1. Task Number	2. Investigator's ID	EPIDEMIOLOGIC INVESTIGATION REPORT
090810CBB1946	2248	

3. Office Code	4. Date of Accident YR MO DAY	5. Date Initiated YR MO DAY
810	2007 12 01	2009 08 10

6. Synopsis of Accident or Complaint **UPC**

The consumer moved into a new home in December 2007. Despite reports that neighboring homes may have been built with Chinese drywall, the consumer reported no health-related concerns or problems with appliances. The builder has conducted its own inspection of the home.

CPSA 6(b)(1) CLEARED for PUBLIC
✓ NO MFRS/PRVTLBLRS OR PRODUCTS IDENTIFIED
__ EXCEPTED BY: PETITION RULEMAKING ADMIN. PRCDG
__ WITH PORTIONS REMOVED: 6, 25c
5/18/2010

7. Location (Home, School, etc)	8. City	9. State
1 - HOME	MIAMI	FL

10A. First Product	10B. Trade/Brand Name	10C. Model Number
1876 - House Structures, Repair Or	UNKNOWN	UNKNOWN

10D. Manufacturer Name and Address
UNKNOWN

11A. Second Product	11B. Trade/Brand Name	11C. Model Number
0	NONE	NONE

11D. Manufacturer Name and Address
NONE

12. Age of Victim	13. Sex	14. Disposition	15. Injury Diagnosis
49	1 - Male	0 - No Injury	70 - No Injury

16. Body Part(s) Involved	17. Respondent	18. Type of Investigation	19. Time Spent (Operational / Travel)
99 - NO INJURY	1 - Victim/Complainant	1 - On-Site	18 / 1

20. Attachment(s)	21. Case Source	22. Sample Collection Number
9 - Multiple Attachments	07 - Consumer Complaint	

23. Permission to Disclose Name (Non NEISS Cases Only)

○ Yes ● No ○ Verbal ○ Yes for Manuf. Only

24. Review Date	25. Reviewed By	26. Regional Office Director
08/25/2009	9001	Dennis R. Blasius

27. Distribution	28. Source Document Number
Rose, Blake; Blasius, Dennis; Woodard, Dean; Matheson, Joanna; Trotta, Andrew; Khanna, Rohit	X0980305A

090810CBB1946

This in-depth-investigation was initiated as follow-up to a CPSC generated incident report indicating that a consumer residing in a community allegedly containing Chinese drywall has reported that he has not experienced any obvious health related problems nor has had issues with malfunctioning appliances in his home.

Information contained in this investigation was obtained from the consumer during an on-site visit to the home. During this visit, the consumer signed the authorization to release name form (see Exh. 2). An in-home release form and waiver of liability form were signed by the consumer as well and included as Exhibits 3 and 4.

The home is a 1716 square foot two-story townhouse with 3 bedrooms and 2 and one-half bathrooms. The home is constructed with metal studs. The interior of the home is tiled throughout. The home was completed in December of 2007. The consumer moved shortly thereafter and replaced the kitchen counter with a granite top and added a new sink and faucet as well. All of the interior walls were painted prior to the consumer moving in.

The home is occupied by two people (including the homeowner) ages 49 and 30. No children or pets reside in the home. There has been no demolition and/or additions other than the granite top kitchen counter and sink/faucet mentioned above.

The homeowner states he smells no odor in the home. Although he stated, that he coughs at times, he indicated that he cannot with certainty attribute his coughing to problems with drywall as he is having no other problems in the home.

Health Effects

Adult, male (49) – no health related problems other than infrequent coughing, which was reported present prior to moving into the home.
Adult, male (30) – no health-related problems reported.

Appliances Effected

Air conditioner – no problems reported with the a/c coils or cooling system, coil has not had to be either replaced or repaired

****no other appliances have been affected per the consumer***
****consumer stated that he has had fluorescent lights replaced in the kitchen, however, mentioned that it could be attributed to daily use***

According to the consumer, there has been no fire or smoke in the home. No flickering lights or faulty outlets were either reported or observed. The smoke alarms are in working condition.

Photographs of the interior of the air conditioning unit and outlets were taken and included in Exhibit 6. No noticeable corrosion was observed.

Contact with Builder

The consumer indicated that sometime in February of 2009, the builder contacted him explaining that a small percentage of homes had been built with a type of drywall which was emitting low levels of naturally-occurring sulfur-containing gas (see Exh. 5).

As a result of this, the consumer agreed to have his home inspected by the builder. On February 20, 2009, the consumer received a letter from the builder stating that after conducting a thorough inspection of his home, they were pleased to inform him that his home did not contain the affected drywall.

According to the consumer, the builder's inspection consisted of a gentleman who came into the home, opened several outlets with a screwdriver, and left after no more than 15 minutes.

This investigator conducted an internet search of the builder's website and results are included in Exhibit 7.

An internet search of the residence county property information was conducted and results are shown in Exhibit 8.

Investigator Observations

During this visit this investigator detected no unusual odor inside the home. Corrosion within the air conditioning unit or wall outlets was not observed.

PRODUCT INFORMATION

The product is suspected to be Chinese drywall.

ATTACHMENTS

EXHIBIT 1	Contact Sheet
EXHIBIT 2	Authorization to Release Name Form
EXHIBIT 3	Initial In-Home Release Form
EXHIBIT 4	Final Waiver of Liability Form
EXHIBIT 5	Letter from Lennar

090810CBB1946

EXHIBIT 6	Photographs
EXHIBIT 7	Lennar Homes Internet Information
EXHIBIT 8	Property Information

EXHIBIT 1 **CONTACT SHEET**

RESPONDENTS

1) **Consumer/Complainant**

[redacted]

U.S. Consumer Product Safety Commission

AUTHORIZATION FOR RELEASE OF NAME

Thank you for assisting us in collecting information on a potential product safety problem. The Consumer Product Safety Commission depends on concerned people to share product safety information with us. We maintain a record of this information, and use it to assist us in identifying and resolving product safety concerns.

We routinely forward this information to manufacturers and private labelers to inform them of the involvement of their product in an accident situation. We also give the information to others requesting information about specific products. Manufacturers need the individual's name so that they can obtain additional information on the product or accident situation.

Would you please indicate on the bottom of this page whether you will allow us to disclose your name? If you request that your name remain confidential, we will of course, honor that request. After you have indicated your preference, please sign your name and date the document on the lines provided.

☒ I request that you do not release my name. My identity is to remain confidential.

☐ You may release my name to the manufacturer but I request that you do not release it to the general public.

☐ You may release my name to the manufacturer and to the public.

[redacted] 8/11/09

(Signature) (Date)

CPSC Form 322

RELEASE & WAIVER OF LIABILITY FORM

[To Be Signed by All Residents 18 Years or Age or Older]

I, [redacted], do hereby give permission to the U.S. Consumer Product Safety Commission and any of its designated representatives, consultants, or other designees ("CPSC") to utilize my residence located at [redacted] for an indoor air-quality monitoring and testing study. This work is being undertaken as a part of an exploratory study to assess potential associations between constituents that may be present in indoor air and constituents that may be detected in drywall imported from China.

I understand that CPSC will be testing my residence for a variety of gases and/or other substances. Additionally, I understand that while CPSC will inform me of the chemical analysis results for my own residence, CPSC will not be providing further individualized analysis or recommendations concerning possible actions regarding health, safety and/or remediation which occupants could take in light of the information provided. However, CPSC will inform me if the chemical analysis results for my residence indicate the presence of gases or other substances above established risk levels.

I understand that this testing will take one full day of active testing and up to one to two week(s) of having passive sampling equipment in my home. I understand that after one to two week(s) of passive sampling, CPSC will contact me to arrange a time for CPSC to retrieve the passive sampling equipment. I represent that neither I nor members of my household will touch the passive sampling equipment while it is present in my home. CPSC requests that homeowners refrain from using cleaning supplies containing bleach, ammonia, and acetone. There may be other limited household activities which CPSC will request the homeowner to minimize, and CPSC will explain those activities in more detail when the testing begins.

I understand that CPSC intends to take small nail-size samples (less than 1/8 inch) from multiple inconspicuous locations throughout the home, such as behind switch plates and near baseboards. Additionally, CPSC may take drywall sample(s) of an approximate size of 6 inches by 6 inches and will cover the resulting hole(s) with a blank access panel.

I understand that neither I nor other members of my household, including minor children, will be compensated for our participation in this study nor will we receive any per diem allowance or other funds.

I understand that this study involves multiple residences and the final study and analysis will not be completed for a period of time, likely in the fall of 2009. I also understand that CPSC will likely not release information to the general public until the completion of the entire study. I further understand that this study may be widely disseminated to the public and that my own residence will not be identifiable by personally identifiable information such as address, name, etc. within the larger study.

I assume the risk of any and all injury or damage to my person or property that may arise, whether directly or indirectly, as a result of my participation in this study.

I hereby release and hold harmless CPSC, its officers, employees, consultants, representatives, and other designees and the United States Government from any liability for illness, injury, property loss or damage arising from participation in this study.

This agreement is made upon the express condition that for the period of time which CPSC or any of its equipment is in my residence for the purpose of conducting this testing, I shall be free from all liabilities and

claims for damages and/or suits for or by reason of any illness, injury, or death to any CPSC officers, employees, consultants, representatives, and other designees of the CPSC or the United States Government, and that I shall be free from all liabilities and claims for damages and/or suits resulting to damage of CPSC property. CPSC hereby agrees to release and hold me harmless from any liability for illness, injury, death, and/or property loss or damage in connection with the testing as outlined above, however occurring.

[redacted]

Signature

8/11/05

Date

[REMAINDER OF THIS PAGE LEFT INTENTIONALLY BLANK]

TO BE SIGNED UPON COMPLETION OF IN-HOME AIR-QUALITY MONITORING AND TESTING STUDY

FINAL RELEASE & WAIVER OF LIABILITY FORM

[To Be Signed by All Residents 18 Years or Age or Older]

I, [redacted], do hereby acknowledge that with my permission the U.S. Consumer Product Safety Commission and any of its designated representatives, consultants, or other designees ("CPSC") utilized my residence located at _____ for a preliminary pilot indoor air-quality monitoring and testing study on _____, 2009.

On today's date, I have completed a walk-through inspection of my residence with _____, a CPSC employee. I further acknowledge that except for any items listed and described below, no items are missing, damaged, or destroyed in my residence.

Notation of missing, damaged or destroyed items in residence (if applicable):

_____

_____

_____

_____

I acknowledge that CPSC offered reimbursement for the _____, but I have declined CPSC's offer. I acknowledge that I have not requested that the _____ be repaired or replaced by CPSC.

[redacted] 8/11/09

Signature of Resident Date

[REMAINDER OF THIS PAGE LEFT INTENTIONALLY BLANK]

February 20, 2009

[redacted]

Re: Inspection of [redacted] (your "Home")

Dear Mr. [redacted]

I am Lennar Corporation's Division President in Southeast Florida. As you know, through careful investigation, we have discovered that, between November 2005 and November 2006, certain independent subcontractors installed drywall, in a very small percentage of our homes, that is emitting low levels of naturally-occurring sulfur-containing gas. As part of our ongoing effort to deliver quality, value, and service to our homeowners, Lennar has begun repairing several of the homes containing the affected drywall. Please rest assured that we continue to stand by all of our affected homeowners and are fully committed to resolving any and all of our homeowners' issues.

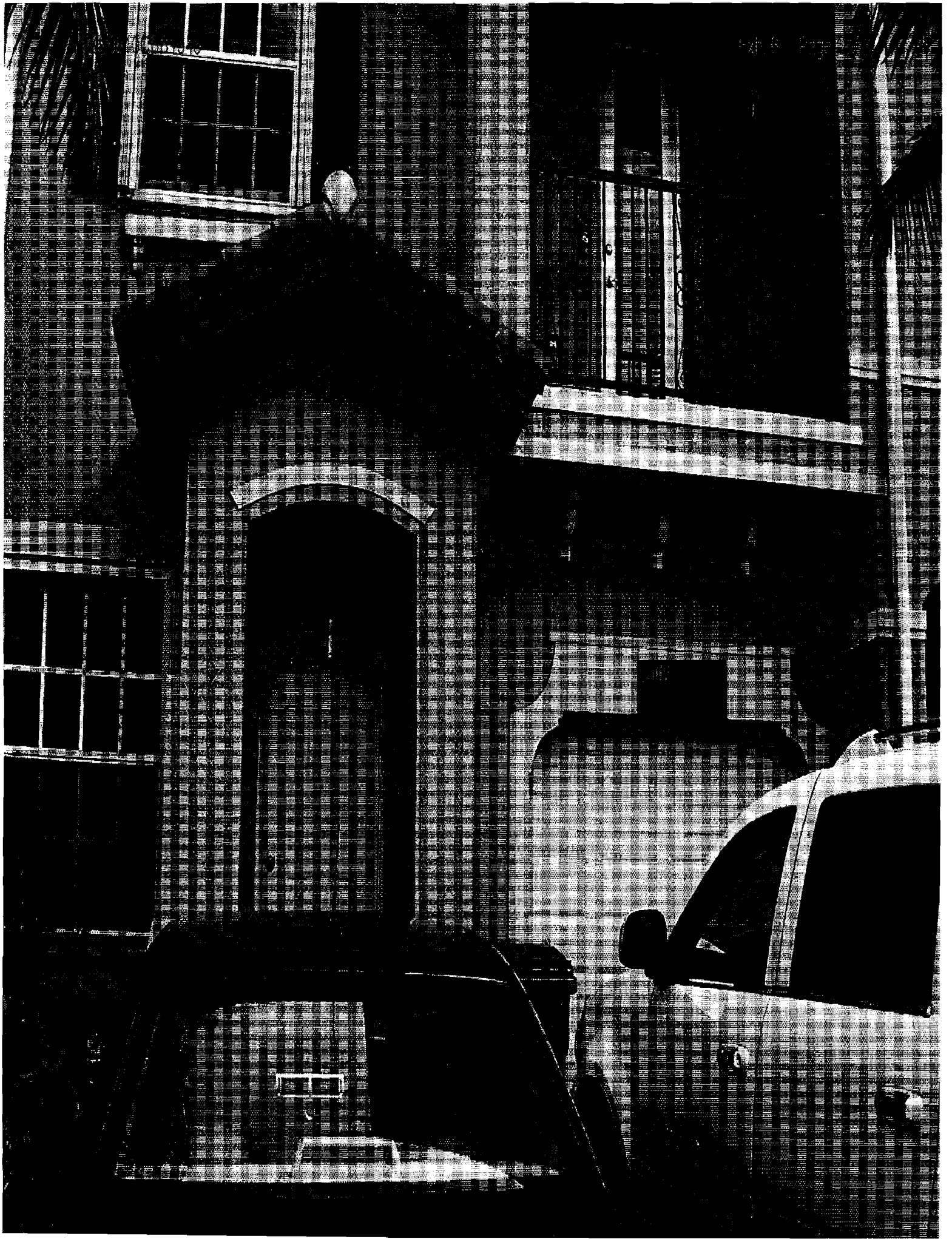
At your request, one of our trained customer care representatives recently conducted a thorough inspection of your Home to determine whether the drywall installed in your Home is affected. We are pleased to report that our thorough inspection of your Home has confirmed that there is no indication that the drywall in your Home is affected.

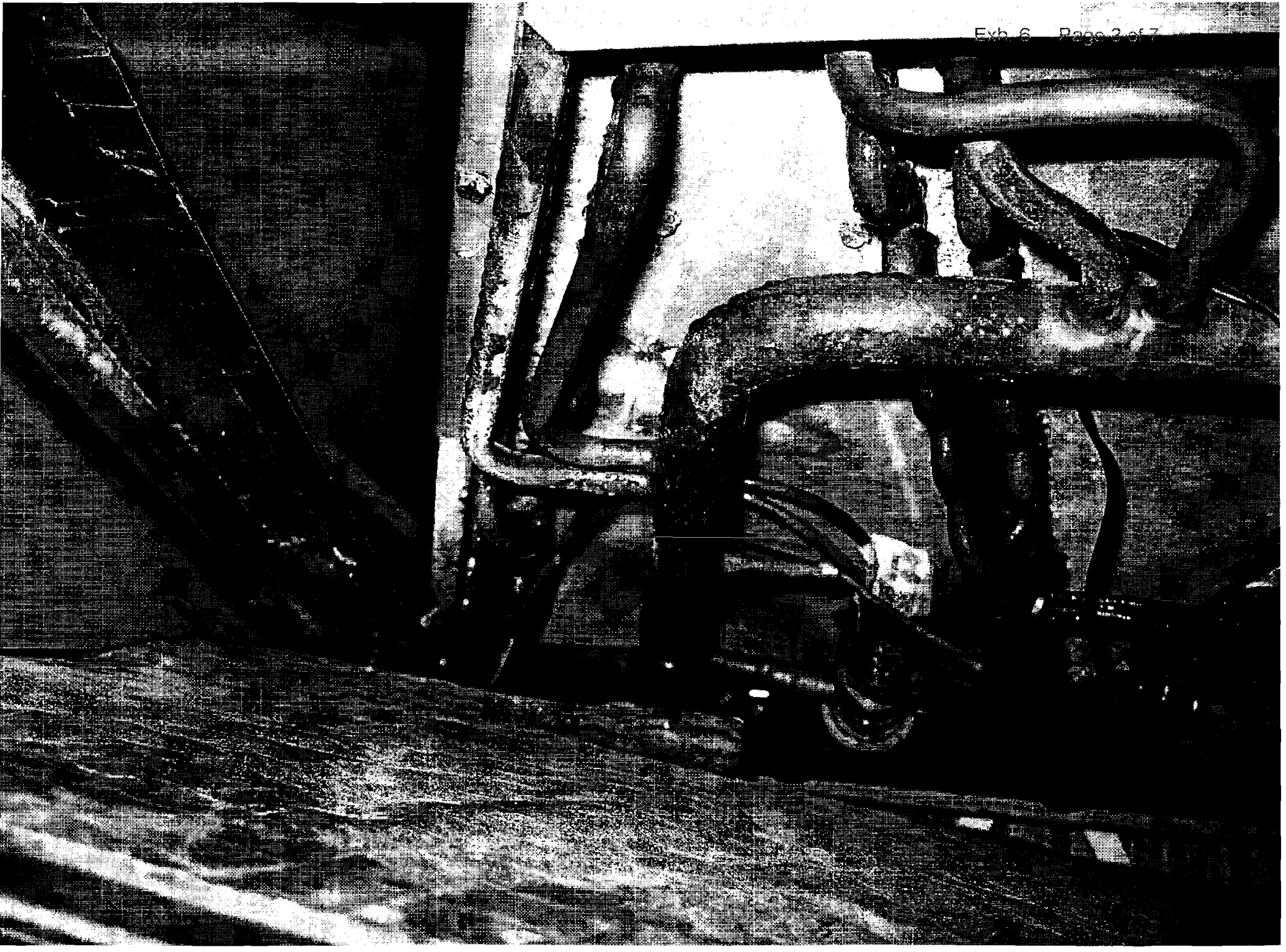
Please contact me directly if you have any additional questions or concerns, or if you would like us to re-inspect your Home for any reason. Thank you again for your understanding and cooperation.

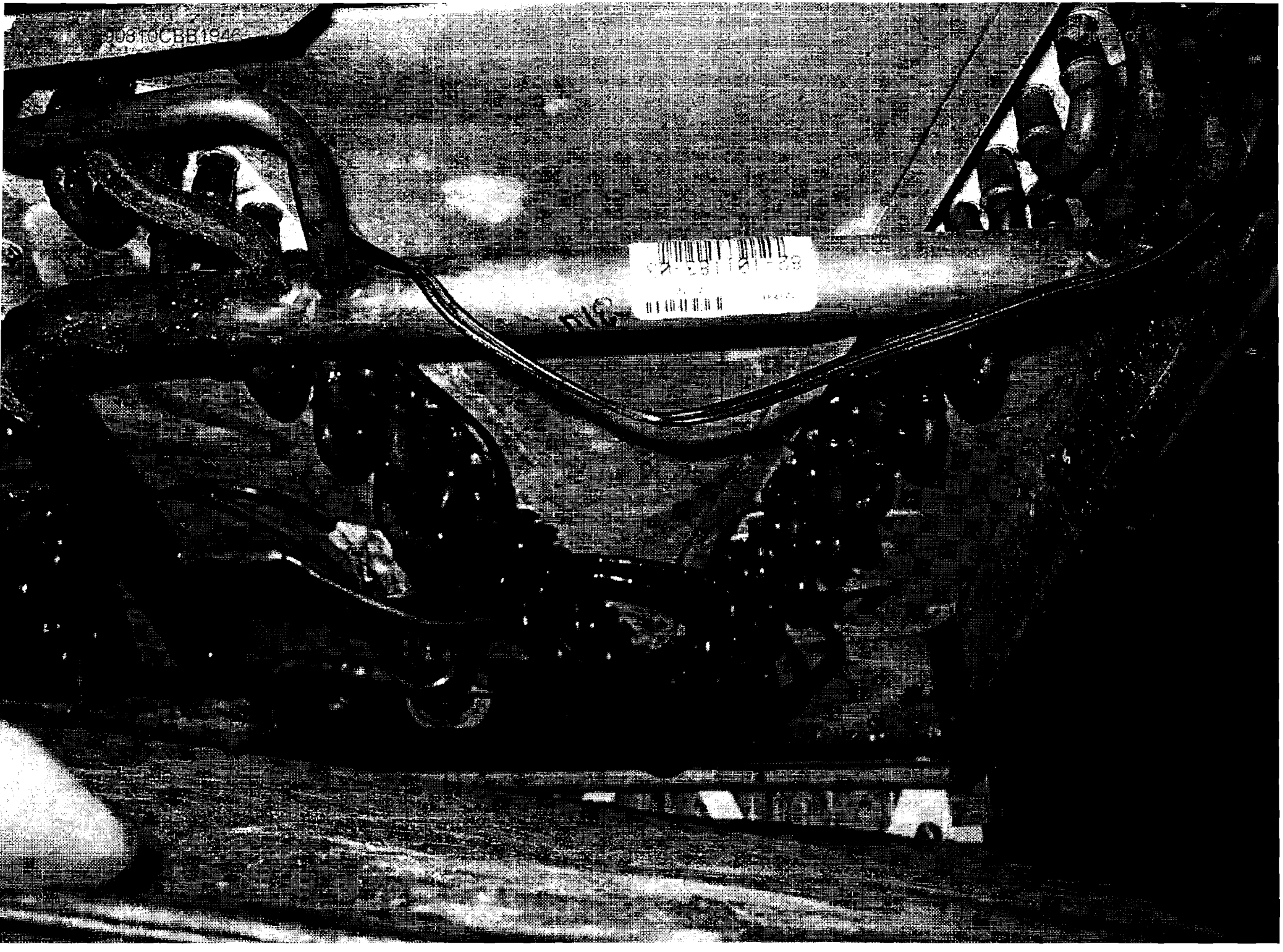
Sincerely,

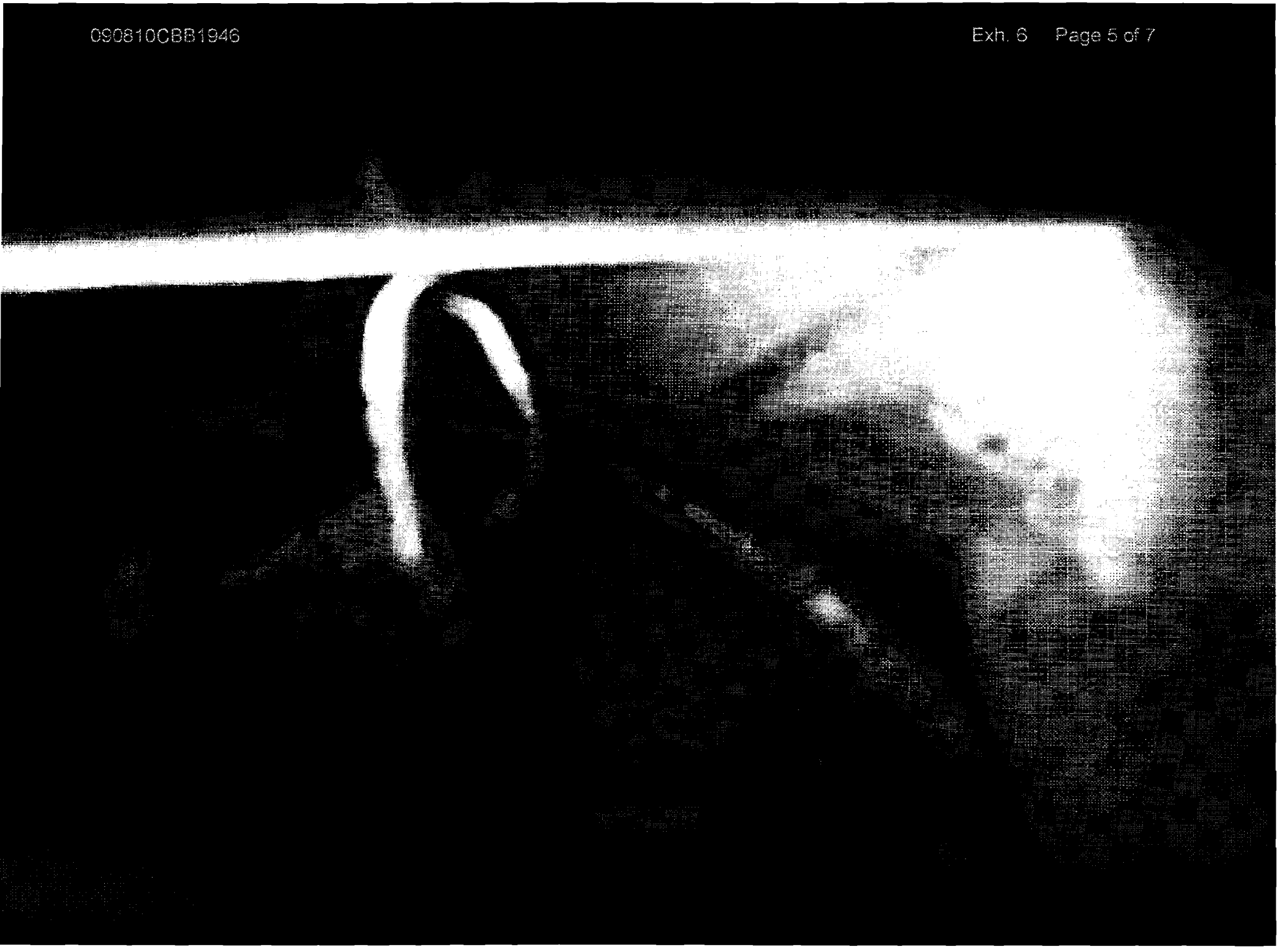
Carlos Gonzalez

730 N.W. 107th Avenue, 4th Floor, Miami, FL 33172 • Phone 305-559-1951 • Fax 305-559-4543
LENNAR.COM





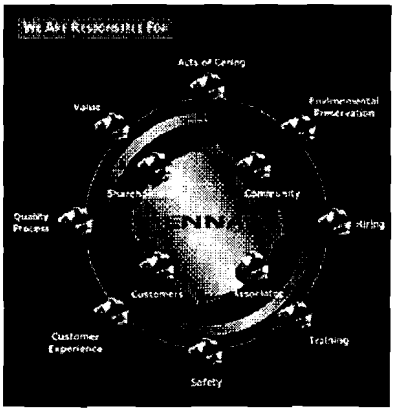




About Lennar

More information:
- About Lennar
- Customer Experience
- Founding Principles
- Historical Highlights
- Leadership Team
- Community Involvement

Lennar Corporation, founded in 1954, is headquartered in Miami, Florida and is one of the nation's leading builders of quality homes for all generations. Lennar builds affordable, move-up and retirement homes in Communities that cater to almost any lifestyle – such as urban, golf course, Active Adult or suburban Communities.



Lennar builds homes in 17 different states in some of the finest markets in the nation including:

Arizona
Phoenix and Tucson

California
Bakersfield, Fresno/Central Valley, Los Angeles/Valencia, Orange County, Palm Springs/Coachella, Riverside County, Sacramento, San Bernardino, San Diego, and San Francisco/Bay Area

Colorado
Denver

Delaware
Millsboro

Florida
Clermont, Ft. Lauderdale, Jacksonville/St. Augustine, Lakeland, Melbourne/Palm Bay, Miami, Naples/Ft. Myers, Orlando, Sarasota/Manatee, Tampa, and Treasure Coast/Palm Beach

Illinois
Chicago

Maryland
Baltimore, Eastern Shore, and MD/DC Metro

Massachusetts
Boston

Minnesota
Minneapolis/St. Paul

Nevada
Las Vegas and Reno

New Jersey
Edison Township, Mays Landing, Monroe Township, Rockaway Township, Waretown, Weehawken, and Woolwich Township

New York
Rockland County

North Carolina
Charlotte and Raleigh

Pennsylvania
Lancaster and York County

South Carolina
Charleston, Greenville, and Myrtle Beach

Texas
Austin, Dallas/Ft. Worth, Houston, and San Antonio

Virginia
Southern Virginia and VA/DC Metro

Lennar's Financial Services companies – including Universal American Mortgage Company, North American Title Company and Lennar Communications Ventures – help simplify the entire homebuying process for our Lennar Customers. By providing everything from title, mortgage, closing services and high-speed internet service, Lennar makes it even easier to become a homeowner.

Look for one of the following Lennar brands in your area to build the home of your dreams: Cambridge, Greystone, Lennar, NuHome, Patriot, U.S. Home, and Village Builders.

Lennar is the leading builder of quality new homes in the most desirable real estate markets across the nation. Our home plans demonstrate our commitment to our customers by showcasing outstanding new home construction and a dedication to excellence in homebuilding. Every new home for sale offers the simplicity of included options featured in our model homes and inventory homes.

Home About Lennar

Lennar builds new homes for sale in 17 different states in some of the finest markets in the nation including:

Arizona:
Phoenix
Tucson

California:
Bakersfield
Fresno/Central Valley
Los Angeles/Valencia
Orange County
Palm Springs/Coachella
Riverside County
Sacramento
San Bernardino
San Diego
San Francisco/Bay Area

Colorado:
Denver

Delaware:
Millsboro

Florida:
Clermont
Ft. Lauderdale
Jacksonville/St. Augustine
Lakeland
Melbourne/Palm Bay
Miami
Naples/Ft. Myers
Orlando
Sarasota/Manatee
Tampa
Treasure Coast/Palm Beach

Illinois:
Chicago

Maryland:
Baltimore
Eastern Shore
MD/DC Metro

Massachusetts:
Boston

Minnesota:
Minneapolis/St. Paul

Nevada:
Las Vegas
Reno

New Jersey:
Edison Township
Mays Landing
Monroe Township
Rockaway Township
Waretown
Weehawken
Woolwich Township

New York:
Rockland County

North Carolina:
Charlotte
Raleigh

Pennsylvania:
Lancaster
York County

South Carolina:
Charleston
Greenville
Myrtle Beach

Texas:
Austin
Dallas/Ft. Worth
Houston
San Antonio

Virginia:
Southern Virginia
VA/DC Metro

Lennar is the leading builder of quality new homes. The Logic of Lennar offers the simplicity of included options as featured in our model homes and inventory homes. Our home plans demonstrate our commitment to our customers by showcasing outstanding new home construction and a dedication to excellence in homebuilding.

My Home

miamidade.gov

ACTIVE TOOL: SELECT

MIAMI-DADE

Show Me:

Property Information

Search By:

Select Item

Text only

Property Appraiser Tax Estimator

Portability S.O.H. Calculator

Summary Details:

Folio No.:	[redacted]
Property:	
Mailing Address:	

Property Information:

Primary Zone:	3700 MULTI-FAMILY
CLUC:	0010 RESIDENTIAL-TOWNHOUSE
Beds/Baths:	3/2
Floors:	0
Living Units:	1
Adj Sq Footage:	1,716
Lot Size:	1,800 SQ FT
Year Built:	2007
Legal Description:	TUSCANY VILLAS [redacted]

Sale Information:

Sale O/R:	[redacted]
Sale Date:	12/2007
Sale Amount:	$288,716

Assessment Information:

Year:	2009	2008
Land Value:	$0	$0
Building Value:	$0	$0
Market Value:	$192,080	$256,100
Assessed Value:	$134,458	$134,329

Exemption Information:

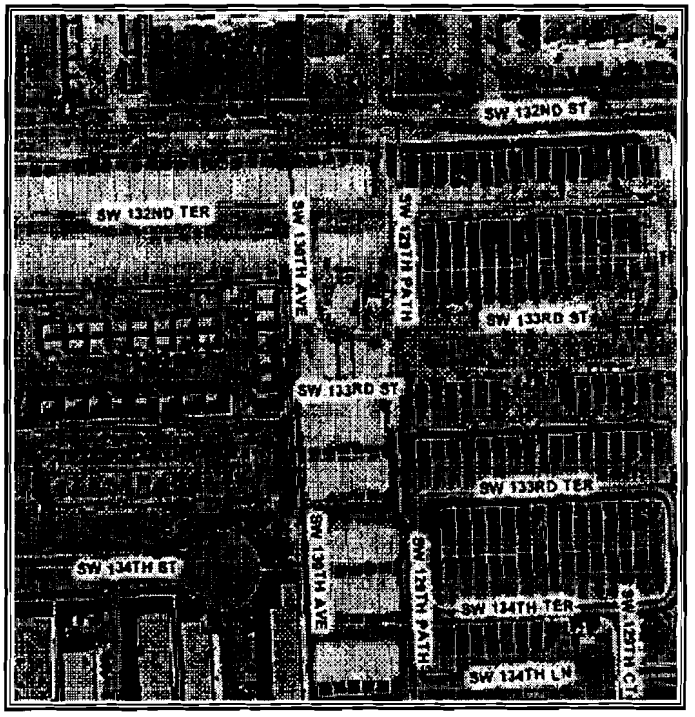
Year:	2009	2008
Homestead:	$25,000	$25,000
2nd Homestead:	YES	YES

Taxable Value Information:

Year:	2009	2008
Taxing Authority:	Applied Exemption/ Taxable Value:	Applied Exemption/ Taxable Value:
Regional:	$50,000/ $84,458	$50,000/ $84,329
County:	$50,000/ $84,458	$50,000/ $84,329
School Board:	$25,000/ $109,458	$25,000/ $109,329

Additional Information:

Click here to see more information for this property:



Digital Orthophotography - 2007

0 ——— 108 ft

Legend

- Property Boundary
- Selected Property
- Street
- Highway
- Miami-Dade County
- Water

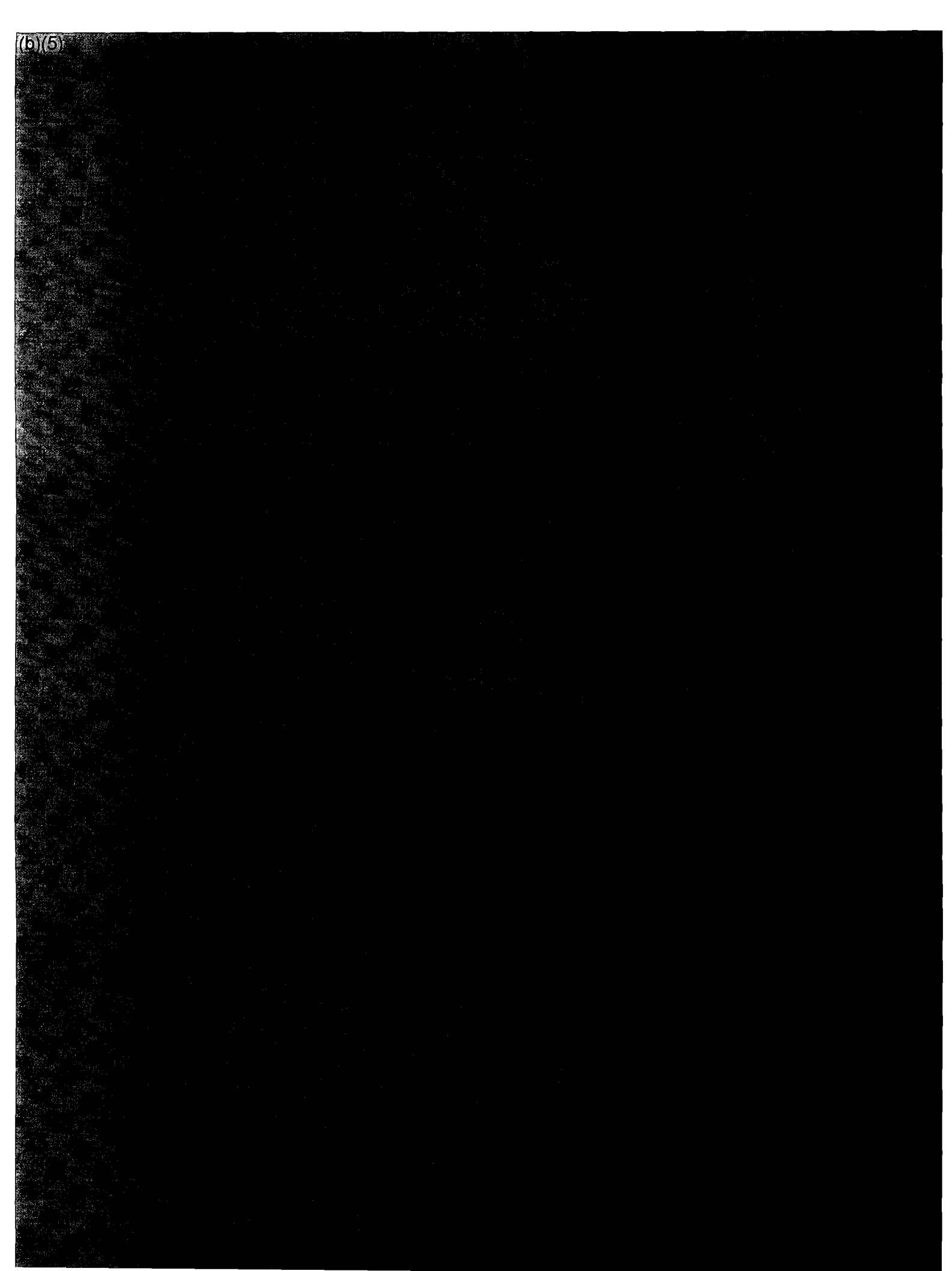
N W E S

My Home | Property Information | Property Taxes | My Neighborhood | Property Appraiser

Home | Using Our Site | About | Phone Directory | Privacy | Disclaimer

If you experience technical difficulties with the Property Information application, or wish to send us your comments, questions or suggestions please email us at Webmaster.

Community Development District
Community Redevelopment Area
Empowerment Zone
Enterprise Zone
Land Use
Urban Development Boundary
Zoning
Non-Ad Valorem Assessments


(b)(5)

Streeter, Robin X098 0305 AUG 10 2009

From: Streeter, Robin
Sent: Monday, August 10, 2009 9:43 AM
To: Streeter, Robin
Subject: Home for potential indoor air sampling

ISSUE 46

Home for potential indoor air sampling:

[redacted]

1. Task Number 090727CBB1888		2. Investigator's ID 9052	**EPIDEMIOLOGIC INVESTIGATION REPORT**
3. Office Code 810	4. Date of Accident YR MO DAY 2009 07 27	5. Date Initiated YR MO DAY 2009 07 27	

6. Synopsis of Accident or Complaint **UPC**

This home was part of an air quality study conducted by an engineering firm to determine if the house was constructed of Chinese drywall. This was considered a "control home".

CPSA 6(b)(1) CLEARED for PUBLIC
✓ NO MFRS/PRVTLBLRS OR PRODUCTS IDENTIFIED
__ EXCEPTED BY: PETITION RULEMAKING ADMIN. PRCDG
✓ WITH PORTIONS REMOVED: 250

VK 5/18/10

7. Location (Home, School, etc) 1 - HOME	8. City SUN CITY CENTER	9. State FL
10A. First Product 1876 - House Structures, Repair Or	10B. Trade/Brand Name UNKNOWN	10C. Model Number UNKNOWN
10D. Manufacturer Name and Address UNKNOWN		
11A. Second Product 0	11B. Trade/Brand Name NONE	11C. Model Number NONE
11D. Manufacturer Name and Address NONE		

12. Age of Victim 74	13. Sex 1 - Male	14. Disposition 0 - No Injury	15. Injury Diagnosis 70 - No Injury
16. Body Part(s) Involved 99 - NO INJURY	17. Respondent 1 - Victim/Complainant	18. Type of Investigation 1 - On-Site	19. Time Spent (Operational / Travel) 14 / 3
20. Attachment(s) 9 - Multiple Attachments	21. Case Source 13 - Other Case Source	22. Sample Collection Number	

23. Permission to Disclose Name (Non NEISS Cases Only)

○ Yes ● No ○ Verbal ○ Yes for Manuf. Only

24. Review Date 08/18/2009	25. Reviewed By 9057	26. Regional Office Director Dennis R. Blasius
27. Distribution Rose, Blake; Woodard, Dean; Blasius, Dennis		28. Source Document Number X0970564A

Information contained within this report was obtained from the homeowners during an on-site visit at their home on 7/29/09. During this visit, engineers from EH & E were conducting air quality tests. This home was considered a "control home" for the drywall study.

The homeowners consist of a 74-year-old male and a 69-year-old female. No one else lives in the home. The homeowners purchased the home while it was being constructed in early 2006. They closed on the home on June 1, 2006 and worked on the inside of the home for the entire month of June 2006. They installed tile in the kitchen along with extra cabinets in the kitchen, living room and den. At the end of June 2006, they moved into the home and have lived in the home non-seasonally since then. The only time they have been away from the home has been when they have taken one to two months vacation each year.

The home is a one story family house that has 1, 980 square feet of living space. There is a two car attached garage and a screened in porch on the back of the house. The house has two bedrooms, two bathrooms and one den with a living room, kitchen, dining room and laundry room. The house was built on a concrete slab and is constructed of concrete block and stucco. The house has all tile floors with oriental carpets throughout each of the rooms.

The house has wood studs and is equipped with natural gas for the stove, water heater and furnace. The homeowners have installed a chair rail in the living room, breakfast nook and bedroom and have painted the walls below the chair rails. No other painting has been done since they have occupied the house.

The homeowners stated that they have not had any type of strange or pungent odors in their home. They have heard that several of their neighbors have claimed to have a strange odor that they believe is coming from the drywall in their homes. Their neighbors have complained of medical problems and copper and metal corrosion. The homeowners in this home have not experienced any of the medical problems or corrosion problems that their neighbors have had. The homeowners pointed out that they have several copper home decorations in their home and the copper has not corroded at all. The homeowners added that all of their copper was covered with lacquer paint approximately 20 years ago. (See Attachment 1, Photo 2).

The electrical outlets were checked and none of them showed any signs of corrosion. The air conditioning unit was checked and the copper coils did not show any signs of corrosion. The homeowner related that he had some rust on the aluminum frame of the air conditioning unit last year, so he used naval jelly to take the rust off and then spray painted the frame so it would not rust again. He believed there was water sitting on the bottom of the air conditioning unit while it was not in use in the winter months and that caused the rust on the aluminum frame. He has not had to have the coils replaced or the air conditioning unit repaired. He added that he has the air conditioning unit serviced

once a year by an air conditioning technician and the technician has never reported any problems with the air conditioning unit.

The homeowners' builder, WCI offered to have the homeowners' home checked for problems associated with the reported defective drywall. The homeowners stated that when the builder's representative inspected their home, they followed the inspector around the home while he was doing his inspection. The inspector told them that he did not find any corrosion on the ground wires in their electrical outlets or within their air conditioning unit. However, the builder refuses to provide anything on paper concerning whether or not their home has the Chinese drywall .

The homeowners learned of the problem with Chinese drywall through their neighbors and from the news in the newspaper and on television. Their homeowner's association has had several meetings on the issues of the Chinese drywall since so many neighbors appear to be affected by it. The homeowners provided a copy of an email notice from their homeowner's association concerning the Chinese drywall. (Attachment 3).

PRODUCT IDENTIFICATION:

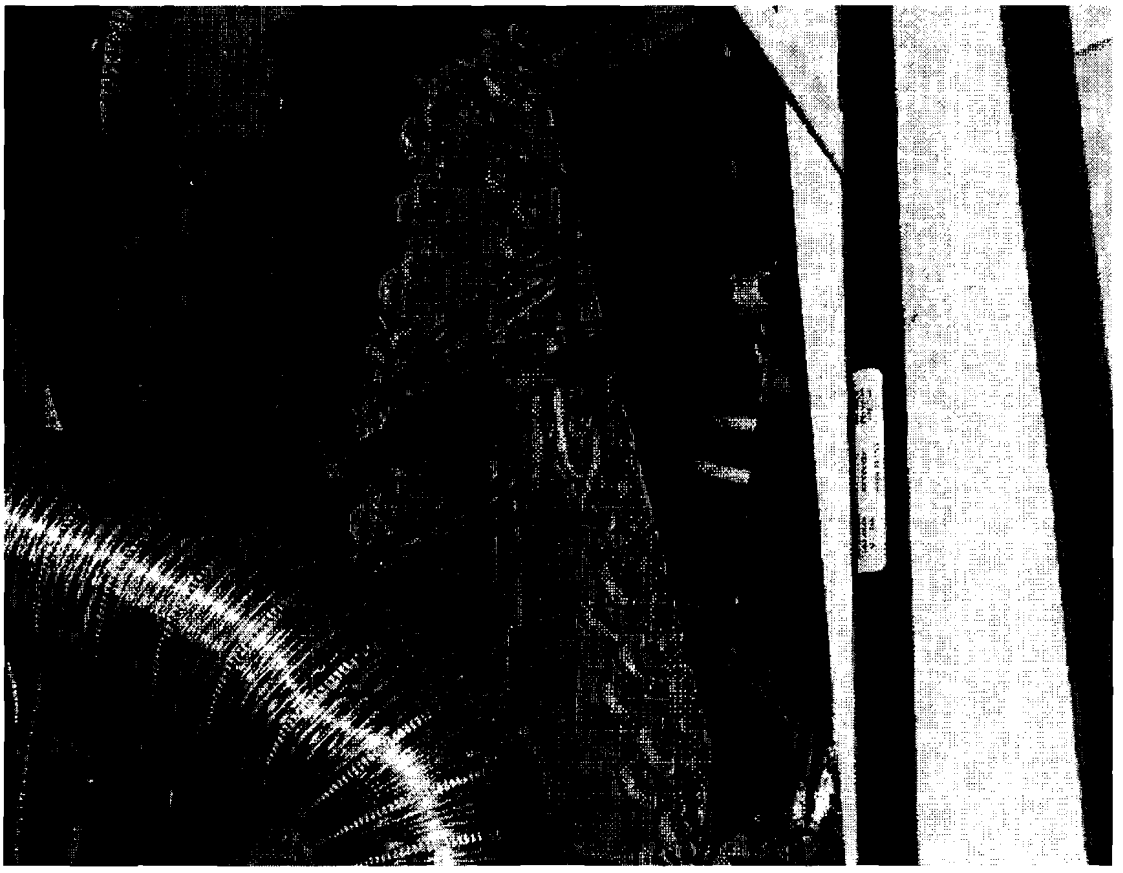
Drywall installed in the new home in 2006. Identification of manufacturer could not be determined.

ATTACHMENTS:

Attachment 1 – Photos 1 – 4
Attachment 2 – Commitment Form
Attachment 3 – Email correspondence from homeowner's association
Attachment 4 – Final Release Form
Attachment 5 – Authorization for Release of Name
Attachment 6 – Identification of Contacts

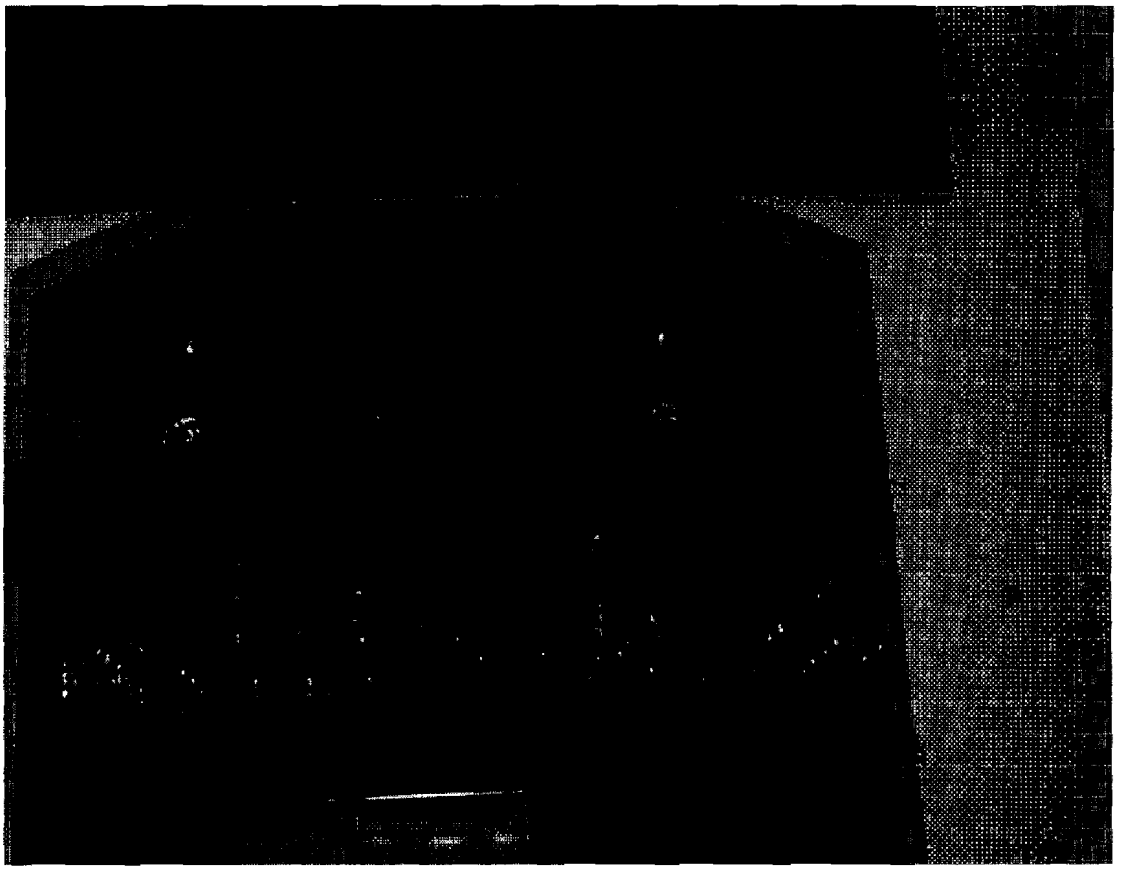
090727CBB1888 ATTACHMENT 1

Photo 1 – View of the homeowner's air conditioning unit showing no corrosion on copper pipes and coils



090727CBB1888 ATTACHMENT 1

Photo 2 – View of copper bowls in home that have not shown any type of corrosion



090727CBB1888 ATTACHMENT 1

Photo 3 – View of other copper home decorations hanging on the kitchen wall that does not show any type of corrosion

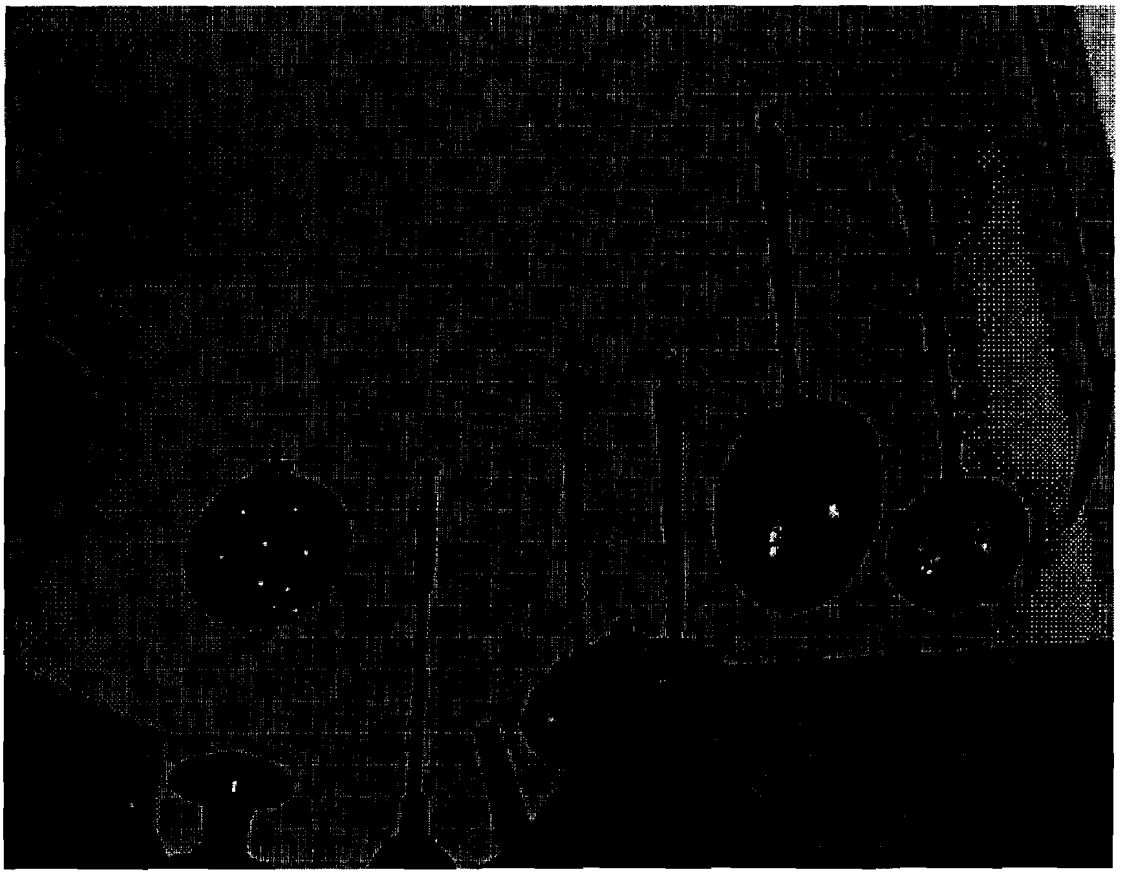
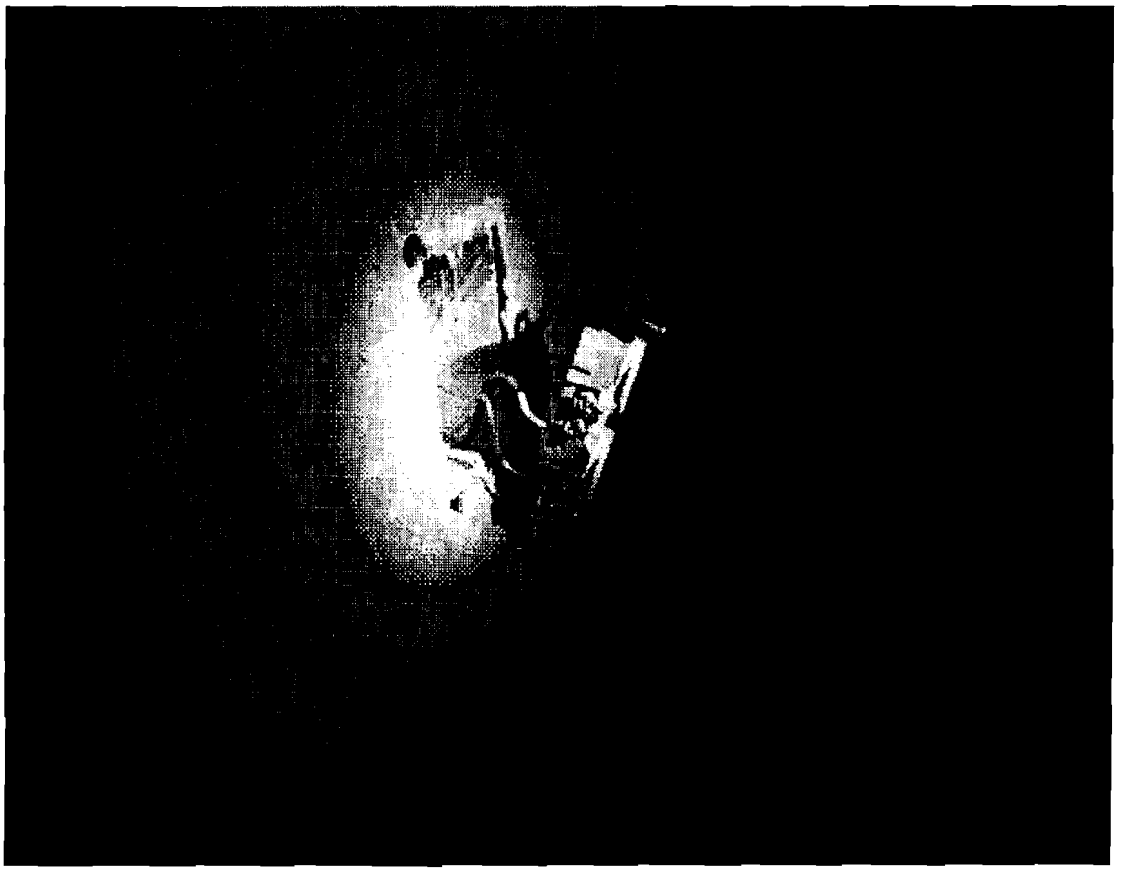


Photo 4 – View of the copper ground wire in a receptacle that does not show any type of corrosion



RELEASE & WAIVER OF LIABILITY FORM

[ed by All Residents 18 Years or Age or Older]

I, _____, do hereby give permission to the U.S. Consumer Product Safety Commission and any of its designated representatives, consultants, or other designees ("CPSC") to utilize my residence located at [redacted] for an indoor air-quality monitoring and testing study. This work is being undertaken as a part of an exploratory study to assess potential associations between constituents that may be present in indoor air and constituents that may be detected in drywall imported from China.

I understand that CPSC will be testing my residence for a variety of gases and/or other substances. Additionally, I understand that while CPSC will inform me of the chemical analysis results for my own residence, CPSC will not be providing further individualized analysis or recommendations concerning possible actions regarding health, safety and/or remediation which occupants could take in light of the information provided. However, CPSC will inform me if the chemical analysis results for my residence indicate the presence of gases or other substances above established risk levels.

I understand that this testing will take one full day of active testing and up to one to two week(s) of having passive sampling equipment in my home. I understand that after one to two week(s) of passive sampling, CPSC will contact me to arrange a time for CPSC to retrieve the passive sampling equipment. I represent that neither I nor members of my household will touch the passive sampling equipment while it is present in my home. CPSC requests that homeowners refrain from using cleaning supplies containing bleach, ammonia, and acetone. There may be other limited household activities which CPSC will request the homeowner to minimize, and CPSC will explain those activities in more detail when the testing begins.

I understand that CPSC intends to take small nail-size samples (less than 1/8 inch) from multiple inconspicuous locations throughout the home, such as behind switch plates and near baseboards. Additionally, CPSC may take drywall sample(s) of an approximate size of 6 inches by 6 inches and will cover the resulting hole(s) with a blank access panel.

I understand that neither I nor other members of my household, including minor children, will be compensated for our participation in this study nor will we receive any per diem allowance or other funds.

I understand that this study involves multiple residences and the final study and analysis will not be completed for a period of time, likely in the fall of 2009. I also understand that CPSC will likely not release information to the general public until the completion of the entire study. I further understand that this study may be widely disseminated to the public and that my own residence will not be identifiable by personally identifiable information such as address, name, etc. within the larger study.

I assume the risk of any and all injury or damage to my person or property that may arise, whether directly or indirectly, as a result of my participation in this study.

I hereby release and hold harmless CPSC, its officers, employees, consultants, representatives, and other designees and the United States Government from any liability for illness, injury, property loss or damage arising from participation in this study.

This agreement is made upon the express condition that for the period of time which CPSC or any of its equipment is in my residence for the purpose of conducting this testing, I shall be free from all liabilities and

claims for damages and/or suits for or by reason of any illness, injury, or death to any CPSC officers, employees, consultants, representatives, and other designees of the CPSC or the United States Government, and that I shall be free from all liabilities and claims for damages and/or suits resulting to damage of CPSC property. CPSC hereby agrees to release and hold me harmless from any liability for illness, injury, death, and/or property loss or damage in connection with the testing as outlined above, however occurring.

[redacted] 7/19/04

Signature Date

[REMAINDER OF THIS PAGE LEFT INTENTIONALLY BLANK]

(b)(6)

From: [redacted]@tampabay.rr.com]
Sent: Thursday, June 18, 2009 11:04 AM
To: [redacted]
Cc:
Subject: Lawsuit consolidation

FYI - Interesting article. I believe that this action only applies to Federal suits and would not apply to the type of action Mr. [redacted] is proposing.

(b)(6)

NEW ORLEANS METRO REAL-TIME NEWS
Breaking Local News from New Orleans, Louisiana

Chinese drywall lawsuits to be consolidated in federal court in New Orleans

by Kate Moran, The Times-Picayune

Monday June 15, 2009, 5:32 PM

CHRIS GRANGER / THE TIMES-PICAYUNEA sample of the Chinese-made drywall ripped out of a home in Chalmette.

A panel of federal judges ruled Monday that lawsuits filed around the country against home builders, suppliers and manufacturers of Chinese drywall be moved to New Orleans, where U.S. District Judge Eldon Fallon will preside over discovery and pre-trial hearings.

By transferring all of the cases to federal court in New Orleans, the judicial panel tried to ensure that lawyers for both the plaintiffs and the defense would not have to duplicate their efforts in multiple courts during discovery. The panel also wanted to prevent judges in different districts from handing down inconsistent rulings.

The seven judges, led by chairman John Heyburn II, indicated that they selected New Orleans at least in part because Fallon had experience overseeing litigation that originated in multiple courts. Notably, he helped midwife a settlement in the consolidated class action against the manufacturers of the drug Vioxx.

The judicial panel wrote that Fallon has "the ability and temperament to steer this complex litigation on a steady and expeditious course."

Monday's transfer order brings a total of 10 suits originating in Louisiana, Florida, and Ohio into Fallon's court. An additional suit filed in federal court in Virginia could also be moved to New Orleans. All cite similar problems with the drywall, which allegedly emits sulfurous compounds that cause air-conditioners and other appliances to deteriorate.

The attorney who initiated the class action in Louisiana, Daniel Becnel Jr., had argued before the panel in late May that the litigation should be transferred to New Orleans because its residents had suffered several times over -- first when they lost homes to Hurricane Katrina, and later when some of the renovated homes were found to contain the defective drywall.

Becnel said some New Orleans residents whose houses are filled with the tainted drywall cannot afford to move, even as the product emits sulfur-like odors, corrodes appliances and allegedly causes nosebleeds and other health issues. By contrast, he claimed that some of the affected houses in Florida were built on speculation during the housing boom and remain unsold or unoccupied.

"They finally get a house with their Road Home and insurance money, and now it is contaminated and they have no place to go," Becnel said of consumers in Louisiana.

It has proven difficult to quantify the scope of the drywall problem. U.S. Sen. Mary Landrieu, D-La., has cited media reports indicating that as many as 7,000 homes in Louisiana might contain the defective product, but the number of

consumer complaints lodged with state and federal agencies monitoring the drywall issue has been far lower.

What's more, not all drywall imported from China appears to undermine appliances. Aleis Tusa, communications director for Habitat for Humanity in New Orleans, said in a recent interview that the nonprofit had used the Chinese drywall in about 200 homes. Yet the drywall stood up to air-quality tests conducted by Habitat, and the nonprofit's clients have not reported issues, Tusa said.

Becnel, a veteran litigator, said he has argued two major class action suits in front of Fallon that were consolidated in New Orleans from federal courts around the country -- the Vioxx suit and another against the manufacturer of the drug Propulsid. Both drugs have since been removed from the market in the United States.

Fallon did not return a call for comment Monday.

Edward Sherman, a professor at Tulane Law School who specializes in civil procedure, said Fallon would set a schedule for discovery and depositions and appoint a liaision counsel for the plaintiffs.

After Fallon had finished preparing the cases for trial, Sherman said they would be sent back to the original courts in which they originally were filed -- unless the parties reach a global settlement, as they did when Fallon was presiding over the Vioxx cases.

Sherman said that the order Monday transferring the Chinese drywall litigation to the federal district court in New Orleans would affect only federal cases. Suits filed against builders, suppliers or manufacturers in state courts would not be involved, though Sherman said Fallon convinced state court plaintiffs in the Vioxx cases to participate in the global settlement.

"That was kind of a unique thing that Judge Fallon pioneered," Sherman said.

Yeleny Suarez, an account executive at the Everett Clay Associates public relations firm, represents Knauf Plasterboard Tianjin, a manufacturer that was named in some of the drywall suits filed in federal courts in Louisiana and Florida. Suarez said the company did not have any comment on Monday's transfer order.

In re: Chinese-Manufactured Drywall Products Liability Litigation is filed as case No. 2047 with the U.S. Judicial Panel on Multi-District Litigation. A copy of the panel's transfer order can be found here.
Kate Moran can be reached at kmoran@timespicayune.com or 504.826.3491.

FINAL RELEASE & WAIVER OF LIABILITY FORM

[To Be Signed by All Residents 18 Years or Age or Older]

I, [redacted], do hereby acknowledge that with my permission the U.S. Consumer Product Safety Commission and any of its designated representatives, consultants, or other designees ("CPSC") utilized my residence located at [redacted] for a preliminary pilot indoor air-quality monitoring and testing study on 7/29, 2009.

On today's date, I have completed a walk-through inspection of my residence with SUSAN GABRIEL, a CPSC employee. I further acknowledge that except for any items listed and described below, no items are missing, damaged, or destroyed in my residence.

Notation of missing, damaged or destroyed items in residence (if applicable):

Nothing visible on initial walkthrough.

I acknowledge that CPSC offered reimbursement for the NA, but I have declined CPSC's offer. I acknowledge that I have not requested that the NA be repaired or replaced by CPSC.

[redacted]

Signature of Resident

7/29/09.

Date

[REMAINDER OF THIS PAGE LEFT INTENTIONALLY BLANK]

U.S. Consumer Product Safety Commission

AUTHORIZATION FOR RELEASE OF NAME

Thank you for assisting us in collecting information on a potential product safety problem. The Consumer Product Safety Commission depends on concerned people to share product safety information with us. We maintain a record of this information, and use it to assist us in identifying and resolving product safety concerns.

We routinely forward this information to manufacturers and private labelers to inform them of the involvement of their product in an accident situation. We also give the information to others requesting information about specific products. Manufacturers need the individual's name so that they can obtain additional information on the product or accident situation.

Would you please indicate on the bottom of this page whether you will allow us to disclose your name? If you request that your name remain confidential, we will of course, honor that request. After you have indicated your preference, please sign your name and date the document on the lines provided.

☒ I request that you do not release my name. My identity is to remain confidential.

☐ You may release my name to the manufacturer but I request that you do not release it to the general public.

☐ You may release my name to the manufacturer and to the public.

[redacted] 7/29/09

(Signature) (Date)

CPSC Form 322

090727CBB1888 **ATTACHMENT 6**

IDENTIFICATION OF CONTACTS:

1. [redacted] homeowners, [redacted] – contacted on site at their home on July 27, 2009.

X097 0564 [redacted] 44 JUL 27 2009

Streeter, Robin

From: Blasius, Dennis
Sent: Wednesday, July 22, 2009 5:02 PM
To: BBaker@eheinc.com
Cc: Streeter, Robin; Saltzman, Lori; Matheson, Joanna; Marques, Stefanie; Rose, Blake; Recht, Joel
Subject: Florida addresses for the week of 7/27.

Brian, I've tentatively selected these three for next week, Tuesday-Thursday. We are contacting the homeowners to confirm their availability. I'll get back to you tomorrow.

[redacted]	SUN CITY CENTER	FL	33573
	Sun City Center	FL	33573
	PALMETTO	FL	34221

(I090598A)
~~I090~~(I090429A)

Dennis Blasius
Eastern Region Director
U.S. Consumer Product Safety Commission
Office of Compliance and Field Operations
Ph. # 262-650-1216
Fax # 866-686-7936
Cell # 202-595-4619

PRODUCT = 1876

[redacted]

HOME FOR INDOOR AIR SAMPLING

DATE OF INCIDENT: 7/22/2009

1. Task Number	2. Investigator's ID	EPIDEMIOLOGIC INVESTIGATION REPORT
090727CBB1887	9052	

3. Office Code	4. Date of Accident YR MO DAY	5. Date Initiated YR MO DAY
810	2009 04 15	2009 07 30

6. Synopsis of Accident or Complaint **UPC**

The 66-year-old male and his wife, a 68-year-old female have experienced multiple health issues while living in their house that was built in 2006 with suspected tainted Chinese drywall. They have had several appliances and computers break down along with their air conditioner. Jewelry and copper artwork have corroded and turned black.

CPSA 6(b)(1) CLEARED for PUBLIC

☑ NO MFRS/PRVTLBLRS OR PRODUCTS IDENTIFIED

☐ EXCEPTED BY: PETITION RULEMAKING ADMIN. PRCDG

☐ WITH PORTIONS REMOVED:

7. Location (Home, School, etc)	8. City	9. State
1 - HOME	PALMETTO	FL

10A. First Product	10B. Trade/Brand Name	10C. Model Number
1876 - House Structures, Repair Or	UNKNOWN	UNKNOWN

10D. Manufacturer Name and Address
UNKNOWN

11A. Second Product	11B. Trade/Brand Name	11C. Model Number
4061 - Electric Outlets Or Receptac	UNKNOWN	UNKNOWN

11D. Manufacturer Name and Address
NONE

12. Age of Victim	13. Sex	14. Disposition	15. Injury Diagnosis
66	1 - Male	0 - No Injury	70 - No Injury

16. Body Part(s) Involved	17. Respondent	18. Type of Investigation	19. Time Spent (Operational / Travel)
99 - NO INJURY	1 - Victim/Complainant	1 - On-Site	15 / 3

20. Attachment(s)	21. Case Source	22. Sample Collection Number
9 - Multiple Attachments	07 - Consumer Complaint	

23. Permission to Disclose Name (Non NEISS Cases Only)

○ Yes ● No ○ Verbal ○ Yes for Manuf. Only

24. Review Date	25. Reviewed By	26. Regional Office Director
08/19/2009	9057	Dennis R. Blasius

27. Distribution	28. Source Document Number
Rose, Blake; Woodard, Dean; Blasius, Dennis	I0940429A

Information contained within this report was obtained from the homeowners during an on-site visit with them at their home. During this visit, engineers from E H & E were conducting air quality test. Also, present with the homeowners was a friend of theirs that has studied the effects of Chinese drywall for the last nine months. He related that he is acting as a liaison for homeowners who have problems with Chinese drywall and their builders and/or contractors and/or insurance agents.

The homeowners consist of a 66-year-old male and a 68-year-old female. No one else lives in the home with them. They do not have pets. The homeowners purchased this home in November 2006 and began living in the home in November 2006. However, the homeowner related that from November 2006 to February 2008, they were involved in a construction renovation of a condominium building in Sarasota where they spent the majority of their time during the day. They were in this house to sleep at night and were rarely there for more than six to eight hours.

In February 2008, they completed the construction project and began living at this house full time. They lived in this house from that time until June 2009. In June 2009, they moved out of this house and have only been back once a week to check on it. They have left all of their belongings in the house while they decide what to do with this house.

The house is a one-story ranch style house that is constructed of cinder block stucco. The interior walls have wood frame and the roof is constructed or pre-fabricated wood trusses. The studs are wood studs. There are four bedrooms and three bathrooms which make up 2,350 square feet. The walls have a heavy orange peel texture. All of the appliances are new and were installed when the house was built. The family room, kitchen and bathrooms all have tile floors. The bedrooms and living-dining room combination are carpeted.

They do not have any natural gas or propane gas in this house. Everything is electric. The homeowners related that they have only painted one small wall in the living room. Other than that, there has been no other painting or any other changes made to this house since they have lived in this house.

The homeowners stated that none of the drywall in this house has been replaced. Neither one was aware of the drywall contractor or the drywall installer. The home was built by Lennar Homes.

The homeowners began having medical problems shortly after they moved into the home; however, the symptoms did not persist at first because they were not in the home except to sleep. After February 2008 when they completed the construction job, they were in this house most of the day and night. The female homeowner began to experience low grade headaches, nose bleeds, nausea and feeling congested all the time. She explained that she has worn contact lenses for 30 years and usually worn them for 12 to 14 hours a day. But after being in this house for approximately four to five hours, she has to take

her contact lenses out because her eyes begin to hurt. She has also been suffering from a rash that is on her neck. It comes and goes like hives. When she is out of the house, it goes away.

The male homeowner stated that he had problems sleeping in the house. He stated that he would wake up every 10 to 15 minutes every night. He also experienced coughing, sneezing and congestion. He explained that when he was gone from this house for a while, these symptoms disappeared. They both moved out of this house in June 2009. Since then, they have not experienced these symptoms. He added that he has no problem sleeping at night and does not have any congestion, coughing or sneezing since he has moved out of this house.

The female homeowner stated that she no longer has the leg cramps, low grade headaches or any nausea since they moved out of this house in June 2009. She can wear her contact lenses again for 12 to 14 hours a day when she is away from this house.

The homeowner's son, who has his PHD in physical therapy, advised the homeowners to have some x-rays completed on both of them along with blood work and an arterial gas blood work tests completed. The x-rays results did not show any medical problems but the arterial gas blood work showed a gas in their lungs. They believed the gas was H2S. Their son advised them to get out of the house. They are concerned with the long term effects on their lungs.

The homeowner's son who is 31-years-old has visited this home during holidays and always complains about the odor in this house. Both homeowners stated that when they first moved into this house, they noticed a musty smell that they believed was from wet drywall. They attributed the smell to a "new home" smell. Both homeowners detect the pungent odor when they first enter the house each time. After they have been in the house for a short time, they no longer smell it. They believe they do not smell it anymore because they have become accustomed to the smell. The female homeowner related that she uses fragrant oils and fragrant candles to help take away the smell in the house. She described the smell as a vinegary type smell and added that it becomes worse when the air conditioner is on. The smell is stronger in the garage, laundry room, back bedroom and pool bath closet.

The air conditioner in this home has had several problems. In July 2007, the air conditioner needed to be recharged because of low refrigerant levels. In October 2007, the air conditioner stopped working. The technician who came out to check it out related to the homeowners that the coils in the air conditioner were corroded and needed to be replaced. The homeowners had the coils replaced at that time. In March 2009, the air conditioner technician had to recharge the air conditioner and noticed the coils were turning black and corroding again. He told the homeowners that the coils will need to be replaced very soon.

The homeowners related that they have had several electrical appliances stop working since moving into this house. They have had six to seven DVR cable boxes to their television stop working. Four or five modems have completely stopped working and had to be replaced. The homeowner's personal computer stopped working in 2008. The homeowner's laptop computer also stopped working. The homeowners sent their broken laptop computer to a friend who is a computer engineer. He took the laptop computer completely apart and told the homeowners that the laptop computer was completely corroded inside and could not be repaired.

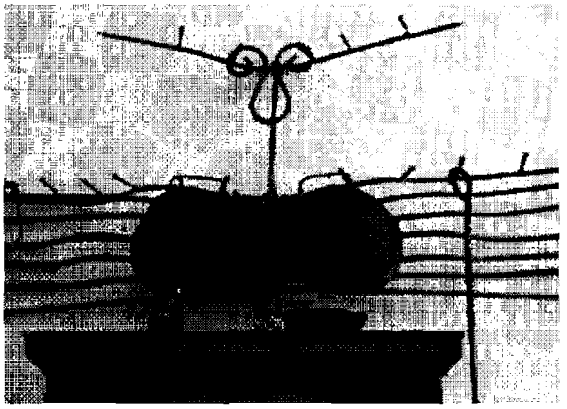
The homeowners related that their big screen plasma television stopped working. The television was still new and under warranty. The television repairman told them that the wires within the television were corroded and that he had never seen anything like that before. The homeowners' refrigerator stopped working. The technician who came to repair the refrigerator had to replace the motherboard in the refrigerator because it was corroded.

The washing machine was new when they purchased this house. However, the motor stopped working after three months. The motor had to be replaced. Also, the motor in the new microwave oven had to be replaced when it was about four to five months old. The heating element on the top of their electric stove has had to be replaced since they have lived in this home.

The dishwasher that was new in the house when they purchased the house also stopped working in 2008. The technician who came to repair the dishwasher said the circuit board electronics had to be replaced.

The homeowners' stereo amplifier makes a crackling noise and the speakers no longer work. The recharger for their portable telephone no longer works. In early 2009, they found that the batteries in their flashlight were corroded making the flashlight useless.

The homeowners' pointed out that a copper breast plate artwork that was in a show in 2007 has also turned black. The homeowner provided a copy of a newspaper article showing the art piece (Attachment 3). It was dated July 12, 2007. The homeowners brought the piece of artwork back to their home and since then, it has corroded and has turned the copper black.



The female homeowner related that a copper bowl that she has had since the 1970's has turned black after they moved into this house. (See Attachment 1, Photo 8). Some of her copper and silver jewelry has turned black (See Attachment 1, Photo 9).

Most of the outlets were checked by the engineers. All of the ground wires that were checked showed signs of corrosion (See Attachment 1, Photo 6).

The homeowners related that they have had to replace the mirrors in the bathrooms three times. The mirrors would start to show gray spots and then would corrode with pitting marks. They pointed out one mirror that had been replaced three times that is beginning to show the gray spots (See Attachment 1, Photo 1).

There were also some pitting marks on the drain of one of their bathtubs and some pitting marks on a shower caddy in a shower (See Attachment 1, Photos 2 & 3).

The homeowners' builder, Lennar Homes sent a representative from a testing company called Environ to their house in February 2009. The representative took samples of the drywall from the homeowner's house. According to the letter they received from Lennar Homes, the drywall in this house would not produce any adverse health effects. The homeowners provided a copy of the test (See Attachment 5).

