

Asbestos Inspection Report

Cone Mills / Old Union Bleachery Site
3335 Old Buncombe Road
Greenville, SC 29617



SCDHEC Site ID# 50936

Prepared for:
South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management
State Remediation Section

AECOM Project 60133878.03
Date of Inspection: June 14-16, 2010
Date of Report: July 19, 2010

Prepared By



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July 19, 2010

Ms. Keisha Long
State Remediation Section
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: Asbestos Investigation Report
Cone Mills/Old Union Bleachery Site
Greenville, South Carolina
AECOM Project No. 60133878

Dear Ms. Long,

The purpose of this inspection is to determine the amount, location and condition of any friable or non-friable Asbestos Containing Building Materials (ACBM) located in the former Cone Mills building.

On June 14 through June 16, 2010, AECOM representatives (Nicole Spangler, Meredith Herndon, and Justin Butler) collected samples of building materials suspected of containing asbestos at the Cone Mills/Old Union Bleachery Site. The bulk asbestos samples collected from this survey were sent to EMSL Laboratory in Charlotte, NC. The laboratory is equipped to analyze bulk samples using Polarized Light Microcopy (PLM) and Transmission Electron Microscopy (TEM). EMSL Analytical Services is accredited by the National Institute for Standards and Technology (NIST) National Voluntary Laboratory Accreditation Program (NVLAP).

As part of an asbestos inspection, materials suspected of containing asbestos are sampled and submitted to an accredited laboratory for analysis. In some cases, however, collection of a sample may be unsafe or cause unacceptable release of asbestos fibers. Examples include areas of the building with unknown structural integrity. The inspector assumes all un-sampled materials are asbestos containing.

Prior to removing regulated asbestos-containing materials, written notification must be submitted to SCDHEC (up to 10 working days in advance depending on the amount of asbestos to be removed). Prior to the demolition of any regulated facility, written notification must be submitted at least 10 working days in advance even when a building inspector determines that asbestos is not present at the facility. In both cases, the notification must include certain required items of information about the owner, the contractor, the facility, and the asbestos removal project. A copy of the building inspector's report must accompany the notification of demolition.

Notification must be accomplished by completing and mailing Form DHEC 3428, Notification of Demolition, to SCDHEC. Forms sent by facsimile will not be accepted. A copy of the Notification of Demolition Form is available at: <http://www.scdhec.net/administration/library/d-3428.pdf>

Ms. Keisha Long

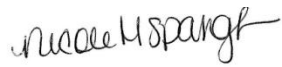
July 19, 2010

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AECOM appreciates the opportunity to provide environmental consulting services to the Department. Please contact me at (864) 234-3283 if you have any questions.

Very Truly Yours,

AECOM Technical Services, Inc.

A handwritten signature in black ink, appearing to read "Nicole Spangler". The signature is written in a cursive, flowing style.

Nicole Spangler

Project Scientist

Nicole.spangler@aecom.com

EXECUTIVE SUMMARY

On behalf of the site trustee, the South Carolina Department of Health and Environmental Control (SCDHEC) requested that AECOM perform an Asbestos Inspection of the former Cone Mills/Old Union Bleachery. This survey is necessary before any demolition of the mill can be accomplished.

The tables in Section 2 summarize the materials sampled and the results of the asbestos analyses. Figures are also included to illustrate where samples were taken, homogeneous areas, and locations of asbestos containing building materials (ACBMs).

Laboratory analysis determined the sheetrock-like material (noted at Misc 03) and various piping insulation are positive for asbestos. The inspector assumes all inaccessible (un-sampled) materials are asbestos containing including the second floor, basement, and debris piles. Sampling confirmed 2,450 square feet and 5,700 linear feet of ACBM. In addition, approximately 427,000 square feet of material is assumed to be asbestos containing.

The friable nature of the miscellaneous sheetrock-like materials and thermal system insulation will be disturbed during demolition. In addition, it is likely the assumed asbestos containing materials will be rendered friable during demolition activities.

Prior to removing regulated asbestos-containing materials, written notification must be submitted to SCDHEC (up to 10 working days in advance depending on the amount of asbestos to be removed). Prior to the demolition of any regulated facility, written notification must be submitted at least 10 working days in advance even when a building inspector determines that asbestos is not present at the facility. In both cases, the notification must include certain required items of information about the owner, the contractor, the facility, and the asbestos removal project. A copy of the building inspector's report must accompany the notification of demolition.

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According to the SC Asbestos Regulations R.61-86.1 all friable ACBM, including those assumed to be asbestos containing and those that may be rendered friable during the demolition process, must be removed before demolition of the building begins.

This report, entitled Asbestos Inspection Report – Cone Mills / Old Union Bleachery Site has been prepared at the request of Ms. Keisha Long of the South Carolina Department of Health and Environmental Control (SCDHEC). The inspection was conducted by Ms. Nicole Spangler with assistance from Meredith Herndon and Justin Butler. The report was prepared and reviewed by the undersigned.



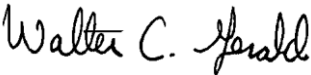
Inspection Conducted by:	SCDHEC License #	License Expiration Date	Signature(s)	Date
Nicole Spangler	BI-00549	10/21/2010		6/14 – 6/16/2010
Report Prepared by:				
Nicole Spangler	BI-00549	10/21/2010		7/16/2010
Report Reviewed by:				
Walter Gerald				7/19/2010

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1.0 INTRODUCTION

This report has been compiled and assembled by Nicole Spangler, an accredited asbestos building inspector, on behalf of the South Carolina Department of Health and Environmental Control (SCDHEC). This report has been developed pursuant to the Asbestos Survey Work Plan of the Cone Mills/ Old Union Bleachery Site at 3335 Old Buncombe Road, Greenville, SC 29617.

1.1 Purpose and Scope of Work

The purpose of this survey is to determine the amount, location, condition, and relative risk factor of any friable or non-friable asbestos containing building material (ACBM) located in the main building at the Cone Mills site. For any identified ACBMs, response actions are recommended for each Asbestos Containing Homogeneous Material in each Functional Space. Ancillary buildings were not surveyed as part of this scope of services.

1.2 Laboratory Information

188 bulk samples representing 52 types of suspect materials were collected from this site were analyzed at EMSL Analytical, Inc. located at 4335 Stuart Andrew Boulevard, Charlotte, NC 28217. The laboratory is equipped to analyze bulk samples using Polarized Light Microcopy (PLM) and Transmission Electron Microscopy (TEM). EMSL Analytical Services is accredited by the National Institute for Standards and Technology (NIST) National Voluntary Laboratory Accreditation Program (NVLAP) [NVLAP Lab Code: 200841-0].

1.3 Building Information

The former mill building on the subject property consists of two-stories with a basement. The building is brick construction with concrete floors throughout. The footprint of the building is approximately 260,000 square feet with a total area over 700,000 square feet. There is no electrical service to the building. The property is abandoned but secured with a locked fence.

The building was largely damaged in a fire. The fire caused most of the roof and second floor to collapse. The portion of the second floor that did not collapse is covered with various debris and the structural stability is unknown and therefore was inaccessible for sampling for this survey. The below photo (Photo 1) is taken from an access ladder to the second floor.

Debris on the second floor include roofing material, piping, insulation, metal, wood, and ash. The second floor is assessable by this ladder and a stair case.



Photo 1. Second Floor View

Large areas of the main floor have been cleared of debris from previous metal scrapping efforts, allowing most of the main floor to be sampled, however areas with questionable structural stability and excessive debris were not sampled.

The basement of the building was also not sampled. Again, the structural stability is unknown and in addition, much of the basement was covered in an unknown depth of standing water. The standing water added several safety concerns due to depth, inability to see debris or structures underwater, and the potential exposure to site-related chemical constituents.

Inaccessible areas are listed on Figure 1 and also include the second floor and basement, as stated above. Inaccessible areas were not sampled for safety reasons. According to SC Asbestos Regulations R. 61-86.1, any material not sampled must be assumed to contain asbestos.

The following photos (2-8) show various inaccessible areas of the facility:



Photos 2 and 3. Front Offices (Figure 1, Area 8)



Photo 4. Collapsed Conveyor Belt and Breezeway Area (Figure 1, Area 7)



Photo 5. West Entrance to Boiler Room 2 (Figure 1, Area 13).

This entrance (Photo 5) is on the west side of the boiler room. Entrance to Boiler Room #1 (Area 12) is at the bottom of the ramp. At the bottom of the ramp the floor is covered in standing water and the area to the east is all heavy machinery that is inaccessible.



Photo 6. East Entrance to Boiler Room #2 (Figure 1, Area 13)

Photo 6 is an example of the inaccessibility around the boilers and fallen debris. This debris is visible through a large part of the Area.



Photo 7. An example of inaccessible portions of areas 17, 18, 19, and 20 (Figure 1) due to the instability of overhead debris.



Photo 8. An example of debris piles.

Debris piles are observed to contain wood, ash, metal, roofing materials, plastic, fabric, piping, and insulation. In order to properly sample these piles, the entire pile would need to be sorted. The potential for creating a fiber release was deemed high and would require heavy machinery to move the debris.

1.4 Asbestos Bulk Sampling Methodology

(Using the United States Environmental Protection Agency's Asbestos Hazard Emergency Response Act [AHERA] Protocol)

1. Sampling locations were chosen in a randomly statistical manner.
2. Non-essential personnel were restricted from the area where sampling was performed.
3. When appropriate, members of the field team wore respirators, gloves, and disposal coveralls while sampling.
4. The sample area was misted (not saturated) with amended water from a spray bottle during sampling to minimize fiber release.
5. The suspected ACBM was sampled using a knife, chisel, or corer down to the structural member. The tool that minimized the disturbance to the sample material, was least likely to cause fiber release, and was most efficient for sampling the particular material was used.
6. All layers of ACBM were sampled, with sample integrity maintained.
7. The sample size was at a minimum 2 square centimeters.
8. Each sample was placed in a clear plastic bag, and the outside wet wiped, sealed, and labeled with a unique sample number. This number along with other pertinent information was recorded on the bulk sample Chain of Custody form.
9. Holes created by sampling were not filled because the building is to be demolished.

10. The sampling tool was cleaned with a damp disposable towel. Disposable clothing was removed slowly and turned inside out while being removed. All potentially contaminated rags, debris, suits and other disposable material were placed into 6-mil plastic bags, inside a 55-gallon drum and marked with asbestos warning labels. The waste container was left at the locked site for pickup.
11. Respirators were wet-wiped clean and placed in their proper storage containers.

2.0 ASBESTOS SURVEY DATA

Table 2.1 below, summarizes the various suspect materials that were sampled as part of the inspection.

Table 2.1. Suspect Material Data

Suspect Mat. No.	Material Description	Category (S, T, M)	# of Samples	Approx. Quantity	Location Fig. No.	Present Cond.	Pot. Dist.	Asbestos Findings (P or N)	Response Action/Haz Assess.
Base-01	Black Vinyl Baseboard	M	3	420 LF	1	NF/G	PSD ¹	N	
Boiler-01	Boiler Wrap Material	M	3	50 SF	1	F/G	PSD¹	P	Remove/5
Brick-01	Grey Brick (Cinderblock)	M	3	6000 SF	1	NF/G	PSD ¹	N	
Brick-02	Red Brick; Newer	M	3	3000 SF	1	NF/G	PSD ¹	N	
Brick-03	Red Brick; Older	M	3	3600 SF	1	NF/G	PSD ¹	N	
Brick-04	Red/Orange Painted Brick	M	3	6600 SF	1	NF/G	PSD ¹	N	
Brick-05	Exterior Red Brick	M	3	59400 SF	1	NF/D	PSD ¹	N	
Brick-06	Interior Red Brick	M	3	40200 SF	1	NF/D	PSD ¹	N	
Brick-07	Grey Brick (Cinderblock)	M	3	32600 SF	1	NF/G	PSD ¹	N	
Ceiling-01	Ceiling Tile	M	3	3400 SF	1	F/G	PSD ¹	N	
Cement-01	Raised Grey Cement	M	3	175 LF	1	NF/G	PSD ¹	N	
Cement-02	Floor Grey Cement	M	3	45000 SF	1	NF/G	PSD ¹	N	
Cement-03	Yellow Painted Cement	M	3	40 SF	1	NF/G	PSD ¹	N	
Cement-04	Exterior Cement	M	3	230 LF	1	NF/G	PSD ¹	N	
Cement-05	Floor White Cement	M	3	174000 SF	1	NF/G	PSD ¹	N	
Cement-06	Interior Cement (including pilings)	M	3	800 SF	1	NF/G	PSD ¹	N	
Door-01	Fire Door	T	3	40 SF	1	F/SD	PSD ¹	N	
Floor-01	Blue/Grey Laminate Flooring (Mastic)	M/S	3	3400 SF	1	NF/G	PSD ¹	N	
Ins-01	Grey Wall Insulation	T	3	9600 SF	1	F/SD	PSD ¹	N	
Ins-02	Duct Insulation; Wall Insulation	T	3	4300 SF	1	F/G	PSD ¹	N	
Ins-04	White Plastic – Yellow Wall Insulation	T	3	7500 SF	1	F/G	PSD ¹	N	
Misc-01	Orange Foam	S	3	10 LF	1	F/G	PSD ¹	N	
Misc-02	Yellow Foam	S	3	15 LF	1	F/G	PSD ¹	N	
Misc-03	Sheetrock-like material	M	3	2400 SF	1	F/SD	PSD¹	P	Remove/7
Misc-04	Fibers in Debris Pile	M	3	20 SF	1	F/SD	PSD ¹	N	
Misc-07	Roofing Shingle	M	3	900 SF	1	F/SD	PSD ¹	N	
Misc-09	Fabric	M	3	200 SF	1	NF/SD	PSD ¹	N	
Misc-10	Fiber Wrapped Piping	M	3	30 SF	1	NF/D	PSD ¹	N	
Mortar-01	Grey Mortar	M	3	1500 SF	1	NF/G	PSD ¹	N	
Mortar-02	Grey Mortar	M	3	750 SF	1	NF/G	PSD ¹	N	
Mortar-03	Red Mortar	M	3	900 SF	1	NF/G	PSD ¹	N	
Mortar-04	Painted Red Mortar	M	3	1650 SF	1	NF/G	PSD ¹	N	
Mortar-05	Exterior Mortar	M	3	19800 SF	1	NF/G	PSD ¹	N	
Mortar-06	Interior Mortar	M	3	14800 SF	1	NF/G	PSD ¹	N	
Mortar-07	Grey Mortar	M	3	10000 SF	1	NF/G	PSD ¹	N	
Shingle-01	Red/Black Wall Shingle	M	3	6000 SF	1	F/D	PSD ¹	N	
Tsi2i-01	2" White Wrapped	T	3	200 LF	1	F/D	PSD ¹	N	
Tsi2i-02	2" Black Wrapped	T	3	150 LF	1	F/SD	PSD ¹	N	
Tsi4i-02	4" White; Black, Metal Wrapped	T	3	500 LF	1	F/SD	PSD¹	P	Remove/7
Tsi4i-03	4" Wrapped; Orange Band	T	3	480 LF	1	F/SD	PSD¹	P	Remove/7
Tsi4i-04	4" Metal Wrapped; Blue Arrows	T	3	430 LF	1	F/D	PSD¹	P	Remove/6
Tsi4i-05	4" White Wrapped; Red Arrows	T	3	600 LF	1	F/D	PSD¹	P	Remove/6
Tsi4i-07	4" White Wrapped; Green Band	T	3	570 LF	1	F/SD	PSD ¹	N	
Tsi6i-01	6" White/Black Wrapped	T	3	500 LF	1	F/D	PSD ¹	N	
Tsi6i-02	6" White Wrapped	T	3	30 LF	1	F/SD	PSD ¹	N	
Tsi6i-03	6" Metal Wrapped	T	3	300 LF	1	F/D	PSD¹	P	Remove/6
Tsi6i-04	6" White Wrapped; Green Band	T	3	900 LF	1	F/D	PSD¹	P	Remove/6
Tsi8i-01	8" Metal Wrapped; Blue Arrows	T	3	300 LF	1	F/D	PSD¹	P	Remove/6
Tsi8i-02	8" Metal Wrapped	T	3	600 LF	1	F/D	PSD¹	P	Remove/6
Tsi8i-03	8" Metal Wrapped; Orange Band	T	3	210 LF	1	F/D	PSD¹	P	Remove/6
Tsi10i-01	10" Metal Wrapped	T	3	600 LF	1	F/D	PSD¹	P	Remove/6
Tsi16i-01	16" Wrapped	T	3	280 LF	1	F/SD	PSD¹	P	Remove/7

Table 2.1 Notes

1 – The building is to be demolished

TSI Sample names indicated the pipe diameter, for example Tsi8i-02, is 8-inch in diameter.

