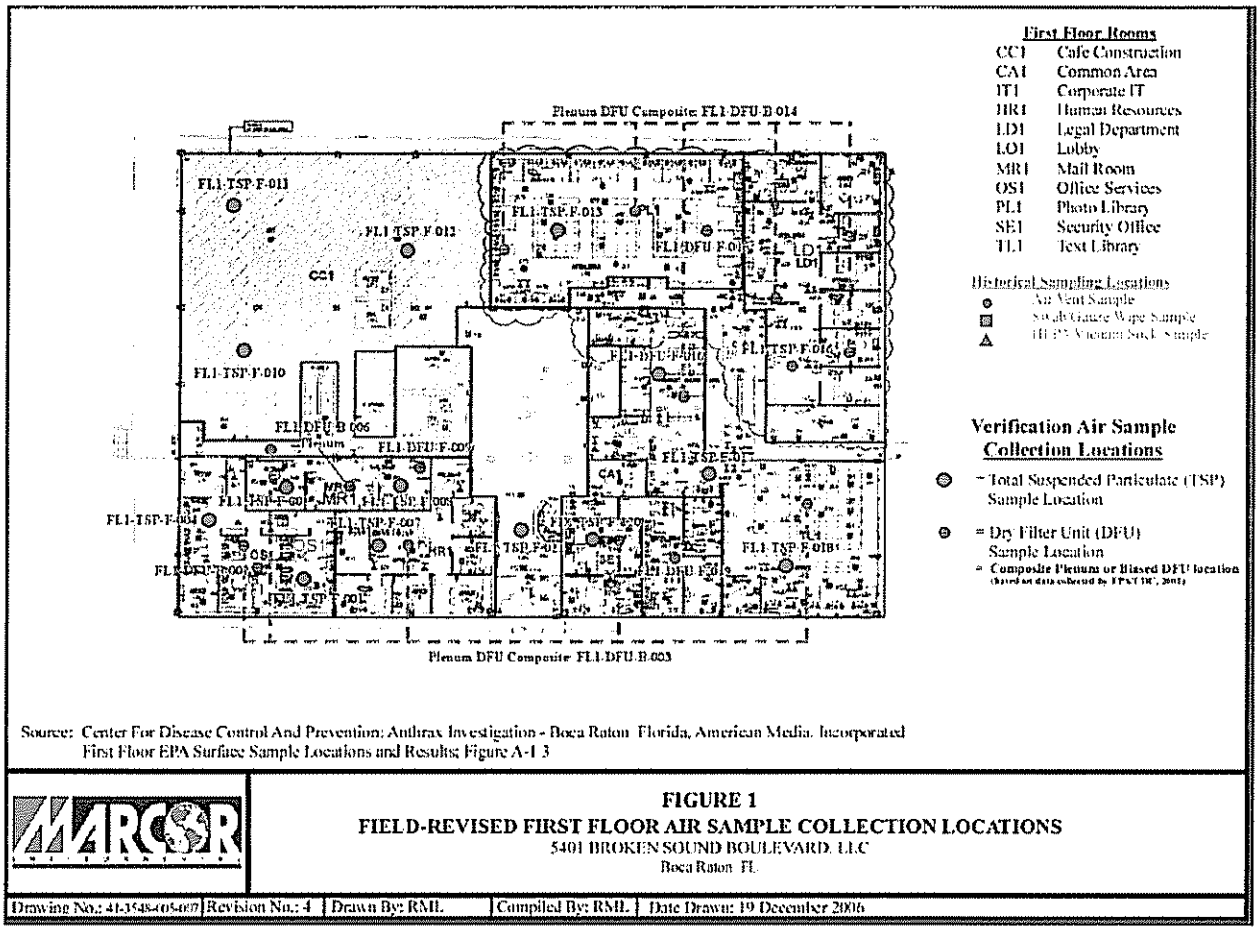
First Floor samples results

First Floor						
Sample ID	Location	Date	Time	Sample Type	Sample Collection Method	Result
FL1-WP-R-1	Café Construction - (Office Diffuser)	Cancelled. No ventilation system present				
FL1-WP-R-2	Legal Department Office - (Office Diffuser)	12/1/2006	17:40	Random	Wipe	ND
FL1-WP-R-3	Text Library Office - (Office Diffuser)	12/1/2006	18:05	Random	Wipe	ND
FL1-WP-R-4	Office Services Office - (Office Diffuser)	12/1/2006	18:00	Random	Wipe	ND
FL1-WP-R-5	Mail Room Office - (Counter Top)	12/1/2006	17:20	Random	Wipe	ND
FL1-WP-R-6	Mail Room Office - (Counter Top)	12/1/2006	17:30	Random	Wipe	ND
FL1-WP-R-7	Mail Room Office - (Tile Floor)	12/1/2006	17:35	Random	Wipe	ND
FL1-HS-R-1	Office Services Office - (Floor Carpet)	12/6/2006	13:20	Random	HEPA Vacuum Sock	ND
FL1-HS-R-2	Office Services Office - (Vertical Cloth Cubicle Divider)	12/6/2006	13:40	Random	HEPA Vacuum Sock	ND
FL1-HS-R-3	Legal Department Office - (Floor Carpet)	12/6/2006	14:00	Random	HEPA Vacuum Sock	ND
FL1-HS-R-4	Legal Department Office - (Floor Carpet)	12/6/2006	14:20	Random	HEPA Vacuum Sock	ND
FL1-HS-F-5	Mail Room - (Ceiling Tile Top in Plenum)	12/6/2006	13:00	Focused	HEPA Vacuum Sock	ND
FL1-TSP-F-001	Office Services	12/6-12/7 2006	19:29	Focused	Total Suspended Particulate	ND
FL1-DFU-B-002	Office Services	12/6-12/7 2006	19:25	Biased	Dry Filter Unit	ND
FL1-DFU-B-003	OS1, CC1, HR1, SE1, TL1 (Plenum Sample)	12/6-12/7 2006	20:07	Biased	Dry Filter Unit	ND
FL1-TSP-F-004	Office Services	12/6-12/7 2006	19:20	Focused	Total Suspended Particulate	ND
FL1-TSP-F-005	Mail Room	12/6-12/7 2006	22:30	Focused	Total Suspended Particulate	ND
FL1-DFU-B-006	Mail Room	12/6-12/7 2006	22:38	Biased	Dry Filter Unit	ND
FL1-TSP-F-007	Human Resources	12/6-12/7 2006	19:24	Focused	Total Suspended Particulate	ND
FL1-TSP-F-008	Mail Room	12/6-12/7 2006	22:35	Focused	Total Suspended Particulate	ND
FL1-DFU-F-009	Mail Room	12/6-12/7 2006	20:30	Focused	Dry Filter Unit	ND
FL1-TSP-F-010	Café Construction	12/6-12/7 2006	19:13	Focused	Total Suspended Particulate	ND
FL1-TSP-F-011	Café Construction	12/6-12/7 2006	19:06	Focused	Total Suspended Particulate	ND
FL1-TSP-F-012	Café Construction	12/6-12/7 2006	19:05	Focused	Total Suspended Particulate	ND
FL1-TSP-F-013	Photo Library	12/6-12/7 2006	18:58	Focused	Total Suspended Particulate	ND
FL1-DFU-B-014	PL1, CA1, LD1 (Plenum Sample)	12/6-12/7 2006	20:15	Biased	Dry Filter Unit	ND
FL1-DFU-F-015	Photo Library	12/6-12/7 2006	19:00	Focused	Dry Filter Unit	ND
FL1-DFU-F-016	Common Area	12/6-12/7 2006	18:45	Focused	Dry Filter Unit	ND
FL1-TSP-F-016	Legal Department	12/6-12/7 2006	18:50	Focused	Total Suspended Particulate	ND
FL1-TSP-F-017	Common Area	12/6-12/7 2006	18:45	Focused	Total Suspended Particulate	ND
FL1-TSP-F-018	Text Library	12/6-12/7 2006	18:32	Focused	Total Suspended Particulate	ND
FL1-DFU-F-019	Security Office	12/6-12/7 2006	18:30	Focused	Dry Filter Unit	ND
FL1-TSP-F-020	Security Office	12/6-12/7 2006	19:48	Focused	Total Suspended Particulate	ND
FL1-TSP-F-021	Lobby	12/6-12/7 2006	18:35	Focused	Total Suspended Particulate	ND

Notes: **ND** = No *Bacillus anthracis* isolated in sample Additional information may be found in the attached laboratory data report
NA = Not Applicable

PL1 = Photo Library - 1st Floor
CA1 = Common Area - 1st Floor
LD1 = Legal Department - 1st Floor
OS1 = Office Services - 1st Floor
CC1 = Café Construction - 1st Floor
HR1 = Human Resources - 1st Floor

Field-revised first floor air sample collection locations

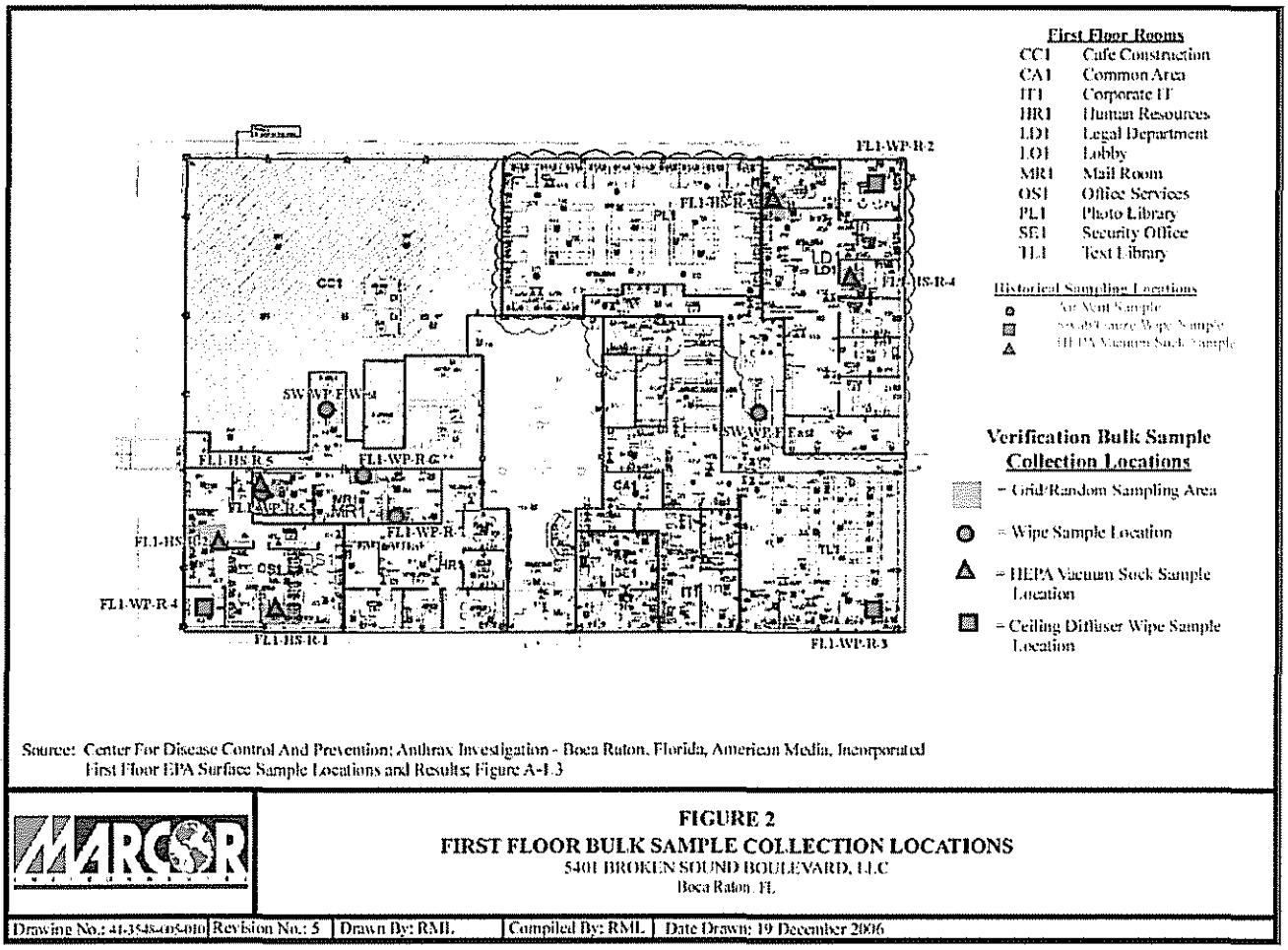


Source: Center For Disease Control And Prevention: Anthrax Investigation - Boca Raton Florida, American Media, Incorporated First Floor EPA Surface Sample Locations and Results Figure A-1.3

FIGURE 1
FIELD-REVISED FIRST FLOOR AIR SAMPLE COLLECTION LOCATIONS
5401 BROKEN SOUND BOULEVARD, LLC
Boca Raton, FL

Drawing No.: 41-3548-05-007	Revision No.: 4	Drawn By: RML	Compiled By: RML	Date Drawn: 19 December 2006

First floor bulk sample collection locations



Source: Center For Disease Control And Prevention; Anthrax Investigation - Boca Raton, Florida, American Media, Incorporated First Floor EPA Surface Sample Locations and Results; Figure A-1.3

FIGURE 2
FIRST FLOOR BULK SAMPLE COLLECTION LOCATIONS
5401 BROKEN SOUND BOULEVARD, LLC
Boca Raton, FL

Drawing No.: 41-3548-005-010	Revision No.: 5	Drawn By: RML	Compiled By: RML	Date Drawn: 19 December 2006

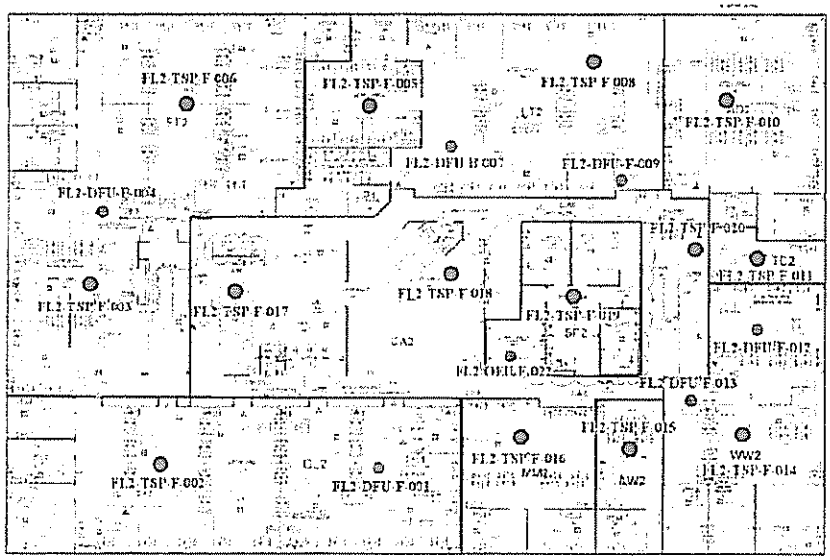
Second floor sampling results

Second Floor						
Sample ID	Location	Date	Time	Sample Type	Sample Collection Method	Result
FL2-WP-R-1	STAR - (Office Diffuser)	11/30/2006	17:00	Random	Wipe	ND
FL2-WP-R-2	Production Management Advertising - (Office Diffuser)	11/30/2006	17:10	Random	Wipe	ND
FL2-WP-R-3	WWW - (Office Diffuser)	11/30/2006	17:20	Random	Wipe	ND
FL2-WP-R-4	Globe - (Office Diffuser)	11/30/2006	16:50	Random	Wipe	ND
FL2-DFU-F-001	Globe	12/5-12/6 2006	16:40	Focused	Dry Filter Unit	ND
FL2-TSP-F-002	Globe	12/5-12/6 2006	14:40	Focused	Total Suspended Particulate	ND
FL2-TSP-F-003	STAR	12/5-12/6 2006	14:55	Focused	Total Suspended Particulate	ND
FL2-DFU-B-004	STAR	12/5-12/6 2006	15:00	Biased	Dry Filter Unit	ND
FL2-TSP-F-005	Laser Technologies	12/5-12/6 2006	15:06	Focused	Total Suspended Particulate	ND
FL2-TSP-F-006	STAR	12/5-12/6 2006	15:25	Focused	Total Suspended Particulate	ND
FL2-DFU-B-007	Laser Technologies	12/5-12/6 2006	15:20	Biased	Dry Filter Unit	ND
FL2-TSP-F-008	Laser Technologies	12/5-12/6 2006	15:30	Focused	Total Suspended Particulate	ND
FL2-DFU-F-009	Laser Technologies	12/5-12/6 2006	15:35	Focused	Dry Filter Unit	ND
FL2-TSP-F-010	Production Management Advertising	12/5-12/6 2006	15:40	Focused	Total Suspended Particulate	ND
FL2-TSP-F-011	Travel Desk	12/5-12/6 2006	15:55	Focused	Total Suspended Particulate	ND
FL2-DFU-F-012	WWW	12/5-12/6 2006	16:00	Focused	Dry Filter Unit	ND
FL2-DFU-F-013	WWW	12/5-12/6 2006	16:06	Focused	Dry Filter Unit	ND
FL2-TSP-F-014	WWW	12/5-12/6 2006	16:00	Focused	Total Suspended Particulate	ND
FL2-TSP-F-015	Auto World	12/5-12/6 2006	16:10	Focused	Total Suspended Particulate	ND
FL2-TSP-F-016	Mini Magazines	12/5-12/6 2006	16:22	Focused	Total Suspended Particulate	ND
FL2-TSP-F-017	Common Area	12/5-12/6 2006	15:15	Focused	Total Suspended Particulate	ND
FL2-TSP-F-018	Common Area	12/5-12/6 2006	16:25	Focused	Total Suspended Particulate	ND
FL2-TSP-F-019	Common Area	12/5-12/6 2006	16:15	Focused	Total Suspended Particulate	ND
FL2-TSP-F-020	Common Area	12/5-12/6 2006	15:58	Focused	Total Suspended Particulate	ND
FL2-TSP-F-021	Cancelled Sample Location. Utilize 21 Serviceable Air Sampling Units					
FL2-DFU-F-022	Common Area	12/5-12/6 2006	16:20	Focused	Dry Filter Unit	ND

Notes: ND = No *Bacillus anthracis* isolated in sample Additional information may be found in the attached laboratory data report
NA = Not Applicable

PL1 = Photo Library - 1st Floor
CA1 = Common Area - 1st Floor
LD1 = Legal Department - 1st Floor
OS1 = Office Services - 1st Floor
CC1 = Café Construction - 1st Floor
HR1 = Human Resources - 1st Floor

Field revised second floor air sample collection locations



Second Floor Rooms

AW2	Auto World
CA2	Common Area
GL2	Globe
LT2	Laser Technologies
MM2	Mini Mags
AD2	Production Management Advertising
SP2	Special Video Production
ST2	STAR
TD2	Travel Desk
WW2	WWW

Historical Sampling Locations

Verification Air Sample Collection Locations

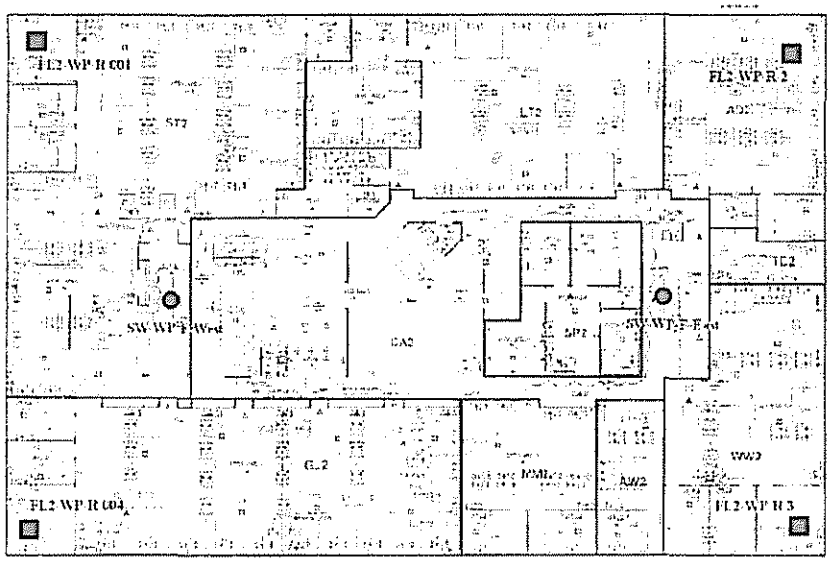
- Total Suspended Particulate (TSP) Sample Location
- Dry Filter Unit (DFU) Sample Location
- Biased DFU location

Source: Center For Disease Control And Prevention: Anthrax Investigation - Boca Raton, Florida, American Media, Incorporated Second Floor EPA Surface Sample Locations and Results: Figure A-2.3

FIGURE 3
FIELD REVISED - SECOND FLOOR AIR SAMPLE COLLECTION LOCATIONS
5401 BROKEN SOUND BOULEVARD, LLC
Boca Raton, FL

Drawing No.: 41-3548-005.008	Revision No.: 1	Drawn By: RML	Compiled By: RML	Date Drawn: 19 December 2006

Second floor bulk sample collection locations



Second Floor Rooms

AW2	Auto World
CA2	Common Area
GL2	Globe
LT2	Laser Technologies
MM2	Mini Mags
AD2	Production Management Advertising
SP2	Special Video Production
ST2	STAR
TD2	Travel Desk
WW2	WWW

Historical Sampling Locations

Verification Bulk Sample Collection Locations

- Ceiling Diffuser Wipe Sample Location

Source: Center For Disease Control And Prevention: Anthrax Investigation - Boca Raton, Florida, American Media, Incorporated Second Floor EPA Surface Sample Locations and Results: Figure A-2.3

FIGURE 4
SECOND FLOOR BULK SAMPLE COLLECTION LOCATIONS
5401 BROKEN SOUND BOULEVARD, LLC
Boca Raton, FL

Drawing No.: 41-3543-035-5001	Revision No.: 1	Drawn By: RML	Compiled By: RML	Date Drawn: 19 December 2006

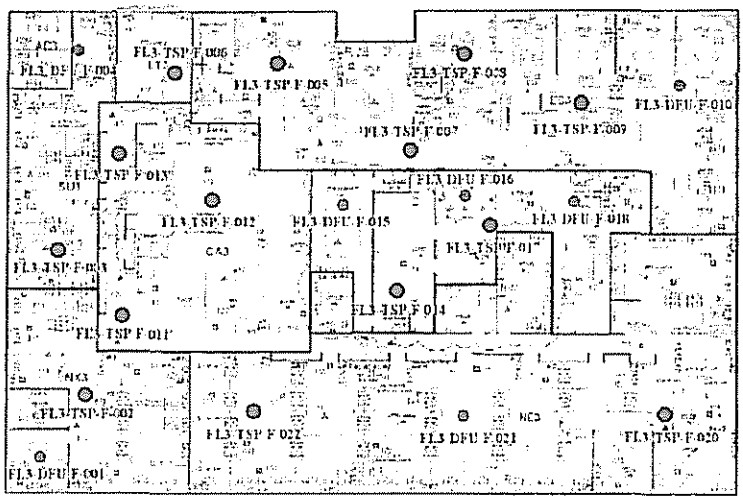
Third floor sampling results

Third Floor						
Sample ID	**Location**	**Date**	**Time**	**Sample Type**	**Sample Collection Method**	**Result**
FL3-WP-R-1	Acounting Office - (Office Diffuser)	11/30/2006	16:00	Random	Wipe	ND
FL3-WP-R-2	Executive Suites - (Office Diffuser)	11/30/2006	16:10	Random	Wipe	ND
FL3-WP-R-3	National Enquirer - (Office Diffuser)	11/30/2006	16:20	Random	Wipe	ND
FL3-WP-R-4	National Examiner - (Office Diffuser)	11/30/2006	15:50	Random	Wipe	ND
FL3-DFU-F-001	National Examiner	12/4-12/5 2006	12:15	Focused	Dry Filter Unit	ND
FL3-TSP-F-002	National Examiner	12/4-12/5 2006	12:17	Focused	Total Suspended Particulate	ND
FL3-TSP-F-003	SUN	12/4-12/5 2006	12:45	Focused	Total Suspended Particulate	ND
FL3-DFU-F-004	Accounting	12/4-12/5 2006	12:56	Focused	Dry Filter Unit	ND
FL3-TSP-F-005	Executive Suites	12/4-12/5 2006	13:10	Focused	Total Suspended Particulate	ND
FL3-TSP-F-006	Laser Technologies	12/4-12/5 2006	13:05	Focused	Total Suspended Particulate	ND
FL3-TSP-F-007	Executive Suites	12/4-12/5 2006	13:15	Focused	Total Suspended Particulate	ND
FL3-TSP-F-008	Executive Suites	12/4-12/5 2006	13:25	Focused	Total Suspended Particulate	ND
FL3-TSP-F-009	Executive Suites	12/4-12/5 2006	13:33	Focused	Total Suspended Particulate	ND
FL3-DFU-F-010	Executive Suites	12/4-12/5 2006	13:40	Focused	Dry Filter Unit	ND
FL3-TSP-F-011	Common Area	12/4-12/5 2006	12:30	Focused	Total Suspended Particulate	ND
FL3-TSP-F-012	Common Area	12/4-12/5 2006	13:15	Focused	Total Suspended Particulate	ND
FL3-TSP-F-013	Common Area	12/4-12/5 2006	12:54	Focused	Total Suspended Particulate	ND
FL3-TSP-F-014	Common Area	12/4-12/5 2006	14:02	Focused	Total Suspended Particulate	ND
FL3-DFU-F-015	Common Area	12/4-12/5 2006	14:05	Focused	Dry Filter Unit	ND
FL3-DFU-F-016	Common Area	12/4-12/5 2006	13:20	Focused	Dry Filter Unit	ND
FL3-TSP-F-017	Common Area	12/4-12/5 2006	13:50	Focused	Total Suspended Particulate	ND
FL3-DFU-F-018	Common Area	12/4-12/5 2006	13:04	Focused	Dry Filter Unit	ND
FL3-TSP-F-019	Cancelled Sample Location. Utilize 21 Serviceable Air Sampling Units					
FL3-TSP-F-020	National Enquirer	12/4-12/5 2006	13:55	Focused	Total Suspended Particulate	ND
FL3-DFU-F-021	National Enquirer	12/4-12/5 2006	13:58	Focused	Dry Filter Unit	ND
FL3-TSP-F-022	National Enquirer	12/4-12/5 2006	14:10	Focused	Total Suspended Particulate	ND

Notes: **ND** = No *Bacillus anthracis* isolated in sample Additional information may be found in the attached laboratory data report
NA = Not Applicable

PL1 = Photo Library - 1st Floor
CA1 = Common Area - 1st Floor
LD1 = Legal Department - 1st Floor
OS1 = Office Services - 1st Floor
CC1 = Café Construction - 1st Floor
HR1 = Human Resources - 1st Floor

Field-revised third floor air sample collection locations



Second Floor Rooms

AC3	Accounting
CA3	Common Area
ES3	Executive Suites
LT3	Laser Technologies
NE3	National Enquirer
NX3	National Examiner
SU3	SUN