Lennar Homes has contacted them and has offered to pull out all the existing drywall in their home and replace it with new drywall. Lennar Homes would move them out of the house while the repairs were being made and then move them back in after all repairs were completed. Lennar Homes would also replace the air conditioning system and the duct work in the house along with replacing all the appliances. They would also install a new circuit breaker unit. Lennar Homes would agree to do all this if the homeowners would sign off any rights they may have for medical problems and/or long term effects from living in this house. At this time, the homeowners are concerned about long term effects on their health and what effects the drywall has had on their personal belongings

that Lennar Homes would move back into the home. They decided not to take this offer from Lennar Homes at this time.

The homeowners have contacted local and state health departments. They were told that these agencies do not have the resources to do any type of testing for them.

The homeowners related that they learned of the problems with Chinese drywall through the newspapers and the television news. Once they heard that copper wires and air conditioning coils had to be replaced, they believed their home may have the Chinese drywall especially since this home was built in 2006. While watching the news, they saw their friend (Chinese drywall expert) who was working with homeowners that believed they had the Chinese drywall. They called their friend who examined their home and confirmed that this home does have the effects of the Chinese drywall.

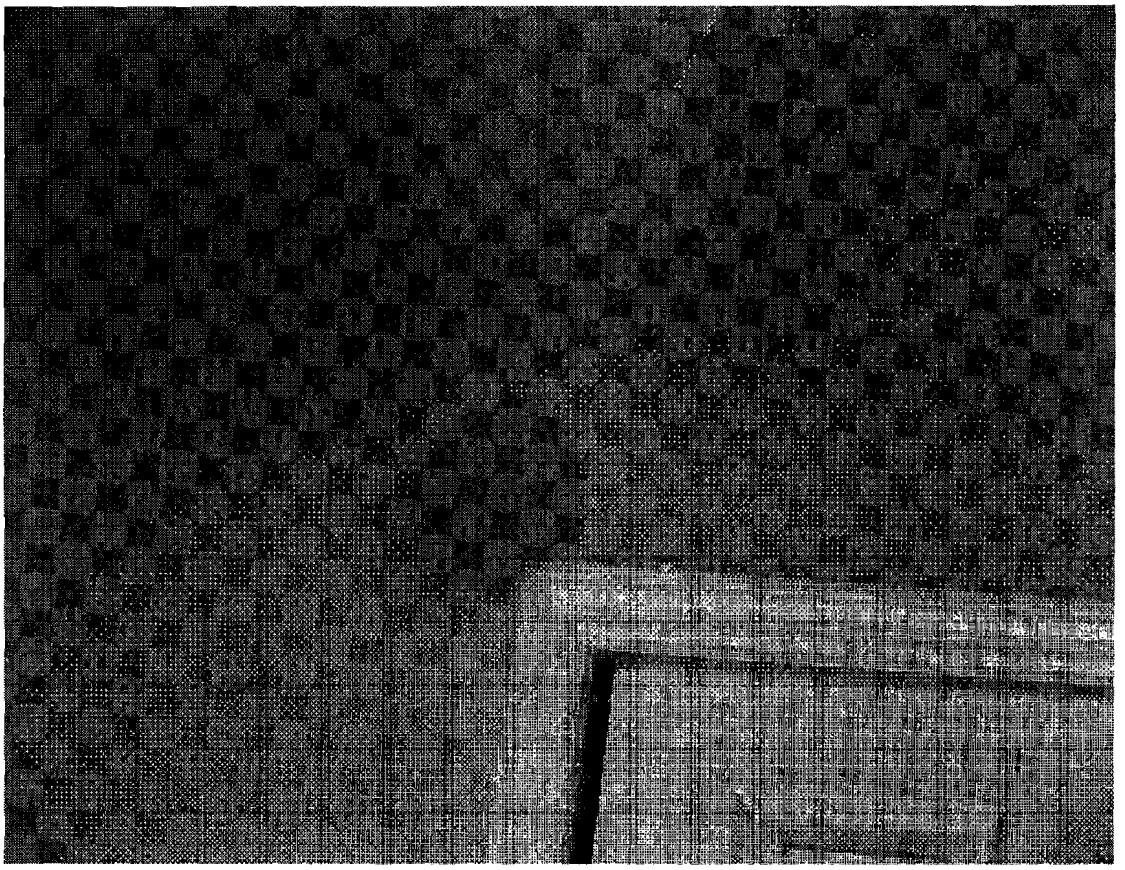
The homeowners' short term plans began when they moved out of this house in June 2009. Since then, they have lived in a friend's house as a temporary situation. For the long term, they are hoping that Lennar Homes will trade this house for another house without Chinese drywall. They are working with their friend who is a liaison for them with the builder and the insurance company.

ATTACHMENTS:

Attachment 1 – Photos 1 - 10
Attachment 2 – Commitment Form
Attachment 3 – Copy of Newspaper article
Attachment 4 – Copy of homeowner's medical records
Attachment 5 – Copy of test conducted by builder
Attachment 6 – Final Walk-Through Form
Attachment 7 – Authorization for Release of Name
Attachment 8 – Identification of contacts

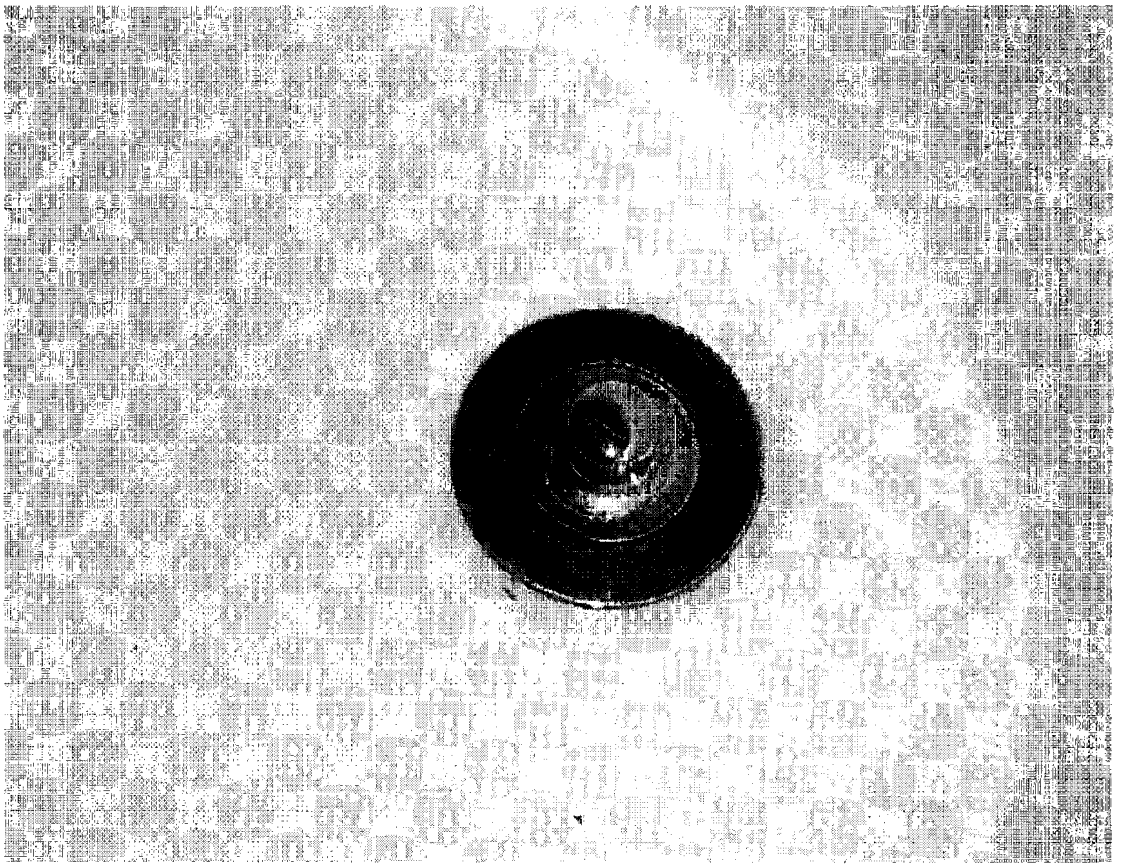
090727CBB1887 **ATTACHMENT 1**

Photo 1 – View corrosion on mirror in bathroom



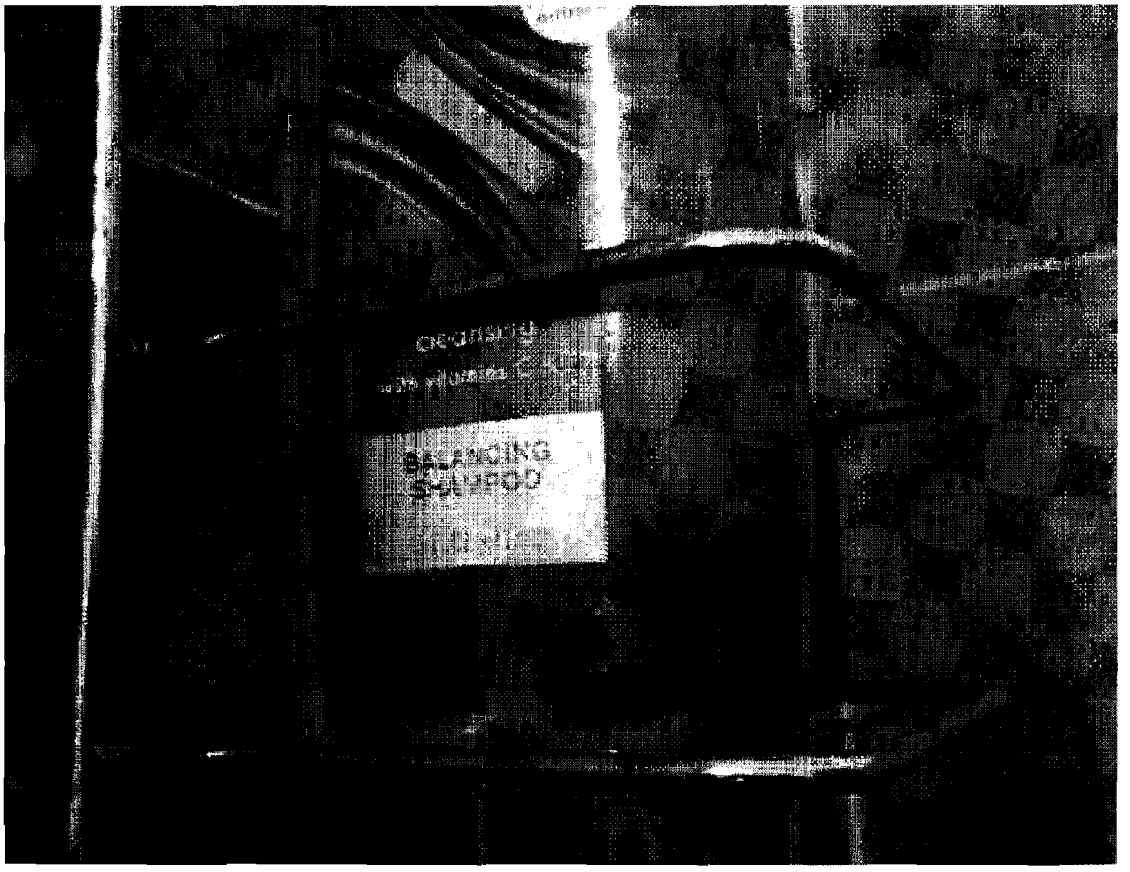
090727CBB1887 **ATTACHMENT 1**

Photo 2 – View of corrosion on drain in bathtub that has never been used



090727CBB1887 **ATTACHMENT 1**

Photo 3 – View of corrosion on shower shelf



090727CBB1887 ATTACHMENT 1

Photo 4 – View of copper artwork showing black corrosion

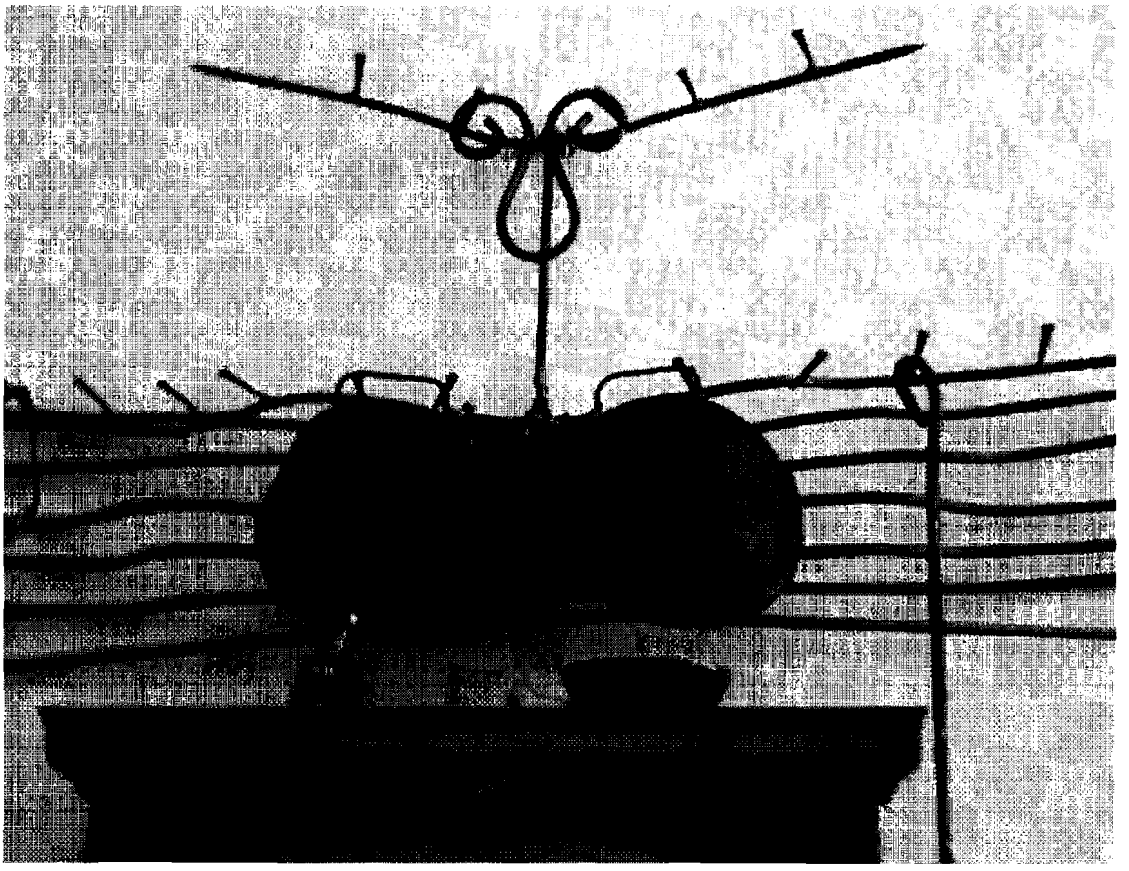


Photo 5 – View of corrosion on pipe on back of refrigerator

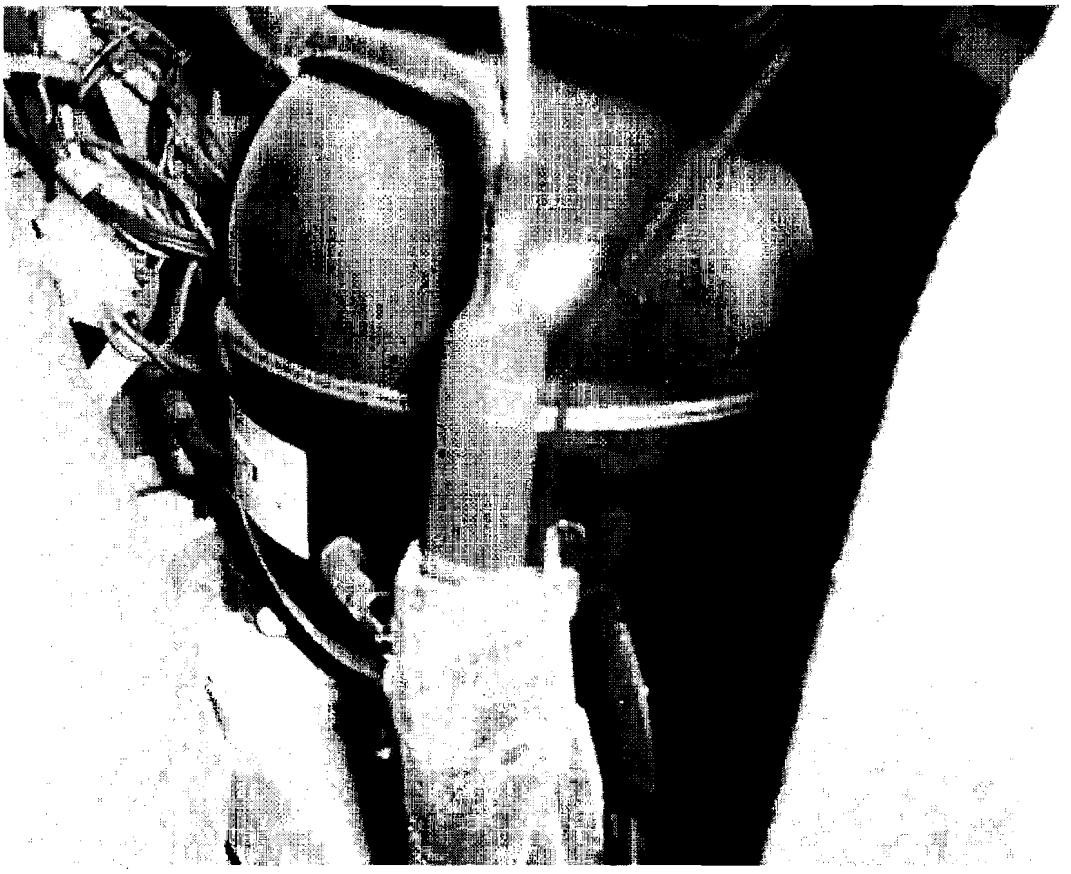
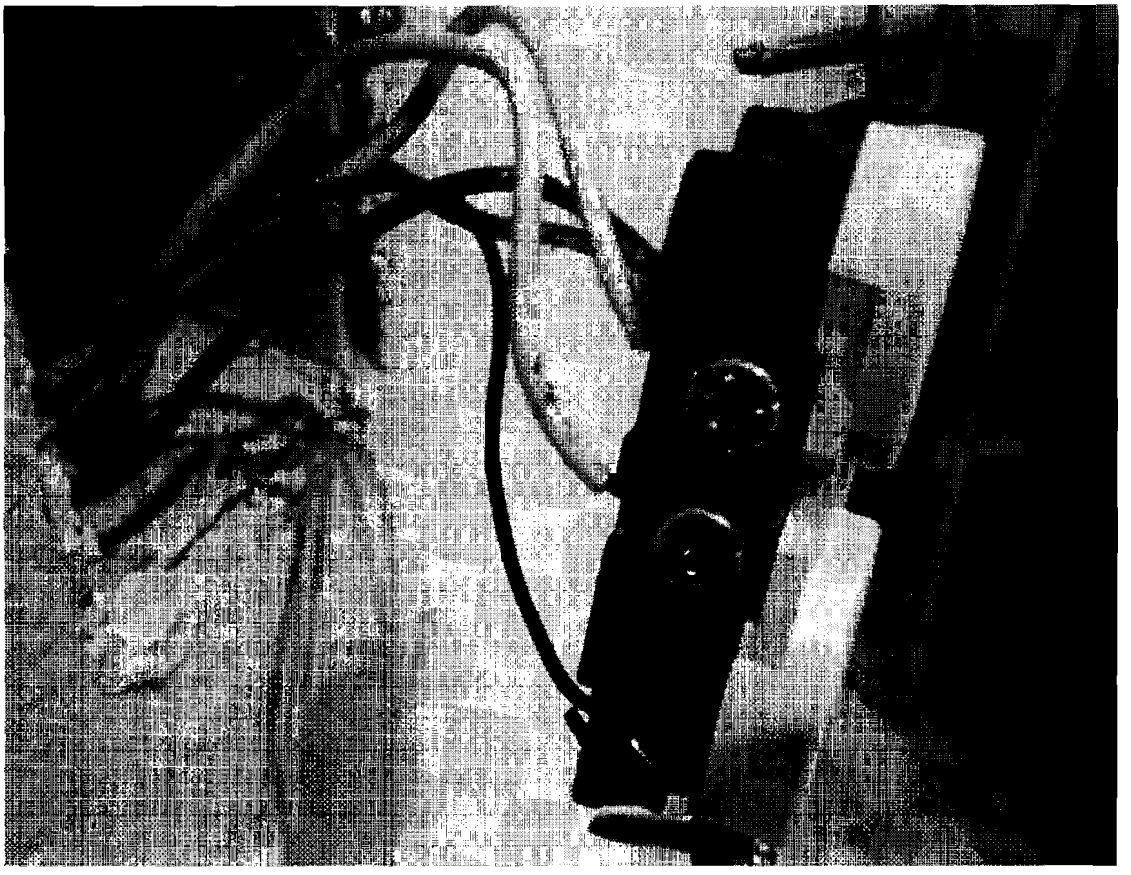


Photo 6 – View of corrosion on ground wire of the outlet



090727CBB1887 ATTACHMENT 1

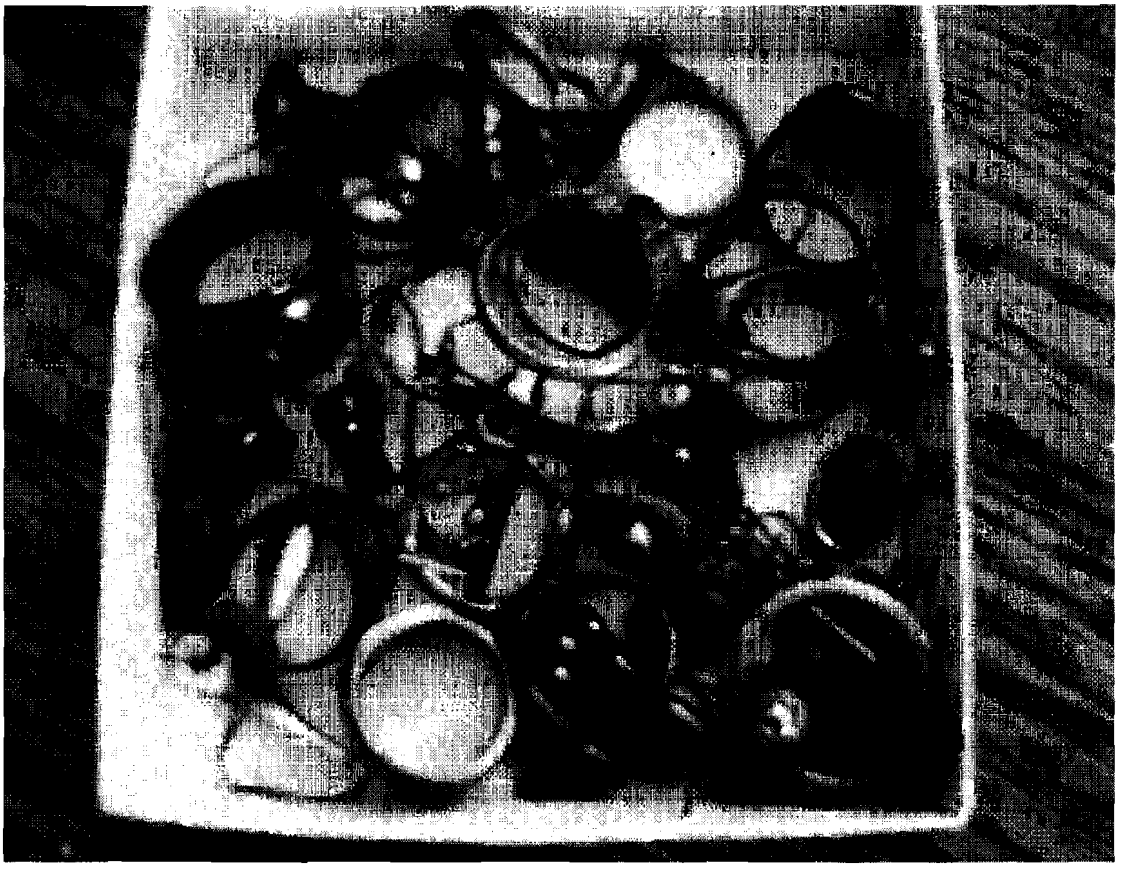
Photo 7 – View of corrosion on silver bowl and Christmas tree decoration

090727CBB1887 ATTACHMENT 1

Photo 8 – View of corrosion on outside of a copper bowl

090727CBB1887 ATTACHMENT 1

Photo 9 – View of corrosion on jewelry



090727CBB1887 **ATTACHMENT 1**

Photo 10 – View of the front of the homeowners' house

RELEASE & WAIVER OF LIABILITY FORM

[by All Residents 18 Years or Age or Older]

I (b)(6) (b)(6) Exemption 3 for 25(c)(1), do hereby give permission to the U.S. Consumer Product Safety Commission and any of its designated representatives, consultants, or other designees ("CPSC") to utilize my residence located at (b)(6) Exemption 3 for 25(c)(1)(b)(6) for an indoor air-quality monitoring and testing study. This work is being undertaken as a part of an exploratory study to assess potential associations between constituents that may be present in indoor air and constituents that may be detected in drywall imported from China

I understand that CPSC will be testing my residence for a variety of gases and/or other substances. Additionally, I understand that while CPSC will inform me of the chemical analysis results for my own residence, CPSC will not be providing further individualized analysis or recommendations concerning possible actions regarding health, safety and/or remediation which occupants could take in light of the information provided. However, CPSC will inform me if the chemical analysis results for my residence indicate the presence of gases or other substances above established risk levels.

I understand that this testing will take one full day of active testing and up to one to two week(s) of having passive sampling equipment in my home. I understand that after one to two week(s) of passive sampling, CPSC will contact me to arrange a time for CPSC to retrieve the passive sampling equipment. I represent that neither I nor members of my household will touch the passive sampling equipment while it is present in my home. CPSC requests that homeowners refrain from using cleaning supplies containing bleach, ammonia, and acetone. There may be other limited household activities which CPSC will request the homeowner to minimize, and CPSC will explain those activities in more detail when the testing begins.

I understand that CPSC intends to take small nail-size samples (less than 1/8 inch) from multiple inconspicuous locations throughout the home, such as behind switch plates and near baseboards. Additionally, CPSC may take drywall sample(s) of an approximate size of 6 inches by 6 inches and will cover the resulting hole(s) with a blank access panel.

I understand that neither I nor other members of my household, including minor children, will be compensated for our participation in this study nor will we receive any per diem allowance or other funds.

I understand that this study involves multiple residences and the final study and analysis will not be completed for a period of time, likely in the fall of 2009. I also understand that CPSC will likely not release information to the general public until the completion of the entire study. I further understand that this study may be widely disseminated to the public and that my own residence will not be identifiable by personally identifiable information such as address, name, etc. within the larger study.

I assume the risk of any and all injury or damage to my person or property that may arise, whether directly or indirectly, as a result of my participation in this study.

I hereby release and hold harmless CPSC, its officers, employees, consultants, representatives, and other designees and the United States Government from any liability for illness, injury, property loss or damage arising from participation in this study.

This agreement is made upon the express condition that for the period of time which CPSC or any of its equipment is in my residence for the purpose of conducting this testing, I shall be free from all liabilities and

claims for damages and/or suits for or by reason of any illness, injury, or death to any CPSC officers, employees, consultants, representatives, and other designees of the CPSC or the United States Government, and that I shall be free from all liabilities and claims for damages and/or suits resulting to damage of CPSC property. CPSC hereby agrees to release and hold me harmless from any liability for illness, injury, death, and/or property loss or damage in connection with the testing as outlined above, however occurring.

Signature (b)(3) Exemption 6 for 25(c)(6) Date 7/15/09 7/15/09

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A&E

WHAT LIES BENEATH

In this issue

ArtCenter Manatee artists display their underwear. **PAGE 1B**

090727CBB1887
ATTACHMENT 3

THE OBSERVER
THURSDAY, JULY 12, 2007

PERKY PEEK AT THE HISTORY OF BRASSIERES

"Warrior Brassiere" by **Meghan** and **Nancy Nelson**

Over time, women have used a variety of garments and devices to cover and elevate their breasts and bra-like garments have been traced all the way back to ancient Greece. The corset and a girdle-like garment dominated the undergarments worn by women from the 16th century onward, especially wealthier women.

Moving up in time, Mary Phelps Jacob, a New York socialite, was granted a patent for the "backless brassiere" in 1914. The backless brassiere was made of two silk handkerchiefs fashioned together with some pink ribbon and cord. It was inspired after she purchased a sheer evening gown for a social event, but the whalebone of her corset, the only acceptable undergarment at the time, visibly poked out from under the sheer fabric. Jacob's bra was not the first to be commercially produced in the U.S., but she was the first to use the term "brassiere" for her creation.

The evolution of the bra reflects the constantly changing idea of what an "ideal" woman should look like, as well as technological and manufacturing advances. Today, fashion has trumped function in the billion-dollar bra industry.

Quest Diagnostics

Quest Diagnostics Incorporated

QUEST DIAGNOSTICS INCORPORATED
CLIENT SERVICE 1 800 322.6362

SPECIMEN INFORMATION
SPECIMEN: TM764899N
REQUISITION: 0004398

COLLECTED: 04/15/2009 08:33
RECEIVED: 04/15/2009 08:33
REPORTED: 04/16/2009 04:50

PATIENT INFORMATION
(b)(6)
DOB: 07/16/1943 AGE: 65
GENDER: M

REPORT STATUS: **FINAL**

ORDERING PHYSICIAN
(b)(6)

CLIENT INFORMATION
ID: (b)(6) 18EA000
PHONE

090727CBB1887
ATTACHMENT 4
Page 1 of 25

(b)(6)

COMMENTS: FASTING

Test Name	In Range	Out of Range		Reference Range	Lab
BASIC METABOLIC PANEL W/EGFR					TP
GLUCOSE		**137**	**H**	65-99 mg/dL FASTING REFERENCE INTERVAL	
UREA NITROGEN (BUN)		**28**	**H**	7-25 mg/dL	
CREATININE		**1.63**	**H**	0.76-1.46 mg/dL	
eGFR NON-AFR. AMERICAN		**43**	**L**	> OR = 60 mL/min/1.73m2	
eGFR AFRICAN AMERICAN		**52**	**L**	> OR = 60 mL/min/1.73m2	
BUN/CREATININE RATIO	17			6-22 (calc)	
SODIUM	139			135-146 mmol/L	
POTASSIUM	4.6			3.5-5.3 mmol/L	
CHLORIDE	105			98-110 mmol/L	
CARBON DIOXIDE	23			21-33 mmol/L	
CALCIUM	8.9			8.6-10.2 mg/dL	
HEMOGLOBIN A1c		**6.8**	**H**	% of total Hgb NON-DIABETIC: <6.0%	TP

PERFORMING LABORATORY INFORMATION
QUEST DIAGNOSTICS TAMPA, 4225 E. FOWLER AVE, TAMPA, FL 33617 Laboratory Director: (b)(6)
CLIA: 10D0979120

(b)(6)

Page 1 - End of ReportFLASH - 66

MAY 14 2009

Quest on Demand™

QUEST DIAGNOSTICS INCORPORATED
CLIENT SERVICE: 800.322.8252

SPECIMEN INFORMATION
SPECIMEN: TP1627707
REQUISITION: 0061968

COLLECTED: 0_/16/2007 12:13
RECEIVED: 02/16/2007 23:43
REPORTED: 02/17/2007 09:00

PATIENT INFORMATION
[redacted]

DOB: 07/16/1943 AGE: 63
GENDER: M

ID: [redacted]
PHONE: [redacted]

090727CBB1887
ATTACHMENT 4
Page 2 of 25

REPORT STATUS FINAL

ORDERING PHYSICIAN
[redacted]

CLIENT INFORMATION
[redacted] 18EA000
P.L.L.C
[redacted]

Test Name	In Range	Out of Range		Reference Range	Lab
LIPID PANEL					
TRIGLYCERIDES	104			<150 mg/dL	TP
CHOLESTEROL, TOTAL	192			<200 mg/dL	TP
HDL CHOLESTEROL	47			> OR = 40 mg/dL	TP
LDL-CHOLESTEROL	124			<130 mg/dL (calc)	TP
DESIRABLE RANGE <100 MG/DL FOR PATIENTS WITH CHD OR DIABETES AND <70 MG/DL FOR DIABETIC PATIENTS WITH KNOWN HEART DISEASE.					
CHOL/HDLC RATIO	4.1			<5.0 (calc)	TP
BASIC METABOLIC PANEL W/EGFP					TP
GLUCOSE		104	H	65-99 mg/dL FASTING REFERENCE INTERVAL	
UREA NITROGEN (BUN)		36	H	7-25 mg/dL	
CREATININE		1.8	H	0.5-1.4 mg/dL	
GFR ESTIMATED		41	L	> OR = 60 mL/min/1.73m2	
IF THE PATIENT IS AFRICAN AMERICAN, PLEASE MULTIPLY THIS RESULT BY 1.21. THIS RESULT HAS BEEN CALCULATED ASSUMING THE PATIENT IS NON-AFRICAN AMERICAN.					
BUN/CREATININE RATIO	20			6-25 (calc)	
SODIUM	141			135-146 mmol/L	
POTASSIUM	4.3			3.5-5.3 mmol/L	
CHLORIDE	102			98-110 mmol/L	
CARBON DIOXIDE	28			21-33 mmol/L	
CALCIUM	9.8			8.5-10.4 mg/dL	
HEPATIC FUNCTION PANEL					TP
PROTEIN, TOTAL	6.9			6.0-8.3 g/dL	
ALBUMIN	4.4			3.2-4.6 g/dL	
GLOBULIN	2.5			2.2-4.2 g/dL (calc)	
ALBUMIN/GLOBULIN RATIO	1.8			0.8-2.0 (calc)	
BILIRUBIN, TOTAL	0.4			0.2-1.5 mg/dL	
BILIRUBIN, DIRECT	0.1			0.0-0.3 mg/dL	
BILIRUBIN, INDIRECT	0.3			0.0-1.5 mg/dL (calc)	

[redacted]

Page 1 - Continued on Page 2

FEB 19 2007

Quest on Demand™

QUEST DIAGNOSTICS INCORPORATED

PATIENT INFORMATION
NELSON, HARRIS

DOB: 07/16/1943 AGE: 63
GENDER: M

REPORT STATUS: FINAL

ORDERING PHYSICIAN
HARRIS, MICHAEL J

COLLECTED: 02/16/2007 12:13
REPORTED: 02/17/2007 05:00

Test Name	In Range	Out of Range	Reference Range	Lab
ALKALINE PHOSPHATASE	37		20-125 U/L	
AST	14		3-50 U/L	
ALT	16		3-60 U/L	
CBC (INCLUDES DIFF/PLT)				TP
WHITE BLOOD CELL COUNT	7.1		3.8-10.8 Thousand/uL	
RED BLOOD CELL COUNT		3.89 L	4.20-5.80 Million/uL	
HEMOGLOBIN		12.2 L	13.2-17.1 g/dL	
HEMATOCRIT		35.2 L	38.5-50.0 %	
MCV	90.6		80.0-100.0 fL	
MCH	31.3		27.0-33.0 pg	
MCHC	34.6		32.0-36.0 g/dL	
RDW	13.1		11.0-15.0 %	
PLATELET COUNT	249		140-400 Thousand/uL	
ABSOLUTE NEUTROPHILS	4047		1500-7800 cells/uL	
ABSOLUTE LYMPHOCYTES	1910		850-3900 cells/uL	
ABSOLUTE MONOCYTES	809		200-950 cells/uL	
ABSOLUTE EOSINOPHILS	291		15-500 cells/uL	
ABSOLUTE BASOPHILS	43		0-200 cells/uL	
NEUTROPHILS	57.0		%	
LYMPHOCYTES	26.9		%	
MONOCYTES	11.4		%	
EOSINOPHILS	4.1		%	
BASOPHILS	0.6		%	
TSH	1.53		0.40-5.50 mIU/L	TP
PSA, TOTAL	1.4		< OR = 4.0 ng/mL	TP

PSA VALUES FROM DIFFERENT ASSAY METHODS CANNOT BE USED INTERCHANGEABLY. THIS ASSAY WAS PERFORMED USING THE BAYER CHEMILUMINESCENT METHOD.

! Scan

HEMOGLOBIN A1c	6.4	H	% of total Hgb	TP
			NON-DIABETIC: <6.0%	

URINALYSIS, REFLEX			
COLOR	YELLOW		YELLOW
APPEARANCE	CLEAR		CLEAR
SPECIFIC GRAVITY	1.021		1.001-1.035
PH	6.0		5.0-8.0
GLUCOSE	NEGATIVE		NEGATIVE
BILIRUBIN	NEGATIVE		NEGATIVE

TP

FEB 19 2007

PATIENT INFORMATION
NELSON, HARRIS

REPORT STATUS **FINAL**

QUEST DIAGNOSTICS INCORPORATED

DOB: 07/16/1943 AGE: 63
GENDER: M

ORDERING PHYSICIAN
HARRIS, MICHAEL J

COLLECTED: 02/16/2007 12:12
REPORTED: 02/17/2007 05:20

Test Name	In Range	Out of Range	Reference Range	Lab
KETONES	NEGATIVE		NEGATIVE	
OCCULT BLOOD	NEGATIVE		NEGATIVE	
PROTEIN	NEGATIVE		NEGATIVE	
NITRITE	NEGATIVE		NEGATIVE	
LEUKOCYTE ESTERASE	NEGATIVE		NEGATIVE	

PERFORMING LABORATORY INFORMATION

[illegible] 5 E. FOWLER AVE, TAMPA, FL 33617, Laboratory Director: KIRIT PATEL, MD, CLIA: 10D0291120

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ATTACHMENT 4
Page 4 of 25

FEB 19 2007

Quest Diagnostics

QUEST DIAGNOSTICS INCORPORATED
CLIENT SERVICE 1.800 332 6352

PATIENT INFORMATION
NELSON, RICHARD

DOB: 07/16/1943 AGE: 65
GENDER: M

ID:
PHONE: 941.723.9837

REPORT STATUS **FINAL**

ORDERING PHYSICIAN
GELVIN, CHRIS R

CLIENT INFORMATION
T120065 18EA000
GELVIN, CHRIS R MD PA

2750 BAHIA VISTA ST STE 270
SARASOTA, FL 34239-2641

SPECIMEN INFORMATION
SPECIMEN: TM667269L
REQUISITION: 0004236

COLLECTED: 01/21/2009 08:41
RECEIVED: 01/21/2009 08:42
REPORTED: 01/22/2009 05:05

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ATTACHMENT 4

Test Name	In Range	Out of Range		Reference Range	Lab
COMPREHENSIVE METABOLIC PANEL W/EGFR					TP
GLUCOSE		133	H	65-99 mg/dL FASTING REFERENCE INTERVAL	
UREA NITROGEN (BUN)		29	H	7-25 mg/dL	
CREATININE		1.70	H	0.50-1.30 mg/dL	
eGFR NON-AFR. AMERICAN		41	L	> OR = 60 mL/min/1.73m2	
eGFR AFRICAN AMERICAN		49	L	> OR = 60 mL/min/1.73m2	
BUN/CREATININE RATIO	17			6-22 (calc)	
SODIUM	140			135-146 mmol/L	
POTASSIUM	4.7			3.5-5.3 mmol/L	
CHLORIDE	105			98-110 mmol/L	
CARBON DIOXIDE	23			21-33 mmol/L	
CALCIUM	9.0			8.6-10.2 mg/dL	
PROTEIN, TOTAL	6.8			6.2-8.3 g/dL	
ALBUMIN	4.2			3.6-5.1 g/dL	
GLOBULIN	2.6			2.1-3.7 g/dL (calc)	
ALBUMIN/GLOBULIN RATIO	1.6			1.0-2.1 (calc)	
BILIRUBIN, TOTAL	0.4			0.2-1.2 mg/dL	
ALKALINE PHOSPHATASE	43			40-115 U/L	
AST	14			10-35 U/L	
ALT	14			9-60 U/L	
CBC (INCLUDES DIFF/PLT)					TP
WHITE BLOOD CELL COUNT	8.2			3.8-10.8 Thousand/uL	
RED BLOOD CELL COUNT		4.05	L	4.20-5.80 Million/uL	
HEMOGLOBIN		12.6	L	13.2-17.1 g/dL	
HEMATOCRIT		37.0	L	38.5-50.0 %	
MCV	91.3			80.0-100.0 fL	
MCH	31.2			27.0-33.0 pg	
MCHC	34.1			32.0-36.0 g/dL	
RDW	13.5			11.0-15.0 %	
PLATELET COUNT	216			140-400 Thousand/uL	
ABSOLUTE NEUTROPHILS	5330			1500-7800 cells/uL	
ABSOLUTE LYMPHOCYTES	1730			850-3900 cells/uL	
ABSOLUTE MONOCYTES	804			200-950 cells/uL	

NELSON, RICHARD - TM667269L

Page 1 - Continued on Page 2

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Quest Diagnostics Incorporated

QUEST DIAGNOSTICS INCORPORATED

PATIENT INFORMATION
NELSON,RICHARD

DOB: 07/16/1943 AGE: 65
GENDER: M

REPORT STATUS FINAL

ORDERING PHYSICIAN
GELVIN,CHRIS R

COLLECTED: 01/21/2009 08:41
REPORTED: 01/22/2009 05:05

Test Name	In Range	Out of Range		Reference Range	Lab
ABSOLUTE EOSINOPHILS	287			15-500 cells/uL	
ABSOLUTE BASOPHILS	49			0-200 cells/uL	
NEUTROPHILS	65.0			%	
LYMPHOCYTES	21.1			%	
MONOCYTES	9.8			%	
EOSINOPHILS	3.5			%	
BASOPHILS	0.6			%	
HEMOGLOBIN A1c		6.8	H	% of total Hgb NON-DIABETIC: <6.0%	TP

PERFORMING LABORATORY INFORMATION

TP QUEST DIAGNOSTICS-TAMPA, 4225 E. FOWLER AVE, TAMPA, FL 33612, Laboratory Director: LUIS A DIAZ ROSARIO,MD
CLIA: 10D0291120

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ATTACHMENT 4
Page 6 of 25

Quest Diagnostics Incorporated

Quest Diagnostics

QUEST DIAGNOSTICS INCORPORATED
CLIENT SERVICE 1 800 [illegible]

SPECIMEN INFORMATION
SPECIMEN: TM698398J
REQUISITION: 0004063

COLLECTED: 10/21/2008 11:01
RECEIVED: 10/21/2008 11:02
REPORTED: 10/22/2008 04:52

PATIENT INFORMATION
NELSON, RICHARD

DOB: 07/16/1943 AGE: 65
GENDER: M

ID:
PHONE: 941.723 9837

FINAL

ORDERING PHYSICIAN
GELVIN, CHRIS R

CLIENT INFORMATION
T120065 18EA000
GELVIN, CHRIS R MD PA

2750 BAHIA VISTA ST STE 270
SARASOTA, FL 34239-2641

090727CBB1887
ATTACHMENT 4
Page 7 of 25

Test Name	In Range	Out of Range		Reference Range	Lab
URIC ACID		8.9	H	4.0-8.0 mg/dL	TP
BASIC METABOLIC PANEL W/EGFR					TP
GLUCOSE		104	H	65-99 mg/dL FASTING REFERENCE INTERVAL	
UREA NITROGEN (BUN)		31	H	7-25 mg/dL	
CREATININE		1.74	H	0.50-1.30 mg/dL	
eGFR NON-AFR. AMERICAN		40	L	> OR = 60 mL/min/1.73m2	
eGFR AFRICAN AMERICAN		48	L	> OR = 60 mL/min/1.73m2	
BUN/CREATININE RATIO	18			6-22 (calc)	
SODIUM	142			135-146 mmol/L	
POTASSIUM	4.4			3.5-5.3 mmol/L	
CHLORIDE	105			98-110 mmol/L	
CARBON DIOXIDE	24			21-33 mmol/L	
CALCIUM	9.0			8.6-10.2 mg/dL	
CBC (INCLUDES DIFF/PLT)					TS
WHITE BLOOD CELL COUNT	7.6			3.8-10.8 Thousand/uL	
RED BLOOD CELL COUNT		4.11	L	4.20-5.80 Million/uL	
HEMOGLOBIN		12.6	L	13.2-17.1 g/dL	
HEMATOCRIT		37.4	L	38.5-50.0 %	
MCV	91.1			80.0-100.0 fL	
MCH	30.7			27.0-33.0 pg	
MCHC	33.7			32.0-36.0 g/dL	
RDW	13.7			11.0-15.0 %	
PLATELET COUNT	235			140-400 Thousand/uL	
ABSOLUTE NEUTROPHILS	4879			1500-7800 cells/uL	
ABSOLUTE LYMPHOCYTES	1680			850-3900 cells/uL	
ABSOLUTE MONOCYTES	714			200-950 cells/uL	
ABSOLUTE EOSINOPHILS	296			15-500 cells/uL	
ABSOLUTE BASOPHILS	30			0-200 cells/uL	
NEUTROPHILS	64.2			%	
LYMPHOCYTES	22.1			%	
MONOCYTES	9.4			%	
EOSINOPHILS	3.9			%	
BASOPHILS	0.4			%	

OCT 21 2008

Quest Diagnostics Incorporated

Quest Diagnostics

PATIENT INFORMATION
NELSON, RICHARD

REPORT STATUS **FINAL**

DOB: 07/16/1943 AGE: 65
GENDER: M

ORDERING PHYSICIAN
GELVIN, CHRIS R

COLLECTED: 10/21/2008 11:01
REPORTED: 10/22/2008 04:52

Test Name	In Range	Out of Range	Reference Range	Lab
HEMOGLOBIN A1c		6.8 H	% of total Hgb	TP
			NON-DIABETIC: <6.0%	

PERFORMING LABORATORY INFORMATION

TP QUEST DIAGNOSTICS-TAMPA, [redacted] AVE, TAMPA, FL 33617, Laboratory Director: LUIS A DIAZ-ROSARIO,MD
CLIA: 10D0291120

090727CBB1887
ATTACHMENT 4
Page 8 of 25

Wilson, Robert

ID: 03-02-09 10:34AM

CLARITY:
COLOR: YELLOW

MULTISTIX 10 SG

BLU	NEGATIVE
BIL	NEGATIVE
KET	NEGATIVE
SG	>=1.030
BLO	NEGATIVE
pH	5.5
PRO	NEGATIVE
URO	0.2 E.U./dL
NIT	NEGATIVE

Sarasota Memorial Hospital
1700 South Tamiami Trail Sarasota,Fl 34239

Patient Results

NELSON, NANCY H	SMH Main Campus	67y	F	Gelvin, Chris R
	28-Jul-1941	2024605 / 8397625		

04-Mar-2009 09:57 **Arterial Blood Gas** **Final Result**

Specimen Number:	0304:RT00047R			Final
PaO2	78	L	[80-100 mmHg]	Final
FiO2	21		[%]	Final
pH (abg)	7.45		[7.35-7.45]	Final
PaCO2	41		[35-45 mmHg]	Final
HCO3	28.5	H	[22-26 meq/L]	Final
B.E.	4.1	H	[-4.0-4.0]	Final
HCT(abg)	44 0		[36-46 %]	Final
SaO2	96		[93-100 %]	Final
Temperature (art)	37		[C]	Final
Site (art)	L.RADIAL,+Mod.Allens			Final
O2 Delivery Device (art)	ROOM AIR			Final
Intubation (Y=1 N=0)	0 1=YES 0=NO			Final
Critical Results	NONE			Final

090727CBB1887
ATTACHMENT 4
Page 10 of 25

Sarasota Memorial Hospital
1700 South Tamiami Trail Sarasota,Fl 34239

Patient Results

NELSON, RICHARD M **SMH Main Campus** **65y** **M** **Gelvin, Chris R**
16-Jul-1943 **20[illegible]3163 / 8397570**

04-Mar-2009 09:50	**Arterial Blood Gas**			**Final Result**
Specimen Number:	0304:RT00046R		Final	
PaO2	82	[80-100 mmHg]	Final	
FiO2	21	[%]	Final	
pH (abg)	7.39	[7.35-7.45]	Final	
PaCO2	46 H	[35-45 mmHg]	Final	
HCO3	27.8 H	[22-26 meq/L]	Final	
B.E.	2.3	[-4.0-4.0]	Final	
HCT(abg)	36.0 L	[41-52 %]	Final	
SaO2	96	[93-100 %]	Final	
Temperature (art)	37	[C]	Final	
Site (art)	R.RADIAL,+Mod.Allens		Final	
O2 Delivery Device (art)	ROOM AIR		Final	
Intubation (Y=1 N=0)	0 1=YES 0=NO		Final	
Patient Resp Rate (art)	18	[/MIN]	Final	
Critical Results	TX BY PROTOCOL/ORDER		Final	

090727CBB1887
ATTACHMENT 4
Page 11 of 25

AB
MAR

SARASOTA MEMORIAL HEALTH CARE SYSTEM

A decision as important as *life* itself.℠

SARASOTA MEMORIAL HEALTH CARE SYSTEM
1700 S. Tamiami Trail
Sarasota, FL

Radiology Consultation

Patient Name: NELSON, NANCY H

DOB: 07/28/1941 **Sex:** F **Patient Status:** C **Patient Type:** U
Visit #: 8397625 **Patient Location:**
Accession: 1811335 **Completed:** 03/04/2009

Exam: (SMH) - Chest PA and Lateral 00130

Requesting Provider: GELVIN, CHRIS R, MD
Attending Provider:

MRN: 002024605
Signs & Symptoms: Cough, Exposure To Chinese Drywall
History:
Comments:

Reason for exam: Cough

090727CBB1887
ATTACHMENT 4
Page 12 of 25

PA and Lateral
Comparison: None

The lungs are clear There is no evidence of infiltrate, failure or effusion. The heart, mediastinal structures and pulmonary vasculature are normal

The bony thorax and thoracic soft tissues are unremarkable

Conclusion: Normal chest for age

Signed on: 3/4/2009 9:58:54AM by MD HAROLD X ACKERSTEIN

MAR 0 4 2009

SARASOTA MEMORIAL HEALTH CARE SYSTEM

A decision as important as *life* itself.™

SARASOTA MEMORIAL HEALTH CARE SYSTEM
1700 S. Tamiami Trail
Sarasota, FL

Radiology Consultation

Patient Name: NELSON, RICHARD M

DOB: 07/16/1943 **Sex:** M **Patient Status:** C **Patient Type:** U
Visit #: 8397570 **Patient Location:**
Accession: 1811341 **Completed:** 03/04/2009

Exam: (SMH) - Chest PA and Lateral 00130

Requesting Provider: GELVIN, CHRIS R, MD
Attending Provider:

MRN: 002003163
Signs & Symptoms: Cough, Exposure To Chinese Drywall
History:
Comments:

Chest, two views.

History: Cough, exposure to Chinese drywall.

Cardiac size, contour, and pulmonary vasculature are normal. There is no effusion. The lungs are clear. The bony structures are unremarkable for age.

Impression: No acute disease.

Signed on: 3/4/2009 11:00:41 AM by MD RICHARD J LICHTENSTEIN

MD

ID: NELSON, NANCY
03-02-09 10:31AM

CLARITY:
COLOR: YELLOW

MULTISTIX 10 SG

GLU	NEGATIVE
BIL	NEGATIVE
KET	NEGATIVE
SG	1.010
BLO	NEGATIVE
pH	6.0
PRO	NEGATIVE
URO	0.2 E.U./dL
NIT	NEGATIVE
LEU	TRACE

PATIENT INFORMATION
NELSON, NANCY H

DOB: 07/28/1941 Age: 67
GENDER: F

ID: FL3085495019
PHONE: 9417239837

REPORT STATUS **Final**

ORDERING PHYSICIAN
GELVIN, CHRIS R
CLIENT INFORMATION
120065
GELVIN, CHRIS R MD PA

1217 S EAST AVE STE 301
SARASOTA, FL 34239-2352

SPECIMEN INFORMATION
SPECIMEN: TM8004514P
REQUISITION: 0004476
LAB REF NO:

COLLECTED: 05/27/2009 09:20
RECEIVED: 05/27/2009 09:22
REPORTED: 05/28/2009 08:32

COMMENTS: FASTING

Test Name	In Range	Out of Range	Reference Range	Lab
LIPID PANEL				
TRIGLYCERIDES	89		<150 mg/dL	TP
CHOLESTEROL, TOTAL	176		125-200 mg/dL	TP
HDL CHOLESTEROL	60		> OR = 46 mg/dL	TP
LDL-CHOLESTEROL	98		<130 mg/dL (calc)	TP
	DESIRABLE RANGE <100 MG/DL FOR PATIENTS WITH CHD OR DIABETES AND <70 MG/DL FOR DIABETIC PATIENTS WITH KNOWN HEART DISEASE.			
CHOL/HDLC RATIO	2.9		< OR = 5.0 (calc)	TP
BASIC METABOLIC PANEL W/EGFR				TP
GLUCOSE	79		65-99 mg/dL	
	FASTING REFERENCE INTERVAL			
UREA NITROGEN (BUN)	21		7-25 mg/dL	
CREATININE	0.78		0.60-1.18 mg/dL	
eGFR NON-AFR. AMERICAN	>60		> OR = 60 mL/min/1.73m2	
eGFR AFRICAN AMERICAN	>60		> OR = 60 mL/min/1.73m2	
BUN/CREATININE RATIO	NOT APPLICABLE		6-22 (calc)	
	BUN/CREATININE RATIO IS NOT REPORTED WHEN THE BUN AND CREATININE VALUES ARE WITHIN NORMAL LIMITS			
SODIUM	142		135-146 mmol/L	
POTASSIUM	4.2		3.5-5.3 mmol/L	
CHLORIDE	105		98-110 mmol/L	
CARBON DIOXIDE	24		21-33 mmol/L	
CALCIUM	9.6		8.6-10.2 mg/dL	
HEPATIC FUNCTION PANEL				TP
PROTEIN, TOTAL	7.4		6.2-8.3 g/dL	
ALBUMIN	4.6		3.6-5.1 g/dL	
GLOBULIN	2.8		2.2-3.9 g/dL (calc)	
ALBUMIN/GLOBULIN RATIO	1.6		1.0-2.1 (calc)	
BILIRUBIN, TOTAL	0.4		0.2-1.2 mg/dL	
BILIRUBIN, DIRECT	0.1		< OR = 0.2 mg/dL	
BILIRUBIN, INDIRECT	0.3		0.2-1.2 mg/dL (calc)	
ALKALINE PHOSPHATASE	69		33-130 U/L	
AST	23		10-35 U/L	
ALT	14		6-40 U/L	

MAY 2 8 2009

QUEST DIAGNOSTICS [illegible]

REPORTED: 05/28/2009 08:32
COLLECTED: 05/27 [illegible] 09:25

PATIENT INFORMATION
NELSON, NANCY H
DOB: 07/29/1941 Age: 67
GENDER: F
ID: FL3085495019

REPORT STATUS **Final**

ORDERING PHYSICIAN
GELVIN, CHRIS R

Test Name	In Range	Out of Range	Reference Range	Lab
URINALYSIS, COMPLETE				TP
COLOR	YELLOW		YELLOW	
APPEARANCE	CLEAR		CLEAR	
SPECIFIC GRAVITY	1.018		1.001-1.035	
PH	7.0		5.0-8.0	
GLUCOSE	NEGATIVE		NEGATIVE	
BILIRUBIN	NEGATIVE		NEGATIVE	
KETONES	NEGATIVE		NEGATIVE	
OCCULT BLOOD	NEGATIVE		NEGATIVE	
PROTEIN	NEGATIVE		NEGATIVE	
NITRITE	NEGATIVE		NEGATIVE	
LEUKOCYTE ESTERASE		1+	NEGATIVE	
WBC		6-10	< OR = 5 /HPF	
RBC	NONE SEEN		< OR = 3 /HPF	
SQUAMOUS EPITHELIAL CELLS		6-10	< OR = 5 /HPF	
BACTERIA	NONE SEEN		NONE SEEN /HPF	
HYALINE CAST	NONE SEEN		NONE SEEN /LPF	
CBC (INCLUDES DIFF/PLT)				TP
WHITE BLOOD CELL COUNT	4.7		3.8-10.8 Thousand/uL	
RED BLOOD CELL COUNT	4.20		3.80-5.10 Million/uL	
HEMOGLOBIN	13.2		11.7-15.5 g/dL	
HEMATOCRIT	39.3		35.0-45.0 %	
MCV	93.3		80.0-100.0 fL	
MCH	31.4		27.0-33.0 pg	
MCHC	33.7		32.0-36.0 g/dL	
RDW	13.3		11.0-15.0 %	
PLATELET COUNT	342		140-400 Thousand/uL	
ABSOLUTE NEUTROPHILS	2073		1500-7800 cells/uL	
ABSOLUTE LYMPHOCYTES	2214		850-3900 cells/uL	
ABSOLUTE MONOCYTES	310		200-950 cells/uL	
ABSOLUTE EOSINOPHILS	94		15-500 cells/uL	
ABSOLUTE BASOPHILS	9		0-200 cells/uL	
NEUTROPHILS	44.1		%	
LYMPHOCYTES	47.1		%	
MONOCYTES	6.6		%	
EOSINOPHILS	2.0		%	
BASOPHILS	0.2		%	
TSH, 3RD GENERATION	2.11		0.40-4.50 mIU/L	TP

Performing Laboratory Information:

TP Quest Diagnostics-Tampa 4225 E Fowler Ave Tampa FL 33617 Laboratory Director, Julio A Diaz-Arrastia M D

MAY 28 2009

Quest Diagnostics Incorporated

Quest Diagnostics

PATIENT INFORMATION
(b)(3) Exemption 3 fo

PATIENT STATUS: FINAL

QUEST DIAGNOSTICS INCORPORATED
CLIENT SERVICE 1.800.352.6352

DOB: 07/28/1941 AGE: 67
GENDER: F

ORDERING PHYSICIAN
(b)(3) Exemption 3

SPECIMEN INFORMATION
SPECIMEN: TM311515K
REQUISITION: 0004117

CLIENT INFORMATION
ID:
PHONE (b)(3) Exemption 3 for 25(b),(b)(6) 18EA000

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ATTACHMENT 4
Page 17 of 25

(b)(3) Exemption 3 for 25(b),(b)(6)

COLLECTED: 11/17/2008 09:34
RECEIVED: 11/17/2008 09:35
REPORTED: 11/18/2008 05:12

COMMENTS: FASTING

Test Name	In Range	Out of Range	Reference Range	Lab
LIPID PANEL				
TRIGLYCERIDES	135		<150 mg/dL	TP
CHOLESTEROL, TOTAL	162		125-200 mg/dL	TP
HDL CHOLESTEROL	67		> OR = 46 mg/dL	TP
LDL-CHOLESTEROL	68		<130 mg/dL (calc)	TP
DESIRABLE RANGE <100 MG/DL FOR PATIENTS WITH CHD OR DIABETES AND <70 MG/DL FOR DIABETIC PATIENTS WITH KNOWN HEART DISEASE.				
CHOL/HDLC RATIO	2.4		< OR = 5.0 (calc)	TP
HEPATIC FUNCTION PANEL				TP
PROTEIN, TOTAL	7.9		6.2-8.3 g/dL	
ALBUMIN	4.8		3.6-5.1 g/dL	
GLOBULIN	3.1		2.2-3.9 g/dL (calc)	
ALBUMIN/GLOBULIN RATIO	1.5		1.0-2.1 (calc)	
BILIRUBIN, TOTAL	0.6		0.2-1.2 mg/dL	
BILIRUBIN, DIRECT	0.1		< OR = 0.2 mg/dL	
BILIRUBIN, INDIRECT	0.5		0.2-1.2 mg/dL (calc)	
ALKALINE PHOSPHATASE	73		33-130 U/L	
AST	20		10-35 U/L	
ALT	11		6-40 U/L	

PERFORMING LABORATORY INFORMATION
TP QUEST DIAGNOSTICS-TAMPA, 4225 E. FOWLER AVE, TAMPA, FL 33617, Laboratory Director: LUIS A DIAZ-ROSARIO,MD
CLIA: 10D0291320

(b)(3) Exemption 3 for 25(b),(b)(6)

NOV 16 2008

DSI LABORATORIES

12700 Westlinks Drive, Fort Myers, FL 33913-8017, PHONE: 239-561-8200

Date/Time Printed:
05/02/2008 0806

SEX: FEMALE
AGE: 66 YRS
DOB: 07/28/1941
Client/MD:
Route To:

PATIENT NAME: (b)(3) Exemption 3 for 25(c),(b)(6)
Pt.ID#:
ACCT #:
Location

(b)(3) Exemption 3 for 25(c),(b)(6)

FL 34239

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cc: ATTACHMENT 4
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HEMATOLOGY - GENERAL

	NORMAL	ABNORMAL	REF RANGE/UNITS	
05/01/08 0940				
Complete Blood Count				
WBC	6.6		4.2 - 10.8	th/uL
RBC	4.67		3.70 - 4.90	mil/uL
HGB	14.4		12.0 - 16.0	g/dL
HCT	42.9		37.0 - 47.0	%
MCV	92		80 - 100	fL
MCH	30.7		25.4 - 34.6	pg
MCHC	33.5		31.0 - 37.0	g/dL
RDW		11.4 L	11.5 - 14.5	%
PLT	413		130 - 450	th/uL
NEUTROPHILS	52.4		41.0 - 77.0	%
LYMPHOCYTES	37.9		24.0 - 44.0	%
MONOCYTES	6.5		0.0 - 15.0	%
EOSINOPHILS	2.5		0.0 - 5.0	%
BASOPHILS	0.7		0.0 - 3.0	%

URINALYSIS - STOOLS

	NORMAL	ABNORMAL	REF RANGE/UNITS	
05/01/08 0940				
Urinalysis				
COLOR	YELLOW			
APPEARANCE	CLEAR			
SPEC GRAVITY	1.015		1.005 - 1.03	
pH	7.0		5.0 - 8.0	
PROTEIN	TRACE *		NEGATIVE	
UR GLUC	NEGATIVE		NEGATIVE	
KETONES	NEGATIVE		NEGATIVE	
U BILIRUBIN	NEGATIVE		NEGATIVE	
BLOOD	NEGATIVE		NEGATIVE	
NITRITE	NEGATIVE		NEGATIVE	
UROBILINOGEN	NORMAL		0 - 1	mg/dL
LEUKOCYTE ESTER		1+ *	NEGATIVE	
WBC	3		0 - 5	/HPF
RBC	3		0 - 5	/HPF
SQUAMOUS EPITH	25		0 - 50	/LPF

Legend
L = Low, * = Abnormal

** FINAL **

C718

(b)(3) Exemption 3 for 25(c),(b)(6)

HEMATOLOGY URINALYSIS

Continued ...

Appt 5/7/08

MAY 8

DSI LABORATORIES

12700 Westlinks Drive, Fort Myers, FL 33913-8017, PHONE: 239-561-8200

Date/Time Printed:
05/02/2008 0806

SEX: FEMALE
AGE: 66 YRS
DOB: 07/28/1941
Client/MD:
Route To:

PATIENT NAME: (b)(3) Exemption 3 for 25(c)(b)(6)
Pt.ID#:
ACCT #:
Location:
(b)(3) Exemption 3 for 25(c)
(b)(6)
34239

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CC: ATTACHMENT 4
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URINALYSIS - STOOLS

	NORMAL	ABNORMAL	REF RANGE/UNITS
05/01/08 0940			
Urinalysis			
TRANSITION EPI	1	< 1	/HPF
MUCOUS		RARE *	

CHEMISTRY - GENERAL

	NORMAL	ABNORMAL	REF RANGE/UNITS
05/01/08 0940			
Electrolytes			
SODIUM	143	135 - 145	mmol/L
POTASSIUM	4.9	3.5 - 5.2	mmol/L
CHLORIDE	101	97 - 108	mmol/L
CO2	29	20 - 32	mmol/L
Routine Chemistry			
GLUCOSE	80	65 - 99	mg/dL
BUN	18	5 - 26	mg/dL
CREATININE	0.8 f	0.5 - 1.5	mg/dL

ESTIMATED GFR =76 ml/min/1.73sq.m if Non African-American Female

Interpretative Data for GFR:

Average GFR for 60-69 year old = 85
Chronic kidney disease: <60
Kidney failure: <15

The estimated GFR provides a more sensitive measure of early kidney disease than the creatinine alone and is recommended by the National Kidney Foundation. The estimated glomerular filtration rate (GFR) is calculated with the MDRD formula which includes creatinine, age and sex. However, the above value only applies if the patient is non-African. To calculate the estimated GFR for other patients refer to the formula on the N.K.F. website or use the calculator on the DSI online ordering manual at www.dsilabs.com.

TOTAL PROTEIN	8.0	6.0 - 8.5	g/dL
ALBUMIN	4.7	3.5 - 5.5	g/dL

Legend
* = Abnormal, f = Interp/Footnote

** FINAL **

CF18

(b)(3) Exemption 3 for 25(c)(b)(6)

MAY 1

DSI LABORATORIES

12700 Westlinks Drive, Fort Myers, FL 33913-8017, PHONE: 239-561-8200

Date/Time Printed: 05/02/2008 0806

SEX: FEMALE
AGE: 66 YRS
DOB: 07/28/1941
Client/MD: [redacted]
Route To:

PATIENT NAME: [redacted]
Pt.ID#:
ACCT #:
Location

34239

CC:

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ATTACHMENT 4
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CHEMISTRY - GENERAL

	NORMAL	ABNORMAL	REF RANGE/UNITS	
05/01/08 0940				
Routine Chemistry				
CALCIUM	10.4		8.5 - 10.6	mg/dL
BILIRUBIN TOTAL	0.5		0.1 - 1.2	mg/dL
BILI DIRECT	0.1		0.0 - 0.4	mg/dL
ALK PHOS	79		25 - 165	U/L
ALT (SGPT)	18		0 - 40	U/L
AST (SGOT)	28		0 - 50	U/L

MAY 0 2 2008

DSI LABORATORIES

12700 Westlinks Drive, Fort Myers, FL 33913-8017, PHONE: 239-561-8200

Date/Time Printed:
05/02/2008 0806

SEX: FEMALE
AGE: 66 YRS
DOB: 07/20/1941
Client/MD:
Route To:

PATIENT NAME: (b)(3):Exemption 3 for 25(c),(b)(6)
Pt.ID#:
ACCT #:
Location:

(b)(3):Exemption 3 for 25(c) (b)(6)

34239

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ATTACHMENT 4
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cc:

CHEMISTRY - GENERAL

		NORMAL	ABNORMAL	REF RANGE/UNITS
05/01/08 0940				
Lipid Profile				
CHOLESTEROL			256 H	130 - 200 mg/dL
<200 mg/dL - Desirable; 200-239 mg/dL - Borderline High; >239 mg/dL - High				
TRIGLYCERIDES			155 Hf	30 - 150 mg/dL
HDL CHOLESTEROL	64 f			35 - 150 mg/dL
LDL CHOLESTEROL			H	< 100 mg/dL

IMMUNOASSAY

		NORMAL	ABNORMAL	REF RANGE/UNITS
05/01/08 0940				
Thyroid Testing				
TSH (3rd gen)	2.159			0.350 - 5.50 mIU/L

REFERENCE INTERVALS:

Male	Female
Cord Blood= < 17.400	Cord Blood= < 17.400
1 - 3 day= < 13.300	1 - 3 day= < 13.300
1 - 4 wk= 0.600 - 10.000	1 - 4 wk= 0.600 - 10.000
1 mo - 5 yr= 0.550 - 7.100	1 mo - 5 yr= 0.460 - 8.100
6 - 18 yr= 0.370 - 6.000	6 - 18 yr= 0.360 - 5.800

Legend
H = High, f = Interp/Footnote
TRIGLYCERIDES <150 mg/dL - Normal; 150-199 mg/dL - Borderline High;
200-499 mg/dL - High; >499 mg/dL - Very High
HDL CHOLESTEROL <40 mg/dL - High risk for CHD; > or = 60 mg/dL - Low risk for CHD

LDL CHOLESTEROL The above Lipid Panel results are valid only with a fasting (12 hr.) sample Otherwise, only total cholesterol (TC) & HDL are usable. With non-fasting specimens where TC > or = to 200 mg/dL and/or HDL <40 mg/dL, a followup fasting (12 Hr.) Lipid Panel or direct LDL Cholesterol (LDL) will be needed. The LDL was derived from the Friedewald formula, which is not valid with Fredrickson's Type III Hyperlipoproteinemia or triglycerides >400 mg/dL. If the LDL could not be calculated from the Friedewald formula, a direct LDL method is available.

** FINAL **

CF19

(b)(3):Exemption 3 for 25(c),(b)(6)

End of Report!

CHEMISTRY

MAY 0 7 2008

Sex:	FEMALE	Pt. Name:	(b)(3) Exemption 3 for 25(c),(b)(6)
Age:	65 YRS	Pt. ID #:	
DOB:	07/28/1941	Acct#:	
Client/MD	(b)(3) Exemption 3 MD	Location:	

Route To: (b)(3) Exemption 3 for 25(c),(b)(6)

CC:

DSI LABORATORIES
12700 Westlinks Drive
Fort Myers, FL 33913-8017
Phone: 239-561-8200

CHEMISTRY - GENERAL

	NORMAL	ABNORMAL		REF RANGE/UNITS	
04/03/07 0923					
Lipid Profile					
CHOLESTEROL		234	H	< 200	mg/dL
<200 mg/dL - Desirable; 200-239 mg/dL - Borderline High; >239 mg/dL - High					
TRIGLYCERIDES	100 f			< 150	mg/dL
HDL CHOLESTEROL	70 f			> 40	mg/dL
LDL CHOLESTEROL		144	Hf	< 100	mg/dL

Legend
H = High, f = Interp/Footnote
TRIGLYCERIDES <150 mg/dL - Normal; 150-199 mg/dL - Borderline High; 200-499 mg/dL - High; >499 mg/dL - Very High
HDL CHOLESTEROL <40 mg/dL - High risk for CHD; > or = 60 mg/dL - Low risk for CHD

LDL CHOLESTEROL The above Lipid Panel results are valid only with a fasting (12 hr.) sample Otherwise, only total cholesterol (TC) & HDL are usable. With non-fasting specimens where TC > or = to 200 mg/dL and/or HDL <40 mg/dL, a followup fasting (12 Hr.) Lipid Panel or direct LDL Cholesterol (LDL) will be needed. The LDL was derived from the Friedewald formula, which is not valid with Fredrickson's Type III Hyperlipoproteinemia or triglycerides >400 mg/dL. If the LDL could not be calculated from the Friedewald formula, a direct LDL method is available.

Three categories of risk that modify LDL-Cholesterol goals:

Category	LDL Goal(mg/dL)
CHD & Risk Equivalents	<100
2 Or More Risk Factors	<130
0 to 1 Risk Factor	<160

Major risk factors (exclusive of LDL) that modify goals:
- Cigarette smoking
- B.P. > or = to 140/90 mmHg or on antihypertensive medication
- HDL Cholesterol <40 mg/dL
- Family history or premature CHD (CHD in a male first-degree relative <55 years; CHC in a female first-degree relative <65 years)
- Age (men > or = to 45 years; women > or = to 55 years)

If 2+ risk factors (other than LDL) are present without CHD or CHD risk equivalent, assess Framingham 10-year CHD risk.

APR 0 4 2007

Sex.	FEMALE	Pt. Name:	(b)(3) Exemption 3 for
Age:	65 YRS	Pt. ID #:	25(c),(b)(6)
DOB:	07/28/1941	Acct#:	
Client/MD:	(b)(3) Exemption 3 MD	Location:	

Route To: (b)(3) Exemption 3 for 25(c),(b)(6)

CC:

DSI LABORATORIES
12700 Westlinks Drive
Fort Myers, FL 33913-8017
Phone: 239-561-8200

HEMATOLOGY - GENERAL

	NORMAL	ABNORMAL	REF RANGE/UNITS	
04/03/07 0923				
Complete Blood Count				
WBC	4.9		4.2 - 10.8	th/uL
RBC	4.54		3.70 - 4.90	mil/uL
HGB	14.3		12.0 - 16.0	g/dL
HCT	42.4		37.0 - 47.0	%
MCV	93		80 - 100	fL
MCH	31.4		25.4 - 34.6	pg
MCHC	33.7		31.0 - 37.0	g/dL
RDW		11.3 L	11.5 - 14.5	%
PLT	369		130 - 450	th/uL
NEUTROPHILS		39.0 L	41.0 - 77.0	%
LYMPHOCYTES		50.2 H	24.0 - 44.0	%
MONOCYTES	6.8		0.0 - 15.0	%
EOSINOPHILS	2.7		0.0 - 5.0	%
BASOPHILS	1.2		0.0 - 3.0	%

URINALYSIS - STOOLS

	NORMAL	ABNORMAL	REF RANGE/UNITS	
04/03/07 0923				
Urinalysis				
COLOR	YELLOW			
APPEARANCE	SL CLDY			
SPEC GRAVITY	1.015		1.005 - 1.03	
pH	7.5		5.0 - 8.0	
PROTEIN	NEGATIVE		NEGATIVE	
UR GLUC	NEGATIVE		NEGATIVE	
KETONES	NEGATIVE		NEGATIVE	
U BILIRUBIN	NEGATIVE		NEGATIVE	
BLOOD	NEGATIVE		NEGATIVE	
NITRITE	NEGATIVE		NEGATIVE	
UROBILINOGEN	NORMAL		0 - 1	mg/dL
LEUKOCYTE ESTER	NEGATIVE		NEGATIVE	

Legend
L = Low, H = High

APR 0 4 2007

VF1106

Sex:	FEMALE	Pt. Name:	[redacted]
Age:	65 YRS	Pt. ID #:	
DOB:	07/28/1941	Acct#:	
Client/MD:	[redacted] MD	Location:	DSS2

Route To: [redacted]

CC:

DSI LABORATORIES
12700 Westlinks Drive
Fort Myers, FL 33913-8017
Phone: 239-561-8200

CHEMISTRY - GENERAL

	NORMAL	ABNORMAL	REF RANGE	UNITS
04/03/07 0923				
Electrolytes				
SODIUM	143		137 - 145	mmol/L
POTASSIUM	4.2		3.6 - 5.0	mmol/L
CHLORIDE	104		98 - 107	mmol/L
CO2	28		22 - 30	mmol/L
Routine Chemistry				
GLUCOSE	82		70 - 99	mg/dL

NOTE: The Reference range for a non-fasting patient is 60-180 mg/dL.

	NORMAL	ABNORMAL	REF RANGE	UNITS
BUN	14		7 - 17	mg/dL
CREATININE	0.8 f		0.7 - 1.2	mg/dL

ESTIMATED GFR =77 ml/min/1.73sq.m if Non African-American Female

Interpretative Data for GFR:

Average GFR for 60-69 year old = 85
Chronic kidney disease: <60
Kidney failure: <15

The estimated GFR provides a more sensitive measure of early kidney disease than the creatinine alone and is recommended by the National Kidney Foundation. The estimated glomerular filtration rate (GFR) is calculated with the MDRD formula which includes creatinine, age and sex. However, the above value only applies if the patient is non-African. To calculate the estimated GFR for other patients refer to the formula on the N.K.F. website or use the calculator on the DSI online ordering manual at www.dsilabs.com.

	NORMAL	ABNORMAL	REF RANGE	UNITS
TOTAL PROTEIN	7.9		6.3 - 8.2	g/dL
ALBUMIN	4.8		3.5 - 5.0	g/dL
CALCIUM	10.1		8.4 - 10.2	mg/dL
BILIRUBIN TOTAL	0.50		0.20 - 1.30	mg/dL
BILI DIRECT	0.00		0.00 - 0.30	mg/dL
ALK PHOS	102		38 - 126	IU/L
ALT (SGPT)	30		13 - 69	IU/L
AST (SGOT)	28		14 - 36	IU/L

APR 04 2007

Legend
f = Interp/Footnote

Sex:	FEMALE	Pt Name	(b)(3) Exemption 3 for 25(c)(b)(6)
Age:	65 YRS	Pt. ID #:	
DOB:	07/28/1941	Acct#:	
Client/MD:	(b)(3) Exemption	MD Location	DSS2

Route To: (b)(3) Exemption 3 for 25(c)(b)(6)

cc:

DSI LABORATORIES
12700 Westlinks Drive
Fort Myers, FL 33913-8017
Phone: 239-561-8200

IMMUNOASSAY

	NORMAL	ABNORMAL	REF RANGE/UNITS
04/03/07 0923			
Thyroid Testing			
TSH (3rd gen)	2.000		0.465 - 4.68 mIU/L

APR 0 4 2007

** FINAL **

This report printed at 04APR07 07[illegible] hrs

Pt. Name: (b)(3) Exemption 3 for 25(c)(b)(6)
Pt. ID #:
Client:

End of Report

CHEMISTRY

February 12, 2009

090727CBB1887
ATTACHMENT 5
Page 1 of 14

(b)(3) Exemption 3 for 625(c),(b)(6)

RE: Preliminary Evaluation in Association with Heating, Ventilating and Air Conditioning (HVAC) Component Issues
Project Location: (b)(6) Residence
Project Address: (b)(3) Exemption 3 for 25(c),(b)(6)

Dear Mr. and Mrs. (b)(3)

I am Lennar's Division President in Southwest Florida. As you know, on February 4, 2009, ENVIRON International Corporation ("ENVIRON") conducted a preliminary evaluation of your residence in connection with our inspection of your home. Lennar selected ENVIRON because of their long-standing reputation as experts in the fields of human health and environmental risk assessment. We have tremendous confidence in their testing procedures and in the veteran scientists with whom we have been working.

Enclosed for your review are the results of the air quality assessment performed at your residence, along with a letter from ENVIRON which provides you with some additional information. As you can see from the attached letter, ENVIRON has concluded that there is no indication that the conditions identified in your residence would have any human health effects.