Category

S = Surfacing Materials

T = Thermal Systems Insulation (TSI)

M = Miscellaneous Materials

Approximate Quantity

Approximate quantity of materials is estimated based on the materials accessible at the time of the assessment. Various areas of the facility are not accessible due to structural damage, standing water, or other obstacles.

SF = Square feet

LF = Linear feet

Present Condition

F = Friable

NF = Non-Friable

G = Good (Very localized limited damage)

D = Damaged (Damage of less than 10% distributed and less than 25% localized)

SD = Significantly Damaged (Damage equal to or greater than 10% distributed / 25% localized)

Potential for Future Disturbance

LPD = Low Potential for Disturbance (Contact, Vibration, and Air Erosion all of Low Concern)

PD = Potential for Disturbance (Contact, Vibration, and Air Erosion of Moderate Concern)

PSD = Potential for Significant Damage (Contact, Vibration, and Air Erosion of High Concern)

Asbestos Finding

P = Positive

N=Negative

Response Action/

Hazardous Assessment

= 7 through 1 (7 being the worst i.e. significantly damaged material)

Sampling confirmed 2,450 square feet and 5,700 linear feet of ACBM. In addition, approximately 427,000 square feet of material is assumed to be asbestos containing. Homogeneous areas are depicted in Figures 3 through 8. Figure 9 shows the confirmed and assumed ACBM on the main floor. Figures 10 and 11 show the assumed ASBM on the second floor and basement, respectively.

Quantities of materials are estimated based on the amount of material visible from accessible areas.

Individual sample results are listed in Table 2.2, below.

Table 2.2. Bulk Sample Results

Sample ID No.	Area Number	Location Figure No.	Type Asbestos	Percent Asbestos	Comments
Base-01-1-Cove Base	5	1	Non-Detect		
Base-01-1-Mastic	5	1	Non-Detect		
Base-01-2-Cove Base	5	1	Non-Detect		
Base-01-2-Mastic	5	1	Non-Detect		
Base-01-3-Cove Base	5	1	Non-Detect		
Base-01-3-Mastic	5	1	Non-Detect		
Base-01-1-Baseboard –TEM	5	1	Non-Detect		TEM analysis for NOB materials
Base-01-1-Mastic – TEM	5	1	Non-Detect		TEM analysis for NOB materials
Boiler-01-1	13	1	Amosite Chrysotile	20 15	
Boiler-01-2	13	1	Amosite Chrysotile	15 15	
Boiler-01-3	13	1	Amosite Chrysotile	20 10	
Brick-01-1	1	1	Non-Detect		
Brick-01-2	3	1	Non-Detect		
Brick-01-3	7	1	Non-Detect		
Brick-02-1	7	1	Non-Detect		
Brick-02-2	7	1	Non-Detect		
Brick-02-3	4	1	Non-Detect		
Brick-03-1	4	1	Non-Detect		
Brick-03-2	7	1	Non-Detect		
Brick-03-3	4	1	Non-Detect		
Brick-04-1	7	1	Non-Detect		
Brick-04-2	4	1	Non-Detect		
Brick-04-3	4	1	Non-Detect		
Brick-05-1	21	1	Non-Detect		
Brick-05-2	17	1	Non-Detect		
Brick-05-3	1	1	Non-Detect		
Brick-06-1	21	1	Non-Detect		
Brick-06-2	21	1	Non-Detect		
Brick-06-3	24	1	Non-Detect		
Brick-07-1	21	1	Non-Detect		
Brick-07-2	19	1	Non-Detect		
Brick-07-3	18	1	Non-Detect		
Ceiling-01-1	5	1	Non-Detect		
Ceiling-01-1	5	1	Non-Detect		Should read Ceiling 01-2
Ceiling-01-1	5	1	Non-Detect		Should read Ceiling 01-3
Cement-01-1	1	1	Non-Detect		
Cement-01-2	1	1	Non-Detect		
Cement-01-3	7	1	Non-Detect		
Cement-02-1	1	1	Non-Detect		
Cement-02-2	4	1	Non-Detect		
Cement-02-3	3	1	Non-Detect		
Cement-03-1	7	1	Non-Detect		
Cement-03-2	7	1	Non-Detect		
Cement-03-3	4	1	Non-Detect		
Cement-04-1	21	1	Non-Detect		
Cement-04-2	26	1	Non-Detect		
Cement-04-3	26	1	Non-Detect		
Cement-05-1	21	1	Non-Detect		
Cement-05-2	17	1	Non-Detect		
Cement-05-3	19	1	Non-Detect		
Cement-06-1-Skim Coat	19	1	Non-Detect		
Cement-06-1-Rough Coat	19	1	Non-Detect		
Cement-06-2	17	1	Non-Detect		
Cement-06-3	19	1	Non-Detect		

Table 2.2. Bulk Sample Results (Continued)

Sample ID No.	Area Number	Location Figure No.	Type Asbestos	Percent Asbestos	Comments
Door-01-1	13	1	Non-Detect		
Door-01-2	13	1	Non-Detect		Located on the outside area 13.
Door-01-3	11	1	Non-Detect		
Floor-01-1-Floor Tile	5	1	Non-Detect		
Floor-01-1-Mastic	5	1	Non-Detect		
Floor-01-1-Floor Tile-TEM	5	1	Non-Detect		TEM analysis for NOB material
Floor-01-1-Mastic-TEM	5	1	Non-Detect		TEM analysis for NOB material
Floor 01-2	5	1	Non-Detect		
Floor-01-3-Floor Tile	5	1	Non-Detect		
Floor-01-3-Mastic	5	1	Non-Detect		
Ins-01-1	21	1	Non-Detect		
Ins-01-2	7	1	Non-Detect		
Ins-01-3	22	1	Non-Detect		
Ins-02-1	20	1	Non-Detect		
Ins-02-2	19	1	Non-Detect		
Ins-02-3	18	1	Non-Detect		
Ins-04-1	6	1	Non-Detect		
Ins-04-2	6	1	Non-Detect		
Ins-04-3	6	1	Non-Detect		
Misc-01-1	7	1	Non-Detect		
Misc-01-2	7	1	Non-Detect		
Misc-01-3	7	1	Non-Detect		
Misc-02-1	7	1	Non-Detect		
Misc-02-2	7	1	Non-Detect		
Misc-02-3	7	1	Non-Detect		
Misc-03-1	3	1	Amosite	30	Sheetrock type material – gray
Misc-03-2	3	1	Amosite	30	
Misc-03-3	3	1	Amosite	30	
Misc-04-1	7	1	Non-Detect		
Misc-04-2	7	1	Non-Detect		
Misc-04-3	7	1	Non-Detect		
Misc-07-1	21	1	Non-Detect		
Misc-07-1-TEM	21	1	Non-Detect		TEM analysis for NOB material
Misc-07-2	17	1	Non-Detect		
Misc-07-3	19	1	Non-Detect		
Misc-09-1	21	1	Non-Detect		
Misc-09-2	21	1	Non-Detect		
Misc-09-3-White Fabric	22	1	Non-Detect		
Misc-09-3-Green Fabric	22	1	Non-Detect		
Misc-10-1	20	1	Non-Detect		
Misc-10-2	19	1	Non-Detect		
Misc-10-3	19	1	Non-Detect		
Mortar-01-1	1	1	Non-Detect		
Mortar-01-2	3	1	Non-Detect		
Mortar-01-3	7	1	Non-Detect		
Mortar-02-1	7	1	Non-Detect		
Mortar-02-2	7	1	Non-Detect		
Mortar-02-3	4	1	Non-Detect		
Mortar-03-1	4	1	Non-Detect		
Mortar-03-2	7	1	Non-Detect		
Mortar-03-3	4	1	Non-Detect		
Mortar-04-1	7	1	Non-Detect		
Mortar-04-2	4	1	Non-Detect		
Mortar-04-3	4	1	Non-Detect		
Mortar-05-1	21	1	Non-Detect		
Mortar-05-2	17	1	Non-Detect		
Mortar-05-3	1	1	Non-Detect		
Mortar-06-1	21	1	Non-Detect		

Table 2.2. Bulk Sample Results (Continued)

Sample ID No.	Area Number	Location Figure No.	Type Asbestos	Percent Asbestos	Comments
Mortar-06-2	21	1	Non-Detect		
Mortar-06-3	24	1	Non-Detect		
Mortar-07-1	21	1	Non-Detect		
Mortar-07-2	19	1	Non-Detect		
Mortar-07-3	18	1	Non-Detect		
Shingle-01-1	1	1	Non-Detect		Brick façade shingle
Shingle-01-2	1	1	Non-Detect		
Shingle-01-3	7	1	Non-Detect		
TSI2i-01-1	4	1	Non-Detect		
TSI2i-01-2	2	1	Non-Detect		
TSI2i-01-3	4	1	Non-Detect		
TSI2i-02-1-Insulation	3	1	Non-Detect		
TSI2i-02-1-Wrap	3	1	Non-Detect		
TSI2i-02-2-Insulation	1	1	Non-Detect		
TSI2i-02-2-Wrap	1	1	Non-Detect		
TSI2i-02-2-Tar Layer	1	1	Non-Detect		
TSI2i-02-3-Insulation	3	1	Non-Detect		
TSI2i-02-3-Wrap	3	1	Non-Detect		
TSI2i-02-3-Tar Layer	3	1	Non-Detect		
TSI4i-02-1-Insulation	3	1	Non-Detect		
TSI4i-02-1-Tar	3	1	Non-Detect		
TSI4i-02-2-Insulation	1	1	Non-Detect		
TSI4i-02-2-Tar	1	1	Non-Detect		
TSI4i-02-2-Wrap	1	1	Chrysotile	5	
TSI4i-02-3-Insulation	3	1	Non-Detect		
TSI4i-02-3-Tar	3	1	Non-Detect		
TSI4i-03-1-Insulation	20	1	Non-Detect		
TSI4i-03-1-Wrap	20	1	Non-Detect		
TSI4i-03-2	20	1	Amosite	8	
			Chrysotile	20	
TSI4i-03-3	22	1	Amosite	25	
TSI4i-04-1	20	1	Amosite	5	
			Chrysotile	20	
TSI4i-04-2	16	1	Amosite	15	
			Chrysotile	15	
TSI4i-04-3	19	1	Non-Detect		
TSI4i-05-1	20	1	Amosite	5	
			Chrysotile	15	
TSI4i-05-2	19	1	Amosite	15	
			Chrysotile	15	
TSI4i-05-3	20	1	Non-Detect		
TSI4i-07-1-Insulation	22	1	Non-Detect		
TSI4i-07-1-Wrap	22	1	Non-Detect		
TSI4i-07-2	20	1	Non-Detect		
TSI4i-07-3	20	1	Non-Detect		
TSI6i-01-1	1	1	Non-Detect		
TSI6i-01-2-Insulation	2	1	Non-Detect		
TSI6i-01-2-Tar	2	1	Non-Detect		
TSI6i-01-3-Insulation	2	1	Non-Detect		
TSI6i-01-3-Tar	2	1	Non-Detect		
TSI6i-02-1-Foam	4	1	Non-Detect		
TSI6i-02-1-Wrap	4	1	Non-Detect		
TSI6i-02-2-Foam	4	1	Non-Detect		
TSI6i-02-2-Wrap	4	1	Non-Detect		
TSI6i-02-3-Foam	4	1	Non-Detect		
TSI6i-02-3-Wrap	4	1	Non-Detect		

Table 2.2. Bulk Sample Results (Continued)

Sample ID No.	Area Number	Location Figure No.	Type Asbestos	Percent Asbestos	Comments
TSI6i-03-1	20	1	Amosite Chrysotile	5 15	
TSI6i-03-2	13	1	Amosite	10	
TSI6i-03-3	13	1	Amosite Chrysotile	15 15	
TSI6i-04-1	20	1	Amosite Chrysotile	5 20	
TSI6i-04-2-Insulation	19	1	Non-Detect		
TSI6i-04-2-Wrap	19	1	Non-Detect		
TSI6i-04-3	18	1	Non-Detect		
TSI8i-01-1-Insulation	20	1	Non-Detect		
TSI8i-01-1-Wrap	20	1	Non-Detect		
TSI8i-01-2	16		Amosite Chrysotile	15 15	
TSI8i-01-3	19		Amosite Chrysotile	15 10	
TSI8i-02-1	20		Amosite Chrysotile	15 25	
TSI8i-02-2	19		Non-Detect		
TSI8i-02-3	19		Non-Detect		
TSI8i-03-1	20		Non-Detect		
TSI8i-03-2	13		Amosite Chrysotile	20 10	
TSI8i-03-3-Insulation	17		Amosite Chrysotile	15 5	
TSI8i-03-Wrap	17		Amosite Chrysotile	3 5	
TSI10i-01-1-Insulation	11		Non-Detect		
TSI10i-01-1-Wrap	11		Chrysotile	5	
TSI10i-01-2	22		Non-Detect		
TSI10i-01-3	18		Non-Detect		
TSI16i-01-1	20		Chrysotile	25	Listed on page 19 of results as TSI6i-01-1 and 01-2
TSI16i-01-2	20		Amosite	20	
TSI16i-01-3	13		Amosite Chrysotile	15 15	

3.0 FIGURES

Figure 1. Sample Location Map, Main Floor

Figure 2. Basement Layout, Inaccessible

Figure 3. Homogeneous Areas, Second Floor

Figure 4. Homogeneous Areas, Brick and Mortar, Main Floor

Figure 5. Homogeneous Areas, Cement and Baseboard, Main Floor

Figure 6. Homogeneous Areas, Miscellaneous Areas, Main Floor

Figure 7. Homogeneous Areas, Insulation, Main Floor

Figure 8. Homogeneous Areas, Thermal Systems Insulation, Main Floor

Figure 9. Asbestos Containing Material, Main Floor

Figure 10. Assumed Asbestos Containing Material, Second Floor

Figure 11. Assumed Asbestos Containing Material, Basement

4.0 CONCLUSIONS

Laboratory analysis determined that the sheetrock type material (Misc 03) and various thermal systems insulation are positive for asbestos. The inspector assumes that inaccessible areas contain asbestos. Sampling confirmed 2,450 square feet and 5,700 linear feet of ACBM. In addition, approximately 427,000 square feet of material is assumed to be asbestos containing. Homogeneous areas are depicted in Figures 3 through 8. Figure 9 shows the confirmed and assumed ACBM on the main floor. Figures 10 and 11 show the assumed ASBM on the second floor and basement, respectively.

The material determined to contain asbestos is friable. Materials assumed to contain asbestos are likely to be rendered friable during demolition.

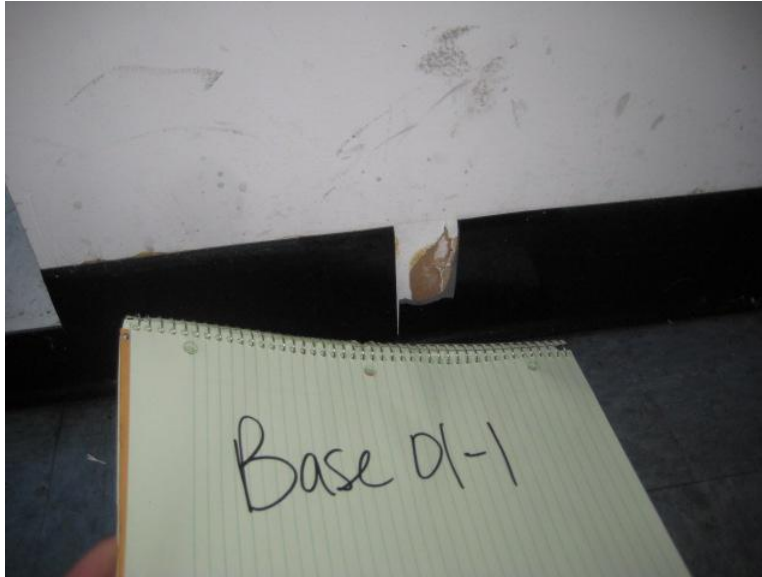
According to the SC Asbestos Regulations R.61-86.1, all friable asbestos containing materials, including those that might be rendered friable by the demolition process, must be properly removed before demolition begins.