Historical Sampling Locations

Verification Air Sample Collection Locations

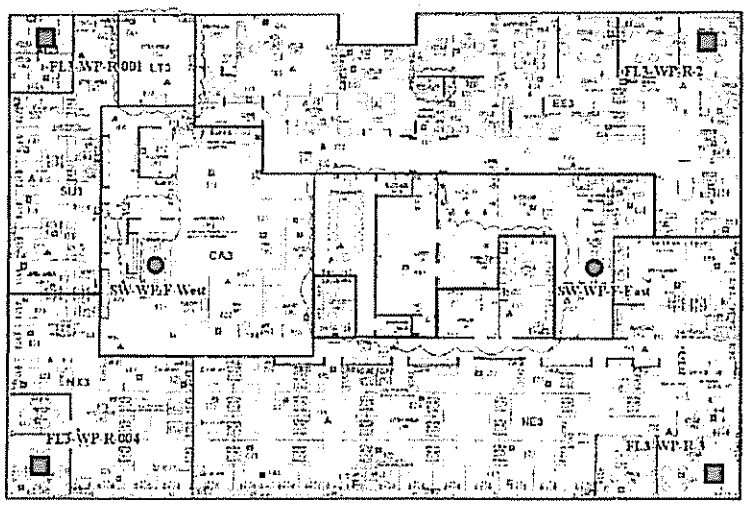
- Total Suspended Particulate (TSP) Sample Location
- Dry Filter Unit (DFU) Sample Location

Source: Center For Disease Control And Prevention: Anthrax Investigation - Boca Raton Florida. American Media Incorporated Third Floor EPA Surface Sample Locations and Results: Figure A-3.3

FIGURE 5
FIELD-REVISED THIRD FLOOR AIR SAMPLE COLLECTION LOCATIONS
5401 BROKEN SOUND BOULEVARD, LLC
Boca Raton, FL

Drawing No.: 41-3548-0840	Revision No.: 2	Drawn By: RML	Compiled By: RML	Date Drawn: 19 December 2006

Third floor bulk sample collection locations



Second Floor Rooms

AC3	Accounting
CA3	Common Area
ES3	Executive Suites
LT3	Laser Technologies
NE3	National Enquirer
NX3	National Examiner
SU3	SUN

Historical Sampling Locations

- Air Vent Sample
- Swab Gauze Wipe Sample
- HEPA Vacuum Sock Sample

Verification Bulk Sample Collection Locations

- Ceiling Diffuser Wipe Sample Location

Source: Center For Disease Control And Prevention: Anthrax Investigation - Boca Raton, Florida, American Media, Incorporated Third Floor EPA Surface Sample Locations and Results; Figure A-3.3

MARCOR

FIGURE 6
THIRD FLOOR BULK SAMPLE COLLECTION LOCATIONS
5401 BROKEN SOUND BOULEVARD, LLC
Boca Raton, FL

Drawing No.: 41-3548-005-0012	Revision No.: 2	Drawn By: RML	Compiled By: RML	Date Drawn: 19 December 2006

Sample results for other samples and QC/QA samples

Other						
SW-WP-F-East	East Stair Well - (Basement to 3rd Floor)	12/7/2006	12:40	Focused	Wipe	ND
SW-WP-F-West	West Stair Well - (Basement to 3rd Floor)	12/7/2006	12:35	Focused	Wipe	ND
QA/QC						
FL1-WP-QA-LB	Field Office Trailer	12/1/2006	10:05	QA/QC	Wipe	ND
FL1-HS-QA-LB	Field Office Trailer	12/1/2006	10:45	QA/QC	HEPA Vacuum Sock	ND
FL1-TSP-QA-LB	Field Office Trailer	12/7/2006	17:49	QA/QC	Total Suspended Particulate	ND
FL1-DFU-QA-LB	Field Office Trailer	12/7/2006	17:43	QA/QC	Dry Filter Unit	ND
FL1-TSP-QA-FB	First Floor Lobby	12/6-12/7 2006	8:15	QA/QC	Total Suspended Particulate	ND
FL1-DFU-QA-FB	First Floor Lobby	12/6-12/7-2006	8:15	QA/QC	Dry Filter Unit	ND
FL1-WP-QA-FB	Mail Room	12/7/2006	12:17	QA/QC	Wipe	ND
FL1-HS-QA-FB	Mail Room	12/7/2006	12:19	QA/QC	HEPA Vacuum Sock	ND
HV-HS-QA-Filter	Café Construction Area (HEPA Vacuum Filter Sample)	12/7/2006	13:00	QA/QC	HEPA Vacuum Sock	ND

Notes: **ND** = No *Bacillus anthracis* isolated in sample Additional information may be found in the attached laboratory data report
NA = Not Applicable

PL1 = Photo Library - 1st Floor
CA1 = Common Area - 1st Floor
LD1 = Legal Department - 1st Floor
OS1 = Office Services - 1st Floor
CC1 = Café Construction - 1st Floor
HR1 = Human Resources - 1st Floor

Appendix B:

Certificates of analysis from MSI

msi®

microbiology specialists inc.

URS
PROJECT: 5401 Broken Sound Boulevard

LAB REPORT - ENV 06-0591

Send Report To	Send Invoice To
Brian D. Stymest Senior Industrial URS 5 Industial Way Salem, NH 03079-2830	Brian D. Stymest Senior Industrial URS 5 Industial Way Salem, NH 03079-2830
Telephone number	**Fax Number**
603-893-0616	603-893-6240
Samples	**Purchase Order**
24 Samples sent in for Bacillus anthracis cultures Samples were received in an acceptable condition	Verbal
Collection Date	**Delivery Date**
12/4/2006	12/9/2006
Special Instructions – Additional Information	

Texas Mould Analysis Laboratory # LAB0126

LAB REPORT - ENV 06-0591

ENV 06-0591-2570: 1 FL1-TSP-QA-FB
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2571: 2 FL1-DFU-QA-FB
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated

ENV 06-0591-2572: 3 FL1-TSP-F-001
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2573: 4 FL1-DFU-B-002
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2574: 5 FL1-DFU-B-003
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2575: 6 FL1-TSP-F-004
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2576: 7 FL1-TSP-F-005
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2577: 8 FL1-DFU-B-006
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2578: 9 FL1-TSP-F-007
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2579: 10 FL1-TSP-F-008
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2580: 11 FL1-DFU-F-009
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2581: 12 FL1-TSP-F-010
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2582: 13 FL1-TSP-F-011
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2583: 14 FL1-TSP-F-012
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2584: 15 FL1-TSP-F-013
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2585: 16 FL1-DFU-B-014
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2586: 17 FL1-DFU-F-015
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2587: 18 FL1-DFU-F-016
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2588: 19 FL1-TSP-F-016
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2589: 20 FL1-TSP-F-017
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2590: 21 FL1-TSP-F-018
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2591: 22 FL1-DFU-F-019
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2592: 23 FL1-TSP-F-020
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0591-2593: 24 FL1-TSP-F-022
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

Analyst:	12/26/2006	Ernest Trevino MT(ASCP)/aa
Reviewer:	12/26/2006	Alice S. Weissfeld PhD, D(ABMM) Technical Manager/Lab Director

This testing has been performed according to MSI procedure number(s)
Date of analysis: 12/12/2006

ENV-06-0591

URS

URS CORPORATION
AIR SAMPLING CHAIN OF CUSTODY

8/04 | Rev. 1 | 1 of 1

IH-15

Project Number:	
Client:	Crown Companies
Location:	5401 Broken Sound Boulevard, Boca Raton, FL
Project Manager:	JOHN FREITAS / RUG CAMARA
Collected By:	RJS Date: 12/04/06-12/07/06
~~Turnaround Time:~~	

Sample Description	Date	Time	Average Flow Rate	Analysis Requested
FLI-TSP-QA-FB	On: 12/7/06 Off:	On: 0115 Off: 0815 Total	—	Bacillus anthracis culture
FLI-DFU-QA-FB	On: 12/7/06 Off:	On: 0115 Off: 0815 Total	—	
FLI-TSP-F-001	On: 12/6/06 Off: 12/7/06	On: 2134 Off: 1929 Total 21 hrs 57m	62.27 CFM	
FLI-DFU-B-002	On: 12/6/06 Off: 12/7/06	On: 2138 Off: 1925 Total 21 hrs 47m	16.57 CFM	
FLI-DFU-B-003 MOBILE COMPOSITE	On: 12/6/06 Off: 12/7/06	On: 2154 Off: 2057 Total 22 hrs 13m	15.88 CFM	
FLI-TSP-F-004	On: 12/6/06 Off: 12/7/06	On: 2140 Off: 1420 Total 21 hr 40min	47.32 CFM	
FLI-TSP-F-005*	On: 12/6/06 Off: 12/7/06	On: 2140 Off: 2230 Total ~21 hrs	50.31 CFM	
FLI-DFU-B-006*	On: 12/6/06 Off: 12/7/06	On: 2140 Off: 2238 Total ~21 hrs	17.43 CFM	
FLI-TSP-F-007	On: 12/6/06 Off: 12/7/06	On: 2139 Off: 1924 Total 21hr 47min	54.30	
FLI-TSP-F-008*	On: 12/6/06 Off: 12/7/06	On: 2140 Off: 2235 Total ~20 hrs 55min	51.31	

Relinquished By	Time: 0840 Date: 12/08/06	Received By: Deborah D Mandra	Time: 8:40 Date: 12/8/06
Relinquished By	Time: Date:	Received By: DEC 11 2:17 PM	Time: Date:

* EXTENDED RUN DUE TO CIRCUIT OVERLOAD (POWER OUT ~ 4 hrs)

URS	URS CORPORATION AIR SAMPLING CHAIN OF CUSTODY	8/04	Rev. 1	1 of 1
		IH-15		

Project Number:	
Client:	Crown Companies
Location:	5401 Broken Sound Boulevard, Boca Raton, FL
Project Manager:	JOHN FREITAS / ROB LAMARY
Collected By:	URS
Date:	12/04/06-12/07/06
~~Turnaround Time:~~	

Sample Description	Date	Time	Average Flow Rate	Analysis Requested
FLI-DFU-F-009	On: 12/6/06 Off: 12/7/06	On: 2200 Off: 2030 Total 22 hrs 30 min	18 CFM	Bacillus Anthracis Culture
FLI-TSP-F-010	On: 12/6/06 Off: 12/7/06	On: 2145 Off: 1413 Total 21 hrs 28 min	40.35 CFM	
FLI-TSP-F-011	On: 12/6/06 Off: 12/7/06	On: 2145 Off: 1406 Total 21 hrs 21 min	46.12 CFM	
FLI-TSP-F-012	On: 12/6/06 Off: 12/7/06	On: 2145 Off: 1905 Total 21 hrs 21 min	49.32 CFM	
FLI-TSP-F-013	On: 12/6/06 Off: 12/7/06	On: 2146 Off: 1858 Total 21 hrs 12 min	51.31 CFM	
FLI-DFU-B-014 mobile composite	On: 12/6/06 Off: 12/7/06	On: 2145 Off: 2015 Total 22 hrs 22 min	15.5 CFM	
FLI-DFU-F-015	On: 12/6/06 Off: 12/7/06	On: 2146 Off: 1900 Total 21 hrs 14 min	17 CFM	
FLI-DFU-F-016	On: 12/6/06 Off: 12/7/06	On: 2150 Off: 1845 Total 20hr 55	17.86	
FLI-TSP-F-016	On: 12/6/06 Off: 12/7/06	On: 2149 Off: 1850 Total 21 hrs 01 min	44.33	
FLI-TSP-F-017	On: 12/6/06 Off: 12/7/06	On: 2150 Off: 1845 Total 20hrs 55 min.	47.32	

Relinquished By	Time: 0840 Date: 12/08/06	Received By: Deborah D. Mandrin	Time: 8:40 Date: 12/8/06
Relinquished By	Time: Date:	Received By:	Time: Date:

URS	URS CORPORATION AIR SAMPLING CHAIN OF CUSTODY	8/04	Rev. 1	1 of 1
		IH-15		

Project Number:	
Client:	Crown Companies
Location:	5401 Broken Sound Boulevard, Boca Raton, FL
Project Manager:	JOHN FREITAS / ROB LAMMY
Collected By:	BRS Date: 12/04/06-12/07/06
~~Turnaround Time:~~	

Sample Description	Date	Time	Average Flow Rate	Analysis Requested
FL1-TSP-F-018	On: 2153 Off: 1832 20hrs 39m	On: 12/6/06 Off: 12/7/06 Total	45.33 CFM	Bacillus Anthracis culture
FL1-DFU-F-019	On: 12/6/06 Off: 12/7/06	On: 2157 Off: 1830 Total 20hr 33Min	16.71 CFM	
FL1-TSP-F-020	On: 12/6/06 Off: 12/7/06	On: 2155 Off: 1835 Total 20hrs 40mn	48.59 CFM	
FL-TSP-F-022	On: 12/6/06 Off: 12/7/07	On: 2135 Off: 1948 Total ~~22hrs 73mn~~	51.06	
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		

Relinquished By	Time: 0840 Date: 12/08/06	Received By: Deborah D. Mandras	Time: 8140 Date: 12/8/06
Relinquished By	Time: Date:	Received By:	Time: Date:

★ Sample #-021, Deleted from sampling plan

msi®

microbiology specialists inc.

URS
PROJECT: 5401 Broken Sound Boulevard

LAB REPORT - ENV 06-0592

Send Report To	Send Invoice To
Brian D. Stymest Senior Industrial URS 5 Industial Way Salem, NH 03079-2830	Brian D. Stymest Senior Industrial URS 5 Industial Way Salem, NH 03079-2830
Telephone number	**Fax Number**
603-893-0616	603-893-6240
Samples	**Purchase Order**
21 Samples sent in for Bacillus anthracis cultures Samples were received in an acceptable condition	Verbal
Collection Date	**Delivery Date**
12/4/2006	12/9/2006
Special Instructions – Additional Information	

Texas Mould Analysis Laboratory # LAB0126

8911 Interchange Drive • Houston, Texas 77054-2507
Tel: 713-663-6888 • Fax: 713-663-7722 • Email: micro@microbiologyspecialists.com • Web:www.microbiologyspecialists.com
CLIA 45D0660152 • CAP 2664301 • Medicare CL0515 • New York State 3965 844052A1

AIHA ACCREDITED LABORATORY 103007

LAB REPORT - ENV 06-0592

ENV 06-0592-2594: 1 FL2-DFU-F-001
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2595: 2 FL2-TSP-F-002
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2596: 3 FL2-TSP-F-003
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2597: 4 FL2-DFU-B-004
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2598: 5 FL2-TSP-F-005
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2599: 6 FL2-TSP-F-006
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2600: 7 FL2-DFU-B-007
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2601: 8 FL2-TSP-F-008
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2602: 9 FL2-DFU-F-009
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2603: 10 FL2-TSP-F-010
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2604: 11 FL2-TSP-F-011
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2605: 12 FL2-DFU-F-012
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2606: 13 FL2-DFU-F-013
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2607: 14 FL2-TSP-F-014
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2608: 15 FL2-TSP-F-015
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2609: 16 FL2-TSP-F-016
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2610: 17 FL2-TSP-F-017
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2611: 18 FL2-TSP-F-018
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2612: 19 FL2-TSP-F-019
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2613: 20 FL2-TSP-F-020
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0592-2614: 21 FL2-DFU-F-022
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

Analyst:	12/26/2006	Ernest Trevino MT(ASCP)/aa
Reviewer:	12/26/2006	Alice S Weissfeld PhD, D(ABMM) Technical Manager/Lab Director

This testing has been performed according to MSI procedure number(s)
Date of analysis: 12/12/2006

ENV 06-0592

URS

URS CORPORATION

AIR SAMPLING CHAIN OF CUSTODY

8/04 | Rev. 1 | 1 of 1

IH-15

Project Number:	
Client:	Crown Companies
Location:	5501 Broken Sound Boulevard, Boca Raton, FL
Project Manager:	JOHN FREITAS / ROB LAMARE
Collected By:	BRS
Date:	12/04/06-12/07/06
~~Turnaround Time:~~	

Sample Description	Date	Time	Average Flow Rate	Analysis Requested
FL2-DFU-F-001	On: 12/5/06 Off: 12/6/06	On: 1926 Off: 1640 Total 21hrs 14mins	17.13 CFM	Bacillus Anthracis Culture
FL2-TSP-F-002	On: 12/5/06 Off: 12/6/06	On: 1825 Off: 1440 Total 20hr 15min	57.56 CFM	
FL2-TSP-F-003	On: 12/5/06 Off: 12/6/06	On: 1840 Off: 1455 Total 20hr 15m	66.24 CFM	
FL2-DFU-B-004	On: 12/5/06 Off: 12/6/06	On: 1845 Off: 1500 Total 20hr 15m	16 CFM	
FL2-TSP-F-005	On: 12/5/06 Off: 12/6/06	On: 1847 Off: 1506 Total 20hrs 19mins	53.22 CFM	
FL2-TSP-F-006	On: 12/5/06 Off: 12/6/06	On: 1855 Off: 1525 Total	54.31 CFM	
FL2-DFU-B-007	On: 12/5/06 Off: 12/6/06	On: 1852 Off: 1520 Total 20hr 28mins	16.88 CFM	
FL2-TSP-F-008	On: 12/5/06 Off: 12/6/06	On: 1857 Off: 1530 Total 20hr 33mins	54.31 CFM	
FL2-DFU-F-009	On: 12/5/06 Off: 12/6/06	On: 1859 Off: 1535 Total 20hrs 36mins	17 CFM	
FL2-TSP-F-010	On: 12/5/06 Off: 12/6/06	On: 1900 Off: 1540 Total 20hrs 40mins	47.80 CFM	

Relinquished By	Time: 0842 Date: 12/8/06	Received By:	Time: 8:42 Date: 12/8/06
Brian R Shumate		Deborah D Mandras	

Relinquished By	Time: Date:	Received By: 11 330 90	Time: Date:

URS	URS CORPORATION AIR SAMPLING CHAIN OF CUSTODY	8/04	Rev. 1	1 of 1
		IH-15		

Project Number:	
Client:	Crown Companies
Location:	5401 Broken Sound Boulevard Boca Raton, FL
Project Manager:	JOHN FREITAS / ROB LAMARE
Collected By:	RDS Date: 12/04/06-12/07/06
~~Turnaround Time:~~	

Sample Description	Date	Time	Average Flow Rate	Analysis Requested
FL2-TSP-F-011	On: 12/5/06 Off: 12/6/06	On: 1903 Off: 1553 Total 20hrs 52min	49.97 CFM	BACILLUS Anthracis Culture
FL2-DFU-F-012	On: 12/5/06 Off: 12/6/06	On: 1906 Off: 1600 Total 20 hrs 54min	15.63 CFM	
FL2-DFU-F-013	On: 12/5/06 Off: 12/6/06	On: 1910 Off: 1606 Total 20hrs 56min	18.75 CFM	
FL2-TSP-F-014	On: 12/5/06 Off: 12/6/06	On: 1908 Off: 1600 Total 20hr 52min	54.31 CFM	
FL2-TSP-~~F-015~~ F-015	On: 12/5/06 Off: 12/6/06	On: 1913 Off: 1610 Total 20hrs 57min	52.14 CFM	
FL2-TSP-F-016	On: 12/5/06 Off: 12/6/06	On: 1919 Off: 1622 Total 21hrs 03min	42.38 CFM	
FL2-TSP-F-017	On: 12/5/06 Off: 12/6/06	On: 1850 Off: 1515 Total 20hr 25min	49.97 CFM	
FL2-TSP-F-018	On: 12/5/06 Off: 12/6/06	On: 1925 Off: 1625 Total 21hrs	48.89 CFM	
FL2-TSP-F-019	On: 12/5/06 Off: 12/6/06	On: 1915 Off: 1615 Total 21 hrs	51.00 CFM	
FL2-TSP-F-020	On: 12/5/06 Off: 12/6/06	On: 1905 Off: 1558 Total 20hrs 53min	46.72 CFM	

Relinquished By	Time: 0842 Date: 12/8/06	Received By: Deborah D. Marsden	Time: 8:42 Date: 12/8/06
Relinquished By	Time: Date:	Received By: 11 DEC 06 2:42 PM	Time: Date:

Sample # -021 REMOVED (no sample submitted)

URS	URS CORPORATION AIR SAMPLING CHAIN OF CUSTODY	8/04	Rev. 1	1 of 1
		IH-15		

Project Number:	
Client:	Crown Companies
Location:	5401 Broken Sound Boulevard, Boca Raton, FL
Project Manager:	John Freitas / Rob Lowry
Collected By:	RBJS — Date: 12/04/06-12/07/06
~~Turnaround Time:~~	

Sample Description	Date	Time	Average Flow Rate	Analysis Requested
PL2-DFU-F022	On: 12/5/06 Off: 12/6/06	On: 1916 Off: 1620 Total 21 hrs Aprx.	16.38 CFM	Bacillus anthracis culture
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		

Relinquished By	Time: 0842 Date: 12/8/06	Received By: Deborah D. Mandus	Time: 8:42 Date: 12/8/06
Relinquished By	Time: Date:	Received By: 07:42 PM 11 DEC 06	Time: Date:

msi®

microbiology specialists inc.

URS
PROJECT: 5401 Broken Sound Boulevard

LAB REPORT - ENV 06-0593

Send Report To	Send Invoice To
Brian D Stymest Senior Industrial URS 5 Industial Way Salem, NH 03079-2830	Brian D Stymest Senior Industrial URS 5 Industial Way Salem, NH 03079-2830
Telephone number	**Fax Number**
603-893-0616	603-893-6240
Samples	**Purchase Order**
21 Samples sent in for Bacillus anthracis cultures Samples were received in an acceptable condition	Verbal
Collection Date	**Delivery Date**
12/4/2006	12/9/2006
Special Instructions – Additional Information	

Texas Mould Analysis Laboratory # LAB0126

LAB REPORT - ENV 06-0593

ENV 06-0593-2615: 1 FL3-TSP-F-001
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2616: 2 FL3-TSP-F-002
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2617: 3 FL3-TSP-F-003
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2618: 4 FL3-DFU-F-004
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2619: 5 FL3-TSP-F-005
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2620: 6 FL3-TSP-F-006
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2621: 7 FL3-TSP-F-007
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2622: 8 FL3-TSP-F-008
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2623: 9 FL3-TSP-F-009
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2624: 10 FL3-DFU-F-010
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2625: 11 FL3-TSP-F-011
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2626: 12 FL3-TSP-F-012
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2627: 13 FL3-TSP-F-013
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2628: 14 FL3-TSP-F-014
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2629: 15 FL3-DFU-F-015
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2630: 16 FL3-DFU-F-016
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2631: 17 FL3-TSP-F-017
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2632: 18 FL3-DFU-F-018
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2633: 19 FL3-TSP-F-020
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2634: 20 FL3-DFU-F-021
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0593-2635: 21 FL3-TSP-F-022
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

Analyst:	12/26/2006	Ernest Trevino MT(ASCP)/aa
Reviewer:	12/26/2006	Alice S. Weissfeld PhD, D(ABMM) Technical Manager/Lab Director

This testing has been performed according to MSI procedure number(s)
Date of analysis: 12/12/2006

ENV06-0345

URS	URS CORPORATION AIR SAMPLING CHAIN OF CUSTODY	8/04	Rev. 1	1 of 1
		IH-15		

Project Number:	
Client:	Crown Companies
Location:	5401 Broken Sound Boulevard, Boca Raton, FL
Project Manager:	John Freitas / Rob Lamm
Collected By:	URS / Date: 12/04/06-12/07/06
~~Turnaround Time:~~	

Sample Description	Date	Time	Average Flow Rate	Analysis Requested
FL3-DFU-F-001	On: 12/4/06 Off: 12/5/06	On: 1550 Off: 1215 Total 20hrs 25min	16.14 CFM	Bacillus Anthracis Culture
FL3-TSP-F-002	On: 12/4/06 Off: 12/5/06	On: 1600 Off: 1217 Total 20hrs 17min	54.03 CFM	
FL3-TSP-F-003	On: 12/4/06 Off: 12/5/06	On: 1608 Off: 1245 Total 20hrs 37min	49.06 CFM	
FL3-DFU-F-004	On: 12/4/06 Off: 12/5/06	On: 1640 Off: 1256 Total 20hrs 16min	16.89 CFM	
FL3-TSP-F-005	On: 12/4/06 Off: 12/5/06	On: 1647 Off: 1310 Total 20hrs 23min	44.14 CFM	
FL3-TSP-F-006	On: 12/4/06 Off: 12/5/06	On: 1645 Off: 1305 Total 20hr 20min	47.11 CFM	
FL3-TSP-F-007	On: 12/4/06 Off: 12/5/06	On: 1655 Off: 1315 Total 20hr 20min	47.11 CFM	
FL3-TSP-F-008	On: 12/4/06 Off: 12/5/06	On: 1700 Off: 1325 Total 20hr 30min	48.59 CFM	
FL3-TSP-F-009	On: 12/4/06 Off: 12/5/06	On: 1703 Off: 1333 Total 20hrs 30min	61.94 CFM	
FL3-DFU-F-010	On: 12/4/06 Off: 12/5/06	On: 1707 Off: 1340 Total 20hr 33min	15.86 CFM	

Relinquished By	Time: 0843 Date: 12/8/06	Received By: Deborah D. Mandrue	Time: 8:43 Date: 12/8/06
Relinquished By	Time: Date:	Received By: 08 DEC 11 PM 2:43	Time: Date:

URS

URS CORPORATION
AIR SAMPLING CHAIN OF CUSTODY

8/04 | Rev. 1 | 1 of 1
IH-15

Project Number:
Client: Crown Companies
Location: 5401 Broken Sound Boulevard, Boca Raton, FL
Project Manager: JOHN FREITAS / ROB CAMPBELL
Collected By: BBS Date: 12/04/06-12/07/06
~~Turnaround Time:~~

Sample Description	Date	Time	Average Flow Rate	Analysis Requested
FL3-TSP-F-011	On: 12/4/06 Off: 12/5/06	On: 1605 Off: 1230 Total 20 hr 25 m	40.18 CFM	Bacillus / Anthracis Culture
FL3-TSP-F-012	On: 12/4/06 Off: 12/5/06	On: 1650 Off: 1315 Total 20 hrs 25 min	46.12 CFM	
FL3-TSP-F-013	On: 12/4/06 Off: 12/5/06	On: 1635 Off: 1254 Total 20 hr 19 min	51.06 CFM	
FL3-TSP-F-014	On: 12/4/06 Off: 12/5/06	On: 1734 Off: 1402 Total 20 hrs 28 min	45.13 CFM	
FL3-DFU-F-015	On: 12/4/06 Off: 12/5/06	On: 1742 Off: 1405 Total 20 hr 23 m	14.57 CFM	
FL3-DFU-F-016	On: 12/4/06 Off: 12/5/06	On: 1657 Off: 1320 Total 20 hrs 23 min	15.13 CFM	
FL3-TSP-F-017	On: 12/4/06 Off: 12/5/06	On: 1720 Off: 1350 Total 20 hrs 30 min	50.07 CFM	
FL3-DFU-F-018	On: 12/4/06 Off: 12/5/06	On: 1710 Off: 1345 Total 20 hr 35 m	17 CFM	
FL3-TSP-F-020	On: 12/4/06 Off: 12/5/06	On: 1350 Off: 1355 Total 20 hrs	51.06 CFM	
FL3-DFU-F-021	On: 12/4/06 Off: 12/5/06	On: 1730 Off: 1358 Total 20 hr 28 m	15.71 CFM	

Relinquished By	Time: 0843 Date: 12/8/06	Received By: Deborah D. Mondesir	Time: 8:43 Date: 12/8/06
Relinquished By	Time: Date:	Received By:	Time: Date:

07 DEC 11 PM 2:43

* #-019 has been deleted.