Based on our ongoing investigation, we believe that certain drywall installed in your home by an independent contractor may contain naturally occurring sulfur that has produced low levels of sulfur-containing gas. We are continuing to actively investigate and pursue this matter on your behalf. Please know that we continue to stand by our homes and are fully committed to resolving these issues. We are working as quickly as possible to find a long-term solution that will be the least disruptive to you and your family.

Please contact me at your earliest convenience so that we can discuss these issues further. Again, we apologize for any inconvenience.

Sincerely,

Darin McMurray

cc: Bill Whiffen

10481 Ben C Pratt / 6 Mile Cypress Parkway, Ft. Myers, FL 33966 • Phone: 239-278-1199 • Fax 239-931-4749
LENNAR.COM

ENVIRON

090727CBB1887
ATTACHMENT 5
Page 2 of 14

February 12, 2009

(b)(3) Exemption 3 for 25 (C),(b)(6)

RE: Preliminary Evaluation in Association with Heating, Ventilating and Air Conditioning (HVAC) Component Issues
Project Location: Nelson Residence
Project Address: 6635 Bobby Jones Court, Palmettos, Florida 34221

Dear Mr and Mrs. (b)(3)

Lennar Corporation and its affiliates (Lennar) have retained expert toxicologists and industrial hygienists from ENVIRON International Corporation (ENVIRON) to perform an air quality assessment at your residence. As you know, on February 4, 2009, ENVIRON conducted a preliminary evaluation of your residential property. ENVIRON's preliminary evaluation was undertaken in conjunction with Lennar Homes' inspection of the heating, ventilating and air conditioning (HVAC) system in your home.

This preliminary evaluation consisted of, among other things, the following: (1) a walkthrough of the residence, which confirmed the presence of black surface accumulations on select HVAC system components; (2) the measurement of indoor and outdoor air using a calibrated direct reading hydrogen sulfide analyzer, which detected no indoor concentrations of hydrogen sulfide above outdoor background values; and (3) the collection of two air samples from locations within the residence (Sample 020409-N1 from the kitchen/family room and Sample 020409-N2 from the master bedroom), and one sample of ambient air from outdoors (Sample 020409-N3) for subsequent laboratory analysis.

These three samples were individually labeled, documented by a chain of custody form, and shipped via overnight courier to an independent accredited laboratory (Air Toxics, Ltd.) for analysis using American Society for Testing and Materials (ASTM) Method D-5504 to test for the presence and concentration of eighteen sulfur compounds.

As you can see from the attached results, the laboratory has reported that "No Detections Were Found" for the 18 sulfur compounds in the samples collected in your residential property

Accordingly, ENVIRON has determined that there is no indication that the conditions identified in your residential property would result in adverse human health outcomes.

ENVIRON appreciates the opportunity to be of assistance in this regard. Should you have any questions and/or comments concerning the information provided, please do not hesitate to contact us.

Sincerely,

Robert P. DeMott, PhD, DABT
Principal Toxicologist

James L. Poole, PhD, CIH
Sr. Industrial Hygiene Manager

Encl: Attachment 1: Nelson – Laboratory Results

ATTACHMENT 1
NELSON RESIDENCE
LABORATORY RESULTS

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0902080

Work Order Summary

CLIENT:	Environ International 10150 Highland Manor Drive Suite 440 Tampa, FL 33610	**BILL TO:**	Environ International 10150 Highland Manor Drive Suite 440 Tampa, FL 33610
PHONE:	813-628-4325	**P.O. #**	
FAX:	813-628-4983	**PROJECT #**	25 17572A GT/Lennar
DATE RECEIVED:	02/05/2009	**CONTACT:**	Bryanna Langley
DATE COMPLETED:	02/07/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	020409-N1 (Kitchen/Family Rm)	ASTM D-5504	Tedlar Bag	Tedlar Bag
02A	020409-N2 (Master Bedroom)	ASTM D-5504	Tedlar Bag	Tedlar Bag
02AA	020409-N2 (Master Bedroom) Lab Duplicate	ASTM D-5504	Tedlar Bag	Tedlar Bag
03A	020409-N3 (outdoor)	ASTM D-5504	Tedlar Bag	Tedlar Bag
04A	Lab Blank	ASTM D-5504	NA	NA
05A	LCS	ASTM D-5504	NA	NA

CERTIFIED BY: _____ DATE 02/07/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09
Air Toxics Ltd certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
ASTM D-5504
Environ International
Workorder# 0902080

Three 1 Liter Tedlar Bag samples were received on February 05, 2009. The laboratory performed the analysis of sulfur compounds via ASTM D-5504 using GC/SCD. The method involves direct injection of the air sample into the GC via a fixed 2.0 mL sampling loop. See the data sheets for the reporting limits for each compound.

Receiving Notes

There were no receiving discrepancies

Analytical Notes

Ethyl Methyl Sulfide and n-Butyl Mercaptan coelute with 3-Methyl Thiophene.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.
File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Air Toxics Ltd.

ANALYTICAL LABORATORY

Summary of Detected Compounds
SULFUR GASES BY ASTM D-5504 GC/SCD

Client Sample ID: [illegible] (Kitchen/Family Rm)

Lab ID#: 0902080-01A
No Detections Were Found.

Client Sample ID: [illegible] (Master Bedroom)

Lab ID#: 0902080-02A
No Detections Were Found.

Client Sample ID: [illegible] (Master Bedroom) Lab Duplicate

Lab ID#: [illegible]
No Detections Were Found.

Client Sample ID: [illegible] (outdoor)

Lab ID#: 0902080-03A
No Detections Were Found.

Air Toxics LTD.

ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 020409-N1 (Kitchen/Family Rm)

Lab ID#: 0902080-01A

SULFUR GASES BY ASTM D-5504 GC/SCD

File Name:	b020504	Date of Collection: 2/4/09
Dil. Factor:	1.00	Date of Analysis: 2/5/09 07:04 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Hydrogen Sulfide	4.0	Not Detected
Carbonyl Sulfide	4.0	Not Detected
Methyl Mercaptan	4.0	Not Detected
Ethyl Mercaptan	4.0	Not Detected
Dimethyl Sulfide	4.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Isopropyl Mercaptan	4.0	Not Detected
tert-Butyl Mercaptan	4.0	Not Detected
n-Propyl Mercaptan	4.0	Not Detected
Thiophene	4.0	Not Detected
Isobutyl Mercaptan	4.0	Not Detected
3-Methyl Thiophene/n-Butyl Mercaptan/Ethyl Methyl Sulfide	4.0	Not Detected
Diethyl Sulfide	4.0	Not Detected
Dimethyl Disulfide	4.0	Not Detected
Tetrahydrothiophene	4.0	Not Detected
2-Ethylthiophene	4.0	Not Detected
2,5-Dimethylthiophene	4.0	Not Detected
Diethyl Disulfide	4.0	Not Detected

Container Type: 1 Liter Tedlar Bag

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 020409-N2 (Master Bedroom)

Lab ID#: 0902080-02A

SULFUR GASES BY ASTM D-5504 (GC/SCD)

File Name:	**b020508**	**Date of Collection:**	**2/4/09**
Dil. Factor:	**1.00**	**Date of Analysis:**	**2/5/09 07:46 AM**

Compound	Rpt. Limit (pptv)	Amount (pptv)
Hydrogen Sulfide	4.0	Not Detected
Carbonyl Sulfide	4.0	Not Detected
Methyl Mercaptan	4.0	Not Detected
Ethyl Mercaptan	4.0	Not Detected
Dimethyl Sulfide	4.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Isopropyl Mercaptan	4.0	Not Detected
tert-Butyl Mercaptan	4.0	Not Detected
n-Propyl Mercaptan	4.0	Not Detected
Thiophene	4.0	Not Detected
Isobutyl Mercaptan	4.0	Not Detected
3-Methyl Thiophene/n-Butyl Mercaptan/Ethyl Methyl Sulfide	4.0	Not Detected
Diethyl Sulfide	4.0	Not Detected
Dimethyl Disulfide	4.0	Not Detected
Tetrahydrothiophene	4.0	Not Detected
2-Ethylthiophene	4.0	Not Detected
2,5-Dimethylthiophene	4.0	Not Detected
Diethyl Disulfide	4.0	Not Detected

Container Type: 1 Liter Tedlar Bag

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 020409-N2 (Master Bedroom) Lab Duplicate

Lab ID#: 0902080-02AA

SULFUR GASES BY ASTM D-5504 GC/SCD

File Name:	**b020507**	**Date of Collection: 2/4/09**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/5/09 08:10 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Hydrogen Sulfide	4.0	Not Detected
Carbonyl Sulfide	4.0	Not Detected
Methyl Mercaptan	4.0	Not Detected
Ethyl Mercaptan	4.0	Not Detected
Dimethyl Sulfide	4.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Isopropyl Mercaptan	4.0	Not Detected
tert-Butyl Mercaptan	4.0	Not Detected
n-Propyl Mercaptan	4.0	Not Detected
Thiophene	4.0	Not Detected
Isobutyl Mercaptan	4.0	Not Detected
3-Methyl Thiophene/n-Butyl Mercaptan/Ethyl Methyl Sulfide	4.0	Not Detected
Diethyl Sulfide	4.0	Not Detected
Dimethyl Disulfide	4.0	Not Detected
Tetrahydrothiophene	4.0	Not Detected
2-Ethylthiophene	4.0	Not Detected
2,5-Dimethylthiophene	4.0	Not Detected
Diethyl Disulfide	4.0	Not Detected

Container Type: 1 Liter Tedlar Bag

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: 020409-N3 (outdoor)

Lab ID#: 0902080-03A

SULFUR GASES BY ASTM D 5504 GC/SCD

File Name:	**b020508**	**Date of Collection: 2/4/09**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/5/09 08:26 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Hydrogen Sulfide	4.0	Not Detected
Carbonyl Sulfide	4.0	Not Detected
Methyl Mercaptan	4.0	Not Detected
Ethyl Mercaptan	4.0	Not Detected
Dimethyl Sulfide	4.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Isopropyl Mercaptan	4.0	Not Detected
tert-Butyl Mercaptan	4.0	Not Detected
n-Propyl Mercaptan	4.0	Not Detected
Thiophene	4.0	Not Detected
Isobutyl Mercaptan	4.0	Not Detected
3-Methyl Thiophene/n-Butyl Mercaptan/Ethyl Methyl Sulfide	4.0	Not Detected
Diethyl Sulfide	4.0	Not Detected
Dimethyl Disulfide	4.0	Not Detected
Tetrahydrothiophene	4.0	Not Detected
2-Ethylthiophene	4.0	Not Detected
2,5-Dimethylthiophene	4.0	Not Detected
Diethyl Disulfide	4.0	Not Detected

Container Type: 1 Liter Tedlar Bag

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0902080-04A

SULFUR GASES BY ASTM D-5504 GC/SCD

File Name:	**b020503**	**Date of Collection: NA**	
Dil. Factor:	1.00	**Date of Analysis: 2/4/09 10:14 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Hydrogen Sulfide	4.0	Not Detected
Carbonyl Sulfide	4.0	Not Detected
Methyl Mercaptan	4.0	Not Detected
Ethyl Mercaptan	4.0	Not Detected
Dimethyl Sulfide	4.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Isopropyl Mercaptan	4.0	Not Detected
tert-Butyl Mercaptan	4.0	Not Detected
n-Propyl Mercaptan	4.0	Not Detected
Thiophene	4.0	Not Detected
Isobutyl Mercaptan	4.0	Not Detected
3-Methyl Thiophene/n-Butyl Mercaptan/Ethyl Methyl Sulfide	4.0	Not Detected
Diethyl Sulfide	4.0	Not Detected
Dimethyl Disulfide	4.0	Not Detected
Tetrahydrothiophene	4.0	Not Detected
2-Ethylthiophene	4.0	Not Detected
2,5-Dimethylthiophene	4.0	Not Detected
Diethyl Disulfide	4.0	Not Detected

Container Type: NA - Not Applicable

Air Toxics LTD.

Client Sample ID: LCS

Lab ID#: 0902080-05A

SULFUR GASES BY ASTM D-5504 (GC/SCD)

File Name:	b020602	**Date of Collection: NA**	
Dil. Factor:	1.00	**Date of Analysis: 2/4/09 09:44 PM**	

Compound	%Recovery
Hydrogen Sulfide	111
Carbonyl Sulfide	103
Methyl Mercaptan	110
Ethyl Mercaptan	114
Dimethyl Sulfide	112
Carbon Disulfide	101
Isopropyl Mercaptan	114
tert-Butyl Mercaptan	113
n-Propyl Mercaptan	119
Thiophene	114
Isobutyl Mercaptan	119
3-Methyl Thiophene/n-Butyl Mercaptan/Ethyl Methyl Sulfide	119
Diethyl Sulfide	109
Dimethyl Disulfide	120
Tetrahydrothiophene	122
2-Ethylthiophene	118
2,5-Dimethylthiophene	120
Diethyl Disulfide	127

Container Type: NA - Not Applicable

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of air, land and water. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager James L. Poole

Collected by: (Print and Sign) James Poole / James L Poole

Company ENVIRON

Address 101 South Howard Ave Suite 440 City Tampa State FL Zip 33610

Phone 813 628 4325 Fax 813 628 4983

Project Info:
P.O. #
Project # 25 175572A
Project Name GT / Lennox

Turn Around Time:
☐ Normal
☒ Rush 48 hr

Lab Use Only
Pressurized by
Dated
Pressurization Gas N2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final
01A	020109-N1 (Kitchen/Family Rm)		2/1/09	15:35	ASTM D-5504				
02A	020109-N2 (Master Bedroom)		2/1/09	15:42	Reduced				
03A	020109-N3 (outdoor)		2/1/09	15:50	Sulfur Gases				

Relinquished by: (Signature) James L Poole Date/Time 2/4/09 17:45
Received by: (Signature) [illegible] Date/Time 2/5/09 10:55
Relinquished by: (Signature) Date/Time
Received by: (Signature) Date/Time

Notes:

Lab Use Only
Shipper Name: Fed Ex
Air Bill #: 8808 3052 4752
Temp °C: 0.4
Condition: Good
Custody Seals Intact? Yes No None
Work Order #: 0902080

TO BE SIGNED UPON COMPLETION OF IN-HOME AIR-QUALITY MONITORING AND TESTING STUDY

FINAL RELEASE & WAIVER OF LIABILITY FORM

[To Be Signed by All Residents 18 Years or Age or Older]

I, (b)(3) Exemption 3 for 25(c), do hereby acknowledge that with my permission the U.S. Consumer Product Safety Commission and any of its designated representatives, consultants, or other designees ("CPSC") utilized my residence located at (b)(3) Exemption 3 for 25(c),(b)(6) for a preliminary pilot indoor air-quality monitoring and testing study on 7/30/09, 2009.

On today's date, I have completed a walk-through inspection of my residence with _____, a CPSC employee. I further acknowledge that except for any items listed and described below, no items are missing, damaged, or destroyed in my residence.

Notation of missing, damaged or destroyed items in residence (if applicable):

None

I acknowledge that CPSC offered reimbursement for the N/A, but I have declined CPSC's offer. I acknowledge that I have not requested that the N/A be repaired or replaced by CPSC.

(b)(3) Exemption 3 for 25(c),(b)(6)

Signature of Resident

7/30/09

Date

090727CBB1887
ATTACHMENT 6

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090727CBB1887
ATTACHMENT 7

U.S. Consumer Product Safety Commission

AUTHORIZATION FOR RELEASE OF NAME

Thank you for assisting us in collecting information on a potential product safety problem. The Consumer Product Safety Commission depends on concerned people to share product safety information with us. We maintain a record of this information, and use it to assist us in identifying and resolving product safety concerns.

We routinely forward this information to manufacturers and private labelers to inform them of the involvement of their product in an accident situation. We also give the information to others requesting information about specific products. Manufacturers need the individual's name so that they can obtain additional information on the product or accident situation.

Would you please indicate on the bottom of this page whether you will allow us to disclose your name? If you request that your name remain confidential, we will of course, honor that request. After you have indicated your preference, please sign your name and date the document on the lines provided.

☒ I request that you do not release my name. My identity is to remain confidential.

☐ You may release my name to the manufacturer but I request that you do not release it to the general public.

☐ (b)(6) o the manufacturer and to the public.

7/30/09

(b)(6) 7/30/09

(Signature) (Date)

CPSC Form 322

090727CBB1887 **ATTACHMENT 8**

IDENTIFICATION OF CONTACTS:

1. (b)(3):Exemption 3 for 25[illegible](b)(6) homeowners, (b)(3):Exemption 3 for 25(e).(b)(6) 34221 – contacted at their home on 7/30/09.
2. (b)(6) friend of homeowners, Liaison for homeowners & drywall expert, (b)(6) contacted at homeowners' home during drywall testing.

CONTACTS MADE BY HOMEOWNERS:

1. Lennar Homes, 1-481 Ben C. Pratt, 6 Mile Cypress parkway, Ft Myers, FL 33966.

Doc No: I0940429A **Issue: 29** **04/17/2009**

04/15/2009 16:14:03

Name = (b)(3) Exemption 3 for 25(c)(b)(6)
Address
City = P
State =
Zip = 34
Email =
Telepho
Name o
Victim's
Victim's
Victim's
Victim's
Victim's

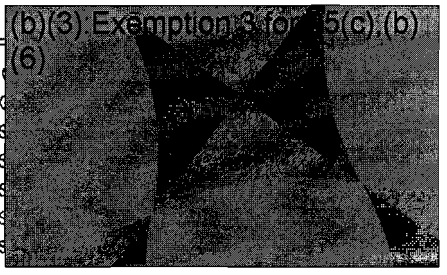
Incident Description = Our house was new in November of 2006. Corrosive chemicals Hydrogen Sulfide, Carbon disulfide, carbonyl sulfide and dimethyl sulfide being emitted into our home. I have constant low-grade headaches, irritated eyes, congestion and cough, sneezing, nausia, sleepless nights, short term memory loss, nose bleeds. Our new electrical appliances have all failed, plasma TV display failed, electrical wiring is corroded, 2 sets of A/C coils have corroded and failed, cooper artwork and silver jewelry are black as coal, copper plumbing is black, all mirror components are intemally tarnishing and breaking down, metal faucets and drains are corroding. Oder is home is terrible with the A/C off and vinegary with it on.

Victim's age at time of incident = 67
Victim's sex = female
Date of incident = current
Product involved = tainted drywall
Product brand name/manufacturer = Knauf
Manufacturer street address = unkn
Place where manufactured (City and State or Country) = china
Product model and serial number, manufacture date = Forensic Construction Consultant Michael Foreman has this info
Product damaged, repaired or modified = no
If yes, before or after the incident =
Description of damage, repair or modification =
Date product purchased = 2006 by Lennar I
Product involved still available = yes
Have you contacted the manufacturer = yes
If not, do you plan to contact them =
Name Release = Release name to the manufacturer and public

DocNo: I0940429A

04/15/2009 16:14:03

Email =
Teleph
Name
Victim's
Victim's
Victim's
Victim's
Victim's



Incident Description = Our house was new in November of 2006. Corrosive chemicals Hydrogen Sulfide, Carbon disulfide, carbonyl sulfide and dimethyl sulfide being emitted into our home. I have constant low-grade headaches, irritated eyes, congestion and cough, sneezing, nausia, sleepless nights, short term memory loss, nose bleeds. Our new electrical appliances have all failed, plasma TV display failed, electrical wiring is corroded, 2 sets of A/C coils have corroded and failed, copper artwork and silver jewelry are black as coal, copper plumbing is black, all mirror components are internally tarnishing and breaking down, metal faucets and drains are corroding. ~~Oder is~~ home is terrible with the A/C off and vinegary with it on.

Victim's age at time of incident = 67
Victim's sex = female
Date of incident = current
Product involved = tainted drywall
Product brand name/manufacturer = Knauf
Manufacturer street address = unkn
Place where manufactured (City and State or Country) = china
Product model and serial number, manufacture date = Forensic Construction Consultant Michael Foreman has this info
Product damaged, repaired or modified = no
If yes, before or after the incident =
Description of damage, repair or modification =
Date product purchased = 2006 by Lennar
Product involved still available = yes
Have you contacted the manufacturer = yes
If not, do you plan to contact them =
Name Release = Release name to the manufacturer and public

I0940429A

If you have any changes, additions, or comments you wish to make concerning your attached report, please make them in the space below. Since THE EMAIL, I Have Learned that These Chemicals Have TAINTED our wood framing. We Are told IT will not "outgas." THE SAME will be true for roof plywood Sheathing. GALVANIZED roof supports Are Also corroded AND failing. I suspect our cinder block EXTERIOR walls will also be TAINTED.

I confirm that the information in the attached report (including any changes, additions, or comments I have made) is accurate to the best of my knowledge and belief.

(b)(3) Exemption 3 for 25(c)(6)(E)

Signature

4/29/09
Date

☐ I request that you do not release my name.

☐ You may release my name to the manufacturer but I request that you not release it to the general public.

☒ You may release my name to the manufacturer and to the public.

EPIDEMIOLOGIC INVESTIGATION REPORT

1. Task Number	2. Investigator's ID
090529CBB1741	9102

3. Office Code	4. Date of Accident YR MO DAY	5. Date Initiated YR MO DAY
810	2009 05 14	2009 05 29

6. Synopsis of Accident or Complaint **UPC** 0-81999-10522-8

The family moved into their home in October 2006 and had to move out in April 2009 due to the ill health affects from the tainted drywall. The owner of the home cut holes in his walls to discover that the drywall was imported from Canada by an American Company and was a medium gray color. The homes two air conditioners coils had both been replaced twice. Chrome fixtures were pitted and electrical wiring was turning black.

MFR/PRVLBR NOTIFIED ✓
COMMENTS: __YES ✓NO
__OVERRULED; __ATTACHED
✓EXCISIONS/FOIA EXS. 3,6(b)C
__DO NOT RE-NOTIFY ✓RE-NOTIFY
VVC 4/29/10

(b)(3):CPSA Section 6(b)

7. Location (Home, School, etc)	8. City	9. State
1 - HOME	CLERMONT	FL

10A. First Product	10B. Trade/Brand Name	10C. Model Number
1876 - House Structures, Repair Or	DRYWALL	(b)(3):CPSA Section 6(b)

10D. Manufacturer Name and Address
(b)(3):CPSA Section 6(b)

11A. Second Product	11B. Trade/Brand Name	11C. Model Number
381 - Air Conditioners	CARRIER	FY4ANF036000AAAA

11D. Manufacturer Name and Address
CAC/BDP
7310 West Morris Street
Indianapolis, IN 46231

12. Age of Victim	13. Sex	14. Disposition	15. Injury Diagnosis
43	1 - Male	1 - Injured, not Hosp.	68 - Poisoning

16. Body Part(s) Involved	17. Respondent	18. Type of Investigation	19. Time Spent (Operational / Travel)
85 - ALL OF BODY	1 - Victim/Complainant	1 - On-Site	13 / 3.5

20. Attachment(s)	21. Case Source	22. Sample Collection Number
9 - Multiple Attachments	07 - Consumer Complaint	098107070

23. Permission to Disclose Name (Non NEISS Cases Only)
● Yes ○ No ○ Verbal ○ Yes for Manuf. Only

24. Review Date	25. Reviewed By	26. Regional Office Director
06/15/2009	9001	Dennis R. Blasius

27. Distribution	28. Source Document Number
Streeter, Robin; Trotta, Andrew; Blasius, Dennis; Rose, Blake; Woodard, Dean; Khanna, Rohit; Matheson, Joanna	I0950507A

This investigation was initiated by a complaint received by the U.S. Consumer Product Safety Commission.

The information contained in this investigation was supplied by the following sources:

1. An onsite interview with the owners of the home on 6-03-2009.

Family Members:

Husband – 43 year old male
Wife – 41 year old female
Son – 10 year old male
Daughter –7 year old female

This incident involves health issues and copper and metal corrosion at the non seasonal home of the victims over an extended period of time as will be detailed later in this report which the owners believe were caused by contaminated *American/Canadian* drywall used in the construction of their home.

The home was a two story all electric, 4 bedrooms, 3 bathrooms new construction, 2,800 square foot townhome in Clermont, FL. The owner contacted the CPSC on 5-14-2009 and that is the incident date. The home was a concrete block and stucco home with wood studs. The bedrooms had carpeting and the main rooms had tile.

The owner of the home also acted as the builder for the home and subcontracted out the electrical, concrete and sheetrock installation etc. He directly purchased the drywall from a local hardware supplier. The receipt is included in the exhibits.

The family moved into the home in October 2006 and began experiencing health symptoms within six months. Eventually, the symptoms became so serious that they moved out of the home on 4-08-2009. The family was not experiencing the following ill effects prior to moving into the home.

The husband was experiencing bloody noses, excessive snoring, sinus congestion, headaches and was "stopped up" all the time. His symptoms did not seem to abate during short periods of time away from the home.

The mother was experiencing constant headaches, sinus infections, poor memory, coughing, eye twitching, a rash on her finger and constant sniffling and eye watering. Her symptoms seemed to abate after about two hours away from the home.

The 10 year old was suffering from constant headaches, coughing, sneezing, breathing difficulties and some blurred vision. The 7 year old was experiencing headaches and some blurred vision. Both the children seemed to feel better after being away from the home at school and their symptoms would begin again an unspecified time back at the home. All of the family felt much better after having been moved out of the home for 10 days. The family members occasionally saw their physician but mainly treated the conditions with over-the-counter medications.

The home had two air conditioner systems and the coils to the upstairs unit were replaced on 1-14-2008 and 7-08-2008. The coils to the downstairs unit were replaced on 12-22-2007 and 8-25-2008. The repair technician could not understand what could cause the corrosion to the evaporator coils but guessed that sulfur could cause the corrosion. Photographs of the newer coils which show corrosion are included in the exhibits.

Photograph of recent corrosion to the downstairs A/C evaporator coils.

Most of the water supply lines to the bathroom fixtures were plastic however in mid 2007 the family started noticing that the chrome plumbing fixtures were showing pitting and corrosion. She noticed that silver jewelry, wine corks and picture frames etc. were showing extreme corrosion.


Photograph of corrosion on a bathroom fixture.

The main circuit board to the microwave had to be replaced in April 2008. In February of 2009 the dishwasher quit working and the repair technician indicated that the copper in the wire nuts "was gone" and had corroded causing a power failure to the unit.

The projector bulb to their new 11 month old 57 inch big screen television bulb blew out. The bulb had to be replaced again two years later in March of 2009.

Speaker wiring which had a clear covering was showing corrosion on the interior of the wiring. Please see photographs in the exhibits.


Photograph of visible corrosion inside the wiring for the speaker system.

The attorney for the complainants was also present during the onsite investigation. He had done extensive research on the subject of the corrosion

caused by drywall. Several scientific papers on the subject were provided by the attorney and are included in the exhibits. This investigator did not thoroughly review the Abstracts but according to the attorney he believed the drywall which was used in the construction of the home was manufactured from the exhaust from a coal fired electrical plant. The plant would scrub their exhaust emissions to eliminate sulphur from the exhaust/pollution and use this as one of the ingredients in the manufacture of the drywall. The drywall was also believed to have organic components and the study included in the exhibits showed that the combination of drywall waste and organics in the drywall were generating Hydrogen sulfide gas in sufficient quantities to be extremely harmful to humans and cause corrosion. A copy of the lawsuit filed by the attorney is included in the exhibits.

The attorney for the complainants indicated that in 2005, EPA regulations were initiated which required scrubbing of the exhaust for sulphur products from coal fired electrical plants. The waste product was then being used by drywall manufacturers to produce synthetic drywall and in combination with organic compounds and anaerobic conditions; the drywall would then produce hydrogen sulfides as indicated in the attached Abstracts and then the health effects and corrosion being experienced by the complainants.

The complainant purchased the drywall for his home from a local construction supply retailer. A receipt for the drywall is included in the exhibits and shows that 265 sheets for ½ inch 12 foot drywall were purchased, 16 sheets of 5/8 inch drywall (fire code requirement for the garage area of the home) and 7 sheets of ½ inch 8 foot drywall. The complainant wanted to discover what kind of drywall was used in his home so he cut open several large holes to look at the labeling on the back and seams of the product. He discovered much to his amazement that it was not Chinese drywall but imported by an American company from Canada.

The complainant indicated they had an electrician install a hardwired smoke detector system with battery backup in their home. All eight units were linked by wiring so that if one unit sounded all of the smoke detectors in the home would sound simultaneously. The family indicated that on 12 occasions over three years the system would sound a fire alert and the family would have to scramble to evacuate their children in the middle of the night because of a suspect fire. On all occasions there was no fire and the units would have to be reset. Resetting would require locating the original smoke detector which set off the alarm in the entire system and pressing *that* button which would then reset the whole system. The process was very difficult and annoying when it occurred in the middle of the night and especially during the day because the female complainant was not able to easily reach the reset button in many of the units.

A representative from CPSC headquarters accompanied this investigator to the onsite investigation and requested that one unit of the smoke detectors be sent to SSF for possible examination. The husband removed and provided one unit which was submitted to SSF as SCR 09-810-7070.

This investigator and the homeowners examined broken pieces of the drywall and we were both surprised at the granular texture and grey color. Most drywall is very white and has a fine powdery texture. The drywall installers remarked to the homeowner, *"This is the stuff that dulls our razor blades knives really fast."*


Photograph of the grey coloring of the drywall.

A downstairs living room electrical outlet was examined. The hot and neutral wires could not be examined but the ground wire was much corroded with a black discoloration.


Photograph of blackened ground wire on an electrical receptacle.

The complainants indicated that they had not had any problems with flickering lights or breakers flipping but that the home had a constant problem with light bulbs going out frequently. She indicated that bulbs were burning out in six months or less on a consistent basis.

In March of 2009 they saw a program on television explaining the health and home effects due to defective Chinese drywall. They immediately began believing that the problems they were having were due to the fact that their home

was constructed out of Chinese drywall and were amazed when they cut into the walls of their home and discovered that in fact these same problems appear to have been caused by North American drywall.

The homeowners believe that their $525,000 home was now worth only the value of the lot. They did not believe that simply removing the drywall would remedy the problem because the affects of the hydrogen sulfide gas may have weakened the nails in the wood studs, the metal plates which join the rafters and joists and hurricane structural support strapping. They have attempted to obtain forbearance from the mortgage lender and county tax authorities without success. The home owners indicated their permission to release their name to the manufacturer and to the public. No medical records were provided. Appliance repair receipts were promised but had not been received by the time this report was due. If they are received they will be added as an addendum to this report. This investigator could easily distinguish a sulphur smell upon entry into the home.

The attorneys for the manufacturer of the drywall met with the complainants on 6-12-2009 at their home and indicated that the product was manufactured by their firm. No other data was conveyed.

CNN and CBS news have both done stories on the complainants' health affects and the home's problems. The family contacted their home owner's insurance which indicated that the problem was a product defect situation and indicated the family needed to contact the manufacturer of the drywall for resolution.

Product Information:

Product: Drywall

Manufacturer:
(b)(3):CPSA Section 6(b)

Labeling on Drywall:
(b)(3):CPSA Section 6(b)

(b)(3):CPSA Section 6(b)

Builder:
Home Owner was the General Contractor (Owner-Builder)

Drywall Installer:
Unknown

Drywall Retailer/Supplier:
84 Lumber of Tavares (1320)
3751 County Road 561
Tavares, FL 32778
Phone: (352) 742-8400
Fax: (352) 742-8500

Attachments:

Exhibit #1	Contacts
Exhibit #2	Abstract on Hydrogen sulfide in landfill construction debris
Exhibit #3	Complainants exhibit on damages to their home.
Exhibit #4	Lawsuit filed by the attorney
Exhibit #5	Abstract by EPA Drywall Sampling Analysis
Exhibit #6	Receipt for Drywall purchase
Exhibit #7	Information on the smoke detector manufacturer
Exhibit #8	Photographs of the home and drywall (26)
Exhibit #9	Release of name form
Exhibit #10	SCR 09-810-7070, Receipt for sample and Photographs of smoke detector (2)
Exhibit #11	Abstract on measuring gypsum content in landfill debris
Exhibit #12	Abstract on Hydrogen Sulfide in construction drywall debris
Exhibit #13	Heath affects and home repair timeline by complainant
Exhibit #14	Information on the drywall manufacturer
Exhibit #15	Information on the drywall retailer

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Reduced sulfur compounds in gas from construction and demolition debris landfills

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Abstract

The biological conversion of sulfate from disposed gypsum drywall to hydrogen sulfide (H_2S) in the anaerobic environment of a landfill results in odor problems and possible health concerns at many disposal facilities. To examine the extent and magnitude of such emissions, landfill gas samples from wells, soil vapor samples from the interface of the waste and cover soil, and ambient air samples, were collected from 10 construction and demolition (C&D) debris landfills in Florida and analyzed for H_2S and other reduced sulfur compounds (RSC). H_2S was detected in the well gas and soil vapor at all 10 sites. The concentrations in the ambient air above the surface of the landfill were much lower than those observed in the soil vapor, and no direct correlation was observed between the two sampling locations. Methyl mercaptan and carbonyl sulfide were the most frequently observed other RSC, though they occurred at smaller concentrations than H_2S. This research confirmed the presence of H_2S at C&D debris landfills. High concentrations of H_2S may be a concern for employees working on the landfill site. These results indicate that workers should use proper personal protection at C&D debris landfills when involved in excavation, landfill gas collection, or confined spaces. The results indicate that H_2S is sufficiently diluted in the atmosphere to not commonly pose acute health impacts for these landfill workers in normal working conditions. H_2S concentrations were extremely variable with measurements occurring over a very large range (from less than 3 ppbv to 12,000 ppmv in the soil vapor and from less than 3 ppbv to 50 ppmv in ambient air). Possible reasons for the large intra- and inter-site variability observed include waste and soil heterogeneities, impact of weather conditions, and different site management practices.

1. Introduction

Odor problems represent a growing concern at many landfills disposing of construction and demolition (C&D) debris. Reduced sulfur compounds (RSC), particularly hydrogen sulfide (H_2S), have been identified as the primary odor-causing compounds in the gas from these facilities (Johnson, 1986; Gypsum Association, 1992a,b; Flynn, 1998). H_2S has a distinctive "rotten egg" smell at low concentrations and its reported threshold ranges from 0.001 (Thorkild, 2002) to 0.1 ppmv (Flynn, 1998). The formation of H_2S results from the biological conversion of sulfate from gypsum drywall ($CaSO_4 \cdot 2H_2O$), one of the more common components of C&D debris. Sulfate-reducing bacteria (SRB) can utilize dissolved sulfate as an electron acceptor, resulting in the formation of H_2S. The US EPA estimated that 123 million metric tons of building-related C&D debris was generated in the US in 1996 (US EPA, 1998). The amount of drywall encountered in most building-related C&D debris ranges from 5% to 30% depending on the source (NAHB, 1995). While some of the scrap gypsum drywall in North America is recycled (Musick, 1992), the majority is disposed in landfills (US EPA, 1998).

C&D debris has historically been considered relatively inert. Since SRB need oxidizable organic matter, the lack of biodegradable wastes in C&D debris might be thought to create conditions unfavorable for large amounts of RSC production. However, odor problems resulting from landfilled C&D debris have been reported at facilities co-disposing C&D debris with municipal solid waste (MSW) and at landfills that only manage C&D debris (Johnson,

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1986). In MSW landfills, large amounts of biogas (primarily in the form of CH_4 and CO_2) are produced as a result of anaerobically degrading refuse and studies of MSW landfill gas commonly report measurable concentrations of H_2S and other RSC (Young and Parker, 1983; CWMB, 1987; Capenter and Bidwell, 1996; Shin et al., 2002). Gas data from C&D debris landfills, however, are much less common.

This paper reports the results of a study characterizing gas samples collected at ten C&D debris disposal facilities in Florida. In recent years, several C&D debris landfills in the state have been the subject of odor complaints which have resulted in heated debate regarding the impact of these facilities on the environment, landfill workers, and the surrounding population. Very few data are available however, characterizing C&D debris landfill gas composition. To help fill this data gap, C&D debris landfills were visited and samples of landfill gas, landfill soil vapor, and ambient air at the surface of the landfill were collected and analyzed for H_2S and other RSC such as methyl mercaptan and carbon disulfide. The objectives of this research were to characterize the range and magnitude of RSC concentrations within and at the surface of typical C&D debris landfills, to examine the variability of such concentrations among different sites and at the same site, and to evaluate potential human health and environmental impacts. This study provides fundamental data that can be used to assess the magnitude of the problem and to aid in the design of future research on the subject.

2. Materials and methods

2.1. Landfills sampled and sampling methodology

Measurements of landfill gas and ambient air were performed at 10 different landfills during the course of the study (designated as sites A–J). Each site, with the exception of sites F and H, were permitted C&D debris disposal facilities. Sites F and H were permitted Class III disposal facilities, which in Florida accept both C&D debris and other non-putrescible wastes such as furniture, carpet and yard trash. Several of the facilities had been the subject of odor complaints in the past (sites B, D, G, I and J). Only two of the sites were equipped with landfill gas wells. In an effort to mitigate odor problems, operators at site D installed a series of vertical gas wells that were combined into three separate passive candlestick flares at different locations on the surface of the landfill. Site F was closed and contained 19 different vertical gas wells that were passively vented to the atmosphere. Table 1 summarizes the sites visited, the number of visits, and the number of samples collected. More details concerning each site can be found in Townsend et al. (2000).

Measurements were performed on both ambient air above the surface of the landfills and on landfill gas itself. Landfill gas was collected in three different manners. At the sites, where gas wells were installed, gases were sampled directly from the wells. When no wells were available, gas samples were collected by extracting vapor from the interface of the waste and the soil. A soil vapor probe (AMS, American Falls, ID) was inserted into the landfill surface to at least a depth of 0.3 m. The soil vapor probe consisted of a 1.3-cm diameter hollow stainless tube that was 0.9 m in length equipped with a hardened stainless steel tip. The probe was inserted into the landfill surface with a slide hammer, after which the liner rod was removed before gas sampling. Then, a Jerome meter was attached to Teflon tubing attached to the inner tip of soil vapor probe to determine H_2S concentration; in addition to direct measurement, a sample could be extracted for subsequent analysis. At several sites (sites A, B, and E), stainless steel sampling tubes were installed and left in place. These soil vapor wells were capped between sampling events. In some cases, the gas composition was measured directly, while in other cases, gas samples were collected for subsequent dilution and analysis in the laboratory. Grab samples of landfill gas were obtained with a Vac-U-Tube (Model 231-945, SKC Inc., Eighty Four, PA) in 1-l Tedlar® bags (Model 232-01, SKC Inc.). H_2S measurements in the ambient air were collected by placing the Jerome meter on the surface of the landfill, in most locations near the location of a soil vapor sample.

Table 1
Description of landfills sampled in Florida

Site	Type	Location	Gas sampling method	Sampling visits	Number of ambient H_2S readings	Number of landfill gas H_2S readings
A	C&D	Pasco County	Soil vapor probe, three soil vapor wells	3	19	21
B	C&D	Citrus County	Soil vapor probe, eight soil vapor wells	11	100	116
C	C&D	Marion County	Soil vapor probe	2	7	8
D	C&D	Volusia County	Soil vapor probe, four existing gas collection flares	8	30	26
E	C&D	Volusia County	Soil vapor probe, soil vapor wells	7	61	72
F	Class III	Alachua County	Nineteen existing gas passive vents	2	24	24
G	C&D	Marion County	Soil vapor probe	2	24	24
H	Class III	Columbia County	Soil vapor probe	2	22	22
I	C&D	Highlands County	Soil vapor probe	3	27	23
J	C&D	Highlands County	Soil vapor probe	3	27	26

2.2. Sample analysis

H_2S concentrations were analyzed using an Arizona Instruments (Phoenix, AZ) Jerome 631-X H_2S Analyzer. The Jerome meter has a detection range from 0.003 to 50 ppmv. H_2S was measured in the field when the concentrations fell within the operating range of the meter. When H_2S concentrations greater than 50 ppmv were encountered, grab samples were collected and diluted in the laboratory using laboratory air, a glass syringe and a separate clean Tedlar bag. Samples were diluted by filling a clean Tedlar® bag with 1000 ml of laboratory air. A 3-ml syringe with a gastight valve was then used to extract 1 ml of the gas sample from the Tedlar® bag filled in the field. The 1-ml gas sample was introduced into the Tedlar® bag containing the 1000 ml of laboratory air and the diluted mixture was analyzed after 10 min. The concentrations of methane, carbon dioxide, and oxygen were measured using a Landtec (Colton, CA) GEM 500 meter in the field. Reduced sulfur compounds (RSC) other than H_2S were measured in the collected grab samples by analysis with an Entech 2000 Microscale Purge and Trap Concentrator attached to a HP5890 Gas Chromatograph with a Finnigan INCOS XL Single Quadrupole Mass Spectrometer Detector (GC/MS). A gas standard of 14 RSC was purchased from Matheson Tri-Gas Company (Pennsylvania) for peak identification and calibration. The operation of the GC/MS followed US EPA Method TO14; the detection limit of the RSC analyzed with the GC/MS was 0.005 ppmv. Blanks, replicates, and calibration check samples were performed as appropriate.

3. Results

3.1. Hydrogen sulfide concentrations

3.1.1. Hydrogen sulfide in C&D debris landfill gas

As presented in Table 2, H_2S was analyzed in a total of 362 samples of C&D debris landfill gas. The majority of the gas samples (321 of 362) were soil vapor collected from the soil-waste interface at the surface of the landfill. The soil vapor samples are best characterized as a mixture of landfill gas with ambient air. Gas wells were available at two sites (D and F), and 41 of the total H_2S measurements came from these locations. H_2S concentrations spanned a large range, from less than the detection limit of the Jerome meter (0.003 ppmv) up to 12,000 ppmv. Since the maximum concentration in the calibration range of the instrument was 50 ppmv, many samples required dilution. Over 80% of the gas samples measured contained H_2S above the detection limit.

Table 2 presents the minimum, maximum, standard deviation and arithmetic average concentrations for each site. Even at the sites with the maximum concentrations, some locations were still below the detection of the instrument. This large inter-site variability was attributed to the fact that most measurements were mixtures of landfill gas and ambient air, and the large heterogeneities of the C&D debris landfill system (which are discussed in more depth later). Since the measured concentrations ranged over many orders of magnitude, the median concentrations for each site are presented in Table 2 as this statistic may be a better representation of the central tendency of the data. In most cases, the average H_2S concentrations were much higher than the median concentrations, a result of a few very high concentration measurements.

Site D was found to have the highest average H_2S concentration (2110 ppm), and unlike other sites, the arithmetic mean was similar to the median concentration. This site was unique in that the majority of the gas samples were collected from gas collection wells installed within the waste. Thus, the majority of samples from this site can be characterized as more representative of gas from within the landfill, while the other sites are more reflective of mixtures of gas and air. The gas from three gas collection wells at over 5 different sampling events contained methane in the range of 15.4–44.9%. Another observation of note is the relatively high maximum and average concentration measured for site I. This landfill (along with site J) accepted a large amount of residuals from C&D debris recycling facilities. These recycling facilities remove large recoverable materials with established markets (wood, concrete, and metal).

Table 2
Hydrogen sulfide concentrations in landfill gas from gas wells or subsurface probes at 10 C&D debris landfills

Site	Number of samples	Samples with detections	Minimum (ppm)	Maximum (ppm)	Standard deviation	Average (ppm)	Median (ppm)
A	21	19	–	470	100	26	0.013
B	116	77	–	920	85	8.1	0.007
C	8	8	0.013	12,000	5400	30	25
D	26	25	–	7000	2200	2110	1800
E	72	62	–	2500	295	36	0.02
F	24	16	–	49	0.024	5.9	0.004
G	24	19	–	0.64	0.16	0.007	0.005
H	22	20	–	3300	700	151	0.025
I	23	22	–	11,000	2800	1200	23
J	26	26	–	530	100	26	0.35
Total	362	294	–	12,000		660	0.023

"–" Below detection limit (3 ppbv).

Drywall is not typically recycled and thus the residuals stream from these recycling facilities contains greater than normal percentages of drywall.

3.1.2. Hydrogen sulfide in ambient air at the landfill surface

A total of 341 ambient air H_2S measurements were made by placing the Jerome meter on the surface of the landfill. In most cases, one ambient measurement was made for every gas measurement. Landfill surface ambient air H_2S concentrations ranged from below detection to greater than the upper detection limit (50 ppm) of the meter (see Table 3). H_2S was detected in 48% of landfill surface ambient air measurements performed. At least one measurement from every site was below 0.003 ppmv. The sites where the maximum concentrations were recorded (sites I and J) were the two sites that accepted the C&D debris recycling facility residuals. As expected, H_2S concentrations at the landfill surface were much lower than measured in the landfill gas itself, or in the gas–air mixture at the waste–soil interface. As H_2S is emitted from the landfill surface, it becomes diluted as it mixes with air. The degree of dilution is a function of wind speed, direction and other climatic conditions. The H_2S measurements in the soil vapor at a particular location did not correlate well with measurements on the surface at the same location, a result of the variable nature of the H_2S concentrations in the soil vapor and the strong impact of changing weather conditions on H_2S dilution. A common observation made by the researchers was that odors were sporadic, especially on windy days. A strong odor would be noted in one location at a given time, and a short time later the odor would be gone.

3.2. Concentrations of other RSC gases

In addition to H_2S, organic RSC may cause odors, and many of these compounds have very low odor detection thresholds (Devai and Deluane, 1999). A total of 53 analyses for the organic RSC were performed on grab samples from 9 of the 10 sites. Since analysis of the compounds was conducted in the laboratory and not with a field instrument, only a limited number of samples were collected. Sample locations for the analysis of the other RSC were limited to those areas, where the concentration of hydrogen sulfide was 1 ppmv or above. Table 4 summarizes the RSC detection frequency and average (arithmetic) concentration at the nine landfills where samples were collected. Methyl mercaptan was detected most frequently (51%), followed by carbonyl sulfide (45%) and carbon disulfide (43%). The maximum average concentration for any compound was 164 ppmv of methyl mercaptan at site D. Site C had the highest average concentration of carbonyl sulfide and carbon disulfide.

The concentrations of the organic RSC were compared to H_2S concentration from the same samples. For the most part, H_2S concentrations were several orders of magnitude greater than the organic RSC concentrations. However, individual organic RSC concentrations were noted to be greater than H_2S concentration in some samples at two sites. At site D, carbonyl sulfide, methyl mercaptan, isopropyl mercaptan and *tert*-butyl mercaptan were observed at concentrations greater than H_2S in at least one sample. At site F, carbonyl sulfide and methyl mercaptan were greater than H_2S in most samples. Samples from both of these sites were collected from gas wells, suggesting that the organic RSC will be a greater contributor to the total RSC content in gas from within the landfill relative to gas mixed with air in the surface soil.

4. Discussion

4.1. RSC in C&D debris landfill gas

The production of H_2S in C&D debris landfills results from the biological conversion of sulfate from gypsum drywall. Gypsum drywall contains ≈90% gypsum and 10% paper facing and backing. Sulfate from gypsum is moderately soluble in water, with a solubility of approximately 1300 mg/L (Dean, 1973). Sulfate-reducing bacteria (SRB) can convert the sulfate from gypsum drywall into H_2S. Conditions required for optimal SRB activity include an anaerobic environment, a neutral pH, sufficient moisture, the presence of an organic carbon source, and of course, sulfate to serve as an electron acceptor (Postgate, 1984; Gypsum Association, 1992b). The connection between disposed drywall and H_2S production has been previously recognized from odor problems at landfill sites (Johnson,

Table 3
Ambient hydrogen sulfide concentrations measured in air at the landfill surface of 10 C&D debris landfills

Site	Number of samples	Samples with detections	Minimum (ppm)	Maximum (ppm)	Standard deviation	Average (ppm)	Median (ppm)
A	19	5	–	0.39	0.097	0.042	–
B	100	18	–	0.11	0.011	0.003	–
C	7	5	–	0.39	0.14	0.12	0.05
D	30	24	–	2.4	0.55	0.19	0.007
E	61	41	–	0.60	0.10	0.039	0.004
F	24	17	–	0.12	0.024	0.008	0.004
G	24	2	–	3.5	0.71	0.15	–
H	22	6	–	0.27	0.084	0.037	–
I	27	23	–	>50	10	4.0	0.61
J	27	21	–	>50	10	2.7	0.008

Note: Averages are calculated from detected samples and 50% of the detection limit for BDL samples. "–" Below detection limit (3 ppbv).

Table 4
Results of organic RSC measurements[a] at 10 C&D debris landfills (sites A–I)[b]

Constituent	Number of samples	% of samples with detections	Average RSC concentration (ppm)						
			A	C	D	E	F	H	I
Carbonyl sulfide	51	45.1	0.04	61	0.71	2.5	22	0.16	0.35
Methyl mercaptan	51	51	0.04	30	164	14	85	4.4	1.9
Dimethyl sulfide	51	25.5	–[c]	2.1	1.7	0.07	0.53	0.02	0.04
Ethyl mercaptan	51	7.8	–	0.19	–	–	–	–	0.03
Carbon disulfide	51	43.1	–	91	0.06	0.03	1.7	0.04	0.03
Isopropyl mercaptan	51	27.5	–	0.14	2.8	0.03	–	0.11	0.15
tert-Butyl mercaptan	51	5.9	–	–	0.13	–	–	0.01	–
Ethyl methyl sulfide	51	2.0	–	–	–	–	–	0.01	–
Thiophene	51	15.7	–	0.14	0.06	–	–	0.02	0.01
Methyl isopropyl sulfide	51	2.0	–	–	–	–	–	–	0.01
Dimethyl disulfide	51	2.0	–	–	–	–	–	–	0.01
2-Methylthiophene	51	11.8	–	0.19	0.13	–	–	–	–
3-Methylthiophene	51	2.0	–	0.24	–	–	–	–	–
sec-Butyl mercaptan	51	5.9	–	0.06	0.05	–	–	–	–

[a] Organic RSCs were below detection limit at sites B, G, and J.
[b] Sample locations for the analysis of the organic RSC were limited to those areas, where the concentration of hydrogen sulfide was 1 ppmv or above.
[c] Below detection limit (5 ppbv).

1986; Gypsum Association, 1992a). The addition of gypsum drywall to simulated landfill reactors was shown to increase H_2S production (Fairweather and Barlaz, 1998) and simulated C&D debris landfills containing drywall showed clear signs of SRB activity and sulfide production (Townsend et al., 1999; Weber et al., 2002; Jang and Townsend, 2003). H_2S was observed in varying concentrations at all 10 sites assayed in this study. While no specific measurements were conducted to confirm the presence of drywall, it is known to be a common component of C&D debris in Florida and many of the landfill operators believed gypsum drywall to be the cause of the odors. Some of the operators of the sites sampled cited the disposal of large amounts of drywall at a given time or location within the landfill as the source of odors.

Sulfate-reducing bacteria (SRB) are strict anaerobes and thus require the absence of oxygen (Postgate, 1984). In MSW landfills, anaerobic conditions develop relatively rapidly as oxygen is consumed during the decomposition of putrescible wastes such as food scraps. While C&D debris landfills should by and large lack the presence of putrescible materials, the evidence suggests that sufficient biodegradable material exists for anaerobic conditions to develop in at least some parts of a C&D debris landfill. Methane was detected in 45% of the gas samples collected, ranging from below the detection limit of the GEM meter (0.1%) up to 47.5%. The majority of these sampling locations were the waste–soil interface, and thus mixing and dilution with air was a large factor. The gas composition data from site D, which was hypothesized to be more representative of true C&D debris landfill gas since it was collected from gas wells, contained on average 38% methane. While pH was not measured in this study, previous research has found leachate from C&D debris landfills to range in pH from 6.1–7.9, an acceptable range for SRB survival (Townsend et al., 1999; Weber et al., 2002; Jang and Townsend, 2003). Moisture certainly plays a role and many of the operators visited attributed increased H_2S concentrations to periods of wet weather. The role of rain in C&D debris landfill H_2S production can be attributed to several possible mechanisms, including displacement of H_2S, solubility of sulfate, and pressure changes associated with a rain event.

H_2S produced within the landfill will migrate from the waste to the surrounding environment as a result of advection from gas pressure differences and diffusion from concentration differences. H_2S concentrations in the soil vapor at the surface of the landfill were observed over almost 8 orders of magnitude. Although gas pressures were not measured, the extremely large concentrations observed in some locations suggest that diffusion may be the dominant driving force. The variable results suggest that the production of H_2S may take place in isolated areas or pockets within the landfill which are assumed to be areas where gypsum drywall has been disposed and has become wet. The H_2S concentrations from the gas wells at site D were relatively constant as they represented a composite of gas from many areas within the landfill. Soil vapor samples were extremely variable, both from site to site, and at the same site. Several explanations are hypothesized for this variability. As described earlier, H_2S production likely occurs in discrete areas within the landfill, where wet drywall is located. In the case of MSW and methane production, materials that biodegrade into methane are well distributed throughout the waste stream. For C&D debris, however, some loads may contain large amounts of drywall, while other loads contain very little. During building construction, scrap drywall is produced during a relatively short period of time; drywall is added to a building during a very distinct phase of construction. The authors have observed many loads of debris at construction sites that contained nearly exclusively gypsum drywall. Other factors that impact the variability observed in the soil vapor likely include preferential paths within the waste for gas migra-

tion, heterogeneity in terms of moisture content, and differences in cover soil thickness and content.

H_2S concentrations in the ambient air above the surface of the landfill were lower than concentrations in the soil vapor. This was expected since gas concentrations will be diluted by the atmosphere. The cover soil also acts as a physical barrier that reduces gas migration, and in some cases may remove H_2S by biological or chemical means. A common observation by landfill operators is that H_2S emissions and subsequent odor problems are at their worst in areas where cover soil has been removed or compromised, as might occur from erosion after a rainfall. There was no obvious correlation between ambient and soil vapor H_2S concentrations measured at similar locations. In other words, even if the soil vapor was found to possess an elevated H_2S concentration, the air immediately above the area was not necessarily higher than areas where the soil vapor concentrations were much lower. This was attributed to the major influence of atmospheric conditions such as wind speed and direction on H_2S transport from the landfill surface.

Table 5 presents ranges of RSC concentrations reported for MSW landfill gas. Included on this list are the default concentrations used in the US Environmental Protection Agency's AP-42 landfill emissions estimation methodology (US EPA, 2000). Because of the wide range of H_2S concentrations measured, some data fall below the typical MSW gas concentrations, while others lie above. When the H_2S and organic RSC concentration data from site D are compared to the data in Table 5 (site D was arguably most representative of C&D debris landfill gas because it was collected from gas wells), the measured concentrations are over several orders of magnitude higher than what is typical of MSW landfills. As noted earlier, the relative abundance of some organic RSC compared to H_2S was greater at site D than from other sites. While hydrogen sulfide is produced from sulfate, the formation of the organic RSCs are typically thought to be the product of the anaerobic decay of organic sulfur compounds such as sulfur-containing amino acids and their derivatives (Smet and Langenhove, 1998). Perhaps gas from deeper within the landfill is more likely to contain the organic RSC compared to soil vapor collected at the surface because conditions are more favorable for the formation of organic RSC. Factors influencing the formation of organic RSC in landfill environments require further investigation.

4.2. Environmental impacts

The results do clearly indicate that H_2S, and possibly other RSC emissions, do represent a nuisance with respect to odor. The odor threshold for H_2S has been reported from less than 0.001 ppmv (Thorkild, 2002) up to 0.1 ppmv (Flynn, 1998). Many of the organic RSCs have low odor thresholds as well. The odor threshold for methyl mercaptan and dimethyl sulfide has been reported to be 0.001 ppmv (Thorkild, 2002).

The presence of H_2S, as well as the other RSC, has several implications for landfill owners and operators with respect to human health risk. It is well known that H_2S is lethal to humans at high concentrations. Exposure to concentrations above 100 ppmv quickly paralyzes the olfactory senses and is considered immediately hazardous to life and health (Flynn, 1998; Merchant et al., 2002). Concentrations above this level were detected in many C&D debris landfill gas samples. This indicates that proper personal protection should be taken for individuals involved in excavation activities at C&D debris landfills, those working with C&D debris landfill gas (as part of the operation of a gas collection system), and those entering confined spaces, where C&D debris landfill gas may have migrated.

The results of the ambient air measurements suggest that H_2S is sufficiently diluted in the atmosphere such that acute health impacts to landfill workers and surrounding residents should be minimal. The National Institute for Occupational Safety and Health (NIOSH) recommends a 10 ppm H_2S exposure limit for a 10-min exposure period (NIOSH, 1979), and the Occupational Safety and Health Administration (OSHA) lists a 20 ppm acceptable H_2S ceiling concentration (Donham et al., 2002). While samples of C&D debris landfill gas and soil vapor certainly exceed these limits on occasion (see Table 6), with the exception of a few measurements, most concentrations at the surface of the landfill were less. Chronic exposure to landfill oper-

Table 5
RSC concentrations reported in MSW landfill gas in previous studies

Compound	AP-42 (ppm)[a]	Capenter and Bidwell (ppm)[b]	Young and Parker (ppm)[c]	CWMB (ppm)[d]
Hydrogen sulfide	35.5	28.33	–	<1.98–14.0
Carbon disulfide	0.58	0.01	–	<0.03–0.60
Carbonyl sulfide	0.49	–	–	<0.20–8.81
Dimethyl sulfide	7.82	–	1.55	0.62–9.46
Dimethyl disulfide	–	–	10.21	0.01–3.70
Ethyl mercaptan	2.28	0.62	–	–
Methyl mercaptan	2.49	0.80	43.49	0.05– 214.96
Thiophene	–	–	–	<0.003–0.14

[a] US EPA (2000).
[b] Capenter and Bidwell (1996).
[c] Young and Parker (1983).
[d] CWMB (1987).

Table 6
Percentage of hydrogen sulfide concentrations exceeding typical worker safety exposure thresholds

Site	Soil vapor			Ambient air		
	# of samples	%>10 ppm[a]	%>20 ppm[b]	# of samples	%>10 ppm	%>20 ppm
A	21	19.0	9.5	19	0	0
B	116	0.9	0.9	100	0	0
C	8	50.0	50.0	7	0	0
D	26	80.8	73.1	30	0	0
E	72	5.6	2.8	61	0	0
F	24	16.7	12.5	24	0	0
G	24	0	0	24	0	0
H	22	9.1	4.5	22	0	0
I	23	60.9	56.5	27	7.4	7.4
J	26	26.9	19.2	27	7.4	7.4

[a] NIOSH exposure limit for 10-min exposure period.
[b] OSHA ceiling exposure limit.

ators is another concern. Recent data indicate that prolonged exposure to low concentrations of H_2S can result in a lowering of blood pressure, headache, nausea, weight loss, and eye-membrane inflammation (ATSDR, 2003). Recent information also suggests that chronic exposure to individuals with respiratory problems may be impacted by concentrations less than typical worker safety limits (Campagna et al., 2004).

4.3. Gas sampling at C&D debris landfills

In this study, two methods were used to collect landfill gas from C&D debris landfills: gas wells and soil probes. Samples from the gas wells more accurately reflect landfill gas concentrations because these samples were obtained from wells screened within the landfill. In characterizing the gas content from a C&D debris landfill, samples collected from gas wells would be most useful. Most C&D debris landfill operators do not install gas wells, however. Unlike the requirements for large MSW landfills in the US, no regulatory program exists requiring the installation and operation of gas collection systems for C&D debris landfills. The soil vapor probe method used in this study permitted samples to be collected, but the results do represent a mixture of air and landfill gas. Actual gas concentrations would in most cases be higher than those reported for the soil vapor probes.

5. Summary and conclusions

Odor problems associated with RSC in gas from C&D debris landfills have become a growing concern. While MSW landfill gas has been studied and characterized, the chemical composition of C&D debris landfill gas has not been previously presented. Research was conducted to chemically characterize the gases produced at C&D debris landfills by collecting samples from 10 Florida landfills that accept predominantly C&D debris. The results confirmed the presence of H_2S and other RSC in C&D debris landfill gas. H_2S concentrations were generally much higher than the concentrations of other RSC such as methyl mercaptan, carbonyl sulfide, and carbon disulfide.

Although the amount of gypsum drywall disposed in any of the landfills studied was not measured, gypsum drywall was a known component at all of the sites. At many sites the landfill operators identified drywall as the source or cause of the odor; interviews with landfill employees were valuable in terms of interpreting measurement results. Relatively large concentrations of H_2S (>100 ppmv) were measured in some locations at most of the sites; several of the landfills had no history of odor complaints and were still found to have large H_2S concentrations. H_2S in C&D debris landfill gas was encountered at levels of up to 12,000 ppmv, indicating that workers exposed to undiluted C&D debris landfill gas (during excavation or work near gas well) should be educated on possible risks and should take precaution. Ambient H_2S levels were much lower than those measured in the gas or the soil vapor, and were found to be extremely variable, from below 3 ppbv to over 50 ppmv. In many cases ambient H_2S levels were very low or below detection, but on some occasions ambient samples exceeded OSHA and NIOSH worker exposure limits. The impact on residents living near landfills with similar characteristics as those studied here is less clear. H_2S from C&D debris landfills can pose a nuisance problem to those nearby because of the odor. The potential impact on human health as a result of exposure to lower concentrations should be investigated further.

The variability of H_2S concentrations in the soil vapor was believed the result of waste and soil heterogeneities, impact of weather conditions, and different site management practices. Many factors come into play in determining the extent that odor problems would result from RSC emissions at a landfill site. These include wind speed and direction, temperature, atmospheric stability, terrain, and distance to susceptible sources. Although the study identified and determined the concentrations of H_2S and other RSC, additional research is recommended on measuring

actual RSC emission rates from C&D debris landfills, evaluating potential off-site odor impacts using dispersion model techniques, and identifying methods for control of such emissions. Additional research would also benefit from a more complete evaluation of the variability in waste composition at C&D debris landfills, and its relationship to RSC emission rates.

Acknowledgements

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TOXIC AMERICAN DRYWALL
Forced Us Out of Our Home

Michael & Jill Swidler

Clermont, FL

fourswids@msn.com

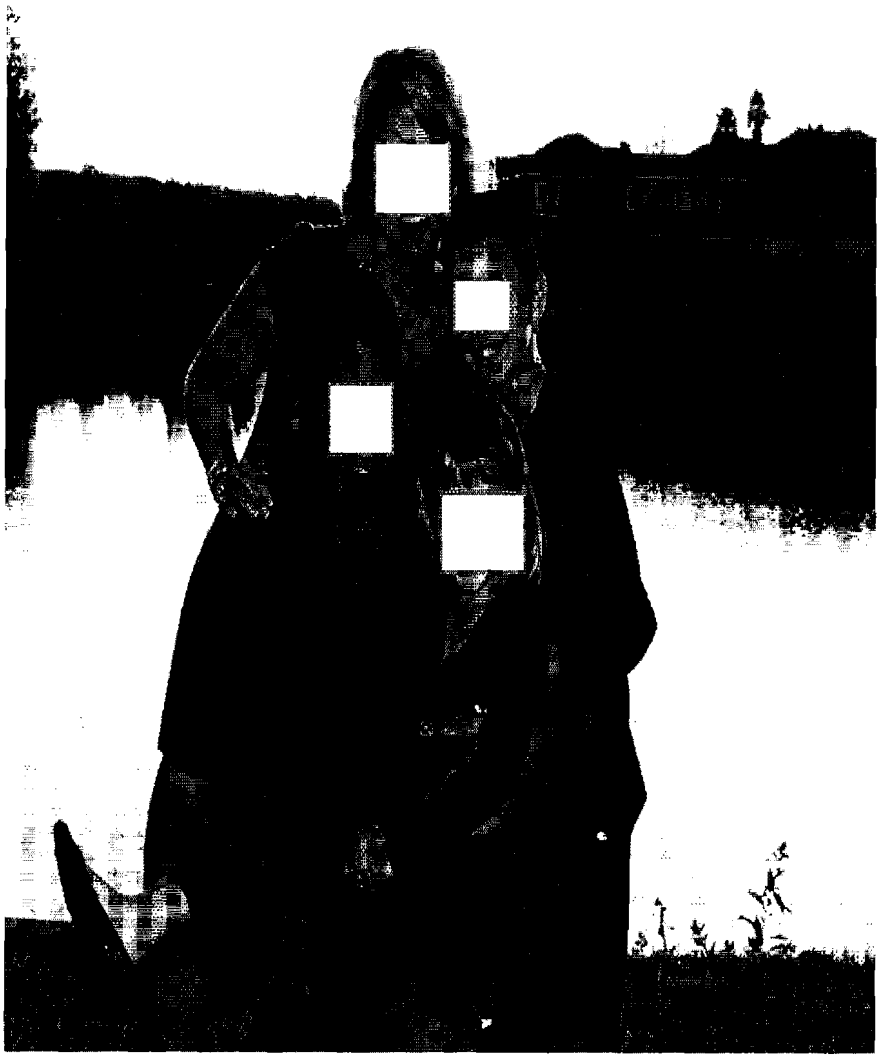
Our House

- Built as owner/builders in 2006
- 2,784 sq. ft two-story on a beautiful canal on the Clermont Chain of Lakes in Lake County, FL
- Appraised for $525,000 in January 2009

Home value today:

$0 due to toxic sulfur being emitted from the drywall

Our Family:



Michael, 43

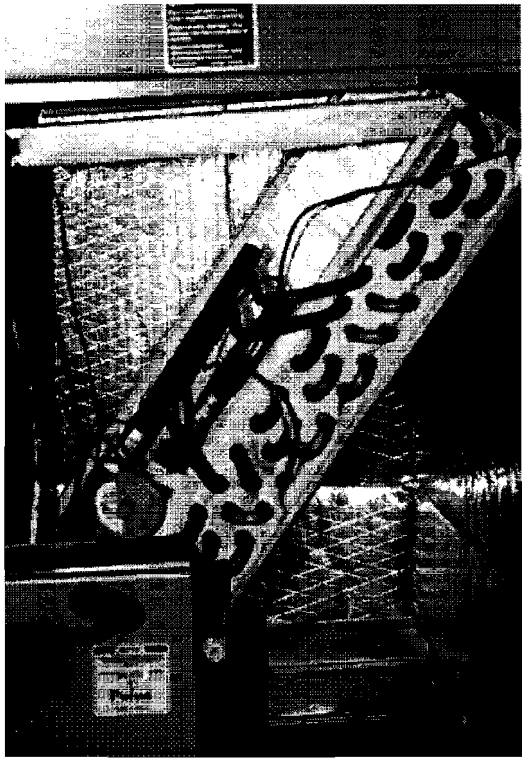
Jill, 41

Sam, 10

Hanna, 7

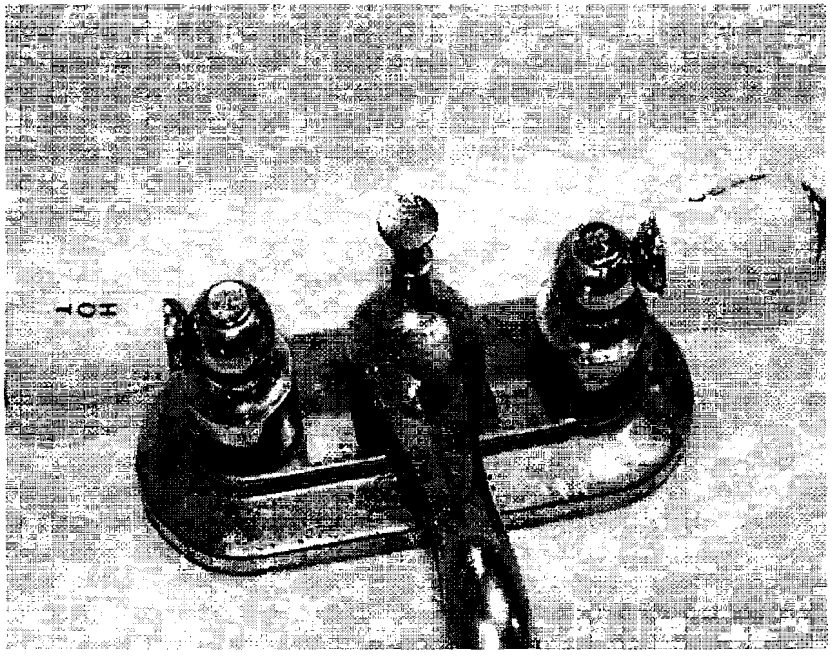
Symptoms: Air Conditioning

- Replaced evaporator coils in AC units 5 times in three years.
- The curved coils in this photo should be copper.
- In May '09, the system froze up and no longer works.



Symptoms: Plumbing Fixtures

- Plumbing fixtures corroded within 6 months of moving into home.
- This photo is from our children's bathroom. They brushed their teeth here for 3 years.

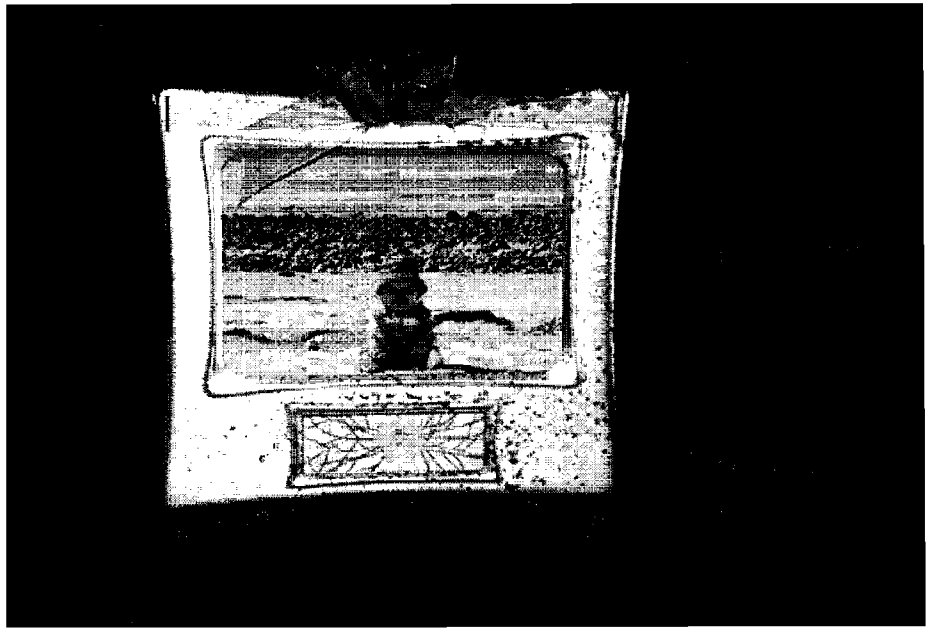


Symptoms: Appliances

- Bulb from new 57" TV burnt out in 10 months. We replaced it and it burnt out again two years later.
- Microwave memory board failed.
- Dishwasher power failure due to copper in wire nuts corroding.

Symptoms: Tarnished Items

- Most of my jewelry is tarnished and ruined.
- Photo frames, picture boxes, gift items all tarnished and ruined.



Health Concerns:

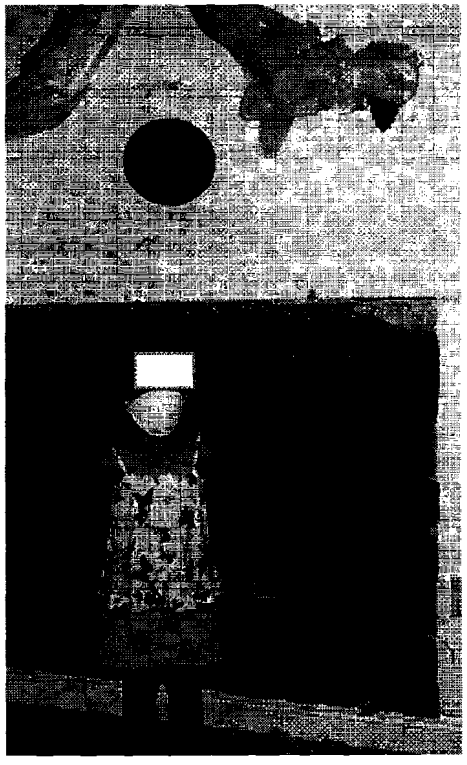
- We have been drinking water coming through corroded plumbing fixtures for 3 years
- We have eaten food that has been stored in the pantry with is made of drywall
- Headaches, irritated eyes, sore throats
- **If the gas is bad enough to corrode copper, what is it doing in our bodies?**

Homeowner Assistance: NONE

- Must wait 3-4 months on possible forbearance from Chase Home Mortgage
- Moved out in May adding $1500/mth rent to our already strapped budget
- No relief yet from insurance company. Don't expect any since this is a "product defect."
- Looking for property tax relief from Lake County

Personal Impact:

- Kids uprooted and "homeless" for a month.
- Kids over-react about headaches, tummy aches, etc. Afraid something bad will happen from living in the house.
- Unnecessary stress caused to whole family
- Financially devastating



Next Steps:

- Continue to demand public awareness of problem with American-made drywall
- Financial implications including losing good credit rating, foreclosure on home, liens from HOA and county for taxes
- Unable to purchase new home due to financial situation

UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF FLORIDA
OCALA DIVISION

MICHAEL SWIDLER, and JILL SWIDLER, on behalf of themselves and all others similarly situated,

Plaintiffs,

vs.

(b)(3):CPSA Section 6(b)

Defendants.

_____/

CLASS REPRESENTATION

CASE NO.:

5:09-cv-181-oc-10GRJ

JURY TRIAL DEMANDED
INJUNCTIVE RELIEF SOUGHT

CLASS ACTION COMPLAINT

COME NOW, the Plaintiffs, MICHAEL and JILL SWIDLER, by and through their undersigned counsel and bring this action on their behalf and on behalf of a class of persons defined below against (b)(3):CPSA Section 6(b) LUMBER COMPANY, L.L.P. ("84 LUMBER") and Defendants, and allege the following upon information and belief except as to the allegations concerning Plaintiffs themselves:

INTRODUCTION

1. Until the filing of this action, the defective drywall causing damage to tens of thousands of homes within the Southeastern United States was thought to have been manufactured exclusively by Chinese companies. However, this consumer class action claims that the issues surrounding the dangerous chemicals used to create the synthetic gypsum used in modern day drywall have infiltrated American-based manufacturers as well.

2. Investigation conducted prior to the filing of this Complaint concluded that drywall manufactured by (b)(3):CPSA Section 6(b) is causing sulfur contamination and damages in much the same manner as the Chinese drywall that is the subject of separate litigation.

3. Plaintiffs bring this class action on behalf of themselves and all owners of homes in the State of Florida that were built using (b)(3):CPSA Section 6(b) drywall manufactured, processed, distributed, delivered, supplied, inspected, marketed and/or sold by Defendant (b)(3):CPSA Section 6(b) and sold to the consuming public by Defendant 84 LUMBER, or other supply companies not yet identified.

4. The drywall manufactured, processed, distributed, delivered, supplied, inspected, marketed, and/or sold by Defendants to build the homes of Plaintiffs and the Plaintiff Class Members is defective and emits levels of sulfur, methane and/or other volatile organic chemical compounds that cause excessive corrosion of HVAC coils and refrigerator units, certain electrical wiring and plumbing components, and other household items, as well as creates noxious odors. Defendants' defective synthetic-gypsum drywall further causes allergic reactions, coughing, sinus and throat infection, eye irritation, respiratory problems and other health concerns. Defendants' drywall is inherently defective and not suitable for its intended use.

JURISDICTION

5. This action is filed in this Federal Court pursuant to diversity jurisdiction under the Class Action Fairness Act of 2005, as codified at 28 U.S.C. § 1332(d)(2).

6. The amount in controversy exceeds five million dollars considering the length of the class period and the number of Plaintiffs and Class Members that have purchased the defective product within the state of Florida.

7. There is complete diversity between Plaintiffs and the Defendants in this matter as Plaintiffs and Plaintiff Class Members are citizens and residents of the state of Florida; Defendant (b)(3):CPSA Section 6(b) s a nationwide company headquartered in Atlanta, Georgia; and, Defendant 84 LUMBER is a national company headquartered in Eighty Four, Pennsylvania.

VENUE

8. Defendant (b)(3):CPSA Section 6(b) as and continues to conduct business throughout the state of Florida at all relevant times, including the Middle District of Florida.

9. Defendant 84 LUMBER has and continues to conduct business throughout the state of Florida at all relevant times, including the Middle District of Florida.

10. Actions giving rise to the named Plaintiffs' claims occurred in Lake County, Florida, which provides for federal jurisdiction in the Middle District of Florida, Ocala Division.

PARTIES

11. Plaintiffs, MICHAEL and JILL SWIDLER, are residents of Lake County, Florida and own a home located at 11101 Versailles Boulevard, Clermont, FL 34711-7346.

12. Defendant (b)(3):CPSA Section 6(b) is a nationwide company doing business in the state of Florida (b)(3):CPSA Section 6(b) rporate Headquarters is located (b)(3):CPSA Section 6(b) in the manufacture of numerous building materials including synthetic-gypsum drywall.

14. Defendant 84 LUMBER is a nationwide company doing business in the state of Florida. 84 LUMBER's Corporate Headquarters is located at 1019 Route 519, Eighty Four, PA 15330-2813.

15. 84 LUMBER is a privately held building materials and service supplier for professional contractors and consumers throughout the United States including the state of Florida.

FACTS (GENERAL ALLEGATIONS)

A. History of Drywall

16. "Drywall" is the common term for rigid paper-faced gypsum boards or panels regularly used in the construction industry in the United States. Traditionally, the gypsum used to make drywall was mined from various locations throughout the country. However, recent advancements in technology have created a new form of gypsum known as "synthetic gypsum" which is a byproduct produced by coal burning power plants. On information and belief, it is the synthetic gypsum which is at the heart of the present drywall crisis. An understanding of the connection between sulfur-laden drywall and coal burning power plants is necessary to explain the present situation.

17. Fossil fuels such as coal and oil contain significant amounts of sulfur. When burned, about 95 percent or more of the sulfur is converted to sulfur dioxide that would be released into the environment. Sulfur dioxide is a harmful pollutant known to cause acid rain and significant health issues. Thus, the emissions from coal burning power plants must be "scrubbed" to remove the sulfur dioxide. Specifically, coal burning plants use technology commonly known as "flue gas desulfurization" to scrub or remove sulfur dioxide from the exhaust gasses produced by such facilities.