Prior to removing regulated asbestos-containing materials, written notification must be submitted to SCDHEC (up to 10 working days in advance depending on the amount of asbestos to be removed). Prior to the demolition of any regulated facility, written notification must be submitted at least 10 working days in advance even when a building inspector determines that asbestos is not present at the facility. In both cases, the notification must include certain required items of information about the owner, the contractor, the facility, and the asbestos removal project. A copy of the building inspector's report must accompany the notification of demolition.

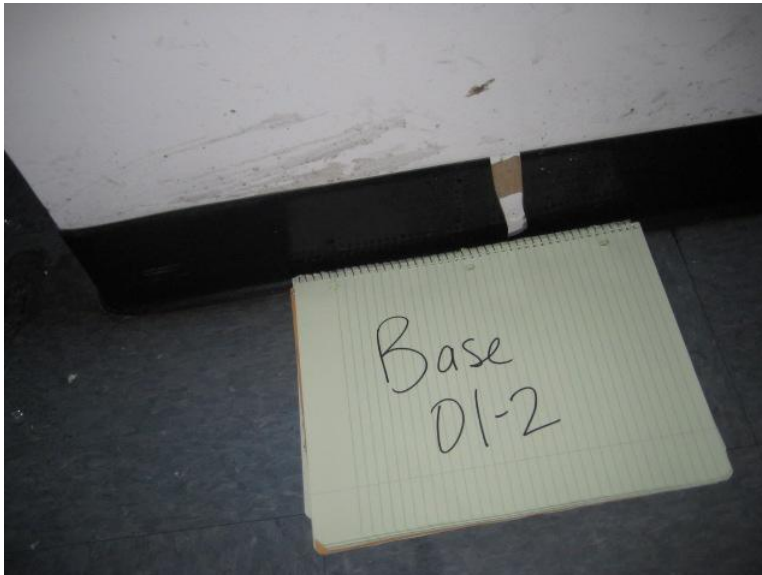
Notification must be accomplished by completing and mailing Form DHEC 3428, Notification of Demolition, to SCDHEC. Forms sent by facsimile will not be accepted. A copy of the Notification of Demolition Form is available at:

<http://www.scdhec.net/administration/library/d-3428.pdf>

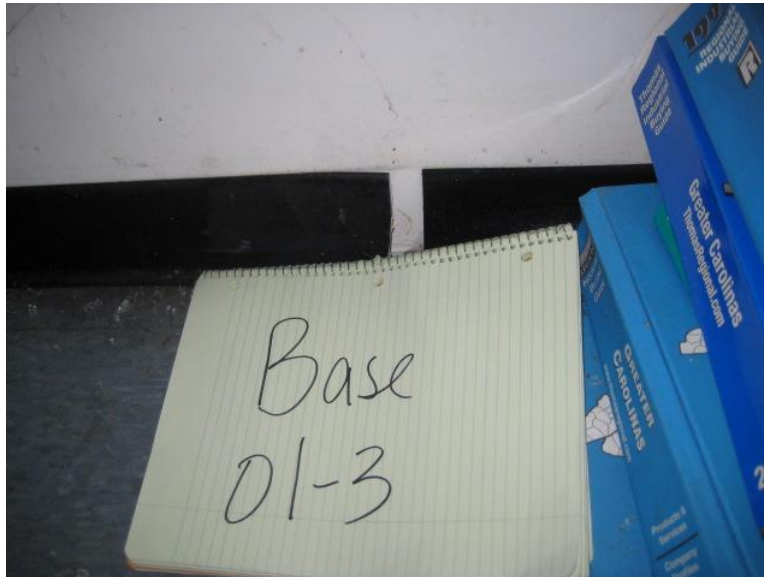
APPENDIX A
SAMPLE PHOTOGRAPHS



Base-01-1_Black Vinyl Baseboard and Adhesive



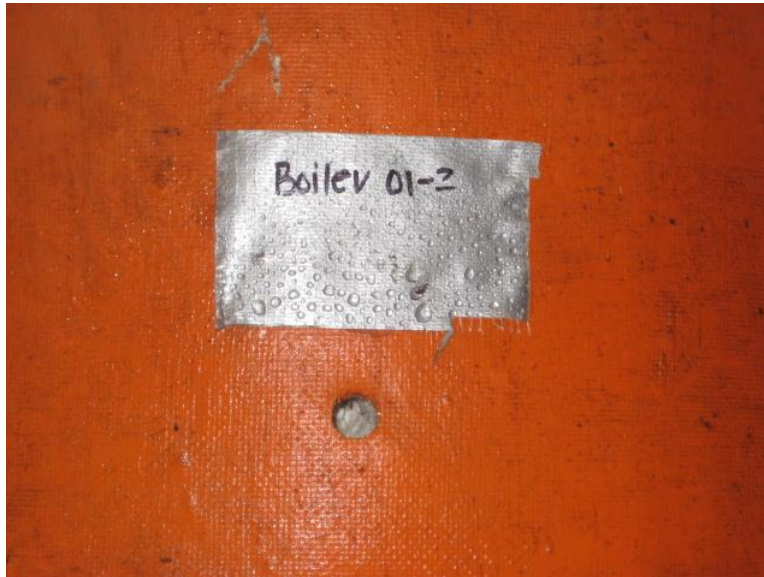
Base-01-2_Black Vinyl Baseboard and Adhesive