URS	URS CORPORATION AIR SAMPLING CHAIN OF CUSTODY	8/04	Rev. 1	1 of 1
		IH-15		

Project Number:	
Client:	Crown Companies
Location:	5901 Broken Sound Boulevard, Boca Raton, FL
Project Manager:	John Freitas / Rob Laman
Collected By: BDS	Date: 12/04/06-12/07/06
~~Turnaround Time:~~	

Sample Description	Date	Time	Average Flow Rate	Analysis Requested
FL3-TSP-F-022	On: 12/4/06 Off: 12/5/06	On: 1731 Off: 1410 Total 20hrs 39m	51.06	Aspergillus/Penicillium Culture
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		
	On: Off:	On: Off: Total		

Relinquished By	Time / Date	Received By	Time / Date
[signature]	Time: 0843 Date: 12/8/06	Deborah D. Manders	Time: 8:43 Date: 12/8/06
Relinquished By	Time: Date:	Received By: 06 DEC 11 PM 2:43	Time: Date:

msi®

microbiology specialists inc.

Marcor Remediation

PROJECT: 5401 Broken Sound Boulevard

LAB REPORT - ENV 06-0586

Send Report To	Send Invoice To
Lynn DeWees Project Manager 540 Trestle Place Downing Town PA, 19335	Lynn DeWees Project Manager 540 Trestle Place Downing Town PA, 19335
Telephone number	**Fax Number**
610-269-3250	610-269-3393
Samples	**Purchase Order**
28 Samples sent in for Bacillus anthracis culture Samples were received in an acceptable condition	Verbal
Collection Date	**Delivery Date**
11/30/2006	12/11/2006
Special Instructions – Additional Information	

Texas Mould Analysis Laboratory # LAB0126

LAB REPORT - ENV 06-0586

ENV 06-0586-2484: 1 FL3-WP-R-1
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2485: 2 FL3-WP-R-2
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2486: 3 FL3-WP-R-3
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2487: 4 FL3-WP-R-4
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2488: 5 FL2-WP-R-1
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2489: 6 FL2-WP-R-2
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2490: 7 FL2-WP-R-3
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2491: 8 FL2-WP-R-4
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2492: 9 FL1-WP-R-2
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2493: 10 FL1-WP-R-3
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2494: 11 FL1-WP-R-4
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2495: 12 FL1-WP-R-5
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2496: 13 FL1-WP-R-6
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2497: 14 FL1-WP-R-7
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2498: 15 FL1-HS-R-1
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2499: 16 FL1-HS-R-2
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2500: 17 FL1-HS-R-3
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2501: 18 FL1-HS-R-4
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2502: 19 FL1-HS-F-5
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2503: 20 SW-WP-F-EAST
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2504: 21 SW-WP-F-WEST
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2505: 22 FL1-WP-QA-LB
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2506: 23 FL1-HS-QA-LB
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2507: 24 FL1-TSP-QA-LB
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2508: 25 FL1-DFU-QA-LB
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2509: 26 FL1-WP-QA-FB
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2510: 27 FL1-HS-QA-FB
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

ENV 06-0586-2511: 28 HV-HS-QA-Filter
Final Bacillus anthracis screen results:
No Bacillus anthracis isolated.

Analyst:	12/26/2006	Ernest Trevino MT(ASCP)/aa
Reviewer:	12/26/2006	Alice S. Weissfeld PhD, D(ABMM) Technical Manager/Lab Director

This testing has been performed according to MSI procedure number(s)
Date of analysis: 12/11/2006

msi

8911 Interchange Drive
Houston, Texas 77054
Tel: 713-663-6888
Fax: 713-663-7722

REQUISITION/ CHAIN OF CUSTODY

msi USE ONLY

Job Number	Starting Specimen Number	Ending Specimen Numbe
ENV-	-	to

Page 1 of 4

PROJECT INFORMATION

Project Name: 5401 Broken Sound Boulevard	Collection Date: multiple dates (11/30 - 12/7)
Project Number: 41-3548-0005	Sample Collector: Richard Mley
Location: Boca Raton, FL	Purchase Order/Claim Number:

FINAL RECIPIENT

Name: Lynn Dewberry
Title: Project Manager
Company: Marcor Remediation
Address: 540 Trestle Place
City: Downingtown State: PA Zip Code: 19335
Phone: (610) 269-3250 Fax: (610) 269-3393
Email: ldewberry@marcor.com / leyrne@aol.com

INVOICE RECIPIENT

☐ Please check here if same as final report recipient

Name: ~~5401~~ David Rustine
Title: President/CEO
Company: 5401 Broken Sound, LLC
Address: Box 643717
City: Vero Beach State: FL Zip Code: 32964
Phone: (772) 231-6363 Fax: X1398
Email: crowco@bellsouth.net

msi USE ONLY SAMPLE # ACCEPTABLE (Y/N)	CLIENT REFERENCE	SAMPLE SOURCE AND DESCRIPTION	REL. HUM. (% RH)	TEMP. (°F)	FLOW RATE (LPM)	SAMPLE TIME (MIN)	Direct Exam B = Bulk T = Slide S = Swab	Direct Exam (Air-O-Cell)	Fungus Culture With Photos A = Air B = Bulk S = Swab	Fungus Culture Without Photos A = Air B = Bulk S = Swab	Fungus Culture Screen A = Air B = Bulk S = Swab	Legionella	Potable Water	Bacterial Screen A = Air B = Bulk S = Swab	Bacterial Identification	Fungal Identification	Other (Specify): A = Air B = Bulk S = Swab	Other (Specify): A = Air B = Bulk S = Swab
✓	1	FL3-WP-R-1																Bacillus Analysis, Culture
✓	2	FL3-WP-R-2																
✓	3	FL3-WP-R-3																
✓	4	FL3-WP-R-4																
✓	5	FL2-WP-R-1																
✓	6	FL2-WP-R-2																
✓	7	FL2-WP-R-3																
✓	8	FL2-WP-R-4																
✓	9	FL1-WP-R-2																

SECOND REPORT RECIPIENT

Please check: ☒ Copy ☐ Fax ☒ Email ☐ Second Original
Name: 5401 Broken Sound, LLC
Address: Box 643717 Vero Beach, FL 32964
Phone: (772) 231-6363 Fax: X1398 Email: crowco@bellsouth.net

SPECIAL INSTRUCTIONS

☐ Priority (1 to 3 day turn-around time)

Relinquished By: [signature] Date/Time: 12/8/06 11:29
Relinquished To: ☐ UPS ☐ FedEx ☐ Lone Star ☐ Other:

Received By: Deborah D. Mandra Date/Time: 12/8/06 11:20

Texas Mold Laboratory #LAB0126, Expires 12/13/2005

ACCREDITED LABORATORY

Web: www.microbiologyspecialists.com
Email: env@microbiologyspecialists.com
CLIA 45D0660152 • CAP 26643-01 • Medicare CL0515 • New York State 10945

msi ® 8911 Interchange Drive
Houston, Texas 77054
Tel: 713-663-6888
Fax: 713-663-7722

REQUISITION / CHAIN OF CUSTODY

msi USE ONLY

Job Number	Starting Specimen Number	Ending Specimen Number
ENV-	-	to

Page 1 of 4

PROJECT INFORMATION

Project Name: 5401 Broken Sound Boulevard	Collection Date: Multiple Dates (11/30 - 12/7)
Project Number: 41-3548-005	Sample Collector: Richard M. Lay
Location: Boca Raton, FL	Purchase Order/Claim Number:

FINAL RECIPIENT

Name: Lynn Deweese	
Title: Project Manager	
Company: Marine Remediation	
Address: 540 Trestle Place	
City: Downingtown State: PA Zip Code: 19335	
Phone: (610) 269-3250 Fax: (610) 269-3393	
Email: deweese@marcor.com / lynnmeadi.com	

INVOICE RECIPIENT

☐ Please check here if same as final report recipient

Name:	Dawn Bustus
Title:	President / CEO
Company:	5401 Broken Sound, LLC
Address:	Box 643717
City:	Vero Beach State: FL Zip Code: 32964
Phone:	(772) 231-6363 Fax: X1398
Email:	Crowuco@bellsouth.net

msi USE ONLY SAMPLE # ACCEPTABLE (Y/N)	CLIENT REFERENCE	SAMPLE SOURCE AND DESCRIPTION	REL. HUM. (% RH)	TEMP. (°F)	FLOW RATE (LPM)	SAMPLE TIME (MIN)	Direct Exam B = Bulk T = Slide S = Swab	Direct Exam (Air-O-Cell)	Fungus Culture With Photos A = Air B = Bulk S = Swab	Fungus Culture Without Photos A = Air B = Bulk S = Swab	Fungus Culture Screen A = Air B = Bulk S = Swab	Legionella	Potable Water	Bacterial Screen A = Air B = Bulk S = Swab	Bacterial Identification	Fungal Identification	Other (Specify): A = Air B = Bulk S = Swab	Other (Specify): Bacillus Spp. Swab
✓	10	FL1-WP-R-3																
✓	11	FL1-WP-R-4																
✓	12	FL1-WP-R-5																
✓	13	FL1-WP-R-6																
✓	14	FL1-WP-R-7																
✓	15	FL1-HS-R-1 45																
✓	16	FL1-HS-R-2 46																
✓	17	FL1-HS-R-3 47																
✓	18	FL1-HS-R-4 46																

SECOND REPORT RECIPIENT

Please check: ☐ Copy ☐ Fax ☐ Email ☐ Second Original

Name: 5401 Broken Sound, LLC
Address: Box 643717 Vero Beach, FL 32964
Phone: (772) 231-6363 Fax: X1398 Email: Crowuco@bellsouth.net

SPECIAL INSTRUCTIONS

☐ Priority (1 to 3 day turn-around time)

Relinquished By: [signature] Date/Time: 12/8/06 1159
Relinquished To: ☐ UPS ☐ FedEx ☐ Lone Star ☐ Other:

Received By: Deborah D. Mandra Date/Time: 12/8/06 11:20

Texas Mold Laboratory #LAB0136, Expires 12/13/2007

ACCREDITED LABORATORY

Web: www.microbiologyspecialists.com
Email: msi@microbiologyspecialists.com
CLIA #45D0660152 • CAP #6643-01 •
Medicare CLO515 • New York State #10483

msi
8911 Interchange Drive
Houston, Texas 77054
Tel: 713-663-6888
Fax: 713-663-7722

REQUISITION/ CHAIN OF CUSTODY

msi USE ONLY

Job Number	Starting Specimen Number	Ending Specimen Number
ENV-	-	to

PROJECT INFORMATION

Project Name: 5401 Broken Sound Boulevard	Collection Date: multiple dates (11/30 - 12/7)
Project Number: 41-3548-0005	Sample Collector: Richard M. Ley
Location: Boca Raton, FL	Purchase Order/Claim Number:

FINAL RECIPIENT	INVOICE RECIPIENT
	☐ Please check here if same as final report recipient
Name: Lynn DeWees	Name: DAVID RUSTINE
Title: Project manager	Title: President / CEO
Company: Marcor Remediation	Company: 5401 Broken Sound, LLC
Address: 540 Textile Place	Address: Box 643717
City: Downingtown State: PA Zip Code: 19335	City: Vero Beach State: FL Zip Code: 32964
Phone: (610) 269-3560 Fax: (610) 269-3393	Phone: (772) 231-6363 Fax: X1398
Email: dewees@marcor.com / leyrm@aol.com	Email: Crowsco@bellsouth.net

msi USE ONLY SAMPLE # / ACCEPTABLE (Y/N)	CLIENT REFERENCE	SAMPLE SOURCE AND DESCRIPTION	REL. HUM. (% RH)	TEMP. (°F)	FLOW RATE (LPM)	SAMPLE TIME (MIN)	Direct Exam B = Bulk T = Tape S = Swab	Direct Exam (Air-O-Cell)	Fungus Culture With Photos A = Air B = Bulk S = Swab	Fungus Culture Without Photos A = Air B = Bulk S = Swab	Fungus Culture Screen A = Air B = Bulk S = Swab	Legionella	Potable Water	Bacterial Screen A = Air B = Bulk S = Swab	Bacterial Identification	Fungal Identification	Other (Specify): A = Air B = Bulk S = Swab	Other (Specify): A = Air B = Bulk S = Swab
✓	19	FL1-HS-F-5 49																
✓	20	SW-WP-F-EAST																
✓	21	SW-WP-F-WEST																
✓	22	FL1-WP-QA-LB																
✓	23	FL1-HS-QA-LB 50																
✓	24	FL1-TSP-QA-LB 51																
✓	25	FL1-DFW-QA-LB																
		~~FL1-TSP-QA-FB~~ BD 12/8/06	ON	UES corporation CHAIN of CUSTODY														
		~~FL1-DFW-QA-FB~~ BD 12/8/06	ON	UES corporation CHAIN of CUSTODY														

SECOND REPORT RECIPIENT

Please check: ☐ Copy ☐ Fax ☐ Email ☐ Second Original

Name: 5401 Broken Sound, LLC

Address: Box 643717 Vero Beach, FL 32964

Phone: (772) 231-6363 Fax: X1398 Email: Crowsco@bellsouth.net

SPECIAL INSTRUCTIONS

☐ Priority (1 to 3 day turn-around time)

Relinquished By: [signature] Date/Time: 12/8/06 11:19

Received By: Deborah D. Mandina Date/Time: 12/8/06 11:20

Relinquished To: ☐ UPS ☐ FedEx ☐ Lone Star ☐ Other:

msi
® 8911 Interchange Drive
Houston, Texas 77054
Tel: 713-663-6888
Fax: 713-663-7722

REQUISITION / CHAIN OF CUSTODY

msi USE ONLY

Job Number	Starting Specimen Number	Ending Specimen Numbe
ENV-	-	to

Page 4 of 4

PROJECT INFORMATION

Project Name: 5401 Broken Sound Boulevard	Collection Date:
Project Number: 41-3548-005	Sample Collector:
Location: Boca Raton, FL	Purchase Order/Claim Number:

FINAL RECIPIENT	INVOICE RECIPIENT
	☐ Please check here if same as final report recipient
Name: Lynn DeWees	Name: David Rushing
Title: Project Manager	Title: President/CEO
Company: Marsh Remediation	Company: 5401 Broken Sound, LLC
Address: 540 Trestle Place	Address: Box 643717
City: Downingtown State: PA Zip Code: 19335	City: Vero Beach State: FL Zip Code: 32964
Phone: (610) 269-3250 Fax: (610) 269-3393	Phone: (772) 231-6363 Fax: X1398
Email: dewees@marsh.com / leyrm@aol.com	Email: Crowco@bellsouth.net

msi USE ONLY SAMPLE # / ACCEPTABLE (Y/N)	CLIENT REFERENCE	SAMPLE SOURCE AND DESCRIPTION	REL. HUM. (% RH)	TEMP. (°F)	FLOW RATE (LPM)	SAMPLE TIME (MIN
✓	26	FLI-WP-QA-FB				
✓	27	FLI-HS-QA-FB 52				
✓	28	HV-HS-QA-Filter 53				

Direct Exam B=Bulk T=Slide S=Swab	Direct Exam (Air-O-Cell)	Fungus Culture With Photos A=Air B=Bulk S=Swab	Fungus Culture Without Photos A=Air B=Bulk S=Swab	Fungus Culture Screen A=Air B=Bulk S=Swab	Legionella	Potable Water	Bacterial Screen A=Air B=Bulk S=Swab	Bacterial Identification	Fungal Identification	Other (Specify): A=Air B=Bulk S=Swab	Other (Specify): Air & Bulk S=Swab

SECOND REPORT RECIPIENT

Please check: ☐ Copy ☐ Fax ☐ Email ☐ Second Original

Name: 5401 Broken Sound, LLC

Address: Box 643717 Vero Beach, FL 32964

Phone: (772) 231-6363 Fax: X1398 Email: Crowco@bellsouth.net

SPECIAL INSTRUCTIONS

☐ Priority (1 to 3 day turn-around time)

Relinquished By: [signature] Date/Time: 12/8/06 11:19

Relinquished To: ☐ UPS ☐ FedEx ☐ Lone Star ☐ Other:

Received By: [signature] Date/Time: 12/8/06 11:20

Texas Mold Laboratory #LAB0126, Expires 12/31/2005

ACCREDITED LABORATORY

Web: www.microbiologyspecialists.com
Email: ray@microbiologyspecialists.com
CLIA #52D0648152 • CAP 26643-01 •
Medicare CLIA#5 • New York State #10965

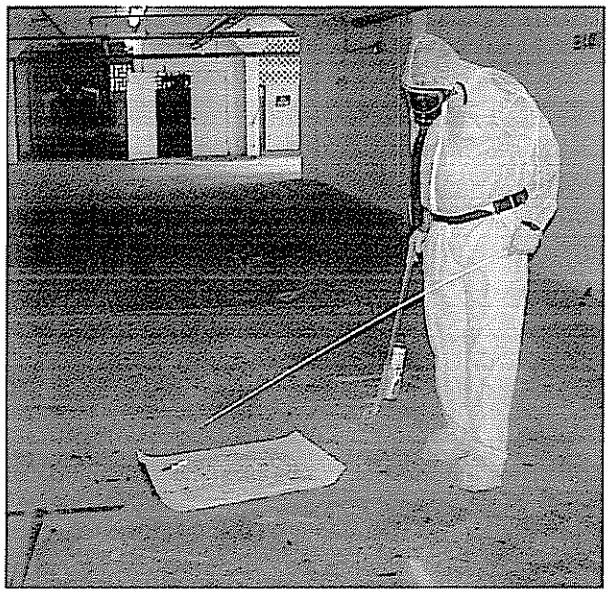
Appendix C:

Final Sampling and Analysis Plan for Clearing the Upper Three Floors at 5401 Broken Sound Boulevard, Boca Raton, Florida, Version 9.0, 11-10-06

FINAL SAMPLING AND ANALYSIS PLAN

FOR CLEARING THE UPPER THREE FLOORS AT 5401 BROKEN SOUND BOULEVARD, Boca Raton, Florida

Version 9.0, 11-10-06



Prepared for: David Rustine
5401 Broken Sound Boulevard LLC
7999 N. Federal Highway
Boca Raton, FL 33478

Prepared by: Lynn Dewees, PE
Project Manager
MARCOR Remediation, Inc.

Bruce Lippy, Ph.D., CIH, CSP
Environmental Profiles, Inc.
Catonsville, Maryland

Richard Ley
MARCOR Remediation, Inc.

Date: November 10, 2006

TABLE OF CONTENTS

TABLES

FIGURES:

1.0 INTRODUCTION AND BACKGROUND INFORMATION

1.1 General

MARCOR Remediation, Inc. (MARCOR) was retained by 5401 Broken Sound Boulevard, LLC to prepare this *Draft Sampling and Analysis Plan for the Upper Three Floors at 5401 Broken Sound Boulevard* (former AMI Building) to document clearance of the upper three floors for *Bacillus anthracis*. A risk-based strategy will be implemented using multiple air sampling techniques to verify the effectiveness of chlorine dioxide fumigation and post-remedial sampling activities performed by others in 2004. Successful demonstration of this verification sampling effort will enable the State of Florida Palm Beach County Health Department to lift the quarantine imposed on the building in September 2001.

Specifically, this sampling program will use recognized aggressive air sampling techniques to draw large sample volumes using differing sampling equipment in conjunction with wet wipe and HEPA vacuum sock techniques to corroborate the success demonstrated by the previous findings. The target clearance level is straightforward: any finding of a viable spore of *Bacillus anthracis* is a failed sample that will require the decontamination and retesting of the area where the sample was collected. All final samples must be free of *Bacillus anthracis* to achieve the ultimate goal of lifting the quarantine on the building and restoring the facility to productive use. After the facility is opened, a transitional monitoring program, as recommended by OSHA, will be instituted.[1]

1.2 Goal and Objectives

1.2.1 Goal

The goal of this verification sampling program is to achieve the lifting of the public health quarantine by finding no viable *B. anthracis* spores within the upper three floors of the former AMI building.

1.2.2 Sampling Program Objectives

The following objectives of this sampling plan are summarized below and addressed in detail in the accompanying body of this document:

1) Use aggressive sampling techniques, high flow rates and long sampling times to be confident that no remaining viable spores remain in the building;
2) Collect sufficiently large sample volumes to ensure that three times the volume of the entire upper three floors has been pulled across filter surfaces that will be subsequently analyzed for *B. anthracis*;
3) Focus the sampling efforts much more intensely in those first floor rooms where significant numbers of *Bacillus anthracis* spores were initially measured, specifically, the mailroom (MR1), legal department (LD1), and office services (OS1);
4) Use different sampling techniques and media to ensure a more robust strategy and to take advantage of the strengths of each method;
5) Ensure that sampling technicians are adequately protected during the sampling process; and
6) Provide sufficient data to the following governmental organizations overseeing the work to ensure that historical decontamination was adequately performed:
    - US EPA, through their On-Scene Coordinators, Terry Stilman and Fred Stroud;
    - Palm Beach County Health Department (PBCHD) through its representative, John O'Malley; and
    - The Technical Working Group (TWG) of federal experts specifically formed to review the technical issues on this project.
7) Mobilize onsite on October 27, 2006 to establish critical barriers, create negative pressure and then conduct sampling.

1.3 Historical Investigation and Remediation Activities

In the fall of 2001, the first case of anthrax caused by terrorist action occurred in the AMI building in Boca Rotan, Florida, which was considered contaminated and subsequently closed. The PBCHD issued a quarantine of the building and restricted access. The FBI, EPA, and CDC collected samples in the facility and the latter two organizations made their sampling results available to the owner. The building was fumigated with chlorine dioxide gas beginning on July 11, 2004.

Following the procedure, 2,000 biological indicator spore strips were positioned in 162 sampling locations of 100 square feet each to test the effectiveness of the fumigation throughout the building. All showed a 100 percent kill rate.[2] In addition, 952 surface samples were collected in the facility and analyzed by the New Jersey Department of Health and Senior Services State Laboratory, which reported all results as negative for *B. anthracis* growth.[3] After the surface sampling was completed, aggressive air samples were collected using three methods: dry filter units, high volume samplers, and Andersen cascade impactors. All samples were found to be negative by the New Jersey Department of Health and Senior Services laboratory.[4] Finally, building-wide stratified aggressive air sampling was conducted with the sampler intakes positioned directly in front of the air handler return ducts for each zone of the building. All samples were found to be negative for growth by the New Jersey Department of Health and Senior Services lab.[5]

A final clearance report was generated and provided to the EPA and to members of the Technical Working Group (TWG) advising PBCHD, but not to the owner because of a contractual dispute. The EPA agreed to consider a February 2, 2006 request to review the copy of the report that resides in the records repository in Atlanta and then provide the PBCHD with a "written assurance that all technical criteria were met and all data were within limits" to allow the department to lift the quarantine with the understanding that the report could not be released. On June 26, 2006, Terry Stilman, on-scene coordinator for the EPA, indicated in an email that EPA has still not made a final determination on whether the upper floor data can be released and it was unlikely that a decision would be made in the foreseeable future. As of the generation of this sampling plan, no decision has been rendered by the EPA.

MARCOR visited the site in December 2005 and January 2006 and successfully removed partially water-damaged palletized boxes containing documents and personal affects stored in the basement, transported the boxes to a local biomedical service facility to be autoclaved (to kill any residual *B. anthracis* spores that may have existed within the boxed items), and decontaminated the basement. Most of the boxes, after passing tests at the facility for successful autoclaving, were buried in a landfill. A limited number of boxes were returned to 5401 Broken Sound Boulevard so that the contents could be examined. All of the pallets of boxes successfully passed spore strip sampling and all were stored in trailers brought specifically to the site for that purpose; none were returned to the basement and all have been removed from the site.

MARCOR returned to the site in May 2006 to collect post-decontamination samples from the basement floors, walls, columns and floor drains. MARCOR closely followed the sampling plan approved by the TWG (Version 8.0, 5-12-06) and collected wipe and HEPA sock vacuum samples for clearance purposes. The samples were packaged, shipped, and analyzed by Microbiology Specialists, Inc. of Houston, Texas. The Technical Working Group was notified on June 21st that all samples were negative.

Bruce Lippy prepared a concept paper dated June 27, 2006 that suggested clearing the upper three floors with wipe sampling, much like what had been done in the basement. A conference call of the TWG was conducted on July 6, 2006 to discuss this paper. Mark Durno, the co-chair for the TWG, agreed with the paper's theme that any sampling program should build on the significant number of samples already collected in the building, but suggested that an aggressive air sampling program made more sense. The TWG agreed with Mr. Durno. This plan is the result.

Section 1 Citations:

1) OSHA (2006). Anthrax e-Tool, Protecting the Worksite from Terrorism. [online]. Accessed 8-12-06 at: http://www.osha.gov/SLTC/etools/anthrax/transition_program.html
2) National Research Council. (2005). Reopening Public Facilities After a Biological Attack: A Decision Making Framework. National Academies Press: Washington, D.C. p.153.
3) Ibid. 154.
4) Ibid. 154.
5) Ibid. 154.

2.0 HVAC SYSTEM CONFIGURATION AND SAMPLING AREAS

The sampling approach for the AMI building will be driven by two key issues: the configuration of the building ventilation system and the extent of contamination previously measured in the facility. There are three distinct zones of ventilation for the building and the sampling will be conducted in three corresponding phases (Figure 1). Two large HVAC units located on the roof condition and circulate air to the third and second floors, each handling the half of the building directly below. The first floor, the site of the heaviest contamination, is supplied by two HVAC ventilation units in the basement, although minor amounts of conditioned air come from the roof units. The building's ventilation system had been operated for years after the attack in 2001. The system is reported to be presently operating in a full recirculating mode, i.e. no outside air is being drawn in through the ventilation system and no return air is being exhausted from the building. MARCOR's project staff will verify this when onsite.

Prior to conducting aggressive sampling, floor to ceiling plastic barriers will be established to physically separate the two HVAC zones on each of the top two floors. The penetrations of those systems into the first floor will also be closed. After the barriers are established, the crew will examine the entire HVAC system to verify that there are no filters remaining. All filtration should have been removed prior to the chlorine dioxide fumigation. If any filters are located, they will be removed and sealed in bags for appropriate disposal. Sampling will start in only one zone controlling the HVAC for floors two and three and that ventilation system will be operated throughout the sampling period. The ventilation systems in the other two zones will be shut down while sampling takes place. While sampling is taking place inside containment, additional samples will be collected outside of containment in adjacent zones to document that no migration of contamination has occurred.

A similar process will be used in the other zone on the top two floors. Finally, both of the roof units will be shut down and the basement system run while aggressive sampling is taking place on the first floor. This approach maximizes the building ventilation design,

but it also moves from areas of less contamination to more contamination, which is the most appropriate way to proceed.

The premise of the air sampling program is to sample three times the volume of the space of the building in a controlled manner, as recommended by the TWG. In conjunction with this effort, the TWG also recommended that specific portions of the building be cordoned-off into discreet sampling areas and that the building HVAC system be operated throughout the sampling effort to liberate any residual *B. anthracis* spores from the duct work. MARCOR reviewed two sets of building mechanical drawings to determine the building HVAC system configuration and establish six discreet sampling areas to meet these recommendations.

It is important that field verification of the building structural layout and HVAC system routing be performed upon entry into the building and that sampling area preparations be amended as necessary (e.g. cordoning-off of additional open areas, vents, and ducts) prior to initiation of the sampling process.