18. The flue gas desulfurization process typically uses a calcium or sodium based alkaline reagent. Flue gas is ducted to a spray tower where an aqueous slurry of sorbent is injected into the flue gas. A portion of the water in the slurry is evaporated and the waste gas

stream becomes saturated with water vapor. Sulfur dioxide dissolves into the slurry droplets where it is collected.

19. Air is then added to the slurry sorbent causing oxidation. This oxidization process chemically creates a byproduct known as synthetic gypsum (calcium sulfate). Once the remaining water is removed, the synthetic gypsum byproduct is sold for use in various products such as cement, plaster, and drywall.

20. Because synthetic gypsum is created through a desulfurization process by which sulfur is removed from power-plant flue gases, the amount of sulfur-based pollutant in synthetic gypsum is far higher than the levels found in naturally-occurring gypsum.

21. When synthetic gypsum is used to manufacture drywall, the end product contains excessive amounts of sulfur-based pollutants. When the exterior of Florida homes containing synthetic gypsum drywall become heated due to normal Florida temperatures, the air temperature inside the wall cavity between the outer shell of the home and the inner drywall becomes significantly elevated. These elevated temperatures combined with Florida's humidity cause sulfur dioxide gas to be released, once again, from the synthetic gypsum.

22. This sulfur dioxide gas causes significant oxidation of various metals that lie in close proximity to the drywall. Metal components in air conditioning coils, electric motors and other parts in dishwashers, microwaves, smoke detectors, computers and other household appliances oxidize and fail as a result of the sulfur gases found in homes containing synthetic gypsum drywall.

B. (b)(3):CPSA Section 6(b) **ynthetic Gypsum Drywall**

23. ses synthetic gypsum generated though the flue gas desulfurization process in its gypsum drywall marketed under the trade nam (b)(3):CPSA Section 6(b)

(b)(3):CPSA Section 6(b) contains excessive amounts of sulfur-based pollutants due to its high content of synthetic gypsum. When the ToughRock's temperature becomes elevated sulfur-based gases are released which cause damage to the metal components of products as described above.

24. Defendan(b)(3):CPSA Section 6(b) anufactured, processed, distributed, delivered, supplied, inspected, marketed and/or sold defective synthetic gypsum drywall, which was unreasonably dangerous in its normal use in that the drywall caused, and continues to cause, corrosion to HVAC coils and refrigerator units, certain electrical wiring and plumbing components, and caused allergic reactions, coughing, sinus and throat infections, eye irritations, respiratory problems and other health concerns.

25. (b)(3):CPSA Section 6(b) used waste material from coal burning power plants to create drywall used in American homes. The use of such waste materials causes the emission of one of several sulfur-based gasses including sulfur dioxide and hydrogen sulfide.

26. When combined with moisture in the air, these sulfur compounds create sulfuric acid, which has been known to dissolve solder joints, corrode coils and copper tubing –creating leaks, blackening coils and causing HVAC systems and refrigerators to repeatedly fail. Sulfuric acid has also been shown to corrode copper electrical wiring and plumbing components. Sulfuric acid can also harm metals such as chrome, brass and silver.

27. Defendant, (b)(3):CPSA Section 6(b) efective synthetic-gypsum drywall can detrimentally affect and ultimately require the replacement of a variety of household items, including but not limited to, dishwashers, microwaves, lighting fixtures, faucets and silverware. In addition, the defective drywall has a noxious odor.

28. Considering the size of (b)(3):CPSA Section 6(b) operations, a significant amount, and most likely several million square feet of its defective drywall was used in the construction of Florida homes between 2004 and the date of this Complaint.

C. Facts Pertaining to Class Representatives Michael and Jill Swidler

29. Plaintiffs MICHAEL and JILL SWIDLER began construction of their home located at 11101 Versailles Boulevard, Clermont, Florida on or about March of 2006. Michael Swidler is a builder by trade and has been employed doing residential construction by Lennar Homes, Engle Homes and Deluca Homes for approximately 15 years.

30. Plaintiff, MICHAEL SWIDLER, acted as owner/builder in the construction of his family home.

31. In May of 2006, Plaintiff SWIDLER ordered 289 sheets of half-inch drywall from Defendant, 84 LUMBER's store located in Tavares, Florida.

32. On or about June 1, 2006, 84 LUMBER employees delivered 289 sheets of (b)(3):CPSA Section 6(b) drywall to the building site in Clermont, Florida.

33. The 84 LUMBER delivery crew placed the drywall inside the dried-in structure per Plaintiff SWIDLER's instructions.

34. The (b)(3):CPSA Section 6(b) rwall was installed and finished by Plaintiffs' drywall subcontractor in accordance with industry standards and (b)(3):CPSA Section 6(b) (b)(3):CPSA Section 6(b) stallation guidelines.

35. At no time did the drywall at issue become wet or exposed to the elements.

36. Construction was completed and the Plaintiffs moved into their new home in October of 2006.

37. Plaintiffs have two young children who live in the home with them.

38. In early 2007, the plumbing fixtures and several silver picture frames in the Plaintiffs' home started to corrode.

39. On or about January 14, 2008, the coils in the Plaintiffs' upstairs HVAC unit developed a leak and failed despite being less than 2 years old. Plaintiffs paid to have the HVAC coils replaced.

40. On or about July 8, 2008, the coils in the Plaintiffs' upstairs HVAC unit developed another leak and failed again despite the coils being replaced six months prior. Again, Plaintiffs paid to have the HVAC coils replaced.

41. The coils in the Plaintiffs' garage HVAC unit failed on or about December 22, 2007 and had to be replaced. Currently, the coils in both HVAC units have again turned black and are oxidizing rapidly.

42. On or about April of 2008, the microwave in Plaintiffs' home failed due to the keypad failing to operate properly. A new keypad was ordered and installed to remedy the problem.

43. On or about August of 2008, the main bulb in Plaintiffs' television went out although the television was less than one year old.

44. On or about February of 2009, the dishwasher in Plaintiffs home failed due to the copper wiring surrounding the copper leads in the control unit of the device having completely deteriorated. The repairman informed the Plaintiffs that the "copper wiring inside the wire nuts was gone which caused the malfunction." It was subsequently replaced.

45. The smoke detectors in the Plaintiffs' home randomly go off without cause, and the home has a strong sulfur odor throughout.

46. All the copper ground wires attached to every light-switch and outlet in the home have turned black and are rapidly oxidizing. The extent of the damage to the remaining wire inside the walls of the home is yet to be determined.

47. On information and belief, significant damage has been done to other household items such as television and stereo components and computer components within the SWIDLER home. Pieces of Plaintiff, JILL SWIDLER's jewelry have also turned black and prematurely oxidized.

48. On or about April 8, 2009, Plaintiffs MICHAEL AND JILL SWIDLER and their two children moved out of their home as a result of exposure to and damages caused by Defendants' defective synthetic-gypsum drywall.

CLASS ACTION ALLEGATIONS

49. Plaintiffs brings this Class action pursuant to Rule 23 of the Federal Rules of Civil Procedure on behalf of themselves and a Class defined as follows:

All persons who own a home in the State of Florida which contains defectiv(b)(3):CPSA Section 6(b) Drywall between 2004 a[illegible]

A subclass exists which is defined as all persons in the State of Florida that purchased defective(b)(3):CPSA Section 6(b) rywall from any 84 Lumbar Company location (b)(3):CPSA Section 6(b) [illegible] period.

50. *Numerosity:* The Class is composed of thousands of persons geographically dispersed throughout the State of Florida, the joinder of whom in one action is impractical. The Class is ascertainable and identifiable. Membership in the Class can be determined easily. Defendants can determine the identity of all Class members from their own records.

51. *Commonality:* Questions of law and fact common to the Class exists as to all members of the Class and predominate over any questions affecting only individual members of the Class. These common legal and factual issues include the following:

a. Whether Defendant (b)(3):CPSA Section 6(b) anufactured and sold a defective product;

b. Whether Defendant 84 LUMBER sold a defective product;

c. Whether (b)(3):CPSA Section 6(b) conduct in manufacturing and/or distributi[illegible]w the duty of care owed to Plaintiffs and members of the Class;

d. Whether 84 LUMBER's conduct in selling defective drywall fell below the duty of care owed to Plaintiffs and members of the Class;

e. Whether Defendants concealed adverse information from Plaintiffs and the Class;

f. Whether Plaintiffs and the Plaintiff Class Members are entitled to recover compensatory, exemplary, punitive, and/or other damages as a result of Defendants' conduct;

g. Whether Defendants breached express warranties;

h. Whether Defendants breached implied warranties of merchantability;

i. Whether the Plaintiff Class is entitled to compensatory damages and, if so, the nature and extent of such damages; and

j. Whether Defendants failed to adequately warn of the adverse effects of their drywall.

52. *Typicality*: Plaintiffs' claims are typical of the claims of the Plaintiff Class as all such claims arise out of Defendants' uniform course of wrongful conduct complained of herein.

53. *Adequacy of Representation:* Plaintiffs will fairly and adequately protect the interests of the Members of the Class and have no interests antagonistic to those of the Class. Plaintiffs have retained counsel experienced in the prosecution of complex class actions, including product and construction cases.

54. *Predominance and Superiority:* This Class action is appropriate for certification because questions of law and fact common to the Members of the Class predominate over questions affecting only individual Members, and a Class action is superior to other available methods for the fair and efficient adjudication of this controversy, since individual joinder of all Members of the Class is impracticable. Should individual Class Members be required to bring separate actions, this Court and courts throughout the state of Florida would be confronted with a multiplicity of lawsuits burdening the court system while also creating the risk of inconsistent rulings and contradictory judgments. In contrast to proceeding on a case-by-case basis, in which inconsistent results will magnify the delay and expense to all parties and the court system, this class action presents far fewer management difficulties while providing unitary adjudication, economies of scale and comprehensive supervision by a single Court.

55. This action is also properly certified under the provisions of F.R.C.P. 23 because:

a. the prosecution of separate actions by individual members of the Class would create a risk of inconsistency of varying adjudications with respect to individual Class Members, thus establishing incompatible standards of conduct for Defendants; and

b. due to the nature of the relief sought, the prosecution of separate actions by the individual members of the Class would create a risk of adjudications with respect to them that would, as a practical matter, be dispositive of the interests of the other members of the Class not parties to such adjudications or would substantially impair or impede the ability of such members of the Class to protect their interests.

56. Defendants' actions will require Plaintiffs and the Plaintiff Class Members to evacuate their homes, remove all defective drywall from the homes, perform extensive remedial repairs to the homes, and then repair the damaged property made visible during the performance of these repairs.

57. Plaintiffs and the Plaintiff Class Members will also be required to repair or replace corroded or damaged household items such as dishwashers, microwaves, lighting fixtures, plumbing fixtures, electronics, jewelry and silverware.

58. As a result, Plaintiffs and the Plaintiff Class Members have suffered, and continue to suffer damages as a result of Defendants' defective drywall and the corrosive effects of the sulfur compounds found therein. These damages include, but are not limited to, the costs of inspection, the costs and expenses necessary to remove and replace the defective drywall, adjoining components, electrical wiring, interior finishes and personal property.

59. Defendants' actions also resulted in substantial diminution in the value of Plaintiffs and the Plaintiff Class Members' homes.

60. Defendants had a duty to exercise reasonable care in inspecting, marketing and/or selling drywall placed into the stream of commerce, including a duty to assure that the product would perform as intended and would not cause and/or did not cause damage as described herein.

61. Defendants breached their duty by failing to exercise ordinary care in the inspecting, marketing and/or selling drywall Defendants placed into the stream of commerce in that it knew or should have known that the product was defective, did not function as intended and/or created a high risk of unreasonable, dangerous side effects, including, but not limited to, corrosion to HVAC coils and refrigerator units, wires, tubes and pipes, and caused allergic reactions, coughing, sinus and throat infections, eye irritations, respiratory problems and other health concerns.

62. Defendants knew or should have known that consumers such as Plaintiffs and the Plaintiff Class Members would suffer damage as a result of Defendants' failure to exercise

ordinary care.

63. As a result of the foregoing acts and omissions, Plaintiffs and the Plaintiff Class Members require and/or will require extensive reconstruction and repairs, and will incur repair and replacement costs, repairs for appliances, incidental, and other related expenses. Plaintiffs and the Plaintiff Class Members are informed and believe, and further allege, that Plaintiffs and the Plaintiff Class Members will in the future be required to pay for additional repairs and/or replacement costs.

COUNT I
BREACH OF IMPLED WARRANTY OF MERCHANTABILITY

64. Plaintiffs, MICHAEL AND JILL SWIDLER, individually and on behalf of all others similarly situated, repeat, reiterate and re-allege paragraphs 1 through 63 of this Complaint, with the same force and effect as if fully set forth herein.

65. This is an action against Defendant 84 LUMBER for breach of the implied warranty of merchantability under the common law and/or Florida Statute §672.314.

66. This is an action against Defendant (b)(3):CPSA Section 6(b) for breach of the implied warranty of merchantability under the common law and/or Florida Statute §672.314.

67. (b)(3):CPSA Section 6 (b) is the manufacturer, supplier, and distributor of its drywall products throughout the United States.

68. 84 LUMBER is a merchant of gypsum drywall at its various locations throughout the United States, including the (b)(3):CPSA Section 6(b) drywall which is the subject of this action.

69. The defective drywall used in the construction of Plaintiffs' and the Plaintiff Class Members' homes was sent from (b)(3):CPSA Section 6 (b) to 84 LUMBER who delivered the product to Plaintiffs and the Plaintiff Class for use in various construction projects.

70. Homebuilders and/or their agents or employees entered into contracts with either one Defendant or both Defendants to purchase synthetic-gypsum drywall that was intended to be installed in the homes of the Plaintiffs and the Plaintiff Class.

71. Plaintiffs and the Plaintiff Class Members are intended third-party beneficiaries of contracts between Defendants and Homebuilders because it was the clear and manifest intent of Defendants that the contracts were to primarily and directly benefit Plaintiffs and the Plaintiff Class Members who would ultimately own the homes being constructed.

72. Pursuant to Florida Statute 672.314 and/or common law, Defendants warranted that the synthetic-gypsum drywall was merchantable and reasonably fit for the ordinary purpose for which drywall is normally used.

73. Defendants breached the implied warranty of merchantability by selling certain synthetic-gypsum drywall that was defective and not reasonably fit for the ordinary purpose for which drywall is used.

74. The drywall that was manufactured and supplied by (b)(3):CPSA Section 6(b) and sold by 84 LUMBER was installed in Plaintiffs' home and the homes of the Plaintiff Class Members and is defective because it causes damage to various metal components and creates various health issues as described above.

75. As a result of Defendants' breach of the implied warranty of merchantability, Plaintiffs and the Plaintiff Class Members have suffered and continue to suffer damages.

76. As a result of the foregoing acts and omissions, Plaintiffs and the Plaintiff Class Members require and/or will require extensive reconstruction and repairs, and will incur repair and replacement costs, repairs for appliances, incidental, and other related expenses. Plaintiffs and the Plaintiff Class Members are informed and believe, and further allege, that Plaintiffs and

the Plaintiff Class Members will in the future be required to pay for additional repairs and/or replacement costs.

COUNT II
BREACH OF IMPLED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE

77. Plaintiffs, MICHAEL AND JILL SWIDLER, individually and on behalf of all others similarly situated, repeat, reiterate and re-allege paragraphs 1 through 63 of this Complaint, with the same force and effect as if fully set forth herein.

78. This is an action against Defendant (b)(3):CPSA Section 6(b) for breach of the implied warranty of fitness for a particular purpose under the common law and/or Florida Statute §672.314.

79. This is an action against Defendant 84 LUMBER for breach of the implied warranty of fitness for a particular purpose under the common law and/or Florida Statute §672.314.

80. (b)(3):CPSA Section 6(b) a manufacturer and supplier of synthetic-gypsum drywall.

81. 84 LUMBER is a supplier of synthetic-gypsum drywall.

82. Upon information and belief, the defective drywall used in the construction of Plaintiffs' and the Plaintiff Class Members' homes was sent from the (b)(3):CPSA Section 6(b) o 84 LUMBER.

83. Upon information and belie (b)(3):CPSA Section 6(b) so sent defective drywall that was used in the construction of Class Members' homes through other supply companies and retail outlets. Plaintiffs will amend this complaint when and if such other Defendants are

identified.

84. Homebuilders and/or their agents or employees entered into contracts with one or both Defendants to purchase gypsum drywall that was installed in Plaintiffs Class Members' homes.

85. Plaintiffs and the Plaintiff Class Members are intended third-party beneficiaries of those contracts because it was the clear and manifest intent of Defendants that the contracts were to primarily and directly benefit Plaintiffs and the Plaintiff Class Members.

86. At the time Defendants entered into the contracts with the homebuilders, Defendants had reason to know that the gypsum drywall was being purchased for the particular purpose of being installed in residential homes like those owned by Plaintiffs and the Plaintiff Class Members, and that homebuilders were relying on Defendants' skill and judgment to furnish gypsum drywall that was suitable for this particular purpose.

87. Plaintiffs and the Plaintiff Class Members used the gypsum drywall provided by Defendants without being informed by Defendants that such drywall was unsuitable for the particular purpose of being installed in residential homes owned by Plaintiffs and the Plaintiff Class Members.

88. Pursuant to Florida Statute 672.315 and/or common law, Defendants warranted that the gypsum drywall was fit for the particular purpose of being installed in residential homes.

89. Defendants breached the implied warranty of fitness for a particular purpose by selling certain synthetic-gypsum drywall that was defective and not fit for the particular purpose of being installed in residential homes.

90. The drywall manufactured, supplied, and sold by Defendants and installed in Plaintiffs' home and the homes of the Plaintiff Class Members is defective because it causes

damage as described more fully herein.

91. As a result of Defendants' breach of the implied warranty of merchantability, Plaintiffs and the Plaintiff Class Members have suffered and continue to suffer damages.

92. As a result of the foregoing acts and omissions, Plaintiffs and the Plaintiff Class Members require and/or will require extensive reconstruction and repairs, and will incur repair and replacement costs, repairs for appliances, incidental, and other related expenses. Plaintiffs and the Plaintiff Class Members are informed and believe, and further allege, that Plaintiffs and the Plaintiff Class Members will in the future be required to pay for additional repairs and/or replacement costs.

COUNT III
BREACH OF EXPRESS WARRANTY
(Against (b)(3):CPSA Section 6(b) ly)

93. Plaintiffs, MICHAEL AND JILL SWIDLER, individually and on behalf of all others similarly situated, repeat, reiterate and re-allege paragraphs 1 through 63 of this Complaint, with the same force and effect as if fully set forth herein.

94. (b)(3):CPSA Section 6(b) pressly warranted that its synthetic-gypsum drywall was safe and appropriate for use in a variety of residential building applications, including but not limited to interior walls, and ceilings.

95. Because of the excessive amount of Sulfur-based pollutants involved, Defendant (b)(3):CPSA Section 6(b) synthetic-gypsum drywall did not conform to these express representations because (b)(3):CPSA Section 6(b) ynthetic-gypsum drywall is defective and unsafe, and is associated with numerous side effects resulting from excessive amounts of sulfur-based pollutants.

96. As a direct and proximate result of the breach of said warranties, Plaintiffs and the

Plaintiff Class Members suffered, and/or will continue to suffer, and/or are at an increased risk to suffer, extensive damage, economic loss and/or other harm.

97. Plaintiff Class Members relied on the express warranties made by (b)(3):CPSA Section 6(b) (b)(3):CPSA because they used the product in the construction of residential dwellings.

98. (b)(3):CPSA Section 6(b) breached the aforesaid express warranties, as the drywall at issue was defe

99. pressly represented to Plaintiffs and the Plaintiff Class Members to their homebuilders that its drywall was safe, efficacious, and fit for use for the purposes intended, that the its drywall was of merchantable quality, that its drywall did not produce any dangerous side effects, and that its drywall was adequately tested and fit for its intended use.

100. (b)(3):CPSA Section 6 (b) knew or should have known that the aforesaid representations and warranties were false, misleading and untrue because its drywall was not fit for the use intended and, in fact, produced severe and extensive damage to Plaintiffs' home and to the homes of the Plaintiff Class Members because of the materials used to manufacture its drywall.

101. As a result of the foregoing acts and omissions, Plaintiffs and the Plaintiff Class Members require and/or will require extensive reconstruction and repairs, and will incur repair and replacement costs, repairs for appliances, incidental, and other related expenses. Plaintiffs and the Plaintiff Class Members are informed and believe, and further allege, that Plaintiffs and the Plaintiff Class Members will in the future be required to pay for additional repairs and/or replacement costs.

COUNT IV
VIOLATION OF THE FLORIDA DECEPTIVE AND UNFAIR TRADE PRACTICES ACT
Defendants 84 LUMBER and (b)(3):CPSA Section 6(b)

102. Plaintiffs, MICHAEL AND JILL SWIDLER, individually and on behalf of all others similarly situated, repeat, reiterate and re-allege paragraphs 1 through 63 of this Complaint, with the same force and effect as if fully set forth herein.

103. This action seeks to secure redress for the unlawful, deceptive and unfair trade practices, perpetrated by Defendan(b)(3):CPSA Section 6(b)ND 84 LUMBER against Florida consumers.

104. Plaintiffs and Plaintiff Class Members are "consumers" and the subject transactions are "trade or commerce" as defined by Florida Statute § 501.203(8).

105. Defendants actions and/or omissions as described herein violate Florida Statutes, § 501.201, *et seq.*, which was enacted to protect the consuming public from those who engage in unfair methods of competition, or unconscionable, deceptive, or unfair acts or practices in the conduct of any trade or commerce.

106. Specifically, (b)(3):CPSA Section 6(b) misrepresented and omitted material information regarding its drywall product by failing to disclose known risks and by selling the product as being fit for use in residential construction projects.

107. (b)(3):CPSA Section 6(b) misrepresentations and concealment of material facts constitute unconscionable commercial practices, deception, fraud, false pretenses, misrepresentation, and/or the knowing concealment, suppression, or omission of materials facts with the intent that others rely on such concealment, suppression, or omission in connection with the sale and use of Defendants' drywall in violation of Florida Statutes, 501.201, *et. seq.*

108. (b)(3):CPSA Section 6(b) olated Florida Statutes, §501.201, *et seq.*, by knowingly

and falsely representing that Defendants' drywall was fit to be used for the purpose for which they were intended, when Defendants knew or should have known that it was dangerous, ineffective, unsafe and by other acts alleged herein.

109. (b)(3):CPSA Section 6(b) gaged in the deceptive acts and practices alleged herein in order to sell its drywall to the public, including Plaintiffs and the Plaintiff Class Members, and/or their representatives.

110. Said acts and practices on the part (b)(3):CPSA Section 6(b) ere and are illegal and unlawful pursuant to Florida Statute §501.204.

111. As a direct and proximate result of olations of Florida Statutes, §501.201, *et. seq.*, Plaintiffs and the Plaintiff Class Members have suffered damages. Plaintiffs and the Plaintiff Class Members are entitled to compensatory damages, equitable and declaratory relief, punitive damages, costs and reasonable attorney's fees.

COUNT V
VIOLATION OF THE MAGNUSON-MOSS WARRANTY IMPROVEMENT ACT

112. Plaintiffs, MICHAEL AND JILL SWIDLER, individually and on behalf of all others similarly situated, repeat, reiterate and re-allege paragraphs 1 through 63 of this Complaint, with the same force and effect as if fully set forth herein.

113. Plaintiffs and the Class are "consumers" as defined by 15 U.S.C. § 2301(3).

114. Each Defendant is a "supplier," "warrantor," and "service contractor" as defined by 15 U.S.C. §§ 2301(4), 2301(5), and 2301(8).

115. The Drywall is a "consumer product" as defined by 15 U.S.C. § 2301 (1).

116. The Magnuson-Moss Warranty Improvement Act ("MMWA") requires Defendants to be bound by all warranties implied by state law.

117. Section 15 U.S.C. § 2310(d)(1) of the MMWA provides that a consumer who is damaged by the failure of a supplier, warrantor, or service contractor to comply with any obligation under this title, or under a written warranty, implied warranty, or service contract, may bring suit for damages and other legal and equitable relief in any court of competent jurisdiction in any State.

118. As a direct and proximate result of Defendants' breach of warranty, Plaintiffs and the Class are entitled to the remedies prayed for below.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs and Plaintiff Class Members demand judgment against the Defendants, jointly and severally, as follows:

An Order certifying the Class, appointing MICHAEL AND JILL SWIDLER as Class Representatives and appointing Varnell & Warwick, P.A. as counsel to the Class;

a. Equitable, injunctive, and declaratory relief;

b. Damages in an amount to be determined at trial, but in an amount exceeding 75 thousand dollars in Pre-judgment and post-judgment interest at the maximum rate allowable at law;

c. Treble, exemplary, and/or punitive damages in an amount to be determined at trial;

d. The costs and disbursements incurred by Plaintiffs and Plaintiff Class Members in connection with this action, including reasonable attorneys' fees;

e. All statutory damages;

f. Disgorgement of Defendants' profits from the sale of drywall;

g. Reimbursement for all costs and expenses incurred in the repair of any

purchase price paid, including, but not limited to, insurance co-payments, interest on these amounts from the date of purchase, attorneys' fees and costs, non-pecuniary damages, as well as any other legal or equitable relief to which Plaintiffs may be entitled;

h. Such other and further relief under all applicable state and federal law and any other relief the Court deems just and appropriate.

DEMAND FOR JURY TRIAL

Plaintiffs, MICHAEL AND JILL SWIDLER, individually and on behalf of the Plaintiff Class Members, hereby demand a trial by jury as to all issues so triable.

Dated: April 24, 2009.

Respectfully Submitted,

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Attorneys for Plaintiffs and the Class

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Drywall Sampling Analysis

Background

Consumers from more than 10 States and the District of Columbia have reported concerns related to drywall imported from China that is in their houses. The Consumer Product Safety Commission (CPSC) is the lead federal agency for this issue. The U.S. Environmental Protection Agency (EPA) is working with CPSC and the Centers for Disease Control and Prevention-Agency for Toxic Substances and Disease Registry (CDC-ATSDR), in coordination with State and local authorities, to investigate this matter.

To gather more information about Chinese drywall, CDC-ATSDR requested that EPA conduct an elemental analysis of Chinese drywall and compare it with drywall manufactured in the United States.

Analysis of Drywall Samples

With CDC-ATSDR's concurrence, two wallboard samples from Florida houses known to have been manufactured in China were selected by the Florida Department of Health (FDOH) for analysis. Additionally, four samples of U.S.-manufactured drywall were purchased by EPA from local stores in Edison, New Jersey and included in the analysis.

Prior to analysis, the thin layer of paint was scraped off of the two Chinese drywall samples for metals analysis. The paper was then separated from the solid (gypsum) material of all six drywall samples and placed into separate glass jars. The paper portions of the samples were analyzed for metals, semi volatile organic compounds (SVOCs) and formaldehyde. The gypsum samples were analyzed for metals, SVOCs, volatile organic compounds (VOCs), formaldehyde, sulfide, water soluble chlorides, total organic carbon (TOC), pH and loss on ignition (LOI).

The results of this analysis will inform additional testing by CPSC to help determine the compounds that may be affecting residents and their houses.

Results

The results of the analysis are noted below. It is important to note that the analysis included a very small sample size, and the results of this testing may not be representative of all drywall products. The analysis was conducted to identify the elemental material contained in the drywall samples and is not itself intended to establish a definitive link between the drywall and the conditions being observed in houses.

- Sulfur was detected at 83 parts per millions (ppm) and 119 ppm in the Chinese drywall samples. Sulfur was not detected in the four US-manufactured drywall samples.
- Strontium was detected at 2,570 ppm and 2,670 ppm in the Chinese drywall samples. Strontium was detected in the US-manufactured drywall at 244 ppm to 1,130 ppm. Total acid soluble sulfides were not detected in any samples.
- Iron concentrations of 1,390 ppm and 1,630 ppm were detected in the Chinese drywall samples and in the range of 841 ppm to 3,210 ppm for the US-manufactured drywall samples. Additional drywall samples will be tested to determine whether the iron is present as oxide, sulfide or sulfate.

EPA's analysis showed the presence of two organic compounds in the Chinese drywall that are associated with acrylic paints: propanoic acid, 2-methyl-, 2,2-dimethyl-1-(2-hydroxy-1-methylethyl) propyl ester at estimated concentrations of 58 ppm and 92 ppm, and propanoic acid, 2-methyl-, 3-hydroxy-2,4,4-trimethylpentyl ester at estimated concentrations of 50 ppm and 84 ppm. These compounds were not detected in the US-manufactured drywall.

EPA will continue to work with its federal and state partners to respond to this issue. EPA also is working with a multi-agency and state technical group to develop an indoor sampling protocol for use by CPSC and states to conduct indoor air testing in houses suspected of containing Chinese drywall. The group's goal is to complete the protocol by June 30, 2009. EPA expects that results from the indoor sampling will be evaluated by CDC-ATSDR for possible health implications.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ENVIRONMENTAL RESPONSE TEAM
Edison, New Jersey 08837

May 7, 2009

Ms. Lynn Wilder
Environmental Health Scientist
Agency for Toxic Substances and Disease Registry
Department of Homeland Security
4770 Buford Highway, NE
Mailstop F-57
Atlanta, GA 30341-3717

Subject: Drywall Sample Analysis

Dear Ms. Wilder,

The Agency for Toxic Substances and Disease Registry (ATSDR) contacted the Environmental Response Team (ERT) of the USEPA Office of Superfund Remediation and Technology Innovation (OSRTI) for analytical assistance with the Chinese-manufactured drywall used in Florida. On March 5, 2009, a teleconference was held with ERT, ATSDR and the Florida Department of Health (FDOH). The FDOH provided background information, including the work that had been previously performed by contractors from Lennar and Knauf (a German company that manufactures drywall in China). ATSDR requested that ERT conduct an independent elemental analysis of the Chinese drywall and compare it with the drywall manufactured in the U.S. With ATSDR's concurrence, six wallboard samples were selected for analysis. Two drywall samples known to have been manufactured in China were extracted by FDOH from affected homes in Florida. Four samples of U.S.-manufactured drywall were purchased from local stores in Edison, New Jersey

Drywall Sample Analysis

ATSDR requested that the ERT analytical laboratory provide support to analyze drywall samples from China suspected of emitting rotten egg odors and causing copper corrosion (e.g., power switches, appliances) throughout the houses with complaints. The corrosion of copper containing items may lead to releases of chlorofluorocarbons (CFCs) and natural gases, depending on their construction materials. Individuals complaining about the drywall in their homes have also reported health issues such as problems with asthma, respiratory irritation, breathing difficulties, coughing, insomnia, eye irritation and headaches. At this time, FDOH has been unable to determine if these issues are directly linked to the suspect drywall. To date, a relatively low number of

samples have been analyzed, and the emission levels detected from samples tested in the laboratory are far lower than those typically associated with such symptoms.

Two Chinese painted drywall samples extracted from Florida homes by FDOH were shipped to Edison for analysis by USEPA/ERT. ERT purchased four US-manufactured drywall samples from local stores for comparison. First, the thin layer of paint was scraped off of two Chinese drywall samples for metals analysis. The top and bottom layers of paper were separated from the solid (gypsum) material of all six drywall samples and placed into separate glass jars. The paper portions of the samples were analyzed for metals, semi volatile organic compounds (SVOCs) and formaldehyde. The gypsum samples were analyzed for metals, SVOCs, volatile organic compounds (VOCs), formaldehyde, sulfide, water soluble chlorides, total organic carbon (TOC), pH and loss on ignition (LOI). Also, an optical microscopic examination was conducted to determine the presence of fly ash.

The drywall sample manufacturers and product names are as follows: (b)(3):CPSA Section 6(b) (b)(3):CP

(China). The ERT/REAC analytical methods were modified to analyze these samples, as standard methods were not available in the area of sample digestion/preparation procedures.

Analytical Methods

Semi Volatile Organic Compounds: The gypsum and paper portions of the drywall samples were analyzed using ERT/REAC SOP #1805. A specific weight of sample in grams is extracted with a 1:1 methylene chloride/acetone mix in a Soxtherm extractor. The extract is concentrated, spiked with an internal standard mixture and subsequently analyzed by gas chromatography/mass spectrometry (GC/MS). Target analytes are identified by comparing the measured mass spectra and retention times with those obtained from calibration standards acquired under the same operating conditions used for the samples. Quantitation of each identified target analyte is calculated based on the internal standard method. The method was modified to determine the presence of any non-target compounds via a library search for the purpose of tentative identification. The NIST/EPA/NIH Mass Spectral Library containing more than 100,000 spectra was used. The elemental sulfur was analyzed using the sample extracts by GC/MS using an ERT/REAC modified method.

Volatile Organic Compounds: The two Chinese and one US-manufactured drywall gypsum samples were analyzed using ERT/REAC SOP #1807. A known amount of gypsum is weighed into a 40-milliliter (mL) Teflon®-lined septum vial, 5 mL of commercially available water suitable for VOC analysis is added, and the sealed vial is placed in the auto sampler. An additional 5-mL portion of VOC-free water containing surrogate/internal standards is added by the autosampler. In order to purge the compounds out of the dry wall, the samples were heated for five minutes at 75°C. These samples were then purged with helium for 20 minutes at the same temperature,

desorbed (trapped) onto the trap for four minutes and injected into the GC and detected using a 5975 MSD. The method was modified to determine the presence of any non-target compounds via a library search for the purpose of tentative identification. The NIST/EPA/NIH Mass Spectral Library containing more than 100,000 spectra was used.

Metals: The gypsum samples were first screened using a NITON x-ray fluorescence detector (XRF) to determine the presence of any metals. The XRF will help to ascertain whether additional metals that are not included in the Target Analyte List (TAL) routinely analyzed by the laboratory need to be added. The gypsum, paper and paint samples were analyzed for TAL metals using ERT/REAC SOP #1811, *Determination of Metals by Inductively Coupled Plasma (ICP) Methods,* and SOP #1832, *Determination of Mercury by Cold Vapor Atomic Absorption (CVAA)*. Based on the XRF screening, strontium and sulfur were added to the list of analytes.

Formaldehyde, Sulfide, Total Organic Carbon: Analyses for these compounds were contracted to outside laboratories. Formaldehyde was analyzed by high pressure liquid chromatography (HPLC), ultraviolet detection (UV) in accordance with modified NIOSH Method 2016 For acid soluble sulfides, the gypsum samples were distilled using EPA SW-846 Method 9030B, which separates the sulfides from the matrix by adding sulfuric acid to the sample and heating to 70°C. The sulfide was quantified using an iodometric method. TOC was determined using a carbonaceous analyzer in accordance with EPA Region II SOP #C-88.

Water Soluble Chlorides: A specific weight of sample was mixed with a known volume of water prior to analysis. Samples were analyzed using a five-point calibration curve by a modified ferricyanide spectrophotometric technique, as outlined in the Standard Methods for the Examination of Water and Wastewater, Method 4500-Cl-E.

Loss on Ignition and pH: Loss on ignition data were obtained by weighing a known amount of sample into a crucible and igniting at 750°C using the modified Standard Methods for the Examination of Water and Wastewater, Method 2540G A 5 percent weight by volume of a gypsum sample in water was prepared and mixed using a magnetic stirrer. The pH of the resulting aqueous solution was measured electrometrically using a calibrated pH meter.

Alkalinity and Sulfate: Alkalinity was performed in accordance with the Standard Methods for the Examination of Water and Wastewater, Method 2320B, that uses an acid titrant to measure the buffering capacity or ability to react with acids to a specific pH. Sulfates were determined using EPA Region II SOP #C-19

Optical Microscopic Examination: The optical microscopic examination was performed at the ERT-Las Vegas laboratory using an Olympus optical microscope.

Discussion of the Results:

The significant differences between the Chinese drywall and the US-manufactured drywall analysis are as follows:

ERT analysis shows the presence of sulfur at 83 ppm and 119 ppm in the Chinese drywall samples and sulfur not detected in four US-manufactured drywall samples. The metal analysis shows the presence of strontium at 2,570 ppm and 2,670 ppm in the Chinese drywall samples, whereas strontium was detected in the US-manufactured drywall at 244 ppm to 1,130 ppm. The total acid soluble sulfides were not detected in any of the drywalls. Further investigation is critical to determine the presence of strontium as strontium sulfate or strontium sulfide using x-ray diffraction.

Iron concentrations of 1,390 ppm and 1,630 ppm were detected in the Chinese drywall samples and in the range of 841 ppm to 3,210 ppm for the US drywall samples. The highest concentration of iron detected in th(b)(3):CPSA Section 6(b) ywall was twice as high as the amount found in the Chinese drywall. An investigation will be done using additional drywall samples to determine whether the iron is present as oxide, sulfide or sulfate.

No evidence of fly ash in the Chinese drywall samples was noted based on the optical microscopic examination.

The ERT/REAC SVOC analysis results show the presence of two organic compounds in the Chinese drywall, as tentatively identified by the mass spectrometry library search for the Chinese drywall. The FDOH has requested that ERT further investigate these compounds. The two compounds were propanoic acid, 2-methyl-, 2,2-dimethyl-1-(2-hydroxy-1-methylethyl) propyl ester (CAS # 74367-33-2) at estimated concentrations of 58 and 92 ppm, and propanoic acid, 2-methyl-, 3-hydroxy-2,4,4-trimethylpentyl ester (CAS # 74367-34-3) at estimated concentrations of 50 and 84 ppm. These compounds were not detected in the US-manufactured drywall. ERT analyzed two samples for VOCs by GC/MS. The analyses confirm the presence of the above two compounds in the Chinese drywall, as tentatively identified by the mass spectrometry library search. ERT is in the process of obtaining standards of propanoic acid, 2-methyl-, 2,2-dimethyl-1-(2-hydroxy-1-methylethyl) propyl ester (CAS # 74367-33-2) and propanoic acid, 2-methyl-, 3-hydroxy-2,4,4-trimethylpentyl ester (CAS # 74367-34-3) to confirm the findings. The literature search reveals that these compounds are found in acrylic paints as reported in the following website:

http://www2.mst.dk/common/Udgivramme/Frame.asp?http://www2.mst.dk/udgiv/publications/2008/978-87-7052-763-7/html/kap02_eng.htm

The summary of analytical results of the six drywall (gypsum, paper, and paint) samples is presented in Summary Table 1. The semi-quantitative XRF data for gypsum

analysis are presented in Table 2. The tentatively identified compounds detected by the GC/MS library search for the SVOC analysis are presented in Table 3 for the gypsum and paper portions of the drywall samples.

Work in Progress

The additional drywall samples to be received from CPSC will be analyzed semi-quantitatively for calcium sulfate, strontium sulfide, strontium sulfate, pyrites and iron oxide by x-ray diffraction. The drywall samples from the United States and China will also be analyzed for VOCs, SVOCs, metals including strontium, sulfide, sulfite, formaldehyde, TOC and LOI. An optical microscopic examination for fly ash will also be conducted. Based on these analyses and the chamber study, ERT will conduct indoor air monitoring in Florida and Louisiana in three test houses for predetermined parameters. A QAPP is under preparation for the Technical Workgroup to review based on the available information to date, and will be modified based on any new information.

If there are any questions, please call me at 732-321-6761

Sincerely

Raj Singhvi, Chemist

Enclosures

cc: David Krause, FDOH
Barnes Johnson, OSRTI
Arnold Layne, OSRTI/TIFSD
Jeff Heimerman, OSRTI/TIFSD
Dave Wright, ERT
Harry Compton, ERT

Table-1 Results of the Analysis for Metals in Solid Drywall Material, Paper and Paint

Sample No.		4	5	6	7	8	9
Sample ID		(b)(3):CPSA Section 6(b)					
	Method	US	China	China	US	US	US
%LOI at 750C		21	22	24	21	19	24
pH of 5% slurry		7.09	7.41	7.35	7.28	7.29	7.31
Analyte		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	Modified REAC SOP 1811	305	1180	948	357	3570	1140
Barium	Modified REAC SOP 1811	5.14	33.8	42.8	14.2	12.8	15.0
Calcium	Modified REAC SOP 1811	276000	268000	254000	267000	245000	248000
Chromium	Modified REAC SOP 1811	1.92	5.28	3.68	2.81	4.34	1.65
Cobalt	Modified REAC SOP 1811	<0.87	<0.87	<0.83	<0.99	2.89	<0.90
Copper	Modified REAC SOP 1811	<1.52	1.79	2.80	<1.73	6.15	2.07
Iron	Modified REAC SOP 1811	841	1390	1630	1170	3210	1850
Lead	Modified REAC SOP 1811	<2.17	<2.16	<2.33	<2.44	3.48	2.61
Magnesium	Modified REAC SOP 1811	463	5020	10300	934	5250	4980
Manganese	Modified REAC SOP 1811	3.24	48.8	71.3	16.1	69.1	72.4
Mercury	Modified REAC SOP 1832	2.06	0.562	0.190	0.0668	<0.047	<0.045
Nickel	Modified REAC SOP 1811	<1.30	1.68	1.44	1.62	5.41	2.09
Potassium	Modified REAC SOP 1811	106	368	333	135	885	1490
Selenium	Modified REAC SOP 1811	8.94	2.81	<3.03	3.43	<2.87	<2.92
Sodium	Modified REAC SOP 1811	<217	428	498	<244	<220	<225
Vanadium	Modified REAC SOP 1811	<0.87	2.52	2.28	2.77	3.36	2.34
Zinc	Modified REAC SOP 1811	<6.71	<6.71	<7.24	<7.56	<6.83	10.1
Strontium (Drywall/Paper)	Modified REAC SOP 1811	244/48	2670/670	2670/636	499/110	538/19	1130/155
Strontium (Paint)	Modified REAC SOP 1811	NA	290	122	NA	NA	NA
Alkalinity (CaCO3)	SM2320B	<99	<99	970	<99	840	230
Alkalinity - Bicarbonate	SM2320B	<99	<99	970	<99	840	230
Sulfide (Lab1)	9030B	<4	<4	<4	<4	<4	12
Sulfide (Lab 2)	9030B	<10	<10	<10	<10	<10	<10
Sulfate	Region II SOP#C-19	686000	535000	507000	652000	668000	567000
Chloride (water soluble)	Modified SM 4500-Cl- E	74	250	190	38	59	145
Sulfur*	Modified REAC SOP 1805	<8.23	119	83	<8.13	<7.94	<7.94
Formaldehyde (Drywall/Paper)	Modified NIOSH 2106	ND/0.58	ND/0.44	ND/ND	ND/0.83	0.54/ND	0.24/0.67
Total Organic Carbon	Region II SOP#C-88	4300	2900	4300	2200	3500	16000
TOTAL ORGANIC COMPOUND* (Drywall/Paper)	REAC SOP 1805	7.7/75	145/125	243/245	18.3/299	31.6/70	2350/2400

* GC/MS analysis results from BNA extract including TIC'S

Raj April, 28, 2009

Table 2 Qualitative Analysis of Drywall Gypsum- XRF

Sample #	(b)(3):CPSA Section 6(b)		Ca	Fe	Sr
1		US	222000 +/- 1200	410 +/- 90	180 +/- 10
2		China	240000 +/- 1300	720 +/- 110	1970 +/- 32
2(Duplicate)		China	241000 +/- 1300	730 +/- 100	1960 +/- 32
3		China	238000 +/- 1300	930 +/- 120	2130 +/- 34
4		US	226000 +/- 1200	990 +/- 120	370 +/- 14
5		US	210000 +/- 1200	2010 +/- 150	460 +/- 16
6		US	220000 +/- 1200	1210 +/- 130	844 +/- 21

A. Major - Calcium

Present - Iron, Strontium, Sulfur

Note: the sulfur line appears as week peak in the XRF spectrum of each sample (sulfur cannot be quantified in these samples with Nitton XRF unit)

B. XRF Results (total concentration) in ppm +/- 1 standard deviation

Table 3 Tentatively Identified Organic Compounds, estimated concentration (mg/kg)

Sample #		1		2		3		4		5		6	
Tentatively Identified Organic Compounds		(b)(3):CPSA Section 6(b)											
		Gypsum	Paper	Gypsum	Paper	Gypsum	Paper	Gypsum	Paper	Gypsum	Paper	Gypsum	Paper
Propylene Glycol	3.74									1.67			
Ethanol, 2-butoxy-	6.40									0.99			
Hexylene Glycol	6.60									1.98			
2-Propanol, 1-butoxy-	6.94									0.76			
Ethanol, 2,2'-oxybis-	7.24					3.62							
Hexanoic acid	7.38										1.48		
Ethanol, 2,2'-oxybis-	7.43												
2-Propanol, 1-(2-methoxy-1-methylethoxy)-	7.83			1.17									
Etane, 1,1'-oxybis[2-ethoxy-]	7.66			3.29	3.18								
2-Propanol, 1-(2-methoxypropoxy)-	8.03			2.05									
dipropylene glycol	8.52					2.55							
Hexanoic acid, 2-ethyl-	9.40									0.65			
1,3-Pentanediol, 2,2,4-trimethyl-	10.04					1.45							
Ethanol, 1-(2-butoxyethoxy)-	10.46			6.64	4.28	23.92	1.07						
Unknown	11.11					2.39							
Quinoline	11.27									0.55			
Unkown	11.45					1.52							
Unknown	11.49					1.77							
2-Propanol, 1-[2-(2-methoxy-1-methylethoxy)-1-methylethoxy]-	11.69			0.60									
2-Propanol, 1-[2-(2-methoxy-1-methylethoxy)-1-methylethoxy]-isomer	11.74			2.22									
2-Propanol, 1-[2-(2-methoxy-1-methylethoxy)-1-methylethoxy]-isomer	11.78			0.97									
Hexaethylene glycol dimethyl ether (?)	11.92			1.37									
2-Propanol, 1-(2-methoxy-1-methylethoxy)- isomer	11.95			1.48	1.69								
Cyclohexasiloxane, dodecamethyl-	11.99									0.65			
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	12.57				18.35					1.00			
Propanoic Acid, 2-methyl-,2,2-dimethyl-1-(2-hydroxy-1-methylethyl)propyl ester	12.57						2.79						
Propanoic Acid, 2-methyl-,2,2-dimethyl-1-[2-hydroxy-1-methylethyl]propyl ester+unknown	12.63			57.84		92.33							
Propanoic Acid, 2-methyl-,2,2-dimethyl-1-[2-hydroxy-1-methylethyl]propyl ester+unknown	12.83			58.45		83.57							
Vanillin	13.06				1.98				0.93	0.53	1.56		
Cyclododecane	13.75					6.24							
Phenol, 2,6-bis(1,1-dimethylethyl)-4-ethyl-	14.81				1.78								
Unknown	15.11										1.21		
Cedrol	15.47									1.26			
Benzyl Benzoate	16.84				4.24								
Homomenthyl salicylate	17.94			0.58									
n-Hexadecanoic acid	18.27		1.26		1.98	1.19			1.12	0.79	2.44		
9-Octadecenoic acid, (E)- or oleic acid	19.72		2.76					0.19			1.25		
Bis(2-ethylhexyl) maleate	19.86				7.00		1.01						
Octadecanoic acid	19.87										1.91		
C23 alkane	20.16						8.16	0.20				24.51	1.14
n-alkane	20.89	0.27	1.62	0.75	1.94			0.65		0.83		79.78	3.36
Tetracosane	21.60	0.45	3.56	1.71	3.56	2.13		1.55	1.32	1.89	1.83	139.23	7.97
morpholine, 4-phenyl-	22.26						2.13						
C25 alkane	22.27	0.62	6.61	2.16	8.57	2.57		2.76	3.29	3.03	4.96	356.70	14.29
diethyleneglycol dibenzoate isomer	22.34	0.39	6.28		18.13		7.98	0.18	2.93	0.61	8.66		
unknown	22.68						1.32	0.18					
C26 alkane	22.91	0.52	7.02	1.87	3.88	2.21		2.69	3.69	3.48	3.85	455.65	16.01
C25 alkane	23.31											18.54	0.86
C26 alkane	23.54	0.42	7.36	2.04	5.53	2.95		3.07	4.04	3.47	4.86	630.11	20.68
Alkane	23.92							0.17				32.47	1.32
Octacosane	24.15					1.12		1.37	3.06	1.64	3.56		
Alkane	23.69											20.41	
Unknown	24.44						0.91						
C28 alkane	24.14	0.29	4.47	0.92	3.07							113.86	5.60
C29 alkane	24.77	0.23	4.09	0.83	9.53	1.08	1.20	1.20	2.58	1.16	3.68	126.95	6.15
alkane	26.29		2.48		3.13	0.72	3.13	0.60	1.46		3.34	125.89	5.77
alkane	27.21		1.99		3.11		3.11	0.30	0.54		2.78	108.49	4.35
Binaphthyl sulfone isomer	27.30	0.27						0.25					
Binaphthyl sulfone isomer	26.19					0.59							
Hentriacontane	28.30		1.33										
C33 n-alkane	28.30										2.02	74.28	2.68
beta.-Sitosterol	29.51	0.17											
Tetratriacontane	29.60		0.86								1.65	50.23	1.62
Octadecanoic acid, ethenyl ester	30.82		2.07						1.43		1.13		
Alkane	30.88												0.84
C35 Alkane	31.13											28.46	
18-Pentatriacontanone	32.78		0.87										
Unknown	32.79								0.94		0.80		
Total organic		7.55	73.72	142.11	118.61	233.80	49.84	18.31	29.91	30.46	69.11	2344.74	95.80

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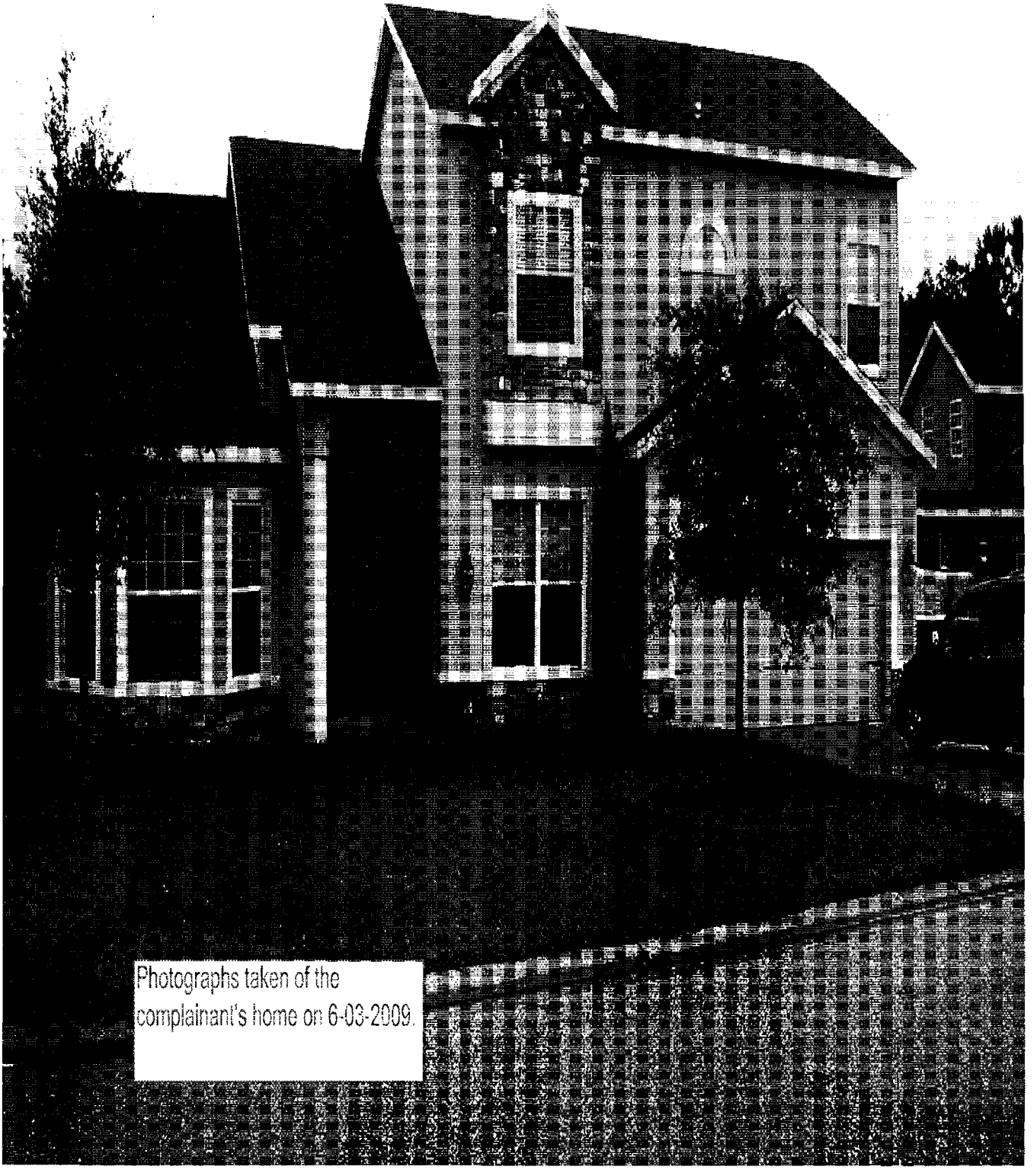
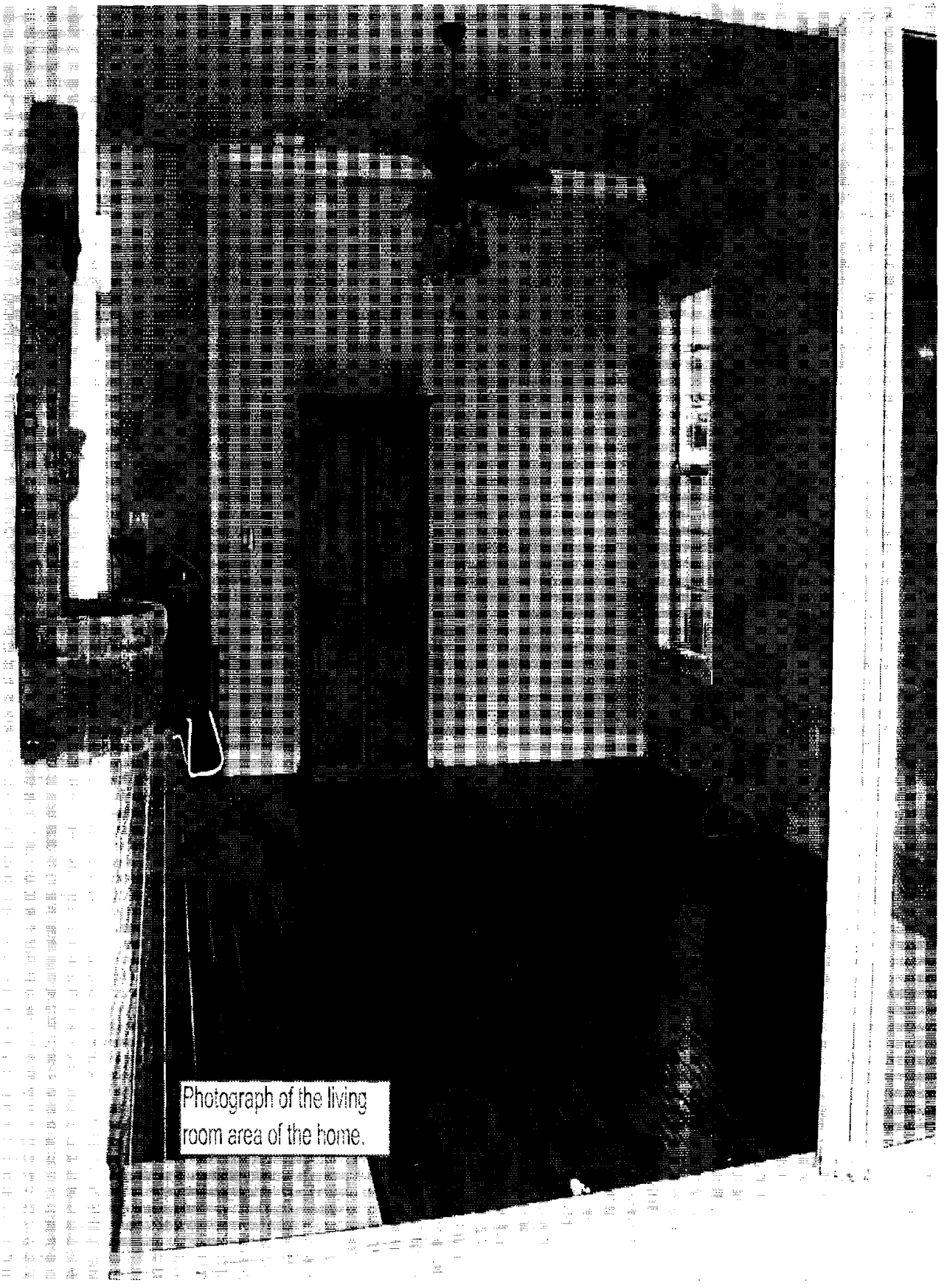
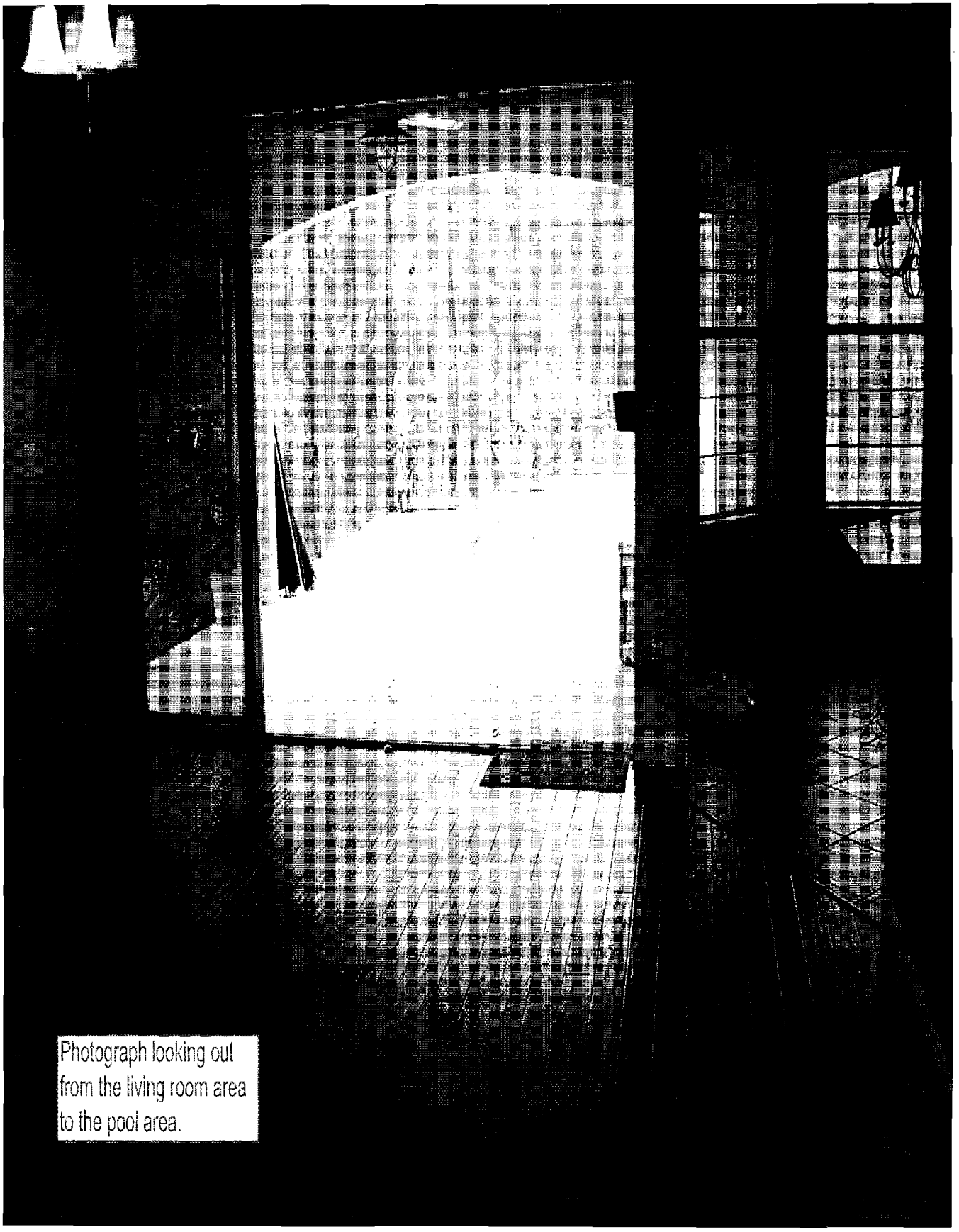


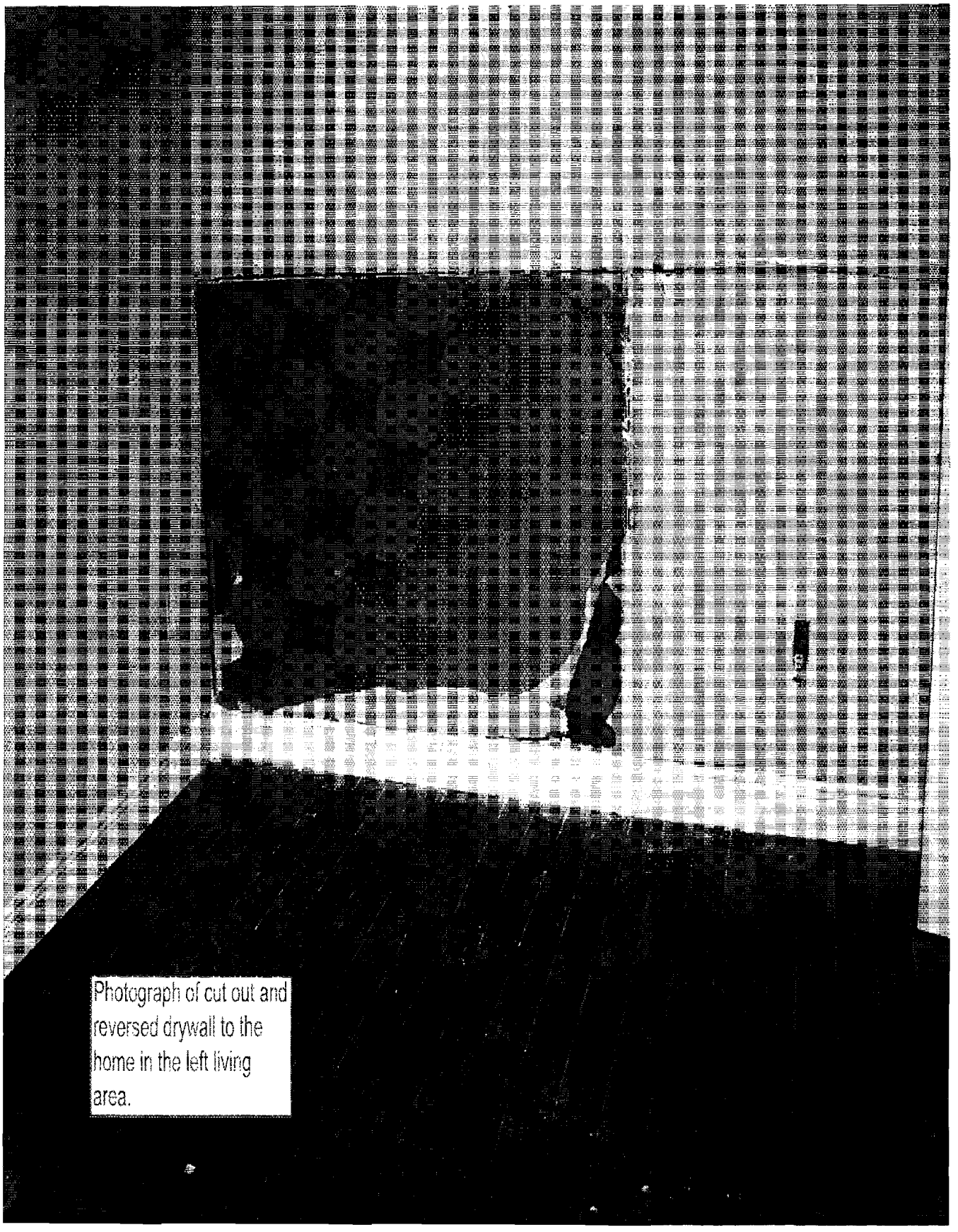
Photographs taken of the complainant's home on 6-03-2009.



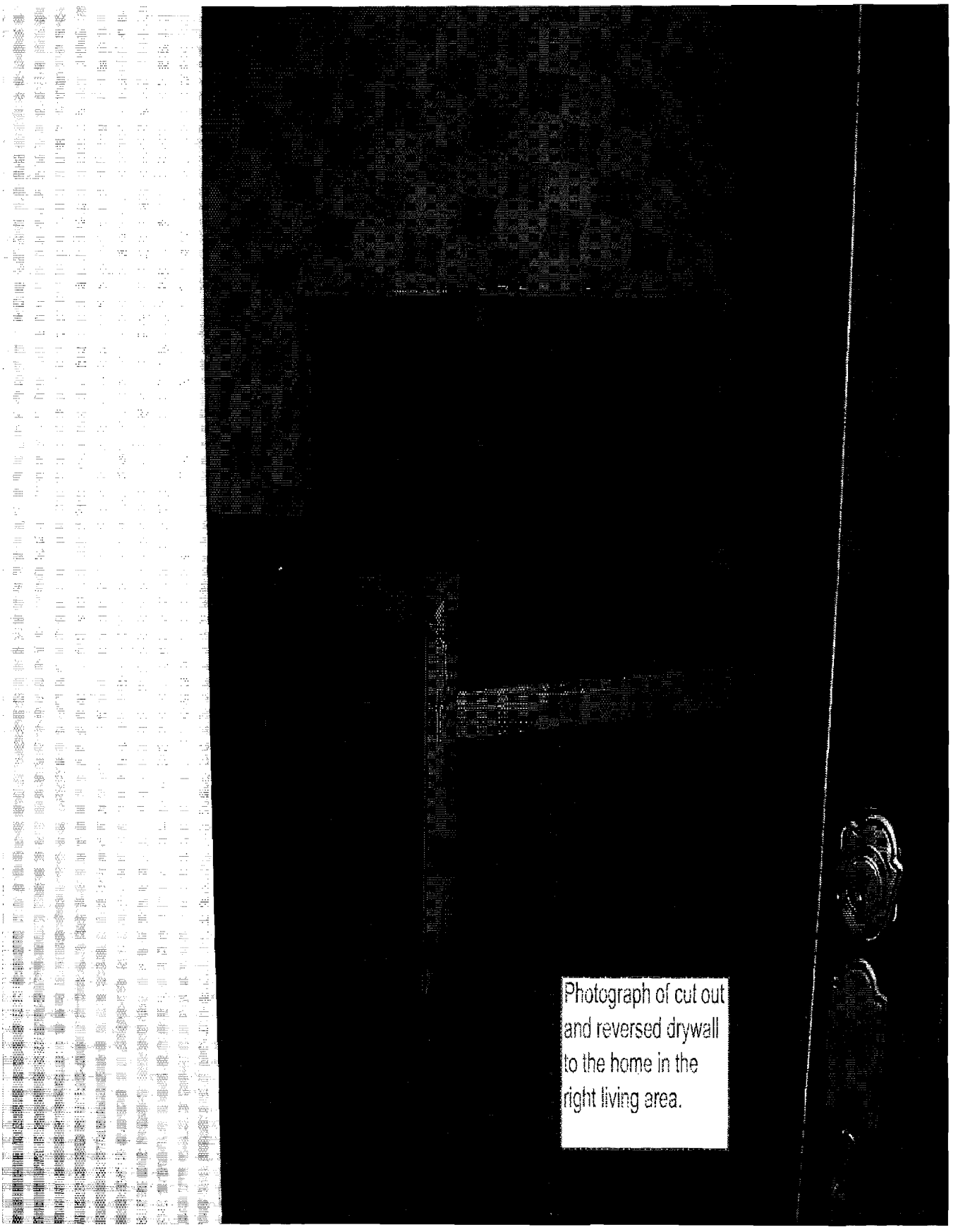
Photograph of the living room area of the home.



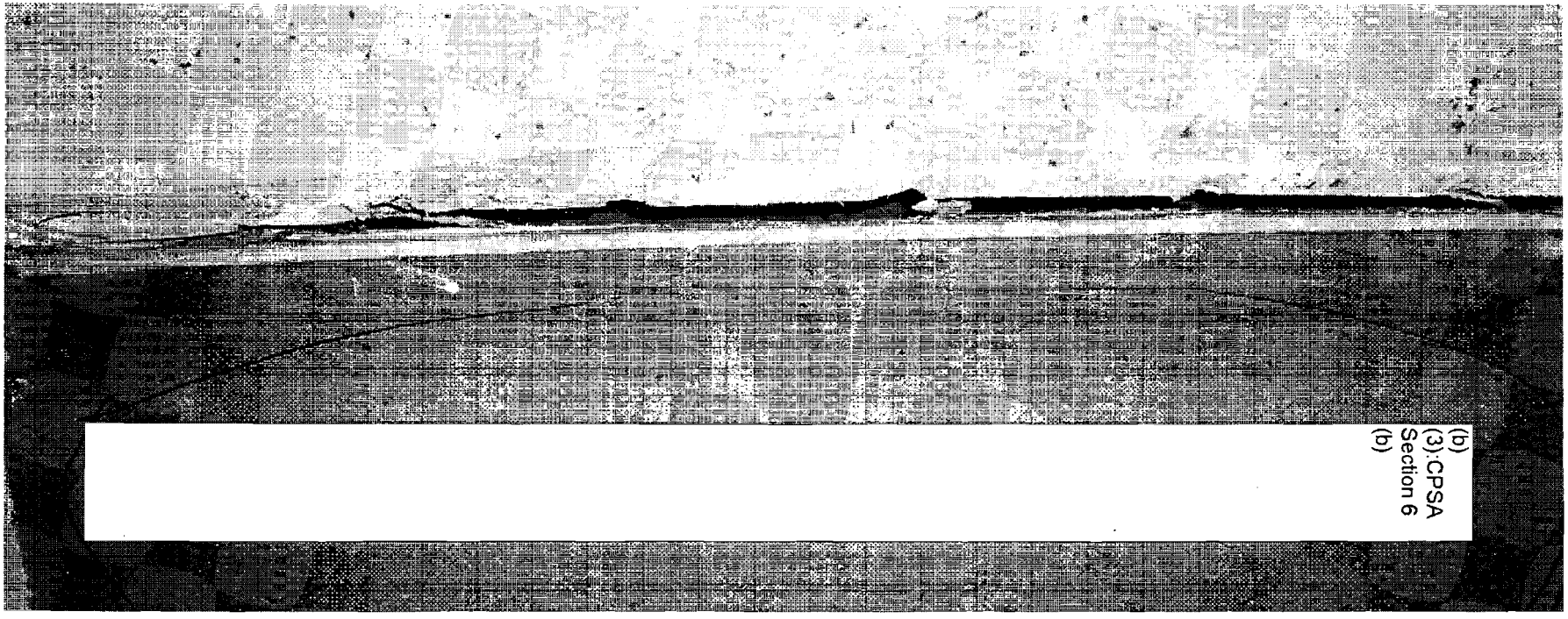
Photograph looking out from the living room area to the pool area.



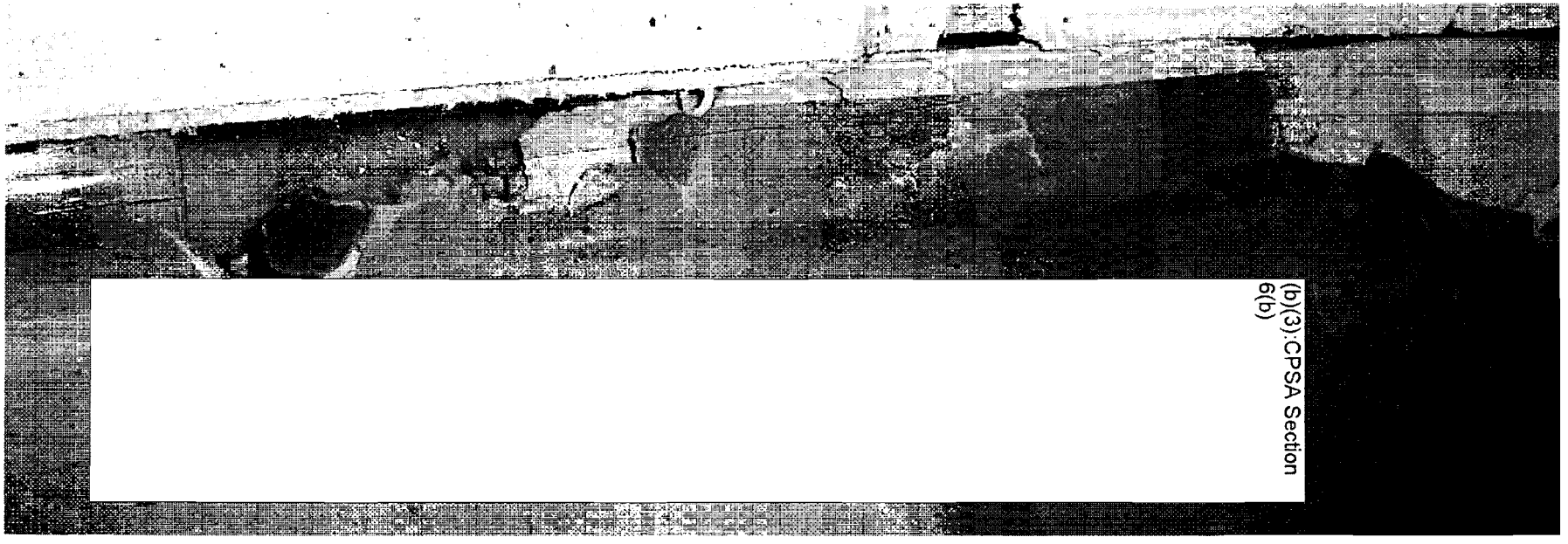
Photograph of cut out and reversed drywall to the home in the left living area.



Photograph of cut out and reversed drywall to the home in the right living area.