Base-01-3_Baseboard and Mastic



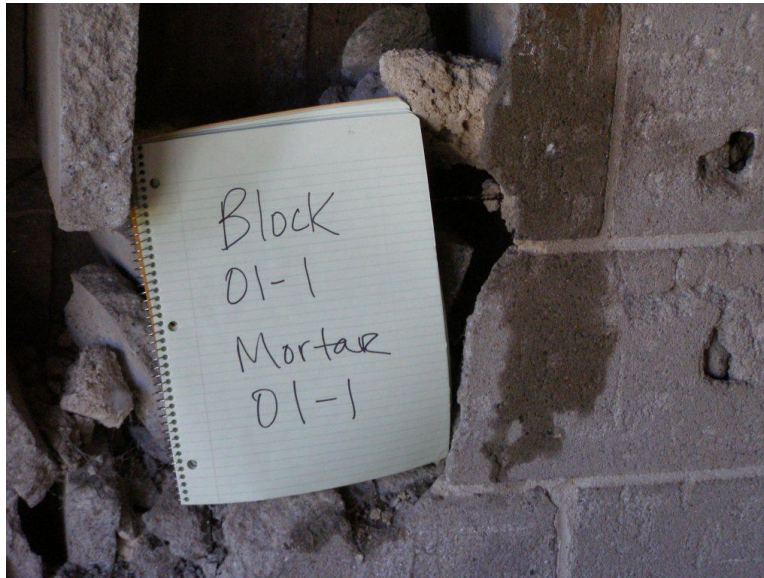
Boiler-01-1_ Boiler Insulation



Boiler-01-2_Boiler Insulation

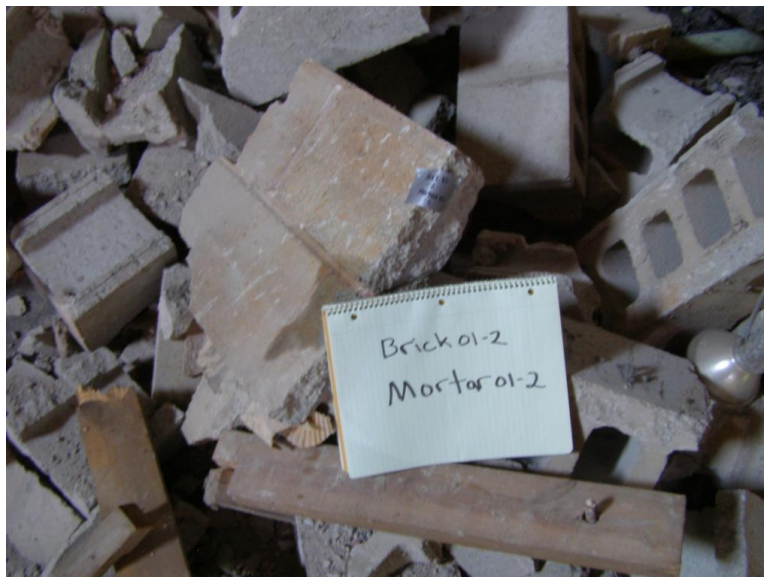


Boiler-01-3_Boiler Insulation



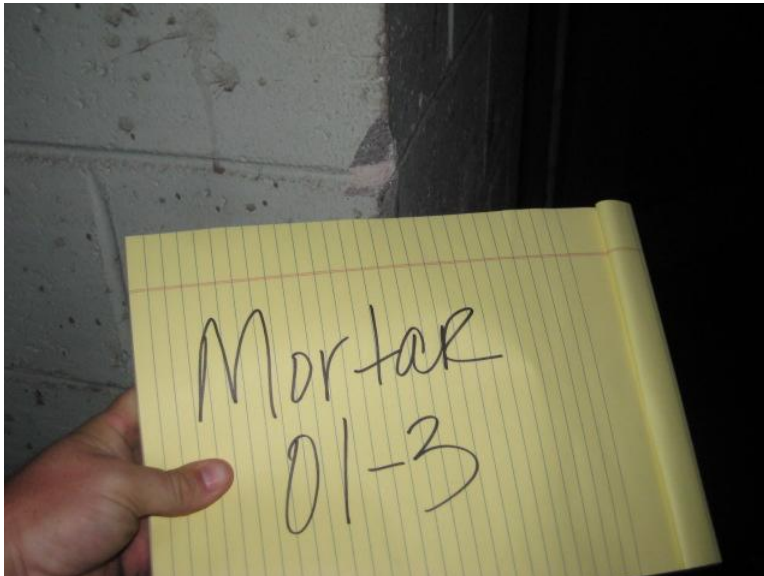
Brick-01-1_Grey Cinderblock

Mortar-01-1_Grey Cinderblock



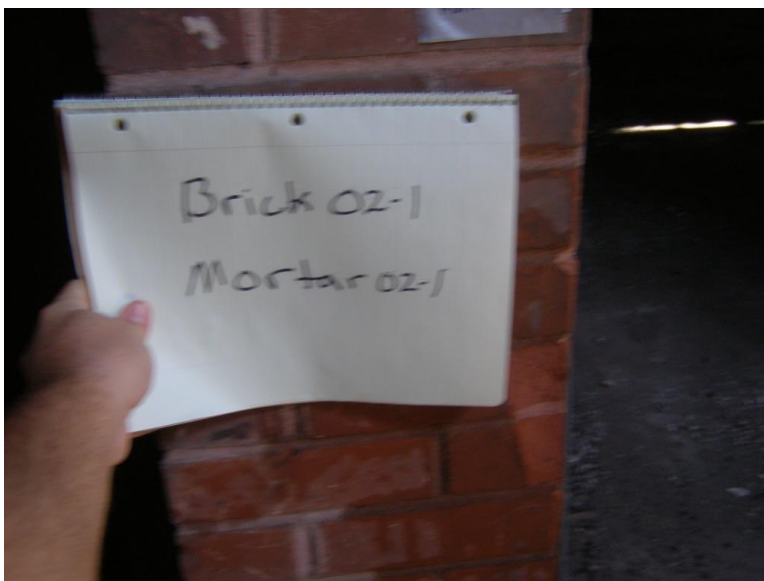
Brick-01-2_Grey Brick

Mortar-01-2_Grey Mortar



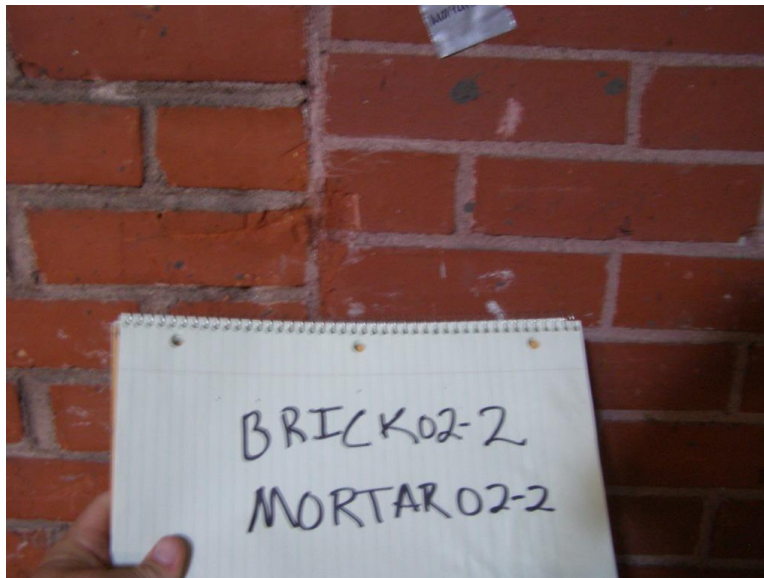
Brick-01-3_Red Brick

Mortar-01-3_Grey Mortar



Brick-02-1_Red Brick

Mortar-02-1_Red Mortar



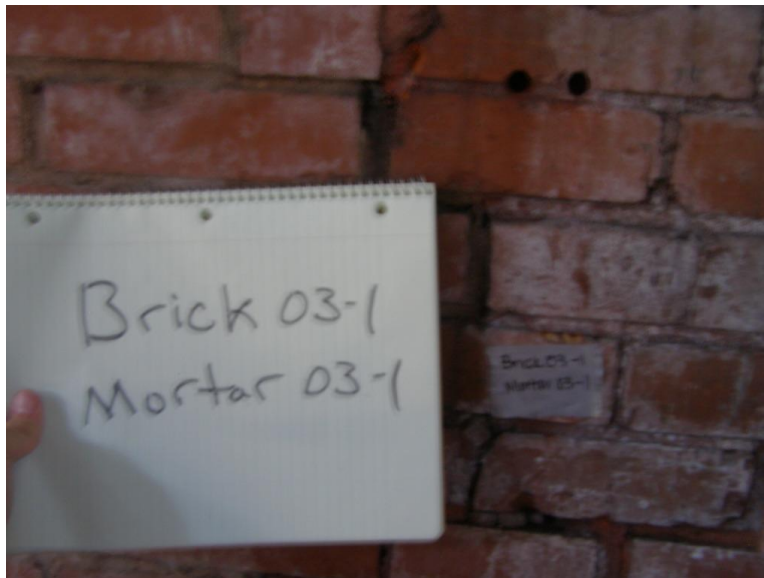
Brick-02-2_Red Brick

Mortar-02-2_Grey Mortar



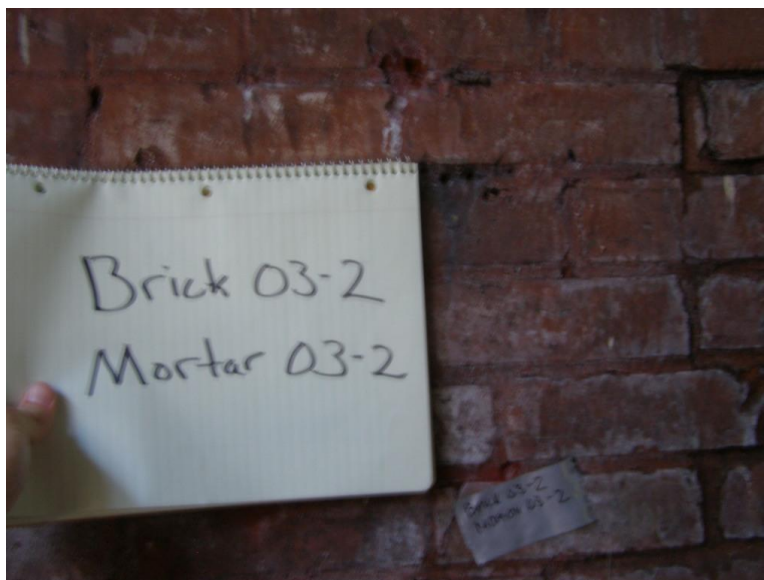
Brick-02-3_Red Brick

Mortar-02-3_Grey Mortar



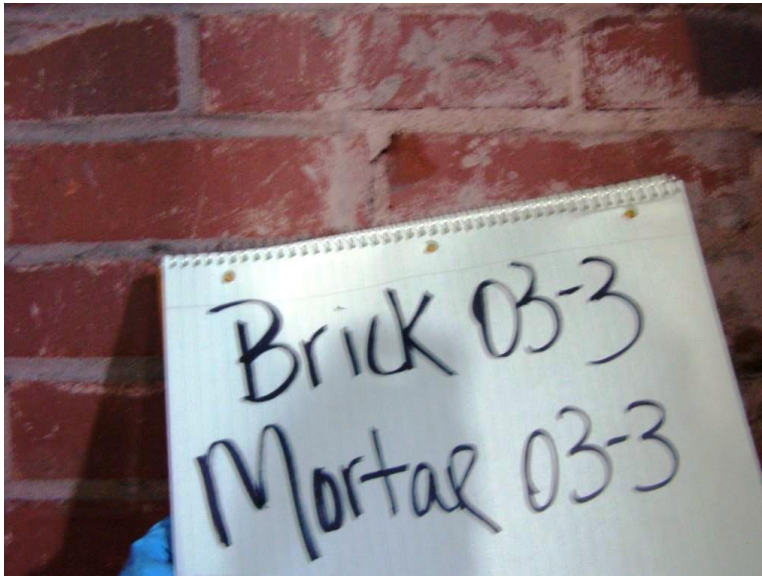
Brick-03-1_Red Brick

Mortar-03-1_Red Mortar



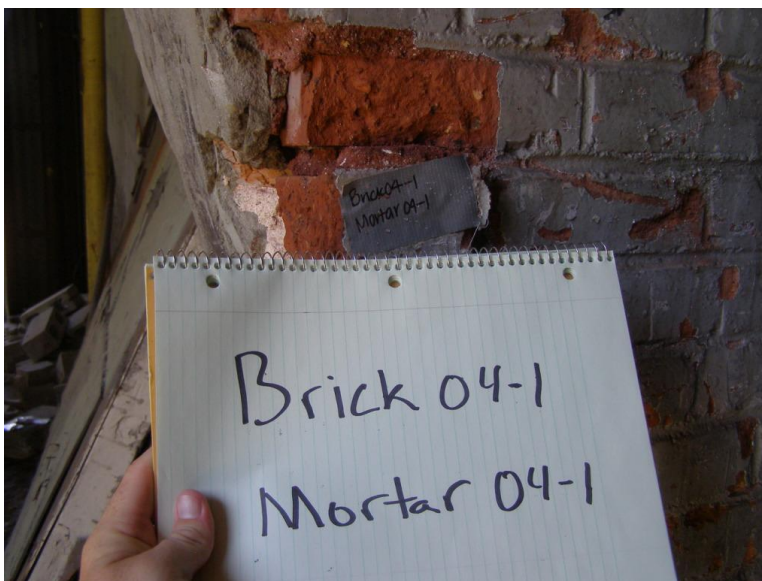
Brick-03-2_Red Brick

Mortar-03-2_Red Mortar



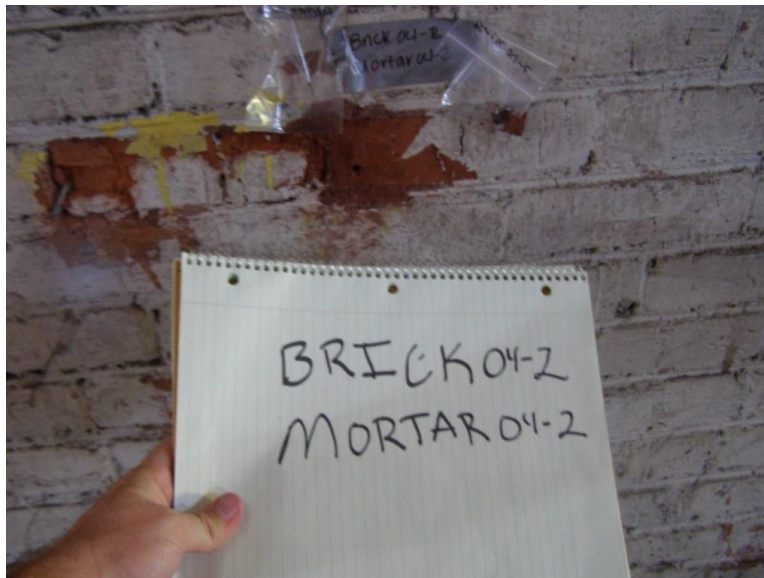
Brick-03-3_Red Brick

Mortar-03-3_Red Mortar



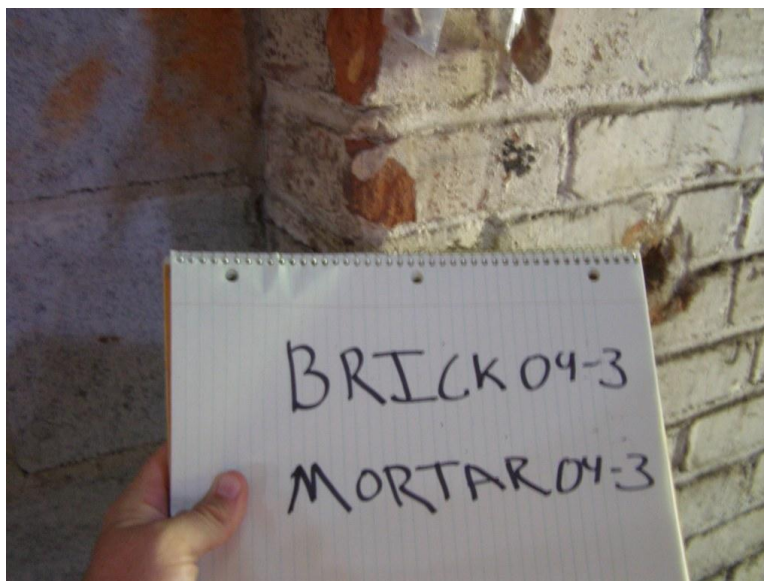
Brick-04-1_Red/Orange Brick

Mortar-04-1_Red Mortar



Brick-04-2_Painted Red Brick

Mortar-04-2_Painted Red Mortar



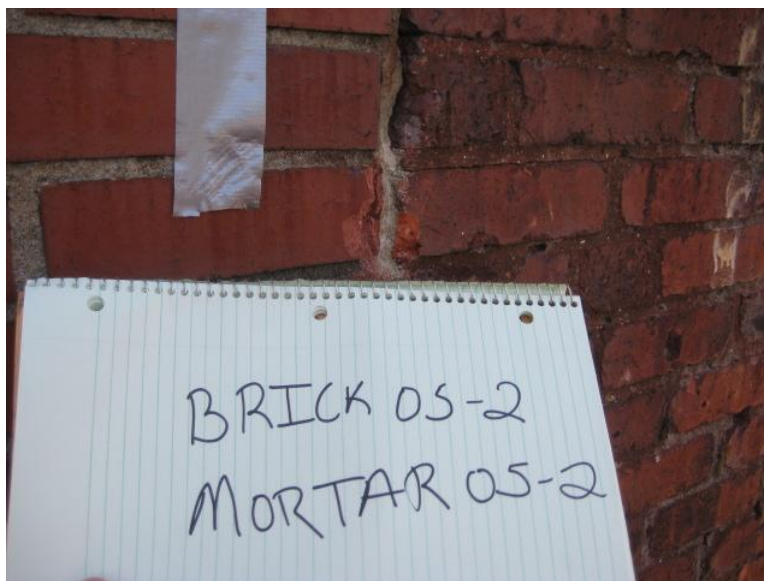
Brick-04-3_Painted Red Brick

Mortar-04-3_Painted Red Mortar



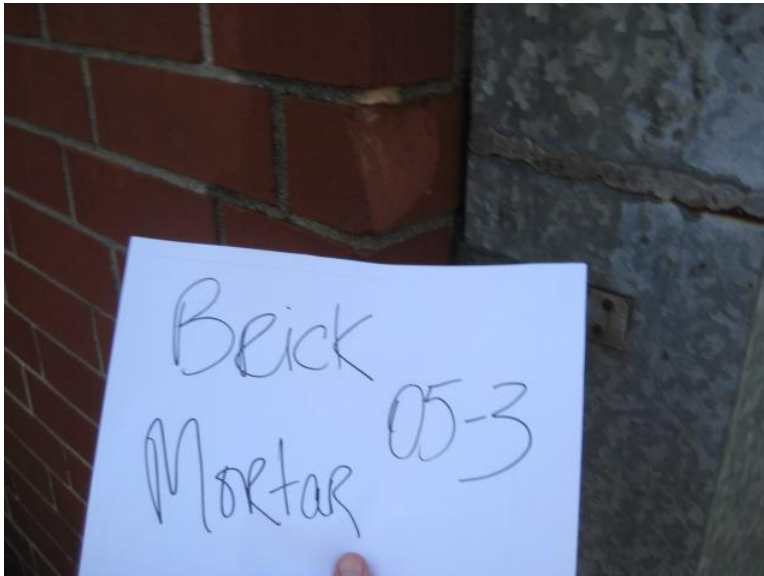
Brick-05-1_Red Brick

Mortar-05-1_White Mortar



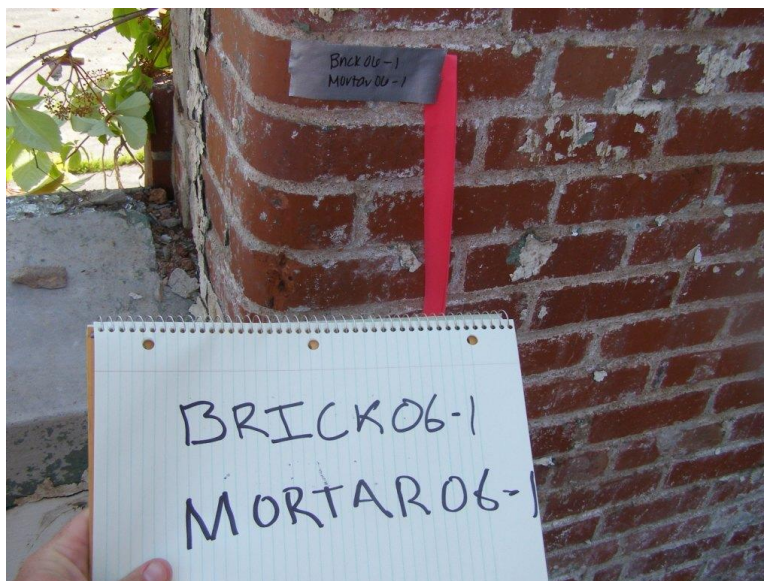
Brick-05-2_Red Brick

Mortar-05-2_Red Mortar