2.1 Building Interior HVAC System Air Balance

2.1.1 First Floor

Climate control for the first floor is provided by two air handling units (AHUs) located in the basement, each of which supports one half of the first floor (Table 1). First floor air flow does not appear to be a closed system, however, as some of the east-central portion of the first floor is open to the second floor via a winding stair case (Figure 2). This area will need to be cordoned-off to isolate the first floor from the upper two floors.

2.1.2 Floor 2 and Floor 3

Climate control for the second and third floors is shared and provided by two AHUs located on the roof. The east half of floors two and three are controlled by AHU 2; AHU 1, in turn, controls the west half of both upper floors (Figure 3 and 4; Table 1)

A third AHU (AHU 3) appears to be a closed loop system that controls a third floor office with no discernible roof-top, basement or exterior features.

2.2 AHU System Control and Sampling Areas

Sampling areas (for aggressive air sampling) will be established based on HVAC system configuration as shown on the generalized cross-sectional view of the AMI building (Figure 1). A total of six sampling areas will be created as shown on Figure 1 and summarized below.

Sampling Area 1
Floor 3 – West Half

Sampling Area 2
Floor 2 – West Half

Sampling Area 3
Floor 3 – East Half

Sampling Area 4
Floor 2 – East Half

Sampling Area 5
Floor 1 – West Half

Sampling Area 6
Floor 1 – East Half

Table 1
AMI HVAC System Air Balance

AHU Unit	Location	Floor Area Coverage	Capacity (CFM)	
			Supply Air	Return Air
AHU 1	Roof	Second, Third Floors West Half	11,025	9,625
AHU 2	Roof	Second, Third Floors East Half	13,075	11,895
AHU 3	Third Floor	Third Floor Office #330	1,600	1,300
AHU 5	Basement	First Floor East Half	12,115	10,575
AHU 6	Basement	First Floor West Half	4,950	4,310
AHU 7	Proposed. Not Installed			

Notes: CFM = Cubic feet per minute

No reference to construction or design specifications for an AHU 4 is contained within the building mechanical drawings.

The proposed spatial demarcation for each sampling unit is presented on Figure 1 (First Floor), Figure 2 (Second Floor) and Figure 3 (Third Floor). The field team will verify the existing configuration for each floor upon entry into the building and will amend the proposed locations as necessary to meet mechanical requirements and logistical constraints. Field-determined off-sets will be presented as red-line modifications on Figures 2 through 4 in the final report.

Sampling unit isolation will be performed by installing floor to ceiling critical barriers comprised of at least 6 mil plastic sheeting. Additional 6 mil plastic sheeting will be installed as necessary across vents, ducts, and open areas that permit the commingling of

air between floors or across sampling areas. The doors within the sealed sampling areas will be secured open to ensure better circulation of the air during aggressive sampling.

A top-down sampling approach, beginning with the west half of the third and second floors, followed by the adjacent east half of both floors beginning with the third floor, and finally the first floor, will be used to minimize the potential for cross-contamination. All elevators will be maintained in an open position on one of the three floors and stairways will be addressed in like manner with discreet stairway portions included with the sampling area immediately above.

Aggressive air sampling will follow EPA accepted asbestos sampling protocols, as found in 40 CFR 763, Appendix A by positioning stationary fans at strategic locations across the sampling unit and then operating new 1/2 horsepower mechanical leaf blowers to liberate dust and potential *B. anthracis* spores into the air. The fans will be positioned to both direct air flow towards stationary aggressive air sampling devices and create turbulence that will keep particulate matter in suspension. The field team will operate the mechanical blowers for a minimum of 30 minutes within each sampling unit. The stationary fans will remain operational throughout the period of sample collection. The sampling team will vacate the sampling unit once all air sampling devices have been activated and the sampling unit AHU has been determined to be operational.

Integral to the successful completion of this effort is the assurance that air flow within specific sampling areas remains isolated from adjoining units. To meet this objective, the sampling team will verify the functionality of each AHU system and ensure that only the sampling area-specific AHU is operational during a sampling period and that any shared ducts, vents or other features are effectively covered with a critical barrier. One notable exception is AHU 3, which will be turned on in conjunction with AHU 1 during the sampling of Sampling Unit 1.

3.0 SAMPLING STRATEGY

3.1 A Risk-Based Approach

The Technical Working Group has agreed that, given the thousands of clearance samples that have already been collected in the building and found to be free of *B. anthracis*, the risk of any viable spores remaining in the structure must be nearly indistinguishable from background levels. As such, a risk-based approach will be implemented whereby the number, location, and methods used for verification will be commensurate with the distribution of pre-fumigation positive findings, and sampling unit dimensions and logistical constraints.

A combination of sampling methods will be implemented using focused, biased, and grid random approaches for cross-verification purposes to corroborate the historical post-decontamination data. This strategy is consistent with and builds on the credible work performed in the building under the guidance of the previous Technical Working Group.

3.2 Continued Reliance on Governmental Guidance

3.2.1 Planning Documents

The following planning documents will be used to successfully complete the verification sampling program of the upper three floors:

1) The MARCOR clearance plan for the basement of the AMI building which was based on the excellent guidance available from the federal government, primarily the National Response Team's guidelines;[6]

2) The MARCOR health and safety plan for the cleanup which was based on the electronic template created by OSHA specifically for *Bacillus anthracis* remediation;[7]

3) The MARCOR *Appendix K to the Health and Safety Plan Draft Sampling and Analysis Plan for the Basement Garage at 5401 Broken Sound Boulevard, Version 8.0, 5-12-06* and *Addendum to Sampling Plan;*

4) The EPA Asbestos Hazard Emergency Response Act (AHERA); and

5) The United States Government Accountability Office; Testimony before the Chairman, Subcommittee on National Security, Emergency Threats, and

International Relations, House Committee on Government Reform, House of Representatives: *ANTHRAX DETECTION Agencies Need to Validate Sampling Activities in Order to Increase Confidence in Negative Results.*

3.2.2 Federal Expert Recommendations

Federal experts have recommended that the sampling strategy for clearance determination at *B. anthracis* projects should include three approaches:

1) **Focused** sampling aimed at locations previously known to contain contamination;
2) **Biased** sampling aimed at targets near areas of contamination that are most likely to contain spores. Together with the focused approach, this should cover as much of the known area of concern as possible; and
3) **Grid/random** sampling that is statistically based.[8]

3.2.3 OSHA Anthrax e-Tool Recommendations

OSHA in its e-Tool for anthrax has the following specific recommendations that will be followed for the final clearance of the upper floors of the AMI Building:

1) Post-Decontamination Surface Sampling: The effectiveness of decontamination should be confirmed by post-decontamination environmental sampling in ambient air and in areas and on surfaces that were previously contaminated. Verification sampling prior to occupancy should include surfaces and air in areas outside of the exclusion zone (for example, the area where decontamination activities were conducted) to ensure that the outside areas continue to remain free of spores.
2) Air Sampling: Aggressive air sampling techniques have been developed for recent anthrax responses that model EPA guidance for clearing facilities for re-occupancy after asbestos decontamination. While the area is under negative pressure, all surfaces are aggressively agitated and air is continuously disturbed while samples are collected. An air sampling method that maximizes the likelihood of detecting contamination should be used.

Establishment of a negative pressure environment may be difficult in this instance because of competition from the building AHUs, which will continue to operate. MARCOR engineers have determined that with a reasonable number of HEPA-filtered portable ventilation units, a negative pressure differential should be achievable even with the building ventilation system running. Consequently, MARCOR will seal negative air machines into the plastic barriers of each containment during sampling. Flexible duct hoses will be used to exhaust the filtered air into the stairwell. Pressure differences will be measured and recorded.

3.3 Clearance Sample Approaches

The three recommended sampling approaches are discussed below by reference. Sample collection locations are presented on Figures 2 through 4, respectively.

3.3.1 Focused Sampling

The distribution of aggressive air sampling will be greatest on the first floor in the vicinity of the mail room where the majority of positive *B. anthracis* results were detected in the results for historical pre-fumigation EPA and CDC data. These data were consulted when determining the proposed sample collection locations presented on Figure 2. A lesser, yet representative, number of focused samples will also be collected on the second and third floors. These samples will all be collected with PM-10 high volume samplers.

3.3.2 Biased Sampling

The CDC report for the building identified samples that contained more than one spore of *B. anthracis*. Some were identified as "loaded" with *B. anthracis* spores. For all of the samples identified as heavily contaminated, an additional sample will be collected using a Dry Filter Unit sampler as an alternate sampling method.

3.3.3 Grid/Random Sampling

Random sampling will be performed using wipe samples and HEPA vacuum sock protocols. Random sampling will be performed on ventilation system exhaust grates and on flat surfaces (e.g. table tops, the tops of file cabinets, carpeted floor, and hard-surfaced floor) within the mail room (MR1), legal department (LD1), and office services (OS1)

areas of the first floor, the three areas most contaminated during the attack. Random sampling grids will be applied to these three areas of the building to determine sample collection locations. The sample collection method will be determined in the field based on the surface selected for sampling. The sampling team will attempt to collect at least one sample from each surface type. The wipe and HEPA sock samples will be taken **before** the areas are disturbed by aggressive air sampling techniques. Based on the recommendation of MSI, HEPA sock samples will be chosen, whenever practicable, over wipes because they provide more conclusive results.

Section 3 Citations:

6) National Response Team. (2002, Sept). Technical Assistance for Anthrax Response, Interim-Final Draft. [online]. Available at: http://www.nrt.org/production/nrt/home.nsf/resources/publications/

7) Occupational Safety and Health Administration (2003). OSHA Software System Model Health & Safety Plan (HASP) for Clean-up of Facilities Contaminated with Anthrax Spores [online]. Available at: http://www.osha.gov/dep/anthrax/hasp/index.html

8) Gillen, M. & Kelly, J. (2003), Clearance Determinations: Judging Remediation Success and Readiness for Re-Occupancy. Presented at the EPA Science Forum 2003.

4.0 SAMPLING METHODS

4.1 Air Sampling

The air sampling will be conducted by applying the following applicable protocols from the EPA's Asbestos Hazard Emergency Response Act (AHERA)[9] requirements:

1) Air sampling equipment shall be placed randomly in the work areas, but shall not be placed in corners of rooms or near obstructions;

2) Before sampling begins, the exhaust from forced air equipment (such as a one-half horsepower leaf blower) shall be directed against all walls, ceilings, floors, ledges and other surfaces in the room. This procedure requires at least five minutes per 1,000 sq. ft. of floor.

3) 20-inch fans will be used for air circulation during the sampling procedure. The fan exhaust shall be directed toward the ceiling. The fans shall be operated on the lowest speed setting. Fans shall be operated in the center of

each room where sampling will take place. At least one fan per 10,000 cubic feet of room space shall be used.

4) In small perimeter offices, the fans will be directed up and towards the office door.

The aggressive air sampling methods that will be used differ from traditional occupational sampling methods, which use an 8-hour workday exposure for an employee to compare against an OSHA Permissible Exposure Limit. There is no PEL for *Bacillus anthracis*. Consequently, the quantity of air that will be pulled through the sampling areas will greatly exceed that inhaled by an employee during an 8-hour period. For these reasons, agar plate sampling, such as with Andersen Impactors, will not be used because of being restricted to small sampling volumes to avoid agar desiccation.

4.1.1 Dry Filter Units

The Dry Filter Unit (DFU) was developed by the Joint Program Office for Biological Defense and has been used to collect over 20,000 samples for *B. anthracis*.[10] Samples will be drawn at 300 liters per minute. Samples will be collected on 47 mm diameter polyester felt filter disks or, preferably, on Teflon®, if available and operative for DFUs. Calibration of the flow rate will be performed before and after sampling using a mass flow meter (such as an Aalborg) with a capacity to measure from 1 to 1,000 liters per minute, as recommended by OSHA.[11] All of the OSHA Salt Lake Technical Center recommendations for operation will be followed. These units will be used for biased sampling. Use is dependent on the availability of these units through the EPA. The units will be carefully placed to avoid the airflow from fans or the ventilation system, which might reduce the possibility of capturing spores. The units will also be kept away from other sampling units to prevent them from affecting airflow.

4.1.2 PM-10 Samplers

Given the imperative of collecting large volumes while using Teflon filters to assure good extraction efficiency, PM-10 samplers will be used as the primary sampling device. The units are designed to be operated continuously for extended periods at flows up to 40 cubic feet per minute (cfm), which is approximately 1,130 liters per minute. Samples

will be drawn at the highest flow rate consistent with manufacturer's recommendations for the time required to pull three air volumes (See Appendix A). Samples will be collected on Teflon® filters. Calibration of the flow rate will be performed before and after sampling using a mass flow meter in accordance with USEPA Reference Methods.

4.2 Surface Samples

Standard wet wipe (non-cotton gauze pad pre-moistened with sterilized water) and HEPA vacuum sock sampling methods will be used to collect samples from randomly selected locations across the MR1, LD1 and OS1 rooms on the first floor. Wipe sampling will be performed on smooth surfaces such as desktop, floors, ventilation grates and inside ventilation systems; vacuum socks will be collected on carpeted and other rough surfaces, particularly those that contain heavy dust deposits, although vacuum samples will be favored over wipes whenever possible.

4.2.1 Wipe Samples

Wipe samples will be collected following the same protocol used to collect post-decontamination samples in the basement garage: the method outlined in CDC's Comprehensive Procedures for "Collecting Environmental Samples for Culturing *Bacillus anthracis*." Non-cotton gauze pads (either rayon or polyester) will be pre-moistened in a clean area before entering the sampling location, most likely in the office trailer for the sampling team. A control blank of the sampling media will be prepared for the lab for the lot being used.

4.2.2 HEPA Vacuum Sock Samples

HEPA vacuum sock samples will be collected following the OSHA protocols used to collect post-decontamination samples within the basement garage as presented in Appendix K to the Health and Safety Plan – Draft Sampling and Analysis Plan for the Basement Garage at 5401 Broken Sound Boulevard.

Section 4 Citations:

9) 40 CFR 763, Appendix E

10) OSHA Salt Lake Technical Center (undated). Bacillus anthracis Spores (Etiologic Agent of Anthrax) in Air. [online]. Accessed 9-8-06 at www.osha.gov (document subsequently removed from website).

11) Ibid. p.84.

5.0 QUALITY ASSURANCE/QUALITY CONTROL

5.1 General

A QA/QC program is essential to any industrial hygiene sampling effort. The case of *Bacillus anthracis* is unique for several reasons, however:

1) Lab blanks and field blanks for industrial toxins like lead are collected to assure the sampling media and methods aren't accidentally contaminating the process. The chance of this for *B. anthracis* is exceedingly small;

2) Validated sampling and analytical methods exist for most common industrial agents; this isn't the case for any step in the process with *B. anthracis*.[12] and

3) Few laboratories are able to analyze for Bacillus anthracis.

For general bioaerosol sampling, the American Conference of Governmental Industrial Hygienists recommends that investigators "must add a sufficient number of blank or control samples to establish the quality of the data they collect. For example, investigators should collect at least one field blank for every type of sample collected, every different area studied, and every new batch of collection medium, such as filters or culture media."[13] This recommendation will be followed in the Boca Raton sampling effort.

The NRT recommendations will be followed in final sampling at 5401 Broken Parkway. NRT recommendations include the following four key quality assurance/quality control (QA/QC) elements:

1) QC of field activities,

2) Sample documentation and management,

3) Sample handling and shipment, and

4) Data validation and management.

As further recommended by the NRT, QA/QC samples will be collected in the field and the chosen laboratory will perform equipment blanks or equivalent measures to verify the accuracy and precision of the applicable test method. All samples will be managed by an unbroken chain-of-custody (COC) from collection through analysis. Any variance from this sampling plan will be documented.[14]

The non-cotton gauze pads used for surface sampling will be pre-moistened in a clean area outside the sampling area to provide another quality control step. Historically, some of the samples collected on other *B. anthracis* cleanup projects were questioned after the controls came back positive from the lab. The process of wetting the wipes in a potentially contaminated area could bias the sampling.

5.2 Laboratory

Initial analysis will be performed by Microbiology Specialists Inc., which is located at 8911 Interchange Drive, in Houston, TX, 713-663-6888. Their website is: (micro@microbiologyspecialists.com). MSI performed the analysis of the samples in the basement of the AMI Building and is accredited by the American Industrial Hygiene Association (AIHA) in environmental microbiology. The firm participates in the AIHA Environmental Microbiology Proficiency Analytical Testing (EMPAT) for bacteria and fungi and is currently rated proficient for those analytes that the laboratory analyzes. The firm's president, Dr. Alice Weissfeld, informed MARCOR that MSI meets all the conditions of an Advanced Sentinel Laboratory, which is a definition recently developed by the Laboratory Response Network working group. MSI will serve as the Sentinel Laboratory on this project. Dr. Weissfeld has provided comments on this sampling plan and has participated in TWG conference calls. The NJ Department of Health and Senior Services' Public Health and Environmental Laboratory will serve as the reference lab to corroborate any sample that MSI reports as positive. The website for the NJ lab: (http://www.state.nj.us/health/phel/index.shtml).

Analysis will follow the traditional culturing method where the sample is appropriately prepared for elution and plating, after which it is inoculated onto plates containing sheep blood agar or other media. The plates are allowed to incubate for hours and are then

examined for growth of suspicious colonies. MSI will use a neutralizing broth and, following the CDC protocol, will heat shock the samples to kill any other microbes that might also be in the sample. *B. anthracis* spores are heat resistant and will not be damaged by this process. The lab will extract all of the materials on each sample and not just a representative portion, as often practiced. The former approach will maximize the possibility of finding a spore collected on the filter.

Any sample that contains a viable *B. anthracis* spore will be considered a failure and necessitate further cleaning of that area of the building. All sampling results will be provided to the TWG as soon as they are available. The TWG will also receive the results as part of a final report prepared at the conclusion of the cleanup effort.

5.3 QA/QC Samples

5.3.1 Duplicate Samples

Field duplicate samples will be collected to verify the effectiveness of the fumigation effort performed in 2004. Duplicate samples will be collected at the frequency presented below using the opposite method used to collect the routine sample (e.g. a PM-10 duplicate will be collected at a location where the dry filter unit method was used to collect the routine sample).

Focused Sample Locations

- 10 percent frequency;
- A minimum of one (1) duplicate sample will be collected per sampling area.

Biased Sample Locations

- A duplicate sample will be collected at all locations identified as heavily contaminated (Figure 2)

Grid/Random Sample Locations

- 10 percent frequency;
- One (1) duplicate sample will be collected from each of the following first floor rooms: MR1, LD1, and OS1.

5.3.2 Field Blanks

Field blanks (also called method blanks) are comprised of sample collection media not subjected to the sample collection process, but opened in the sampling environment. Field blanks can indicate potential contamination or interference of the media by naturally occurring microbes suspended in the atmosphere. Appreciable "background" microbial interference was observed on field blank samples collected within the basement garage.

During the May 2006 basement garage post-decontamination sampling effort, microbes present in ambient air adhered to the sample media (wet wipe/HEPA vacuum sock) within approximately 30 seconds to one minute of exposure. Consequently, field blank sample duration time will include the time required to set-up, remove/tear down, and package the sample for delivery to the laboratory.

Air Samples (DFU and PM-10)

One field blank will be collected for each type of air sampling method (2 total samples) in the following way:

- Don a clean pair of disposable surgical gloves;
- Install the filter media into the sampler unit;
- Remove filter media from sampler unit and place into laboratory-provided packaging for delivery to the laboratory.

Note: Air sample method blanks will be collected prior to initial air agitation and before the appropriate AHU is turned on within the selected sampling unit so that a sample will be collected of background ambient air conditions.

Wipe Samples

One wipe sample field blank will be collected as follows:

- Don a clean pair of disposable surgical gloves;
- Remove a sterilized gauze pad from its packaging;

- Open the vial of laboratory-provided sterilized water and wet sterile gauze pad with contents of vial (let it soak up water);
- Place moistened pad into laboratory-provided packaging in preparation for delivery to the laboratory.

HEPA Vacuum Sock Samples

One wipe sample field blank will be collected as follows:

- Don a clean pair of disposable surgical gloves;
- Decontaminate the orifice and inside/outside portions of the HEPA vacuum hose for a length of approximately three inches using isopropyl alcohol;
- Manually insert one HEPA vacuum sock into the end of the decontaminated hose;
- Manually insert a disposable nozzle into the sock/hose;
- Remove the HEPA vacuum sock and place into laboratory-provided packaging in preparation for delivery to the laboratory.

5.3.3 Lab Blanks

Lab blanks (also called trip blanks) are unopened sampling vials that will be packaged with the shipments to the laboratory. These blanks can indicate potential contamination of the media as well as potential contamination arising from transporting the blanks with real samples during the trip to the lab. There will be one lab/trip blank for each set of samples sent to the lab.

5.4 Chain of Custody and Shipment of Samples

A fully-executed chain-of-custody form will accompany each sample batch delivered to the laboratory. The COC will be signed by each individual assigned responsibility for the handling and security of the samples. One COC form will be completed, placed into a zipper-locked plastic bag, and taped to the inside lid of each sample cooler (or comparable outer containment packaging) delivered to the laboratory. Microbiology Specialists, Inc., the AIHA-accredited laboratory that will be performing the initial

analyses will send a certified transportation specialist to package and ship the samples back to their laboratory in Houston Texas, using UPS.

5.5 Sample Packaging

All packages will be labeled according to DOT requirements for biohazards and the CDC requirements for interstate shipment of etiologic agents, found at 42 CFR Part 72 in the Federal Register, Vol. 45, No. 141-Monday, July 21, 1980. The following information will be mounted to the exterior surface of each sample cooler (or comparable outer containment packaging):

- Signed and dated laboratory-provided custody seal;
- "This Side Up" marker (along with an orientation arrow);
- The DOT proper shipping name and hazard class for the material;
- The shipper's or consignee's name and address; and
- An appropriate hazard class label and a "cargo aircraft only" label, if applicable.

Additionally, the bagged vials will be placed into a leak-proof container (with tight cover) labeled "biohazard." Absorbent material will be place in to the container. Both containers will meet state and federal regulations for transport of hazardous material and be properly labeled.

Section 5 Citations:

12) GAO. (2005, April 5). Anthrax Detection: Agencies Need to Validate Sampling Activities in Order to Increase Confidence in Negative Results. GAO-05-493T. p.4.

13) ACGIH (1999). Bioaerosols: Assessment and Control. Janet Macher, Ed. Cincinnati, OH: ACGIH. P 5-10.

14) National Response Team (2003, Nov). Technical Assistance for Anthrax Response: Interim-Final Draft Phase I Update. [online]. Accessed at: www.nrt.org.

6.0 SAFETY AND HEALTH PRECAUTIONS

Technicians will wear full personal protective equipment during sampling, entering the basement through an airlock and wearing full-face Power Air Purifying respirators with p-100 cartridges and Tyvec® disposable garments. Nitrile gloves will be worn and changed with each sample. Decontamination will be performed using the buddy system with a four-stage decontamination setup:

- The first stage will be a tool drop utilizing a bleach solution to decon the tools;
- The second stage will be for personnel to decon with a water and surfactant mix that will be treated later;
- The third stage will be for the workers to remove their personal protective equipment and garments and decon them with a bleach solution; and
- The fourth stage will be a clean room.

Two decon stations will be set up in the basement garage beside the doors leading upstairs. See the HASP for further details.

The MARCOR Health and Safety Plan for the sampling of the upper three floors provides greater detail on the precautions to be taken during sampling and is available for review.

7.0 ACTIVITIES SCHEDULE

See Appendix B.

8.0 LIFTING OF THE QUARANTINE

8.1 Steps for Lifting the Quarantine

1) This sampling plan will be approved by the Technical Working Group.
2) MARCOR will execute the plan.
3) After all samples results are received and indicate "no *Bacillus anthracis* isolated," certificates of analysis and support documentation will be provided to all members of the TWG.
4) After the TWG agrees that the goals and objectives of the sampling program have been completed, a letter will be generated from the TWG to the Palm Beach County Health Department indicating the quarantine can be lifted.
5) The Palm Beach County Health Department will then lift the quarantine so that normal operations can be resumed at the property.

8.2 Proposed Language from the TWG to Dr. Malecki, Palm Beach County Health Department

The following language has been incorporated into a draft letter to Dr. Malecki of the Palm Beach County Health Department. This language was provided by the EPA and is taken directly from release documents from previous *B. anthracis* cleanups. The draft letter was submitted on October 31, 2006 to the EPA for review. The suggested language:

> "In summary, based on the information available, the Technical Working Group concludes that the measures used to treat and remove *B. anthracis* contamination at the former AMI Building, located at 5401 Broken Sound Boulevard in Boca Raton, Florida were successful. The TWG notes that as with all preceding remediation projects performed in response to the anthrax attacks in 2001, limitations in available sampling and analytical methods do not allow for an absolute guarantee that every possible spore has been destroyed.

However, working from the premise that surfaces, air spaces and areas are acceptably clean when an adequate sampling design has been implemented and all sample results are negative, the TWG believes that the building can be safely reoccupied, normal working activities resume and building contents be reused (or discarded as routine waste). The TWG notes that renovation and refurbishment activities will be performed in the building prior to returning the facility to its intended use. The TWG recommends that the facility work with the Occupational Safety and Health Administration (OSHA) prior to refurbishment to determine if OSHA recommends any measures for the protection of refurbishment workers.

Also, risk communication and educational activities are recommended to ensure that both renovation contractors and returning building employees are provided with an adequate explanation of the *B. anthracis* contamination incident, remediation measures conducted within the building and the subsequent clearance sampling results."

APPENDIX A

Air Sample Collection Duration

Floor	Number Sample Location per Half Floor		Air Volume per Half Floor (ft^3)		Three Air Volumes per Half Floor (ft^3)		Air Volume Processed per Location[1] (ft^3)		Air Sampler Capacity (ft^3/min)		Time Required to Draw 3 Air Volumes per Sample Area[1] per Half Floor (hours)			
	Floor Half		Floor Half		Floor Half		Floor Half		Air Sampler		DFU		TSP	
	West	East	West	East	West	East	West	East	DFU	TSP	West	East	West	East
Floor 3	8	6	156,000	156,000	468,000	468,000	58,500	78,000	10 6	60	92	123	16 3	21 7
Floor 2	5	11	156,000	156,000	468,000	468,000	93,600	42,545	10 6	60	147	67	26 0	11 8
Floor 1	8	16	156,000	156,000	468,000	468,000	58,500	29,250	10 6	60	92	46	16 3	8 1

Notes: [1] The volume of air is a function of the air processing capacity of the respective air sampler, the calculated three volumes for the space, and the number of air sample locations.