Labeling on the back of the drywall



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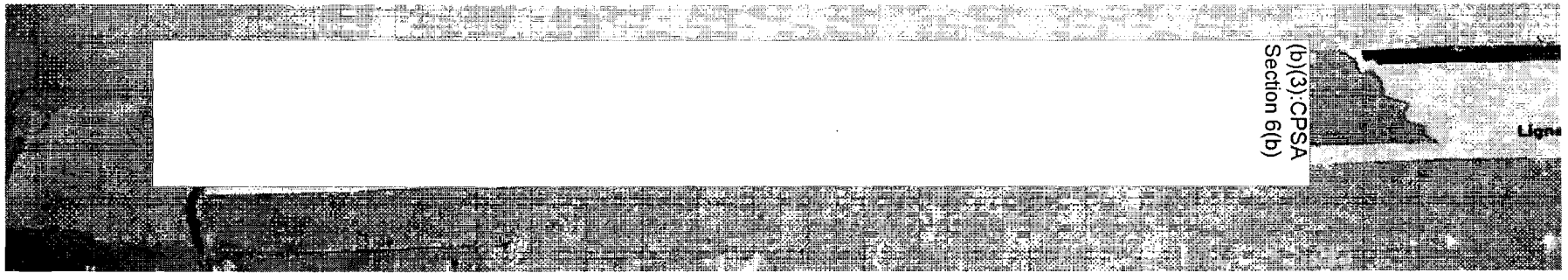

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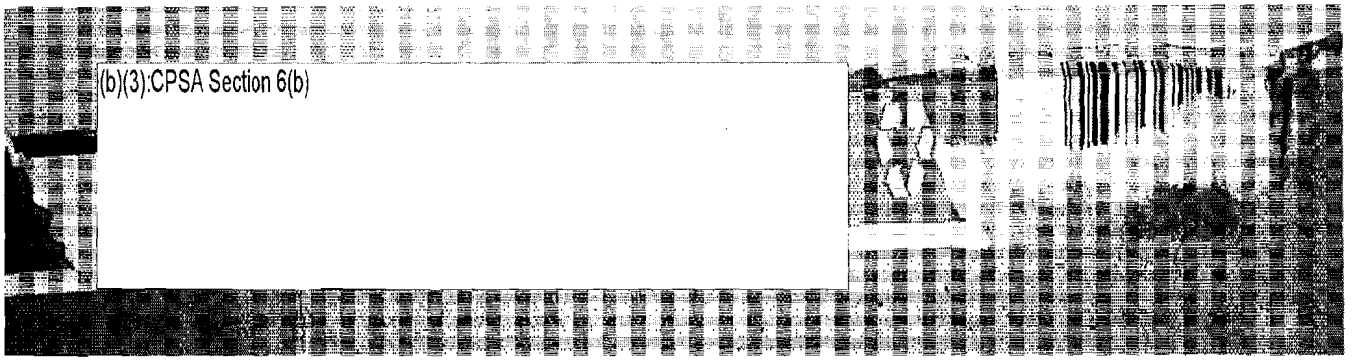

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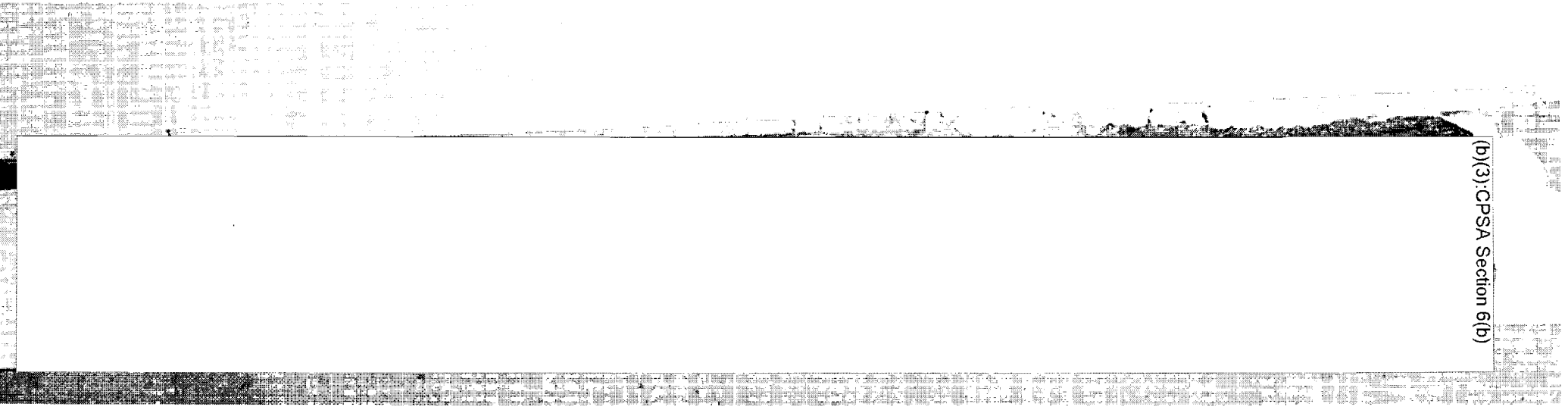

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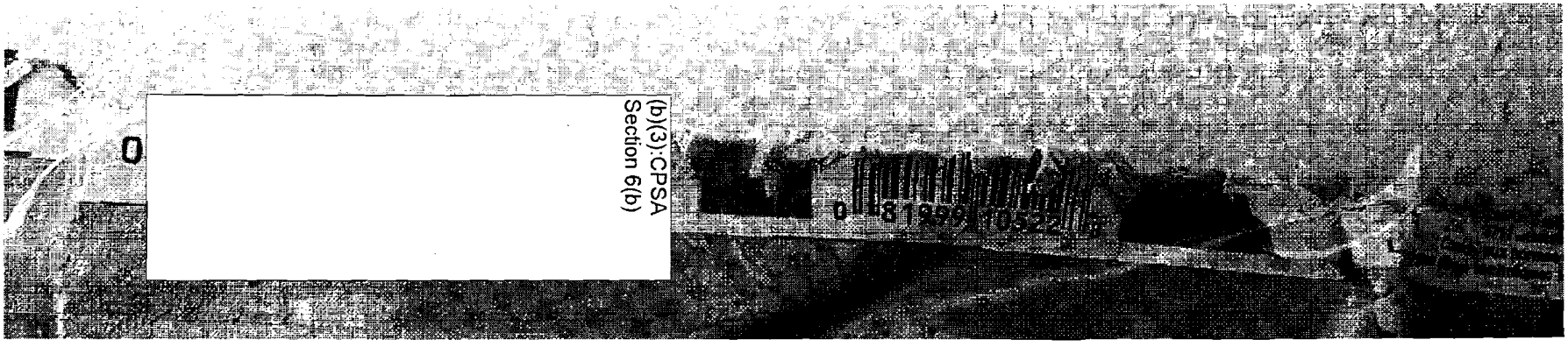
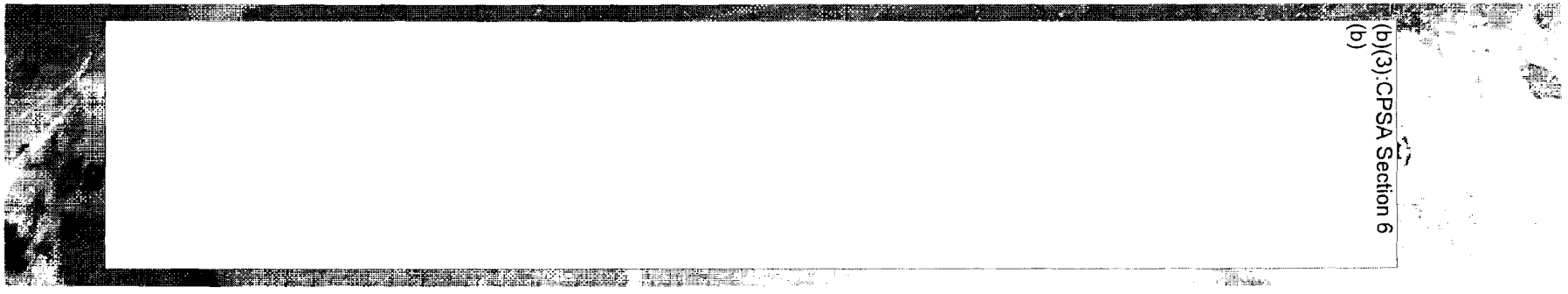
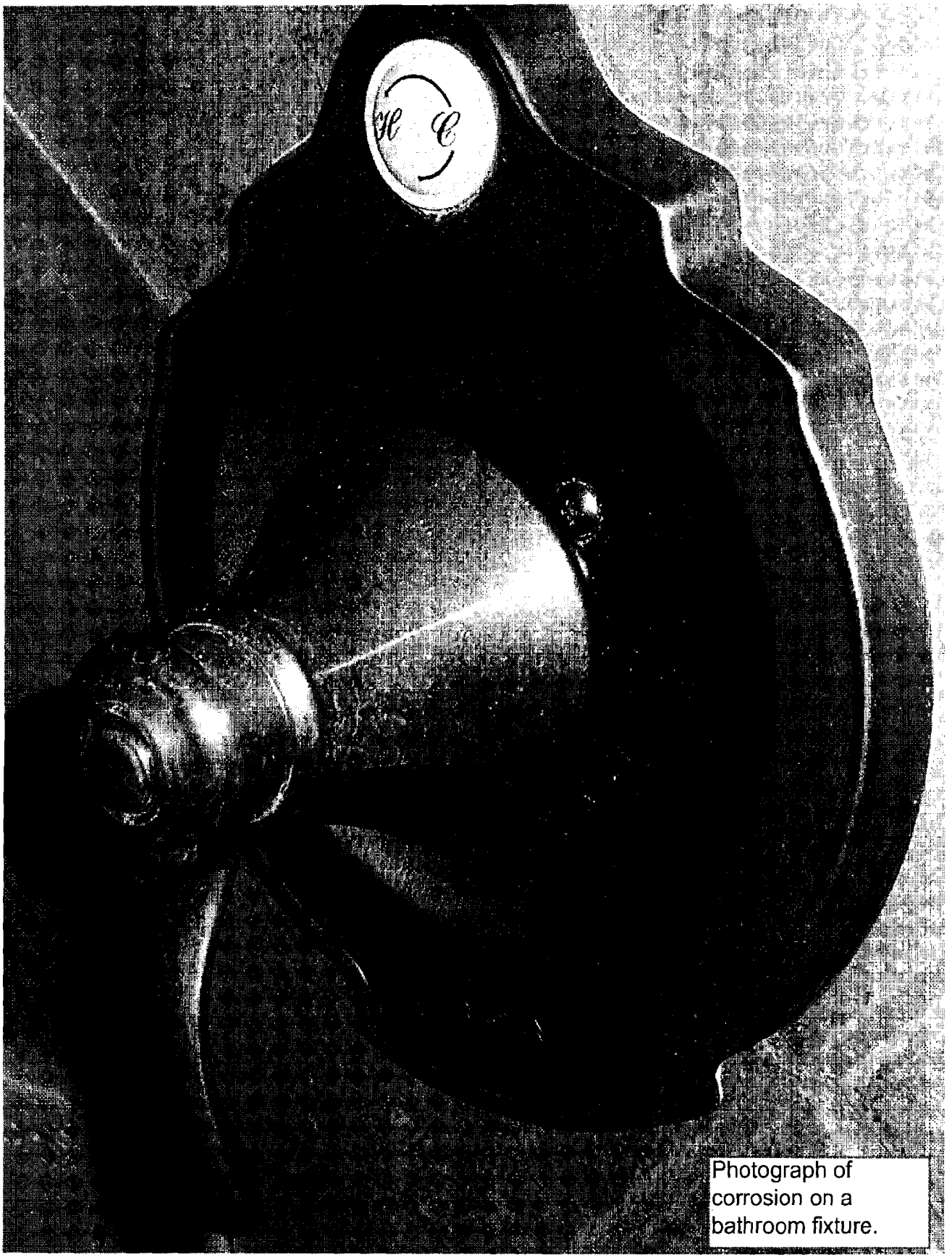


Labeling on the back of the drywall

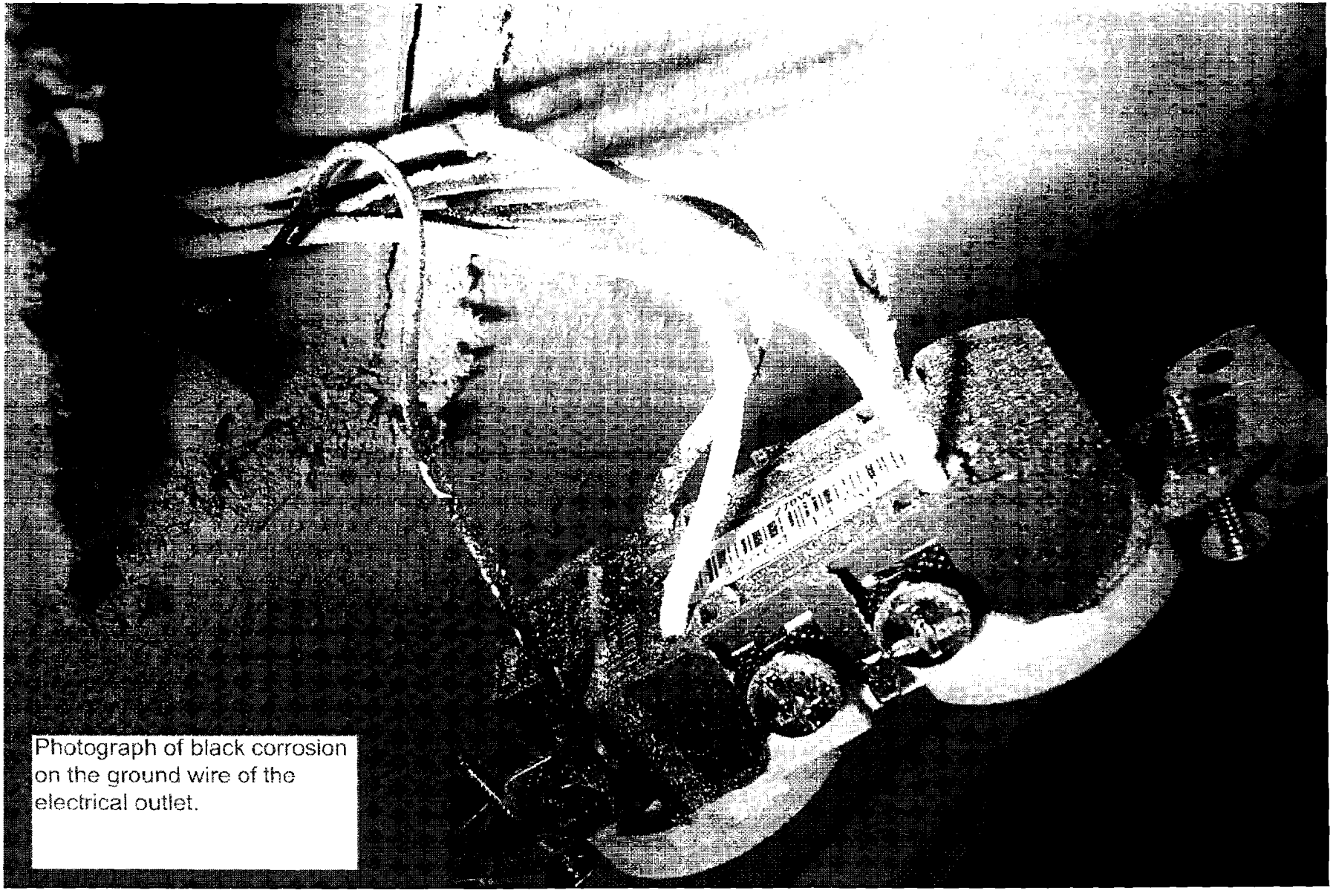


Labeling on the back of the drywall

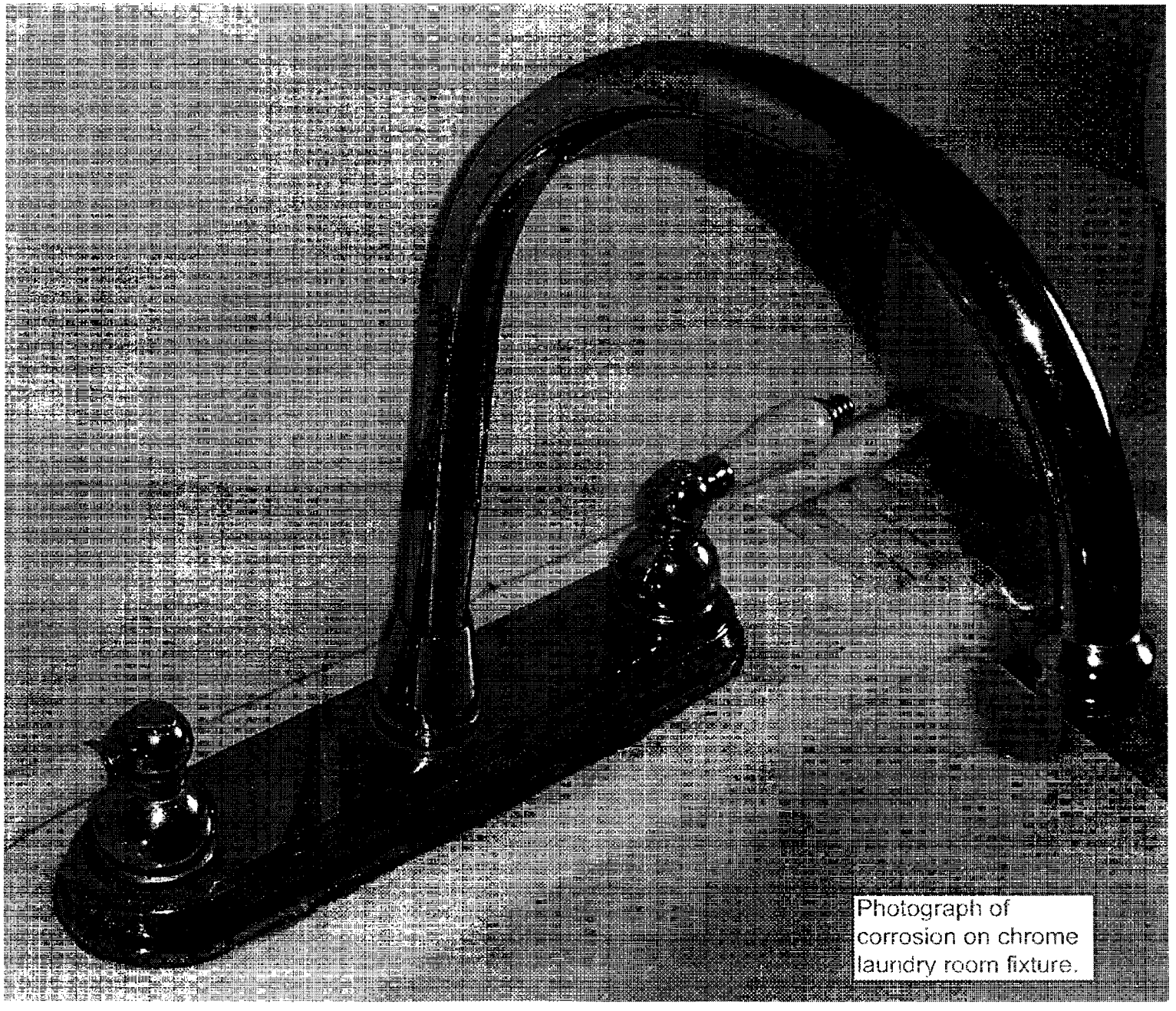
Photograph of corrosion on a bathroom chrome fixture.



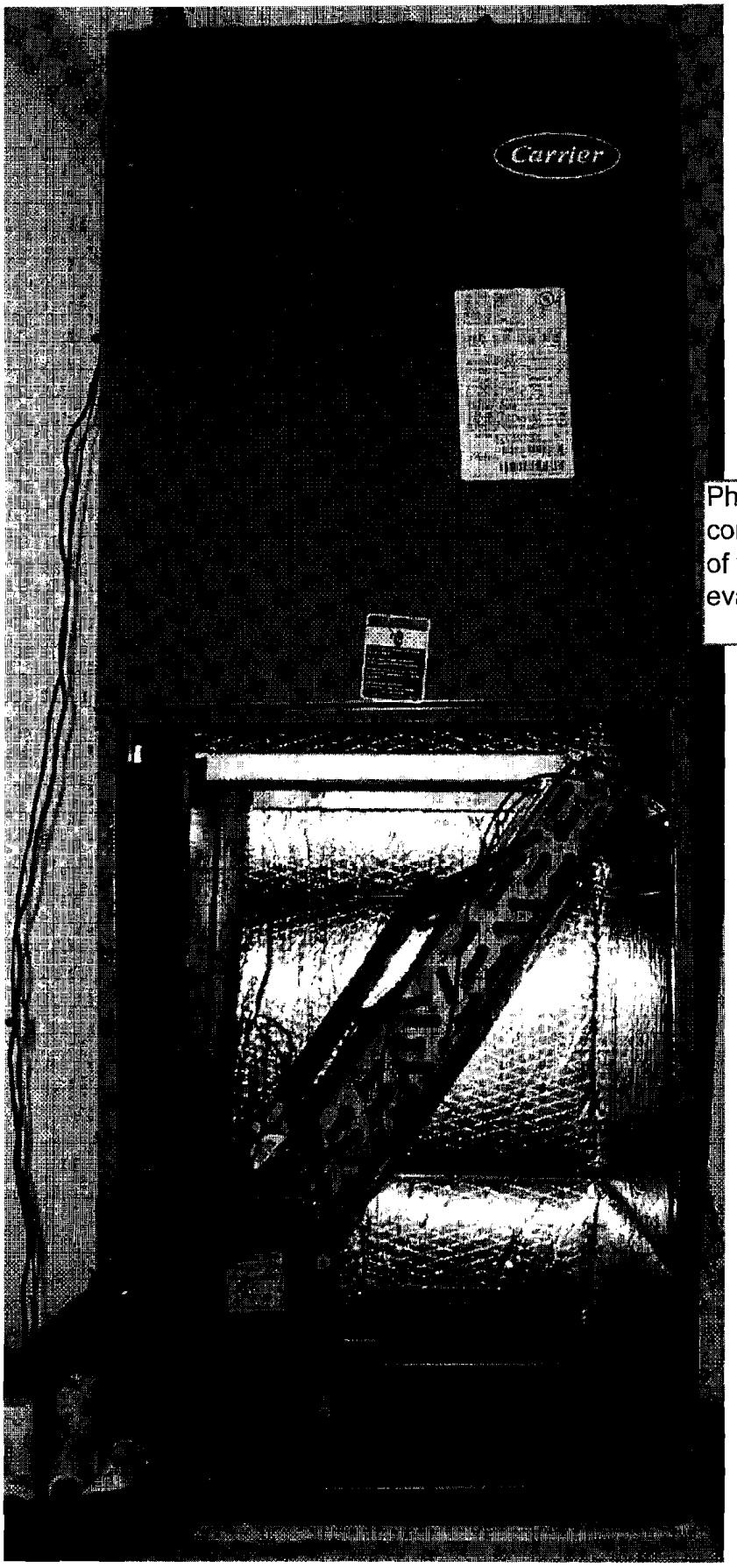
Photograph of corrosion on a bathroom fixture.



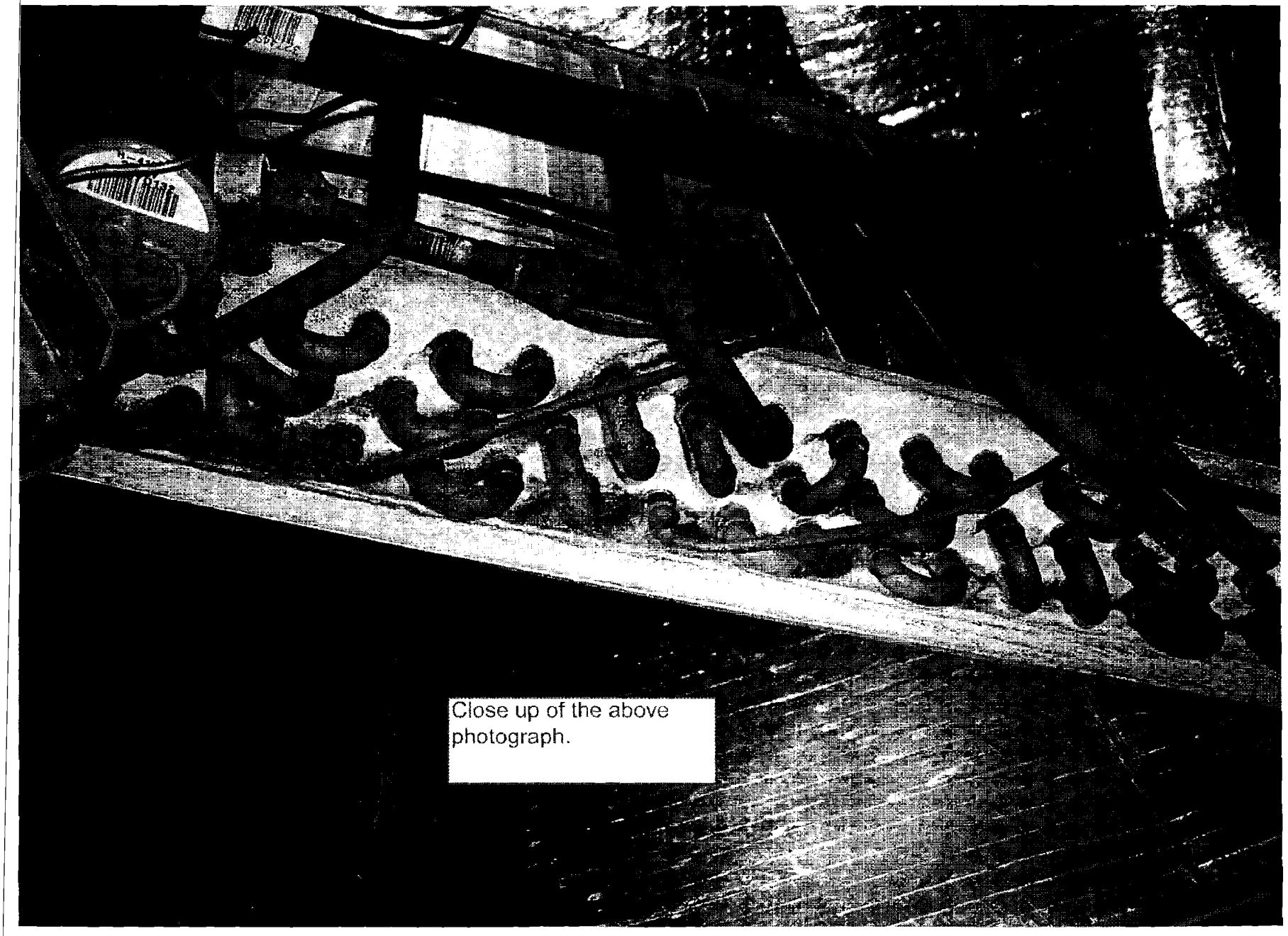
Photograph of black corrosion on the ground wire of the electrical outlet.



Photograph of corrosion on chrome laundry room fixture.

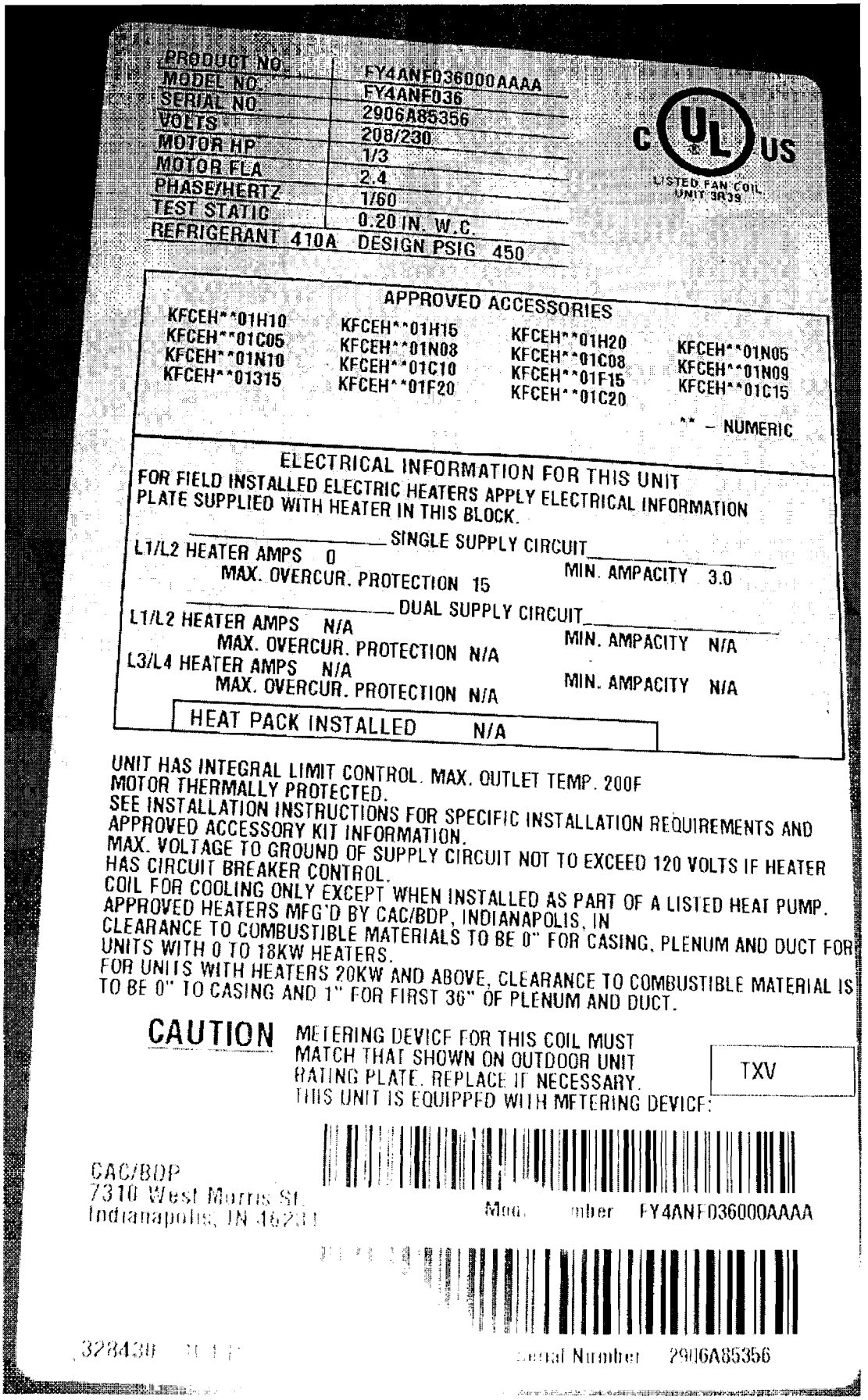


Photograph of corrosion on one of the replaced evaporator coils.



Close up of the above photograph.

Labeling on the above air conditioner.



PRODUCT NO.	FY4ANF036000AAAA
MODEL NO.	FY4ANF036
SERIAL NO.	2906A85356
VOLTS	208/230
MOTOR HP	1/3
MOTOR FLA	2.4
PHASE/HERTZ	1/60
TEST STATIC	0.20 IN. W.C.
REFRIGERANT 410A	DESIGN PSIG 450

c UL us
LISTED FAN COIL UNIT 3R39

APPROVED ACCESSORIES

KFCEH**01H10	KFCEH**01H15	KFCEH**01H20	KFCEH**01N05
KFCEH**01C05	KFCEH**01N08	KFCEH**01C08	KFCEH**01N09
KFCEH**01N10	KFCEH**01C10	KFCEH**01F15	KFCEH**01C15
KFCEH**01315	KFCEH**01F20	KFCEH**01C20	

** – NUMERIC

ELECTRICAL INFORMATION FOR THIS UNIT

FOR FIELD INSTALLED ELECTRIC HEATERS APPLY ELECTRICAL INFORMATION PLATE SUPPLIED WITH HEATER IN THIS BLOCK.

SINGLE SUPPLY CIRCUIT

L1/L2 HEATER AMPS 0 — MIN. AMPACITY 3.0
MAX. OVERCUR. PROTECTION 15

DUAL SUPPLY CIRCUIT

L1/L2 HEATER AMPS N/A — MIN. AMPACITY N/A
MAX. OVERCUR. PROTECTION N/A
L3/L4 HEATER AMPS N/A — MIN. AMPACITY N/A
MAX. OVERCUR. PROTECTION N/A

HEAT PACK INSTALLED N/A

UNIT HAS INTEGRAL LIMIT CONTROL. MAX. OUTLET TEMP. 200F
MOTOR THERMALLY PROTECTED.
SEE INSTALLATION INSTRUCTIONS FOR SPECIFIC INSTALLATION REQUIREMENTS AND APPROVED ACCESSORY KIT INFORMATION.
MAX. VOLTAGE TO GROUND OF SUPPLY CIRCUIT NOT TO EXCEED 120 VOLTS IF HEATER HAS CIRCUIT BREAKER CONTROL.
COIL FOR COOLING ONLY EXCEPT WHEN INSTALLED AS PART OF A LISTED HEAT PUMP.
APPROVED HEATERS MFG'D BY CAC/BDP, INDIANAPOLIS, IN
CLEARANCE TO COMBUSTIBLE MATERIALS TO BE 0" FOR CASING, PLENUM AND DUCT FOR UNITS WITH 0 TO 18KW HEATERS.
FOR UNITS WITH HEATERS 20KW AND ABOVE, CLEARANCE TO COMBUSTIBLE MATERIAL IS TO BE 0" TO CASING AND 1" FOR FIRST 36" OF PLENUM AND DUCT.

CAUTION METERING DEVICE FOR THIS COIL MUST MATCH THAT SHOWN ON OUTDOOR UNIT RATING PLATE. REPLACE IF NECESSARY.
THIS UNIT IS EQUIPPED WITH METERING DEVICE: TXV

CAC/BDP
7310 West Morris St.
Indianapolis, IN 46231

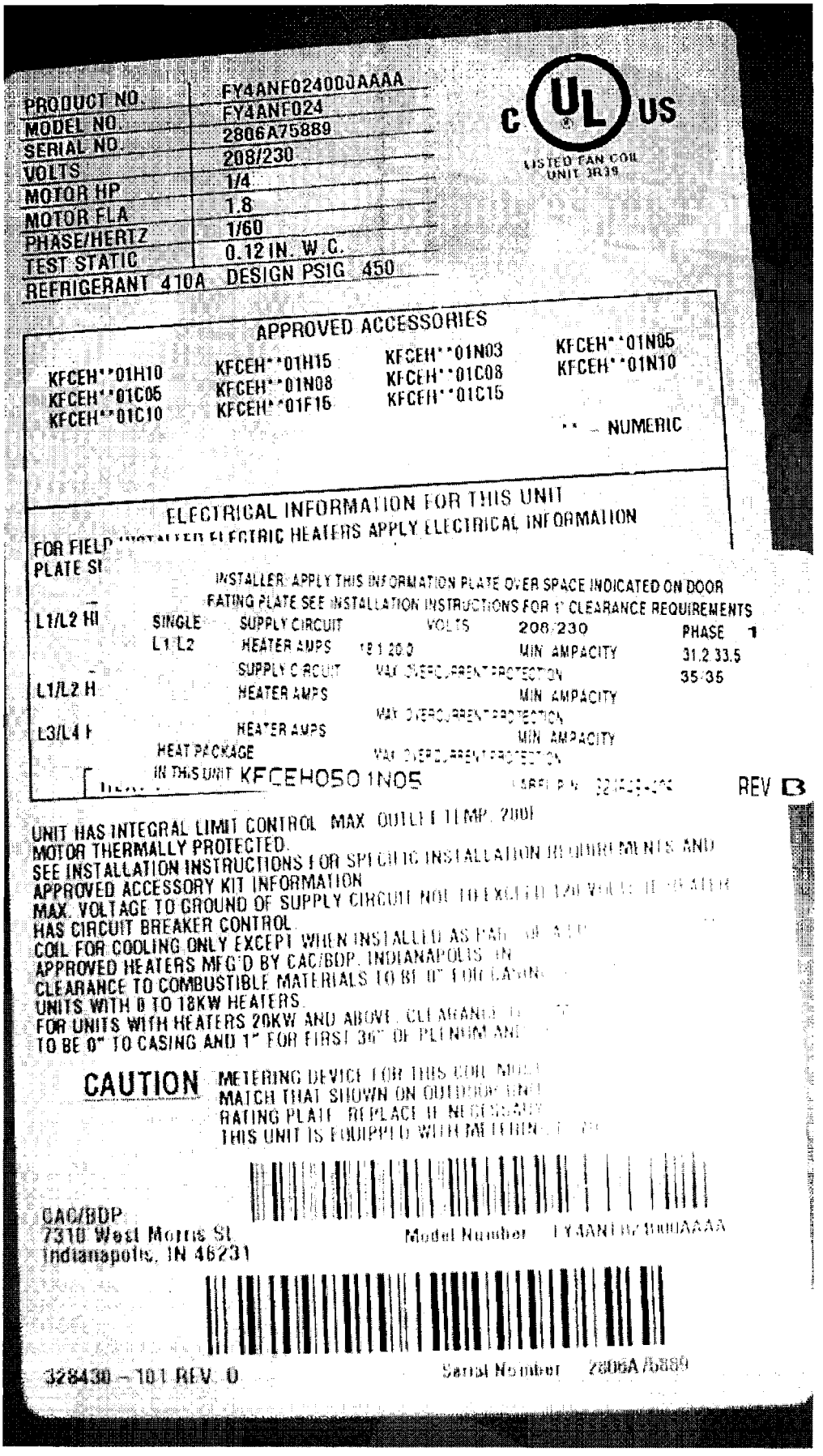
Model Number FY4ANF036000AAAA

328438 Serial Number 2906A85356

Photograph of upstairs air conditioner in the home.

Close up photograph of the above air conditioner.

Photograph of the labeling.



PRODUCT NO.	FY4ANF024000AAAA
MODEL NO.	FY4ANF024
SERIAL NO.	2806A75889
VOLTS	208/230
MOTOR HP	1/4
MOTOR FLA	1.8
PHASE/HERTZ	1/60
TEST STATIC	0.12 IN. W.C.
REFRIGERANT 410A	DESIGN PSIG 450

c UL us
LISTED FAN COIL UNIT 3R39

APPROVED ACCESSORIES

KFCEH**01H10	KFCEH**01H15	KFCEH**01N03	KFCEH**01N05
KFCEH**01C05	KFCEH**01N08	KFCEH**01C08	KFCEH**01N10
KFCEH**01C10	KFCEH**01F15	KFCEH**01C15	

** = NUMERIC

ELECTRICAL INFORMATION FOR THIS UNIT

FOR FIELD INSTALLED ELECTRIC HEATERS APPLY ELECTRICAL INFORMATION PLATE SI

INSTALLER: APPLY THIS INFORMATION PLATE OVER SPACE INDICATED ON DOOR RATING PLATE SEE INSTALLATION INSTRUCTIONS FOR 1" CLEARANCE REQUIREMENTS

L1/L2 HI	SINGLE	SUPPLY CIRCUIT	VOLTS	208/230	PHASE 1
	L1 L2	HEATER AMPS	18.1 20.0	MIN AMPACITY	31.2 33.5
		SUPPLY CIRCUIT	MAX OVERCURRENT PROTECTION		35/35
L1/L2 H		HEATER AMPS		MIN AMPACITY	
			MAX OVERCURRENT PROTECTION		
L3/L4 H		HEATER AMPS		MIN AMPACITY	
	HEAT PACKAGE		MAX OVERCURRENT PROTECTION		
	IN THIS UNIT	KFCEH050 1N05			REV B

UNIT HAS INTEGRAL LIMIT CONTROL MAX OUTLET TEMP. 200F
MOTOR THERMALLY PROTECTED.
SEE INSTALLATION INSTRUCTIONS FOR SPECIFIC INSTALLATION REQUIREMENTS AND APPROVED ACCESSORY KIT INFORMATION
MAX. VOLTAGE TO GROUND OF SUPPLY CIRCUIT NOT TO EXCEED 120 VOLTS IF HEATER HAS CIRCUIT BREAKER CONTROL
COIL FOR COOLING ONLY EXCEPT WHEN INSTALLED AS PART OF A HP
APPROVED HEATERS MFG'D BY CAC/BDP, INDIANAPOLIS, IN
CLEARANCE TO COMBUSTIBLE MATERIALS TO BE 0" FOR CASING
UNITS WITH 0 TO 18KW HEATERS
FOR UNITS WITH HEATERS 20KW AND ABOVE, CLEARANCE TO
TO BE 0" TO CASING AND 1" FOR FIRST 36" OF PLENUM AND

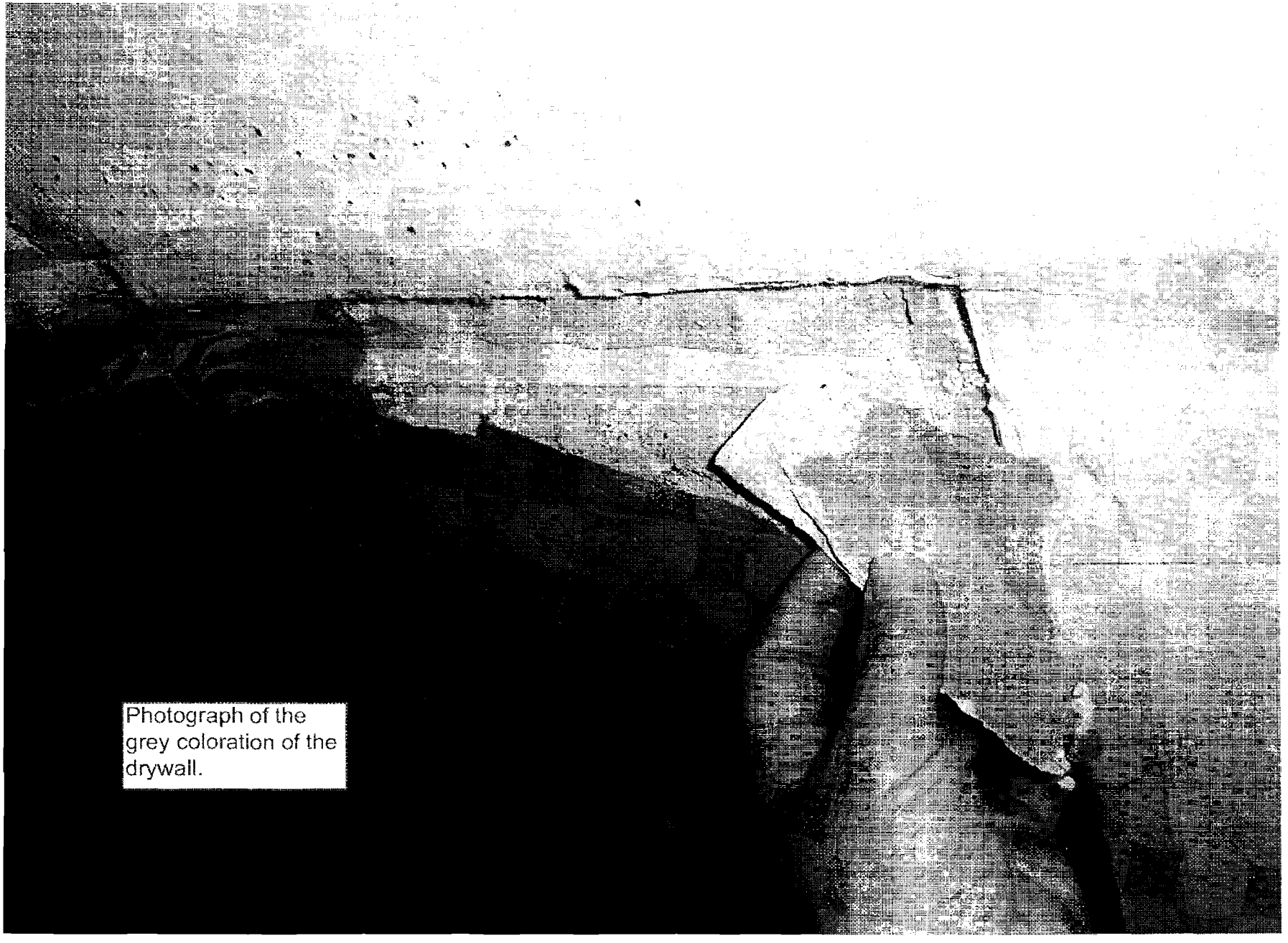
CAUTION METERING DEVICE FOR THIS COIL MUST MATCH THAT SHOWN ON OUTDOOR UNIT RATING PLATE. REPLACE IF NECESSARY. THIS UNIT IS EQUIPPED WITH METERING

CAC/BDP
7310 West Morris St.
Indianapolis, IN 46231

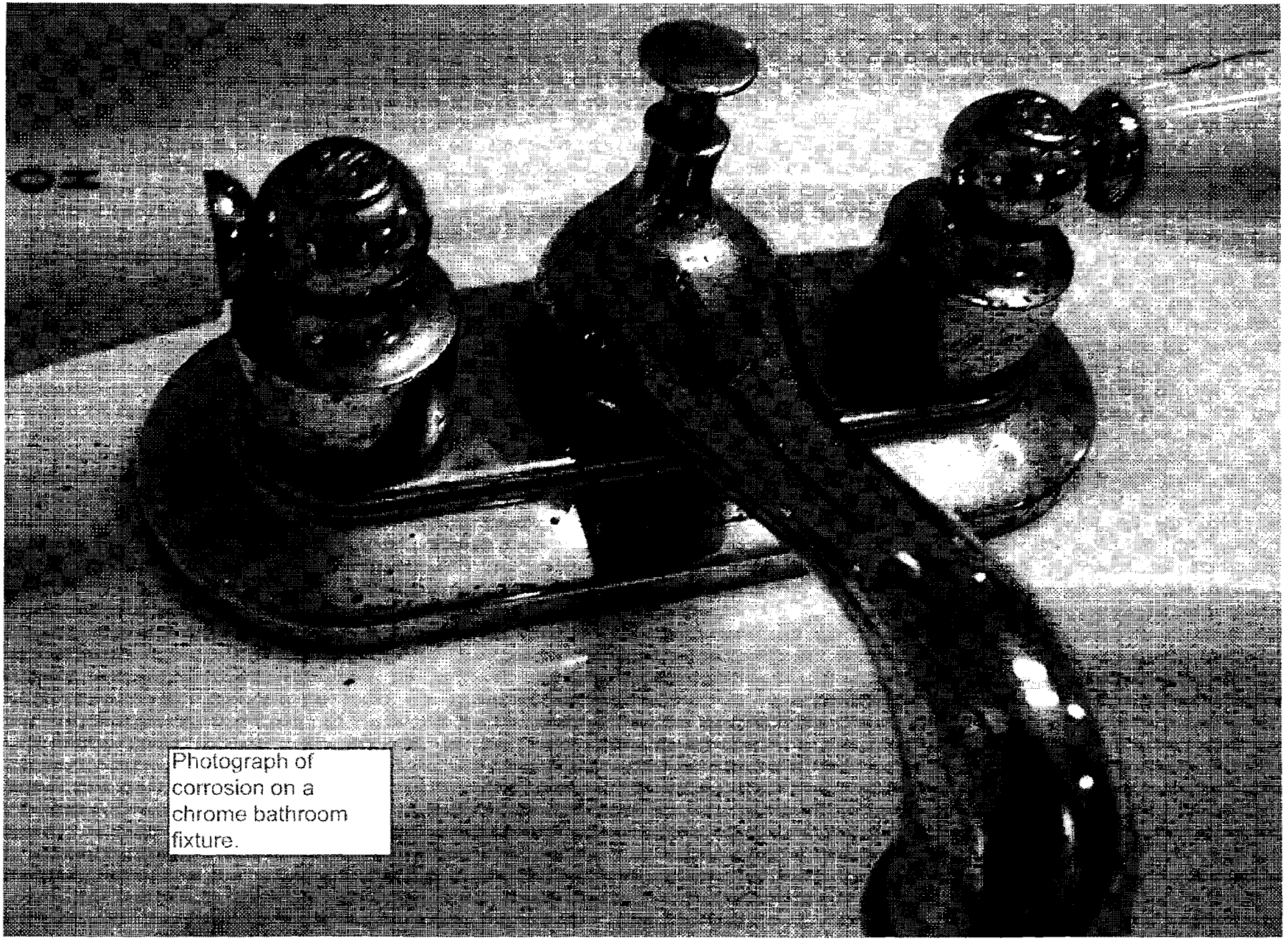
Model Number FY4ANF024000AAAA

Serial Number 2806A75889

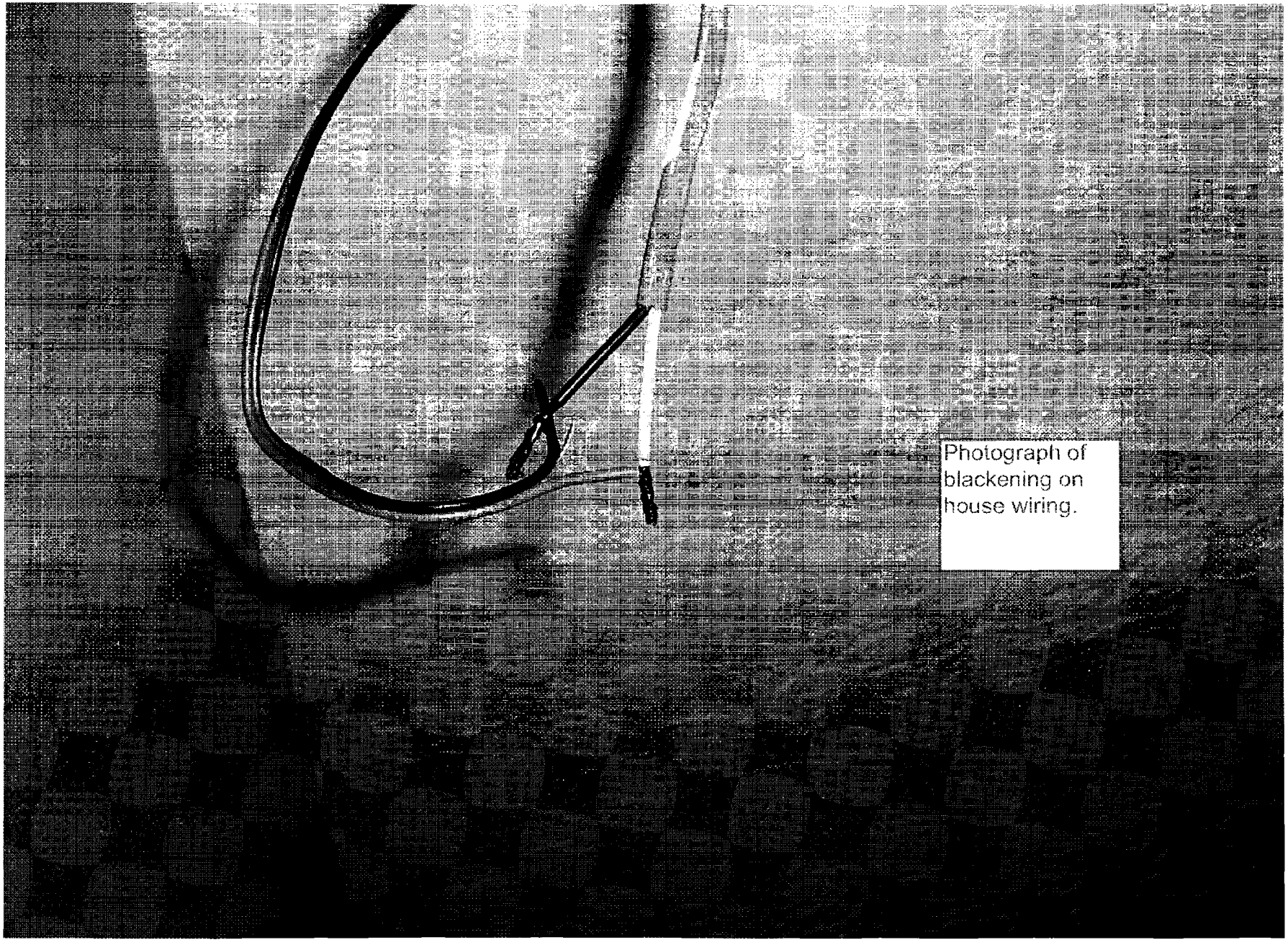
328430-101 REV. 0



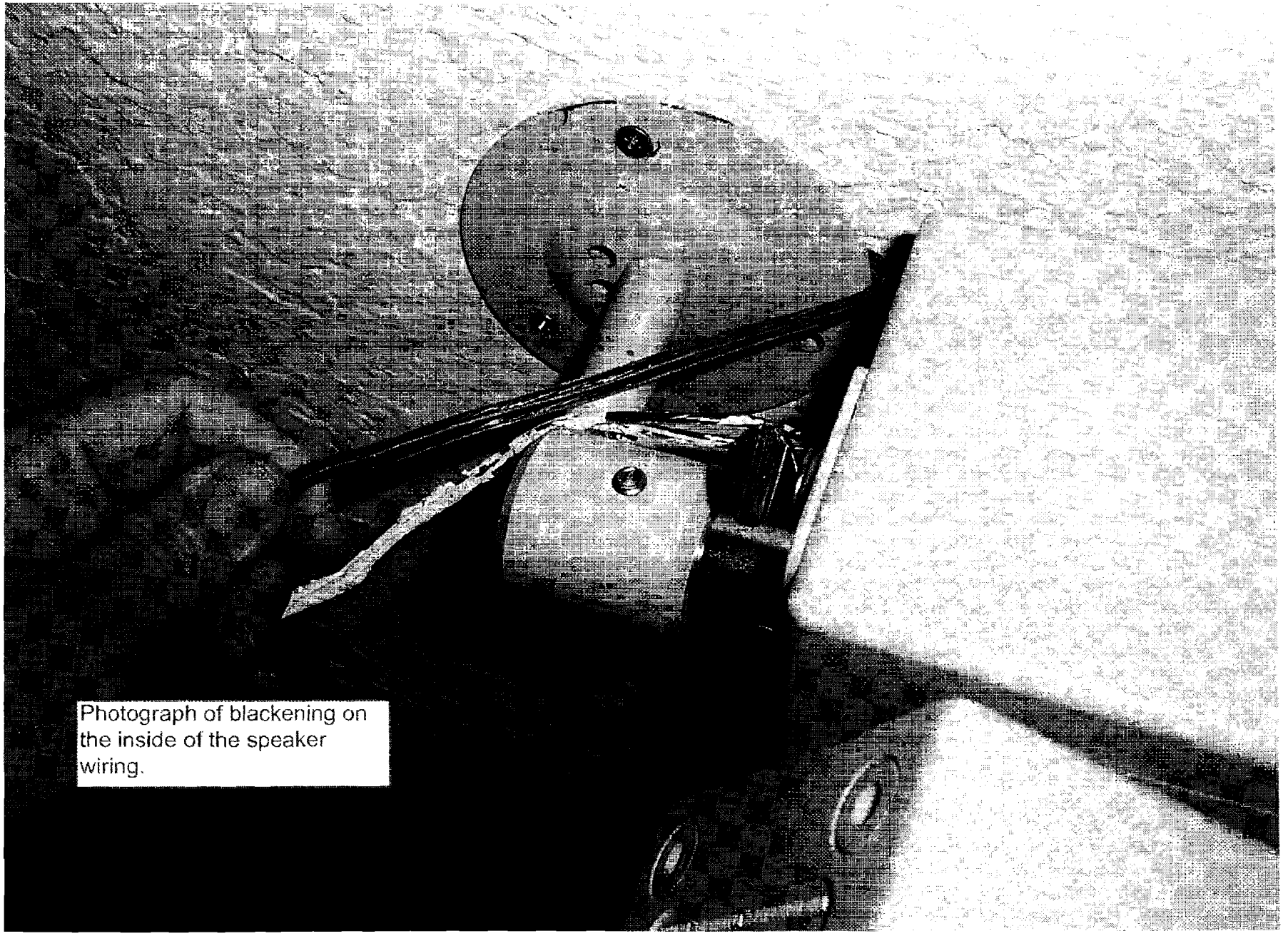
Photograph of the grey coloration of the drywall.



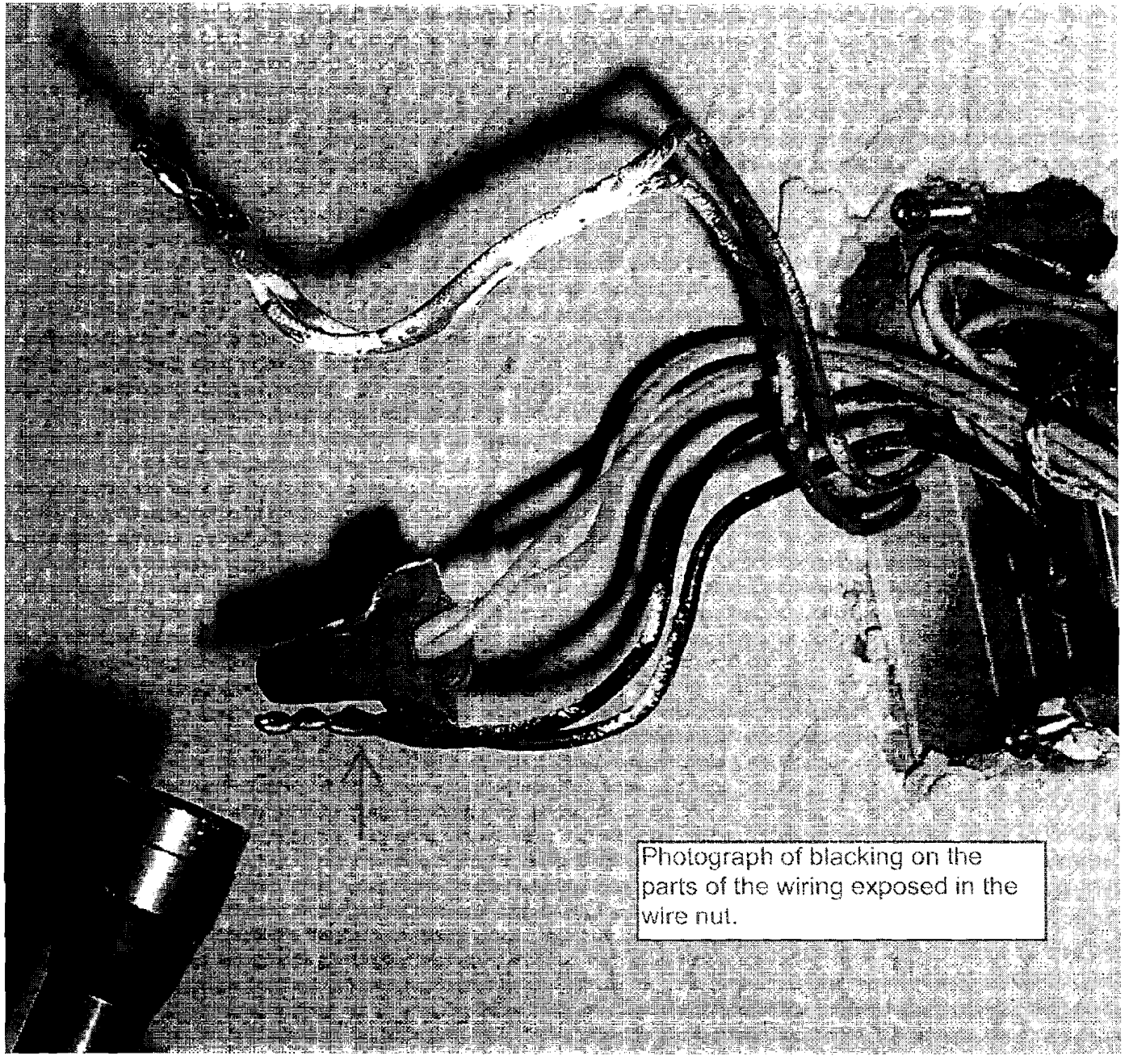
Photograph of corrosion on a chrome bathroom fixture.



Photograph of blackening on house wiring.



Photograph of blackening on the inside of the speaker wiring.



Photograph of blacking on the parts of the wiring exposed in the wire nut.

U.S. Consumer Product Safety Commission

AUTHORIZATION FOR RELEASE OF NAME

Thank you for assisting us in collecting information on a potential product safety problem. The Consumer Product Safety Commission depends on concerned people to share product safety information with us. We maintain a record of this information, and use it to assist us in identifying and resolving product safety concerns.

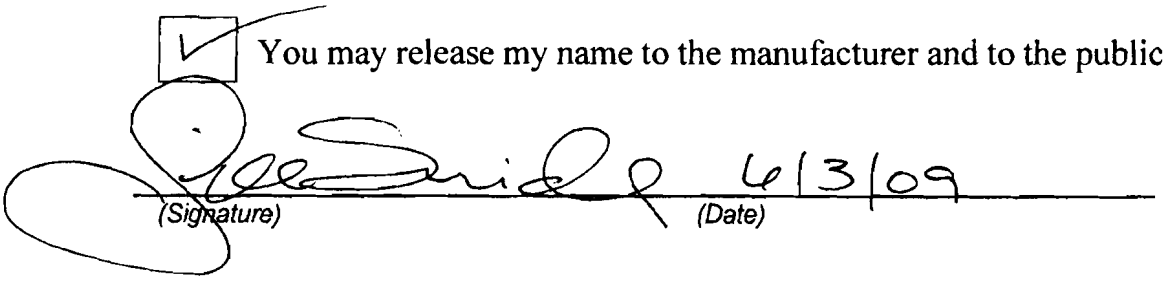
We routinely forward this information to manufacturers and private labelers to inform them of the involvement of their product in an accident situation. We also give the information to others requesting information about specific products. Manufacturers need the individual's name so that they can obtain additional information on the product or accident situation.

Would you please indicate on the bottom of this page whether you will allow us to disclose your name? If you request that your name remain confidential, we will of course, honor that request. After you have indicated your preference, please sign your name and date the document on the lines provided.

☐ I request that you do not release my name. My identity is to remain confidential.

☐ You may release my name to the manufacturer but I request that you do not release it to the general public.

☑ You may release my name to the manufacturer and to the public.



(Signature) 6/3/09 (Date)

CPSC Form 322

U.S. Consumer Product Safety Commission
SAMPLE COLLECTION REPORT

1. Sample Flag	2. Date Collected	3. Sample Type and Number: 09-810-7070	
NOTIFY BLAKE ROSE & BELINDA BELL	6/3/09	● Physical ○ Documentary	
4a. Product Name	**4b Model**	**4c NEISS**	**5. Assignment Number**
SMOKE DETECTOR	1276	0702	090529CBB1741
6. Complete for Import Samples		**7. MIS**	**8. Hours** Activity 3 / Travel 1
Port of Entry:		31102	
Country of Origin:		**9a Home RO**	**9b Collecting RO**
Entry No. and Date:		CFIE	CFIE
Customs Contact:			

10. Sample Cost	11. Invoice Value of Lot	12. Size of Lot	Units
$0.00		1	unt

13. Manufacturer/Importer # KID158	14. Shipper/Foreign Manufacturer	15. Dealer/Import Broker #
KIDDE SAFETY 1016 CORPORATE PARK DRIVE MEBANE, NC 27302	SAME AS BOX #13	JILL SWIDLER 11101 VERSAILLES BLVD CLERMONT, FL 34711

16. Supporting documents attached:

Invoice No. and Date: NONE
Shipping Record and Date: NONE
Affidavit Signer's name, title and date: NA

17. Product Identification:

Product is an off white smoke detector.
Labeling states in part, "Kidde Ionization Smoke Alarm Model 1276, Kidde Safety, Mebane NC 27302; 2005 Jan 27, Made in china, UL Listed

18. Reason for collection/analysis needed: ○ FHSA ● CPSA ○ FFA ○ PPPA ○ RSA

Unit requested by CPSC Atty Belinda Bell

19. Summary of Field Screening:

None conducted however the complainant indicated that on approximately 12 occasions over 3 years the alarms would sound and have to be reset. There had been no fire event in any false alarm instance. All the

20. Sample size/Method of Collection:

The CPSC attorney asked the family if the CPSC could collect one unit of the smoke detectors. The father removed one of the units for potential review by the CPSC laboratory. The sample consists of 1 sub

21. Identification on sample:	22. Identification on seal and date:
" 09-810-7070 SUB #1 GLD 6/3/09 "	"09-810-7070 Glenn L. Dunlap 6/9/09 "

23a. Sample delivered to:	23b Date	24. Report/Record Sent to:
FEDEX 32807		CFIE

25. Laboratory/Office: LSE ___ LSM ___ CRC ___ SIU ___ Other
LSC ___ LS ___ CLD ___ SSF X

26. Remarks:

Attachments: Photograph of the product and Receipt for sample. Complainant was unsure of the retailer and had no receipts for the product.

27. Related Samples:

none

28a Collector's name/title:	28b Collector's signature/date:
Glenn L. Dunlap Product Safety Investigator	Glenn L. Dunlap 6/10/09
29a Reviewer's name/title:	**29b Reviewer's signature/date:**

PRODUCT IDENTIFICATION

Issue No. 70,047 ***"

FIELD SUMMARY

homes 8 alarms are interconnected by hard wiring and when one would sound they would all sound. There was no master control panel/monitoring system.

METHOD OF COLLECTION

that was provided by the complainant to this investigator. The sample was identified as in Box #21 and officially sealed as in Box #22 in a cardboard box. Sample remained under lock & key; or in investigator's possession from the time of collection until submission.

REMARKS

It should also be noted that the unit has a battery backup and is hard wired into their home. On 6-08 at this investigator's residence station it did a "beep, beep, beep, pause, beep" once at night. On 6-09 it did that three times only at night. Finally at 4 am I heard it beep again and realized it was the complainant's smoke detector! The beeping was never continuous or periodic and never sounded during the day.

U.S. CONSUMER PRODUCT SAFETY COMMISSION

1. AREA OFFIC: Glenn Dunlap 407-671-5737
US Consumer Prod Safety Comm
2344 Pear Tree Court
Orlando, FL 32807

2. NAME OF INDIVIDUAL	3. TITLE OF INDIVIDUAL	4. DATE
Jill Swidler	home owner	6-3-09
5. FIRM NAME		**6. SAMPLE NUMBER**
NA		09-810-7070
7. NUMBER AND STREET	**8. CITY AND STATE** *(Include Zip Code)*	
11101 Versailles Blvd	Clermont, FL 34711	

9. SAMPLES COLLECTED *(Describe fully. List lot, serial, model numbers and other positive identification)*

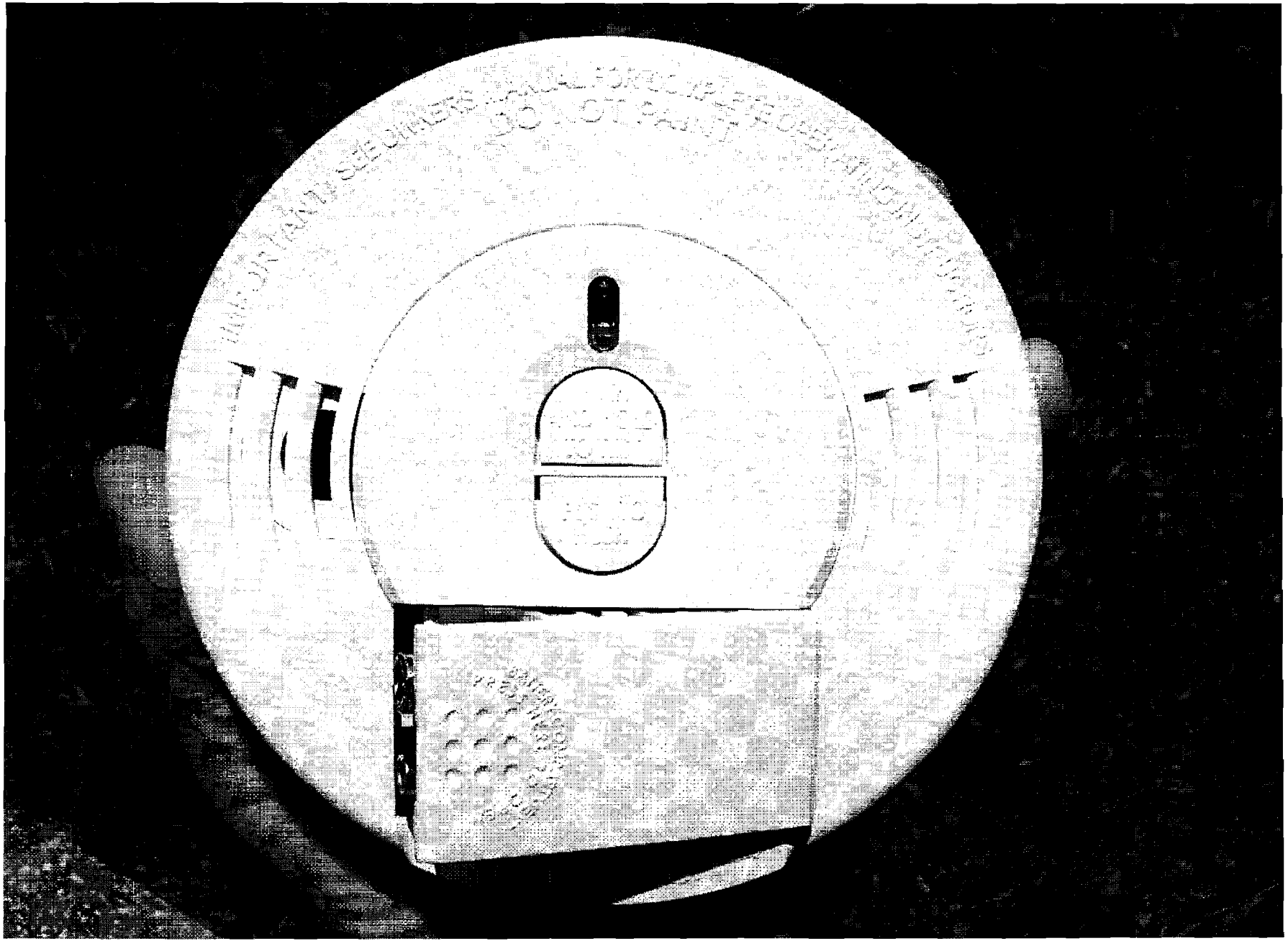
The following samples were collected by the Consumer Product Safety Commission pursuant to Section 27(f) of the Consumer Product Safety Act (15 U.S.C. 2076(f) and/or Section 11(b) of the Federal Hazardous Substances Act (15 U.S.C. 1270(b) and/or Sections 5(c) and (d) of the Flammable Fabrics Act (15 U.S.C. 1194(c) and (d) and/or Section 704(c) of the Federal Food Drug and Cosmetic Act (21 U.S.C. 374(c)) [Authority for sample collections made in connection with the Poison Prevention Packaging Act of 1970 (15 U.S.C. 1471 et seq.)], and receipt for said samples is hereby acknowledged. Sections cited are quoted on the reverse side of this form.

I, Glenn L. Dunlap received from Mr & Mrs Swidler one Kidde Ionization Smoke Alarm Model 1276 for possible review by the CPSC due to alarm Sounding when no fire/Smoke presents

10 SAMPLES	11. SAMPLES WERE	12. COLLECTOR
a. AMOUNT RECEIVED FOR SAMPLE: 0	PURCHASED	a. NAME *(Print or type)*: Glenn Dunlap
b. SIGNATURE *(Person from whom sample received)*: Sent by Mail	BORROWED *(To be returned)*	b. SIGNATURE:

CPSC FORM NO. 163

RECEIPT FOR SAMPLES


DO NOT PAINT


Kidde
Ionization Smoke Alarm Model 1276
120 VAC (60Hz, 80mA MAX) 9V BATTERY BACKUP with "Hush"
For repair or service return to Kidde Safety, Mebane, NC 27302.
(800-880-6788) Three pulse alarm pattern indicates that particles of
combustion have been detected. Steady green LED indicates the alarm is receivin
AC power. Flashing green LED indicates alarm memory. Periodic flashing (45 sec.
of the red LED indicates the alarm is operating. An intermittent "Chirp" indicates a
low or missing battery.
Clean your alarm (annually) using compressed air or a vacuum cleaner hose and vacuuming or blowing air through the openings around the perimeter of the alarm. If cleaning does not restore your alarm to normal operation, the alarm should be replaced.
Sensitivity = 0.99± .07 percent/Ft.
LOCK
The "Hush" button will reduce the sensitivity for 7 minutes. During this time the alarm will "Chirp" every 45 seconds. Push the test button to end the "Hush" cycle or reset the alarm memory. Not recommended for use at temperatures below 40°F or above 100°F, or in humidity higher than 85%, as these conditions may reduce battery life. This device contains 0.9 Micro curies of Americium 241, a radioactive material and is distributed under U.S. NRC No. 32-23858-01E.
WARNING: USE ONLY BATTERIES SPECIFIED IN MARKING. USE OF DIFFERENT BATTERY MAY HAVE A DETRIMENTAL EFFECT ON ALARM OPERATION. REPLACE BATTERY ONCE A YEAR OR WHEN "CHIRP" OCCURS.
For battery replacement use only: Eveready 216, 522, 1222; Gold peak 1604P, 1604S, 1604A; Duracell MX1604, MN1604 or Ultralife U9VL.
To replace battery, locate the battery compartment on the front of the unit. Press where indicated and release. When installing a new battery, follow all markings on battery compartment. Press and release battery compartment to close.
SEE OWNER'S MANUAL FOR COMPLETE INSTRUCTIONS .. WEEKLY TESTING IS REQUIRED
Manufactured under one or more of the following patents, 4246572, 4972181, D346981 Others pending
REPLACE IN 10 YEARS
MADE IN CHINA C
1276 7101 00
2005 Jan. 27
THIS SIDE UP FOR WALL MOUNTING
SINGLE AND/OR MULTIPLE STATION SMOKE ALARM
ISSUE NO. 70.047
UL LISTED
S1816

Available online at www.sciencedirect.com

ScienceDirect

Waste Management 28 (2008) 2091–2096

wasteWmanagement

www.elsevier.com/locate/wasman

Measuring the gypsum content of C&D debris fines

Stephen E. Musson, Qiyong Xu, Timothy G. Townsend *

Department of Environmental Engineering Sciences, University of Florida, Gainesville, FL 32611-6450, USA

Accepted 10 September 2007
Available online 5 November 2007

Abstract

Construction and demolition (C&D) debris recycling facilities often produce a screened material intended for use as alternative daily cover (ADC) at active landfills or for shaping and grading at closed landfills. This product contains soil and small pieces of wood, concrete, gypsum drywall, shingles and other components of C&D debris. Concerns have been raised over the contribution of gypsum drywall in C&D debris fines to odor problems at landfills where the product is used. To address such concerns, limitations may be placed on the percentage of gypsum (or sulfate) that can occur, and standardized testing procedures are required to permit valid compliance testing. A test procedure was developed for measuring the gypsum content in C&D debris fines. The concentration of sulfate leached in an aqueous solution was used to estimate the initial gypsum content of the sample. The impact of sample size and leaching time were evaluated. Precision and accuracy increased with increasing gypsum content. Results from replicate samples had an average relative standard deviation of 9%. The gypsum content of fines obtained from different facilities in the US varied widely from 1% to over 25%. These variations not only occurred between differing facilities, but within batches produced within a single facility.

1. Introduction

Construction and demolition (C&D) debris recycling is a growing industry attempting to address the growing C&D waste stream in environmentally friendly manners by providing an alternative to C&D debris landfills. These facilities accept incoming loads of C&D debris and process the mixed material into separate fractions, with a goal of creating as many product streams as possible that do not require direct landfilling. In addition to product streams consisting of at a minimum wood, concrete/masonry/brick, and metal, a product consisting of fine materials typically results. In some cases C&D debris fines are produced by simply screening incoming waste to separate large and small materials. In other cases, part of the C&D debris is mechanically size-reduced to manufacture the fines. The fines contain a blend of soil and small pieces of building materials such as wood, concrete, gypsum drywall, and shingles. The goal of the facility operator is to find a regulatory permissible market for the fines that is less expensive than paying a landfill disposal fee. Thus, to be economically feasible and successful, C&D recycling programs rely upon finding markets for all of their major products, including C&D fines.

Well screened C&D debris fines that contain predominantly soil may under some circumstances be permitted for beneficial use as a substitute for soil. These uses may be limited, however, by the presence of trace metals and organic chemicals (Townsend et al., 2004; Jang and Townsend, 2001a). Recycling facility operators thus turn to markets that entail placement of the fines within a landfill. One such application is use as alternative daily cover (ADC) at landfills. The ADC is used as a substitute for earthen material placed on the active face of an operating municipal solid waste (MSW) landfill at the end of each operating day to control vectors, fires, odors, litter, and scavenging. If permissible, these facilities may also use fines for longer-term uses such as intermediate and final cover. Another use practiced at some closed landfills in the US is shaping and grading. Closed landfills that need additional materials to reach elevations and slopes for

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E-mail address: ttown@ufl.edu (T.G. Townsend).

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doi:10.1016/j.wasman.2007.09.012

proper storm water control have in some cases added C&D debris fines for these purposes.

Concerns have been raised over the contribution of gypsum drywall in the ADC to odor problems at landfills, including a temporary ban on the use of C&D fines as ADC in New Hampshire in 2004 (O'Connell, 2005). C&D fines can contain a large portion of gypsum ($CaSO_4 \cdot 2H_2O$), the primary component in drywall; previous research found C&D debris fines to contain gypsum at levels of 1.5–9.1% by mass (Jang and Townsend, 2001b). The gypsum can then result in the production of hydrogen sulfide gas in a landfill when sulfate-reducing bacteria consume and convert the sulfate under anaerobic conditions (Lee et al., 2006; Townsend et al., 2000, 2005). Although the most notable problem related to the hydrogen sulfide is the disagreeable odor, other health problems due to a high exposure to the gas have been reported (O'Connell, 2005; Flynn, 1998; WHO, 2000; Selene and Chou, 2003; Campagna et al., 2003).

To control odor production from C&D debris fines, limitations may be placed on the percentage of gypsum (or sulfate) in the fines. However, no standard test procedure has been developed for measuring gypsum content in C&D debris fines and industry groups report varying laboratory test results. This paper presents the work conducted to develop a standard operating procedure (SOP) for determining the gypsum content of C&D debris fines produced from C&D debris. The development of the SOP had several objectives: (1) readily performed by most major environmental analytical laboratories, (2) provide consistent testing results among laboratories, and (3) be cost effective and rapid.

2. Materials and method

The developed method utilizes the leaching of gypsum from the fines into an aqueous solution and measuring the resulting sulfate concentration in the leachate. If all (or nearly all) of the gypsum is leached, the original percentage of gypsum can be calculated. Synthetic samples were prepared by mixing ground gypsum wallboard, ground construction lumber (white pine), sand, soil, cardboard, and concrete. Gypsum wallboard, of a composition of 90% gypsum and 10% backing paper, was ground to a powder. Wood blocks were ground to particles less than 3 cm^3 in size. Concrete particles varied from pea size gravel to powder, and cardboard squares of 4 cm^2 were used. Coarse sand was obtained from a local building supply store and local topsoil was used as the soil component. Test samples consisted of 0%, 2%, 5%, 10%, and 20% by weight of gypsum. The percentage of sand was varied to correspond with the changing gypsum content. The mixture percentages are shown in Table 1 and were based upon composition measurements of a field sample obtained from a C&D recycling facility. Four experiments were conducted using the synthetic samples to define procedure factors such as sample size, leaching time, and endpoint determination.

Table 1
Percentage by weight of artificial C&D debris fines samples used in method determination

% Gypsum	% Sand	% Concrete	% Wood	% Soil	% Cardboard
0	22	5	30	40	3
2	20	5	30	40	3
5	17	5	30	40	3
10	12	5	30	40	3
20	2	5	30	40	3

2.1. Experiment 1 – time required for gypsum dissolution

Many standardized leaching protocols such as the toxicity characteristic leaching procedure (TCLP) and the synthetic precipitate leaching procedure (SPLP) require an 18 h leaching time (US EPA, 2000). However, due to its solubility, it was expected that gypsum would dissolve and come to equilibrium rapidly and allow the test duration to be shortened. Two synthetic mixtures, 2% and 20% gypsum content, were leached in triplicate and the sulfate content measured at various leaching times.

One hundred gram samples were created in 2 L HDPE vessels by measuring the individual components of the mixture (i.e., 20 g gypsum, 2 g sand, 5 g concrete, etc.) into each container. Two liters of deionized water were placed into the extraction vessel and the vessel rotated end over end at 30 rpm in a 12 vessel rotary extractor (Analytical Testing Corporation). Samples were initially tested at 2, 4, 8, 12, and 18 h intervals. At each interval, the rotation apparatus was stopped and 50 ml of extract removed. The 50 ml samples were analyzed for sulfate concentration using a Dionex DX500 ion chromatograph. Based on these results, testing was repeated using a 5% gypsum mixture but at new time intervals of 15, 30, 45, 60, and 120 min.

2.2. Experiments 2 and 3 – methods for complete gypsum dissolution

Based upon interviews with industry personnel and prior research (Jang and Townsend, 2001b), the typical gypsum content of C&D debris fines was expected to be from 5% to 20%, or 5–20 g per 100 g sample. However, the solubility of gypsum permits a maximum of 5.28 g to dissolve in the 2 L extraction solution. Therefore, it was necessary to reduce the solid to liquid ratio utilizing a smaller sample size, larger extraction vessels, or to leach the sulfate into solution in multiple steps.