Brick-05-3_Exterior Red Brick

Mortar-05-3_Exterior Grey Mortar



Brick-06-1_Red Brick

Mortar-06-1_Red Mortar



Brick-06-2_Red Brick

Mortar-06-2_Red Mortar



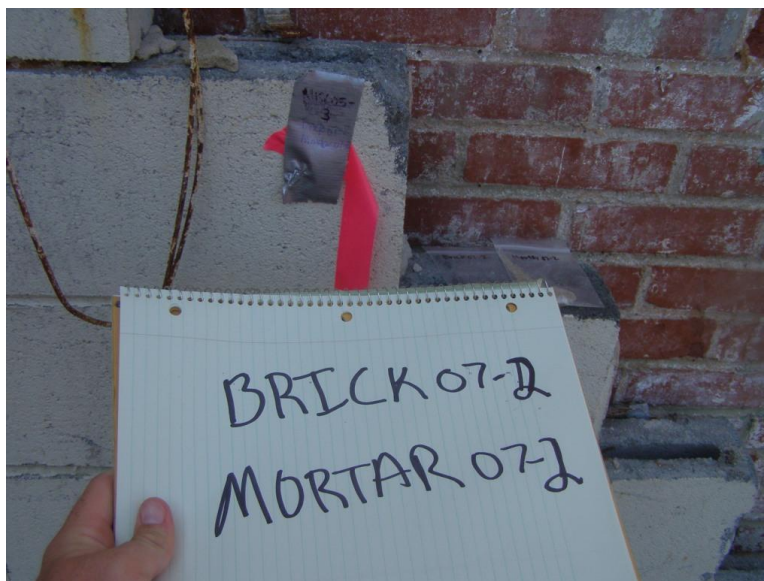
Brick-06-3_Red Brick

Mortar-06-3_Red Mortar



Brick-07-1_Grey Cinderblock

Mortar-07-1_Grey Cinderblock



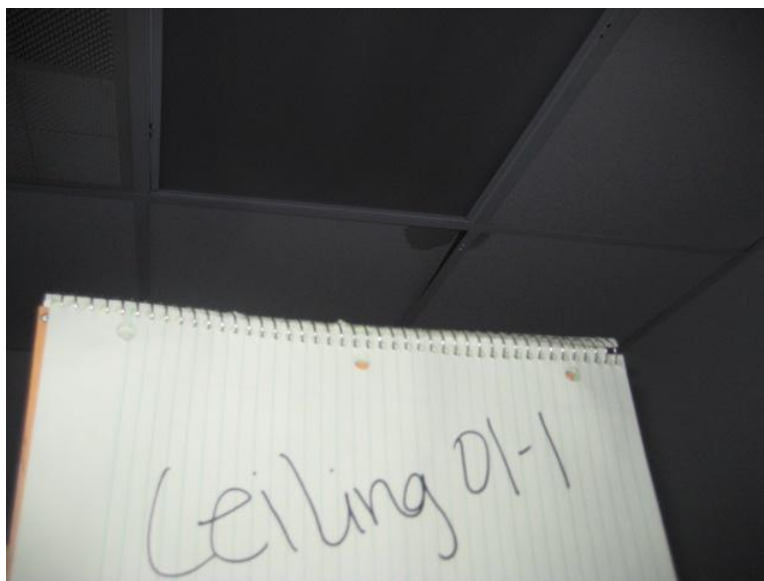
Brick-07-2_Grey Brick

Mortar-07-2_White Mortar

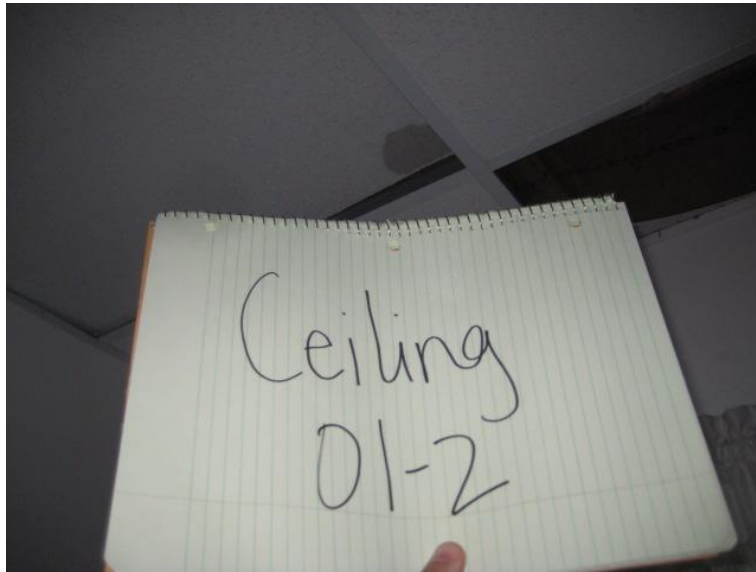


Brick-07-3_Grey Brick

Mortar-07-3_Grey Mortar



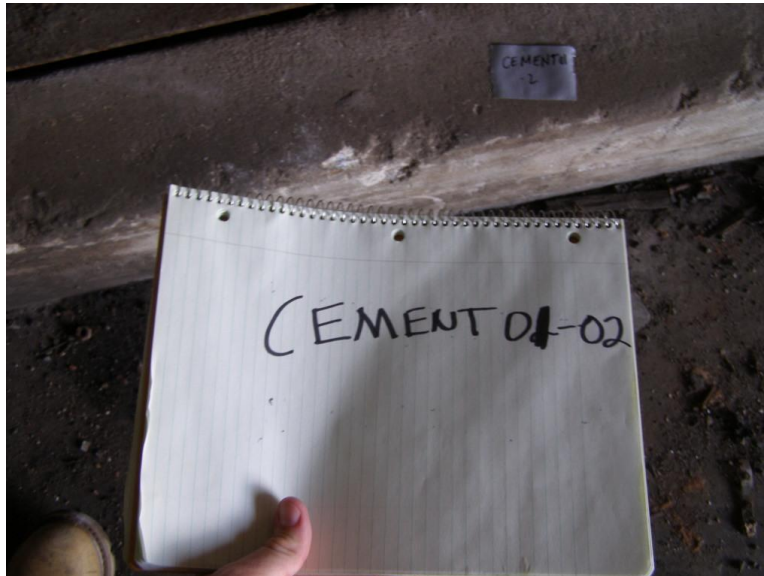
Ceiling-01-1_Ceiling Tile



Ceiling-01-2_Cieling Tile



Cement-01-1_Interior Raised Grey Cement



Cement-01-2_Interior Raised Grey Cement



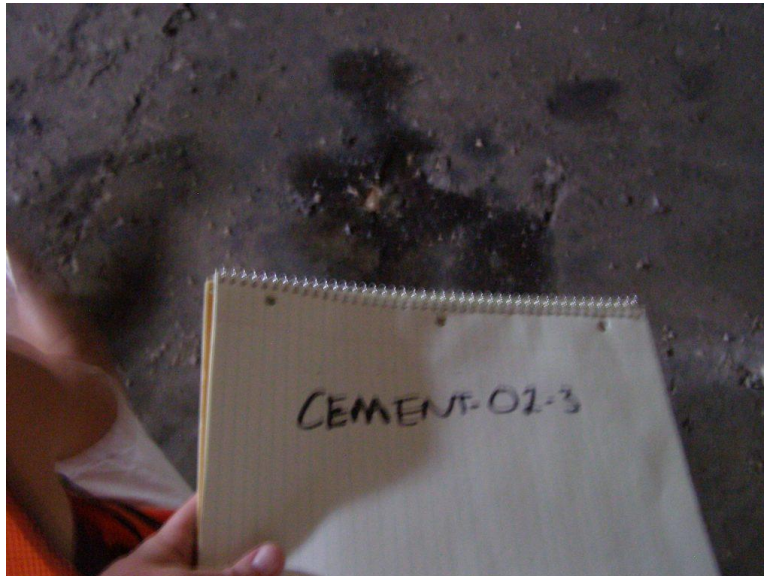
Cement-01-3_Interior Raised Grey Cement



Cement-02-1_Grey Floor Cement



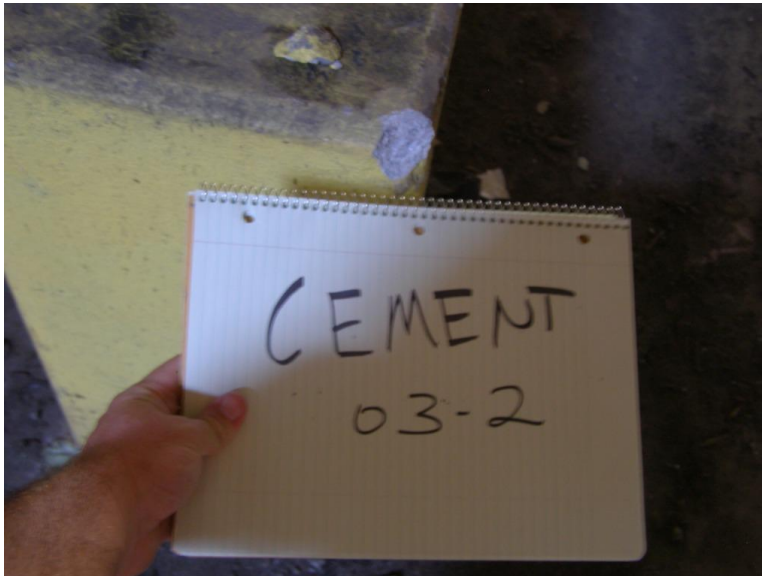
Cement-02-2_Grey Floor Cement



Cement-02-3_Grey Floor Cement



Cement-03-1_Yellow Painted Piling



Cement-03-2_Yellow Painted Piling



Cement-03-3_Yellow Painted Piling



Cement-04-1_ White/Orange Tint Cement



Cement-04-2_ Orange Tinted Cement



Cement-04-3_Orange Tinted Cement



Cement-05-1_White Cement



Cement-05-2_Floor Cement



Cement-05-3_Floor Cement



Cement-06-1_Black Painted Cement



Cement-06-2_Painted Yellow Cement



Cement-06-3_Interior Walls Cement



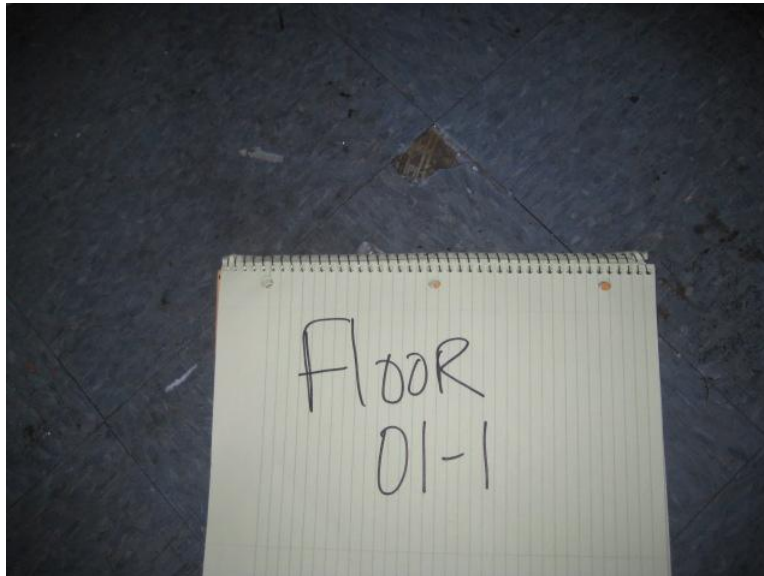
Door-01-1_Painted Red Fire Door (Power Plant)