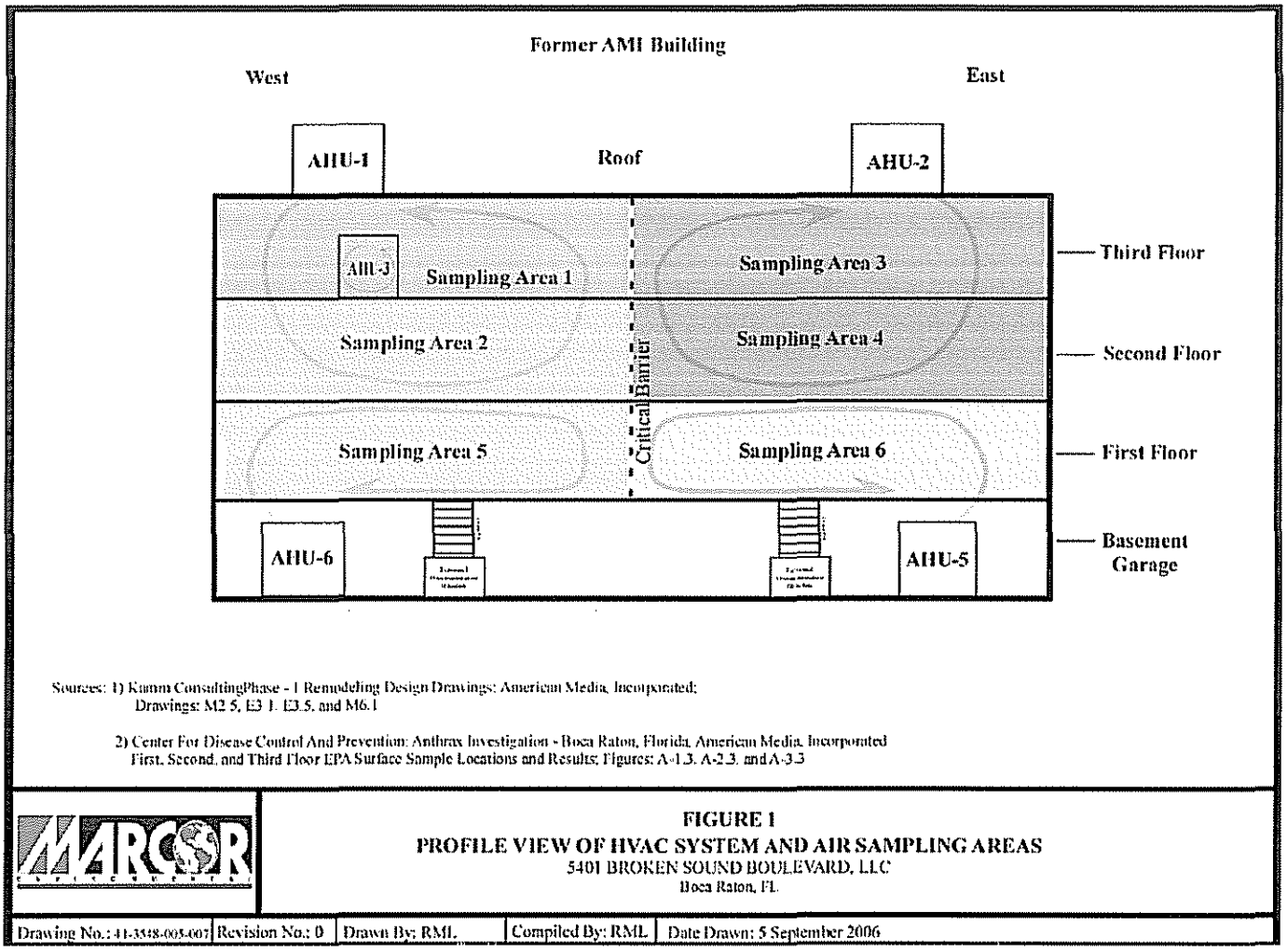
APPENDIX B

PROPOSED SCHEDULE OF ACTIVITIES

Day	Floor Areas Worked	Activities
1	Basement	Mobilization of work crew. Begin construction of two personnel decontamination structures in basement garage.
2	Basement	Construction of personnel decontamination structures.
3	Basement	Complete construction of personnel decontamination structures.
4	All	Critical barrier construction - Floor 3. Reconnaissance/confirm HVAC system as-
	Floor 3	built design.
5	Floor 3	Critical barrier construction - Floor 3
6	Floor 3	Critical barrier construction - Floor 3.
7	Floor 2	Critical barrier construction - Floor 2.
8	Floor 2	Critical barrier construction - Floor 2.
9	Floor 2	Complete critical barrier construction - Floor 2; mobilization of sampling team; prepare air sampling units and air moving equipment for use.
10	Floors 3 and 1	Set-up sampling equipment and air moving equipment on Floor 3 (west half; Sampling Area 1). Turn-on HVAC system (west half). Begin sampling. Begin critical barrier construction on Floor 1.
11	Floors 2 and 3 Floor 1	Move air sampling equipment and air moving equipment from Floor 3 to Floor 2. Set-up sampling equipment and air moving equipment at Sampling Area 2, as appropriate. Begin sampling. Continue critical barrier construction on Floor 1.
12	Floors 2 and 3 Floor 1	Turn-off HVAC system in the west half. Move air sampling equipment and air moving equipment from Floor 2 to Floor 3. Set-up sampling equipment and air moving equipment at Sampling Area 3. Turn-on HVAC system (east half). Begin sampling. Complete critical barrier on Floor 1.
13	Floors 2 and 3	Move air sampling equipment and air moving equipment from Floor 3 to Floor 2. Set-up sampling equipment and air moving equipment at Sampling Area 2 Begin sampling.
14	Floors 1 and 2	Turn-off HVAC system west half. Move air sampling equipment and air moving equipment from Floor 2 to Floor 1. Set-up sampling equipment and air moving equipment at Sampling Area 5. Turn-on Floor 1 HVAC system (west half). Begin sampling.
15	Floor 1	Turn-off HVAC system. Move air sampling equipment and air moving equipment to other half of Floor 1. Set-up sampling equipment and air moving equipment at Sampling Area 6. Turn-on HVAC system. Begin sampling.
16	Floor 1	Complete air sampling Floor 1. Turn-off HVAC system. Collect grid/random samples from Floor 1 rooms MR1, OS1 and LD1. Begin demobilization.
17	Basement	Demobilization.

FIGURE 1

Profile View of HVAC System and Air Sampling Areas



Sources: 1) Kimm ConsultingPhase - I Remodeling Design Drawings: American Media, Incorporated; Drawings: M2.5, E3.1, E3.5, and M6.1

2) Center For Disease Control And Prevention: Anthrax Investigation - Boca Raton, Florida; American Media, Incorporated First, Second, and Third Floor EPA Surface Sample Locations and Results; Figures: A-1.3, A-2.3, and A-3.3

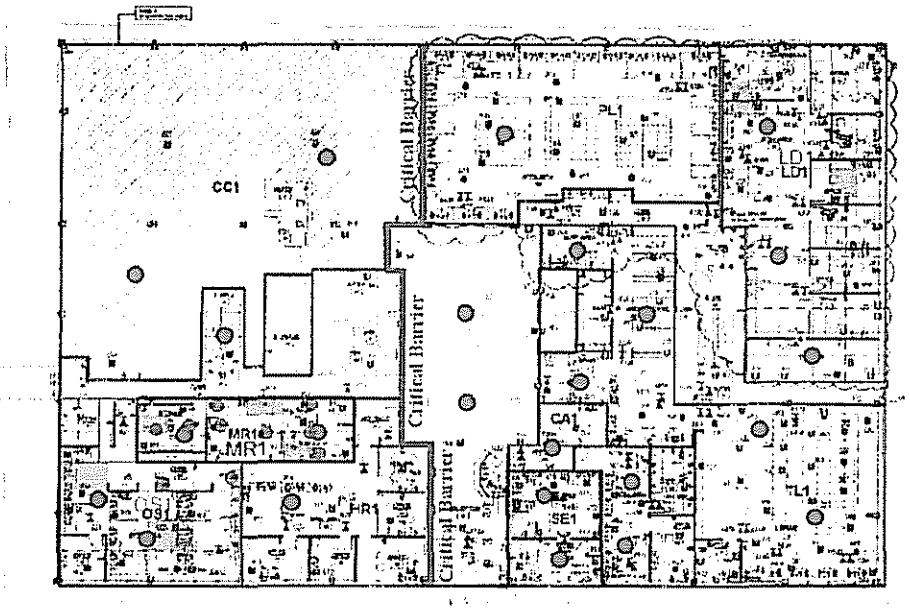
MARCOR ENVIRONMENTAL

FIGURE 1
PROFILE VIEW OF HVAC SYSTEM AND AIR SAMPLING AREAS
5401 BROKEN SOUND BOULEVARD, LLC
Boca Raton, FL

Drawing No.: 41-3348-005-007	Revision No.: 0	Drawn By: RML	Compiled By: RML	Date Drawn: 5 September 2006

Figure 2

First Floor Sample Collection Locations



First Floor Rooms

CC1	Cafe Construction
CA1	Common Area
IT1	Corporate IT
HR1	Human Resources
LD1	Legal Department
LO1	Lobby
MR1	Mail Room
OS1	Office Services
PL1	Photo Library
SE1	Security Office
TL1	Text Library

Historical Sampling Locations

- Air Vent Sample
- Swab/Gauze Wipe Sample
- HEPA Vacuum Sample

Proposed Verification Sample Locations

- Air Sampling Location
- Biased Sampling Location (Air Sampling Location)
- Grid Random Sampling Location (Wipe and HEPA Vacuum Sock)

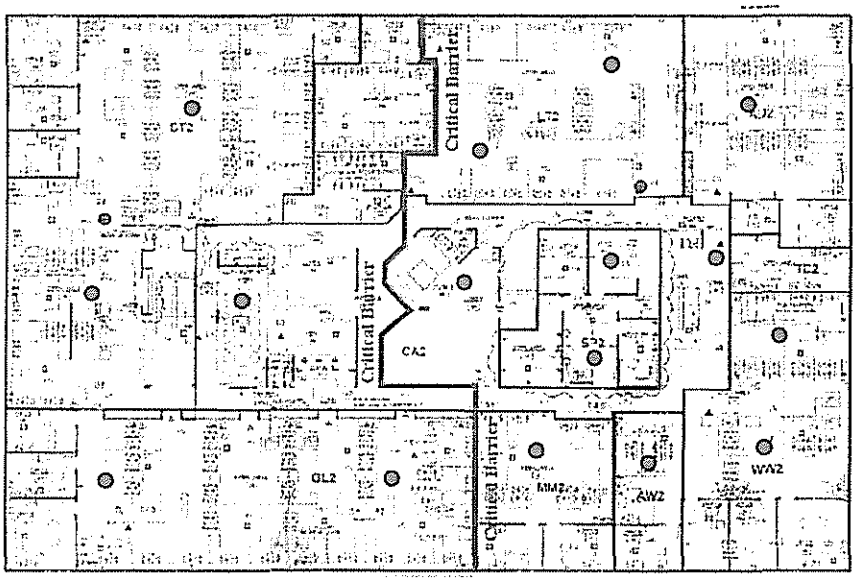
Source: Center For Disease Control And Prevention: Anthrax Investigation - Boca Raton, Florida. American Media, Incorporated First Floor EPA Surface Sample Locations and Results; Figure A-1.3

FIGURE 2
FIRST FLOOR SAMPLE COLLECTION LOCATIONS
5401 BROKEN SOUND BOULEVARD, LLC
Boca Raton, FL

Drawing No.: 41-3548-005-007	Revision No.: 0	Drawn By: RML	Compiled By: RML	Date Drawn: 5 September 2006

FIGURE 3

Second Floor Sample Collection Locations



Second Floor Rooms

AW2	Auto World
CA2	Common Area
GL2	Gluge
LT2	Laser Technologies
MM2	Mini Mugs
AD2	Production Management Advertising
SP2	Special Video Production
ST2	STAR
TD2	Travel Desk
WW2	WWW

Historical Sampling Locations

- Air Vent Sample
- Swab/Gauze Wipe Sample
- HEPA Vacuum Sample

Proposed Verification Sample Locations

- = Air Sampling Location
- = Biased Sampling Location (Air Sampling Location)

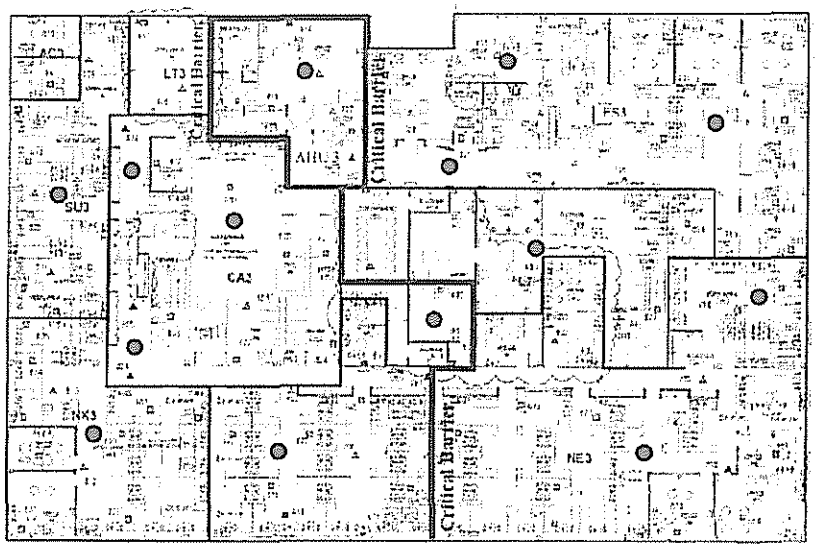
Source: Center For Disease Control And Prevention: Anthrax Investigation - Boca Raton, Florida, American Media, Incorporated Second Floor EPA Surface Sample Locations and Results; Figure A-2.3

FIGURE 3
SECOND FLOOR SAMPLE COLLECTION LOCATIONS
5401 BROKEN SOUND BOULEVARD, LLC
Boca Raton, FL

Drawing No.: 41-3548-005-008	Revision No.: 0	Drawn By: RML	Compiled By: RML	Date Drawn: 6 September 2006

Figure 4

Third Floor Sample Collection Locations



Second Floor Rooms

AC3	Accounting
CA3	Common Area
ES3	Executive Suites
LT3	Laser Technologies
NE3	National Inquirer
NX3	National Examiner
SU3	SUR

Historical Sampling Locations

- Air Vent Sample
- Swab/Gauze Wipe Sample
- HEPA Vacuum Sample

Proposed Verification Sample Locations

- = Air Sampling Location

Source: Center For Disease Control And Prevention: Anthrax Investigation - Boca Raton, Florida. American Media, Incorporated Third Floor EPA Surface Sample Locations and Results: Figure A-3 3

MARCOR ENVIRONMENTAL

FIGURE 4
THIRD FLOOR SAMPLE COLLECTION LOCATIONS
5301 BROKEN SOUND BOULEVARD, LLC
Boca Raton, FL

Drawing No.: 41-3548-005-600	Revision No.: 0	Drawn By: RML	Compiled By: RML	Date Drawn: 6 September 2006

Appendix D:

Health & Safety Plan, Version 5.0, for Final Clearance of the Upper Three Floors-*Field Revised*, 5401 Broken Sound Boulevard, Boca Raton, Florida 33486, 10-24-06

HEALTH & SAFETY PLAN, VERSION 5.0

FOR FINAL CLEARANCE SAMPLING OF THE UPPER THREE FLOORS

FIELD REVISED

5401 Broken Sound Boulevard
Boca Raton, Florida 33487

Submitted To:
John O'Malley
Palm Beach County Florida
Health Department

Prepared By:
MARCOR Remediation, Inc.
540 Trestle Place
Downingtown, Pennsylvania 19335

December 4, 2006

5401 Broken Sound, LLC, by Crown Companies, Inc.
David Rustine, President

MARCOR Remediation, Inc.
Prepared by Bruce Lippy, Ph.D., CIH, CSP

Table of Contents

Table of Contents (cont.)

Appendices (available onsite in bound copies)

Figures

Tables

1.0 INTRODUCTION

In the fall of 2001, the first case of anthrax caused by terrorist action occurred in the AMI building in Boca Rotan, Florida, which was considered contaminated and subsequently closed. The Palm Beach County Health Department issued a quarantine of the building and restricted access. The FBI, EPA, and CDC collected samples in the facility and the latter two organizations made their sampling results available to the owner. The building was fumigated with chlorine dioxide gas beginning on July 11, 2004.

Following the procedure, 2,000 biological indicator spore strips were positioned in 162 sampling locations of 100 square feet each to test the effectiveness of the fumigation throughout the building. All showed a 100 percent kill rate.[1] In addition, 952 surface samples were collected in the facility and analyzed by the New Jersey Department of Health and Senior Services State Laboratory, which reported all results as negative for *B. anthracis* growth.[2] After the surface sampling was completed, aggressive air samples were collected using three methods: dry filter units, high volume samplers, and Andersen cascade impactors. All samples were found to be negative by the New Jersey Department of Health and Senior Services laboratory.[3] Finally, building-wide stratified aggressive air sampling was conducted with the sampler intakes positioned directly in front of the air handler return ducts for each zone of the building. All samples were found to be negative for growth by the New Jersey Department of Health and Senior Services lab.[4]

A final clearance report was generated and provided to the EPA and to members of the Technical Working Group (TWG) advising Palm Beach County Health Department, but not to the owner because of a contractual dispute. With the understanding that the report could not be released, the EPA agreed to consider a February 2, 2006 request to review the copy of the report that resides in the records repository in Atlanta and then provide the Palm Beach County Health Department with a "written assurance that all technical criteria were met and all data were within limits" to allow the department to lift the quarantine. On June 26, 2006, Terry Stilman, on-scene coordinator for the EPA, indicated in an email that EPA had still not made a final determination on whether the upper floor data could be released and there was no indication that a decision would be made.

In the interim, MARCOR Environmental successfully removed the boxes stored in the basement and transported them for autoclaving. Most of the boxes, after passing tests at the facility for successful autoclaving, were buried in a landfill. A limited number of boxes were returned to 5401 Broken Sound Boulevard so the contents could be examined. All of the pallets successfully passed spore strip sampling and all were stored in trailers brought specifically to the site for that purpose; none were returned to the basement. After decontaminating the basement, MARCOR

---

[1] National Research Council. (2005). Reopening public facilities after a biological attack: A decision making framework. National Academies Press: Washington, D.C. p.153.
[2] Ibid. 154.
[3] Ibid. 154.
[4] Ibid. 154.

closely followed the sampling plan approved by the TWG (Version 8.0, 5-12-06) and collected wipe and HEPA sock vacuum samples for clearance purposes. The samples were packaged, shipped, and analyzed by Microbiology Specialists, Inc. of Houston, Texas. The Technical Working Group was notified on June 21st that all samples were negative for growth.

After the basement was officially cleared, and in the absence of any decision by the EPA about the previously successful clearance sampling on the upper floors, the owner of the building asked MARCOR to develop a sampling plan for the upper floors. A plan was developed and submitted to the Technical Working Group for review on September 9, 2006 (version 7). Comments were received and a formal comment resolution document was issued on October 3, 2006 This Health and Safety Plan (HASP) applies to the final clearance sampling in the upper three floors of the building.

2.0 ORGANIZATIONAL STRUCTURE

This chapter of the Health and Safety Plan (HASP) describes lines of authority, responsibility, and communication for health and safety functions at this site. The purpose of this chapter is to identify the personnel involved in the development and implementation of the site health and safety plan and to describe their roles and responsibilities. This chapter also identifies other contractors and subcontractors involved in work operations and establishes the lines of communication among them for safety and health matters.

The organizational structure of this site's safety and health program is consistent with OSHA requirements in 29 CFR 1910.120(b)(2) and provides the following site-specific information:

* the general supervisor who has the responsibility and authority to direct all cleanup operations;
* the site safety and health officer who has the responsibility and authority to develop and implement this HASP and verify compliance;
* other personnel needed for cleanup operations and emergency response and their general functions and responsibilities; and
* the lines of authority, responsibility, and communication for safety and health functions.

This chapter is reviewed and updated as necessary to reflect the current organizational structure at this site.

2.1 Roles and Responsibilities

All personnel and visitors on this site must comply with the requirements of this HASP. The specific responsibilities and authority of management, safety and health, and other personnel on this site are detailed in the following paragraphs. A site organizational chart illustrating the hierarchy of personnel and lines of communication within this company and with additional contractors on site is found in Figure 2-1.

Project Manager (PM)

The Project Manager (PM) for this site is Lynn Dewees, P.E.

The PM has responsibility and authority to direct all work operations. The PM coordinates safety and health functions with the Site Safety and Health Officer (SSHO), has the authority to oversee and monitor the performance of the SSHO, and bears ultimate responsibility for the proper implementation of this HASP. The specific duties of the PM are:

1. Preparing and coordinating the site work plan;
2. providing site supervisor(s) with work assignments and overseeing their performance;
3. coordinating safety and health efforts with the SSHO;
4. ensuring effective emergency response through coordination with the Emergency Response Coordinator (ERC); and
5. serving as primary site liaison with public agencies and officials and site contractors.

The qualified alternate Project Manager (PM) for this site is Jack Bally.

Site Safety and Health Officer (SSHO)

The Site Safety and Health Officer (SSHO) for this site is Bruce Lippy, Ph.D., CIH, CSP, a consultant to MARCOR.

The SSHO has full responsibility and authority to develop and implement this HASP and to verify compliance. The SSHO reports to the Senior Health & Safety Specialist. The SSHO is on site or readily accessible to the site during all work operations and has the authority to halt site work if unsafe conditions are detected. The specific responsibilities of the SSHO are:

1. Managing the safety and health functions on this site;
2. serving as the site's point of contact for safety and health matters;
3. ensuring that site monitoring, worker training, and selection and use of PPE is appropriate;
4. assessing site conditions for unsafe acts and conditions and providing corrective action;
5. assisting the preparation and review of this HASP;
6. maintaining effective safety and health records as described in this HASP; and
7. coordinating with the Emergency Response Coordinator (ERC), Site Supervisor(s), and others as necessary for safety and health efforts.

Emergency Response Coordinator (ERC)

The Emergency Response Coordinator (ERC) for this site will be the Site Supervisor.

The ERC is responsible for assessing site conditions and directing and controlling emergency response activities and personnel in accordance with the Site Emergency Response Plan. The ERC reports to the Project Manager (PM). The ERC will ensure the evacuation, emergency transport, and treatment of site personnel and will notify the appropriate emergency response units and management staff in accordance with the emergency response plan of this HASP. Specific duties of the ERC include:

1. developing and reviewing the emergency response plan;
2. conducting emergency response rehearsals;
3. ensuring effective emergency response to and evacuation of the site;
4. coordinating emergency response functions with the Site Safety and Health Officer (SSHO), and
5. integrating site emergency response plans with the disaster, fire, and/or emergency response plans of local, state, and federal organizations and agencies.

Site Supervisor

The Site Supervisor for this site is Rick Ley.

The Site Supervisor is responsible for field operations and reports to the Project Manager (PM). The Site Supervisor ensures the implementation of the HASP requirements and procedures in the field. The specific responsibilities of the Site Supervisor are:

1. executing the Work Plans and schedule as detailed by the PM;
2. coordinating with the Site Safety and Health Officer (SSHO) on safety and health;
3. ensuring site work compliance with the requirements of this HASP.

Site Workers

Site workers will be responsible for complying with this HASP, using the proper PPE, reporting unsafe acts and conditions, and following the lines of authority established for this project site. MARCOR abatement workers will be responsible for erecting the plastic barriers to separate

work areas for the sequential aggressive air sampling protocol. They will also assist the sampling team by operating leaf-blowers and setting up stationary fans.

Decontamination Manager

The Decontamination Manager for this site will be the Site Supervisor.

The Decontamination Manager is responsible for decontamination procedures, equipment, and supplies. The specific responsibilities of the Decontamination Manager are:

1. setting up decontamination lines and the solutions appropriate for the type of contamination on site;
2. controlling the decontamination of all equipment, personnel and samples from the contaminated areas;
3. assisting in disposal of contaminated clothing and materials;
4. ensuring all required equipment is available and in working order; and
5. providing for collection, storage and disposal of waste.

Security Officer

The Security Officer for this site will be provided by the property owner through a contract with Allied Barton Security.

The Security Officer is responsible for managing and maintaining site security. The specific responsibilities of the Security Officer are:

1. Conducting routine area patrols;
2. controlling facility access and egress;
3. assisting with communication during an emergency;
4. securing accident/incident scenes;
5. maintaining a log of site access and egress.

Details are provided in the Security Plan in Appendix H.

2.2 Identification of Other Site Contractors

The other contractors and subcontractors on this site who could be affected by the tasks and operations associated with this work plan and HASP are listed in Table 2-2 below.

Table 2-2 Other Site Contractors and Subcontractors

Company	Function
Microbiology Specialists Inc. (MSI)	Sampling and analysis
URS Corporation	Collection of air samples

Safety and health lines of communication with these contractors are illustrated in Figure 2-1.

2.3 Local/State/Federal Agency Representatives and Their Roles & Responsibilities

Palm Beach County Health Department (PBCHD)

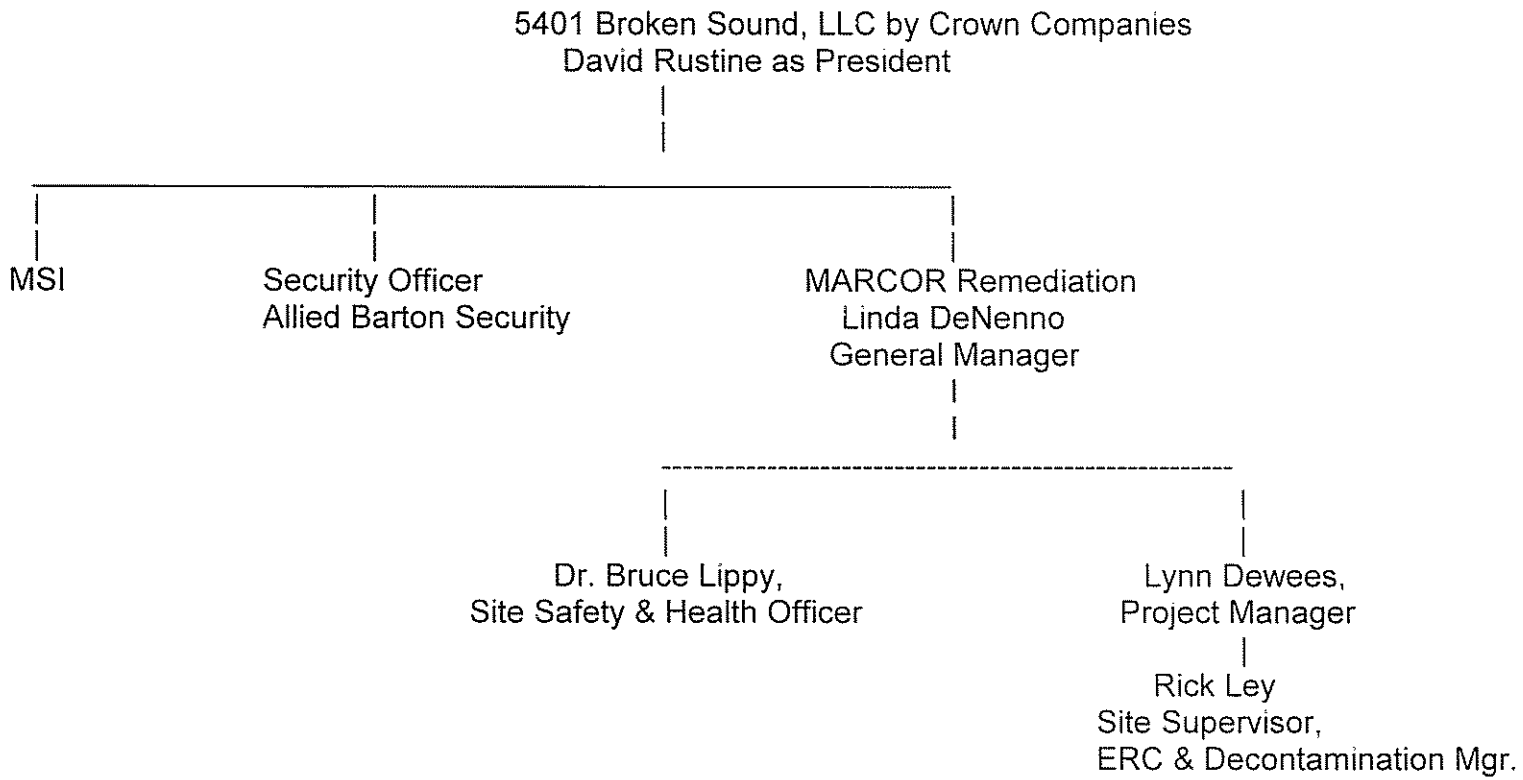
John O'Malley of the PBCHD may be on-site from time-to-time to verify that the means and methods of containment and decontamination documented in this plan are being followed. The Palm Beach County Health Department holds the quarantine of the building and will be responsible for lifting it after the sampling has been successfully completed.