The use of multiple leaching steps was examined to determine if this method would be unduly labor or time intensive. The number of leaching steps required to completely dissolve the gypsum of the 5% and 20% samples was assessed by leaching triplicate samples. Samples were prepared as described previously and rotated for a 2 h period. After rotating, the solution conductivity was measured using an ECTestr High (Eutech Instruments, Singapore). One liter of solution was removed from the sample and

filtered using pressure filtration and a 0.7 μm glass fiber filter; 250 ml of the filtrate were collected for sulfate ion concentration determination using the Dionex 500X ion chromatograph. The used filter paper and the filtered solids were returned to the extraction vessel and 1 L of deionized water was added to replace the removed water. The rotation, filtering, and sampling were repeated for a total of 5 repetitions. It should be noted that initial attempts to filter the entire 2 L solution were unsuccessful due to clogging of the filter paper. Use of alternate, more porous filter papers was also ineffective as fine material in the extract passed through the filter paper.

An additional experiment examined the effects of reduced sample size upon test results. To be fully soluble in the 2 L extraction solution, a 20% gypsum sample would require a sample size of less than 26 g. The researchers believed that a sample of this size was not sufficient to be representative of the heterogeneous mixture. Therefore, it was decided that a 50 g sample size would be the smallest sample size to be tested, and a comparison of 50 g samples and 100 g samples of a 5% gypsum mixture was conducted. The test methodology and analysis was identical to the methods described previously, utilizing multiple leaching and filtering steps but at 30 min intervals. The use of larger extraction vessels was not examined since a goal of the procedure was to use equipment commonly available in environmental labs.

2.3. Experiment 4 – standard procedure verification

Based on the results of the prior experiments, a standard procedure was created. The procedure was validated by testing three C&D debris fines mixtures from actual processing operations and 6 artificial configurations containing known gypsum contents (0.5%, 1%, 2%, 5%, 10% and 20%). The composition of the field samples was extremely variable. Thus mixing and sampling were significant factors in obtaining a representative sample. Approximately 5 kg (approximately 20 L in volume) of each sample were placed into a large laboratory sorting tray and mixed thoroughly to obtain an even distribution of materials across the tray. The tray was sectioned into quarters and two opposing quarters were transferred to a second sorting tray (approximately 2.5 kg). This procedure was repeated, obtaining a 1 kg and then 500 g subsample.

The 500 g sample was examined for any granules or pieces 0.5 cm or larger in size of materials that were potential sulfate sources such as gypsum drywall, cement, or soil. To promote leaching of the sulfate from these sources, these pieces were manually removed from the sample, ground using a mortar and pestle, and returned to the sample. The final 500 g sample was then mixed to obtain a uniform distribution; 100 g of the sample were then transferred into each of three extraction vessels; and 2 L of deionized water were placed into each extraction vessel and the vessels rotated at 30 rpm for 30 min intervals. At each 30 min interval, the rotation apparatus was stopped and the particulate matter allowed to settle for 30 min to allow quicker filtration.

The conductivity of the solution was measured, and 1 L of extract was removed and filtered using a 0.7 μm filter paper with pressure filtration. A minimum of 50 ml of the extract was collected. Based upon prior experimentation, if the measured conductivity was less than 500 μs/cm, extraction steps were ceased. If the conductivity was greater than 500 μs/cm, the filter was removed from the filter holder and returned with any solid materials to the extraction vessel. One liter of deionized water was placed into the extraction vessel and the 30 min extraction and filtration process repeated. Extract samples were analyzed using ion chromatography as described for the previous experiments. The total gypsum content of each sample was determined by the summation of the sulfate content of each 1 L extract sample and 2 L for the final vessel content. The formula is shown in Eq. (1):

$$\%\ \text{Gypsum wallboard} = 0.001991 * \left(\sum_{i=1}^{n-1} Ci + 2C_n\right) \quad (1)$$

where n is the number extractions performed; $\sum_{i=1}^{n-1} Ci$: sum of sulfate concentrations (mg/L) of extracts 1 through $n-1$; C_n sulfate concentration in mg/L of the last extract sample n; 0.001991: conversion constant assuming a 100 g sample, 1 L extraction solution exchanges, and a 90% gypsum/10% paper composition for wallboard.

3. Results and discussion

The purpose of experiment 1 was to determine the time necessary to completely dissolve gypsum into solution or to reach saturation of the solution. This would determine the leaching time necessary for the standard procedure. Lange's Handbook of Chemistry (2005) lists the solubility of gypsum (calcium sulfate dihydrate) as 0.264 g/100 g water at 25 °C. This is equivalent to approximately 1500 ppm or a maximum of 5.28% gypsum in the 100 g sample. Thus any C&D debris fines sample composed of a percentage of gypsum greater than 5.28% would be expected to reach a maximum concentration near 1500 ppm.

Initial testing using the 2% and 20% gypsum samples showed that by the first sampling interval of 2 h, maximum sulfate concentration had already been acquired. Thus to determine the minimum effective leaching time, further tests were required. Tests were performed with samples taken at 15, 30, 45 min, 1 h, and 2 h for a 5% gypsum sample. Fig. 1 shows the results of these tests. Based upon these results, (30 min) was selected as the appropriate leaching time based on the decrease in slope at that time interval. This time would allow sufficient gypsum to enter solution yet provide an adequately short period of time for analysis.

Since the gypsum concentrations of C&D debris fines were expected to be greater than 5%, multiple extractions were anticipated. To minimize the number of extractions,

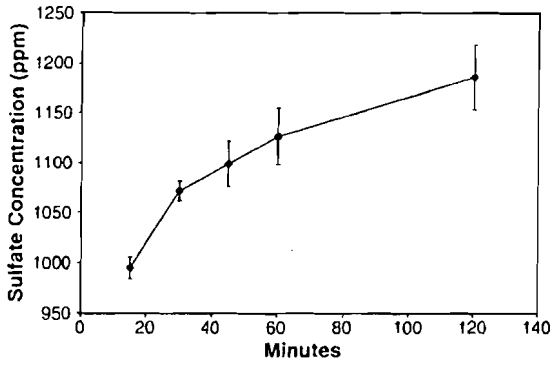

Fig. 1. Time to reach equilibrium (5% gypsum sample).

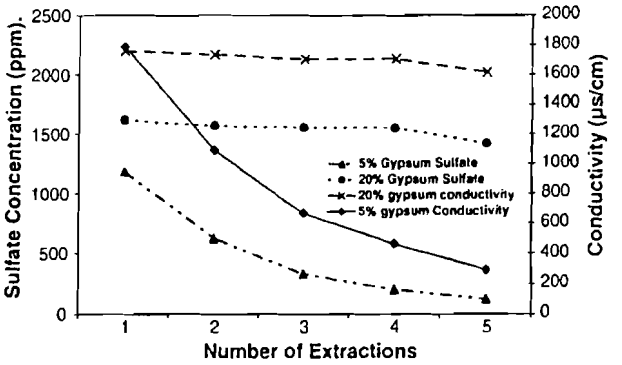

Fig. 2. Determination of extractions/conductivity trends for complete sulfate extraction.

a small sample size of 50 g was compared with a larger sample size of 100 g for accuracy and precision; 5% gypsum samples were used and the results are presented in Table 2. Statistical analysis (*T*-test) of the mean values shows that there is no significant difference. However, due to the heterogeneous nature of the field samples, it was determined that a 100 g sample is preferred. This increases the probability of obtaining a representative sample. Furthermore, to increase the accuracy of the procedure, the average of triplicate extractions would be used to determine the percentage of gypsum in the sample.

A goal of experiment 2 was to develop a simple means to determine when the analyst could discontinue further extractions. Immediate analysis of the sulfate concentration was cumbersome and required extended ion chromatograph operation. Another parameter would be necessary. Fig. 2 presents the conductivity and sulfate concentration of the 5% and 20% gypsum samples over five, 2 h extraction periods. An excellent correlation of conductivity to the sulfate (gypsum) content of the leaching solution was demonstrated. Furthermore, the conductivity could be quickly and accurately measured at the end of each extraction period. Based upon these results, it was determined that a conductivity value of 500 µs/cm corresponded to a sulfate concentration (approximately 400 ppm) sufficiently below saturation to ensure that all of the gypsum had entered into solution and the extraction procedure could be discontinued.

The results of field sample tests are presented in Table 3. Measurements were performed on three C&D debris fines

Table 2
Determination of reduced sample size on accuracy of gypsum percentage measurements for a 5% gypsum sample

Sample (g)	% Gypsum measured	Sample (g)	% Gypsum measured
50 #1	4.00	100 #1	4.63
50 #2	3.96	100 #2	4.68
50 #3	4.63	100 #3	4.00
50 #4	4.43	100 #4	4.69
50 #5	4.41	100 #5	4.39
50 #6	4.30	100 #6	4.22
Average	4.29 ± 0.26	Average	4.43 ± 0.28

Table 3
Gypsum content results for C&D debris fines field and lab standard samples

	Gypsum concentration (%)				Number of leaching steps
	Sample 1	Sample 2	Sample 3	Average	
ADC #1	9.80	8.49	7.53	8.61 ± 1.14	7
ADC #2	21.50	20.27	18.03	19.93 ± 1.76	10
ADC #3	21.41	23.87	20.89	22.06 ± 1.59	10
0.5%	0.38	0.39	0.42	0.40 ± 0.02	1
1.0%	0.75	0.74	0.76	0.75 ± 0.01	2
2.0%	1.79	1.59	1.64	1.68 ± 0.10	3
5%	5.07	5.28	5.01	5.12 ± 0.14	4
10%	10.80	9.62	6.57	9.00 ± 2.18	6
20%	22.64	19.17	19.01	20.28 ± 2.05	9

mixtures from actual processing operations and six artificial configurations containing known gypsum contents (0.5%, 1%, 2%, 5%, 10% and 20%). The results indicate greater accuracy for higher gypsum concentrations with the average concentration of the 1% gypsum test samples within 20% of the true value and the average concentration of the 20% gypsum test samples within 1% of the actual value. The standard deviation of the samples was sufficiently low with relative standard deviations ranging from less than 1% to 24% and an average relative standard deviation for all samples of 9%. As expected, the number of leaching steps required was directly proportional to the gypsum content with a maximum of 10 leaching steps required for samples of approximately 20% gypsum content. Additionally, to reduce required analytical time, composite samples were created from extract solutions to reduce the amount of Ion Chromatograph analysis per sample to one. Thus for each sample, 20 ml of the final 2 L extraction solution were mixed with 10 ml from each preceding 1 L removed from the vessel. This created a composite sample from which the final gypsum content could be determined. The change in calculation is shown by Eq. (2):

$$\% \text{ Gypsum wallboard} = 0.001991 * n * Cc \quad (2)$$

where n is the number of extractions performed; Cc is the sulfate concentration in mg/L of the composite sample.

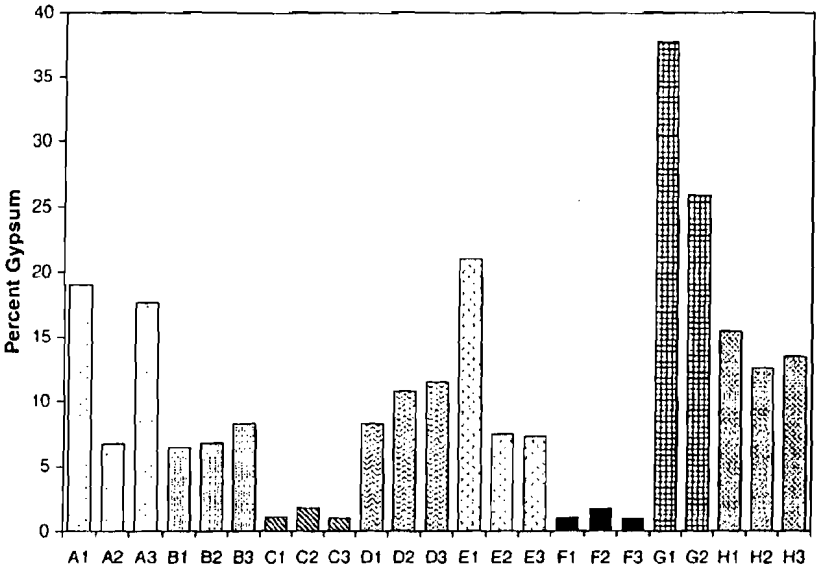

Fig. 3. Gypsum content of C&D debris generated ADC from varying field sites.

0.001991: conversion constant assuming a 100 g sample, 1 L extraction solution exchanges, and a 90% gypsum/10% paper composition for wallboard.

Use of this method upon a known 20% gypsum sample resulted in a measured content of 21.20%.

4. Summary and conclusions

The method for the determination of gypsum content developed in this research will provide landfill operators and C&D debris fines producers assurance of the gypsum content placed on the landfill. With these measurements, manufacturers and landfill operators can establish guidelines containing an allowable percentage of gypsum in the C&D debris fines. This should prevent the generation of hydrogen sulfide in quantities resulting in odor complaints from surrounding communities and health risks to landfill operators.

The method was developed to minimize analytical costs and to be readily performed by most environmental analytical labs. Using readily available laboratory supplies, minimal reagents, and simple analysis, the method maximizes the efficiency of the analysis while minimizing costs. Requiring 10 leaching cycles for a 20% sample results in a total of 5 h of leaching time. Since most samples are expected to be less than 20% gypsum, it should be possible to complete the procedure and analysis within one, 8 h work day. However, an advantage of the procedure is its flexibility in allowing the analyst to extend leaching times or suspend analysis when required to meet their work schedule. Work is continuing to further examine steps to reduce analysis time and effort, such as reduced filtering requirements.

Due to the heterogeneous composition of C&D debris fines products, special emphasis should be placed on obtaining a representative sample of the product. Fig. 3 shows the results of testing performed on actual field samples from eight differing C&D debris fines producers. The gypsum content of the material may vary widely due to the variation of the incoming waste stream used to create it. This is true not only between differing facilities but between individual batches within a single facility. Measured field values ranged from 1% to nearly 38% gypsum. The selection of a representative 5 kg sample at the manufacturer was not examined during this study and test results may be affected by the initial sample selected. Use of partitioning, grinding of large particles, and triplicate analysis were effective in minimizing variability. While no instances were noted during method development, standard quality assurance and control practices should be utilized to detect possible interferences from the heterogeneous materials comprising C&D debris fines.

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TECHNICAL PAPER

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Hydrogen Sulfide Generation in Simulated Construction and Demolition Debris Landfills: Impact of Waste Composition

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ABSTRACT

Hydrogen sulfide (H_2S) generation in construction and demolition (C&D) debris landfills has been associated with the biodegradation of gypsum drywall. Laboratory research was conducted to observe H_2S generation when drywall was codisposed with different C&D debris constituents. Two experiments were conducted using simulated landfill columns. Experiment 1 consisted of various combinations of drywall, wood, and concrete to determine the impact of different waste constituents and combinations on H_2S generation. Experiment 2 was designed to examine the effect of concrete on H_2S generation and migration. The results indicate that decaying drywall, even alone, leached enough sulfate ions and organic matter for sulfate-reducing bacteria (SRB) to generate large H_2S concentrations as high as 63,000 ppmv. The codisposed wastes show some effect on H_2S generation. At the end of experiment 1, the wood/drywall and drywall alone columns possessed H_2S concentrations >40,000 ppmv. Conversely, H_2S concentrations were <1 ppmv in those columns containing concrete. Concrete plays a role in decreasing H_2S by increasing pH out of the range for SRB growth and by reacting with H_2S. This study also showed that wood lowered H_2S concentrations initially by decreasing leachate pH values. Based on the results, two possible control mechanisms to mitigate H_2S generation in C&D debris landfills are suggested.

INTRODUCTION

The disposal of gypsum drywall in landfills has been linked to the formation of hydrogen sulfide (H_2S) gas.[1–3] When gypsum drywall (~90% $CaSO_4 \cdot 2\ H_2O$ and 10% paper) becomes wet in a reducing environment, such as a landfill, sulfate-reducing bacteria (SRB) use sulfate as an electron acceptor to produce H_2S.[4] Characterized by an offensive odor at relatively low detectable concentrations (reported as low as 0.5 ppbv[5,6]), H_2S emissions have been documented as a nuisance at several communities surrounding disposal facilities that accept large amounts of construction and demolition (C&D) debris.[1,4,7] Concentrations as high as 12,000 ppmv were measured from gas produced in various C&D debris landfills in Florida.[7] Although concentrations in the ambient air surrounding landfills do not approach dangerous levels because of dilution, concentrations are large enough to create odor problems. Recent research does indicate, however, that prolonged exposure to low H_2S concentrations may pose adverse health effects on susceptible populations.[8]

Despite the potential problems resulting from the land disposal of gypsum drywall, the majority of this waste stream continues to be managed by landfilling. Although drywall recycling is technically feasible and does occur in some locations, economic and logistic issues surrounding its collection, processing, and marketing have limited widescale recycling efforts.[9] For the most part, H_2S production at landfills has only been addressed after a problem has been noted (e.g., odor complaints). Limited research has been conducted characterizing the role of gypsum drywall in the landfill environment. In laboratory simulations, Moreau-le-Golvan et al.[10] discuss laboratory studies to determine sulfate concentrations in leachate, which retard methanogenesis. Fairweather and Barlaz[11] evaluated the effects of several landfill inputs on H_2S production, including municipal solid waste, C&D waste, and sludge, and found that gypsum drywall was the major cause of H_2S. Experiments designed to generate and characterize C&D debris landfill leachate have resulted in H_2S production, as evidenced by strong H_2S odors[12,13] or dissolved sulfide in the leachate.[14] These experiments, however, were not designed to measure H_2S concentrations in the gas.

This paper presents research conducted to examine the range of H_2S concentrations that might occur within a C&D debris landfill and to explore the role that C&D debris composition might have on H_2S production and fate. In one experiment, the impact of three major C&D debris components (drywall, wood, and concrete) on H_2S production was explored. In a second experiment, the relationship between H_2S generation from drywall and the presence of concrete was examined in greater detail. The results provide insight into H_2S production in C&D

IMPLICATIONS

H_2S generation in C&D debris landfills has been a concern because of its adverse environmental and health effects. This study examined the H_2S generation in a serial of columns and explored the effect of codisposed waste on H_2S generation. Results demonstrated that H_2S generation is the result of the biological conversion gypsum drywall and is affected by the presence of codisposed wood and concrete. The results suggest that concrete or other alkaline materials may be used to help control H_2S formation and emission from C&D debris landfills.

debris landfills and to methods that might be used to control H_2S production and emission.

EXPERIMENTAL WORK

Experiment 1

Eight simulated C&D debris landfill columns were constructed, and five materials were used: gypsum drywall, wood, concrete, pea gravel, and sand. The pea gravel was selected to represent an inert material that would not impact the chemical conditions within the columns, and sand was used for a leachate drainage layer. Gypsum drywall, wood, and concrete were mixed to simulate C&D debris. Those constituents were size reduced and screened before being loaded into the columns. Sheets of new gypsum drywall were purchased and cut into 2.5 × 2.5-cm pieces. Crushed concrete was collected from a local concrete recycling facility. Southern yellow pine dimensional nontreated lumber was purchased and size reduced using a wood chipper. The concrete and the wood were screened to remove fine particles <0.64 cm. Table 1 summarizes the content added to each column. The columns were loaded so that each component represented approximately one third of the total waste by volume. Three columns (A1, A2, and A3) contained equal volumes of drywall, wood, and concrete. In two columns (B1 and B2), the concrete was omitted and substituted with pea gravel. Two additional columns (C1 and C2) contained only drywall with the remaining volume occupied by pea gravel. A final column (D) contained concrete and wood without drywall and was expected to result in minimal H_2S production.

Each column was constructed using 10-cm-diameter polyvinyl chloride (PVC) pipe cut to a length of 90 cm (see Figure 1). A slip cap was glued to the bottom of each column, and a valve was installed for removing leachate. A layer of clean silica sand was placed as a drainage layer at the bottom of the column. The waste components were added in two separate lifts. After the first lift was loaded, gas extraction ports were drilled, and valves were installed to provide a mechanism for extracting gas. A 6-cm stainless steel tube was attached to each valve so that the gas samples could be collected from the center of the columns. Once the gas extraction ports were in place, the second lift of the waste was loaded. An additional sand layer was added above the top lift of waste to provide a mechanism for uniform distribution of water added to the column. Sections of stainless steel screen were placed between the sand layer and the waste to prevent sand from filling the voids of the waste. A slip cap equipped with a valve was glued to the top of the column. Before the start of the experiment, the columns were flushed with nitrogen gas to remove oxygen. Simulated rainwater was added to the columns weekly (400 mL per week) in a batch fashion. The water addition rate was not selected to simulate any particular rainfall rate but rather to simply keep the simulated landfills moist and at field capacity. The rainwater solution was created following procedures outlined for the synthetic precipitation leachate procedure [SPLP; U.S. Environmental Protection Agency (EPA) SW-846 Method 1312[15]] and possessed a pH of 4.20 ± 0.05. Leachate was drained from the columns weekly. Experiment 1 was conducted for a duration of 192 days.

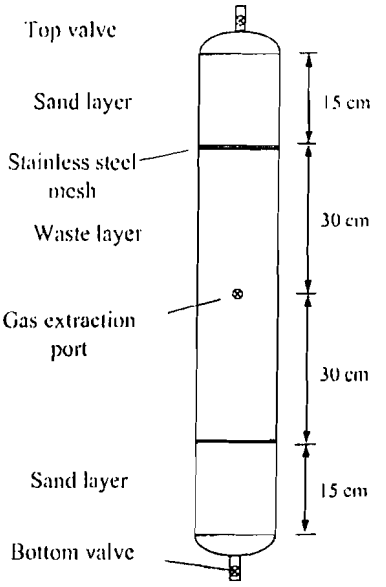

Figure 1. Column schematic for experiment 1.

Experiment 2

Experiment 2 was designed to follow up observations regarding the effects of concrete on the H_2S concentrations observed in experiment 1. Four additional columns were constructed using 8-cm-diameter PVC pipe cut to a length of 100 cm (see Figure 2). Slip caps were again affixed to the top and bottom of the columns to facilitate

Table 1. Summary of columns and their waste components.

Column	Components	Mass (g)				Total Volume (cm^3)	Final Depth of Waste (cm)
		Drywall	Concrete	Wood	Gravel		
A1	Wood, drywall, concrete	402	1766	308		4942	52
A2		402	1766	308		4942	54
A3		402	1766	308		4942	52
B1	Drywall, wood	402		308	2298	4942	53
B2		402		308	2298	4942	51
C1	Drywall	402			4590	4942	51
C2		402			4590	4942	51
D	Wood, concrete		1766	308	2297	4942	56

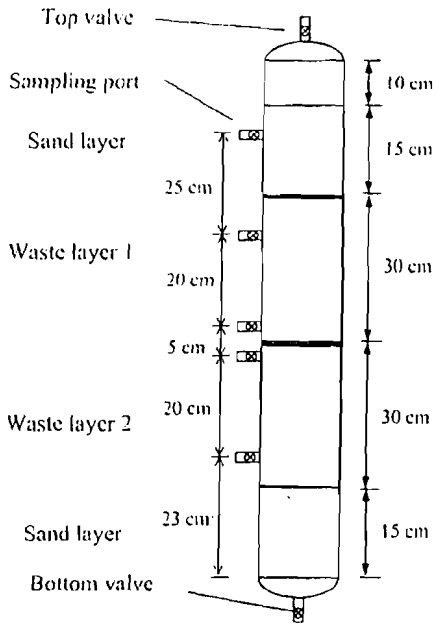

Figure 2. Column schematic for experiment 2.

water addition and leachate collection. Only two waste components were added to the columns in experiment 2: gypsum drywall and concrete. Each waste component was prepared in a similar fashion to the previous experiment. A silica sand drainage layer was placed at the bottom of the columns. Two columns (E1 and E2) were first loaded with a 30-cm layer of concrete followed by a 30-cm layer of drywall. The other two columns (F1 and F2) were loaded in the opposite fashion, with a 30-cm layer of drywall being placed first, followed by a 30-cm layer of concrete. Five gas sampling ports were installed in each column, as shown in Figure 2. The SPLP solution was added to the columns every week (225 mL per week) in a batch fashion. The columns in experiment 2 were monitored for a period of 27 days.

Sampling Collection and Analysis

Gas Samples. Gas samples were collected from the gas extraction ports and from the valves at the bottom of the columns. Gas samples from the waste layers were collected using various size glass syringes connected to the gas extraction ports via a neoprene nipple. Gas samples from the bottom of the columns were collected from the headspace above the Tedlar bags, which collected the drained leachate. Pure nitrogen (99.999%) was used to replace the volume of gas extracted for the various sampling parameters. Gas samples from experiment 1 were analyzed for H_2S, CH_4, CO_2, and volatile sulfur compounds (VSCs), and gas samples from experiment 2 were analyzed for H_2S. H_2S concentrations were analyzed using a Jerome 631-X H_2S analyzer (Arizona Instruments) with a detection range from 0.003 to 50 ppmv. In experiment 1, the H_2S was measured daily in the middle of the columns until day 52. From day 53 to 124, the Jerome meter required maintenance and was sent to the manufacturer for recalibration; the columns continued to be maintained during this period. Beginning on day 125, H_2S monitoring resumed at a frequency of once every 2 days. Gas sampling for experiment 2 was conducted weekly before adding the SPLP solution.

In addition to H_2S, some samples were also characterized for the concentration of CH_4, CO_2, and a suite of VSCs (which included several mercaptans, sulfides, and disulfides). These gases were analyzed every 2 weeks in gas from the middle of the columns in experiment 1. CH_4 and CO_2 were analyzed using an HP5890 gas chromatograph equipped with a thermal conductivity detector calibrated for a range of 1% (10,000 ppmv) to 100%. EPA method 3C[15] was followed for CH_4 and CO_2 analysis, each using a separate column. The VSCs were measured using an Entech 2000 purge and trap concentrator attached to a HP5890 gas chromatograph connected to a Finnigan INCOS XL single quadrupole mass spectrometer detector. The VSC detection limit was 0.1 ppmv. A gas standard of 14 VSCs was purchased from Matheson Tri-Gas Company for peak identification and calibration.

Leachate Samples. Leachate samples were collected weekly by draining the leachate by gravity from the bottom of the columns into Tedlar bags connected to the bottom valves. This procedure was conducted at the same time that SPLP solution was added to the tops of the columns. As stated previously, the gas collected in the headspace above the leachate in the Tedlar bags was used to characterize gas from the bottom of the columns. The leachate samples from experiment 1 were analyzed for sulfide, dissolved oxygen (DO), conductivity, pH, oxidation-reduction potential (ORP), sulfate, and chemical oxygen demand (COD). Leachate samples from experiment 2 were analyzed for sulfide and pH. The methylene Blue Method (EPA method 376.2 and Standard Method 4500-S2-D)[16] was used to measure sulfide concentrations weekly in experiments 1 and 2. DO was measured using the DO Meter Model 55/12 FT (YSI, Inc.). Conductivity was measured weekly following Standard Method 2510 B.[16] The methods used for pH and ORP were equivalent to Standard Method 4500-H+B and Standard Method 2580,[16] respectively. Sulfate was analyzed bimonthly using a Dionex DX 500 Chromatography System with dual columns according to SW 846 Method 9056,[15] and COD was measured bimonthly with a HACH DR/4000U spectrophotometer (Standard Method 5220 days).[16] Blanks, replicates, and calibration check samples were performed as appropriate.

RESULTS

Experiment 1

Biogas Characteristics. The majority of H_2S measurements were performed on samples collected using the gas extraction port located in the middle of the waste. The H_2S analyzer, a Jerome meter, was daily checked using 25-ppm standard H_2S gas. Before any gas samples were analyzed, laboratory air was used as a blank, and the blank was always below the detection limit of the Jerome meter (3 ppb). Seventy-four samples were analyzed over a 192-day period. Figure 3a presents the H_2S concentrations measured in the center of the columns during the length of experiment 1. Measurements collected from columns of the same composition were averaged together. A dramatic difference in H_2S concentrations among the different

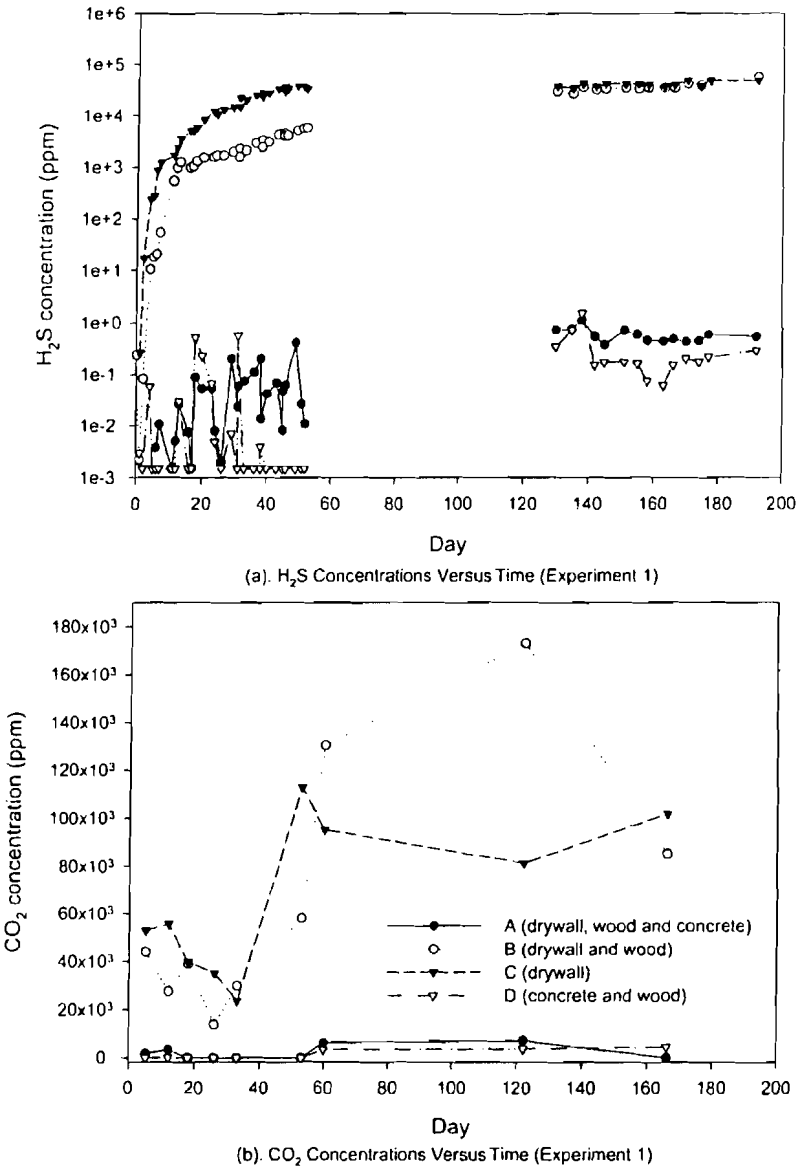

Figure 3. (a) H_2S and (b) CO_2 concentrations vs. time (experiment 1).

waste compositions was observed, as were changing concentrations over time. Both the B columns (drywall and wood) and the C columns (drywall alone) finished the experiment with H_2S concentrations >40,000 ppmv. H_2S concentrations in the B columns lagged behind those measured in the C columns during the early phases of the experiment. H_2S was detected at much lower concentrations in the A and D columns. The D columns contained no drywall, and only 37 of 74 samples from the middle of the waste contained H_2S above the instrument detection limit. H_2S concentrations measured in the center of waste from the A columns (which contained drywall, wood, and concrete) were also very low relative to the B and C columns.

H_2S concentrations were also measured in the gas collected from the bottom of the columns when the leachate was drained. In most cases, H_2S concentrations in this gas were on the same order of magnitude as gas from the middle of the columns. However, this was not true for the A columns during the early phases of the experiment. Figure 4 presents the H_2S concentrations measured from the middle and bottom of the columns for 2 days: a day from the beginning portion of the experiment (day 38) and a day from the later part of the experiment (day 138). Concentrations for the two different locations were similar for the columns containing wood-drywall and drywall alone. The column containing wood, drywall, and concrete was found to have (at day 38) a much greater concentration in the bottom gas compared with gas collected from the middle of the waste.

Table 2 summarizes the results of the other gas compounds measured, including CH_4, CO_2, and several of VSCs that were routinely observed. These compounds were analyzed on 11 occasions from day 5 to 170. Methane was found only in the A1 and B columns, with concentrations of 0.5% starting around day 53. Methane concentrations continued to rise to ~5% (measured on day 122) and then dropped to ~3% at day 166. CO_2 was

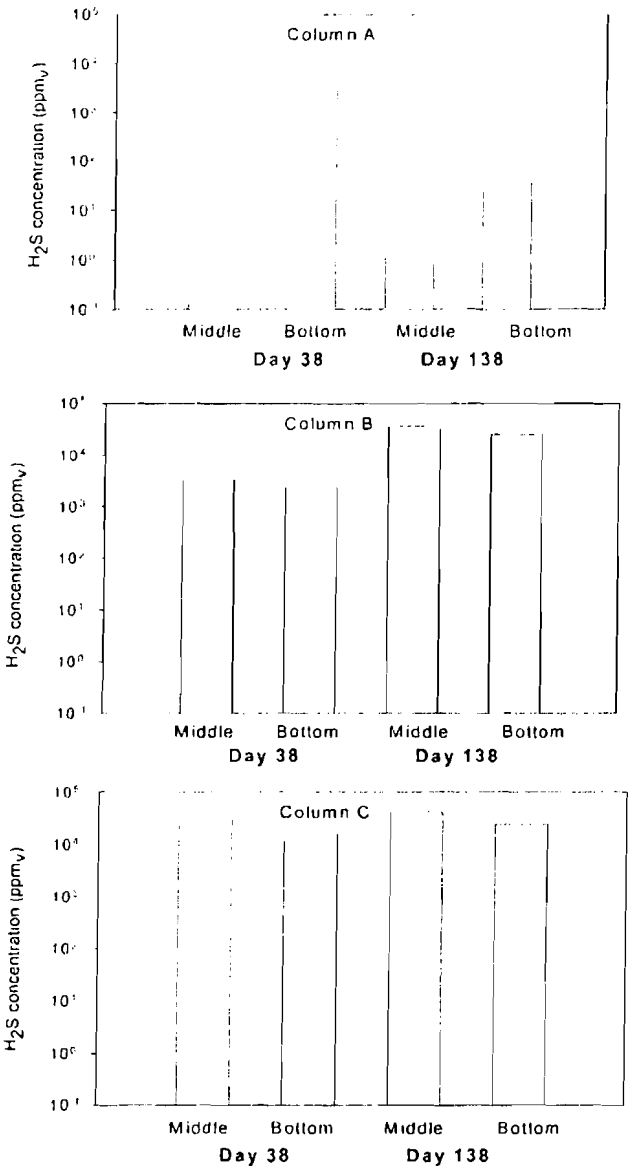

Figure 4. Comparison of average H_2S concentrations measured in and below the waste.

found in all of the columns (see Figure 3b). In general, CO_2 concentrations and VSC concentrations were greatest in those columns containing the greatest concentrations of H_2S. Carbon disulfide, carbonyl sulfide, and dimethyl sulfide were found in all of the columns. Methyl mercaptan was found only in the B and C columns, whereas sec-butyl mercaptan was present only in the C columns. Although other VSCs, such as tert-butyl mercaptan, ethyl methyl sulfide, ethyl mercaptan, 2-methylthiophene, isopropyl mercaptan, and 3-methylthiophene, were detected, their concentrations were below the detection limit (<0.1 ppmv) of the technique.

Leachate Characteristics. Leachate samples were collected from day 10 to day 173, the same days when simulated rainfall was added. Figure 5 presents the average leachate concentrations for several water quality parameters as a function of time (a, pH; b, COD; c, conductivity; and d, sulfide). Although the initial pH of the simulated rainfall was 4.2, the chemical and biological conditions within the columns resulted in leachate pH measurements typically >6. The columns containing wood and drywall (B) and the columns containing drywall only (C) both finished at pH near neutral, although the pH in the B columns began lower and took longer to reach this condition. Column D increased to alkaline conditions (pH >11) within a few weeks after leaching commenced. The A columns started near neutral but increased during the course of the experiment to a pH >10. For the most part, sulfide levels followed the same trend observed with H_2S in the gas. One noted exception to this was sulfide in the A columns during the first half of the experiment. This observation falls in line with the H_2S measurements observed in the bottom of the A columns described above. COD concentrations decreased with time, with the columns containing wood having higher concentrations than the one column without wood (D). The electrical conductance was greatest in those columns containing drywall.

Experiment 2

Several observations from experiment 1 led to development of experiment 2. H_2S concentrations in the waste from columns containing drywall, wood, and concrete were much lower than that observed in the columns containing wood and drywall or drywall alone. The initial hypothesis was that the alkaline pH created by the concrete simply suppressed SRB activity (this will be discussed in greater detail in the next section). However, H_2S concentrations were measured in gas below the waste in columns A at much higher concentrations than in the waste. Thus, whereas activity may have been suppressed in the waste, activity was evident beneath the waste (at least during the first half of the experiment), and somehow H_2S was being removed from the gas phase upon contact with the waste. It was hypothesized that concrete in some manner impacted H_2S concentrations.

H_2S gas profiles from experiment 2 are presented in Figure 6. In columns E1 and E2, relatively large concentrations of H_2S were measured in the top drywall layer (maximum H_2S concentration of 360 ppmv), whereas concentrations in bottom layer of concrete were <10 ppmv. The opposite occurrence was observed when the layers were switched in the F columns. Large concentrations of H_2S were generated in the lower drywall layer, but H_2S migration into the upper concrete layer did not occur. The pH of columns containing a drywall layer above a concrete layer (E1 and E2) ranged from 7.9 to 11.6, whereas pH from columns in which the layer order was reversed (F1 and F2) were around neutral. A difference in the sulfide concentrations between the E and F columns was also observed: the sulfide concentrations from the F columns (24.8 mg/L) were higher than those of the E columns (0.558 mg/L).

DISCUSSION

When gypsum drywall in a C&D debris landfill becomes wet as a result of infiltrating rainfall, sulfate becomes solubilized. Under anaerobic conditions, SRBs use sulfate

Table 2. Biogas results in experiment 1.

Biogas	Results	Column A1	A2	A3	B1	B2	C1	C2	D
H_2S	No. of detected	56	62	64	73	74	73	73	37
	Min	BDL	BDL	BDL	BDL	0.003	BDL	BDL	BDL
	Max	1.6	1.03	0.67	63000	48000	47000	50000	1.5
	Average	0.277	0.20	0.15	14075	11155	21636	24389	0.13
CH_4	No. of detected	5	0	0	5	5	0	0	12
	Min	BDL	—	—	BDL	BDL	—	—	BDL
	Max	1.14	—	—	5.49	3.41	—	—	BDL
	Average	0.68	—	—	3.33	1.71	—	—	0.05
CO_2	No. of detected	4	2	2	9	9	8	9	3
	Min	BDL	BDL	BDL	1.85	0.95	BDL	1.35	BDL
	Max	0.72	0.34	0.22	18.10	16.50	10.64	12.20	0.45
	Average	0.53	0.22	0.16	6.74	6.62	6.0	6.24	0.38
Carbon disulfide	No. of detected	2	2	2	4	5	5	6	1
	Min	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Max	0.2	0.2	0.1	1.1	0.8	2.9	1.7	0.1
	Average	0.15	0.15	0.15	0.48	0.5	1.0	0.53	0.1
Carbonyl sulfide	No. of detected	5	4	2	6	6	7	6	3
	Min	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	Max	25.6	3.7	0.5	119.8	151.6	32.1	122.9	0.4
	Average	11.88	1.85	0.35	30.1	37.74	7.04	24.81	0.2
Dimethyl sulfide	No. of detected	10	10	8	8	7	10	9	6
	Min	BDL	BDL	BDL	BDL	BDL	0.1	BDL	BDL
	Max	11.4	11.1	5.2	2.2	3.9	3.6	3.3	0.3
	Average	3.74	2.75	1.44	0.9	1.25	0.98	1.08	0.15
Methyl mercaptan	No. of detected	0	0	0	9	7	11	11	0
	Min	—	—	—	BDL	BDL	BDL	BDL	—
	Max	—	—	—	221.9	175.4	243.2	254.9	—
	Average	—	—	—	29.26	29.89	48.76	44.86	—
Sec-butyl mercaptan	No. of detected	0	0	0	0	0	4	4	0
	Min	—	—	—	—	—	5.7	5.9	—
	Max	—	—	—	—	—	85.4	29.5	—
	Average	—	—	—	—	—	37.9	14.35	—

Notes: BDL = below detection limit; — = not detected.

as an electron acceptor and produce H_2S. In the experiments described above, H_2S production was evident from the large concentrations observed in many of the simulated landfill columns. Concentrations in the range of 10,000–50,000 ppmv were encountered in the columns containing wood and drywall and the columns containing only drywall. When samples of gas and soil vapor from C&D debris landfills in Florida were characterized, a wide range of H_2S concentrations were observed; maximum concentrations were on the order of 10,000 ppmv.[17] The results suggest that large concentrations of H_2S can occur within a C&D debris landfill, although they would tend to be lower in actual landfills because of advection and diffusion of gas from the waste. For those involved with excavation or gas extraction at C&D debris landfills, H_2S concentrations lethal to humans should be anticipated, and proper safety precautions should be used. As described elsewhere, H_2S concentrations in the atmosphere above and surrounding C&D debris landfills should be much less as a result of cover soil attenuation and air dilution.[18]

Biological sulfate reduction requires a carbon source and results in the production of CO_2. The columns with the greatest H_2S concentrations also displayed the greatest CO_2 concentrations. Sources of organic carbon (OC) in the columns included wood and the paper coating of the drywall. The results indicate that paper contained on the drywall provides sufficient OC for the reaction to proceed.[19] Evaluation of whether the OC resulting from the wood would have supplied appropriate OC for the sulfate reduction process was not evaluated. Organic compounds from the wood would be expected to be primarily in the form of larger molecular weight compounds (e.g., tannic and humic substances). The OC leaching from the wood did appear to impact H_2S production. Unlike the drywall columns, the columns containing drywall and wood contained a pH as low as 5.5 initially. The pH then increased slowly and until it was similar to that in the drywall columns. The increase in pH corresponded with a similar increase in H_2S. pH has been shown to impact SRB activity, with optimum SRB growth reported at a pH of ~7.0.[20,21]

The H_2S concentrations measured in the gas from the middle and bottom of the columns and the sulfide concentrations measured in the leachate suggest that perhaps the concentrations started to become inhibitory, that is, the concentrations appeared to be at or near a maximum level. A similar observation was made by the authors in a

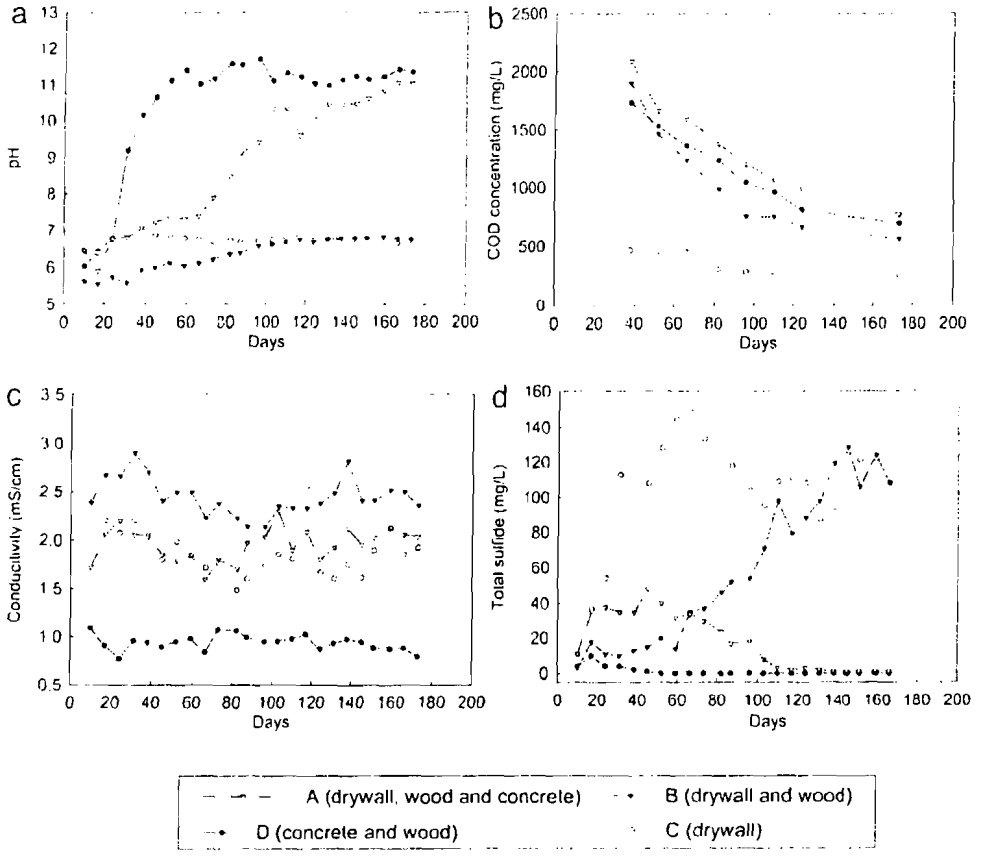

Figure 5. Leachate characteristics from the simulated landfills in experiment 1. (a) pH; (b) COD concentration (mg/L); (c) conductivity (mS/cm); (d) total sulfide (mg/L).

more limited study where H_2S production from drywall was measured in small-scale assays.[17] SRB activity has been shown to be inhibited by high concentrations of H_2S.[22] Another possibility is that carbon source became limited, although mass balance estimates indicate that this should not be the case.

The presence of concrete impacted H_2S concentrations in the columns. Portland cement concrete is one of the larger components of C&D debris, and the mixture of concrete, wood, and drywall was considered to be the most representative of the simulated landfills in experiment 1. H_2S concentrations measured from the middle of the waste containing all three components were dramatically lower than concentrations measured in the wood and drywall columns and the drywall only columns. Because concrete is an alkaline material, an early hypothesis was that low H_2S concentrations resulted from inhibition of SRB activity caused by the extreme pH. Although the pH in the column A leachate was alkaline in the later months of the experiment and certainly inhibited SRB activity, leachate pH during the first months of the experiment was in a suitable range. Sulfide concentrations in the column A leachate during the first months of the experiment were greater than sulfide concentrations in the column B leachate. This confirms what was described in Figure 5, that H_2S was being produced in the layer underneath the mix of concrete, wood, and drywall. In some fashion, H_2S gas was reduced in concentration be several orders of magnitude 30 cm into the waste layer. This suggested that some mechanism for H_2S removal was occurring.

Experiment 2 resulted in a similar observation. H_2S was being produced in the layer of drywall (and below the layer of drywall in the case when drywall was on the bottom), yet it was being removed from the gas phase once in contact with the concrete. To further verify that concrete was in some fashion removing H_2S from the gas phase, a simple experiment was conducted. Drywall was placed into a Tedlar bag, and concrete was placed into another. The bags were de-aired and then filled with the 25-ppmv H_2S standard gas used to calibrate the Jerome meter. H_2S concentrations were then performed every 2 min. The H_2S concentrations were observed to quickly drop in the bag containing concrete, whereas H_2S in the bag containing drywall remained nearly constant. One possible mechanism for the interaction between concrete and the H_2S gas is that as H_2S sorbs to the concrete surface, the alkaline nature of the concrete results in H_2S being converted to sulfide. For example, a primary component of concrete is calcium oxide (CaO); a reaction such as the following is hypothesized[2,3]:

$$CaO + H_2S \rightarrow CaS + H_2O \quad (1)$$

The authors are currently conducting research to test this hypothesis.

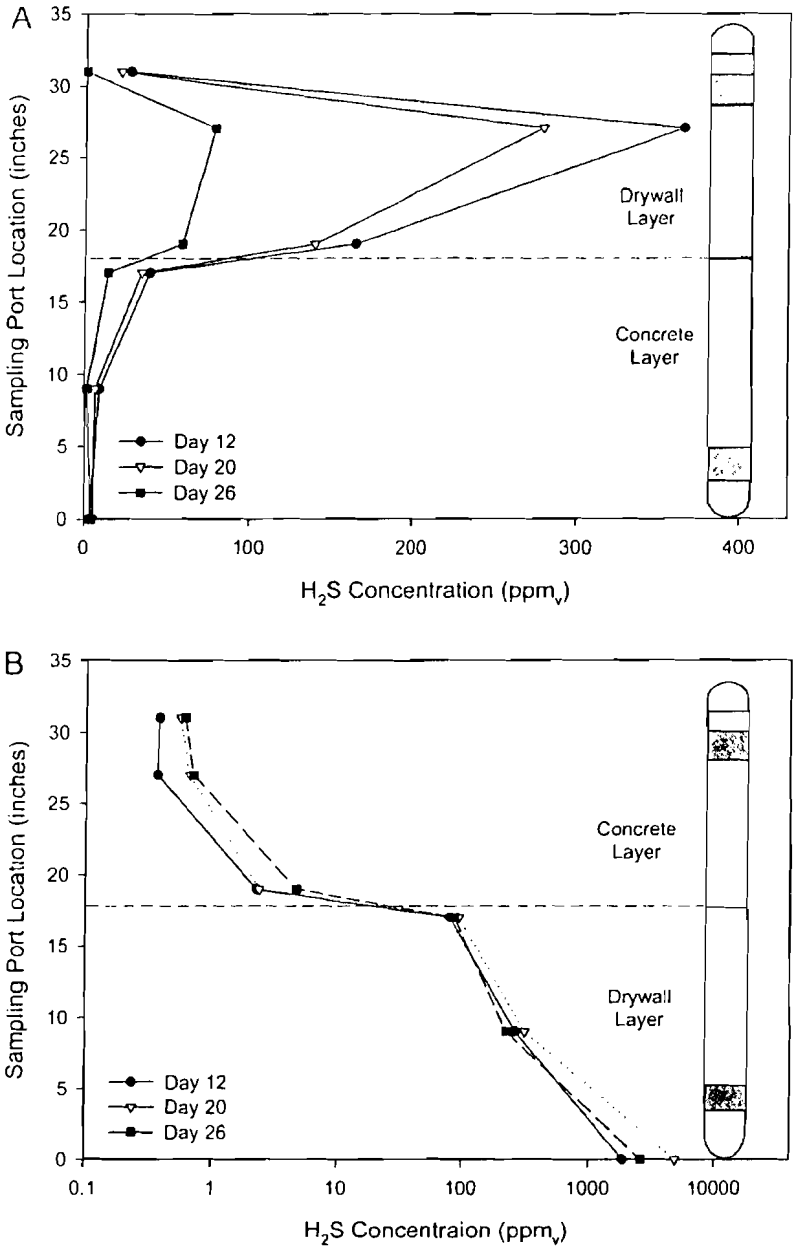

Figure 6. H_2S Concentration profiles in simulated landfills from experiment 2: (A) E1 and E2 average; (B) F1 and F2 average.

CONCLUSIONS

Two laboratory experiments were conducted to simulate H_2S generation when drywall was codisposed with different C&D waste constituents. Experiment 1 consisted of different combinations of drywall, wood, and concrete and was designed to determine whether H_2S could be generated in a controlled environment and what impact different waste constituents have on H_2S production. Experiment 2 was designed to research the impact of concrete on H_2S production. In many of the columns, high concentrations of H_2S were measured when drywall was present. This demonstrated that H_2S could be produced in a laboratory environment and that drywall provided the sulfate ions and the organic matter required for SRB activity. The paper backing on the drywall was a carbon source for the SRB to produce a large concentration of H_2S.

H_2S generation is affected by the presence of codisposed wood and concrete. The H_2S concentrations in columns containing wood and drywall lagged behind those columns containing only drywall but eventually reached similar levels. The organic acids leaching from the wood lowered the pH of the leaching solution out of the ideal pH range of SRB. SRB activity increased once the concentration of the organic acids decreased. Concrete plays a role in the reduction of H_2S production by two possible mechanisms. One mechanism is that concrete can increase leachate pH, making the environment less favorable for SRB. The other mechanism is that concrete can react with H_2S in an adsorptive or absorptive process.

The results of this study have implications for understanding H_2S generation at C&D debris landfills and possible control mechanisms for the gas. C&D debris landfills that accept drywall can expect H_2S generation, even without additional carbon sources. A possible H_2S control mechanism could be the addition of a material to loads of C&D debris that contained large amounts of drywall that would buffer the pH out of the ideal SRB pH range (e.g., lime). The results of concrete interaction with H_2S provide another possible H_2S control mechanism; by adding crushed concrete either with the waste or as a cover layer, H_2S emission from the landfill could possibly be reduced.

ACKNOWLEDGMENTS

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Swidlers Home timeline
11101 Versailles Blvd.
Clermont, FL 34711

- We built our home in 2006 as owner-builders.
- Purchased our lot in 2004 with plans to build our dream house.
- Started in March 2006 and our drywall arrived on June 1, 2006.
- Purchased the drywall from 84 Lumber in Tavares (have the receipt)
- Dan Raines to install the drywall which he did in about 5 days.
- Paint was delivered on July 7 and the home was painted in approximately 3 days
- Moved into the home in October 2006

- AC unit repairs:
  - 9/17/07 – Piston housing very loose. Tightened and reset. $204.47
  - 12/28/07 – Condenser replaced $215.19
  - 12/31/07 Leak in evaporator coil. Replaced. No charge
  - 1/14/08 – new evaporator coil $311
  - 7/8/08 – Diagnostic on upstairs condenser. Charged Freon $79
  - 8/7/08- Large leak in upstairs evaporator No charge
  - 8/22/08 Charged condenser due to Freon leak. No charge
  - 8/25/08 Replaced coil, new dryer. $256
  - 4/6/09 Found charge low. We refused to charge. $79
  - 4/15/09 System completely broken
  - Average electric bills in the summer were $300+ since the units were running all the time

- Mid-07 started noticing kids plumbing fixtures were corroding.
- Random pieces of silver (wine corks, picture frames, etc) were tarnishing
- End of 07, noticed guest bath plumbing corrosion

- April 2008 replaced main board on microwave
- August 2008 main bulb on new big screen blew out (11 months old)
- October 2008 noticed all of Jill's jewelry was tarnishing (she is a jeweler for Premier Designs Jewelry)

- January 2009 had all carpets cleaned
- February 2009 dishwasher power failure. Repair man stated the copper in the wire nuts were gone which caused the malfunction.
- April 2009 main bulb blew out again ($250)

- Every three months since we've lived in the home our electric smoke detectors have gone off at random when all batteries are still charged.

- March 2009 Jill saw story on local CBS station on Chinese drywall. Pulled off electrical outlets and realized we didn't have any copper wiring.
- Mike found (b)(3):CPSA Section 6(b) rywall in the attic – so we thought we didn't have Chinese drywall.

- Larry Cerro from the AG's office inspected the house on April 5, 2009.
- April 8, 2009, Adam Harden inspected the house and we realized we had bad American drywall. We stopped living in the house that day.
- May 23 moved furniture out of the house
- May 26 cut drywall in office, master bedroom, Hanna's room. All GP.

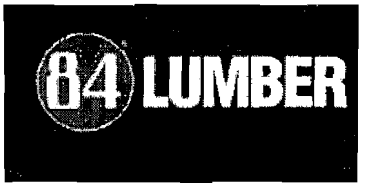
Health issues:

Mike
- Excessive snoring
- Headaches

Jill
- Constant headaches
- Sinus infection when moved in Oct 06
- Poor memory (better now we're out of the house)
- Eye twitching (gone now)
- Coughing
- Rash on wedding ring finger for 6 months
- Constant sniffling/eye watering

Sam (age 10)
- Constant headaches
- Coughing
- Sneezing
- Heavy breathing
- Blurred vision

Hanna (age 7)
- Headaches
- Blurred vision



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(Click on store name for map and driving directions)

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1011 Pineloch Ind Drive
Winter Garden, FL 34787

Phone: (407) 656-1484
Fax: (407) 905-9784
Hours: Mon-Fri: 7-6 Sat: 8-12 Sun: CLOSED

Tavares (1320)
3751 County Road 561
Tavares, FL 32778

Phone: (352) 742-8400
Fax: (352) 742-8500
Hours: Mon-Fri: 7-6 Sat: 8-4 Sun: 9-4

Sanford (1302)
3050 Mellonville Av
Sanford, FL 32773

Phone: (407) 708-7400
Fax: (407) 708-7408
Hours: Mon-Fri: 7-5 Sat: CLOSED Sun: CLOSED

Haines City (1339)
3777 Cr 544 East
Haines City, FL 33844

Phone: (863) 422-1184
Fax: (863) 422-1162
Hours: Mon-Fri: 7-5 Sat: CLOSED Sun: CLOSED

Brooksville (1334)
2281 Broad St
Brooksville, FL 34604

Phone: (352) 544-8084
Fax: (352) 799-1184
Hours: Mon-Fri: 7-6 Sat: 8-12 Sun: CLOSED

Search Again

Doc No: I0950507A **Issue: 33** **05/15/2009**

05/14/2009 08:49:32

Name = Jill Swidler
Address = 11101 Versailles Blvd.
City = Clermont
State = Florida
Zip = 34711
Email = fourswids@msn.com
Telephone = 352-227-8024
Name of Victim = Swidler Family
Victim's Address = 11101 Versailles Blvd.
Victim's City = Clermont
Victim's State = Florida
Victim's Zip = 34711
Victim's Telephone = 3522278024

Incident Description = We have had to move out of our three year old home due to toxic AMERICAN drywall. Two different investigators have found that we have all of the symptoms of Chinese drywall, but ours has (b)(3):CPSA labeling which is manufactured in the US by (b)(3):CPSA We are now trying to get a forbearance agreement with our mortgage company and then will have the house (b)(3):CPSA Section 6(b) that maybe our insurance will pay for our rental. We have also filed a class action suit against (b)(3):CPSA Section 6(b) and 84 Lumber.

Victim's age at time of incident =
Victim's sex =
Date of incident = 4/6/09
Product involved = Toxic AMERICAN drywall
Product brand name/manufacturer (b)(3):CPSA Section 6(b)
Manufacturer street address =
Place where manufactured (City and State or Country) =
Product model and serial number, manufacture date =
Product damaged, repaired or modified = no
If yes, before or after the incident =
Description of damage, repair or modification =
Date product purchased = June 2006
Product involved still available = yes
Have you contacted the manufacturer = yes
If not, do you plan to contact them =
Name Release = Release name to the manufacturer and public

I0950507A

If you have any changes, additions, or comments you wish to make concerning your attached report, please make them in the space below.

We need help from our bank, insurance company & county. We can't afford a home that is so sick & toxic that we can not live in it!

I confirm that the information in the attached report (including any changes, additions, or comments I have made) is accurate to the best of my knowledge and belief.

Signature 9/12/09 Date

☐ I request that you do not release my name.

☐ You may release my name to the manufacturer but I request that you not release it to the general public.

☒ You may release my name to the manufacturer and to the public.

1. Task Number		2. Investigator's ID	EPIDEMIOLOGIC INVESTIGATION REPORT
090505CBB1688		2391	
3. Office Code	**4. Date of Accident** YR MO DAY	**5. Date Initiated** YR MO DAY	
810	2008 03 01	2009 05 05	

6. Synopsis of Accident or Complaint UPC

The 44 year old female complainant occupies the home built using imported drywall from China with her 34 year old husband, 16 year old son, 4 year old daughter. They have experienced issues including upper respiratory infections, bronchitis, congestion, and allergies since moving into the home. They have also noticed blackening, pitting, and corrosion on metal surfaces and copper pipes. The complainant is concerned with the long term health effects her family will experience.

MR/PRVLBR NOTIFIED 10/9/09
COMMENTS: YES NO
OVERRULED; ATTACHED
EXCISIONS/FOIA Hxs 3 4 5 C
DO NOT RE-NOTIFY RE-NOTIFY

7. Location (Home, School, etc)	8. City	9. State
1 - HOME	SEBASTIAN	FL

10A. First Product	10B. Trade/Brand Name	10C. Model Number
1876 - House Structures, Repair Or	UNKNOWN	UNKNOWN

10D. Manufacturer Name and Address
UNKNOWN

11A. Second Product	11B. Trade/Brand Name	11C. Model Number
4062 - Electric Wire Or Wiring Syst	UNKNOWN	UNKNOWN

11D. Manufacturer Name and Address
NONE

12. Age of Victim	13. Sex	14. Disposition	15. Injury Diagnosis
44	2 - Female	1 - Injured, not Hosp.	68 - Poisoning

16. Body Part(s) Involved	17. Respondent	18. Type of Investigation	19. Time Spent (Operational / Travel)
85 - ALL OF BODY	1 - Victim/Complainant	1 - On-Site	8 / 1

20. Attachment(s)	21. Case Source	22. Sample Collection Number
9 - Multiple Attachments	07 - Consumer Complaint	

23. Permission to Disclose Name (Non NEISS Cases Only)
○ Yes ● No ○ Verbal ○ Yes for Manuf. Only

24. Review Date	25. Reviewed By	26. Regional Office Director
05/20/2009	9093	Dennis R. Blasius

27. Distribution	28. Source Document Number
Kessler, Charles; Salgado-Rivera, Karina; Rose, Blake; Woodard, Dean	H0940141A

This investigation was initiated through the receipt of a Consumer Product Incident Report submitted by a 44 year old female complainant, involving issues with imported drywall used in building the home she is renting. Information for this report was gathered from an on-site interview with the complainant in the home.

The affected home is occupied by the complainant, her 16 year old son, four year old daughter and on weekends by her 34 year old husband. The home was built in March 2004 and the complainant's family began occupying the home in March 2008. The house is 1,500 square feet, villa style, has three bedrooms and two bathrooms, and was constructed with wood studs. The house does not have carpet and is tiled throughout. There is no gas or natural gas service, all the appliances are electric. Since moving into the house she has not made any changes or renovations because she rents the home. The complainant is not aware of any drywall being replaced in the house prior to moving in. While living in the house, she has not had to replace or repair any of the existing drywall.

Upon moving into the house, the complainant first noticed an unusual odor that she described as a "rotten egg" odor. When the air conditioner is off, the complainant reported that the odor becomes stronger. She has also noticed that the odor is stronger in the bathroom. Specifically, near the sink and shower drain and other plumbing areas. The time of day does not affect the odor. During the winter she has noticed that the odor is not as strong. Because she has not had any repairs or renovations, she has not seen a change in the odor.

In April 2009 she began to experience problems with the garage door opener and lights that have stopped working unexpectedly. She has not had to recharge the air conditioning unit with refrigerant, although she has noticed that it needs to be recharged. Her father, a retired electrician, has advised her that the unit will need to be recharged by the end of the month because it is leaking Freon. She intends to move out of the house soon and does not plan on recharging the air conditioning unit. The complainant reported that the box that the air conditioning unit is placed on top of in the garage filled with water and she later discovered that the unit was clogged; she was unable to give a specific date when this occurred. She has not had to replace any of the evaporator coils in the air conditioning unit. The complainant has not had electricians or service technicians inspect any components. Her father is a retired electrician and has advised her in some instances. On a consistent basis she has not experienced any of the following: flickering lights, arcs or sparks anywhere in the electrical system, sizzling or buzzing, or light switches or outlets that are warm or hot to the touch. She has experienced the circuit breaker for the smoke alarms tripping. She also has noticed an unusual odor in the vicinity of a light switch and electrical receptacle in the bathroom. Since moving into the home, she has noticed blackening, pitting, and corrosion on such items such as: shower heads, metal components on light fixtures, plumbing copper pipes, copper pipes connected to the air conditioning unit, and her jewelry. She is unsure if there is a potential safety issue or potential for a fire due to the problems occurring in the home. She reported only one issue with the smoke alarms. On April 13, 2009 the smoke alarms were activated unexpectedly. Photographs of the affected areas of the house are included as Exhibit 2.

The complainant and her family moved into the home in March 2008. In the summer months of 2008 the family developed health issues. The complainant developed issues with allergies, burning and swollen eyes, a haze and film impairing her vision, headaches, and visited the emergency room in May 2009 for chest pains. Her four year old daughter has been treated by a pediatrician for upper respiratory infections and bronchitis. Her 16 year old son has had upper respiratory infections and bronchitis on three occasions. The last incident was in April 2009 where he was treated at a local hospital. He was placed on a nebulizer and other medications. He also complains of burning eyes. Her husband visits and stays in the home on weekends and has complained of congestion and upper respiratory infections. He was treated with steroids and antibiotics. The complainant reported that her family was usually healthy prior to moving into the home. Her children have not had these health issues until living in the house for several months. The complainant has provided some medical documentation that she had available during the interview and it is included as Exhibit 3. The symptoms the family is experiencing do lessen when they leave the home for long periods of time such as attending work and school. But upon returning to the home the symptoms return. They do not own any pets.

On April 16, 2009 the complainant contacted the owner of the home via e-mail. She is currently renting the home and did not have any contact information for the builder at that time. She reported her issues to the home owner and included photographs. The e-mail correspondence is included as Exhibit 4. The owner contacted the builder and realtor to report the drywall issues. On April 21, 2009, personnel from the realty company and building company removed drywall from the master bedroom. On April 28, 2009 they returned to replace the drywall. She has not had any other experts or professionals in the house to examine the house. She has contacted the Florida Attorney General's Office to report her issue. Her short term goal is to move out of the house before the end of May 2009. The complainant is not aware of anything being done in her community related to this problem. She is aware of others in her community affected by this problem. She added that she is a school teacher and was made aware of this issue while examining current events with students at work.

Product Description

The product involved is imported drywall from China. During the on-site interview this investigator gained access to the attic through the garage. Visible labeling on the drywall read in part: "***120904225WEA 03:4 *** RECYCLE *** 11:55 100% RECYCL *** 121104225KDC ***" No additional identifying information is available.

Exhibit

Exhibit 1 Contact Information

Exhibit 2 Photographs (24)

Exhibit 3 Medical Documentation

Exhibit 4 Correspondence between Complainant and Landlord

Exhibit 5 Authorization for Release of Name

Contact Information

(b)(3):CPSA Section 25(c) Complainant

Sebastian, FL 12111

(b)(3):CPSA Section 25(c)

May 5, 2009

Contact Information for Complainant

(b)(3):CPSA Section 25(c)

Beaumont, CA 92223

Tel. (b)(3):CPSA Section 25(c)

April 16, 2009

Paula Rogers & Associates, Inc., Realtor
PO Box 643245
Vero Beach, FL 32964
Tel. 772-231-9121
April 21, 2009

MGB Construction
945 Sebastian Blvd. #4
Sebastian, FL 32958
Tel. 772-589-0663
April 21, 2009

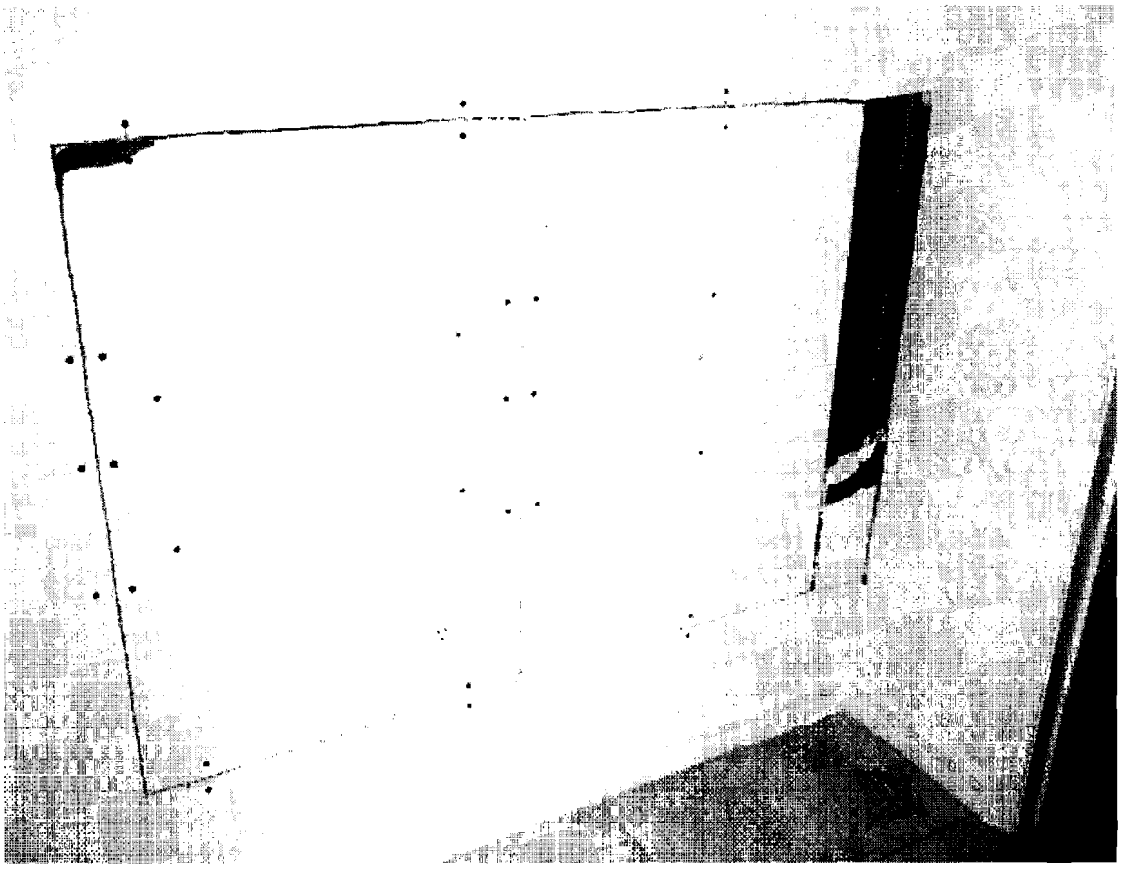

Photo 1 shows the wall that the builder used to sample drywall. Additional drywall was added to cover the hole.

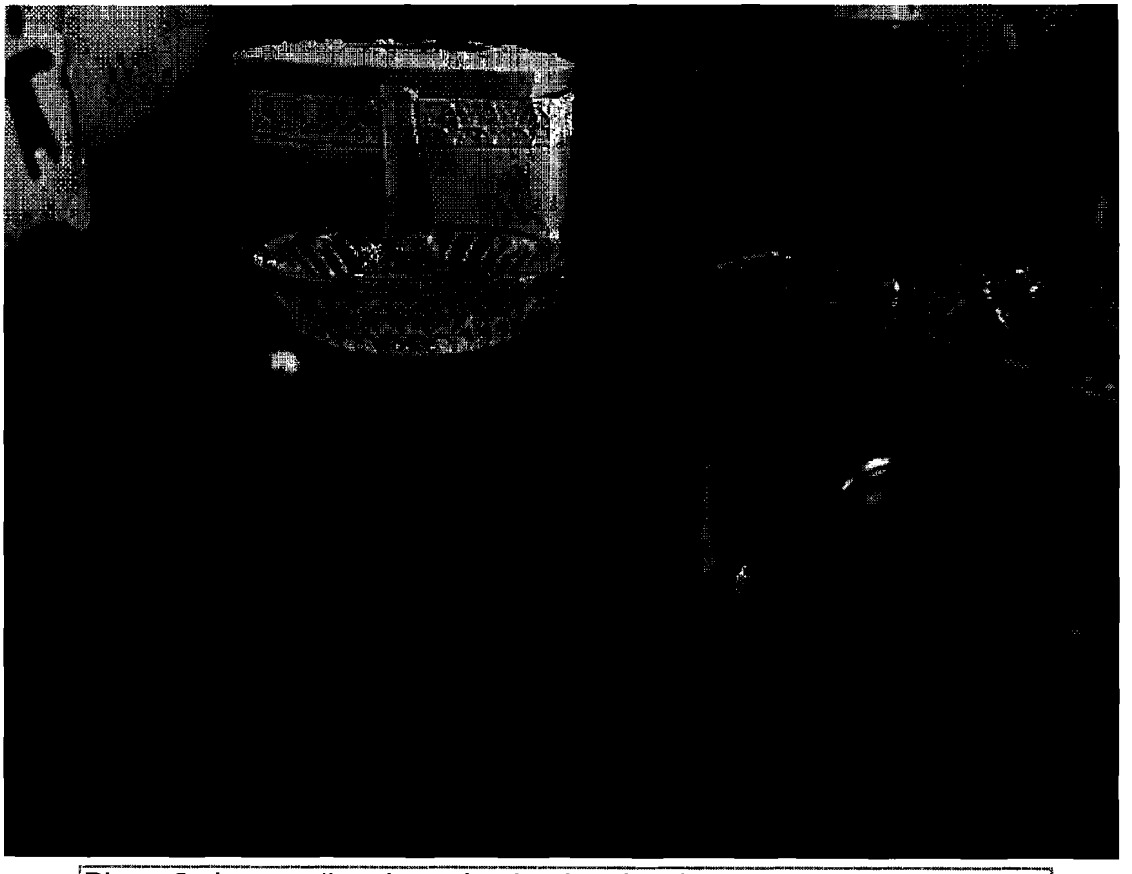

Photo 2 show a silver bracelet that has blackened.

Photo 3 shows blackening on a heart shaped earring.

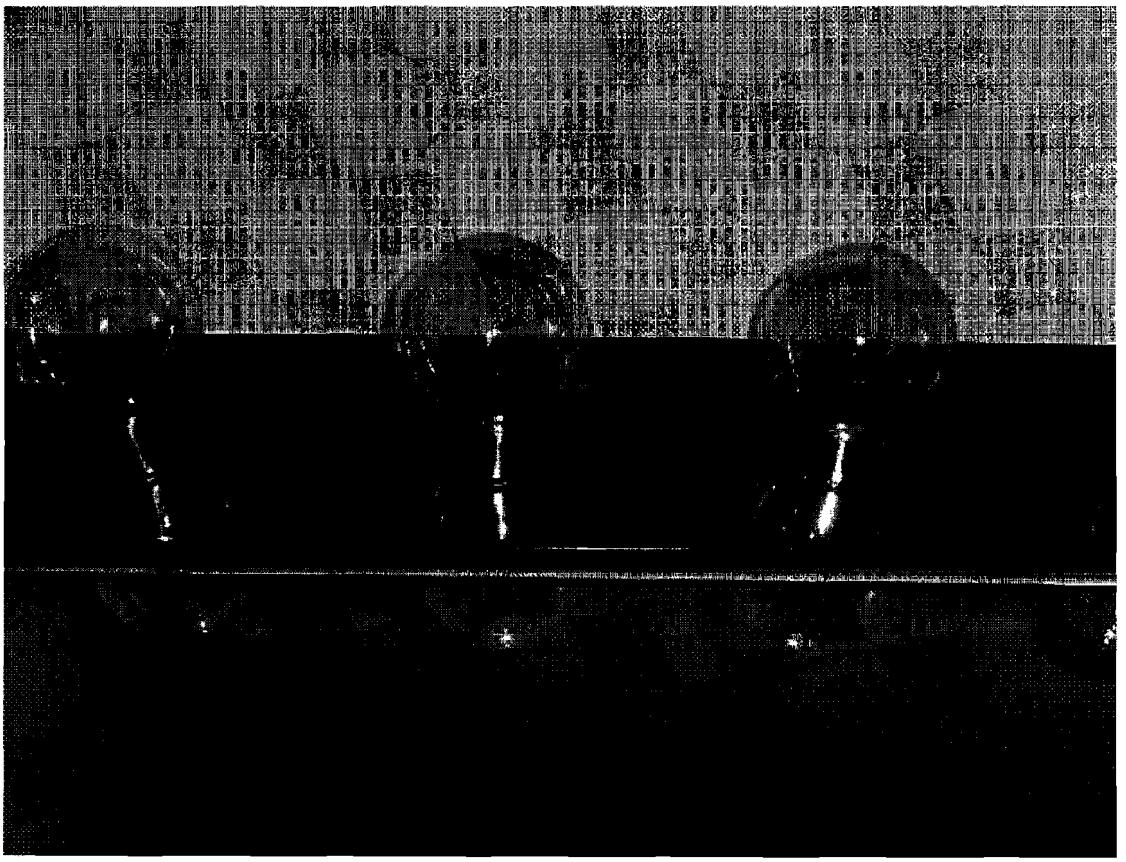

Photo 4 shows blackening and pitting around mirrored lights in the bathroom.

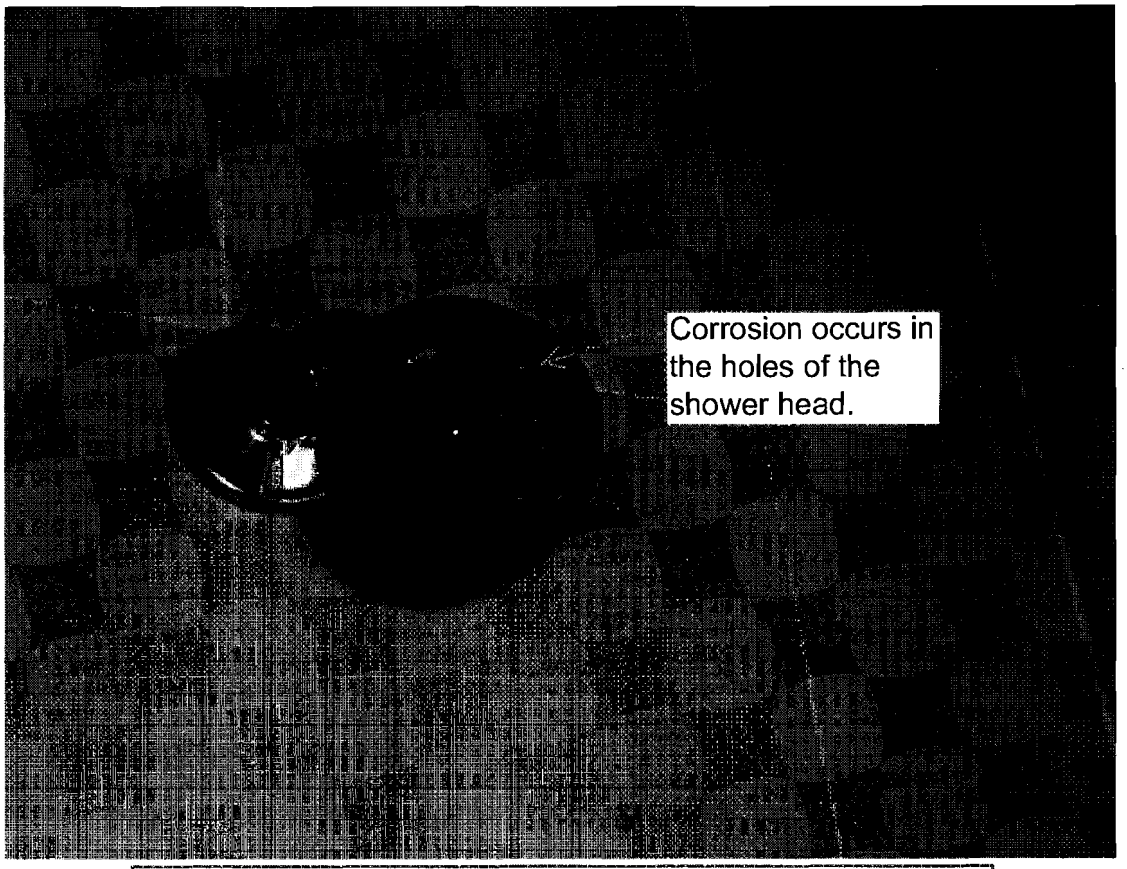

Photo 5 shows blackening and corrosion in the shower head.