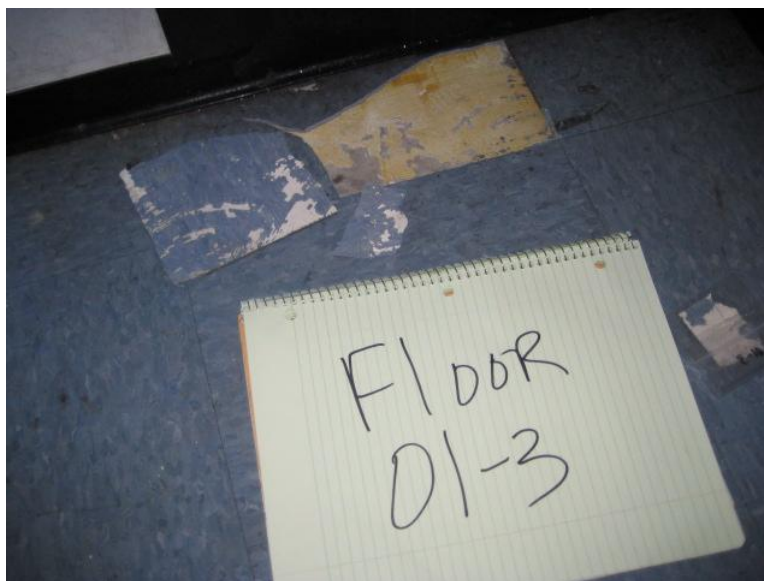
Door-01-2_Fire Door



Door-01-3_Fire Door



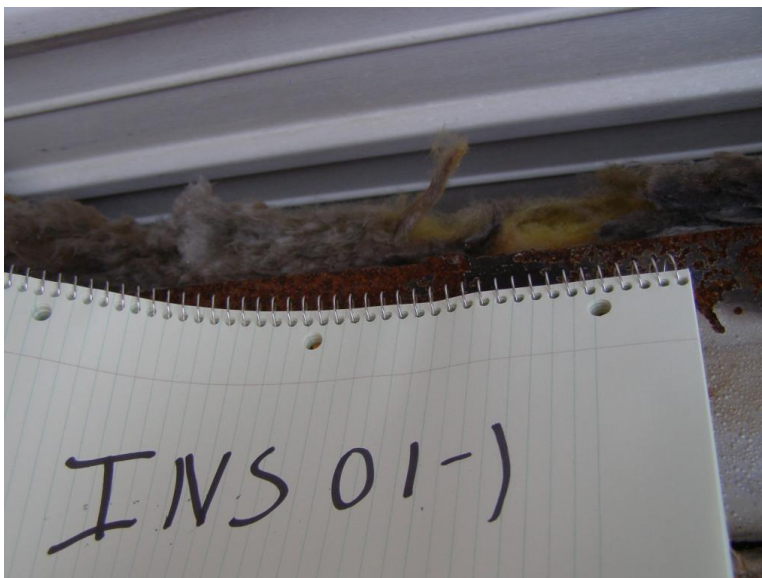
Floor-01-1_Blue/Grey Laminate Flooring



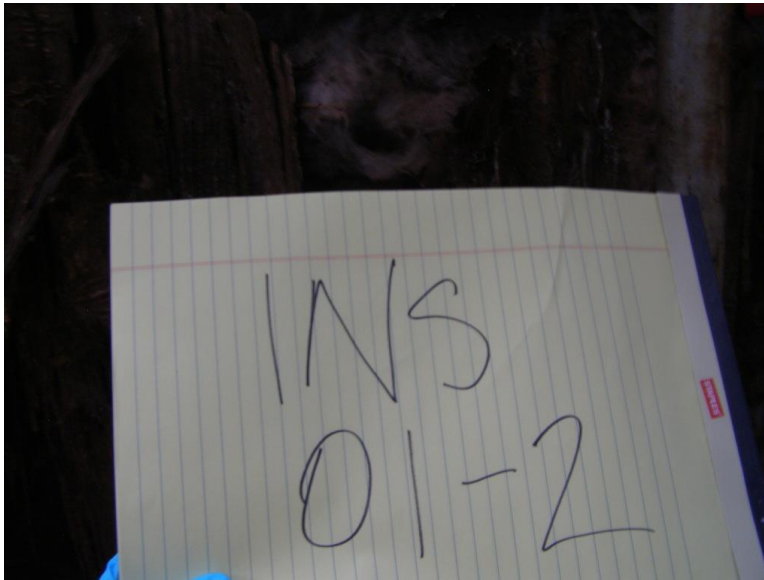
Floor-01-3_Blue/Grey Laminate Flooring



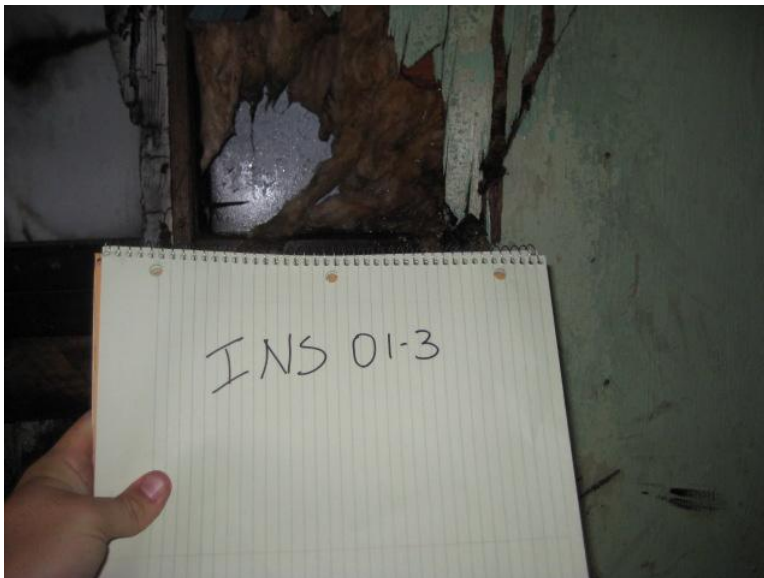
Floor-01-4_Blue/Grey Laminate Flooring



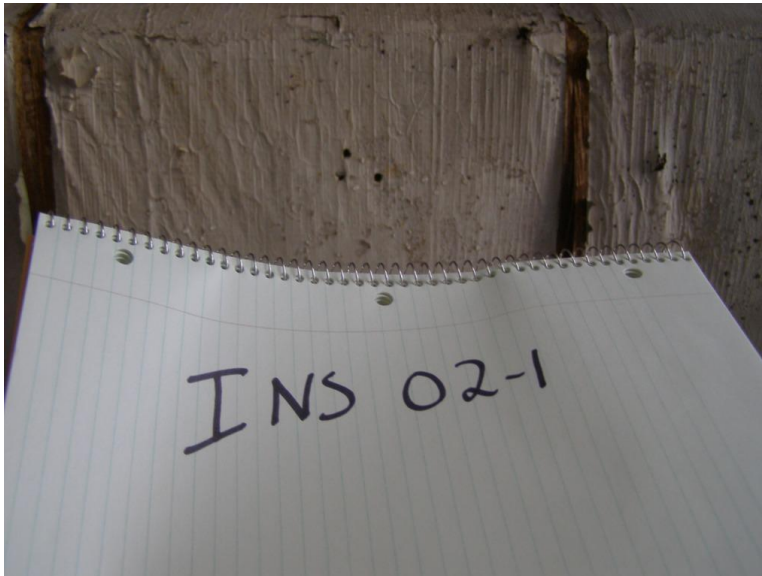
Ins-01-1_Grey Insulation



Ins-01-2_Grey Insulation



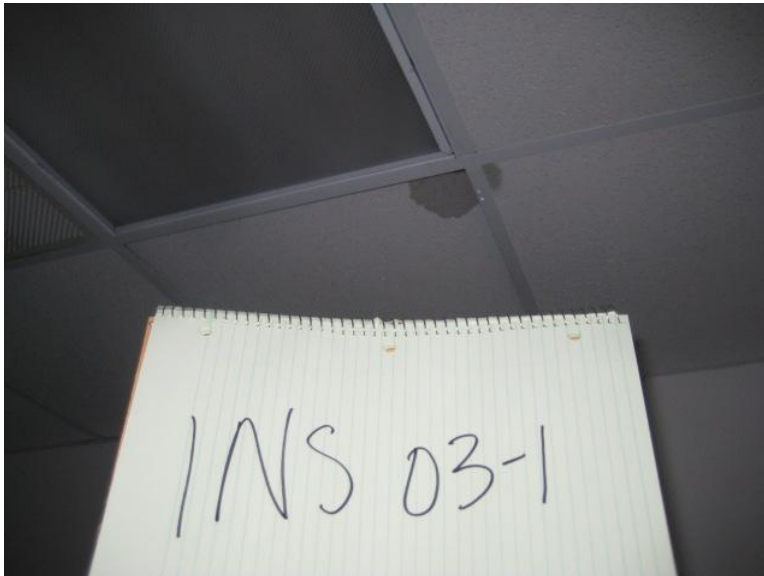
Ins-01-3_Grey Insulation



Ins-02-1_4 inch Duct Insulation



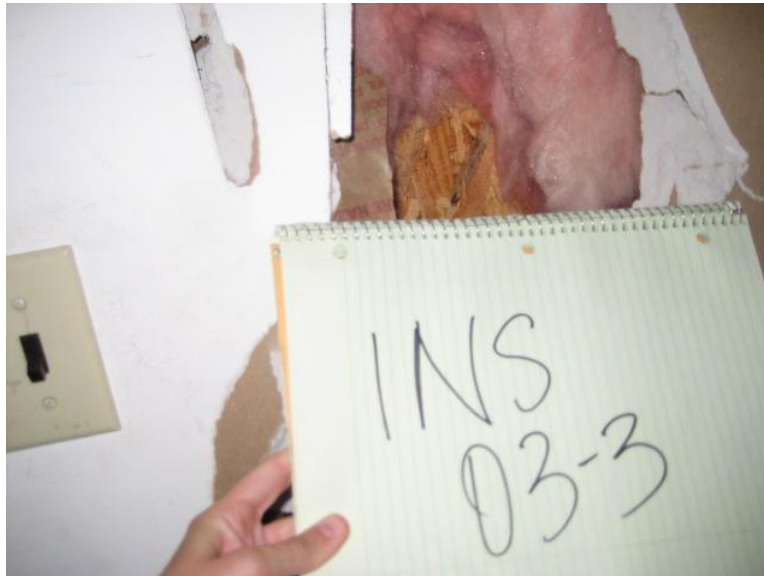
Ins-02-3_4 inch Duct Insulation



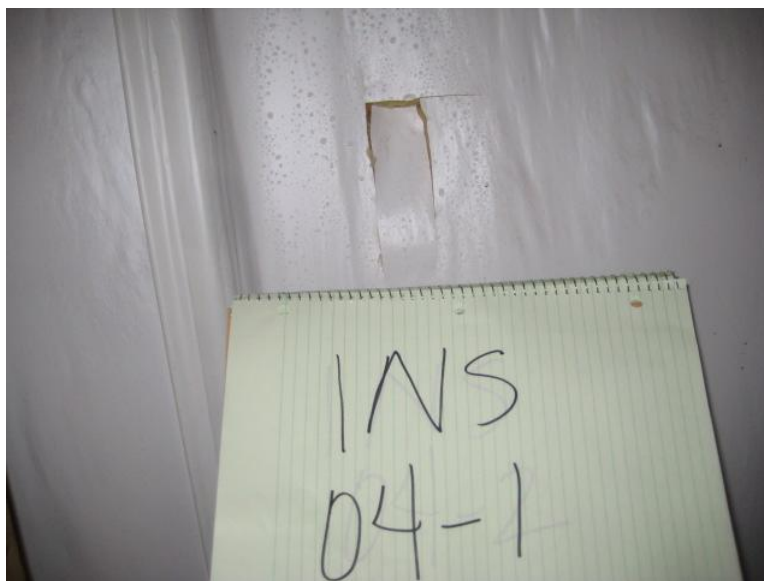
Ins-03-1_Pink Wall/Ceiling Insulation



Ins-03-2_Pink Wall/Ceiling Insulation



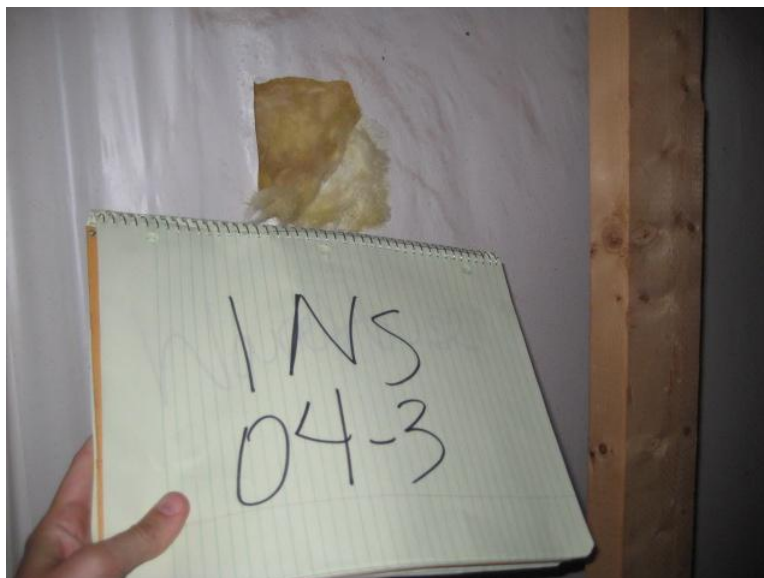
Ins-03-3_Pink Wall/Ceiling Insulation



Ins-04-1_White Plastic-Yellow Wall Insulation



Ins-04-2_White Plastic-Yellow Wall Insulation



Ins-04-3_White Plastic-Yellow Wall Insulation

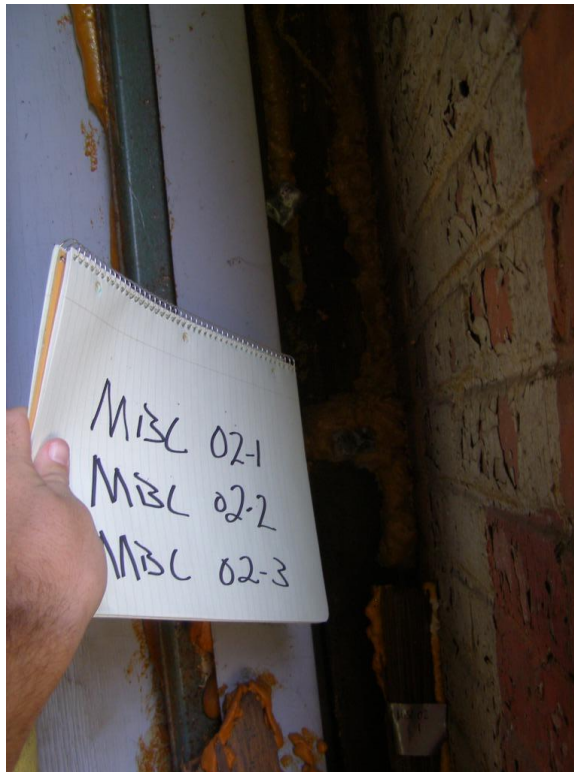


Misc-01-1_Orange Foam



Misc-01-2_Orange Foam

Misc-01-2_Small Capillary Orange Foam



Misc-02-1_Yellow Foam

Misc-02-2_Light Yellow Capillary-Orange Foam

Misc-20-3_Light Yellow Foam



Misc-03-1_Particle Board Appearance

Misc-03-2_Particle Board Appearance



Misc-03-3_Particle Board Appearance



Misc-04-1_Black and White Fibers in Debris Pile at Conveyor Belt

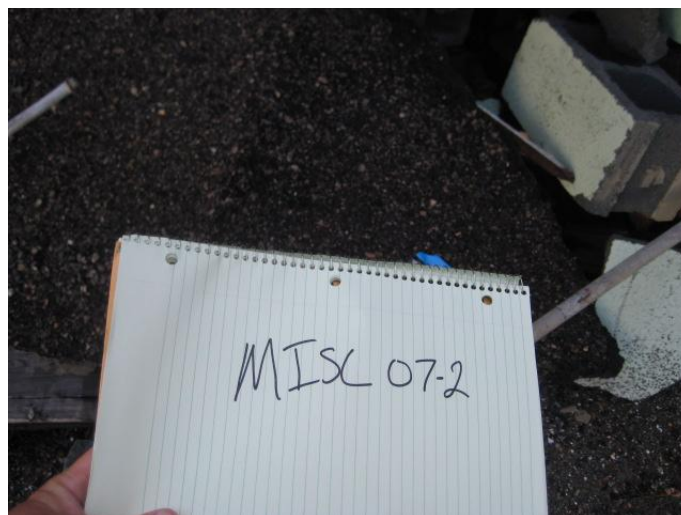
Misc-04-2_Black and White Fibers in Debris Pile at Conveyor Belt