EPA Representative

The USEPA Representative for this site is Terry Stilman, the On-Scene Coordinator (OSC). Fred Stroud, a member of the EPA's Environmental Response Team based in Las Vegas, has been serving as a backup for Mr. Stilman when he has other assignments.

The USEPA OnScene Coordinator has certain legal and regulatory authorities and responsibilities to respond to releases. In this case the USEPA is providing technical assistance to the PBCHD. The OSC will be on site from time to time.

Figure 2-1 Organizational Chart



3.0 SITE CHARACTERIZATION AND JOB HAZARD ANALYSIS

This section of the HASP describes safety and health hazards associated with site work. The purpose of characterization and job hazard analysis is to identify the health and safety hazards associated with each site task and operation, and to evaluate the risks to workers. With this information, risks are then eliminated if possible, or effectively controlled. The information contained in this section of the HASP is essential to effective preparation of all other sections of the HASP. This section of the HASP includes:

- job hazard analysis
- chemical and biological hazard information
- employee notification of hazards

The individuals responsible for ongoing site characterization and job hazard analysis at this site will be the SSHO and Site Supervisor, leading a team including site workers.

3.1 Job Hazard Analysis

Table 3.2a contains the job hazard analysis information for this site and the planned hazard controls. This table lists each task or operation required for this facility cleanup project, by site location. Biological and chemical hazards and their known or anticipated airborne concentrations are identified for each distinct combination of location and task/operation. Based on the task/operation at a particular location, anticipated physical hazards are also identified. Then, based on the best available knowledge of how that task/operation will be performed, the likelihood of exposure to the hazards identified for the task/operation at that location is indicated. The final section in Table 3.2a lists the control measures implemented to protect employees from the hazards identified. The information provided here is designed to satisfy the job hazard analysis requirements of 1910.120(b)(4)(ii)(A) and the workplace hazard assessment requirements of 1910.132(d).

Table 3.2b summarizes health hazard information for each chemical and biological substance listed in Table 3.2a.

Tables 3.2a and 3.2b will be modified by the SSHO when:

- the Scope of Work is changed by adding, eliminating, or modifying tasks;
- new methods of performing site tasks are selected;
- observation of the performance of site tasks results in a revised characterization of the hazards;
- new chemical, biological, or physical hazards are identified;
- exposure data indicate changes in the concentration and/or likelihood of exposure; and
- new or different control measures are selected.

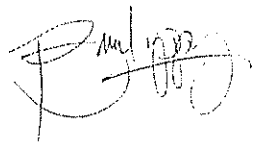
These tables summarize the information used to select and implement the specific exposure controls identified in the remainder of the HASP. When the tables are modified, related provisions elsewhere in the HASP are also modified.

3.2 Employee Notification of Hazards and Overall Site Information Program

The information in Tables 3.2a and 3.2b will be conveyed to all employees who could be affected by it during an initial site briefing and/or HASP training conducted prior to the time they begin their work activities. Modifications to these tables are communicated during routine briefings.

Consistent with paragraph (i) of HAZWOPER, MARCOR will also inform other contractors and subcontractors about the nature and level of hazardous substances at this site, and likely degree of exposure to workers who participate in site operations. The SSHO is responsible for providing site characterization information, this HASP, and modifications to it to other contractors and subcontractors working on this site.

Table 3.2a: Site-Specific Job Hazard Analysis

JHA Number:	1	**Date JHA Conducted.**	10/8/06
Task/Operation		Install plastic barriers	
Location Where Task/Operation Performed		All three upper floors	
Employee Certifying this JHA (in accordance with 910.132(d)(2)):		Bruce Lippy	
Signature of Employee Certifying this JHA			

Chemical Hazards

Chemical Name	Source	Concentration	Exposure Potential
Acetone	Aramsco Lynx Tack Spray glue	Not measured	**X Likely** ☐ Unlikely
n-Hexane	Aramsco Lynx Tack Spray glue	Not measured	**X Likely** ☐ Unlikely
Liquefied petroleum gas	Aramsco Lynx Tack Spray glue	Not measured	**X Likely** ☐ Unlikely
Bleach	Equipment and material Decontamination	PH adjusted bleach solution	**X Likely** ☐ Unlikely

Biological Hazards

Name of Hazard	Source	Concentration	Exposure Potential
Bacillus anthracis spores	Settled dust that becomes airborne during the hanging of plastic	Unknown	☐ Likely **X Unlikely**

Physical Hazards

Physical Hazard	Source	Exposure Potential
Slips, trips, & falls	Typical building conditions, particular working at heights inside the building hanging plastic.	**X Likely** ☐ Unlikely
Heat Stress	Climate exacerbated by PPE	**X Likely** ☐ Unlikely
Fire	Spray glue	☐ Likely **X Unlikely**

Table 3.2a: Site-Specific Job Hazard Analysis		
Muscle strain	Lifting of boxes of materials such as duct tape and particularly, rolls of poly sheeting	☐ Likely **X Unlikely**
Control Measures Used		
Engineering Controls: HEPA ventilation units, if used to achieve negative pressure, will dilute vapors from spray glue applications.		
Work Practices: MARCOR crew will work from small lifts rather than ladders while hanging the plastic sheets on each floor to avoid the greatest hazard on this project: falls during the erecting of the plastic barriers. Lifts of materials over 50 pounds will be done using the buddy system to prevent strains and sprains. The buddy system will be used, additionally, to ensure that while in the building, the workers are constantly checking each other for signs of heat stress.		
PPE: MARCOR crews will wear p-100/OV dual respirator cartridges during the spraying of glue to reduce the exposure to acetone and hexane. Standard Tyvec suits will be used rather than Saranek-coated Tyvec to reduce the degree to which protective garments add to the heat stress burden. (Refer to section 6.0 Personal Protective Equipment.)		

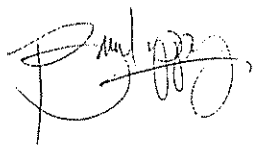
Table 3.2a: Site-Specific Job Hazard Analysis			
JHA Number:	2	**Date JHA Conducted.**	10/08/06
Task/Operation		Cutting plastic during erection of barriers	
Location Where Task/Operation Performed		Upper three floors	
Employee Certifying this JHA (in accordance with 910.132(d)(2)):		Bruce Lippy	
Signature of Employee Certifying this JHA			
Chemical Hazards			
Chemical Name	**Source**	**Concentration**	**Exposure Potential**
Bleach	Personnel Decontamination	PH adjusted bleach solution	**X Likely** ☐ Unlikely
Biological Hazards			
Name of Hazard	**Source**	**Concentration**	**Exposure Potential**

Table 3.2a: Site-Specific Job Hazard Analysis			
Bacillus anthracis spores	Settled dust that becomes airborne during the hanging of plastic	Unknown	☐ Likely **X Unlikely**

Physical Hazards		
Physical Hazard	**Source**	**Exposure Potential**
Cuts	Use of sharp utility knives	**X Likely** ☐ Unlikely
Heat Stress	Climate exacerbated by PPE	**X Likely** ☐ Unlikely
Muscle strain	Lifting of materials, particularly rolls of poly sheeting.	☐ Likely **X Unlikely**

Control Measures Used

Engineering Controls: Use of safer utility knives that have guards on the blade.

Work Practices: Materials and supplies that need to be unloaded and moved will be examined by the Site Safety Officer to identify any that may pose a risk of back injury from lifting. The NIOSH lifting formula (Waters, Putz-Anderson and Garg, 1994) will be used to guide decision-making on material handling. The use of the buddy system will be emphasized. The buddy system will be used, additionally, to ensure that while in the building, the workers are constantly checking each other for signs of heat stress. Pre-entry training will emphasize the signs and symptoms of heat stress.

PPE: MARCOR crews will wear p-100/OV dual respirator cartridges during the spraying of glue to reduce the potential for exposure to acetone and n-hexane. Standard Tyvec suits, rather than Saranek-coated Tyvec, will be used to reduce the degree to which protective garments add to the heat stress burden. (Refer to section 6.0 Personal Protective Equipment.)

Table 3.2a: Site-Specific Job Hazard Analysis			
JHA Number:	3	**Date JHA Conducted.**	06/29/2005
Task/Operation		Operating leaf blowers and fans	
Location Where Task/Operation Performed		Throughout the upper three floors during aggressive sampling	
Employee Certifying this JHA (in accordance with 910.132(d)(2)):		Bruce Lippy	
Signature of Employee Certifying this JHA			

Table 3.2a: Site-Specific Job Hazard Analysis

Chemical Hazards

Chemical Name	Source	Concentration	Exposure Potential
Carbon monoxide	Gas-powered leaf blowers	Potentially significant	**X Likely** ☐ Unlikely

Biological Hazards

Name of Hazard	Source	Concentration	Exposure Potential
Bacillus anthracis spores	Settled dust that becomes airborne during aggressive sampling	Unknown	☐ Likely **X Unlikely**

Physical Hazards

Physical Hazard	Source	Exposure Potential
Slips, trips, & falls	Typical building conditions, particular heightened during decon in plasticized chambers.	**X Likely** ☐ Unlikely
Heat Stress	Climate exacerbated by PPE	**X Likely** ☐ Unlikely
Electrical shock	Operating the portable equipment	☐ likely **X Unlikely**
Fire	Overheating of portable electrical equipment	☐ likely **X Unlikely**
Noise	Operating leaf blower	**X Likely** ☐ Unlikely

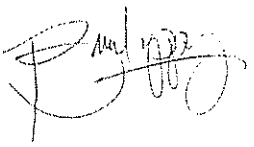
Control Measures Used

Engineering Controls: Gas-powered leaf blowers will not be used in this operation; only electrically-powered leaf blowers will be used to avoid carbon monoxide and reduce noise. The electric leaf blower type will be chosen from among those noted by Consumers Report in 2004 to be excellent for noise. Noise levels will be measured to ensure exposures are acceptable. Additionally, to prevent shocks, all electrical equipment will be plugged into Ground Fault Circuit Interrupters (GFCI).

Work Practices: Use of buddy system: no one will work in isolation during the aggressive sampling efforts.

PPE: See 6.0 Personal Protective Equipment. Hearing protection will not be used unless necessary because of the need to communicate effectively on the site.

Table 3.2a: Site-Specific Job Hazard Analysis

JHA Number:	4	**Date JHA Conducted.**	06/29/2005
Task/Operation		Removal of any remaining filters from the ventilation system.	
Location Where Task/Operation Performed		Throughout the building, but mainly in the mechanical spaces	
Employee Certifying this JHA (in accordance with 910.132(d)(2)):		Bruce Lippy	
Signature of Employee Certifying this JHA			

Chemical Hazards

Chemical Name	Source	Concentration	Exposure Potential
None			☐ Likely ☐ Unlikely

Biological Hazards

Name of Hazard	Source	Concentration	Exposure Potential
Bacillus anthracis spores	Settled dust that becomes airborne during the hanging of plastic	Unknown	☐ Likely **X Unlikely**

Physical Hazards

Physical Hazard	Source	Exposure Potential
Slips, trips, & falls	Working at heights, possible grease or water on floor in mechanical spaces.	**X Likely** ☐ Unlikely
Heat Stress	No PPE	☐ Likely **X Unlikely**
Muscle strain	Light lifting	☐ Likely **X Unlikely**

Control Measures Used

Engineering Controls: None

Work Practices: Use buddy system, never lift alone.

PPE: Refer to section 6.0 Personal Protective Equipment.

Table 3.2b Hazard Substance Information				
Hazardous Substance Name	**Characteristics of Substance**	**Route(s) of Entry**	**Exposure Limits**	**Exposure Signs & Symptoms**
Bacillus anthracis	Aerobic, large gram positive rods occurring in chains; non-motile; forms resistant spores	Inhalation, skin contact, ingestion	Not Established	**INHALATION:** Initial symptoms may resemble a common cold: sore throat, mild fever, muscle aches and malaise. After several days, the symptoms may progress to severe respiratory distress, fever, and shock with death shortly thereafter. **SKIN CONTACT**: Infection begins as a raised itchy bump that resembles an insect bite but within 1-2 days develops into a vesicle and then a painless ulcer, usually 1-3 cm in diameter, with a characteristic black necrotic (dying) area in the center. **INGESTION:** Initial signs of nausea, loss of appetite, vomiting, and fever are followed by abdominal pain, vomiting of blood, severe diarrhea, septicemia and death (rare).
Acetone	Colorless, flammable liquid with a mint-like odor. It represents under 20% of the weight of the Aramsco spray glue.	Inhalation; skin	750 ppm (PEL) 750 ppm (TLV)	**Inhalation**: High vapor concentrations will produce anesthesia. Acetone is a solvent of comparatively low acute and chronic toxicities, however. Acetone does not have sufficient warning properties to prevent repeated exposures to vapors, which may have adverse effects. There have been no reports that prolonged inhalation of low vapor concentrations result in any serious chronic effects in humans. **Skin contact:** Acetone penetrates the skin; prolonged contact can defat the skin and cause dermatitis.
n-hexane	Overexposure may cause progressive and potentially irreversible damage to the peripheral nervous system.	Inhalation skin	50 ppm (PEL) 50 ppm (TLV)	**Inhalation:** Acts as anesthetic in large acute doses and overexposure may cause progressive and potentially irreversible damage to the peripheral nervous system. **Skin contact:** n-hexane penetrates the skin; prolonged contact can defat the skin and cause dermatitis.

Table 3.2b Hazard Substance Information				
Hazardous Substance Name	**Characteristics of Substance**	**Route(s) of Entry**	**Exposure Limits**	**Exposure Signs & Symptoms**
12% Bleach (sodium hypochlorite)	Clear, light yellow liquid with chlorine odor	Inhalation, skin contact, ingestion	Not Established	**INHALATION:** Toxic by Inhalation. Corrosive to respiratory passages. Increasing doses may cause irritation of mouth, nose and throat. Repeated or prolonged exposure can cause coughing, runny nose, bronchopneumonia, headaches, breathing difficulty, pulmonary edema and lung injury. **INGESTION:** Toxic by ingestion. Causes burns, abdominal cramps, nausea, vomiting, lowered blood pressure, diarrhea and shock. Coma, shock and death may occur. **EYE CONTACT:** Burns, irritation. Corrosive to eye tissue and may cause severe damage. **SKIN CONTACT:** Burns, irritation. Corrosive and may cause severe burns. Prolonged and repeated exposure to dilute solutions often causes irritation, redness, pain, drying and cracking of the skin and skin sensitization. Toxic effects may be delayed. Rinse with plenty of soap and water for at least 10 minutes. Wash contaminated clothing before re-use.

4.0 SITE CONTROL

This site control program is designed to reduce the spread of hazardous substances from contaminated areas to clean areas, to identify and isolate contaminated areas of the site, to facilitate emergency evacuation and medical care, to prevent unauthorized entry to the site, and to deter vandalism and theft.

The site control program includes the elements specified in 29 CFR 1910.120(d) and provides the following site-specific information:

- a site map, indicating site perimeter and work zones;
- site access procedures;
- site security;
- site work zones including standard operating procedures;
- use of the buddy system; and
- both internal (on-site) and external communications.

The SSHO and Site Supervisor are responsible for evaluating site conditions and for verifying that the site control program functions effectively. The site control program is updated regularly to reflect current site conditions, work operations, and procedures.

4.1 Site Map

A map of this site; showing site boundaries, designated work zones, and points of entry and exit is provided in Figure 4-1, at the end of this chapter.

4.2 Site Access

Access to this site is restricted to reduce the potential for exposure to its safety and health hazards. During hours of site operation, site entry and exit is authorized only at the front gate, the only entrance into the property. Entry and exit at these points are controlled by the property owner. Entry into the upper floors will be through point(s) identified in Figure 4-1. When the site is not operating, access to the site is controlled by the property owner and the front door and garage doors are locked.

Visitors to the site register with guard at the main gate and are escorted at all times. Visitors are expected to comply with the requirements of this HASP. No visitors are expected to enter contaminated areas of the site.

4.3 Site Security

Security at this site is maintained during both working hours and non-working hours to prevent unauthorized entry; removal of contaminated material from the exclusion zone; exposure of unauthorized, unprotected people to site hazards; and increased hazards due to vandalism and theft. The property owner is responsible for maintaining site security and has contracted Allied Barton Security. A detailed Security Plan is in Appendix H

4.4 Site Work Zones

This site is divided into three (3) major zones, described below and shown in Figure 4-1. These zones are characterized by presence or absence of biological and chemical hazards and the activities performed within them.

Zone boundaries are clearly marked at all times and the flow of personnel and equipment among the zones is controlled.

The site is monitored for changing conditions that may warrant adjustment of zone boundaries. Zone boundaries are adjusted as necessary to protect personnel and clean areas. Whenever boundaries are adjusted, zone markings are also changed and workers are immediately notified of the change.

The following criteria were considered in establishing the site work zones:

- required set-up and sampling activities;
- sampling results for air and surface contaminants; and
- physical, biological, and other characteristics of anthrax spores and decontamination substances, and
- The need to keep the work zones under negative pressure.

Exclusion Zone

The Exclusion Zone is the area where hazardous substances are known or suspected to be present and pose the greatest potential for exposure. Remediation operations or, in this case, sampling activities are performed in the Exclusion Zone. At this site, the Exclusion Zone boundaries include anything above the AMI basement parking garage. Personnel and equipment will enter and exit the Exclusion Zone from the designated access points in the Contamination Reduction Zone (CRZ), shown in Figure 4-1. Special emphasis will be placed on training workers about changing access points into the different sampling areas through the barriers as the project evolves.

Personnel in the Exclusion Zone will adhere to the following Standard Operating Procedures (SOPs):

Exclusion Zone (ExZ) Standard Operating Procedures (SOPs)

While in the exclusion zone, all workers must:

- Check in and out of this zone at the designated access point and sign the entry and exit log, noting the estimated time in the zone;
- Use the buddy system at all times;
- Wear the PPE required for this zone (see PPE section of this HASP);
- Not smoke, eat, or drink;
- Monitor self and buddy for signs of heat stress, Check body temperature with the tympanic thermometer at the entry desk upon entering and exiting the zone and note temperature in the log, comparing it against the recommended range;
- Spend at least 15 minutes in the air-conditioned trailer after exiting the work area;
- Alert supervisor to signs of unanticipated hazards;
- Avoid all in horseplay;
- Monitor self and buddy for PPE improper fittings, rips, tears, and/or damage; and
- Use monitoring equipment and tools that are safe for the working environment.

Contamination Reduction Zone (CRZ)

The CRZ is located between the Exclusion Zone and the Support Zone (clean zone). Its primary purpose is for decontamination of workers and equipment. The CRZ also serves as a buffer between the Exclusion Zone and Support Zone, to limit the potential for contamination to spread to the Support Zone and outlying areas. At this site, the CRZ boundaries include the decontamination chamber at the garage entrance.

Workers and equipment exit the Exclusion Zone through the designated access point(s) into the CRZ. Workers and equipment are then decontaminated in the CRZ, according to the procedures specified in the Decontamination section of this HASP. Workers and equipment then exit the CRZ into the Support Zone through the designated access points, shown in Figure 4-1.

If necessary, emergency decontamination procedures are implemented. Emergency decontamination procedures are described in the site's emergency response program, Chapter 12 of this HASP. Personnel in the CRZ will adhere to the following SOPs.

Contamination Reduction Zone (CRZ) SOPs

While in the Contamination Reduction Zone, all workers must:

- Check in and out of this zone at the designated access point;
- Wear the PPE required for this zone (see PPE section of this HASP);
- Not smoke, eat, or drink;
- Monitor self and buddy for signs of heat stress and other difficulties;
- Alert supervisor to signs of unanticipated hazards;
- Avoid horseplay; and
- Monitor self and buddy for PPE improper fittings, rips, tears, and/or damage.

Support Zone

The Support Zone is the clean area of the site, beyond the outer boundary of the CRZ. There should be no contamination in this zone. Administrative, clerical, and other support functions are based in the Support Zone.

The Support Zone is shown in Figure 4-1 and includes the property surrounding the building.

If contamination is expected, zone boundaries will be adjusted until corrective action is taken.

Within the Support Zone, personnel adhere to the following SOPs:

Support Zone (SZ) SOPs

While in the Support Zone, all workers must:

- Check in and out of this zone from the CRZ at the designated site access point;
- Don PPE prior to entry into CRZ;
- Perform communication equipment testing prior to entry into CRZ;
- Perform respiratory equipment check prior to entry into CRZ;
- Perform PPE check, looking for proper PPE, proper seals and general integrity of PPE, prior to entry into CRZ;
- Alert supervisor to signs of unanticipated hazards; and
- Avoid horseplay.

4.5 Buddy System

While working in the Exclusion Zone, site workers use the buddy system. Workers must enter the Exclusion Zone in pairs. The buddy system means that personnel work in pairs and stay in close visual contact to be able to observe one another and summon rapid assistance in case of an emergency. The responsibilities of workers using the buddy system include:

* remaining in close visual contact with partner,
* providing partner with assistance as needed or requested,
* observing partner for signs of heat stress or other difficulties,
* periodically checking the integrity of partner's PPE, and
* notifying the supervisor or other site personnel if emergency assistance is needed.

4.6 Site Communications

Cellular telephones at this site are located in the following areas:
Job site trailer.

A current list of emergency contact numbers is posted in the following locations:
Job site trailer.

Two-way radios are available in the following locations:
Job site trailer.

The following people will carry two-way radios:
Supervisor, SSHO, decontamination support personnel, back-up personnel, and each entry team.

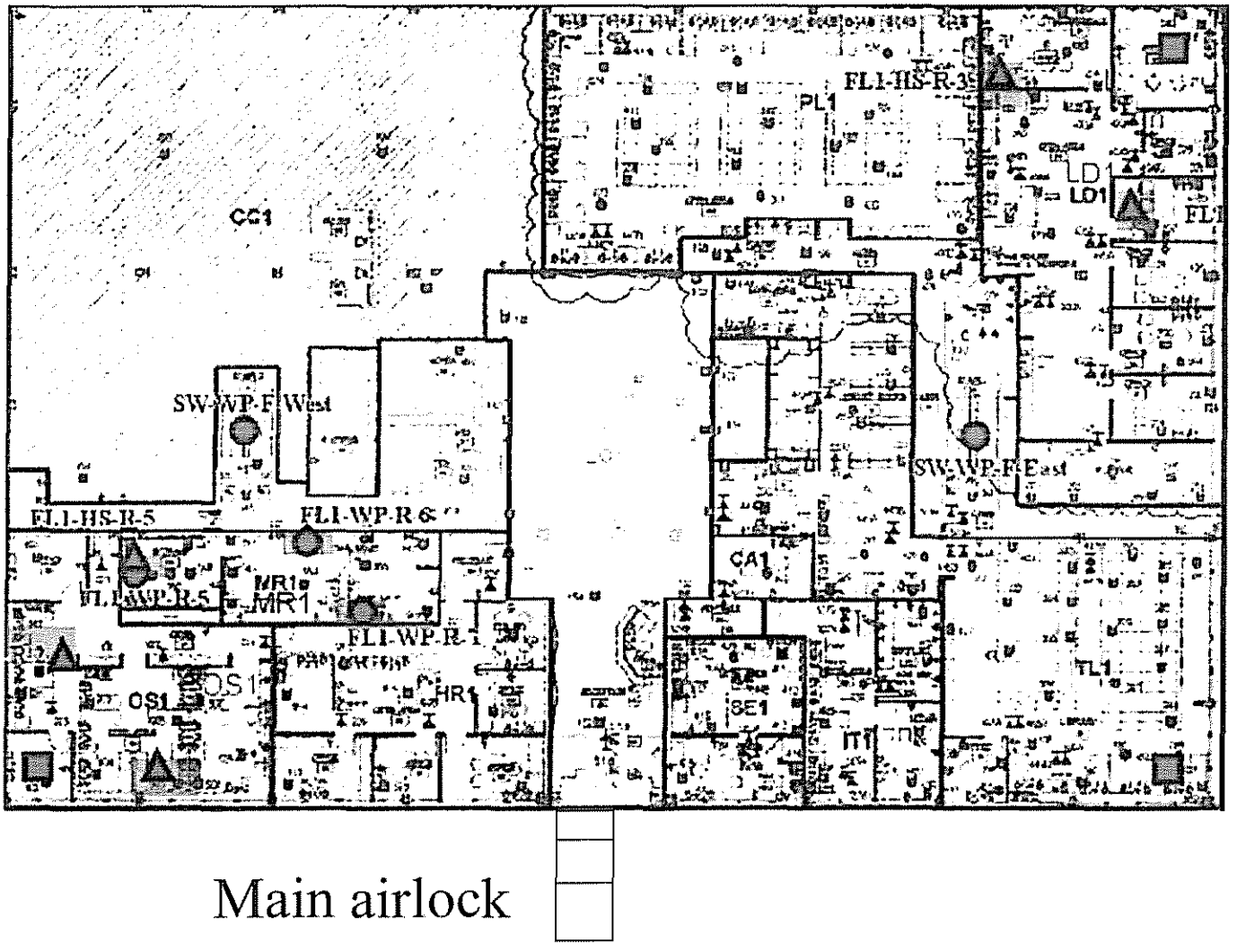
Other forms of communication on this site include:
Air horns will be located in the job trailer and in the exclusion zone for emergency evacuation notification.

Site personnel are trained to recognize and use hand signals when visual contact is possible, but noise or PPE inhibit voice communication. These hand signals are listed below in Table 4-6.

Table 4-6 Site Communication – Hand Signals

Signal	Meaning
Hand gripping throat	Out of air, can't breath
Grip partner's wrist of both hands around waist	Leave area immediately
Hands on top of head	Need assistance
Thumbs up	Ok, I am all right, I understand
Thumbs down	No, negative

Figure 4-1 Map of Site Boundaries, Work Zones, and Entry/Exit Points



5.0 TRAINING PROGRAM

The site training program is designed to ensure that workers receive the training they need to work safely. Site safety and health training requirements are based on the job hazard assessments contained in Chapter 3 of this HASP and relevant OSHA requirements.

At this site, the SSHO and Site Supervisor oversee the implementation of this training program and are responsible for ensuring that employees are adequately and currently trained for all tasks they are asked to perform. Employees who have not been trained to a level required by their job function and responsibility are not permitted to participate in or supervise field activities.

This training program is consistent with the requirements of 29 CFR 1910.120(e) and (q)(11) and addresses the following site-specific information:

- initial training for site workers & supervisors ;
- exceptions to initial training requirements;
- site briefings for visitors and workers;
- refresher training;
- qualification of trainers; and
- emergency response training.

5.1 Initial Training for Site Workers and Supervisors

Initial training requirements are based on the designation of the site as either post-emergency response operations or as a government identified uncontrolled hazardous waste site, a worker's potential for exposure, and compliance with the applicable regulatory requirements of 29 CFR 1910.120 (q)(11) and/or (e)(3).