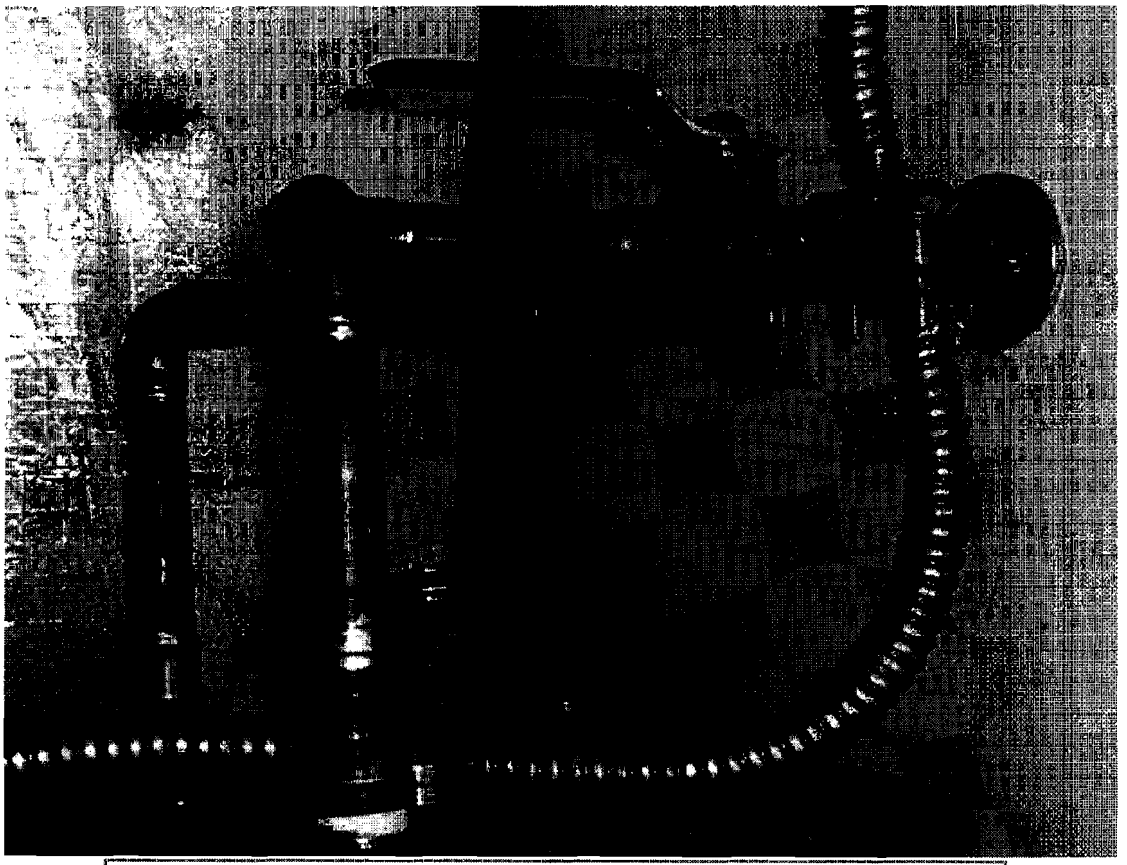

Photo 6 shows the copper pipes connected to the water heater located in the garage.

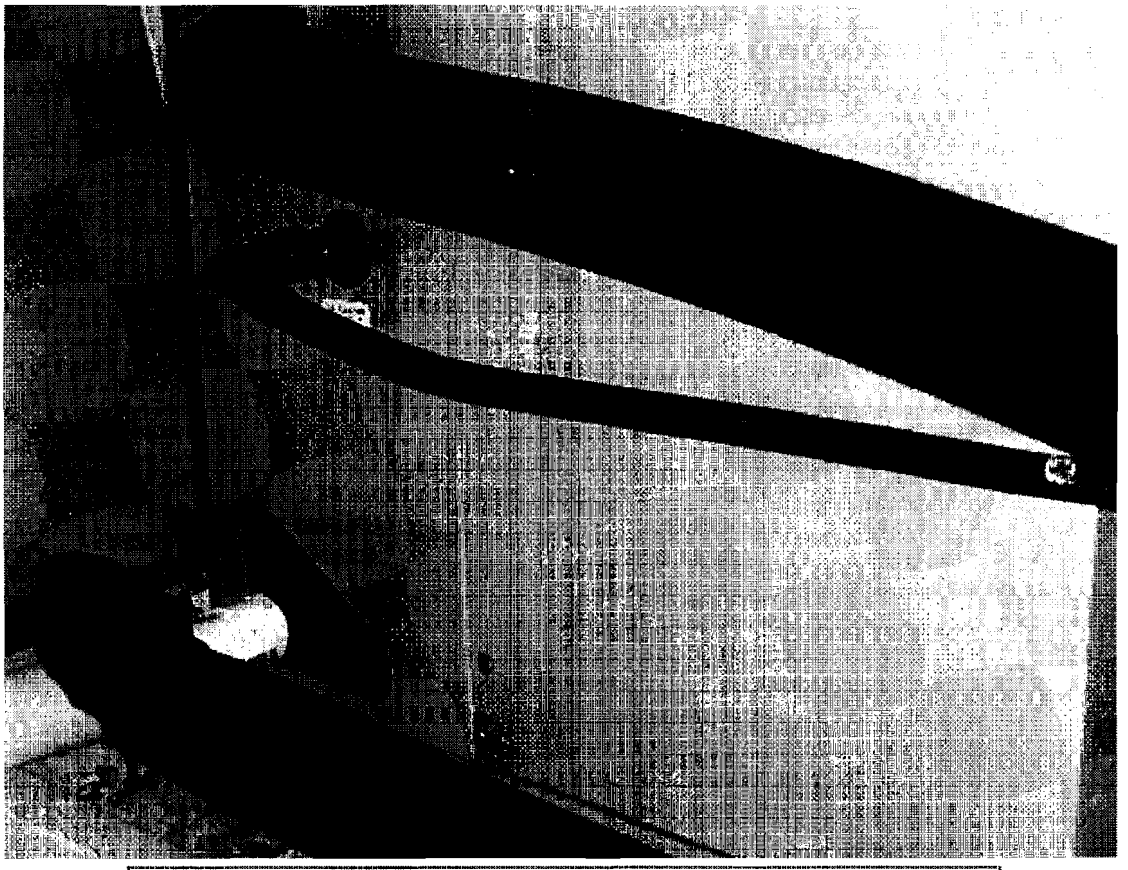

Photo 7 shows a blackening copper pipe connected to the air conditioning unit.P

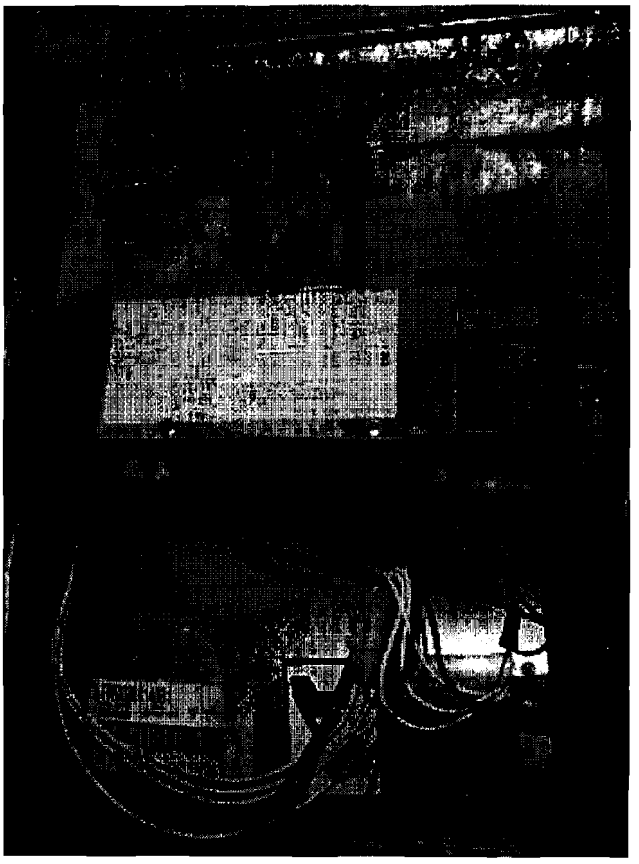

Photo 8 shows the cover of the air conditioning unit.

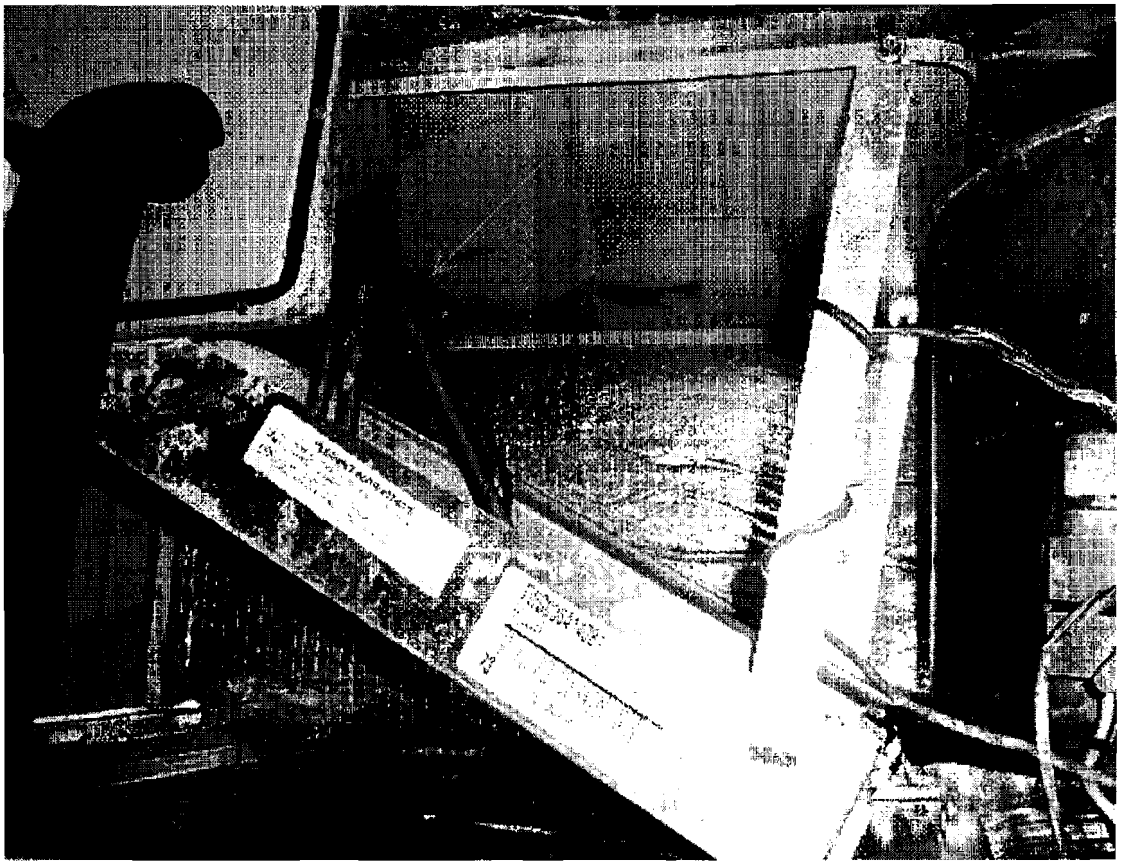

Photo 9 shows some corrosion on the copper evaporator coils of the air conditioning unit.

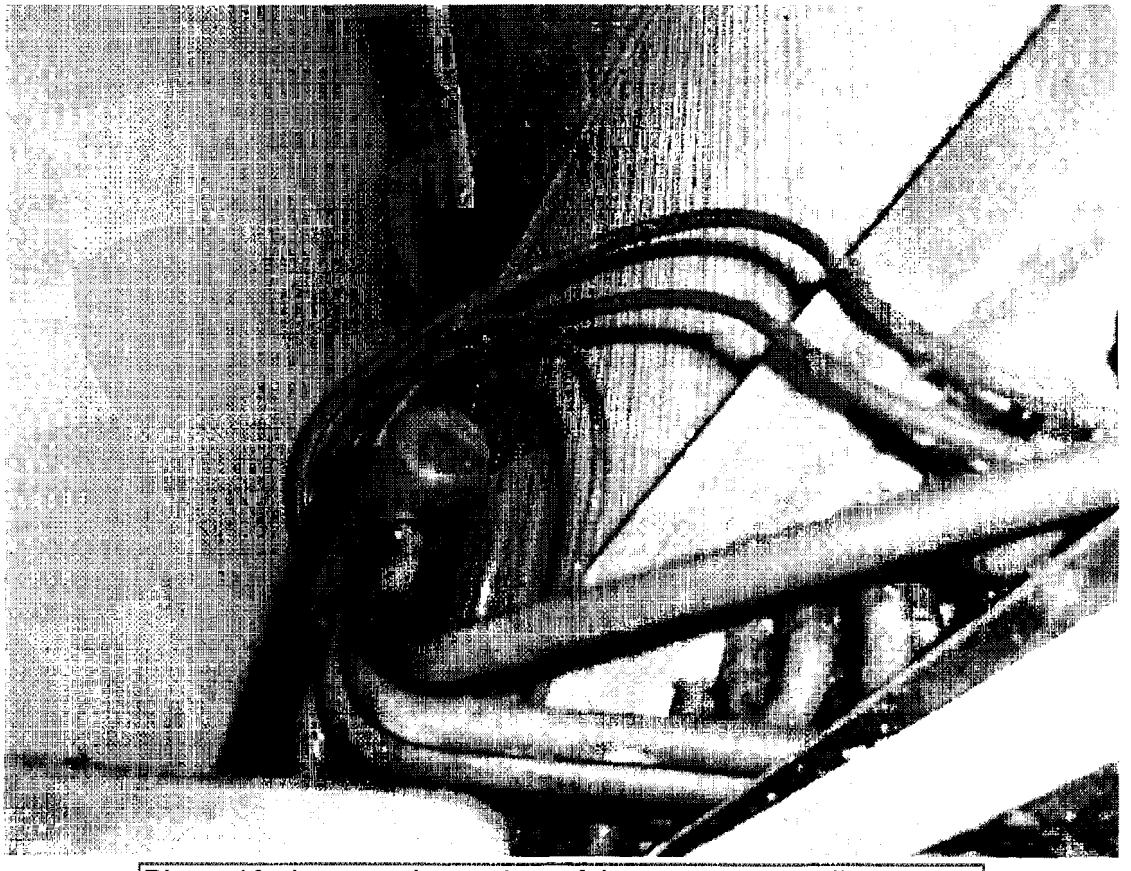

Photo 10 shows a closer view of the evaporator coils beginning to corrode.

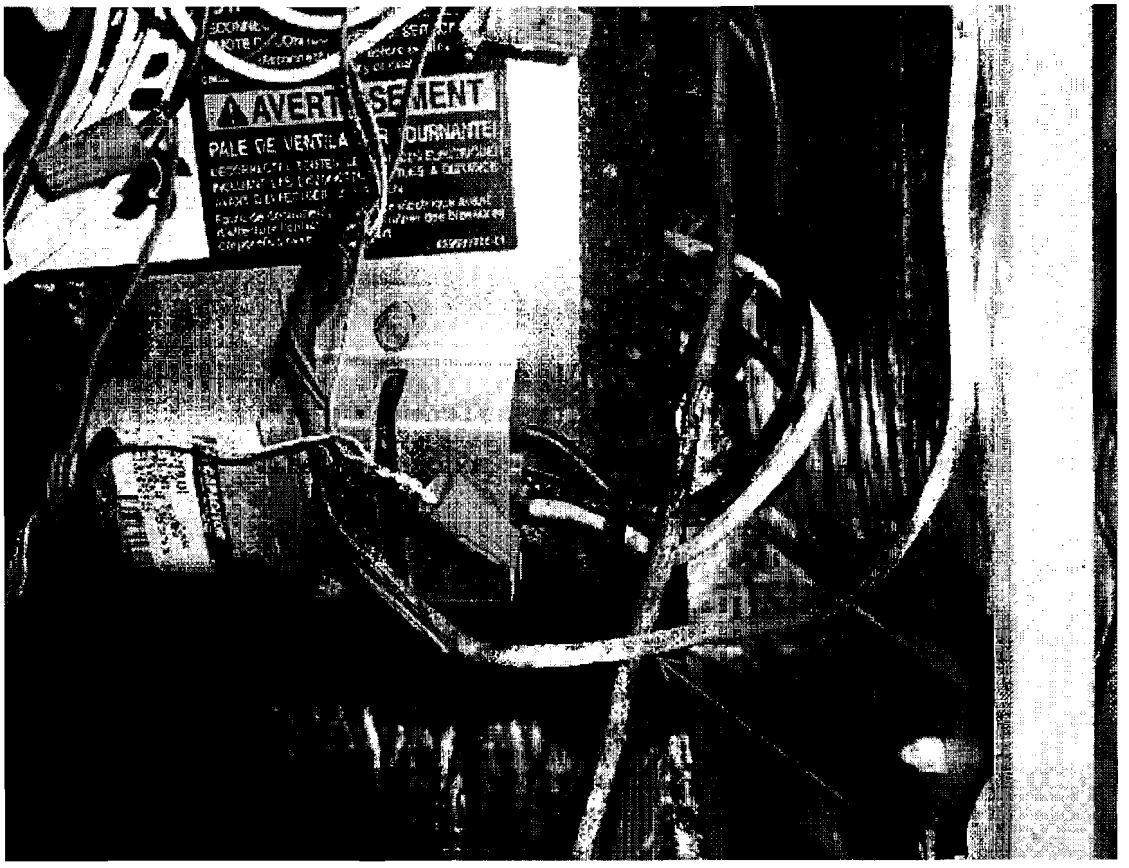

Photo 11 shows a corroded wire in the air conditioning unit.

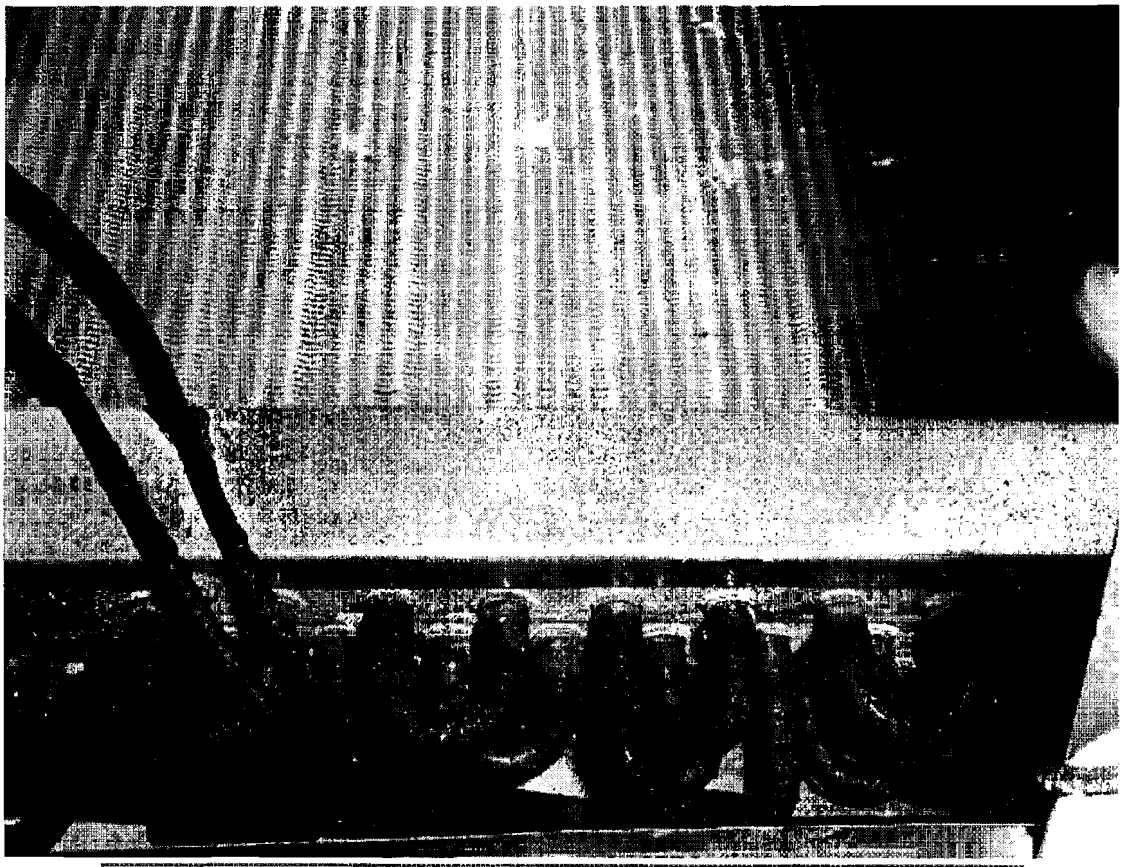

Photo 12 show another view of corroding evaporator coils.

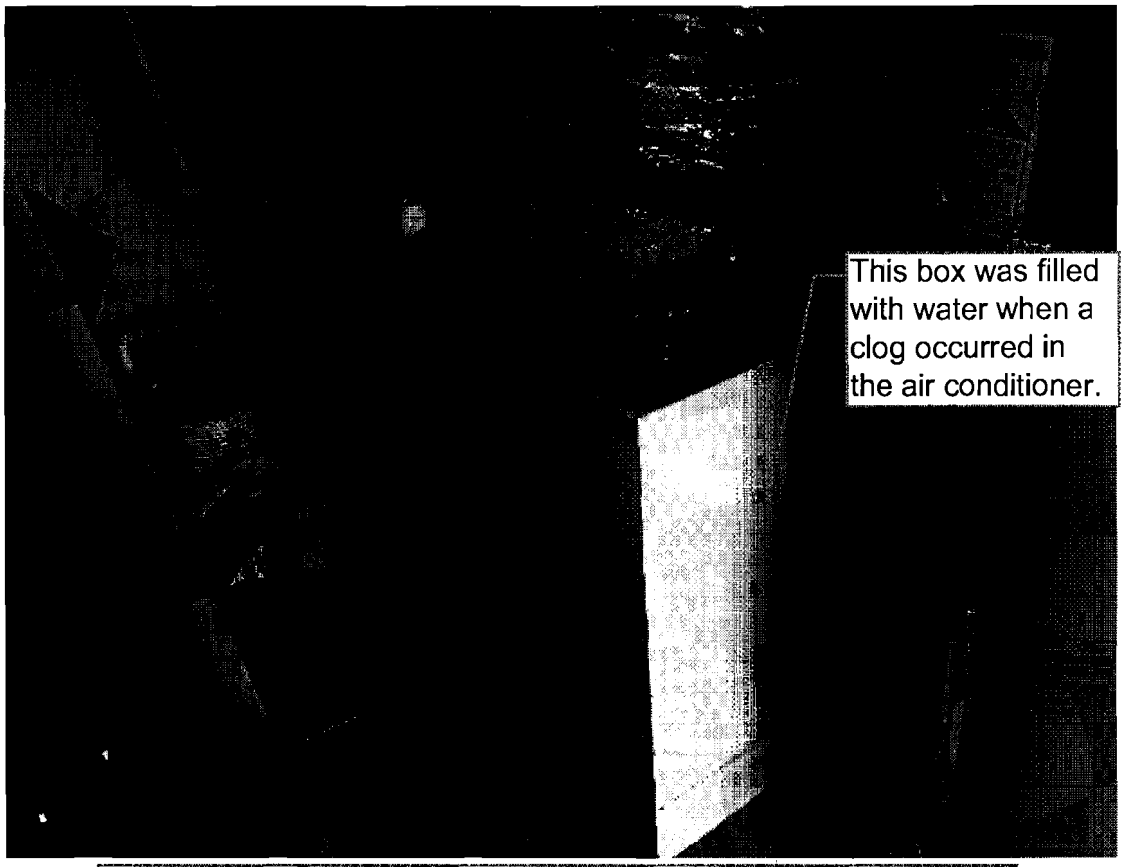

Photo 13 shows the area of the air conditioning unit in the garage.

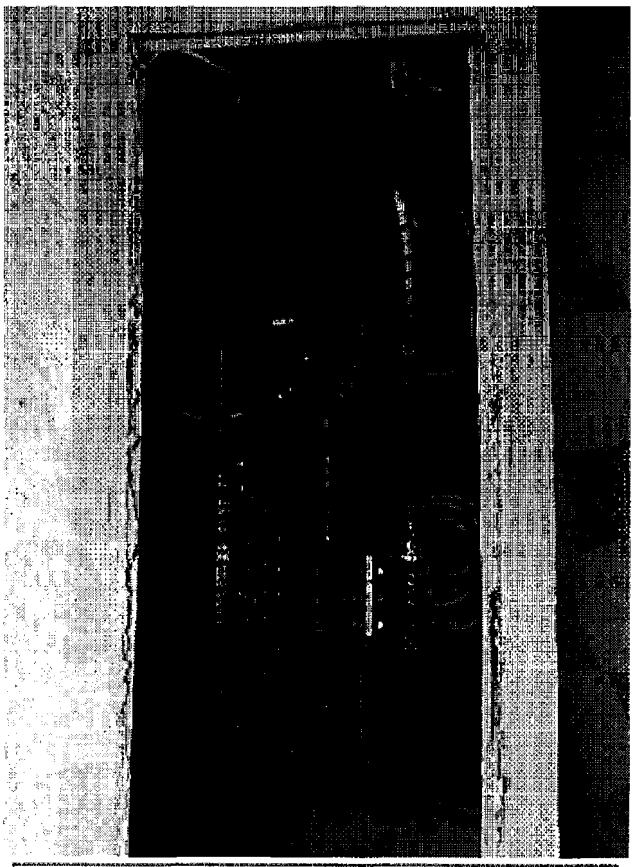

Photo 14 show the circuit breaker panel without the cover.

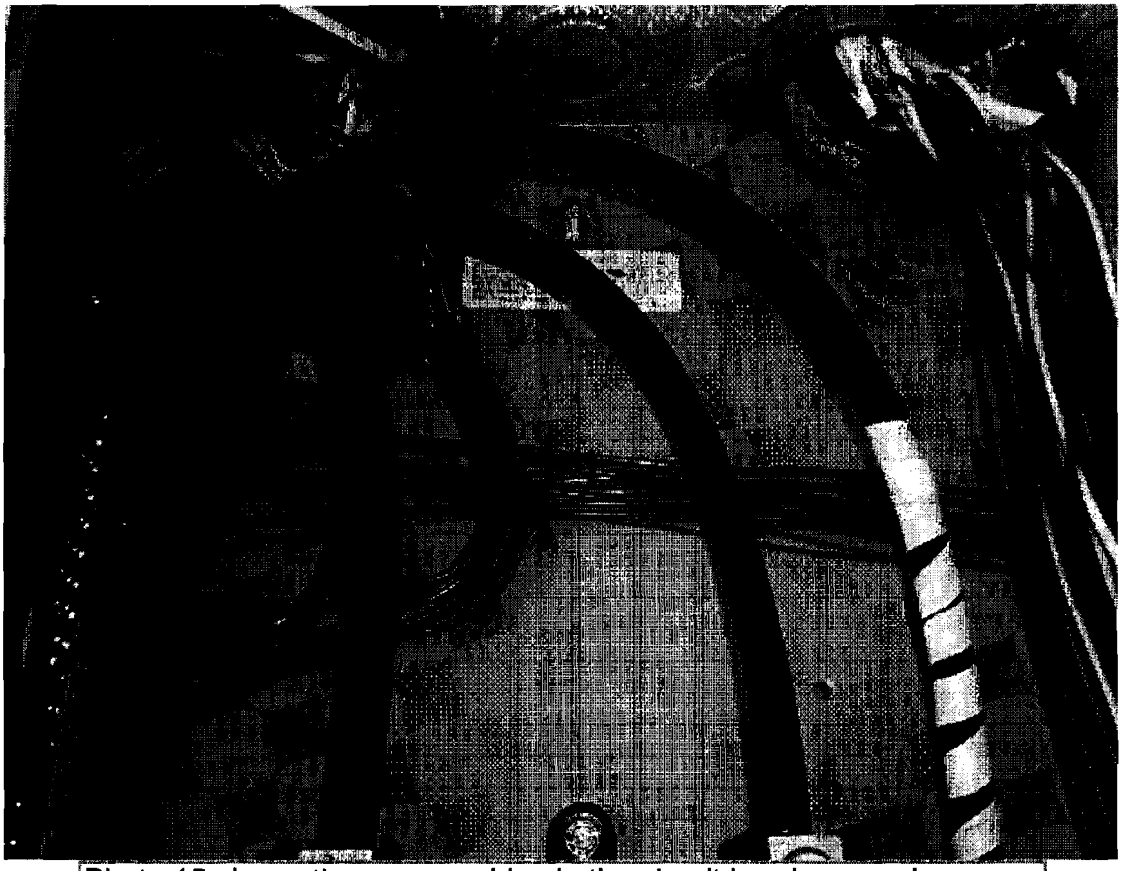

Photo 15 shows the copper wiring in the circuit breaker panel.

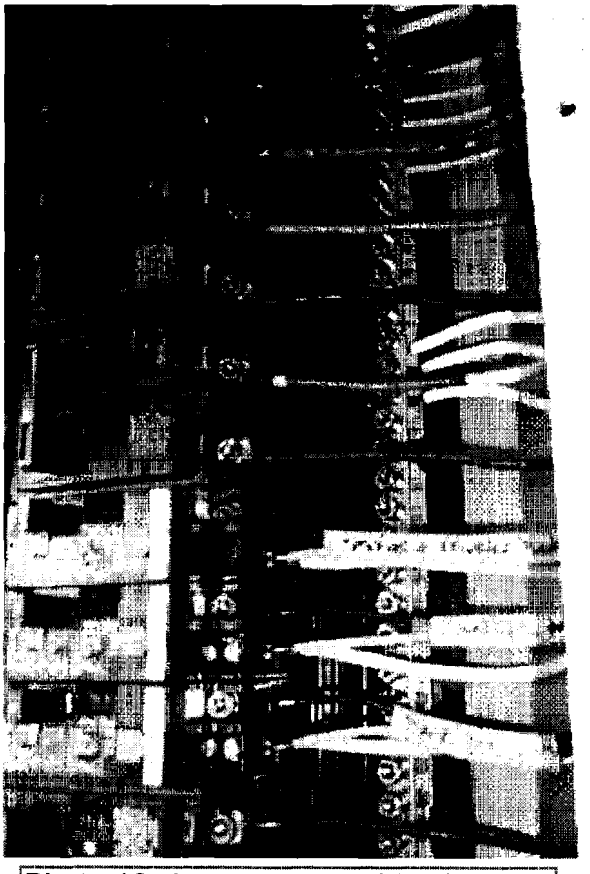

Photo 16 shows copper wiring in the circuit breakers.

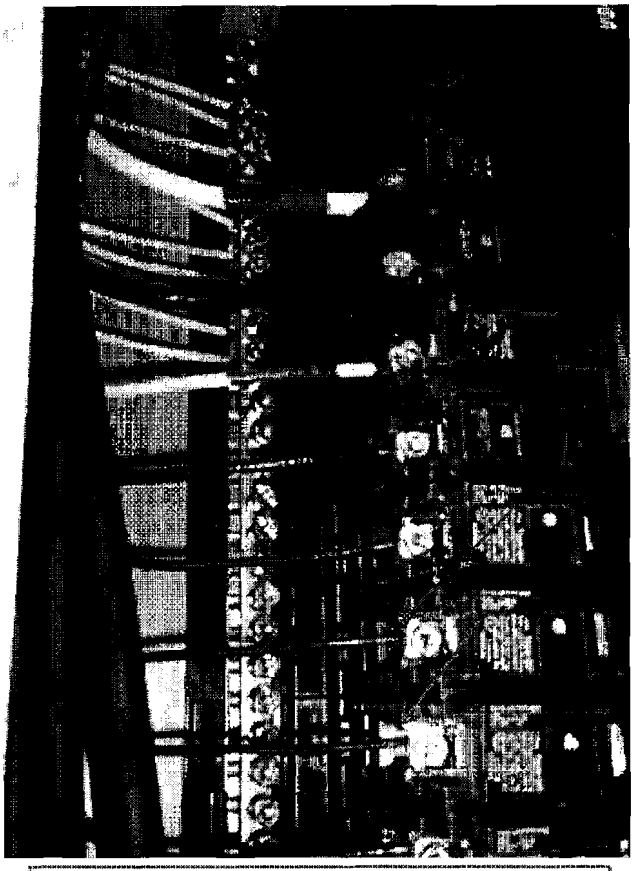

Photo 17 shows some corrosion on the copper wires.

Photo 18 shows labeling located on drywall above the attic, accessed through the garage. Label reads: "120904225WEA 03:4"

Photo 19 shows labeling on drywall in the attic, accessed through the garage. Label reads: "RECYCLE"

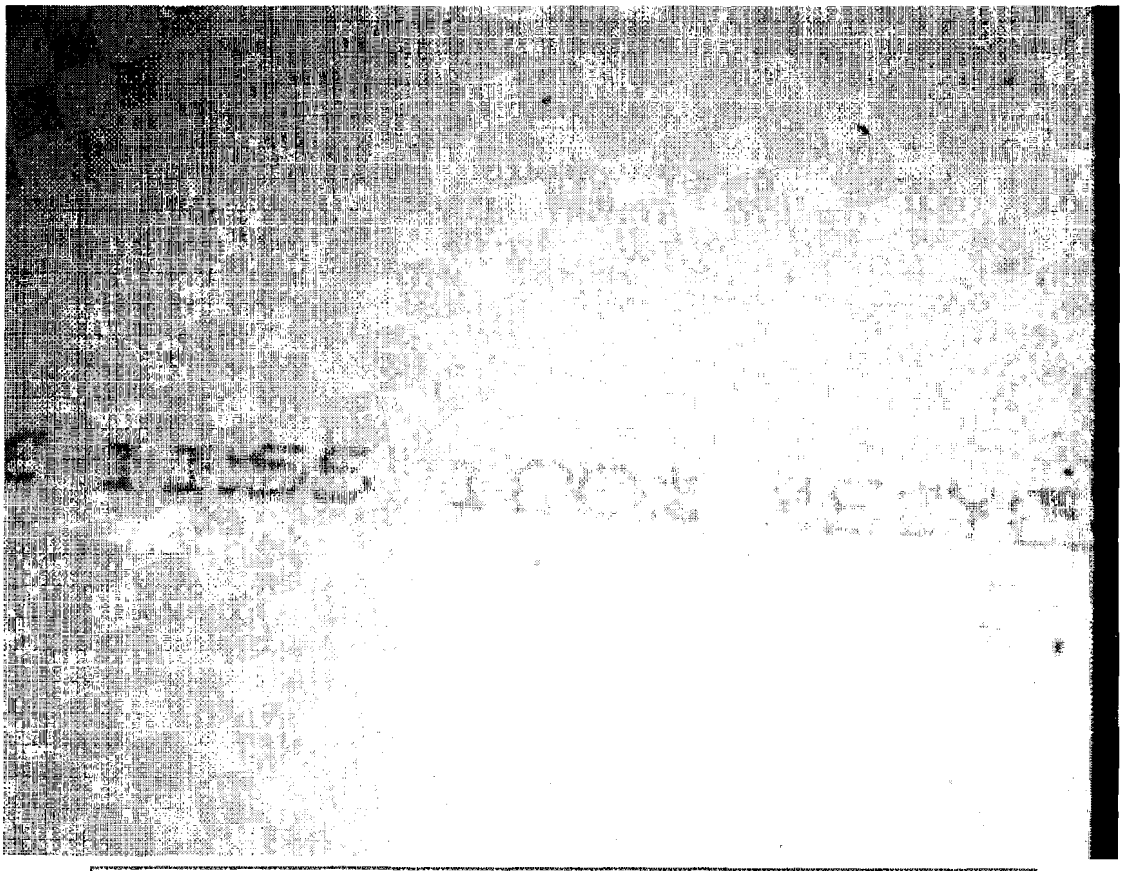

Photo 20 shows labeling on the drywall. Labeling reads: "11:55 100% RECYCL"

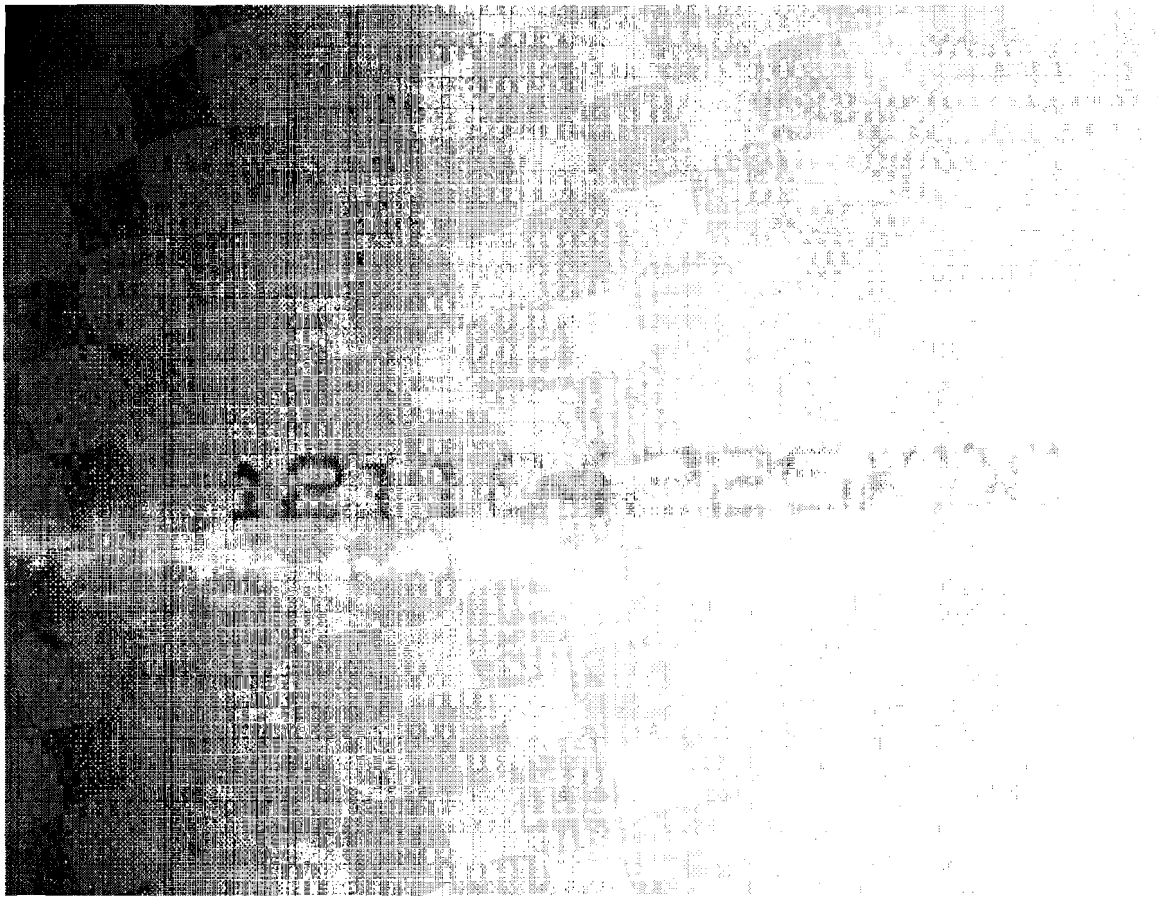

Photo 21 shows labeling on the drywall. Labeling reads: "121104225KDC"

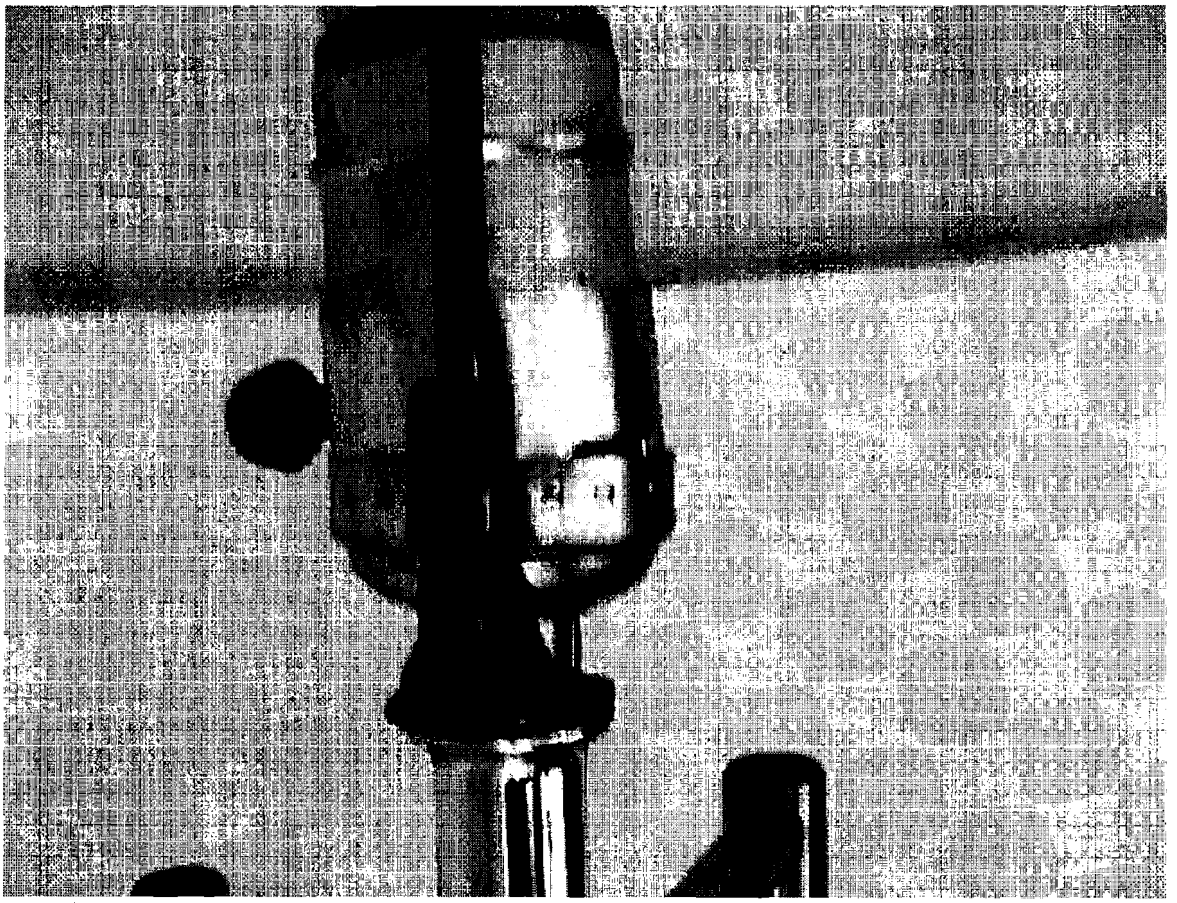

Photo 22 shows blackening metal on a floor lamp.

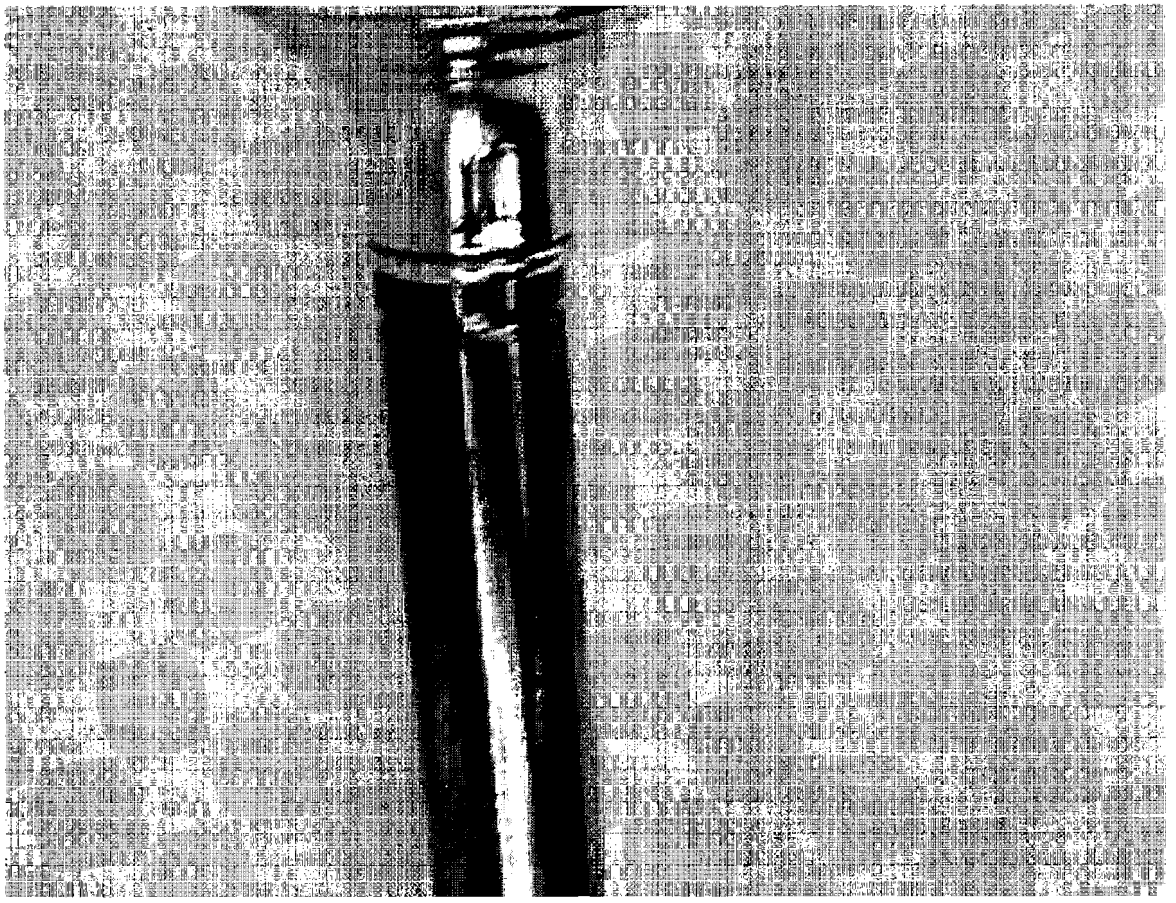

Photo 23 shows continued blackening of the floor lamp.

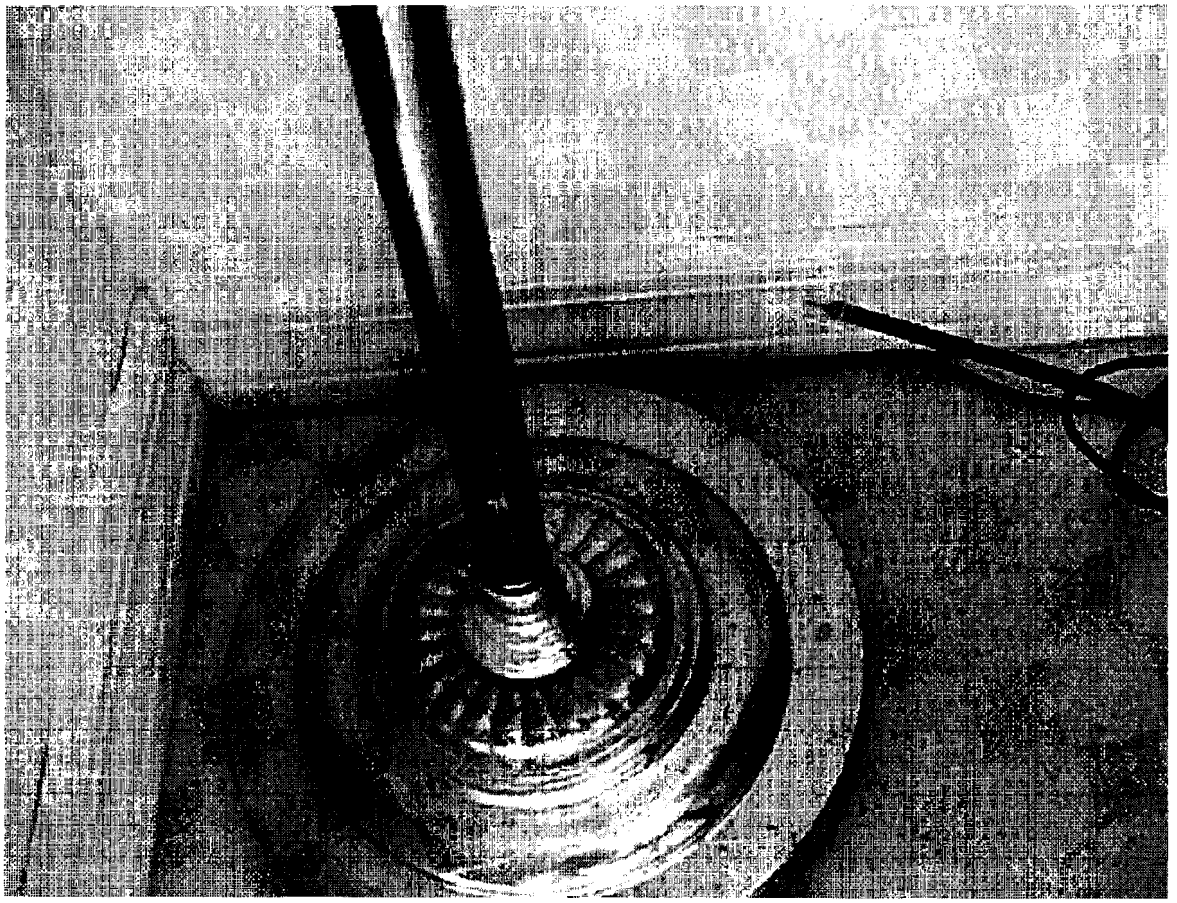

Photo 24 shows the bottom of the floor lamp with pitting on the base.

253511400 penny

$0.00

04/26/05

Penny Pediatrics Inc.

14430 US Highway 1
Sebastian, FL 32958
772 581-0300

0000017673

PATIENT NAME	ACCT #	SOCIAL SECURITY	ADDRESS		
(b)(3):CPSA Section 25(c)	5344		(b)(3):CPSA Section 25(c)	SEBASTIAN, FL 32958	
PRIMARY COVERAGE	**SECONDARY COVERAGE**		04/26/05	**INS BALANCE**	**PAT BALANCE**
MEDICAID	8622183840			$120.00	$0.00
DATE	**TIME**	**DUR**	**PROVIDER**		
Monday Apr 13, 2009	01:00 PM	15	Penny, Marza S		

Description	Code	Amount	X	Description	Code	Amount	X	Description	Code	Amount
NEW SICK LEVEL I	99201	100.00		BLADDER ASPIRATION	51000			DTAP V06.1	90700	10.00
NEW SICK LEVEL II	99202	110.00		BURN TX AND DRSG	16020			HEP A V05.3	90633	10.00
NEW SICK LEVEL III	99203	120.00		CERUMEN REMOVAL	69210			ROTARIX 2 DOSE V04.89	90681	130.00
NEW SICK LEVEL IV	99204	150.00		DEST WART UP TO 14	17110			HEP B V05.3	90744	10.00
NEW SICK LEVEL V	99205	170.00		DEST WART >15	17111			HIB V03.81	90645	10.00
				I & D ABSCESS	10060			IPV V04.0	90713	10.00
EST SICK PT LEVEL I	99211	55.00		LYSIS PENILE ADHES	56441			PREVNAR V03.82	90669	10.00
EST SICK PT LEVEL II	99212	65.00		CIRCUMCISION	54150	250.00		MMR V06.4	90707	10.00
EST SICK PT LEVEL III	99213	75.00		PULSOXIMETRY	94760			VARIVAX V05.4	90716	10.00
EST SICK PT LEVEL IV	99214	90.00		SILV NITR GRANULMA	17250			TDAP V06.1	90715	10.00
EST SICK PT LEVEL V	99215	95.00		SUTURE REMOVAL	17999	25.00		MENACTRA V03.89	90734	10.00
								GARDSIL V04.89	90649	200.00
NEW WELL 0-11 M	99381	90.00						ROTATEQ V04.89	90680	10.00
NEW WELL 1-4 YO	99382	95.00						(DTap-IPV)Kinrix 4-6yr old	90696	65.00
NEW WELL 5-11 YO	99383	95.00		HEARING EXAM	92587	30.00		FLU B-36 MO V04.81	90657	10.00
NEW WELL 12-17 YO	99384	100.00		VISION SCREEN	99173	20.00		FLU >3 YO V04.81	90658	10.00
								FLU GUARDIAN		30.00
EST WELL 0-11 M	99391	80.00		MOST USED DX'S				FLUMIST V04.81	90660	25.00
EST WELL 1-4 YO	99392	85.00		URI	465.9			VACCINE ADMIN 1ST	90471	10.00
EST WELL 5-11 YO	99393	85.00		OME	382.00			VACCINE ADMIN 2+	90472	10.00
EST WELL 12-17 YO	99394	90.00		PHARYNGITIS	462			Pentacel (DTaP-HIB-IPV) V06.3/V03.81	90698	95.00
				CONJUNCTIVITIS	372.03			Pedlarix Dtap/Hep-B/IPV V06.8	90723	10.00
COUNSELING				UTI	599.0			BLOOD SUGAR	82948	10.00
15 MINUTES	99401	50.00		CONSTIPATION	564.00			COLLECTION/HANDLING	99000	20.00
30 MINUTES	99402			ABDOMINAL PAIN	789.0			HEMOGLOBIN	85018	10.00
45 MINUTES	99403			SINUSITIS	461.9			H. PYLORI	86677	10.00
60 MINUTES	99404			ADHD	314.01			MONO TEST	86403	15.00
								RAPID STREP	87880	15.00
DEVELOP. TESTING	96110			HYPERKIN. SYND.	314.8			STOOL GUIAC	82270	10.00
								URINALYSIS	81002	10.00
								URINE PREGNANCY	81025	20.00
								FLU TEST	87804	15.00
								MD VENIPUNCTURE	36410	20.00
								FINGER/ROUTINE VENI/HL	36416	25.00

I HEREBY AUTHORIZE MY INSURANCE BENEFITS TO BE PAID DIRECTLY TO THE PHYSICIAN, AND I AM RESPONSIBLE FOR ANY NON-COVERED SERVICES. I ALSO AUTHORIZE THE RELEASE OF ANY INFORMATION REQUIRED FOR THE PROCESSING OF THIS CLAIM.

SEND PATIENT BILLING TO:
(b)(3):CPSA Section 25(c)
SEBASTIAN, FL 32958

(b)(3):CPSA Section 25(c)

ARNP

Debra Lee Jobe, Office Manager

KO
01-16-2009

PROMISED: 12:00
01-16-2009
Scripts: 02

#7894 Ph:772.589-2822

3495 US HIGHWAY 1
VERO BEACH, FL
32967-0000

(b)(3):CPSA Section 25(c)

0182523 00 0000000

Date:01-16-2009 DAW:0

Rx: 182523 00

AZITHROMYCIN 250 MG DOSE PAPLI
PLIVA INC

TAKE AS DIRECTED

NDC:50111-0787-66 Days Supply: 5 Refills: 0 Qty:6 TA

Prscbr: (b)(3):CPSA Section 25(

TP: 4000 GR:MMODRUG

AUTH#FT1M3K9

PAID PRESCRIPTION

PAY: $8.00

Copy:Y

002103

001489

KU
04-21-2009

04-21-2009
Scripts: 01

#7894 Ph:772.589-2822

3495 US HIGHWAY 1
VERO BEACH, FL
32967-0000

(b)(3):CPSA Section 25(c)

07 0192467 00 0000286

Date:04-21-2009 DAW:0

Rx: 192467 00

PREDNISONE 10 MG TABLET WAT
WATSON LABS

TAKE 5 TABLETS BY MOUTH EVERY DAY FOR 5 DAYS

NDC:00591-5442-01 Days Supply: 5 Refills: 0 Qty:25 TA

Prscbr: (b)(3):CPSA Section 25

TP: 4000 GR:MMODRUG

AUTH#SAC7N7X

PAID PRESCRIPTION

PAY: $2.86

Copy:Y

002103

001489

From: (b)(3):CPSA Section 25(c)
To: John Wolkowicz
Date: Thursday, May 7, 2009 8:09:01 PM
Subject: (b)(3):CPSA Section 25(c)

Good Evening,

Thank you for sending the cancellation letter attachment with your last e-mail. My family and I will be moving out the weekend of May 16th and 17th, 2009. In the attachment it states the 15th; however, this is physically impossible since I will be working at the high school on Friday, the 15th.

If it is o.k. with you , I would like to change the date to reflect the 17th (Sunday) as the day in which we will be completely out of the unit. In addition, we won't be able to get into the new residence until after the 15th.

I appreciate your assistance with this matter and thank you again for being an understanding landlord.

Once you receive the cancellation notice and initial the changes, would you please forward a copy to me.

Thank you again.

(b)(3):CPSA Section 25(c)

CANCELLATION OF LEASE, UNCONDITIONAL AND FULL GENERAL RELEASE

This agreement is made and dated May ____, 2009, and in consideration of the mutual covenants and agreements herein set forth between RELEASOR (b)(3):CPSA Section 25(c) tenant in that lease agreement between the parties dated February 14, 2009, for lease of the premises at (b)(3):CPSA Section 25 (c) Sebastian, Florida, and RELEASEE JOHN WOLKOWICZ, landlord in said lease, for payment by releasee to releasor, the receipt of which is acknowledged by releasor, of $900, upon the rented premises having been vacated by tenant by May 15, 2009 and left in at least as good condition as when tenant first took possession of the premises, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by all parties, and intending to be bound, the parties hereby cancel and set aside said lease, and releasor hereby remises, releases, acquits, satisfies, and forever discharges and holds harmless releasees of and from all and all manner of action and actions, causes and causes of action, suits, debts, dues, sums of money, accounts, security deposits, reckonings, bonds, bills, specialties, covenants, contracts, controversies, agreements, promises, variances, trespasses, damages ,judgments, executions, claims, and demands whatsoever, in law or in equity, in tort of any type, by contract, negligence, premises tort liability, product liability, or any other cause of action or type of cause of action, existing and/or known or unknown or undiscovered as of, before, or after the date of this agreement by either party, both parties or otherwise, latent or patent, past, present or future, accrued or unaccrued, matured or unmatured, which releasor ever had, now has or will have or which any personal representative, successor, devisee, vendee, heir or assign of releasor, hereafter can, shall or may have, against releasee, caused by, or for which the releasee, and/or the employee or employees, agent or agents, of releasee, may be legally liable, for, upon or by reason of any matter, cause or thing whatsoever, past, present and/or future, including specifically but without limitation any liability relating in any way to the real property of releasor which is the subject of said lease. Tenant has vacated the premises and irrevocably given possession thereof to landlord. Releasor agrees there is and will be no further claim by tenant against landlord for return of any or all of tenant's security deposit or unused rent, tenant waives further statutory notice of claims for security or rent deposits, reason for deduction of security deposits and the parties apply her last months rent deposit to pay rent for May 2009, all the foregoing except as provided in this agreement. Successors and Assigns. This release is binding upon the parties hereto and their respective personal representatives, successors, assigns, vendees, devisees, and heirs. THE RELEASOR SIGNING THIS DOCUMENT HAS READ AND UNDERSTANDS IT AND HAS HAD THE OPPORTUNITY TO HAVE AN ATTORNEY-AT-LAW OF HIS OWN CHOICE EXPLAIN IT TO RELEASOR, AND KNOWS THAT RELEASOR IS GIVING UP HIS OR HER RIGHT TO SUE RELEASEES FOR DAMAGE, CLAIM, AND/OR INJURY FROM ANY MATTER WHATSOEVER AS DESCRIBED IN THIS AGREEMENT.

IN WITNESS WHEREOF, the parties have hereunto set their respective hands this _____ day of May 2009.

(b)(3):CPSA Section 25(c)

_____

JOHN WOLKOWICZ, landlord

From: John Wolkowicz ()
To: (b)(3):CPSA Section 25(c)
Date: Wednesday, May 6, 2009 8:43:12 AM
Subject: (b)(3):CPSA Section 25(c)

Hello (b)(3):CPSA Section 25(c)

I'm sorry that I could not get back to you sooner, but I took sick. I feel better now. I'm trying to catch-up on lost time, missed correspondence, etc.

As you know, when you advised me of alleged "Chinese Drywall" installed in 961, I took immediate action. I contracted with 3rd party professional(s) to investigate your allegation.
I have been told of the happenings during the test and inspect period. I am glad that you all got though the investigation period without major incident.

It is my understanding, that you were advised by professional 3rd party non-destructive and destructive investigation and testing report - there was no "Chinese Drywall" discovered in 961. It was determined the gypsum drywall product installed in 961 was manufactured by United States Gypsum ("USG"). The 3rd party test reports I received advise me there is no "Chinese Drywall" in 961.

You have lived in 961 for approx 15 months. You have been a good tenant. You kept terms of the lease agreement. The 1st time I was notified of any problem with 961 was April 15, 2009. I'm sorry that you continue to feel the way do. As requested, I can grant your release from 961 by May 15. I do not stand in your way. Should you decide to break your lease agreement - I can work that out with your cooperation for an orderly transition.

The process for an orderly transition from 961 to your new living arrangement can be made by reading, signing and delivering the attached cancellation of lease form to Paula Rogers. Upon receiving the signed cancellation of lease form, Paula will transfer funds to you.
I appreciate your tenancy and wish you the best.

Thank you.

John Wolkowicz
(760) 625-8945.

From (b)(3):CPSA Section 25(c)
To: John Wolkowicz <lajawz@sbcglobal.net>
Sent: Sunday, April 26, 2009 10:25:47 AM
Subject: Re: (b)(3):CPSA Section 25(c)

Thank you for the reply. Sorry you are not feeling well. Trust me I know how you feel. Everyone in my house is on antibiotics for upper respiratory infections. I do not have the option of shutting down for a few days to recuperate, nor do my children.

Consequently, I do need to move out asap. I'd appreciate your acknowledgment of this situation and information on how to proceed. I'd also appreciate my last month's rent refunded and I'll handle the security deposit with Paula. The situation here is not unique, and not confined to just your unit. Many homes in the Treasure Coast have been affected. I'm aware of your apprehensions, but the documentation and photos speak for themselves. Residing in this unit is obviously a health hazard to me and my family.
Thank you for your understanding and I look forward to resolving this situation soon.

(b)(3):CPSA Section 25(c)

From: John Wolkowicz <lajawz@sbcglobal.net>
To: (b)(3):CPSA Section 25(c)
Sent: Saturday, April 25, 2009 3:16:44 PM
Subject: Re: (b)(3):CPSA Section 25(c)

Hello Annmarie -

A hour ago, I replied to your previous (Thursday) email to let you know that I've been out sick.
I chose to shutdown my daily activity, until I got to feel better.
Today, I'm not feeling 100% but checking on what I missed since getting sick.
I will get back with you soon on a plan to resolve.
Thank you for your understanding.
John Wolkowicz

From: (b)(3):CPSA Section 25(c)
To: John Wolkowicz <lajawz@sbcglobal.net>
Sent: Saturday, April 25, 2009 8:21:15 AM
Subject: (b)(3):CPSA Section 25(c)

Good Morning,
I didn't hear back from you since I sent the last e-mail and I was concerned? I have responded to your concerns about your home and you have not answered my e-mail.
When you have a chance please e-mail me back or call me on my cell phon (b)(3):CPSA Section 25(c) I would like to discuss with you the details involved with moving out of 961 due to the continual health issues for myself and my children. The inconvenience of having my children stay somewhere else until we relocate,and the reoccuring medical expenses need to end.
Please,inform me on the necessary procedure in order to rectify this situation and move my family out. You stated in our phone conversation that you would not hold me to the lease, and "It is just a piece of paper." I certainly hope that has not changed, because there is definately something in the air of this unit that is causing health problems as well as structural and mechanical ones.

Look forward to speaking with you soon.

(b)(3):CPSA Section 25(c)

From: (b)(3):CPSA Section 25(c)
To: John Wolkowicz
Date: Sunday, April 26, 2009 1:25:47 PM
Subject: Re: 961 S Easy

Thank you for the reply. Sorry you are not feeling well. Trust me I know how you feel. Everyone in my house is on antibiotics for upper respiratory infections. I do not have the option of shutting down for a few days to recuperate, nor do my children.

Consequently, I do need to move out asap. I'd appreciate your acknowledgment of this situation and information on how to proceed. I'd also appreciate my last month's rent refunded and I'll handle the security deposit with Paula. The situation here is not unique, and not confined to just your unit. Many homes in the Treasure Coast have been affected. I'm aware of your apprehensions, but the documentation and photos speak for themselves. Residing in this unit is obviously a health hazard to me and my family.

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Subject: (b)(3):CPSA Section 25(c)

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Please,inform me on the necessary procedure in order to rectify this situation and move my family out. You stated in our phone conversation that you would not hold me to the lease, and "It is just a piece of paper." I certainly hope that has not changed, because there is definately something in the air of this unit that is causing health problems as well as structural and mechanical ones.

Look forward to speaking with you soon.

(b)(3):CPSA Section 25(c)

From: (b)(3):CPSA Section 25(c)
To: John Wolkowicz
Date: Tuesday, April 21, 2009 5:38:06 PM
Subject: Re: (b)(3):CPSA Section 25(c), Sebastian

Hello John,

Sorry I did not return the message last night, but I spent the evening at Sebastian River Medical Center with my son. He was having extreme difficulty breathing with a pain in the middle of his chest. He was diagnosed with acute bronchitis/ upper respiratory infection with asthma symptoms. Antibiotics, steroids and a nebulizer(breathing treatment machine) are his directions for recovery. He no longer stays at 961 because his symptoms worsen when here. My daughter still is coughing and going to the ENT Monday, my eyes are burning and swollen.

Obviously there is some form of "toxic and unhealthy" condition with the unit. Perhaps an air quality inspection may shed some light on the matter for you. I do not know. I contacted you as soon as I put the information together.All of the coincidences were not just coincidences. There is a reason why my children and I are getting sick as often as we do living here. This is very disruptive to our family structure as it is to your real estate investment.

John, when I spoke with you, you said that the lease was "just a piece of paper" and I thank you for that because my family needs to move out as soon as possible. I officially request that you please allow me to brake the lease in order to move my family.We will be out of here as soon as I can get everything lined up, not to go beyond May15th. I am hoping that you are able to return my last month's rent of $900 since I will definitely be needing this to apply to my new home. As for the security deposit, upon exit and inspection of the unit by Paula, I would anticipate to receive this back as well.

Thank you so much for your understanding and I look forward to hearing from you soon.

(b)(3):CPSA Section 25(c)

From: John Wolkowicz <lajawz@sbcglobal.net>
To: riestop@yahoo.com
Sent: Monday, April 20, 2009 5:38:23 PM
Subject: Re: (b)(3):CPSA Section 25(c) ebastian

Hello (b)(3):CPSA Section 25(c)

Since receiving your Monday 4-13-09 VM, and leaving VM's - to finally reach you on Thurs, 4-16-09 night.

After listening to your concern, I did not expect to hear of "Chinese" drywall installed @ 961.

For approx 15 months, you have lived in 961 and approx 3 months ago, you renewed your lease on 961.

Until I spoke with you on 4-16-09, I was not aware of a concern needless to say of "Chinese" drywall in 961.

In March 2009, when Property Manager Paul Rogers advised me that your had re-newed your lease for 1 year, Paula advised me that you were a good tenant and happy to live in 961. I was happy on the her report but was not aware of any concern regarding "Chinese" drywall or any other maintenance issues during your tenancy.

As discussed Thursday night, I take your concern seriously and took immediate action to investigate with the Developer, the Builder, the RE Agent, PM and IRC. On Friday, 4-17-09 morning, I investigated your concern of possible "Chinese" drywall installed in 961. I spent the day retrieving phone numbers and talking to people who I thought would be in the know, with first hand knowledge on the construction of 961.

I spoke with the Developer, the Builder, the RE Agent and PM and forwarded them your email and pictures for their

review. After taking their calls throughout the day, the Developer and the Builder assured me their drywall material delivery records report no "Chinese" drywall installed in 961.

The RE Agent and IRC are to get back. Property Manager Paula Rogers advised that she was not aware of any problem with 961. In fact, Paula reported when you decided to renew the lease on 961 for one more year, you were happy living in 961, you had no problems with 961 and wanted to continue to live in 961.

In the meanwhile, I have arranged to have 961 inspected. I take your concern serious but need to coordinate entry day and time with you. Please advise on entry availability so I can schedule my 3rd party to review unit concern.

Thank you.

John Wolkowicz
(760) 625-8945

PS:

On Friday 4-17-09, I received your May rent check and dated 4-10-09. The envelope was date stamped 4-11-09. The rent check was wrapped in pink paper but there was not a notice advising me of your concern with 961.

From: (b)(3):CPSA Section 25(c)
To: Lajawz@sbcglobal.net
Sent: Thursday, April 16, 2009 3:41:32 PM
Subject: (b)(3):CPSA Section 25(c) Sebastian

Good Afternoon Mr. Wolkowicz,

I have not been able to reach you via telephone and I am hoping that we get a chance to speak soon. The reason I am contacting you is due to possible Chinese Drywall in my unit or some other air quality toxin in the house.

Since my children and I moved in last spring, we have had too many upper respiratory infections and my daughter has seen the doctor 12 times. This coupled with the physical signs of Chinese drywall have prompted concern on my end. According to what I have learned, this unit does have characteristics of this problem, or perhaps another contaminent that is turning copper pipes black, jewelry black and produces a sulfur smell in the home. The children and I really felt its impact over Spring break, since we were all home from school.

Please understand that I love my unit and I am not looking to move. However, the health risks and conditions right now are scary. I have reached out to construction professionals as well as consumer/legal advocates to assist me in identifying the problem in the house.

Please view the attached photos and I will speak to you soon regarding this matter.

Thank you,
(b)(3):CPSA Section 25(c)

From (b)(3):CPSA Section 25(c)
To: Lajawz@sbcglobal.net
Date: Thursday, April 16, 2009 6:41:32 PM
Subject: (b)(3):CPSA Section 25(c) Sebastian

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Since my children and I moved in last spring, we have had too many upper respiratory infections and my daughter has seen the doctor 12 times. This coupled with the physical signs of Chinese drywall have prompted concern on my end. According to what I have learned, this unit does have characteristics of this problem, or perhaps another contaminent that is turning copper pipes black, jewelry black and produces a sulfur smell in the home. The children and I really felt its impact over Spring break, since we were all home from school.

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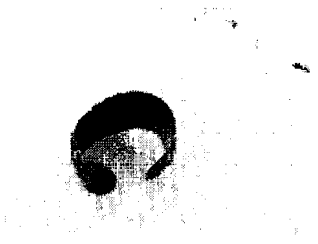
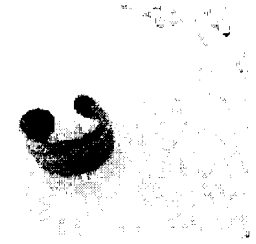
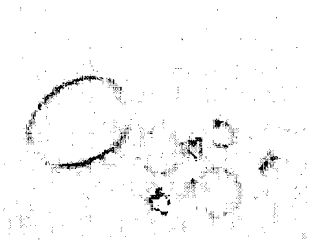
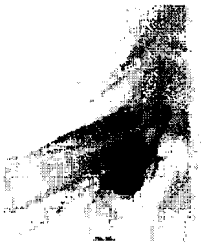
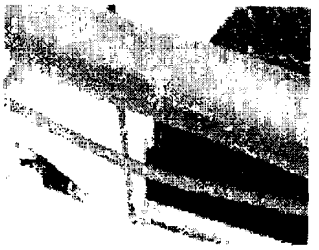
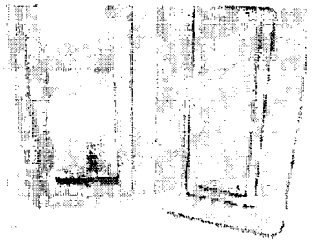
Thank you,
(b)(3):CPSA Section 25(c)

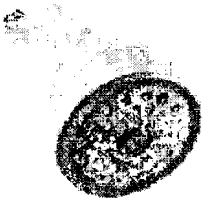
8 Images | View Slide Show | Download All Images | Hide All









U.S. Consumer Product Safety Commission

AUTHORIZATION FOR RELEASE OF NAME

Thank you for assisting us in collecting information on a potential product safety problem. The Consumer Product Safety Commission depends on concerned people to share product safety information with us. We maintain a record of this information, and use it to assist us in identifying and resolving product safety concerns.

We routinely forward this information to manufacturers and private labelers to inform them of the involvement of their product in an accident situation. We also give the information to others requesting information about specific products. Manufacturers need the individual's name so that they can obtain additional information on the product or accident situation.

Would you please indicate on the bottom of this page whether you will allow us to disclose your name? If you request that your name remain confidential, we will of course, honor that request. After you have indicated your preference, please sign your name and date the document on the lines provided.

☑ I request that you do not release my name. My identity is to remain confidential.

☐ You may release my name to the manufacturer but I request that you do not release it to the general public.

☐ You may release my name to the manufacturer and to the public.

(b)(3):CPSA Section 25(c)

5-12-09
(Date)

CPSC Form 322

CONSUMER PRODUCT INCIDENT REPORT

Region: EASTERN

1 (b)(3):CPSA Section 25(c)	(b)(3):CPSA Section 25(c)	(HOME)	(WORK) unknown
3	4.CITY Sabastian	ST FL	ZIPCODE 12111
4 [redacted]	4b.INCIDENT CITY Sabasten	ST FL	ZIPCODE 12111

5.DESCRIBE INCIDENT OR HAZARD, INCLUDING DATA ON INJURIES

The consumer had to replace the elbows in his bathroom. The pipe underneath the sink in the bathroom had a black, nasty sludge - cont -

6. DATE OF INCIDENT(S)	7.IF INJURY OR NEAR MISS, OBTAIN AGE/SEX 34 Y/M AND DESCRIBE INJURY	8.IF VICTIM DIFFERENT FROM RESPONDENT, PROVIDE NAME
01/15/2009	upper respiratory problems and runny nose	self RELATIONSHIP self

9.DESCRIPTION OF PRODUCT	10.BRAND NAME
Chinese drywall	unknown

11.MFR/DISTRIBUTOR NAME, ADDR. & PHONE	12.MODEL, SERIAL #'s, DATE OF MFR
unknown ISSUE 29 unknown 04/14/2009	unknown 13.DEALER'S NAME, ADDRESS & PHONE unknown

14.WAS THE PRODUCT DAMAGED, REPAIRED OR MODIFIED? YES IF YES, BEFORE OR AFTER THE INCIDENT? AFTER DESCRIBE: See narrative	15.PRODUCT PURCHASED NEW DATE PURCHASED 03/15/2008 AGE 13 M 16.DOES PRODUCT HAVE WARNING LABELS? IF SO, NOTE: None pertaining to the problem.

17.HAVE YOU CONTACTED THE MANUFACTURER? NO IF NOT, DO YOU PLAN TO CONTACT THEM? not sure	18.IS THE PRODUCT STILL AVAILABLE? YES IF NOT, ITS DISPOSITION	19.MAY WE USE YOUR NAME WITH THIS REPORT? YES

FOR ADMINISTRATION USE

20.DATE RECEIVED	21.RECEIVED BY (NAME & OFFICE)	22.DOCUMENT NO.
04/13/2009	mlj/HL	H0940141A

23.FOLLOW-UP ACTION	24.PRODUCT CODE(S)
	1876

25.DISTRIBUTION	26.ENDORSER'S NAME & TITLE
	mlj 04/13/2009

Narrative Continued

that was far beyond normal debris of hair and other items that may end up in the pipes. One of wife's sterling silver bracelets turned completely black. A couple gold earrings and necklaces have begun turning color. The copper pipe coming from the air handle has turned completely black in color.

Their hard-wired fire alarms went off for about 10 minutes and then they stopped. The consumer had an electrician look at them, but he could not find anything wrong with them. The consumer has also noticed a sulfur (rotten eggs) smell in the home.

The son has also experienced headaches and he has been very tired since living in the home. The daughter also has a persistent cough and fever. Daughter has been on antibiotics twice in the past 2 months and the symptoms always return.
The consumer mentioned that his wife began to experience her symptoms in the Summer of 2008.

The house was built between 2004 and the middle of 2005.