Misc-04-3_Black and White Fibers in Debris Pile at Conveyor Belt



Misc-07-1_Black Roofing Material

Misc-08-1_Black/White Roofing Material



Misc-07-2_Black Roofing Material



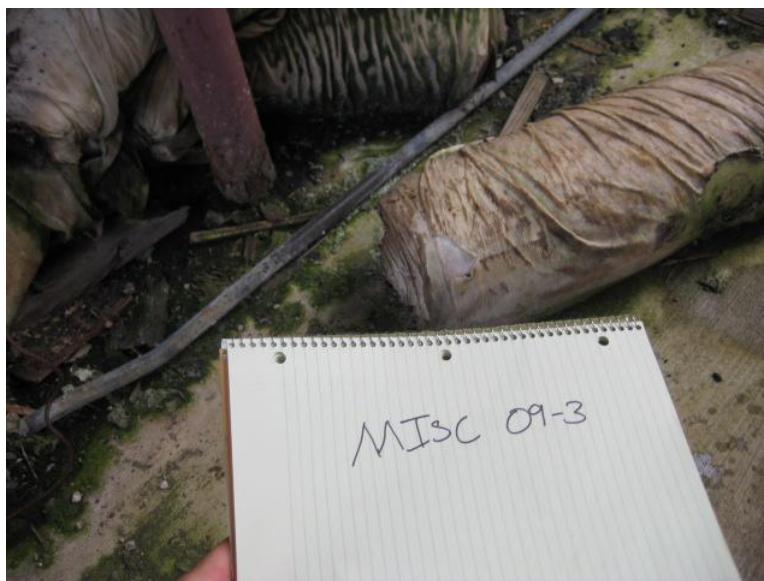
Misc-07-3_Black Roofing Material



Misc-09-1_Burned Fabric



Misc-09-2_Burned Fabric



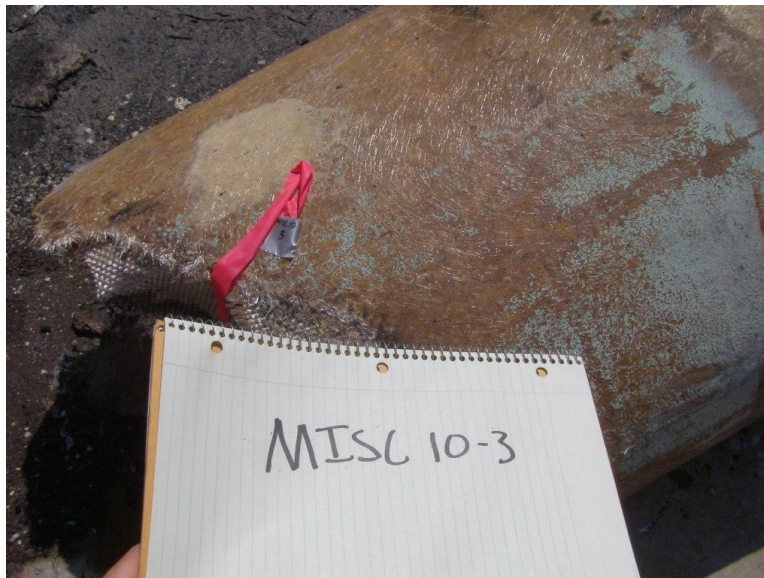
Misc-09-3_White/Rolled Fabric



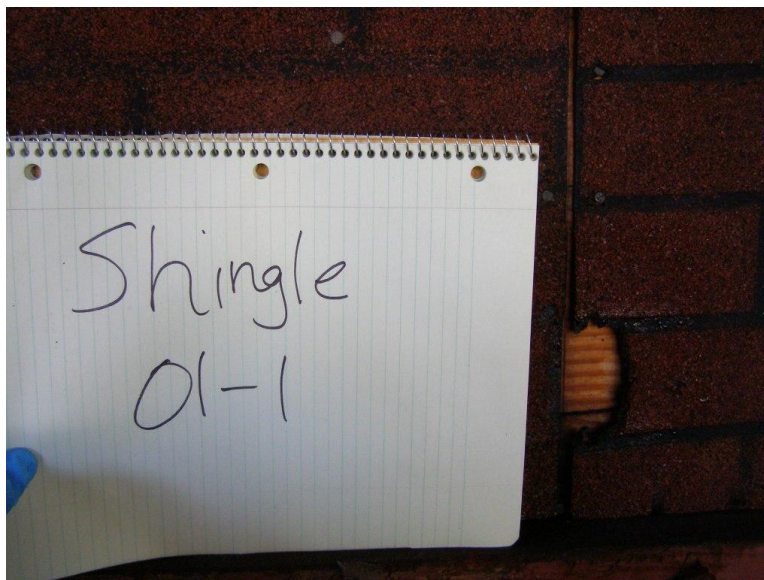
Misc-10-1_Fiber Wrapped Piping



Misc-10-2_Fiber Wrapped Piping



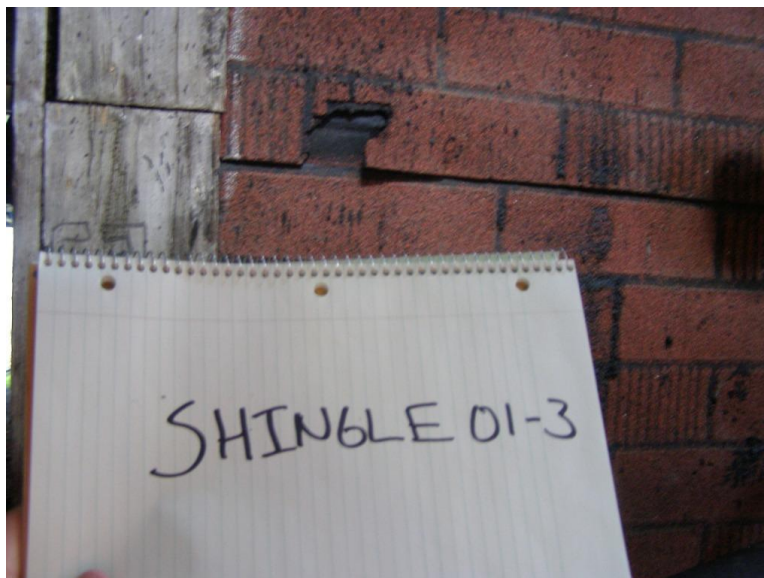
Misc-10-3_Fiber Wrapped Piping



Shingle-01-1_Red/Black Wall Shingle



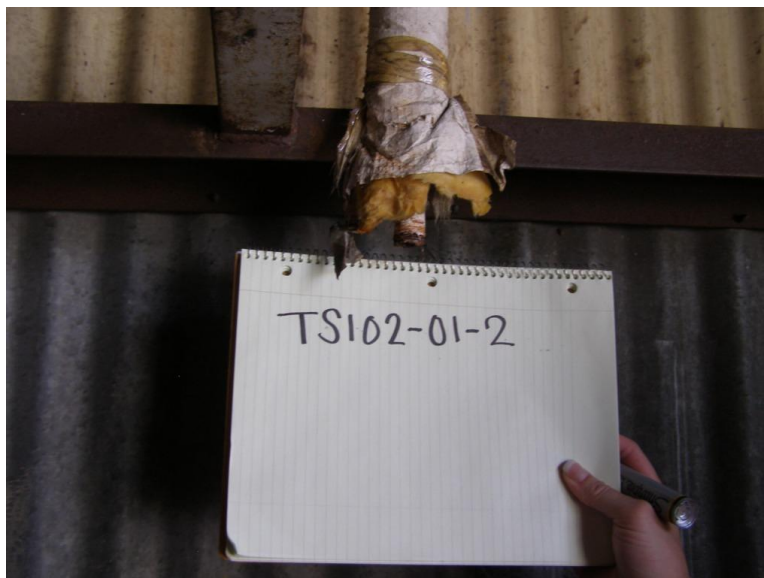
Shingle-01-2_Red/Black Wall Shingle



Shingle-01-3_Red/Black Wall Shingle



Tsi2i-01-1_2 inch White Wrapped Piping



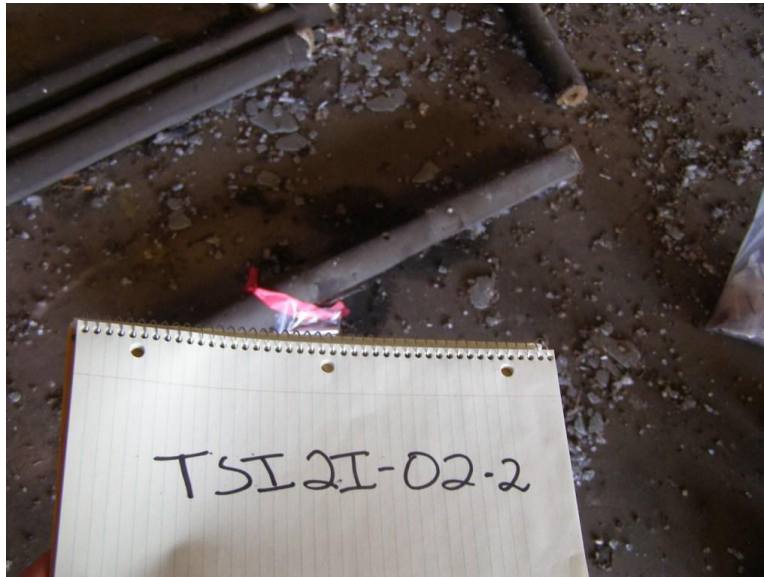
Tsi2i-01-2_2 inch White Wrapped Piping



Tsi2i-01-3_2 inch White Wrapped Piping



Tsi2i-02-1_2 inch White Wrapped Piping



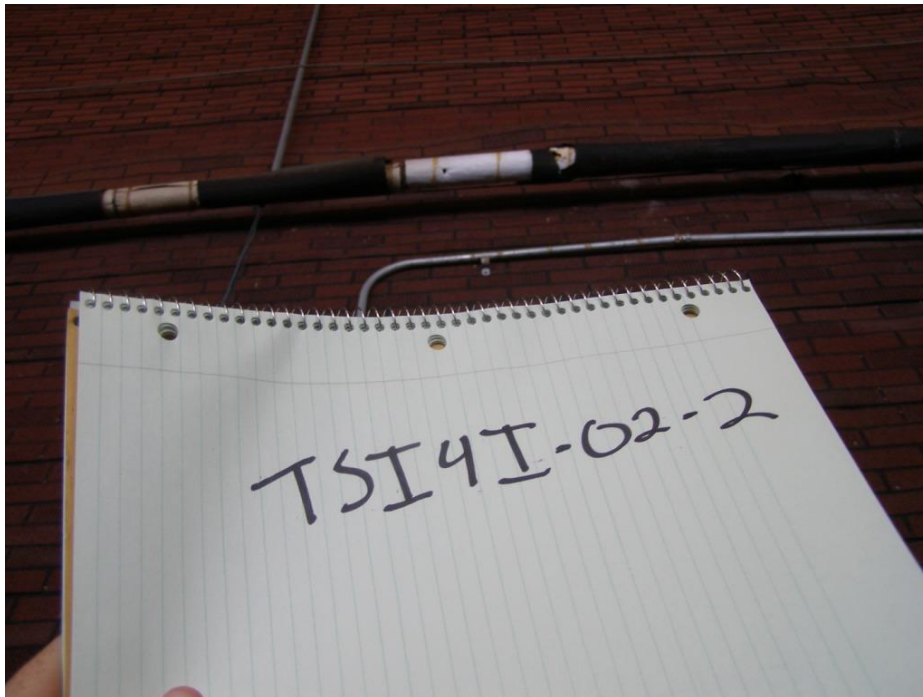
Tsi2i-01-2_2 inch White Wrapped Piping



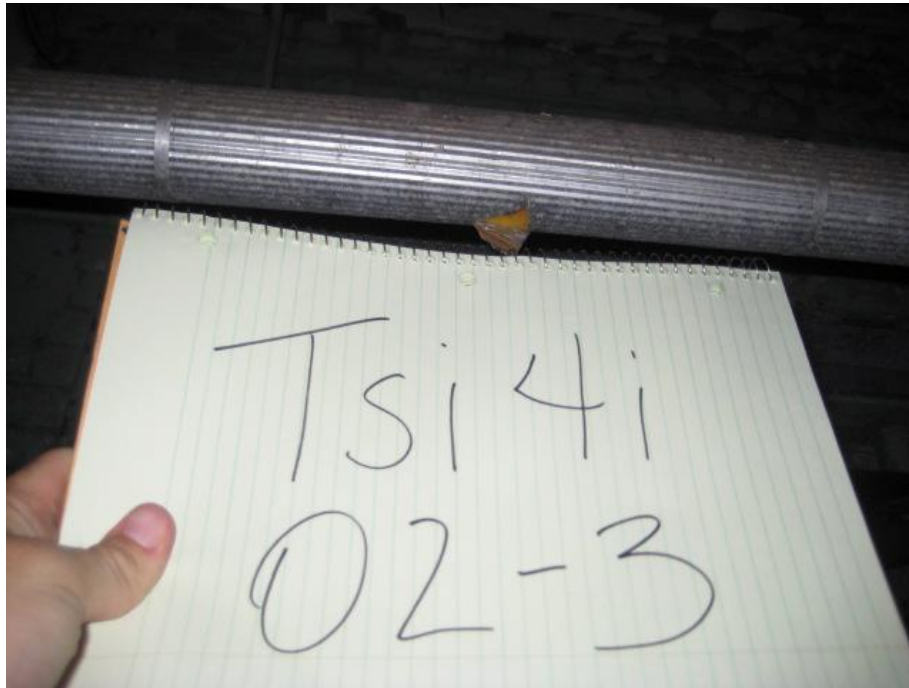
Tsi2i-02-3_2 inch White Wrapped Piping



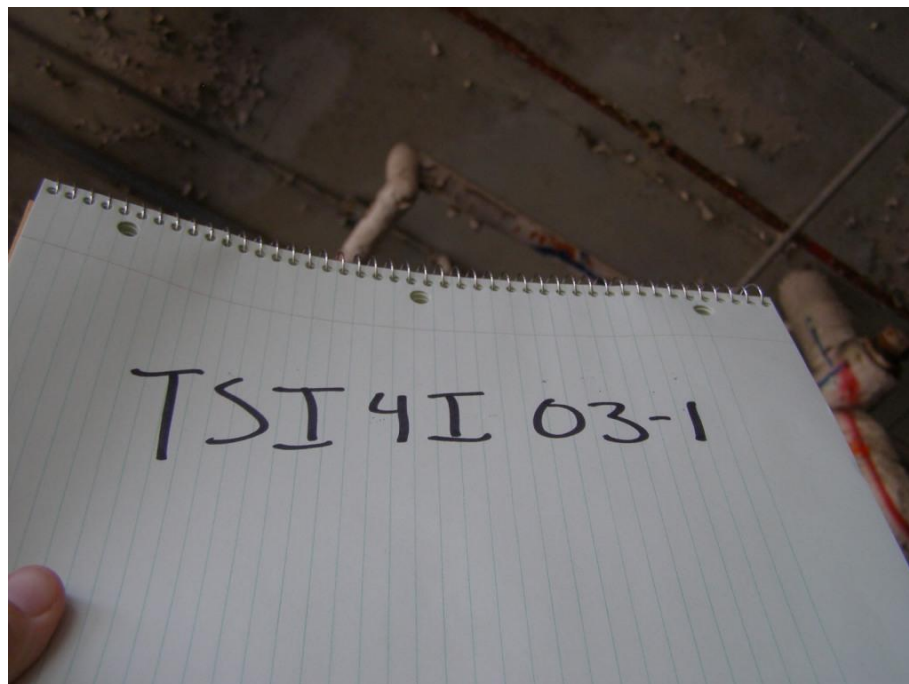
Tsi4i-02-1_4 inch Wrapped Piping



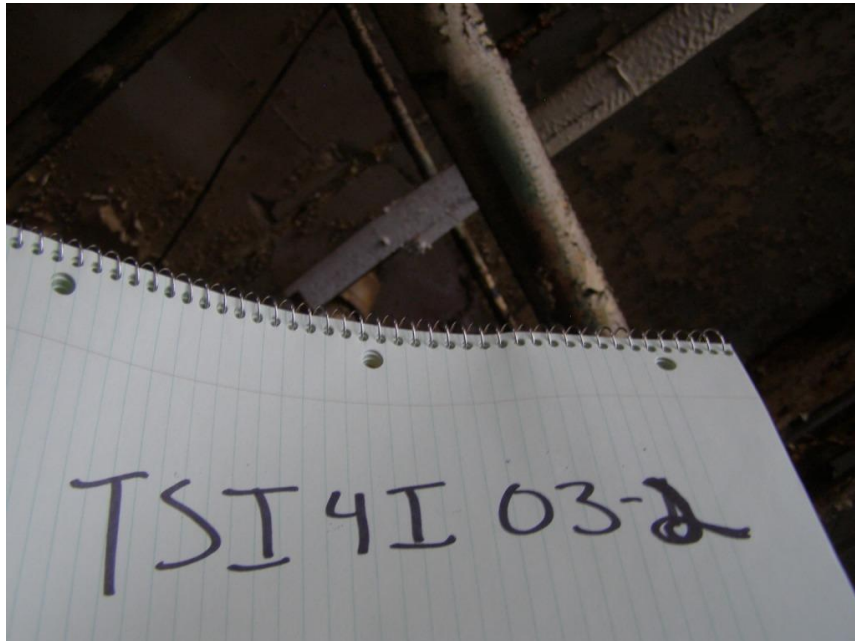
Tsi4i-02-2_4 inch Wrapped Piping



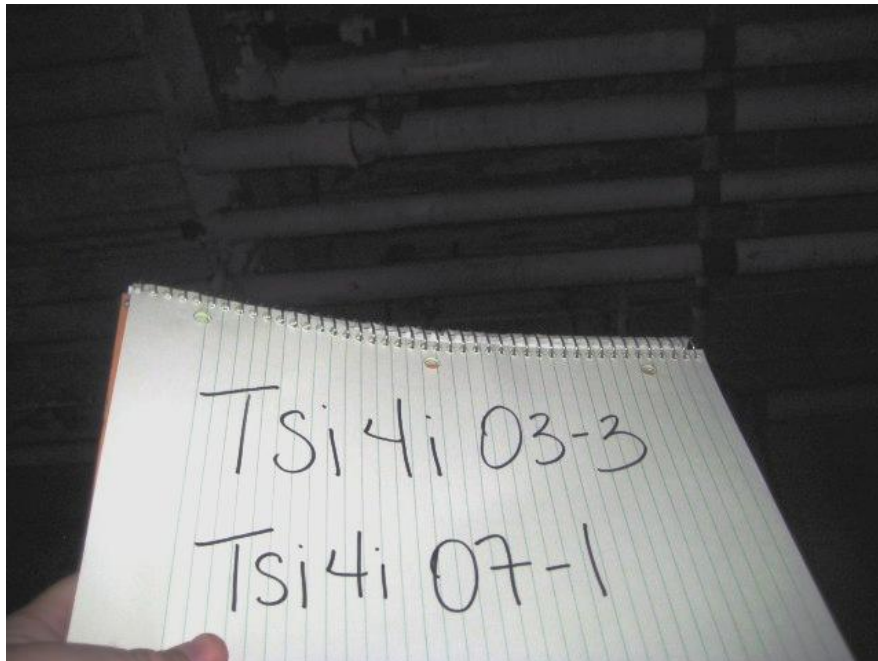
Tsi4i-02-3_4 inch Wrapped Piping



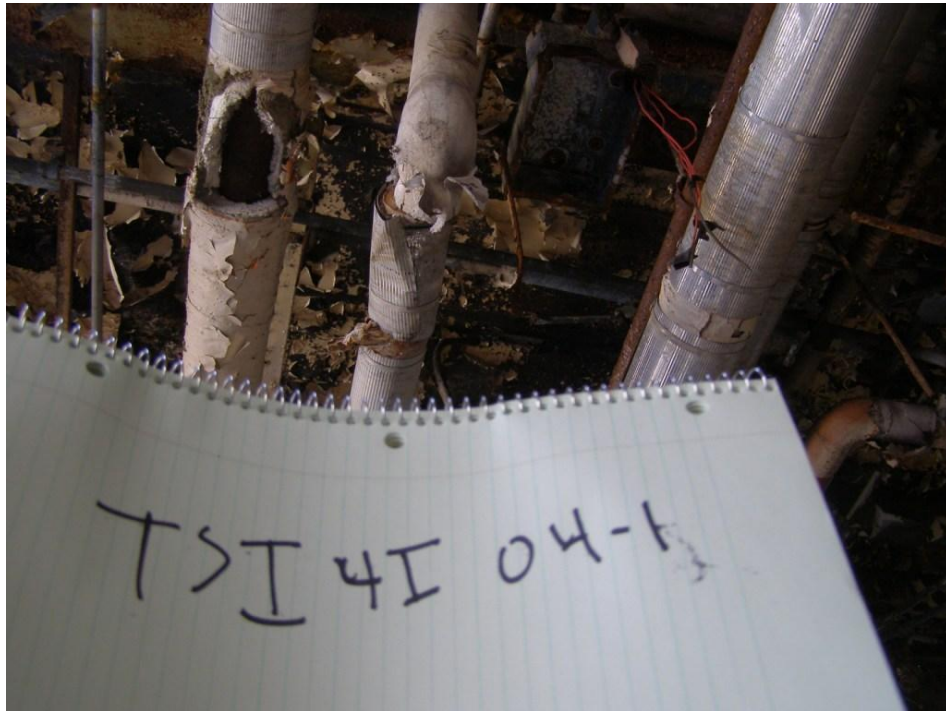
Tsi4i-03-1_4 inch White Wrapped Piping-Orange Band



Tsi4i-03-2_4 inch White Wrapped Piping-Orange Band



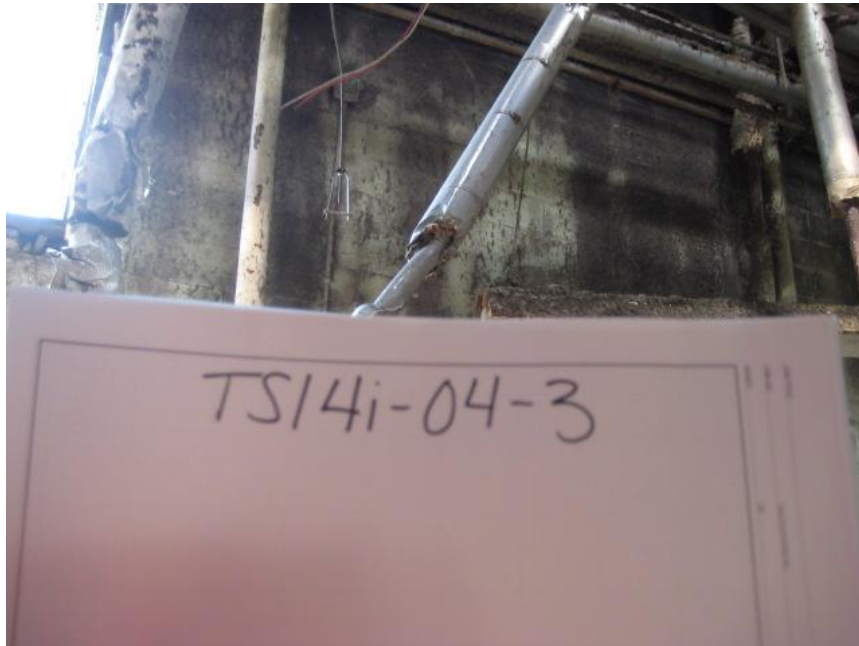
Tsi4i-03-3_4 inch White Wrapped Piping-Orange Band



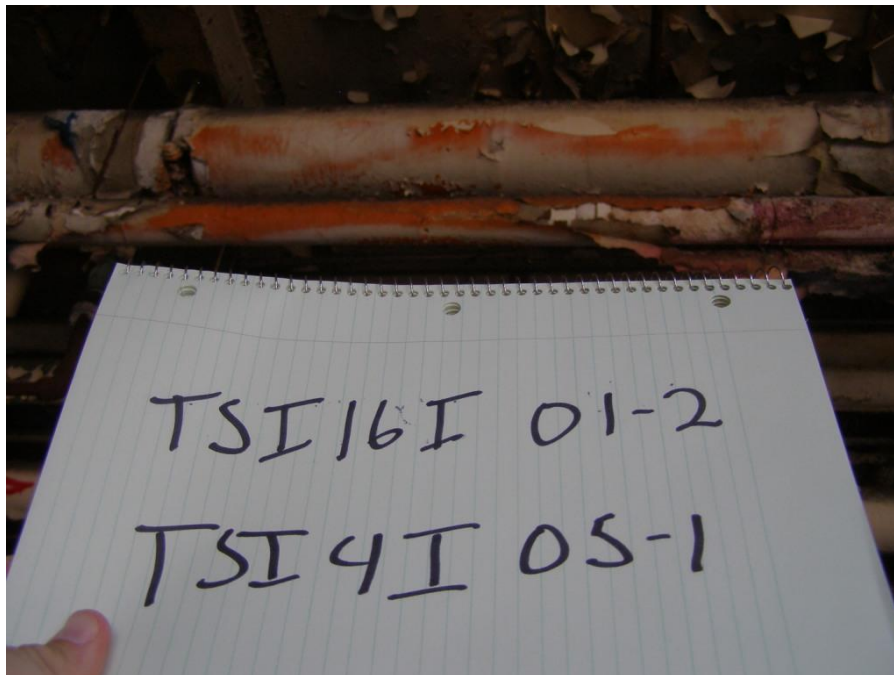
Tsi4i-04-1_4 inch Metal Wrapped with Blue Arrows