Personnel at this site have successfully completed 40-hour initial HAZWOPER training consistent with the requirements of 29 CFR 1910.120(e)(3)(i), or have received equivalent training consistent with the provisions of 29 CFR 1910.120(e)(9), in order to work in contaminated areas. Under (e)(3) onsite training will include changes to egress routes changes that will occur after the barriers are erected.

The initial training provided to these workers addresses:

- names of personnel and alternates responsible for site safety and health;
- safety, health and other hazards present on the site;
- use of PPE;
- work practices by which the employee can minimize risks from hazards;
- safe use of engineering controls and equipment on the site;
- the site control plan detailed in Chapter 4 of this HASP;
- medical surveillance requirements detailed in Chapter 6 of this HASP;
- the spill containment program detailed in Chapter 10 of this HASP;
- decontamination procedures detailed in Chapter 11 of this HASP; and
- the emergency response plan detailed in Chapter 12 of this HASP.

5.2 Exceptions to Initial Training

All employees at this site will have training consistent with what is described in Section 5.1. There are no exceptions.

5.3 Site-Specific Briefings for Visitors and Workers

A site-specific briefing is provided to all individuals, including site visitors, who enter the site beyond the initial point of access, located in the job site trailer.

For visitors, the site-specific briefing provides information about site hazards, the site layout including work zones and places of refuge, the emergency alarm system and emergency evacuation procedures, and other pertinent safety and health requirements as appropriate.

5.4 Refresher Training

All workers on this site, including managers and supervisors, receive annual HAZWOPER refresher training consistent with the requirements of 29 CFR 1910.120(e)(8). Table 5-4 details additional training topics.

Table 5-4 Refresher Training Topics
All workers at this site must also receive additional training including anthrax information and working with bleach solutions.

5.5 Qualification of Trainers

Only instructors qualified in accordance with 29 CFR 1910.120(e)(5) are used to train workers for this site. Qualified instructors have either completed a training program for the subjects they are expected to teach, or have the academic credentials and instructional experience necessary for

teaching these subjects.

5.6 Training Certification

This site maintains written certification of the successful completion of applicable training requirements for all personnel. Training records are maintained up-to-date and are retained onsite in the job site trailer.

Employees and supervisors receive a written certificate when they complete necessary training and field experience. Any person who has not been so certified or who does not meet the requirements of equivalent training is prohibited from engaging in the clean-up operations on this site.

5.7 Emergency Response Training

Emergency response training is addressed in Chapter 12 of this HASP, Emergency Response Plan. Training will emphasize changes in egress routes after containment barriers are erected.

5.8 References

OSHA Fact Sheet and References on Worker Health and Safety for Anthrax Exposure, http://www.osha.gov/bioterrorism/anthraxfactsheet.html

CDC Anthrax Information, http://www.bt.cdc.gov/Agent/Anthrax/AnthraxGen.asp

Occupational Exposure To Anthrax: OSHA Frequently Asked Questions, http://www.osha.gov/bioterrorism/anthrax/faqs.html

EPA Anthrax Webpage, Fact Sheets section, http://www.epa.gov/epahome/hi-anthrax.htm#ANTHRAXFACTSHEETS

6.0 MEDICAL SURVEILLANCE

The medical surveillance section of the HASP describes how worker health status is monitored at this site. Medical surveillance is used when there is the potential for worker exposure to harmful levels of hazardous substances. The purpose of a medical surveillance program is to medically monitor worker health to ensure that personnel are not adversely affected by site hazards. The provisions for medical surveillance at this site are based on the site characterization and job hazard analysis found in Chapter 3 of this HASP. They are consistent with OSHA requirements in 29 CFR 1910.120(f).

The medical surveillance program addresses the following information:

- provisions of the site medical surveillance program;
- provisions of the medical protocol that addresses exposure to *B. anthracis* spores;
- communication between the site, physicians, and workers; and
- medical recordkeeping procedures.

The person with responsibility for ensuring this program is implemented and maintained is the SSHO.

6.1 Site Medical Surveillance Program

A medical surveillance program is implemented at this site based on the potential for employee exposure to levels of hazardous substances or health hazards in excess of the PEL or other published exposure limits, the use of respiratory protection, and/or the assignment of workers to a HAZMAT team.

Medical surveillance requirements are based on a worker's potential for exposure as determined by the site characterization and job hazard analysis documented in Chapter 3 of this HASP and as required by 29 CFR 1910.120(f)(2). Based on that evaluation:

1. All personnel who enter contaminated areas of this site are covered by the medical surveillance program. In addition, all workers assigned to tasks requiring the use of respirators receive medical evaluations in accordance with 29 CFR 1910.134(e) to ensure they are physically capable to perform the work and use the equipment.

2. Personnel within the medical surveillance program receive medical examinations on the following schedule:

   a. Prior to assignment: personnel covered by the medical surveillance program are medically examined prior to commencing work in contaminated areas of the site. The purpose of this examination is to assess baseline health status and the worker's ability to perform anticipated duties wearing required PPE without any adverse health effects. The pre-assignment medical examination must have been performed within the past 12 months. The content of the exam must include, at a minimum, the items listed in Table 6-1b below, based on the hazards present at this site and anticipated work duties. A copy of the results

of that examination, in the form of a physician's written opinion as described in paragraph 6.3, must be presented on site prior to entry into contaminated areas.

b. On an annual basis: personnel within the medical surveillance program receive medical exams at least every 12 months to provide for ongoing assessment of a worker's health status

c. At termination or reassignment: personnel are offered the opportunity for a medical examination upon their termination of employment or reassignment to work where the worker is not exposed to hazardous materials or required to wear a respirator

d. Post-injury/illness: any worker who is injured, becomes ill, or develops signs or symptoms of possible over-exposure to hazardous substances or health hazards, receives a medical examination as soon as possible after the occurrence, with follow-up examinations provided as required by the attending physician.

All medical examinations and procedures are performed by or under the supervision of a licensed physician certified in occupational medicine and are provided to workers free of cost, without loss of pay, and at a reasonable time and place. MARCOR"S Medical Surveillance Program is managed by Health Resources, Woborn, Massachusetts.

Table 6-1b identifies the exam protocol for the baseline, periodic and termination exams conducted for all personnel within the medical surveillance program. These protocols were determined by MARCOR's SOP.

Table 6-1b Medical Surveillance for Site Workers

Baseline Exam	Periodic Exam	Termination Exam
Pulmonary function test	Same	same
Physical fitness	Same	Same

6.2 Medical Protocol for *B. anthracis* Spore Exposure

Based on the low risk of exposure to Anthrax by the inhalation route, the following medical protocol is implemented at this site.

Employees operating in the ExZ and CRZ will **not** be required to follow a prophylactic regimen. Given the previous successful testing in the facility and the PPE to be worn, MARCOR feels that the risks from adverse reaction to Cipro and Doxycycline are more significant than the potential for workers to develop anthrax. The firm will counsel workers accordingly. Employees, however, may voluntarily follow a prophylactic regimen using the drug Cipro or Doxycycline, at no cost. Employees who voluntarily want to follow a prophylaxis regimen will be educated on the dosage and the side effects of Cipro so they can make an educated decision on whether to follow a prophylaxis regimen. Employees who voluntarily follow a prophylaxis regimen will be required to participate in a medical surveillance program and maintain contact with a physician throughout the entire 100-day post exposure period.

6.3 Communication Between the Site, Physicians, and Workers

The medical facility providing medical monitoring and overseeing injury, illness or overexposure examinations is:

Name	Health Resources
Location	600 West Cummings Park, Suite 3400, Woburn, MA 01801
Phone	800-350-4511 Fax. 781-938-4678

The employer, MARCOR Remediation, Inc. (MARCOR) will provide information about the site hazards and potential exposure levels, work activities and PPE requirements, and other information as required by OSHA in 29 CFR 1910.120(f)(6) to the above-mentioned facility and physician.

MARCOR also makes this information available to site personnel and/or their personal physicians.

A physician's written opinion of the results of these examinations is required for each worker. The contents of the written opinion are limited to:

- a statement of the worker's health status in relation to his/her job duties and a description of any detected medical condition that could put the worker at increased risk;
- notation of any recommended limitations in work activity or PPE use; and
- confirmation that the physician has informed the employee of the examination results and any further examination or treatment required

6.4 Medical Recordkeeping Procedures

Corporate medical recordkeeping procedures are consistent with the requirements of 29 CFR 1910.1020, and are described in the company's overall safety and health program. A copy of that program is available at the job site trailer.

Records required under this medical surveillance program, consistent with 1910.120(f)(8), are kept accurate and updated and are accessible at the Downingtown, PA office.

7.0 PERSONAL PROTECTIVE EQUIPMENT

This is the site Personal Protective Equipment (PPE) program. This chapter of the HASP describes how PPE is selected and used to protect workers from exposure to hazardous substances and hazardous conditions on this site. Exposure hazards from anthrax spores, as well as those from the decontamination process, are considered. The following topics are addressed in this chapter:

* PPE selection criteria
* site specific PPE ensembles
* work mission duration
* training in use of PPE
* respiratory protection
* PPE maintenance & storage
* evaluation of this program

The person with the overall responsibility for implementing the PPE program on site will be the SSHO.

7.1 PPE Selection Criteria

Site safety and health hazards are eliminated or reduced to the greatest extent possible through engineering controls and work practices. Where hazards are still present, a combination of engineering controls, work practices, and PPE are used to protect workers.

The following criteria are used in selecting PPE levels at this site.

Use of Level C Protection

Employees will use Level C protection with full-face powered air purifying respirators equipped with p-100 (HEPA) filters, Tyvec suits with hoods and booties, and two pairs of nitrile gloves. Respirators will be quantitatively fit-tested in the negative pressure mode on site with a TSI Portacount prior to entry.

In accordance with 29 CFR 1910.134(d)(3)(iii)(B)(2), a cartridge change schedule has been determined. Cartridges used with air-purifying respirators on this site are disposed of as waste during each egress from the exclusion zone.

Use of Level D Protection

Employee can use Level D protection only in the basement, which has been previously cleared by sampling. Level C with PAPR is required for any entry into the exclusion zone.

7.2 Use of PPE

Site-specific PPE ensembles and materials are identified below in Table 7-2a. These ensembles are consistent with Appendix B of 29 CFR 1910.120. All PPE is used in accordance with

manufacturers' recommendations, and in conjunction with Appendix C, Standard Operating Procedures.

Table 7-2a Site-Specific PPE Ensembles					
Equipment	**Model/Material**	**Level**			
		A	**B**	**C**	**D**
Full-face powered air purifying respirator (PAPR)	MSA Optimair 6[a] MSA Optimair MM2K			X	
	Cartridge: P100				
	Service Time: Dispose after each use				
Outer Hooded Protective Suit	Tyvek suit or equal			X	
Booties, outer, chemical-resistant	Disposable outer booties to go over bootie on suit			X	
Inner chemical resistant gloves #1	N-Dex Free Nitrile Gloves or equal			X	
Outer chemical resistant gloves	Nitrile Gloves or equal			X	X
Steel toe/shank boots				X	X
Hard Hat				X	
Safety Glasses					

Table 7-2b Level C PPE Procedures & Equipment
1. Each member of the entry team will remove street clothes except steel toe boots and don disposable undergarments.
2. The team members will then don protective suit.
3. The team members will then don outer protective boot covers.
4. The team members will then don inner gloves.
5 The team members will then tape outer boots to protective suit, tape over zipper of protective suit, and tape all seams on protective suit.
6. The team members will then don outer gloves and tape them to protective suit.
7. The team members will then don PAPR and check for proper seal of face piece.
8. The team members will then don hood of protective suit.
9. The team members will then check each other for proper PPE fit.

Criteria for PPE Upgrades and Downgrades

The SSHO has the authority to upgrade or downgrade PPE in a timely manner to respond to changing site conditions and to protect worker health and safety. Routine evaluation of the PPE program is conducted as identified in Section 7.6 below.

Work Mission Duration

The SSHO identifies task-specific work duration based on the following:

- physiological requirements of the task;
- PPE level for the task;
- ambient temperature and humidity;
- respiratory protection capacity (air supply or cartridge change requirements);
- chemical protective clothing capacity (permeation rate of on-site materials); and
- acclimatization of the work force to site and task conditions.

The SSHO and Site Supervisor communicate the task-specific work duration during daily pre-entry briefings. Work duration is consistent with the requirements outlined in Chapter 9, Heat Stress and the respiratory protection capacity for the assigned PPE. Work duration is re-evaluated throughout the day in response to changes in working conditions.

7.3 Training

Employees receive general training regarding proper selection, use and inspection of PPE during initial HAZWOPER training (or equivalent) and subsequent refresher training. Site-specific PPE requirements, including task specific PPE, ensemble components, cartridge/canister service times, and inspection procedures are communicated as identified in Chapter 5, Training.

7.4 Respiratory Protection

Respiratory protection is selected, fitted, used, stored and maintained in accordance with the Respiratory Protection Program located in Appendix C. Quantitative fit testing will be conducted with a Portacount.

Appropriate service for cartridges and canisters used with APRs are identified in Table 7-2a. The written Respiratory Protection Program has been reviewed for consistency with the other requirements of this HASP.

7.5 PPE Maintenance & Storage

In order to ensure that PPE continues to provide the anticipated protection, this site uses specific procedures for PPE inspection, cleaning, maintenance, and storage. Adherence to these procedures is tracked with written inspection records

The Site Supervisor is responsible for overseeing PPE maintenance & storage procedures and for maintaining the inspection record. Table 7-5 details the PPE maintenance requirements for this site.

Table 7-5 PPE Cleaning, Inspection, & Maintenance

Type of PPE	Model	Inspection Frequency/ Procedures	Done by	Cleaning Frequency/ Procedures	Done by
PAPR	MSA Optimair 6A	Before each use	User	After each use	User

PAPR flow rates will be checked before relying on the manufacturer's rotameter. PAPR batteries will be discharged and charged each day. Spare batteries will be maintained in the charged state for emergency use. MARCOR"S Respiratory Protection SOP (Appendix C) will be followed for cleaning, maintenance and storage of respirators. Sealed plastic containers will be used for storage.

Defective or damaged equipment is not used and is reported to the SSHO or Site Supervisor so that the equipment can be repaired or discarded. Spent and disposable PPE is discarded in the manner specified in Chapter 11, Decontamination. After decontamination, reusable PPE is properly stored, according to the manufacturers' recommendations and the site decontamination plan mentioned above and in HASP Appendix C, Standard Operating Procedures.

7.6 Evaluation of PPE Program

Modifications to initially selected PPE are determined by the SSHO. Affected employees are informed immediately. Chapter 3 of the HASP, Job Hazard Analysis, is the source of updated information about job hazards and selected controls.

8.0 EXPOSURE MONITORING PROGRAM

Air monitoring for *B. anthracis* spores is not generally advocated by governmental agencies. As the National Response Team indicated in its technical assistance document from November 2003, "Currently, there are no occupational or environmental exposure standards for *B. anthracis* contamination and no validated sampling and analytical methods specifically for *B. anthracis* in environmental samples."

Many samples will be collected in the upper three floors with high volume sampling equipment using aggressive techniques as part of the final clearance of the building. The sampling strategy is to find any remaining *B. anthracis* spores, not to characterize personal exposures. Well over 2000 samples have already been collected in the building after the fumigation with chlorine dioxide and none were positive for growth of *B. anthracis*. Consequently, rather than collect personal air samples, PPE and decon methods have been chosen as if *B. anthracis* spores are present in the air and on surfaces.

9.0 HEAT STRESS PREVENTION PROGRAM

Heat stress is always a concern when protective garment are worn, since these garments reduce evaporative body cooling. MARCOR's Heat Stress SOP, which has been included in Appendix C, will be followed. This work will be conducted in the winter months, which will reduce, but not eliminate, the risk of heat stress.

10.0 SPILL CONTAINMENT PROGRAM

This chapter of the HASP describes the potential for hazardous substance spills at this site and procedures for controlling and containing such spills. The purpose of this chapter of the HASP is to ensure that spill containment planning is conducted and appropriate control measures are established, consistent with OSHA requirements in 29 CFR 1910.120(b)(4)(ii)(J) and (j)(1)(viii).

The spill containment program addresses the following site-specific information:

- potential hazardous substance spills and available controls;
- initial notification and response;
- spill evaluation and response; and
- post-spill evaluation.

10.1 Potential Spills and Available Controls

An evaluation was conducted to determine the potential for hazardous substance spills at this site. That evaluation indicated that a minor hazardous substance spill could potentially occur. Therefore, the following site-specific spill containment program has been implemented to address spill containment planning, equipment, and procedures. Site personnel will be trained in the contents of this spill containment program and their roles and responsibilities during spill response operations.

Table 10-1 below lists the location and type of potential hazardous substance spills at this site. This table also describes the activities or situations in which an accidental spill could occur and whether an emergency response is likely to be needed.

Where spills, leaks, or ruptures can occur, this site has suitable quantities of proper absorbent and US Department of Transportation-specified salvage containers. Their location is noted in Table 10-1. In addition, all areas subject to potential spills are diked or a means to adequately dike these areas in the event of a spill is available so that the entire volume of the hazardous substance being spilled can be contained and isolated. The type and location of spill containment equipment is also listed in Table 10-1.

Table 10-1 Potential Spills and Controls

Location	Hazardous Substance	Source of spill	Potential maximum qty of spill	Potential to Require Emergency Response	Available Spill Containment Equipment	Equipment Location
CRZ	Bleach	Broken container	10 gallons		Oil-Dri General purpose Absorbent	Support Zone
CRZ	Bacillus anthracis	Decon water	<55 gallons		Same as above	Support Zone

10.2 Initial Spill Notification and Response

Any worker who discovers a hazardous substance spill immediately notifies the SSHO and/or Site Supervisor.

The worker reports, to his/her best ability, the hazardous substance involved, the location of the spill, the estimated quantity of substance spilled, the direction/flow of the spill material, related fire/explosion incidents, and any associated injuries

10.3 Spill Evaluation and Response

The SSHO and Site Supervisor are responsible for evaluating spills and determining the appropriate response. When this evaluation is being made, the spill area is isolated and demarcated to the extent possible.

When an incidental release occurs, clean-up personnel receive instructions in a pre-clean-up meeting as to spill conditions, PPE, response activities, decontamination, and waste handling.

The procedures of the Emergency Response Chapter of this HASP are immediately implemented when the spill is determined to require emergency precautions and action. If necessary to protect those outside the clean-up area, notification of the appropriate authorities is made. Table 10-3 below lists the spill conditions that trigger notification of Federal, state, and local agencies.

Table 10-3 Off-site Notification Requirements

Location	Hazardous Substance	Spill Volume/Conditions	Required Notification
Outside building	*Bacillus anthracis*	Any release	EPA/PBCHD on-site representatives

The following are general measures that response/clean-up personnel take when responding to a spill:

- To minimize the potential for a hazardous spill, hazardous substances, control/absorbent media, drums and containers, and other contaminated materials are properly stored and labeled.
- When a spill occurs, only those persons involved in overseeing or performing spill containment operations will be allowed within the designated hazard areas. If necessary, the area will be roped, ribboned or otherwise blocked off. Unauthorized personnel are kept clear of the spill area.
- Appropriate PPE is donned before entering the spill area.

- Appropriate spill control measures are applied during spill response.
- Whenever possible without endangerment of personnel, the spill is stopped at the source or as close to the source as possible.
- To dispose of spill waste, all contaminated sorbents, liquid waste, or other spill clean up will be placed in small quantities in approved drums for proper storage or disposal as hazardous waste.

10.4 Post-Spill Evaluation

A written spill response report is prepared at the conclusion of clean-up operations. The report includes, at a minimum, the following information:

- date of spill incident
- cause of incident
- spill response actions
- any outside agencies involved, including their incident reports
- lessons learned or suggested improvements

The spill area is inspected to ensure the area has been satisfactorily cleaned. The root cause of the spill is examined and corrective steps taken to ensure the engineering and control measures in place have performed as required. If alternative precautions or measures are needed, they are made available and implemented.

All durable equipment placed into use during clean-up activities is decontaminated as specified in Chapter 11, Decontamination, for future utilization. All spill response equipment and supplies are re-stocked as required.

11.0 DECONTAMINATION

The decontamination chapter of the HASP describes how personnel and equipment are decontaminated when they leave the Exclusion Zone. This chapter also describes how residual waste from decontamination processes is disposed. Decontamination procedures are designed to achieve an orderly, controlled removal or neutralization of contaminants that may accumulate on personnel or equipment. These procedures minimize worker contact with contaminants and protect against the transfer of contaminants outside designated work zones. They also extend the useful life of PPE by reducing the amount of time that contaminants contact and permeate PPE surfaces. The decontamination procedures described below are designed to meet the requirements of 1910.120(k) and include project-specific information about:

- the location and type of project decontamination facilities;
- general and specific decontamination procedures for personnel and PPE;
- general and specific decontamination procedures for equipment;
- disposal of residual waste from decontamination;
- decontamination equipment and solutions;
- the monitoring procedures used to evaluate the effectiveness of decontamination.

Emergency decontamination procedures are detailed in the Emergency Response chapter of this HASP.

The SSHO and/or Site Supervisor overseas implementation of project decontamination procedures and is responsible for ensuring their effectiveness.

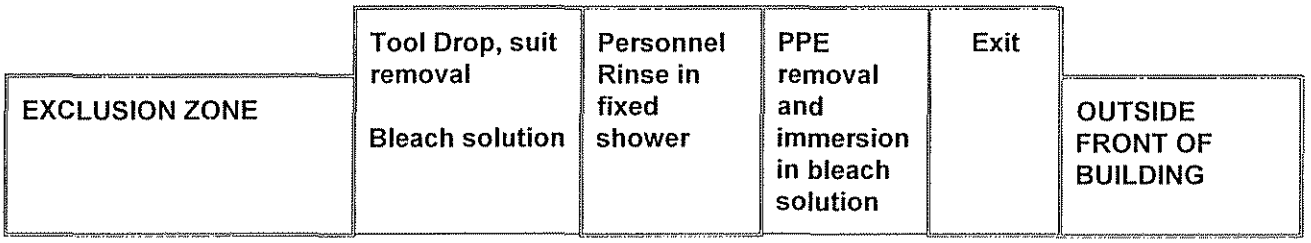
11.1 Decontamination Facilities

Decontamination is conducted in the contamination reduction zone (CRZ). The CRZ acts as a buffer between the exclusion zone and the support zone. The location and design of decontamination stations minimize the spread of contamination beyond these stations. Separate facilities are used for personnel and for equipment. The location of these designated facilities is marked on Figure 11-1.

Figure 11-1 Location of Decontamination Facilities

Figure 11-2 Diagram of Decontamination Line

Decon line at the main entrance of the building.



11.2 Decontamination Procedures for Personnel and PPE

Decontamination procedures are designed for the level of PPE used. Project-specific procedures for personnel and non-disposable PPE decontamination minimize the potential for hazardous skin or inhalation exposure, cross-contamination, and chemical incompatibilities.

Based on the nature of the hazards and/or duration of work, showers and change rooms consistent with the requirements of 29 CFR 1910.141 are provided for workers to shower upon leaving the building.

The following are general decontamination procedures established and implemented during this project. Specific procedures for personnel and non-disposable PPE decontamination are provided in Table 11-2a.

- Decontamination is required for all workers exiting a contaminated area. Personnel may re-enter the Support Zone only after undergoing the decontamination procedures described in the next section.
- Used protective clothing and decontamination support materials are disposed of after each use and will not be decontaminated. Used protective clothing and decontamination support materials will be treated separately as described below.
- PPE that requires maintenance or parts replacement is decontaminated prior to repairs or service.
- Non-disposable PPE is decontaminated or prepared for disposal. Personnel who handle contaminated equipment have been trained in the proper means to do so to avoid hazardous exposure. The waste preparation procedures are described in below in Table 11-3a & b.
- Workers are required and trained to immediately exit the work zone, perform applicable decontamination procedures, shower, and change into uncontaminated clothing if their protective suit is torn or is compromised in anyway or if their permeable clothing is splashed or becomes wetted with a hazardous substance.
- Procedures for waste disposal meet all applicable local, State, and Federal regulations. Spent PPE generated will be placed into 6 mil plastic bags and wiped with a pH adjusted bleach and maintained wet for ten minutes prior to moving the waste out of the exclusion zone. The waste will then be placed into another 6 mil plastic waste bag and wiped with pH adjusted bleach and maintained wet for ten minutes in the contamination reduction zone. The double-bagged waste will then be staged for disposal at an approved facility.
- Decontamination water will be carefully pumped to 55-gallon drums in over-pack drums.
- Respirators and non-disposable PPE are decontaminated with a method/ procedure that has proven to be effective for anthrax spores as described in the EPA Pesticides: Topical & Chemical Fact sheets website (attached in Appendix F. A detailed copy of that method/procedure is attached to this chapter. Tables 11-2a and 11-2c list project-specific procedures for personnel decontamination and handling of personnel decontamination waste

Table 11-2a Revised Level C personnel, environmental sample, and re-usable PPE Decontamination Procedures
1 Before entering the decontamination chamber the entry team will leave equipment that isn't bagged in exclusion zone.
2. The entry team members will then proceed into the first decon station to drop tools and wipe them with a bleach solution. The member's suit will be sprayed with a soap and water solution to hold dust prior to suit removal.
3 The entry team members will then proceed into the second decon station to take a shower after removing outer booties and disposable suit but leaving respirator on face.
4. The team members will remove first set of inner gloves and place in biohazard bag for disposal.
5. The team members will remove respirator filters and place bucket containing ph adjusted bleach and ensure that they are submersed.
6 The team members will remove PAPR facepiece and place in bucket for respirators containing ph adjusted bleach bucket and ensure that they are submersed. PAPR facepieces will remain in bleach solution for > 5 minutes.
7. The team members will then replace street clothes and proceed out of the decon unit into the support zone.

Table 11-2b PAPR Decontamination and Cleaning Procedures
1 PAPR batteries and cords will be wiped with ph adjusted bleach solution and placed in a sealed bag and remain in the CRZ for reuse.
2. PAPR facepieces will remain in bleach solution for > 60 minutes.
3. PAPR facepieces will be rinsed.
4. PAPR facepieces will then be placed in a disinfectant solution for 30 minutes (in Support Zone).
5. PAPR facepieces will then be dried and stored in a sealed plastic "zip-lock" bag.
6. Respirator facepieces will be stored in a Plastic storage container.

Table 11-2c Waste Handling for Personnel Decontamination	
Waste Streams/Products for Personnel	**Disposal Procedures for Waste Stream/Product**
Decontamination Water	Drummed in 55-gallon drums with over packs The water will be shocked with bleach as described in Appendix F ATSDR SOP The solution will then be sampled and the results conveyed to City of Boca Raton Utility Services Administration for approval See Appendix G for analysis required.
Waste disposal	Appendix F ATSDR SOP All waste to be disposed through infectious waste stream. Waste decontamination not feasible.

11.3 Decontamination Procedures for non-disposable Equipment

All tools, equipment, and machinery from the Exclusion Zone or CRZ are decontaminated in the CRZ prior to removal to the Support Zone. Equipment decontamination procedures are designed to minimize the potential for hazardous skin or inhalation exposure, cross-contamination, and chemical incompatibilities.

The following are general equipment decontamination procedures to be implemented during this project. Specific procedures for equipment decontamination are provided in Table 11-3a.