Vict #	Sex	Age	Name	Relationship
2	F	44 Y	(b)(3):CPSA Section 25(c)	wife
3	M	15 Y		son
4	F	4 Y		daughter

Vict #	Victim Injury Description
2	burning eyes, swelling to the eye, upper respiratory tightness
3	burning eyes, swelling to the eye, upper respiratory tightness
4	burning eyes, swelling to the eye, upper respiratory tightness

Distributor Phone #:

CPSC Source: HD

If you have any changes, additions, or comments you wish to make concerning your attached report, please make them in the space below.

I confirm that the information in the attached report (including any changes, additions, or comments I have made) is accurate to the best of my knowledge and belief.

(b)(3):CPSA Section 25(c)

S

4-21-09

Date

☐ I request that you do not release my name.

☒ You may release my name to the manufacturer but I request that you not release it to the general public.

☐ You may release my name to the manufacturer and to the public.

090505CBB1188

USG Corporation
Legal Department
550 West Adams Street
Chicago, IL 60661-3676
312 436-4000
Fax: 312 672-7721

August 13, 2009

Founded in 1902

By e-mail tstevenson@cpsc.gov

Mr. Todd A. Stevenson
Director, Office of the Secretary
Consumer Product Safety Commission
4330 East West Highway
Bethesda, MD 20814-4408

Re: FOIA Requests 09-F-00427, 09-F-00495, 09-F-00512, and 09-F-00825: Chinese Drywall Investigations

Dear Mr. Stevenson:

This letter is in response to your July 22, 2009 correspondence to United States Gypsum Company regarding the above referenced FOIA requests. We have reviewed all the documents enclosed with your letter, which include the FOIA requests and the CPSC files that the commission is considering producing in response.

United States Gypsum Company has the following comments for your consideration:

1. First, we want to make clear that United States Gypsum Company has never manufactured wallboard in China. Our SHEETROCK® brand gypsum drywall has always been manufactured in North America only. Therefore, we believe that to the extent any CPSC documents mention wallboard made by U.S. Gypsum Company, those documents are not responsive to FOIA requests that are specifically directed at CPSC investigations into Chinese drywall.

   Second, in more than 90 years of making wallboard, U.S. Gypsum Company has not had complaints about is SHEETROCK® brand drywall similar to those being made regarding Chinese wallboard.

   Third, production of some of these documents by the CPSC in response to Chinese wallboard inquiries would inaccurately and unfairly suggest to the public that our company's primary product, SHEETROCK® brand gypsum drywall, may have been manufactured in China or that the CPSC believes our product may cause problems similar to those that some Chinese wallboard apparently has

caused. Neither is true, and nothing in the documents sent to us suggests otherwise.

2. The following are brief comments on each of the six files that you sent to us for review :

No. 090504CBB1656

No comment or objection.

No. 09054CBB1662

This investigation file relates to a homeowner who believes that his family has developed numerous health conditions related to Chinese drywall in his home. However, neither the homeowner nor the CPSC investigator was able to locate a label on the drywall to confirm the drywall manufacturer. A letter in the file from drywall supplier Seacoast Supply indicates that it did supply some drywall to the home but that based on the delivery date the drywall delivered was manufactured by U.S. Gypsum Company in the United States and is not Chinese-made drywall.

Because no Chinese drywall has been identified in the home, this investigation file is not responsive to FOIA requests for "Chinese Drywall Files". Further, production of the file at this time – prior to a full inspection of all the wallboard in the home and a full investigation into the health issues described by the homeowners – would inaccurately and unfairly suggest to the public that that the family's health issues are related to U.S. Gypsum wallboard. There is no evidence that this is true and the CPSC file does not reveal any reason to believe that such a suggestion is true.

Therefore, U.S. Gypsum requests that this file not be produced or in the alternative that any mention of our company be deleted.

No. 090505CBB1683

As with the previous file, this file reports a homeowner complaint that various health symptoms and copper blackening in his house are related to Chinese drywall. Again, there has been no inspection of all of the drywall in the home to confirm the presence of any Chinese material. The only drywall that has been identified in the report is U.S. Gypsum SHEETROCK® brand drywall, which was reportedly visible only in the attic and is not made in China. There is nothing in the file to confirm the presence of any Chinese drywall in the home. We are aware of other homes where Chinese-made ½"drywall was installed in the walls

of home, and U.S. Gypsum or other 5/8" inch drywall was installed in the ceiling or attic (5/8 inch wallboard typically is used on ceilings, while walls are typically ½ inch board).

Production of this complaint file before a full inspection of all the wallboard in the home and before a full investigation into the health issues described by the homeowners, would inaccurately and unfairly suggest to the public that the family's health issues are related to U.S. Gypsum wallboard.

If any of this homeowner's alleged problems are caused by wallboard in the home, it is more likely that the problems are caused by undiscovered Chinese wallboard than by U.S. Gypsum Company wallboard, which has never been associated with the complaints being made regarding Chinese drywall.

U.S. Gypsum requests that this file not be produced or in the alternative that any mention of our company be deleted.

X No. 090505C1688

This investigation was initiated by a tenant who complained of health issues and copper blackening in her rented home. The manufacturer of the drywall in the home is not confirmed; however, the tenant believes her problems are related to Chinese drywall. As with prior claims addressed herein, the only drywall that was accessible and inspected was located in the attic of the home.

There has been no confirmation that any wallboard in the home was manufactured in China and no investigation into what may be causing the tenant's complaints. Because there is only one unverified reference to U.S. Gypsum Company wallboard in the file, production of these documents by the CPSC in response to FOIA requests would unfairly and inaccurately suggest that U.S. Gypsum wallboard may be a part of the tenant's problems – and there is nothing either in the file or outside the file to support that suggestion.

U.S. Gypsum requests that this file not be produced or in the alternative that any mention of our company be deleted.

No. 090520CBB2638

This file relates to an investigation into a homeowner complaint of health symptoms and electrical component failures that the homeowner believes might be related to Chinese drywall. The CPSC investigator found no evidence of Chinese drywall – although he did obtain information (a purchase receipt

produced by the homeowner) that suggests that some of the drywall in the house was manufactured by two U.S. companies – United States Gypsum and Georgia Pacific. However, there was no visual confirmation that the wallboard in the home was in fact manufactured by the two companies. The investigator did not notice any unusual smell in the home and found no visible blackening of copper wire or other metal surfaces – the symptoms frequently reported in homes with the Chinese drywall problems.

There is no evidence of Chinese drywall in the home, the CPSC investigator did not observe any unusual smell or copper blackening, and there is no evidence that the wallboard in the home is causing any problems whatsoever. Therefore, this report is not responsive to the FOIA request. Production of these material in response to the pending FOIA requests may inaccurately suggest that the homeowner's reported problems are related to the presence of wallboard manufactured by two U.S. manufacturers, and there is nothing to support that conclusion..

U.S. Gypsum requests that this file not be produced or in the alternative that any mention of our company be deleted.

No. 090504CBB3555

No comment or objection.

Thank you again for the opportunity to comment on the CPSC response to these FOIA requests. We appreciate your consideration of our comments and concerns. Please feel free to call me if you have any questions or require further information. (312-436-4006)

Very truly yours,

John A. Donahue
Senior Corporate Counsel
Telephone: (312) 436-4006

JAD/cw
#172623

1. Task Number	2. Investigator's ID	EPIDEMIOLOGIC INVESTIGATION REPORT
090505CBB1685	9101	

3. Office Code	4. Date of Accident YR MO DAY	5. Date Initiated YR MO DAY
810	2006 10 01	2009 05 05

6. Synopsis of Accident or Complaint UPC

The 50 year-old female consumer and her husband have experienced health issues, an air conditioning evaporator coil failure, and metal corrosion issues since purchasing their townhome in 2007. The consumer believes that imported drywall from China was used in constructing her townhome, and that the drywall is emitting chemicals into the atmosphere of the residence and resulting in some or all of the aforementioned issues. No identifying information was available for the drywall.

CPSA 6(b)(1) CLEARED for PUBLIC
NO MFRS/PRVTLBLRS OR PRODUCTS IDENTIFIED 7/6/09
EXCEPTED BY: PETITION RULEMAKING ADMIN. PRCDG
WITH PORTIONS REMOVED:

7. Location (Home, School, etc)	8. City	9. State
1 - HOME	POMPANO BEACH	FL

10A. First Product	10B. Trade/Brand Name	10C. Model Number
1876 - House Structures, Repair Or	CHINESE DRYWALL	UNKNOWN

10D. Manufacturer Name and Address
UNKNOWN

11A. Second Product	11B. Trade/Brand Name	11C. Model Number
381 - Air Conditioners	NONE	NONE

11D. Manufacturer Name and Address
NONE

12. Age of Victim	13. Sex	14. Disposition	15. Injury Diagnosis
50	2 - Female	1 - Injured, not Hosp.	68 - Poisoning

16. Body Part(s) Involved	17. Respondent	18. Type of Investigation	19. Time Spent (Operational / Travel)
85 - ALL OF BODY	1 - Victim/Complainant	1 - On-Site	23 / 7

20. Attachment(s)	21. Case Source	22. Sample Collection Number
9 - Multiple Attachments	07 - Consumer Complaint	

23. Permission to Disclose Name (Non NEISS Cases Only)

● Yes ○ No ○ Verbal ○ Yes for Manuf. Only

24. Review Date	25. Reviewed By	26. Regional Office Director
06/04/2009	9071	Dennis R. Blasius

27. Distribution	28. Source Document Number
Rose, Blake; Woodard, Dean	H0940137A

SYNOPSIS:

This investigation was initiated from a Consumer Product Incident Report submitted by the consumer via the CSPC Hotline. An on-site investigation was conducted on May 12, 2009.

The consumer and her husband have experienced health issues, an air conditioning evaporator coil failure, and metal corrosion issues since purchasing their townhome in 2007. The consumer believes that imported drywall from China was used in constructing her townhome, and that the drywall is emitting chemicals into the atmosphere of the residence and resulting in some or all of the aforementioned issues.

INCIDENT INFORMATION:

The information contained in this investigative report was obtained from the consumer (50-year-old female) and the consumer's husband (54-year-old male).

The incident townhome (See Exhibit A-1; single-family unit, four stories, approximately 2600 sq. ft.) was built in October 2006 and purchased by a real estate investor. The home was unoccupied between October 2006 and September 2007, when the consumer and her husband purchased the residence.

The consumer believes the air conditioning was operated in the home while it was unoccupied. She believes the temperature of the home was kept at approximately 83-85 degrees during the summer months. It is unknown if the home was heated during the winter months while unoccupied.

The consumer and her husband have occupied the home on a full-time basis along with their two dogs. The consumer's two children are away at college and occupy the home on an intermittent basis.

The consumer believes the home is built with metal studs.

The consumer asserts that a family friend performed an inspection of the home prior to the time of purchase. She claims that the inspection revealed that all of the outlets in the home were in working order. Three ceiling fans (out

of six) in the home (1-first floor; 2-second floor) were found to be not working properly (some would turn on but the variable speed functions would not work; light sockets would not illuminate new light bulbs; all wall switches were operating properly) during the inspection. The consumer claims the home was not inspected for the presence of metal corrosion.

The consumer claims none of the appliances were inspected because they planned on replacing all of the appliances after purchase. The consumer confirms that all of the appliances were replaced after the purchase of the home.

The home does not have natural gas or propane service.

The home has three bedrooms. Carpet was installed in two of the three bedrooms during construction. The other areas of the home have marble flooring. The home is equipped with two air handling units (central air/furnace unit), one is on the second floor and one is on the fourth floor.

After purchasing the home, the consumer's family noticed there was odor in the home but they thought that this was a "new house" smell. The consumer asserts they did not think the odor in the home smelled like rotten eggs.

Prior to moving into the home all of the interior walls in the home were painted. The ceilings or closet areas were not painted. The consumer asserts that after the painting was completed the "new house" odor diminished but was still present.

The consumer claims the "new house" smell has always been most noticeable on the first and fourth floors. She asserts that heat intensifies the smell, particularly when the fourth floor is exposed to direct sunlight.

The consumer asserts the air handler positioned on the fourth floor developed a water leak (reasons unknown) in April 2008. The water leak resulted in small areas of damage on the floor of the fourth story and the ceiling of the third story landing and kitchen areas. Four to five 1-2' square areas of ceiling drywall was replaced to repair the water damage. The consumer is not certain where the replacement drywall was obtained, but she believes most of the supplies were obtained from a local retailer (see

Product Description below). No other drywall has been replaced in the home since its construction.

The consumer asserts the home builder used a subcontractor for the drywall installed in her home. The subcontractor is identified in the Product Description section below. In addition, on May 4, 2009 the consumer made contact with the subcontractor via email regarding the supplier of the drywall used in her home. The subcontractor provided a letter (See Exhibit E) from the drywall supplier stating that they did sell Chinese drywall during the time the consumer's home was under construction.

The consumer claims that on or around March 23, 2008 the fourth floor air handler's air conditioning system was recharged due to a low refrigerant level. In April 2008 the second floor air handler's air conditioning system was recharged due to a low refrigerant level. In January 2009 the air conditioning evaporator coil for the air handler on the second floor of the home failed. The consumer had the evaporator coil replaced by a professional air conditioning service on February 02, 2009 (See Exhibit D). No reason for the evaporator coil failure was provided by the technician. The technician stated that the need for the evaporator coil replacement was "weird" given its age, but further stated that sometimes this happens. The consumer asserts the copper of the failed evaporator coil was blackened. No other work has been performed on the air handlers other than normal maintenance.

After the replacement of the air conditioning evaporator coil in February 2009, the consumer began performing research on-line for a possible cause of the failure in March 2009. Through her research, the consumer became aware that the evaporator coil failure may have been due to the presence of Chinese drywall in the home.

The consumer asserts that in February 2009 her husband was using a wall outlet (See Exhibit A-10) on the second floor landing to charge a Blackberry headset. The outlet failed and produced some black charring on the outlet and outlet cover. No property was damaged and no fire resulted from the incident. No other electrical devices were plugged into the outlet. The consumer had the outlet replaced by a professional electrician (See Exhibit C). The electrician gave no reason for the failure of the outlet and the outlet was discarded at the time of repair.

The consumer asserts that on April 19, 2009 she was using one of the two outlets located on the ends of the master bath dual sink top. The consumer had her hair dryer plugged into the outlet (See Exhibit A-17) on the left side of the sink top, with no other electrical devices being used at either outlet. She claims that while using the hair dryer, the outlet on the right side of the sink top (See Exhibit A-17) began to smoke and started to melt. The consumer stopped using the hair dryer and contacted a professional electrician. The electrician arrived on the same day and replaced both the left and right side outlets at each end of the sink top. While making the repair, the electrician noticed that the ground wires were blackened at each outlet. The electrician then opened several other outlets throughout the house, and the main electrical panel, and found that all of the ground wires and exposed neutral wires had a black residue on them. The electrician gave no reason for the outlet failures or the blackening of the copper wiring. The incident outlets were discarded by the electrician after the repair.

The consumer asserts that both of the outlets at the master bath sink top are on the same circuit, and that a GFCI outlet is on this circuit. She claims that the GFCI outlet did not trip during the incident and the circuit breaker for the sink outlets did not trip during the incident. The consumer asserts that the electrician tested the GFCI outlet during the April 19, 2009 repair visit and found it to be operating properly.

In April 2009 the consumer decided to remove the cover of a wall outlet in the master bedroom in order to see if the copper wiring inside was blackened. The consumer did not turn the circuit breaker for the outlet Off prior to attempting to remove the cover. The consumer began removing the outlet cover with a screw driver when she received a shock. She claims that the television and light fixtures in the room began flickering, and a clock radio stopped working (all devices were plugged into other wall outlets in the room; the clock radio was discarded due to it being non-operational after the incident). The consumer asserts that she was scared by the incident and she hastily began tightening the outlet cover, which she then over tightened and caused the cover to crack (See Exhibit A-16).

In late April 2009 the consumer's husband attempted to remove the cover of an outlet (See Exhibit A-11) located on the kitchen island. The consumer's husband did not turn the circuit breaker for the outlet Off prior to attempting to remove the cover. He began using a screw driver to remove a screw for the cover and he was shocked.

In April 2009 the consumer and her husband had two individuals (one from a professional disaster recovery service and one from a professional restoration service) conduct a visual inspection of their home. The inspection performed by each individual found black residue on all uncoated copper in the home (to include the copper on both air conditioning evaporator coils, copper stub outs from toilets and the hot water heater, and the coils on the refrigerator), and each confirmed that they smelled an unpleasant odor in the home. In addition, it was discovered that many of the metal bathroom water fixtures were pitted. No report was available for this inspection.

The consumer asserts that she purchased a laptop computer on August 18, 2007 and kept the unit in the third floor bedroom of the home until December 29, 2008, when it stopped working. The consumer sent the computer back to the manufacturer (See Exhibit B) where it was determined that the motherboard needed to be replaced. The manufacturer sent the consumer a new replacement computer after they were unable to repair the incident computer. The manufacturer did not inform the consumer of the reason for the failure.

During the on-site investigation, the consumer showed this investigator pieces of tarnished silver and gold jewelry (See Exhibit A-15), which had been professionally cleaned in April 2009.

The consumer asserts there are approximately 35 canister light fixtures throughout the home. She claims that she uses incandescent light bulbs in each fixture, and since moving into the home she has had to replace approximately 24 light bulbs. She asserts the lights are used intermittently and that none of them are left illuminated for extended periods. She claims she began using compact florescent bulbs in some of the light fixtures approximately six months ago, and she has had no issues with the bulbs as of the time of the on-site investigation. The consumer believes that she has had to replace the incandescent bulb more frequently than is normal.

The consumer asserts the home's nine hardwired, battery back-up smoke detectors (3-first floor, 1-second floor, 5-third floor, 0-fourth floor) have not been tested since they purchased the home. She claims the smoke detector on the second floor (kitchen/living room) would consistently activate whenever she would use the kitchen range at a temperature of 325+ degrees. She claims this smoke detector stopped working completely (for reasons unknown) in or around April/May 2009.

The consumer asserts that she was born with asthma. She claims that the symptoms of her condition have been no more or less frequent and intense since moving into the residence.
The consumer asserts that since in or around October/November 2008 she has had a dry, hacking cough throughout the day and night. She asserts that her throat feels dry and that she has increased her intake of water. In addition, she has self treated her condition with an over-the-counter cough medication (Deslym), of which she consumes one dose approximately every two weeks.

The consumer claims that since in or around October/November 2008 she has had a headache upon waking up and/or throughout the day approximately 3-4 times each week. She asserts that prior to moving into the incident home she experience similar headaches approximately one time per month. The consumer has self treated her condition with over-the-counter pain relievers.

The consumer asserts that she had no sleep issues prior to moving into the incident home. She claims that shortly after moving into the home she has experience insomnia-like sleep issues where it will take her over an hour to get to sleep, or if she wakes up through the night she will not be able to get back to sleep. The consumer saw a physician for this issue in 2007 and is currently being treated with medication (Ambien CR 12.5 mg).

The consumer claims that since moving into the home she has had a nauseous feeling on a daily basis. She began self treating this condition with 2-3 Pepcid A/C tablets each day. The consumer asserts that no vomiting has accompanied this condition, and that she did not experience this feeling prior to moving into the home.

The consumer asserts that she has experienced a persistent runny nose since moving into the home. She claims that she did not experience this issue prior to moving into the residence. She is self treating this condition with Benedryl 25mg tablets 1-2 times per week.

The consumer claims that she and her family went on an eight day Christmas cruise vacation in 2008. She asserts that while she was on the vacation all of her symptoms disappeared. In addition, she asserts that she feels better after leaving the house for weekend trips.

The consumer asserts that she is employed and works from her house, and that she is in the house for most or all of the day each day.

The consumer claims that her husband has experienced a persistent cough, insomnia and sneezing since moving into the home. She asserts that he did not have these symptoms prior to moving into the home.

The consumer asserts that her husband is employed and works outside of the house.

The consumer has two dogs (a 13.5-year-old Poodle, and a 7-year-old Wheaton Terrier) living in the residence with her and her husband. The consumer asserts the Wheaton Terrier appears to be substantially less energetic since moving into the residence; however, she initially thought that this may have been due to dog's frequent movement up and down the four floors of the residence. She claims that for a period of six months the Wheaton Terrier had a possible staph infection on his skin that was resistant to treatment by shampoo. The terrier was given antibiotics to treat the condition. The consumer claims that the terrier experienced these rashes prior to moving into the home, but since moving in they appear to be lasting longer. The consumer does not know if her poodle has experienced any health-related issues due to living in the home.

On April 27, 2009 the consumer sent the home builder a letter asking for a remedy for the Chinese drywall in their home. On May 26, 2009 the home builder sent an inspector, along with the owner of the drywall subcontractor, to the consumer's home to perform an inspection. The consumer asserts that the two individuals took 5-6 photographs and

after seeing the copper corrosion issues they stated that the consumer may have Chinese drywall in her home. The consumer received no paperwork or reports related to the inspection, and the builder has made no offer to remedy the situation as of June 03, 2009.

In May 2009 the consumer filed a claim through her home owner's insurance company regarding the Chinese drywall issue. She asserts that the claim is being processed but she anticipates the claim will ultimately be denied.

The consumer asserts that her townhome is in a building consisting of 11 units. The complex has a home owner's association which carries insurance (Citizens Property Insurance Corporation, PO Box 17219, Jacksonville, FL 32245) on the complex structure. The home owner's association president filed a claim on behalf of the owners of all 11 units regarding the Chinese drywall issue in 2009. In May 2009 the insurance company conducted an inspection of the complex, and in June 2009 the insurance company denied the claim.

The consumer asserts that she plans to move from the residence no later than August 1, 2009. She is awaiting guidance from the CPSC or another agency on how to resolve the issue.

The consumer claims that she is willing to provide samples of drywall to the CPSC if needed.

This investigator provided the consumer with a copy of the CPSC document *Important Information on Drywall* document during the on-site visit; however the consumer declined it stating that she had already obtained the document through the CPSC website.

This investigator did observe, upon entering and while in the residence, an odor similar to that generated when a wooden matchstick is ignited.

PRODUCT DESCRIPTION:

Product:	Imported Drywall from China
Model #:	1/2" in thickness
Price:	Unknown

Retailer: Unknown

Manufacturer: Unknown

Home Builder: Master Builders of South Florida
1400 East Oakland Park Boulevard
Suite 210
Fort Lauderdale, FL 33334
Telephone Number: 954-563-8953

Drywall Subcontractor: Frank Vicino Drywall Inc.
15 NE 2nd Avenue
Deerfield Beach, FL 33441
Telephone Number: 954-422-5710

Drywall Supplier: Banner Supply Co.
1660 SW 13 Court
Pompano Beach, FL 33069
Telephone Number: 954-781-2399
Facsimile Number: 954-942-4641

Replacement Drywall Supplier: Lowes
1851 North Federal Highway
Pompano Beach, FL 33062

No identifying information is available for the suspected Chinese drywall in the consumer's home. This investigator was unable to find any accessible surface on the drywall that provided any identifying information.

It is the understanding of this investigator that the drywall used in the garage walls and ceilings, and the interior ceilings, of the homes in the geographic area of the consumer's home are required to use 5/8" fire resistant drywall. ½" drywall is commonly used on all other interior walls.

ATTACHMENTS:

Exhibit-A: Photographs (18)
Exhibit-B: Laptop Service Document
Exhibit-C: Electrical Service Invoice
Exhibit-D: Air Conditioning Repair Receipt
Exhibit-E: Email correspondence with drywall subcontractor and letter from drywall supplier

Exhibit-F: Letter to Builder
Exhibit-G: Release of Name form
Exhibit-H: Contact Information

Exhibit A-1 is a view of the incident residence.

Exhibit A-2 is a view of the water heater on the first floor of the residence.

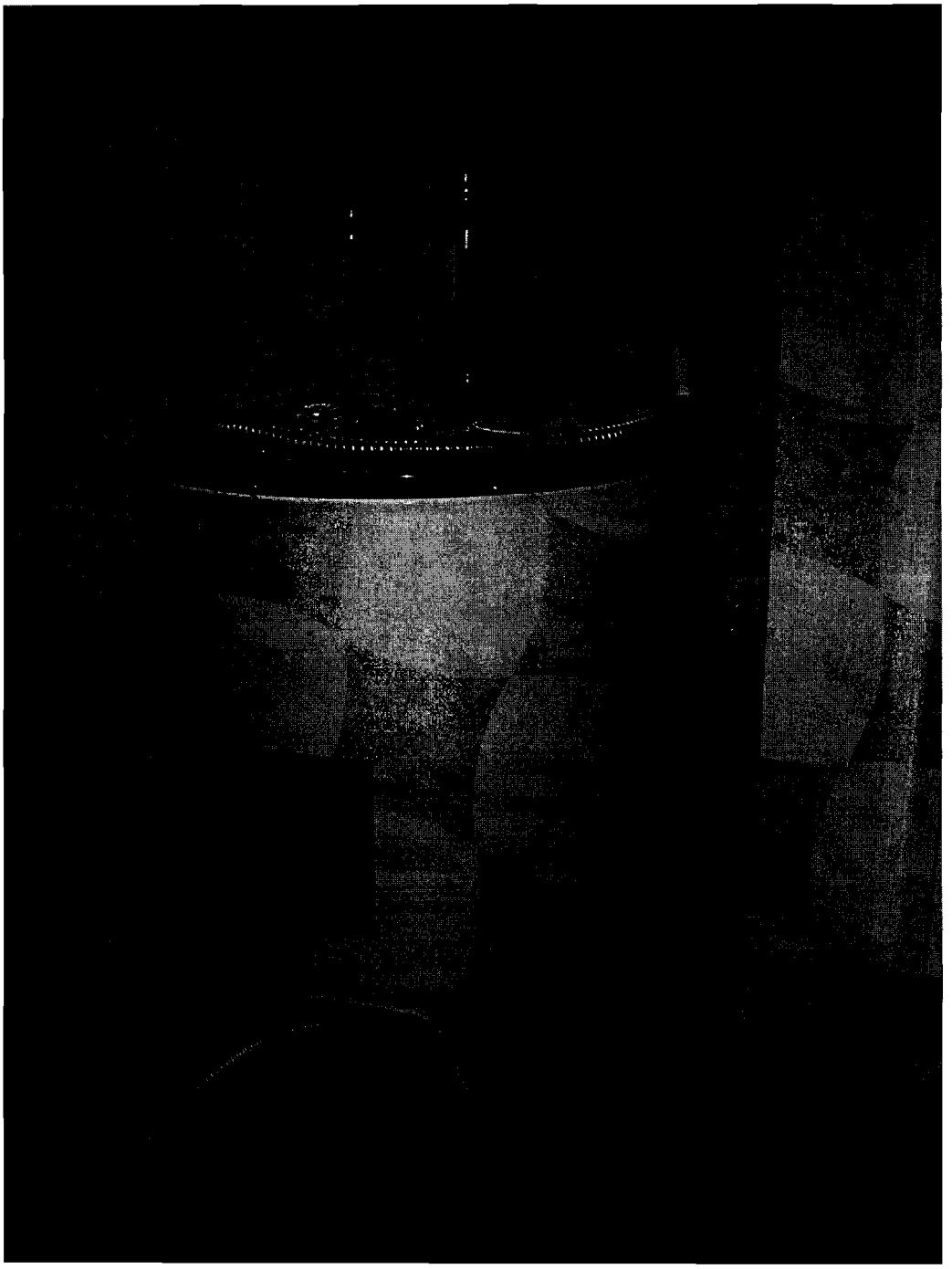


Exhibit A-3 is a view of the blackening of the copper pipes on the water heater.

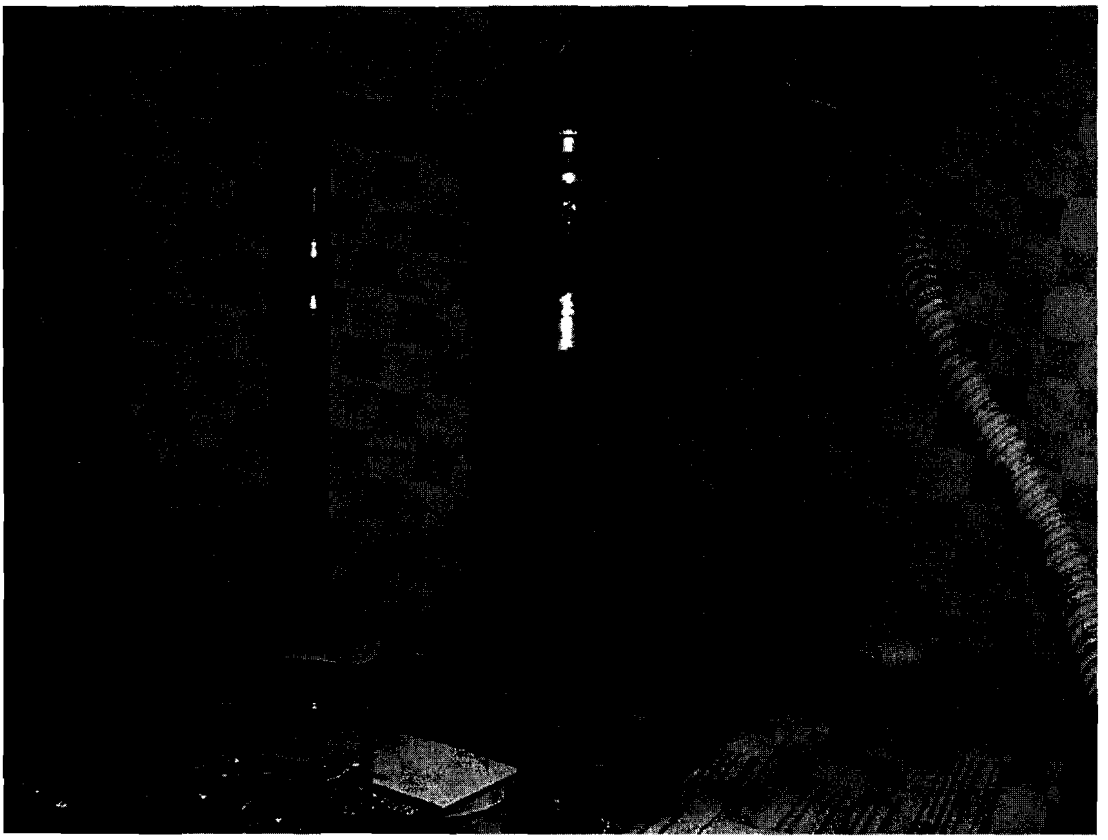


Exhibit A-4 is a view of the blackening of a copper pipe for the first floor bathroom toilet.

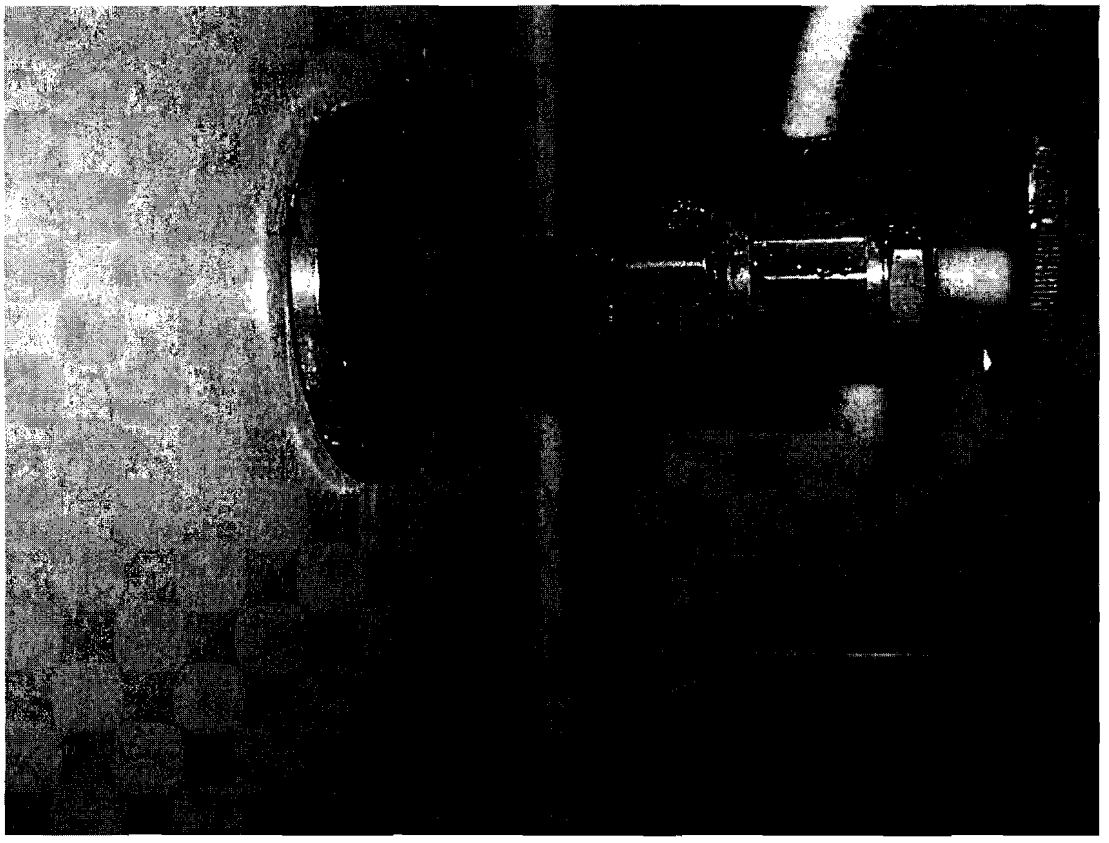


Exhibit A-5 is a view of pitting on the drain of the first floor bathroom sink.

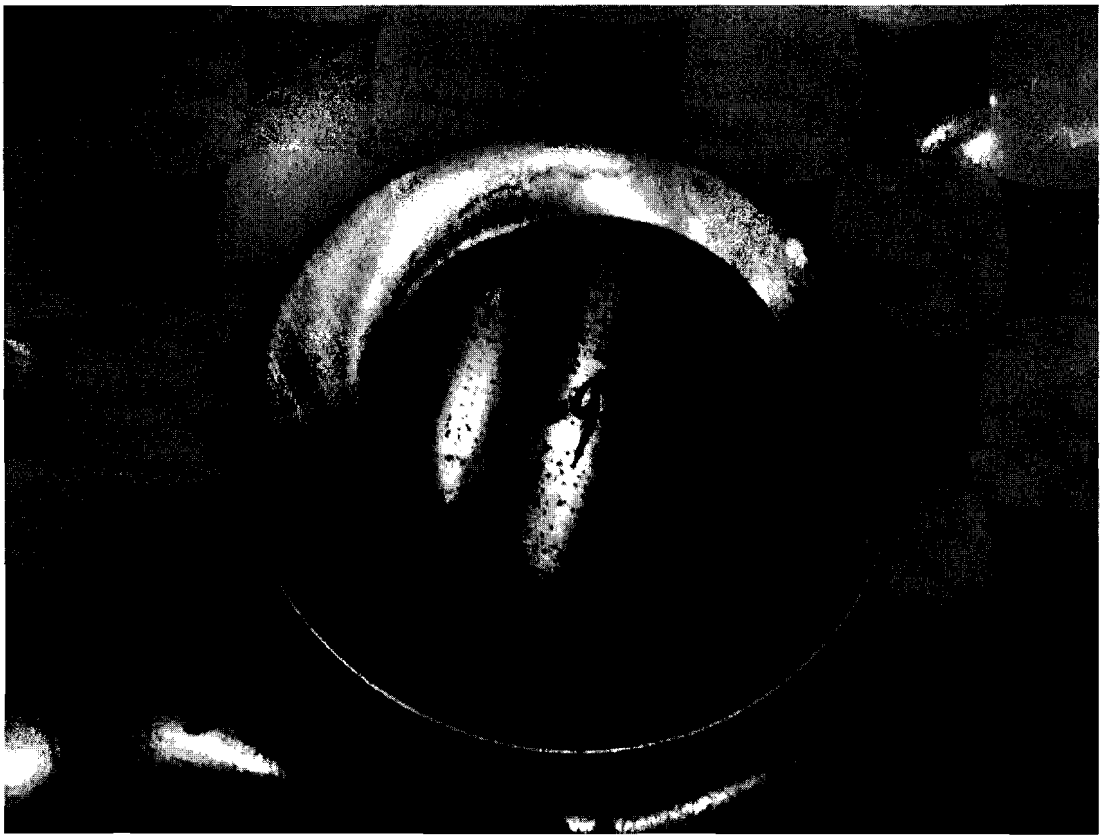


Exhibit A-6 is a view of pitting on the metal light fixture in the first floor bathroom.

Exhibit A-7 is a view of the panel box for the residence.

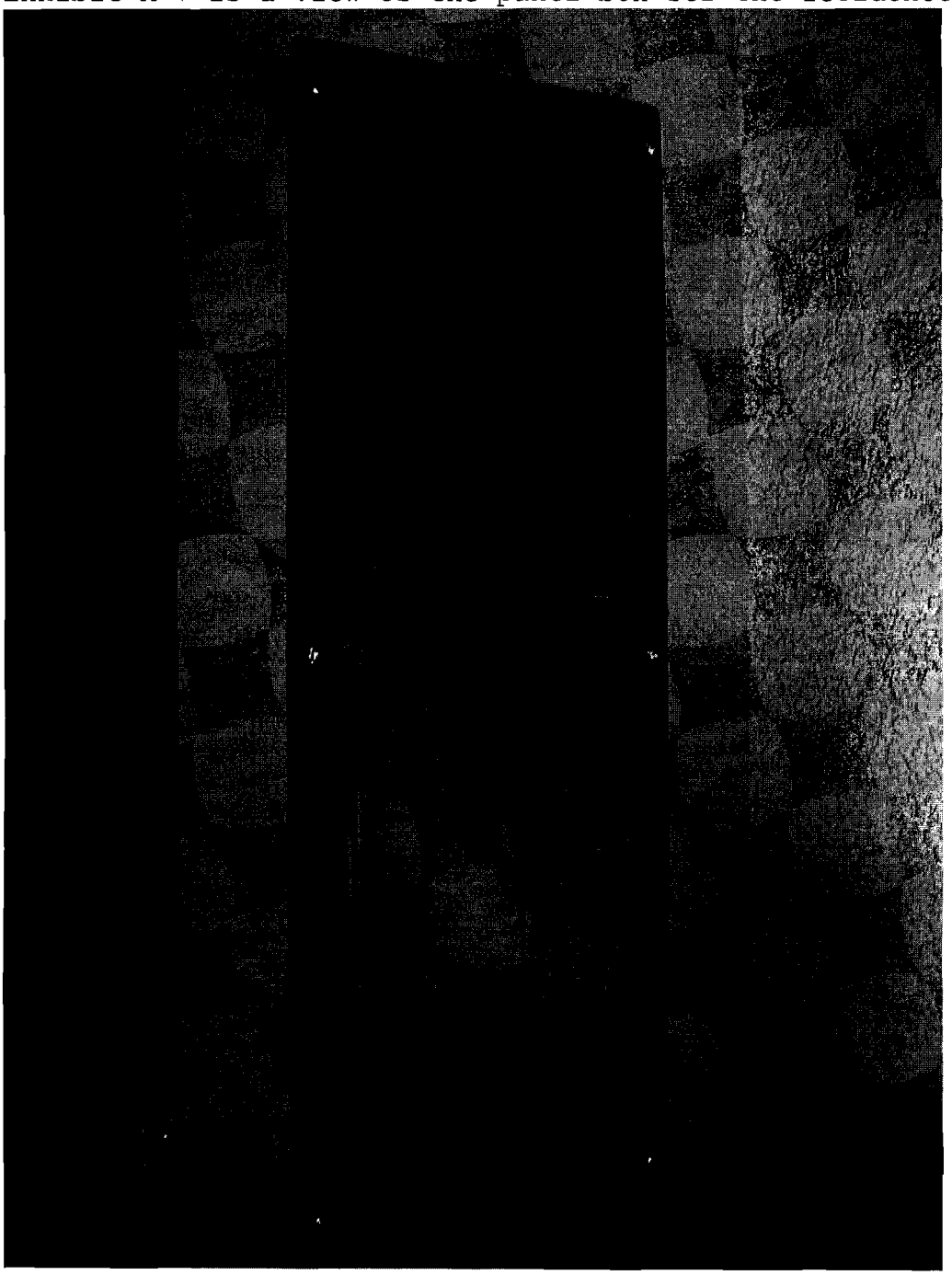


Exhibit A-8 is a view of the panel box for the residence.

Exhibit A-9 is a view of the panel box for the residence.

Exhibit A-10 is a view of the replacement wall outlet after the incident with the Blackberry headset. The outlet cover was used with the incident outlet and charring can be seen at the top screw area.

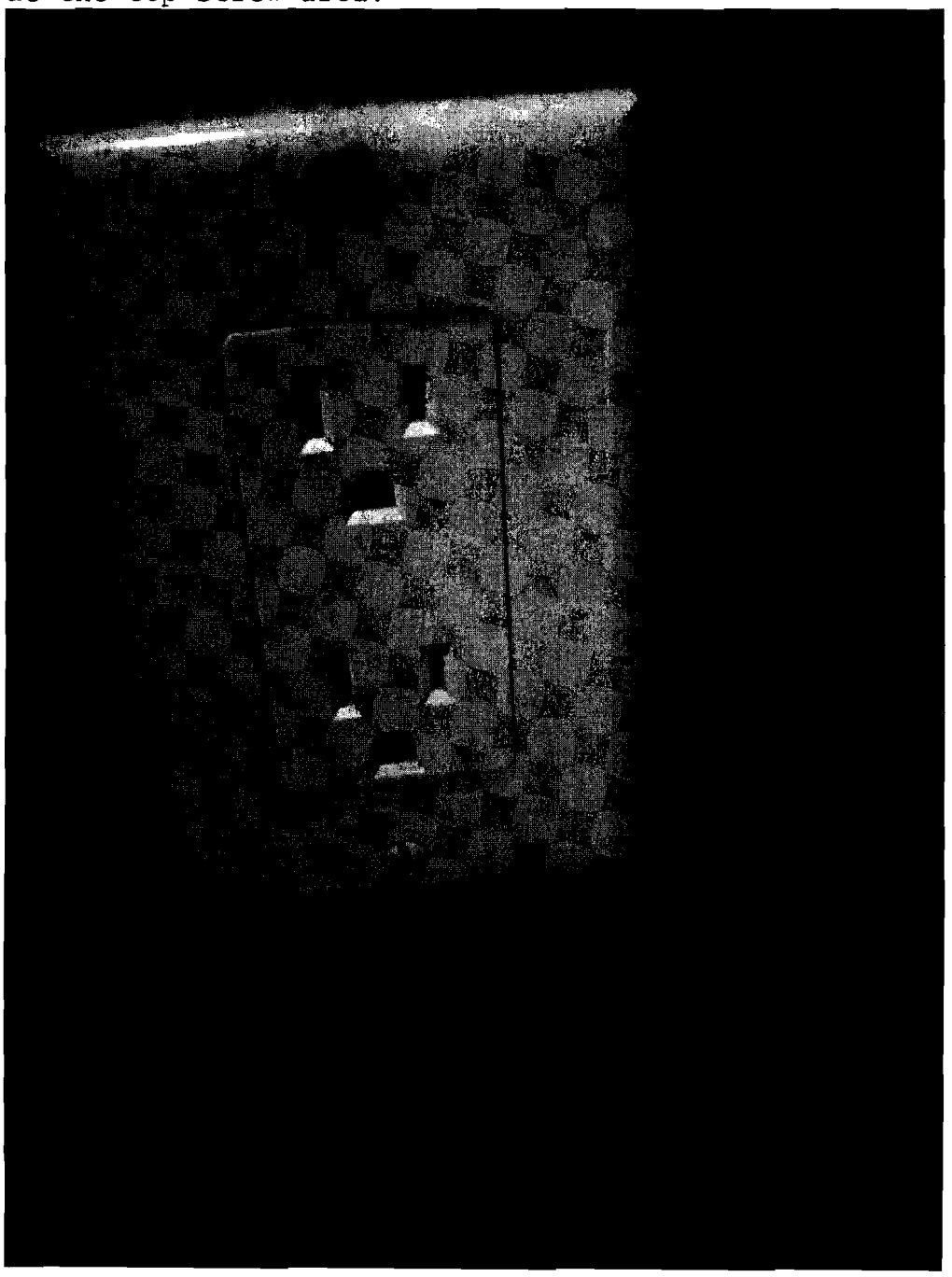


Exhibit A-11 is a view of the kitchen island outlet receptacle that shocked the consumer's husband while he was attempting to remove the cover place.

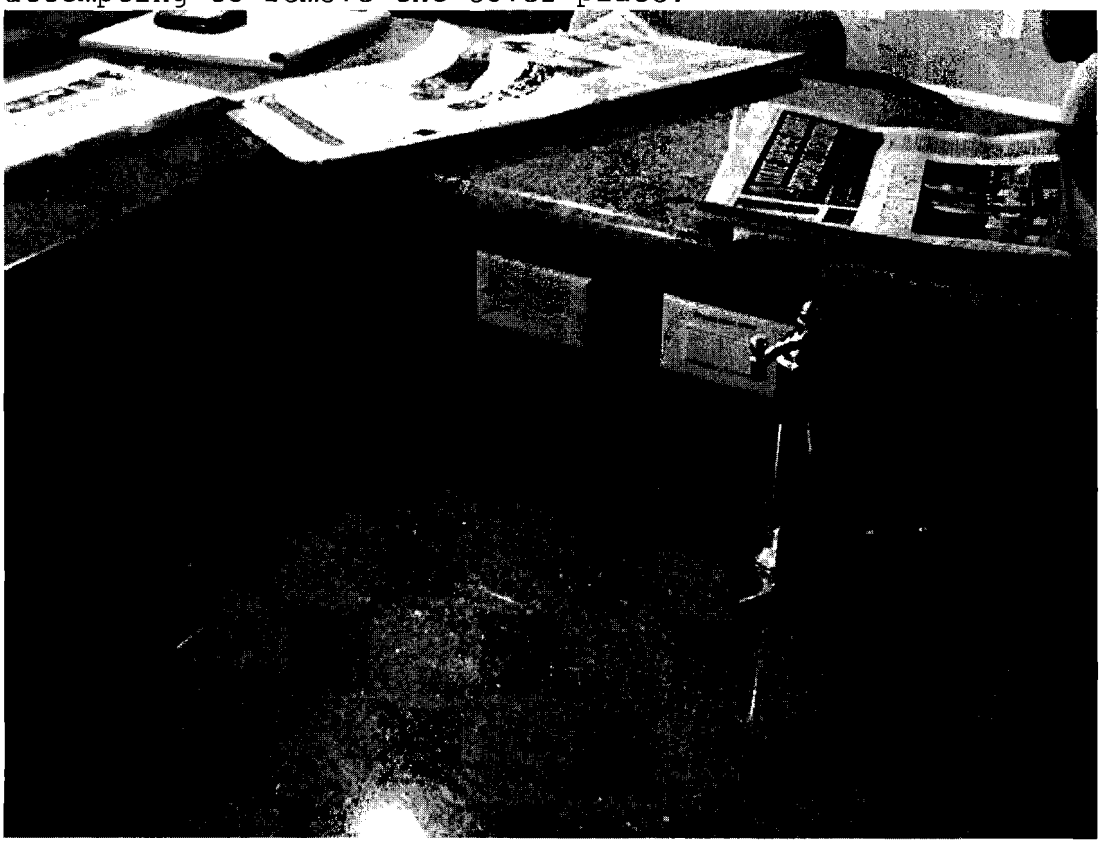
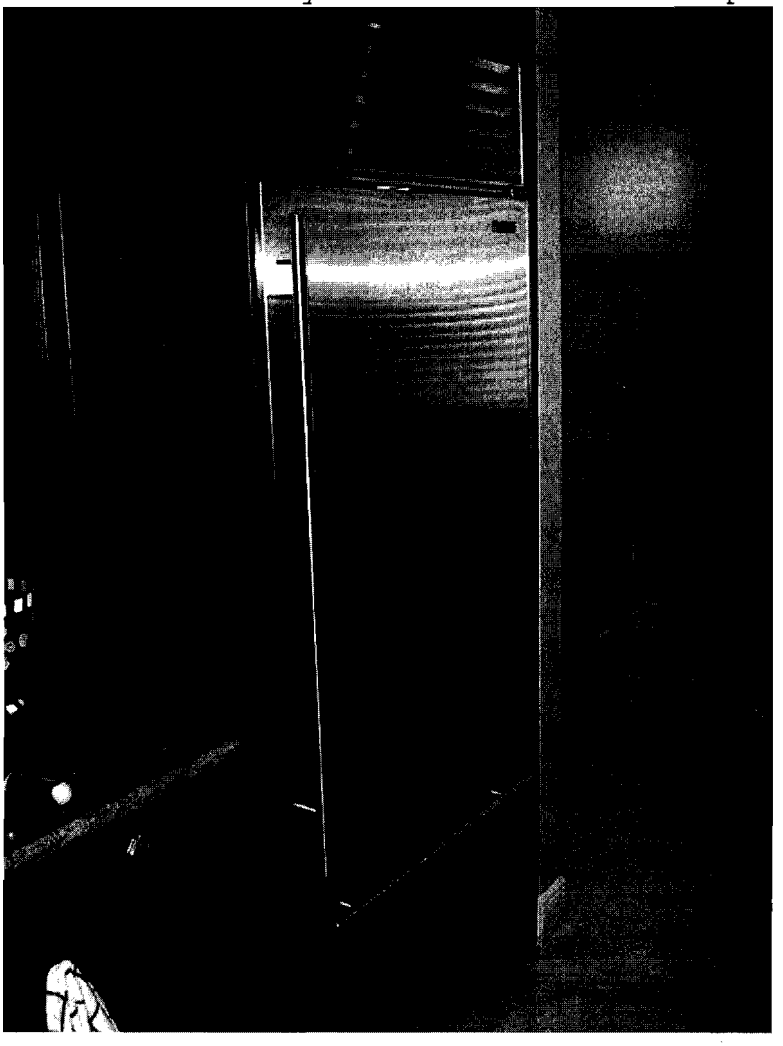
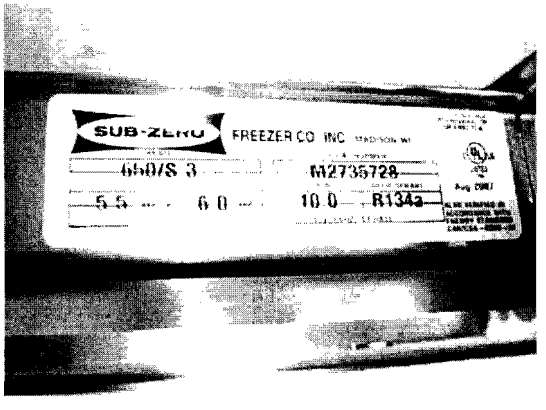


Exhibit A-12 is a view of the refrigerator that was installed shortly after the consumer's purchased the home.





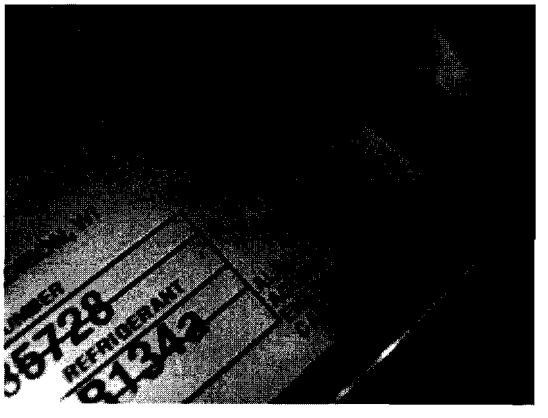


Exhibit A-13 is a view of the copper coils on the refrigerator.

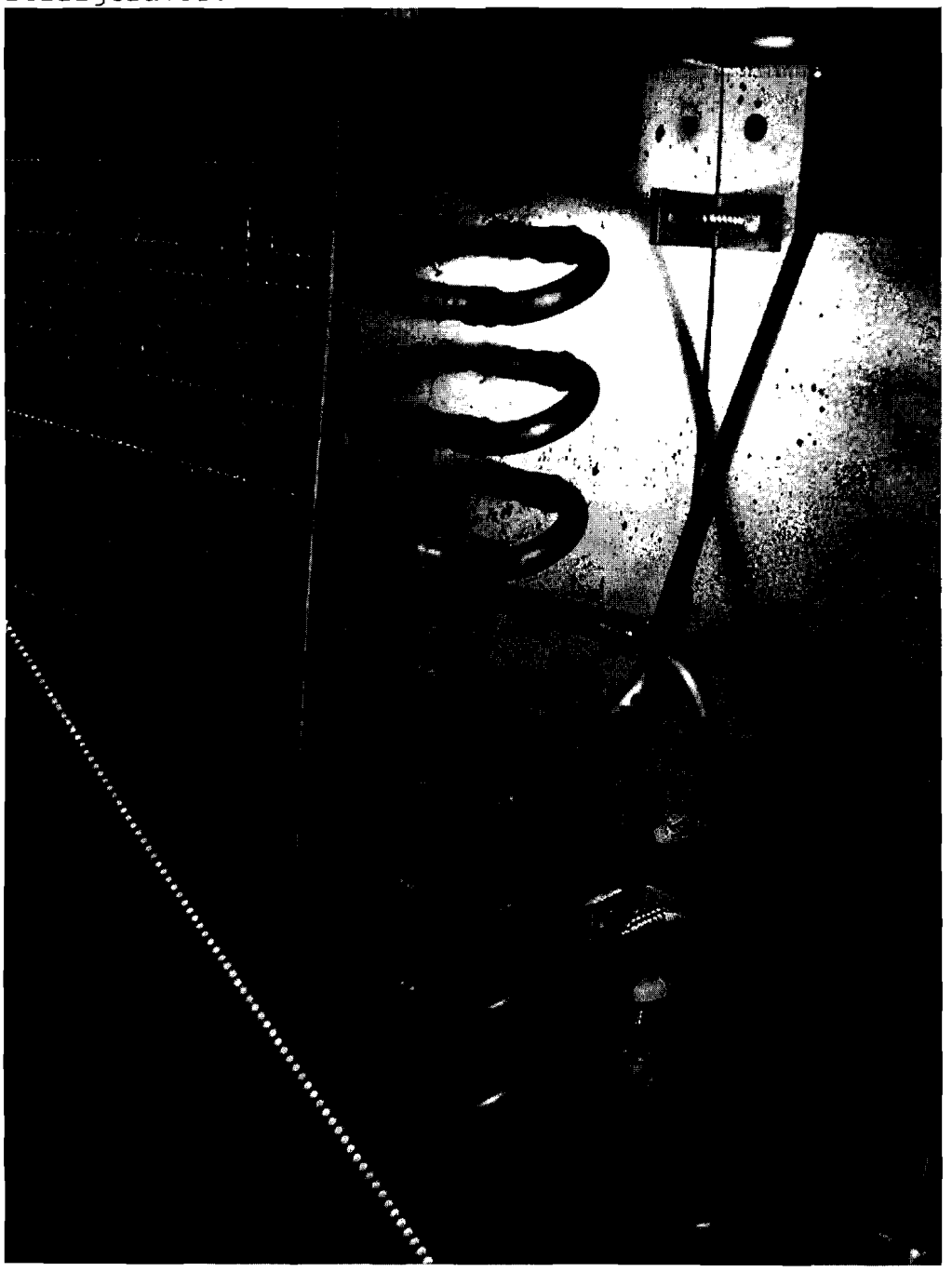
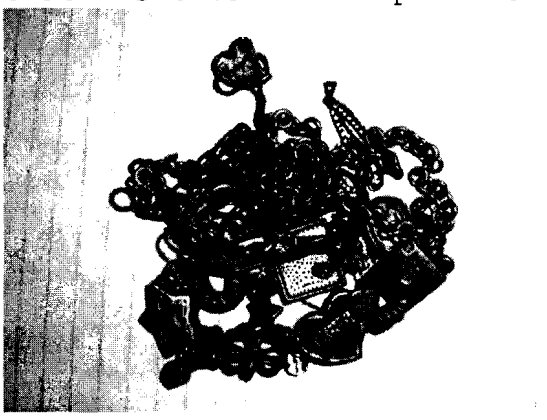
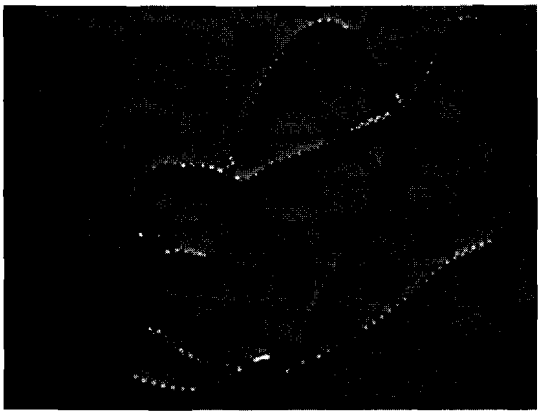


Exhibit A-14 is a view of the blackening of a copper pipe for a third floor bathroom.

Exhibit A-15 is a view tarnished silver and gold jewelry that was cleaned in April 2009.





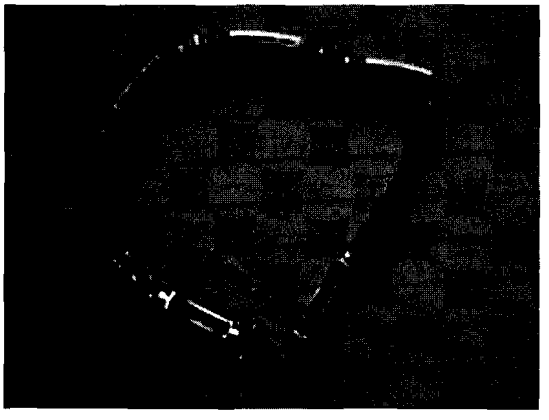


Exhibit A-16 is a view of the replacement outlet and incident outlet cover from the consumer's April 2009 shock incident.

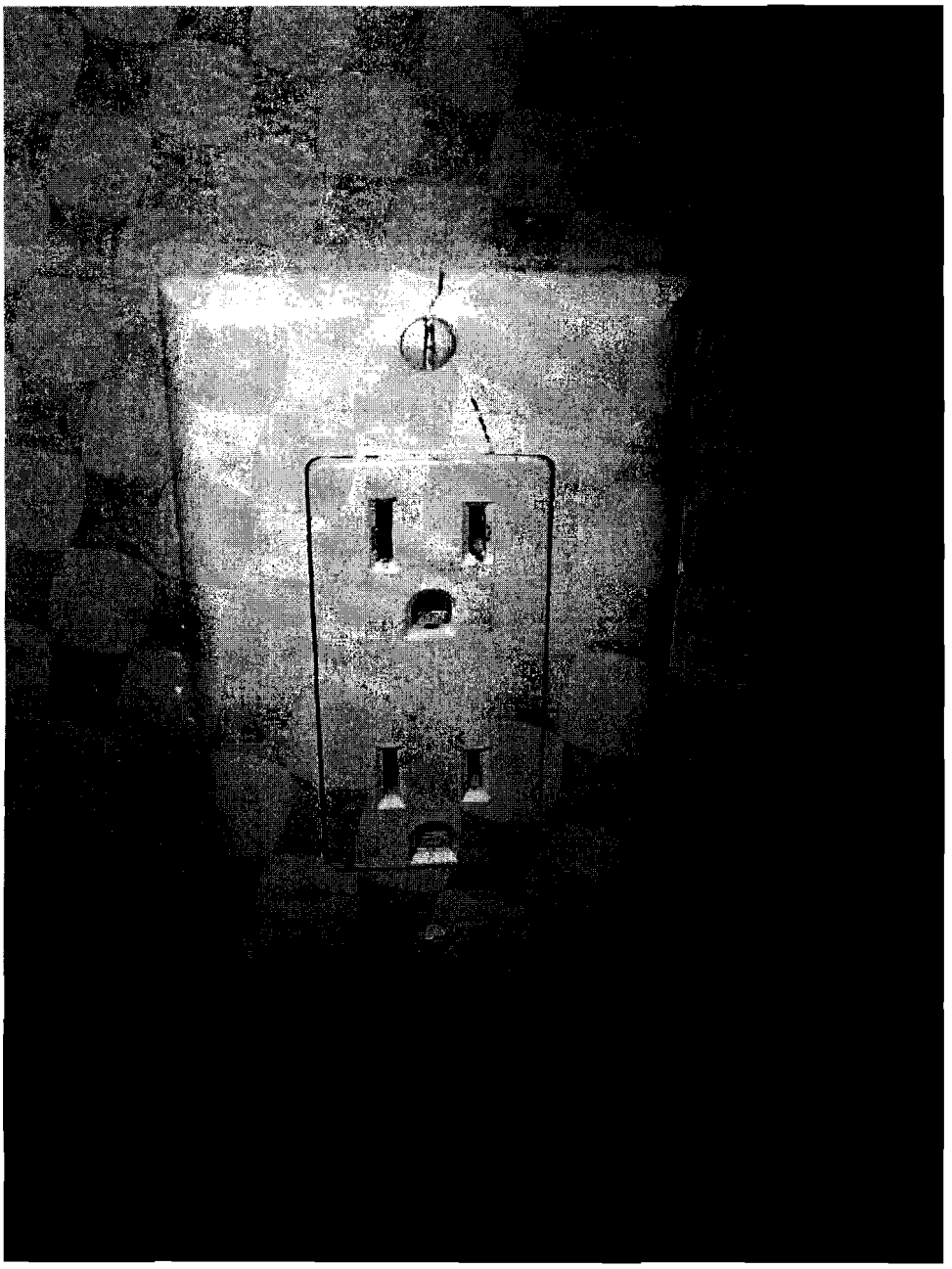


Exhibit A-17 is a view of the outlet being used by the hair dryer on the left, and the replacement outlet on the right that began smoking and started to melt. The outlet cover for the right outlet is from the incident and charring marks can be seen near the outlet receptical.

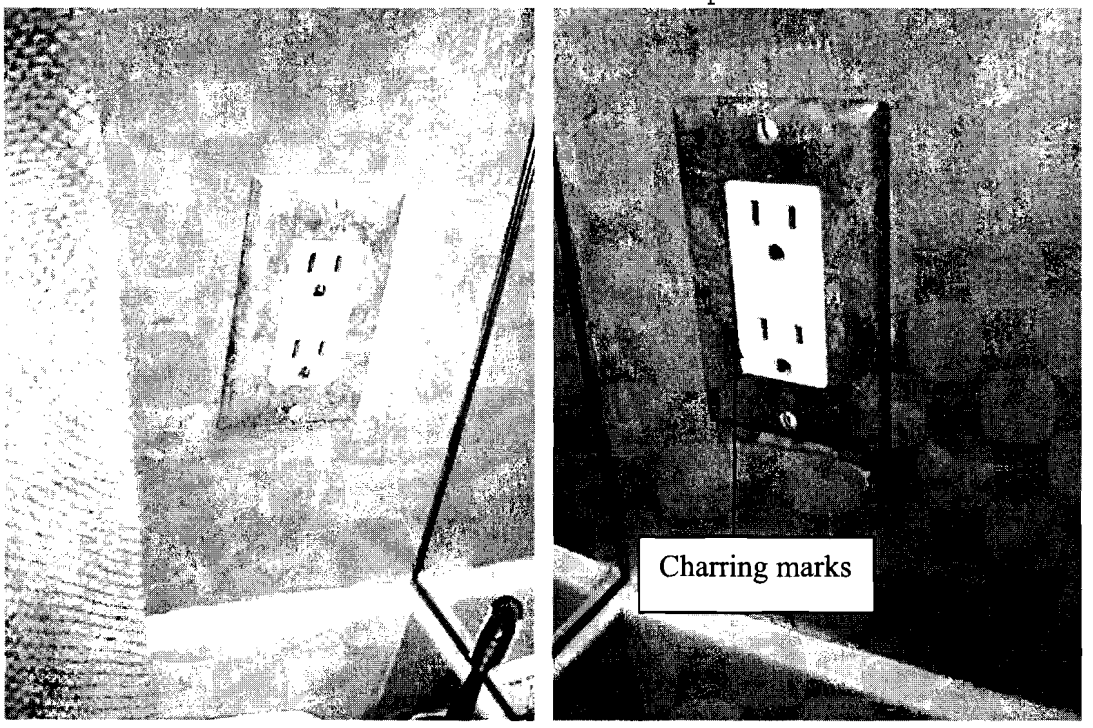
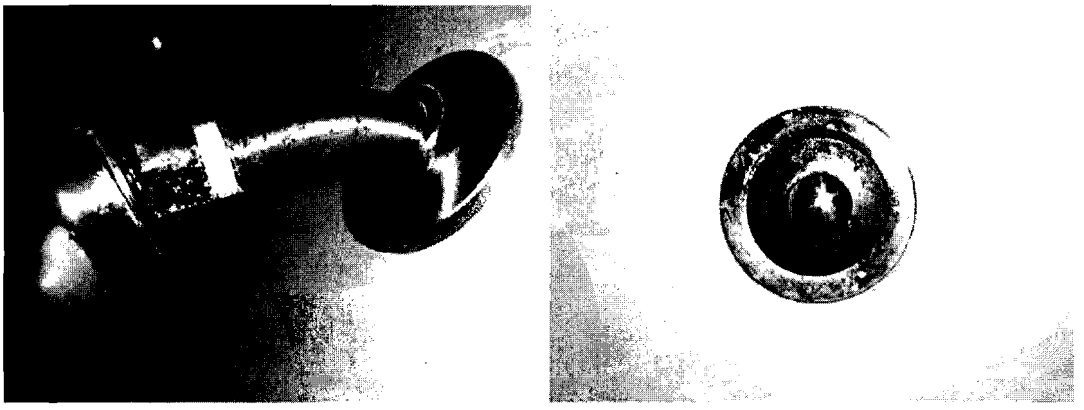


Exhibit A-18 is a view of pitting on the shower neck and tub drain of the third floor master bath.



National Service Center

MXP PO # : A12357111 SO # : SR # : 12357111

Serial # :S013000224 Modified Serial # :S013000224

Model # :vgn-ar550u

Store # :

Contact Name : Claims Representitive

Store Address :

Problem Reported : Contact Name: only required when a company holds the contractPart Requested:motherboard memoryReason:no screen keyboardManufacturer:sonyModel:vgn-ar550uSerial Number:: S01300022 Best time to call:anytime

Approved Entitlement, Receiving Unit,Performed Visual Inspection. Unit Came With AC Adapter, Battery, Power Cord, (2)Insert Dummies, Minor Wear on Keyboard, Minor Scratches On Touchpad Assy, Top Cover, Palmrest Assy, LCD Display, Bezel, Base Assy, Minor Scratches On AC Adapter,
Update Error - Incident was found in a closed type status and could not b update with this status type - Please contact your Service Provider Liaiso for assistance
Update Error - Incident was found in a closed type status and could not b update with this status type - Please contact your Service Provider Liaiso for assistance
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Note : DIAG
Update Error - Incident was found in a closed type status and could not b update with this status type - Please contact your Service Provider Liaiso for assistance
Update Error - Incident was found in a closed type status and could not b update with this status type - Please contact your Service Provider Liaiso for assistance
SENDING TO CLR FOR CONSTANT BEEPING.
ORDERING MOTHERBOARD. MODEL: VGN-AR550U S/N: PCG-8Y1L S/N:28205032
part needs to be ordered
sourcing the part
there would be no problem with data backup, but still awaiting on motherboard
BUY OUT UNIT. DATA BACKUP IS LOCATED IN DRIVE F:

Shipping Date : _____

Tracking # : _____

MANAGEMENT SYSTEM DOCUMENT

Title: Notebook Test

Number: **WI-7.5.0-018 QMS** Revision H

Notebook Repair Check List

Product ID: _____

Yes	No	N/A	
✓			Unit's Serial # matches internal inventory sheet
✓			Completed material traveler data sheet, box and unit match
			DC Jack OK
✓			Battery included and tested OK
			Fan(s) operating normally, no unusual noise
✓			LAN and/or Wifi check OK
✓			External VGA port test OK
✓			USB ports check OK
✓			Modem test OK
✓			Optical devices test OK
✓			Keyboard functions OK, no missing keys
✓			Sound/Audio test OK
✓			LCD functional and clean
✓			PCMCIA expansion slots recognizes cards OK
✓			Additional flash memory slots test OK
✓			Mouse, scroll pad buttons test OK
✓			HDD test OK
✓			No missing hardware/screws from case
✓			External damage noted on material traveler data sheet
			All accessories noted on internal inventory sheet
✓			All software noted on internal inventory sheet
			Unit has software problems that are noted and software sheet included
✓			All reported problems addressed in notes
✓			Matching inventory control sheet and material traveler included
✓			Shake test OK (Check for loose internal/external components)
✓			AC adapter & power cord included and test OK

All areas covered on this checklist have been verified and completed.

Image Microsystems

Technician: Hoang Le Date: 11/8/04

Quality Control: _____ Date: _____

AAA Electric Service Inc.

Family Owned and Operated
Licensed & Insured
2200 NE 36th St., Lighthouse Point, FL 33074
Office: 954-942-4696 . Cell: 954-821-6091
Fax: 954-785-0274 **Lic 89-CME1193X**

INVOICE
#3089

Invoice Submitted To

David & Joan Glickman

Phone 954-612-2612

Date 5/5/09

Street
3236 N E 4th St.

Job Name Service Calls

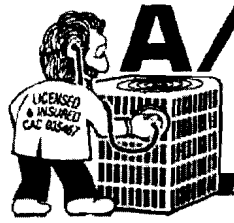
City, State and Zip Code

Pompano Beach, FL 33062

Job Location

Scope of Work

August 15, 2008	
Service call for faulty wiring in bathroom receptacle	$125.00
October 17, 2008	
Replace burnt GFI receptacle on first floor bathroom	125.00
February 13, 2009	
Replaced duplex receptacle on 2nd floor landing due to burnt wiring	125.00
April 19, 2009	
Service call for open circuit in master bedroom receptacle. After fixing open circuit, noticed ground wire blackened, opened up other receptacles and main electric panel to find all ground wires and neutral wires had a black residue on them.	165.00



A/C DOCTOR Rx
& appliance repair, inc.

8972 Southwest 49th Ct. (954) 680-2221
Cooper City, FL 33328-3608 Cell: (954) 557-3355

A/C Under The Weather? We Make House Calls!

FPL Participating Independent Contractor

PHONE	WORK ORDER	DATE
		2/2/09

NAME: DAVID GLICKMAN

ADDRESS: 3236 NE 4 ST

CITY, STATE, ZIP: POMPANO

CHECK	MODEL	SERIAL	PRESSURES
	TRANE	2TEC3F24	A/C [illegible]

QUANTITY	DESCRIPTION	PRICE	AMOUNT
	Service Labor		350 00
	FOUND BAD EVAP COIL		
	PLV Coil		
	REPLACED EVAP COIL		
	EVACED & CHARGED		
	Coil Under Warr.		
	Thank you		350 00

This signature acknowledge that all work was done and unit left in satisfactory condition. Unit and/or all parts installed will be the property of A.C. Doctor until fully paid for.

_____

Subj: **Fwd: Chinese Drywall**
Date: 5/6/2009 4:18:40 P.M. Eastern Daylight Time
From: david@sdcappliances.com
To: abdj3204@aol.com

See the attached letter
David Glickman

SDC Appliances
Mobile: (954) 612-2612
david@sdcappliances.com

Begin forwarded message:

From: Glenda Lopez <glenda@fvicino.com>
Date: May 6, 2009 4:06:23 PM EDT
To: <david@sdcappliances.com>
Subject: RE: Chinese Drywall

MR. David,

Once again sorry for the delay, attached is the letter sent from our supplier Banner Supply Co.

Please do not hesitate to contact us if you have any questions.

Thanks,

Glenda Lopez
Acct. Manager

F. Vicino and Company
Tel: 954-422-5710 ext 202
Fax: 954-422-5766

To: glenda@fvicino.com
Subject: Re: Chinese Drywall
From: david@sdcappliances.com
Date: Mon, 4 May 2009 17:24:09 +0000

Thank you Sent via BlackBerry by AT&T

From: Glenda Lopez
Date: Mon, 4 May 2009 17:17:29 +0000
To: <david@sdcappliances.com>
Subject: RE: Chinese Drywall

Mr. David,

Sorry for the delay, but Mr. Vicino was out of town as soon as he come in to the office I will forward your message. On the mean time I'm contacting our drywall supplier just to make sure that in fact we did or didn't used chinese drywall in your townhome.

As soon as I get this information from our supplier, I'll forward it to you in writing.

Sincerely,

Glenda Lopez
Acct. Manager

F. Vicino and Company
Tel: 954-422-5710 ext 202
Fax: 954-422-5766

> To: glenda@fvicino.com
> Subject: Chinese Drywall
> From: david@sdcappliances.com
> Date: Mon, 4 May 2009 17:08:02 +0000
>
> Glenda,
> Can you please ask Frank to call me when he has a few minutes to discuss the Chinese Drywall in our townhome? Thanks in advance.
> Sincerely,
> David Glickman
> 3236 NE 4th Street
> Pompano Beach, FL. 33062
> Mobile: (954) 612-2612
> Home: (954) 786-2800
> Sent via BlackBerry by AT&T

=

May 4, 2009

Re: Drywall

To Whom It May Concern:

Please be advised that the drywall supplied and delivered by Banner Supply - Pompano to Ocean State, 3236 NE 4th Street, Pompano Beach, FL could have been either American or Chinese Drywall, due to the dates the above job was delivered. It would have been at the time we were having Chinese Drywall delivered to our yard.

Sincerely,

Donald Coblentz – Member
Banner Supply - Pompano

BANNER SUPPLY CO.
LATH - PLASTER & DRYWALL MATERIALS
POMPANO

1660 S.W. 13TH COURT • POMPANO BEACH, FLORIDA 33069 • PHONE: (954) 781-2399 • FAX: (954) 942-4641

Delivered @ 11:30AM 4-28-2009 To Lisa Boisseie

DAVID AND JOAN GLICKMAN
3236 NE 4th Street
Pompano Beach, FL 33062

April 27, 2009

VIA HAND DELIVERY

Master Builders of South Florida
Attn: James Beeson
1400 East Oakland Park Blvd.
Suite 210
Fort Lauderdale, FL 33334

Re: Notice Pursuant to Chapter 558 of the Florida Statutes

Dear Mr. Beeson:

As you know, we purchased our home located at 3236 NE 4th Street, Pompano Beach, FL (the "Home"), which was built by Master Builders of South Florida ("Master Builders"), in September/October, 2007. Recently, we have learned that Master Builders constructed our Home using what is now being commonly referred to as "Chinese Drywall". We consider your use of Chinese Drywall to be a defective condition in our Home. We also consider Chinese Drywall to be a defective material incorporated into our Home. Accordingly, your use of Chinese Drywall in our Home has given rise to our claim against Master Builders for construction defects.

As for the particulars which we have experienced in our Home which confirms that Master Builders utilized defective Chinese Drywall, we have found blackened copper ground wire at each of our electrical outlets. We have had an air conditioning coil failure which we had to replace. We have found blackened copper coils next to our refrigerator. Essentially, all of the exposed copper in our house is now blackened from the defective drywall. Finally, there is a distinct odor in the Home which we attribute to the defective drywall as well.

Pursuant to §558.04, you are entitled to perform a reasonable inspection of the Home within thirty days after receipt of this notice. Within forty-five days after receiving this notice, you are required to provide: (a) a written offer to remedy the alleged construction defect at no cost to us, a detailed description of the proposed repairs necessary to remedy the defect, and a timetable for the completion of such repairs; (b) a written offer to compromise and settle the claim by monetary payment, that will not obligate your insurer, and a timetable for making payment; (c) a written offer to compromise and settle the claim by a combination of repairs and monetary payment, that will not obligate your insurer, that includes a detailed description of the proposed repairs and a timetable for the completion of such repairs and making payment; (d) a written statement that you dispute the claim and will not remedy the defect or compromise and settle the claim; or (e) a written statement that a monetary payment, including insurance proceeds, if any, will be determined by your insurer within thirty days after notification to the insurer by means of forwarding the claim, which notification shall occur at the same time we are notified of this settlement option, which we can then accept or reject.

We look forward to hearing from you within the time frames provided for in the applicable statute.

Very Truly Yours,

David Glickman

Joan Glickman

If you have any changes, additions, or comments you wish to make concerning your attached report, please make them in the space below.

I confirm that the information in the attached report (including any changes, additions, or comments I have made) is accurate to the best of my knowledge and belief.

> see my attached & signed report

Signature 5/1/09 Date

☐ I request that you do not release my name.

☐ You may release my name to the manufacturer but I request that you not release it to the general public.

☒ You may release my name to the manufacturer and to the public.

5/1/09

PERSONS CONTACTED BY THIS INVESTIGATOR

Consumer and Husband:
Joan & David Glickman
3236 NE 4th Street
Pompano Beach, FL 33062
Home Telephone Number: 954-786-2800
Initial Contact: May 05, 2009

PERSONS CONTACTED BY THE CONSUMER

Home Builder:
James Beeson
Master Builders of South Florida
1400 East Oakland Park Boulevard
Suite 210
Fort Lauderdale, FL 33334
Telephone Number: 954-563-8953

Drywall Subcontractor:
Frank Vicino
Frank Vicino Drywall Inc.
15 NE 2nd Avenue
Deerfield Beach, FL 33441
Telephone Number: 954-422-5710

Home Builder Inspector:
Scott Seagraves
Master Builders of South Florida
1400 East Oakland Park Boulevard
Suite 210
Fort Lauderdale, FL 33334
Telephone Number: 954-563-8953

Home Owner's Ins.:
Collette Goslin
VP Premier Client Division
Meridian Insurnace
301 Yamato Road
Boca Raton, FL 33431
Telephone Number: 561-994-2210
Insurance Carrier: AIU

Disaster Recovery Service:

Brett Overman
National Disaster Solutions
995 NW 31st Avenue
Pompano Beach, FL 33069
Telephone Number: 954-979-8100
Website: www.ndsrecovery.com

Restoration Service:

Robert Williamson
All-Clean Restoration Services
995 NW 31st Avenue
Pompano Beach, FL 33069
Telephone Number: 954-979-8100