General Equipment Decontamination Procedures:

- Equipment in the Exclusion Zone that can be used again, that is still operable, and that will not pose an increased exposure hazard during re-use is left in Exclusion Zone until it is no longer needed. This eliminates unnecessary decontamination and reduces the potential for physical transfer of contaminants outside the Exclusion Zone.
- Decontamination is required for all equipment exiting a contaminated area. Equipment may re-enter the Support Zone only after undergoing the equipment decontamination procedures described in the table below (Table 11-3, Equipment Decontamination Procedures).
- Equipment that is transported regularly between the contaminated and clean areas of the facility (e.g., monitoring equipment) is carefully decontaminated utilizing the procedure for respirators and personnel each time it is removed from the Exclusion Zone and the effectiveness of decontamination is monitored to reduce the likelihood that contamination will be spread outside designated work zones.
- Equipment that cannot be successfully decontaminated is disposed of as hazardous waste.

Tables 11-3a and 11-3b list project-specific procedures for equipment decontamination and handling of equipment decontamination wastes.

Table 11-3a Equipment Decontamination Procedures

Type of Equipment	Decontamination Solution	Decontamination Procedure
All re-useable equipment	Bleach solution adjusted for pH (see Appendix D)	The equipment will be moved to the contamination reduction zone and will remain in contact with a pH adjusted bleach solution for 60 minutes The equipment will then be moved to the support zone.

Table 11-3b Waste Handling for Equipment Decontamination

Waste Streams/Products for Equipment	Disposal Procedures for Waste Stream/Product
Decontamination water (pH adjusted bleach and water solution)	ATSDR SOP Appendix F Sampling will then be performed and conveyed to City of Boca Raton Utility Services Administration for approval. See Appendix F for analysis required Wipe the item, which has been wrapped in 6 mil plastic sheeting or placed into a 6 mil bag, with pH-adjusted

Other solid waste or anthrax contaminated items	bleach and maintain wet for ten minutes and pass it out of the exclusion zone. In the next zone the waste package will be wrapped or placed into an additional bag and wiped with pH adjusted bleach and maintained wet for 10 minutes. The waste package will then be staged or loaded for transport and disposal.

11.4 Monitoring the Implementation of Decontamination Procedures

Visual examination and sampling are used to evaluate the effectiveness of decontamination procedures, in compliance with 29 CFR 1910.120(k)(2)(iv). Visual examination is used to ensure that procedures are implemented as described and that they appear to control the spread of contaminants under changing conditions. Where feasible, visual examination is also used to inspect for signs of residual contamination or for contaminant permeation of PPE.

Results of the inspections of decontamination procedures and documentation of any action taken to correct deficiencies are recorded and stored at the job site trailer.

Personnel who work in contaminated areas, either the Contamination Reduction Zone (CRZ) or the Exclusion Zone, are trained in the principles and practices of decontamination described in this chapter of the HASP and in related SOPs. If procedures are changed as a result of inspection and monitoring, all affected employees are notified of these changes.

12.0 EMERGENCY RESPONSE PLAN

This is the site-specific emergency response plan. This chapter of the HASP describes potential emergencies at this site, procedures for responding to those emergencies, roles and responsibilities during emergency response, and training that workers must receive in order to follow emergency procedures. This chapter also describes the provisions this site has made to coordinate its emergency response planning with other contractors on site and with off-site emergency response organizations.

This emergency response plan is consistent with the requirements of paragraph (l) of HAZWOPER and provides the following site-specific information:

- pre-emergency planning;
- on-site emergency response equipment and PPE;
- emergency maps: evacuation routes and route to nearest hospital;
- emergency roles and responsibilities;
- emergency alerting and evacuation procedures;
- emergency response procedures;
- emergency decontamination, medical treatment and first aid;
- response critique and plan updates; and
- emergency response training.

12.1 Pre-emergency Planning

This site has been evaluated for potential emergency occurrences, based on site hazards, the tasks within the work plan, and the building layout. The results of that evaluation are shown in Table 12-1 below.

Table 12-1 Potential Site Emergencies

Type of Emergency	Source of Emergency	Location of Source
Bleach Spill	Broken container of bleach	
Release of contaminant	Decontamination water spill	CRZ
Fire	Ignition of flammable materials, particularly spray glue	ExZ
Injured employee		ExZ or CRZ
Contaminated Employee	Torn/breached PPE	ExZ

Table 12-2 Specific Response to Potential Site Emergencies	
Type of Emergency	Response to Emergency
Bleach Spill	Dilute with water Contact OSC/PBCHD
Fire	Contact Fire Department Contact OSC/PBCHD Provide a copy of the HASP to first Responders
Injured employee	Remove worker from ExZ (using litter if necessary) Administer First Aid & comfort Call ambulance if necessary Decontaminate if can be done without endangering injured employee If decon can not be done protect ambulance from contamination using bodybag Notify hospital prior to transport
Contaminated Employee	Exit ExZ immediately Repair tear/breach prior to decon Enter decon Extend time in final shower

12.2 On-Site Emergency Response Equipment

Emergency procedures may require specialized equipment to facilitate worker rescue, contamination control and reduction, or post-emergency clean up. Emergency response equipment stocked on this site is listed in Table 12-3. The equipment inventory and storage locations are based on the potential emergencies described in Table 12-1. This equipment inventory is designed to meet on-site emergency response needs and any specialized equipment needs that off-site responders might require because of the hazards at this site.

Any additional PPE required and stocked for emergency response is also listed in Table 12-3 below. During an emergency, the Emergency Response Coordinator is responsible for specifying the level of PPE required for emergency response. At a minimum, personal protective equipment used by emergency responders will comply with Chapter 7, Personal Protective Equipment, of this HASP.

Emergency response equipment is inspected at regular intervals and maintained in good working order. The equipment inventory is replenished as necessary to maintain response capabilities.

Table 12-2 Emergency Equipment & Emergency PPE		
Emergency Equipment		
Specific Type	**Quantity Stocked**	**Location Stored**
First Aid Kit	2	Support Zone
Fire Extinguisher	5	decon, & Support Zone
Overpack Drum	2	Support Zone
Spill pads	10	Support Zone
Polyethylene Sheeting	2	Support Zone
Emergency PPE		
Specific Type	**Quantity Stocked**	**Location Stored**
PAPR	2 Each	Support Zone
Kimberly Clark Kleenguard Ultra	2 Each	Support Zone
Nitrile Inner Gloves	2 Pair	Support Zone
Outer Gloves	2 Pair	Support Zone
Ironwear Haz-Mat Boots	2 Pair	Support Zone

12.3 Emergency Planning Maps

Figure 12-3a provides a map of the site with key on-site emergency planning information clearly marked. Emergency evacuation route(s), places of refuge, assembly point(s), and the locations of key site emergency equipment are identified on this map. Site zone boundaries are shown to alert responders to known areas of contamination. Major building features that could affect emergency response planning are also marked on this map. Figure 12-3a is posted at site entry points and at locations throughout the work site. Figure 12-3b indicates the route to the nearest emergency medical assistance. Figure 12-3b is posted at the support zone and on site trailer.

Figure 12-3a Emergency Planning Map

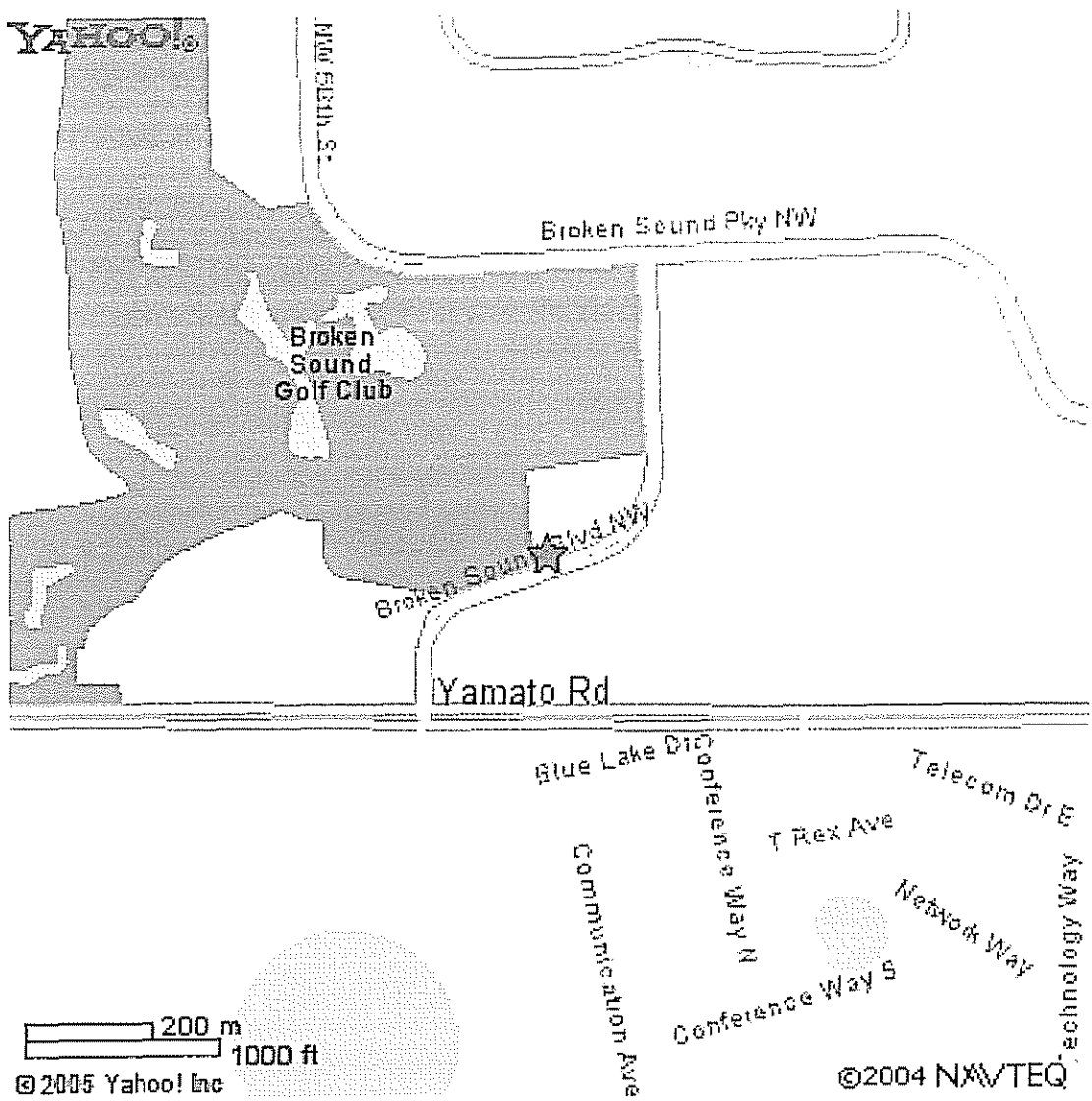
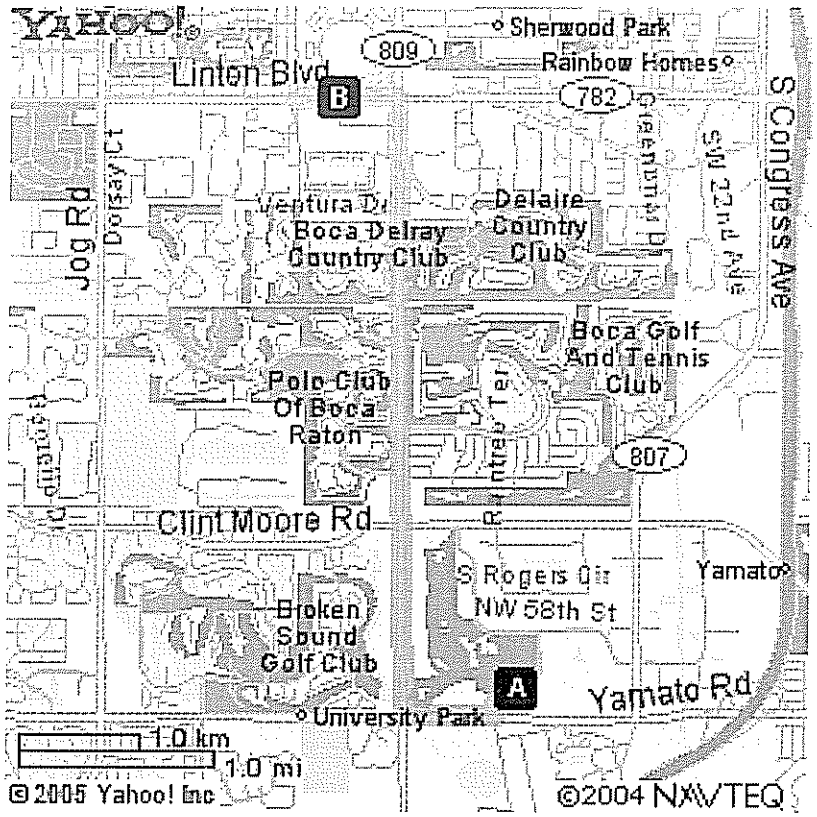


Figure 12-3b Driving Route to Nearest Hospital

Delray Community Hospital
5352 Linton Blvd.
DelRay Beach Florida
(561) 495-3115

Directions Show Turn by Turn Maps

1. Start at **5401 BROKEN SOUND BLVD NW, BOCA RATON** - go **0.2** mi
2. Turn (R) on **NW 51ST ST[FL-794]** - go **0.5** mi
3. Turn (R) on **MILITARY TRL** - go **3.1** mi
4. Turn (L) on **LINTON BLVD** - go **0.5** mi
5. Make a U-turn at **SIMS RD** onto **LINTON BLVD** - go **0.2** mi
6. Arrive at **5352 LINTON BLVD, DELRAY BEACH,** on the (R)


YAHOO!
Sherwood Park
809
Linton Blvd
B
Rainbow Homes
782
S Congress Ave
Jog Rd
Dorsay Ct
Ventura Dr
Boca Delray Country Club
Delaire Country Club
SW 22nd Ave
Boca Golf And Tennis Club
Polo Club Of Boca Raton
807
Clint Moore Rd
S Rogers Cir
NW 58th St
Yamato
Broken Sound Golf Club
A
Yamato Rd
University Park
1.0 km
1.0 mi
©2005 Yahoo! Inc
©2004 NAVTEQ

12.4 Roles and Responsibilities for On-Site and Off-Site Personnel

The Site Supervisor has been designated the Emergency Response Coordinator. He will be responsible for implementing the emergency response plan and coordinates emergency response activities on this site. He will provide specific direction for emergency action based upon information available regarding the incident and response capabilities and initiates emergency procedures, including protection of the public and notification of appropriate authorities.

In the event of an emergency, site personnel are evacuated and do not participate in emergency response activities. As a result, this emergency response plan is designed to comply with 29 CFR 1910.38. The on-site personnel and their alternates responsible for coordinating site evacuation efforts are listed in Table 12-4. The Emergency Response Coordinator or one of his/her alternates is on site whenever work operations are underway.

This site relies upon the off-site emergency response organizations listed in Table 12-4, Emergency Contact Information, to respond to site emergencies. These organizations will be provided a copy of the site HASP; have been thoroughly briefed on site operations, hazards, and potential emergencies; have participated in a site walk-through if necessary; and are appropriately trained, staffed, and equipped to provide emergency response to this site. These organizations are contacted at least semi-annually or when changes in operations or new potential hazards are introduced on site to verify the accuracy of phone numbers and contact names, and to ensure that current points of contact are aware of site operations and hazards.

Table 12-4 Emergency Contact Information			
SITE PERSONNEL			
Title	**Contact**		**Telephone**
EPA Representative	Terry Stilman		(561) 512-4122
PBCHD	John O'Malley		(561) 355-3023
EPA	Terry Stilman		(678)-576-6440
MARCOR Contact	Lynn Dewees		(610) 721-0609
OUTSIDE ASSISTANCE	**Contact**	**Address/Location**	**Telephone**
Chemtrec			(800)-424-9555
Ambulance/EMS	Medics Ambulance	351 S Cypress Road, Pompano Beach, FL	911 (954) 763-1776
Police	Boca Raton City Police	100 Boca Raton Blvd Boca Raton, FL 33431	911 (561) 338-1333
Police	Palm Beach County Sheriff	6000 Glades Road Boca Raton, FL 33431	911 (561) 470-5257
Fire	Boca Raton Fire Rescue Chief Jack McCartt	2333 West Glades Road Boca Raton, FL 33431	911 (561) 367-6700 Non-emergency
Hazmat	Boca Raton Hazmat Chief Jack McCartt	1901 Clintmoore Road Boca Raton, FL	911 (561) 367-6700 Non-emergency
Primary Medical Facility	Delray Medical Center	5352 Linton Street Delray, FL 33484	(561) 498-4440
Poison Control Center			(800) 282-3171
OSHA Area Office	Ft. Lauderdale Area Office	8040 Peters Road Building H-100 Ft. Lauderdale, FL 33324	(954) 424-5242
OSHA Emergency			(800) 321-6742
National Response Center			(800) 424-8802
Center for Disease Control			(404) 639-3311

12.5 Emergency Alerting and Evacuation

Upon discovering an emergency situation, personnel will notify the SSHO and/or Site Supervisor, via radio or alarm system, who will evaluate available information and initiate an appropriate response. Site workers are alerted to emergencies through the use of an employee alarm system. The employee alarm systems at this site are listed in Table 12-5. The SSHO or the Site supervisor is responsible for accounting for all personnel on-site during an emergency

Table 12-5 Employee Alarm Systems

Type of Alarm	Location	How Alarm is Used
Two-way Radios	SSHO, Site Supervisor	Radio notification of emergency
Air Horns	Support Zone	Two quick blasts = evacuation
Air Horns	ExZ -	One long blast = entry team has an emergency

This alarm system meets the requirements of 29 CFR 1910.165 and is tested weekly under normal site operating conditions to ensure that it is in good working order and can effectively alert all persons on-site. A log of alarm tests is kept by the SSHO and/or Site Supervisor in the on site trailer.

If an evacuation notice is given, site workers leave the worksite with their respective buddies, if possible, by way of the nearest exit. Emergency decontamination procedures are followed to the extent practical without compromising the safety and health of site personnel.

Appropriate primary and alternate evacuation routes and assembly areas have been identified and are shown on the Emergency Response Map Fig 12-3a. The routes and assembly area will be determined by conditions at the time of evacuation based on the location of the hazard source and other factors as determined by rehearsals and inputs from emergency response organizations.

If any work will be done outside, wind direction indicators will be located so that workers can determine a safe up wind or cross wind evacuation route and assembly area if not informed by the Emergency Response Coordinator at the time the evacuation alarm sounds.

Personnel exiting the site gather at the designated assembly point. To determine that everyone has successfully exited the ERC will account for all personnel at the assembly site. If any worker cannot be accounted for, notification is given to the SSHO and or Site Supervisor so that appropriate action can be initiated.

Contractors and subcontractors on this site have coordinated their emergency response plans to ensure that these plans are compatible and that source(s) of potential emergencies are recognized, alarm systems are clearly understood, and evacuation routes are accessible to all personnel relying upon them.

12.6 Emergency Response

The Emergency Response Coordinator (or designee), after investigating the incident and reviewing relevant information, determines the level of response required for containment, rescue, medical care, and clean up. The appropriate emergency response team (on-site or off-site) is mobilized to the incident with sufficient personnel, PPE, and emergency equipment.

When the Emergency Response Coordinator (or designee) determines that on-site emergency response capability is inadequate for the emergency or that outside assistance is required, the applicable off-site organization shown in Table 12-4 is contacted. The Emergency Response Coordinator (or designee) provides relevant information to the responding organizations, including hazards associated with the emergency incident, potential containment problems, and missing site personnel.

12.7 Emergency Decontamination, Medical Treatment and First Aid

Site provisions for medical services and first aid are consistent with 1910.151 as well as HAZWOPER. Because of the near proximity of medical assistance, this site does not train or assign site personnel to provide first aid. The primary medical care facility for this site is Delray Medical Center. The route to the facility is shown in Figure 12-3b.

Site personnel who are contaminated and need medical treatment will be decontaminated before being transported to a medical facility **if** decontamination does not delay life-saving treatment or aggravate the injury. When emergency decontamination is performed, contaminated protective clothing and equipment is washed, rinsed and/or cut off. If an emergency victim is grossly contaminated with extremely toxic or corrosive material, the victim will be wrapped in blankets, plastic, or rubber to reduce potential exposure to other personnel.

Offsite medical treatment personnel will be notified during transport of the victim and alerted to the nature of the injury and that there is the potential for Anthrax exposure. This will be done by sending relevant MSDSs and other applicable hazard data with the victim or by having the victim accompanied by personnel who are familiar with the incident and the hazards.

12.8 Emergency Response Critique and Plan Updates

After every emergency incident or evacuation of this site, the Emergency Response Coordinator (or designee) will evaluate the quality and safety of response activities. Any deficiencies in response actions will be included in a specific follow-up plan and corrected.

This emergency response plan is evaluated periodically throughout site operations and updated for accuracy. Changes made to emergency response procedures as the result of rehearsals or actual response incidents are recorded in this Plan. Site workers will receive notification and training on changes to the Plan during weekly tailgate safety meetings.

12.9 Emergency Response Training

All persons who enter this worksite, including visitors, receive a site-specific briefing about anticipated emergency situations and the emergency procedures.

Prior to the commencement of work and in accordance with Chapter 5, Training, site personnel are trained in the contents of this emergency response plan, including potential emergencies, personnel roles and responsibilities, evacuation routes and procedures, and the location of medical assistance.

Site personnel designated as emergency responders are trained how to respond to expected emergencies safely, in accordance with 29 CFR 1910.120(e)(7). Additionally, site workers participate in emergency response rehearsals as required in HAZWOPER paragraph (l)(3)(iv). Off-site emergency response organizations participate in the rehearsals as necessary. Rehearsals are held every month. A log of the rehearsals is kept by the SSHO and/or Site Supervisor.

Where this site relies on off-site organizations for emergency response (see Table 12-3), the training of personnel in those off-site organizations is deemed adequate for response to this site.

The site maintains written up-to-date certification of the successful completion of applicable training requirements of each worker. Training records are maintained in the on site trailer.

12.10 Standard Operating Procedures

A copy of MARCOR's SOPs will be available at the on site trailer. The following are a list of applicable SOPs for this project.

- Hazard Communication
- Medical Surveillance Monitoring
- Personal Protective Equipment
- Respiratory Protection
- Heat Stress

Andrea Caridi-Keen - Ticketless Confirmation - BRAUNGER/PETER - 5EN3UJ

From: "Southwest Airlines" <SouthwestAirlines@mail.southwest.com>
To: <CARIDIA@marcor.com>
Date: 1/9/2007 10:10 AM
Subject: Ticketless Confirmation - BRAUNGER/PETER - 5EN3UJ

Southwest Airlines Receipt and Itinerary

Receipt and Itinerary as of 01/09/07 9:09 AM

Confirmation Number
5EN3UJ

Check In Online

Check In Online

Confirmation Date: 01/09/07
Received: ANDREA

Passenger Information

Passenger Name	Ticket#	Account Number
BRAUNGER/PETER	526-2764970894-4	- None Entered -
GABBERT/STEVEN	526-2764970895-5	- None Entered -

Itinerary:

Date	Flight	Routing Details
Fri Jan 19	432	Depart ORLANDO INTL (MCO) at 1:15 PM Arrive in PITTSBURGH INTL (PIT) at 3:35 PM
Sun Jan 21	1597	Depart PITTSBURGH INTL (PIT) at 7:45 PM Arrive in ORLANDO INTL (MCO) at 10:00 PM

Cost and Payment Summary

Air	$ 442.80
Tax	$ 46.80
PFC Fee	$ 15.00
Security Fee	$ 10.00

Total Payment: $ $514.60

Current payment(s)
01/09/07 VISA xxxxxxxxxxxx2102 Ref 526-2764970894-4 $257.30
01/09/07 VISA xxxxxxxxxxxx2102 Ref 526-2764970895-5 $257.30

Fare Rule(s)

Valid only on Southwest Airlines. NON REFUNDABLE/ STANDBY REQ UPGRADE TO YL All travel involving funds from this Confirm no. must be completed by 01/09/08. Any change to this itinerary may result in a fare increase

Fare Calculation:

ADT- 2 MCOWNPIT M7OWNR 119.00 PITWNMCO M7OWNR 119.00 $238.00 ZP6.80
XFMCO3.00 PIT4.50 AYMCO2.50 PIT2.50 $257.30

Important Checkin Requirement

Passengers who do not obtain a boarding pass and are not present and available for boarding in the departure gate area at least ten minutes prior to scheduled departure time may have their reserved space cancelled and will not be eligible for denied boarding compensation.

Southwest Airlines Co. Notice of Incorporated Terms

Air transportation by Southwest Airlines is subject to Southwest Airlines' Passenger Contract of Carriage, the terms of which are incorporated by reference.

Notice of Incorporated Terms

Additional Information for Travelers

Online Checkin | Free Baggage Allowance | Checkin Requirements | Print Security Document
Inflight Service | Travel Tips | Refund Information | Privacy Policy | Southwest Airlines Destinations

Andrea Caridi-Keen - Ticketless Confirmation - BRAUNGER/PETER - 5EN3UJ

From: "Southwest Airlines" <SouthwestAirlines@mail.southwest.com>
To: <CARIDIA@marcor.com>
Date: 1/9/2007 10:10 AM
Subject: Ticketless Confirmation - BRAUNGER/PETER - 5EN3UJ

Southwest Airlines Receipt and Itinerary

Receipt and Itinerary as of 01/09/07 9:09 AM

Confirmation Number
5EN3UJ

Check In Online

Check In Online

Confirmation Date: 01/09/07
Received: ANDREA

Passenger Information

Passenger Name	Ticket#	Account Number
BRAUNGER/PETER	526-2764970894-4	- None Entered -
GABBERT/STEVEN	526-2764970895-5	- None Entered -

Itinerary:

Date	Flight	Routing Details
Fri Jan 19	432	Depart ORLANDO INTL (MCO) at 1:15 PM Arrive in PITTSBURGH INTL (PIT) at 3:35 PM
Sun Jan 21	1597	Depart PITTSBURGH INTL (PIT) at 7:45 PM Arrive in ORLANDO INTL (MCO) at 10:00 PM

Cost and Payment Summary

Air	$ 442.80
Tax	$ 46.80
PFC Fee	$ 15.00
Security Fee	$ 10.00

Total Payment: $ $514.60

Current payment(s)
01/09/07 VISA xxxxxxxxxxxx2102 Ref 526-2764970894-4 $257.30
01/09/07 VISA xxxxxxxxxxxx2102 Ref 526-2764970895-5 $257.30

Fare Rule(s)

Valid only on Southwest Airlines. NON REFUNDABLE/ STANDBY REQ UPGRADE TO YL All travel involving funds from this Confirm no must be completed by 01/09/08. Any change to this itinerary may result in a fare increase.

Fare Calculation:

ADT- 2 MCOWNPIT M7OWNR 119 00 PITWNMCO M7OWNR 119 00 $238 00 ZP6 80
XFMCO3 00 PIT4.50 AYMCO2.50 PIT2 50 $257 30

Important Checkin Requirement

Passengers who do not obtain a boarding pass and are not present and available for boarding in the departure gate area at least ten minutes prior to scheduled departure time may have their reserved space cancelled and will not be eligible for denied boarding compensation.

Southwest Airlines Co. Notice of Incorporated Terms

Air transportation by Southwest Airlines is subject to Southwest Airlines' Passenger Contract of Carriage, the terms of which are incorporated by reference

Notice of Incorporated Terms

Additional Information for Travelers

Online Checkin | Free Baggage Allowance | Checkin Requirements | Print Security Document
Inflight Service | Travel Tips | Refund Information | Privacy Policy | Southwest Airlines Destinations