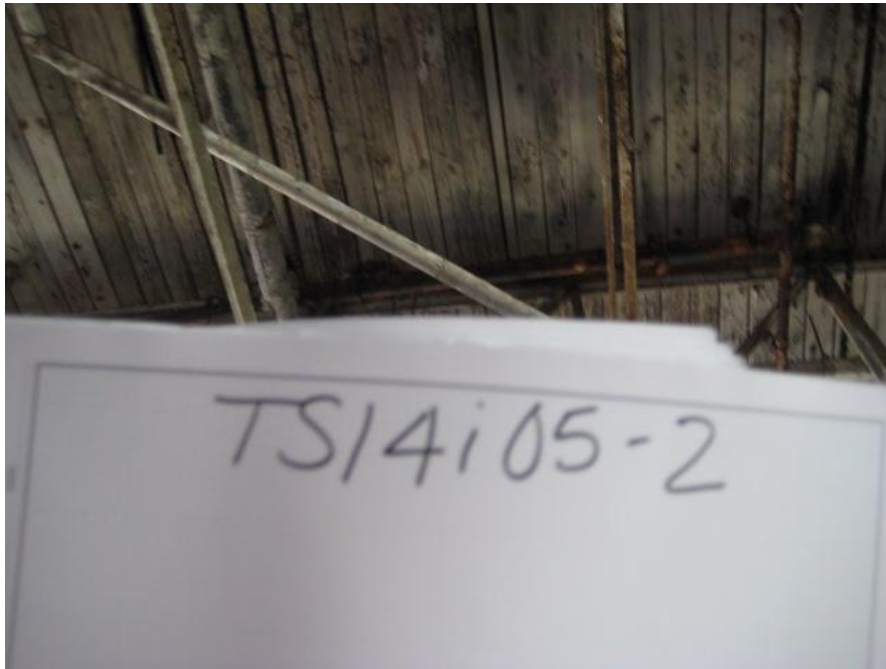
Tsi4i-04-2_4 inch Metal Wrapped with Blue Arrows



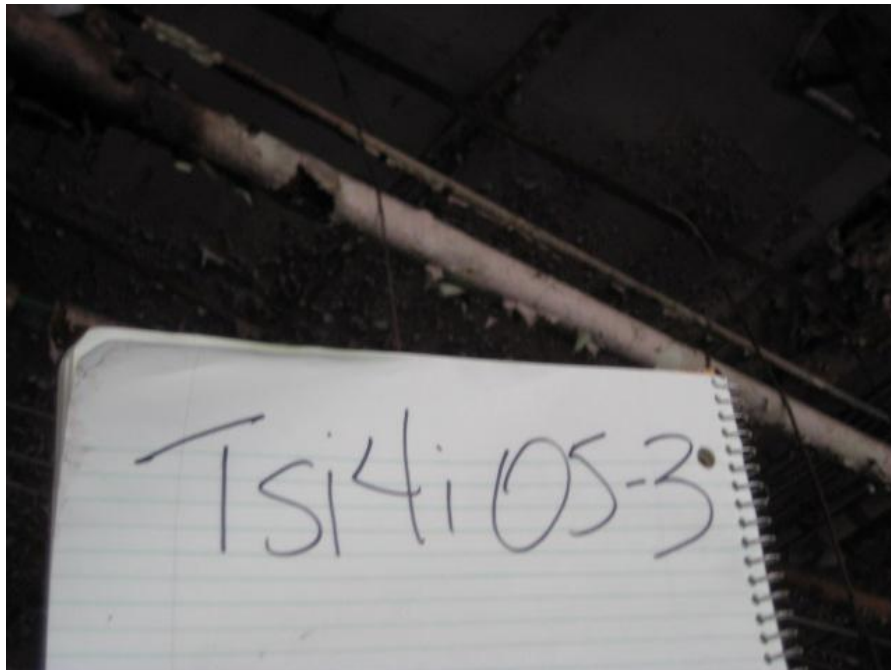
Tsi4i-04-3_4 inch Metal Wrapped with Blue Arrows



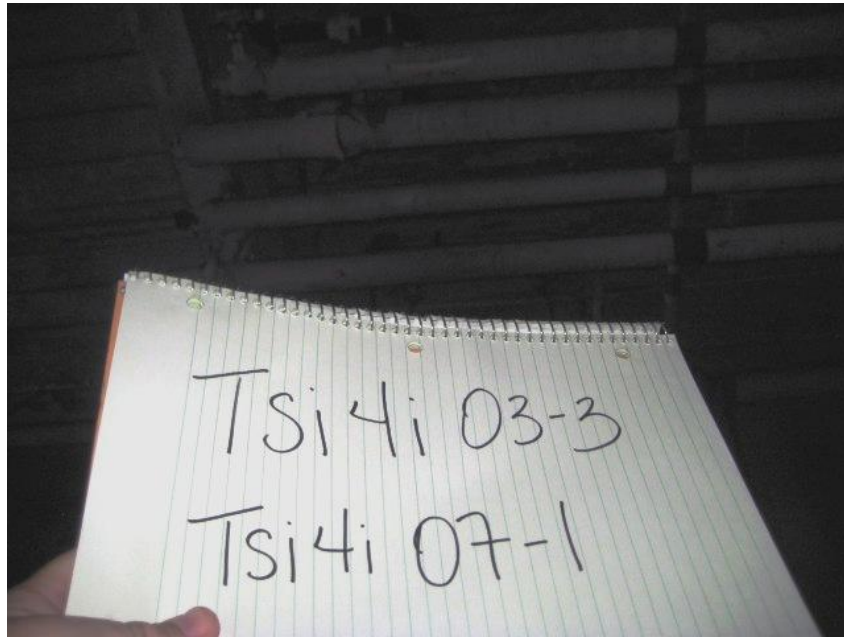
Tsi4i-05-1_4 inch White Wrapped with Red Arrows



Tsi4i-05-2_4 inch White Wrapped



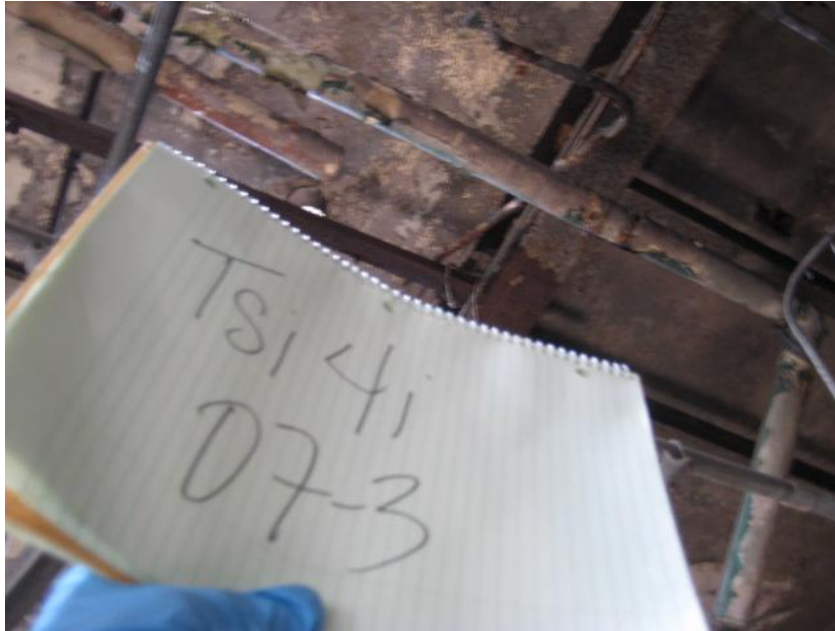
Tsi4i-05-3_4 inch White Wrapped



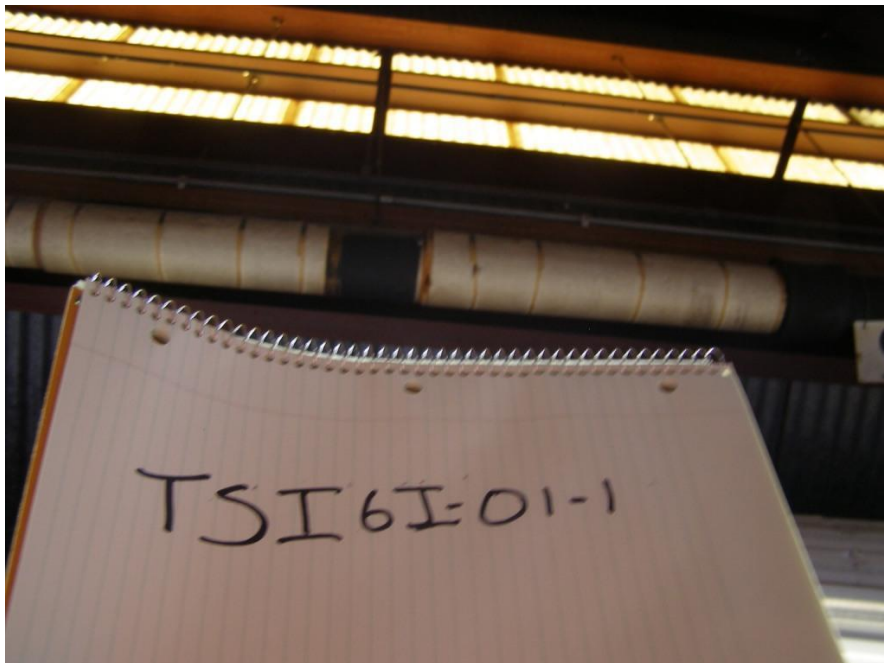
Tsi4i-07-1_4 inch White Wrapped Piping-Green Band



Tsi4i-07-2_4 inch White Wrapped Piping-Green Band



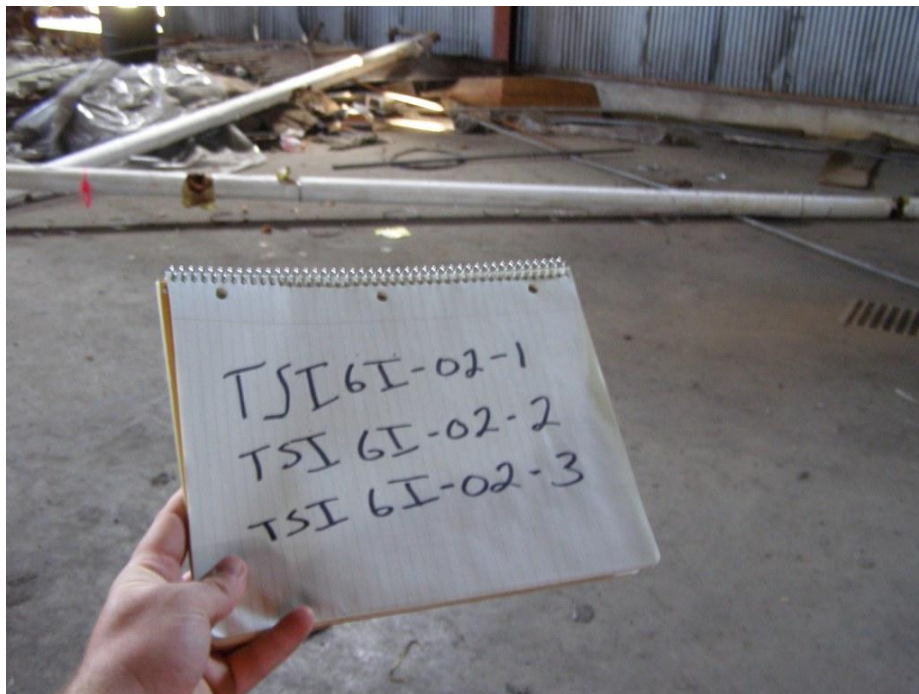
Tsi4i-07-2_4 inch White Wrapped Piping-Green Band



Tsi6i-01-1_6 inch White Wrapped Piping



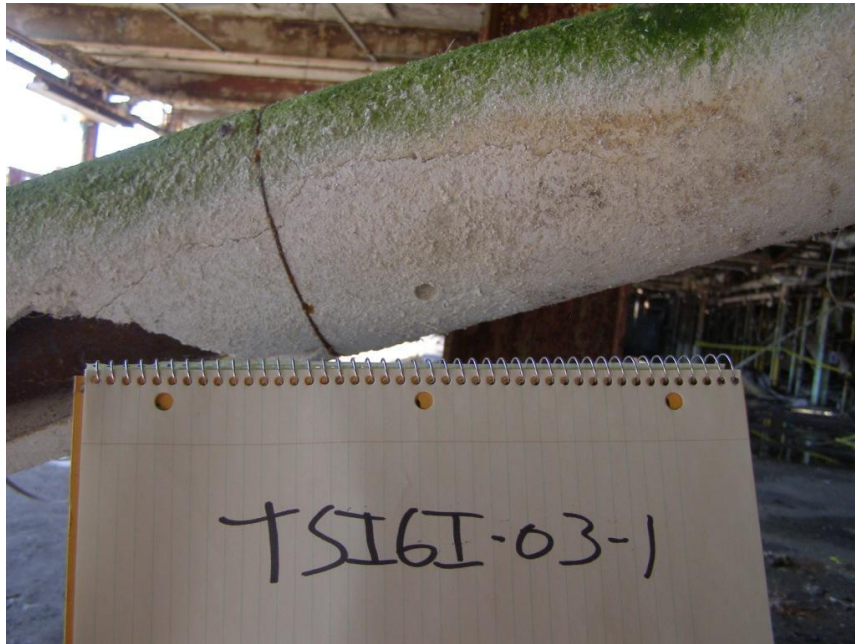
Tsi6i-01-2_6 inch Black Wrapped Piping



Tsi6i-02-1_6 inch White Wrapped Piping

Tsi6i-02-2_6 inch White Wrapped Piping

Tsi6i-02-3_6 inch White Wrapped Piping



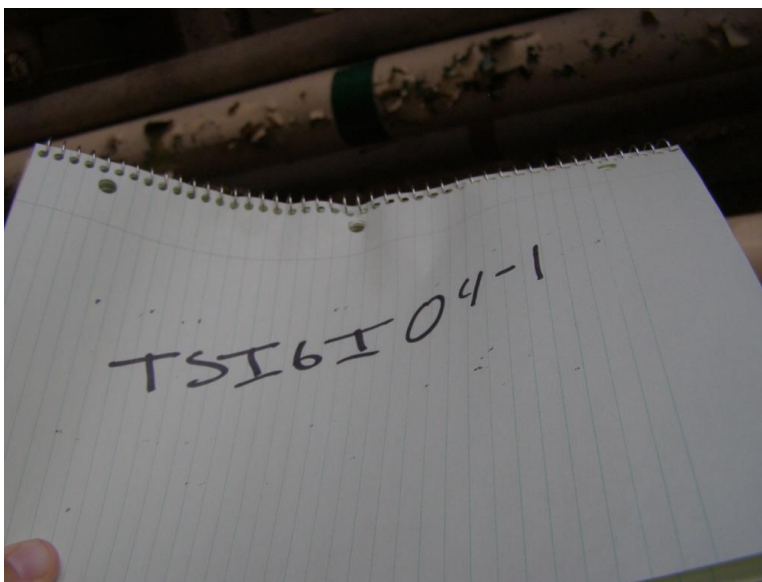
Tsi6i-03-1_6 inch Wrapped with Red Arrows



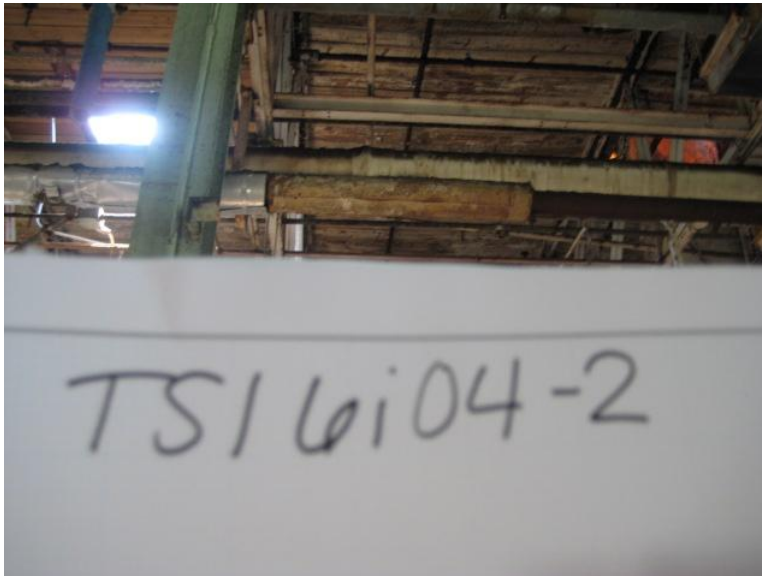
Tsi6i-03-2_6 inch Metal Wrapped Piping



Tsi6i-03-3_6 inch Metal Wrapped Piping



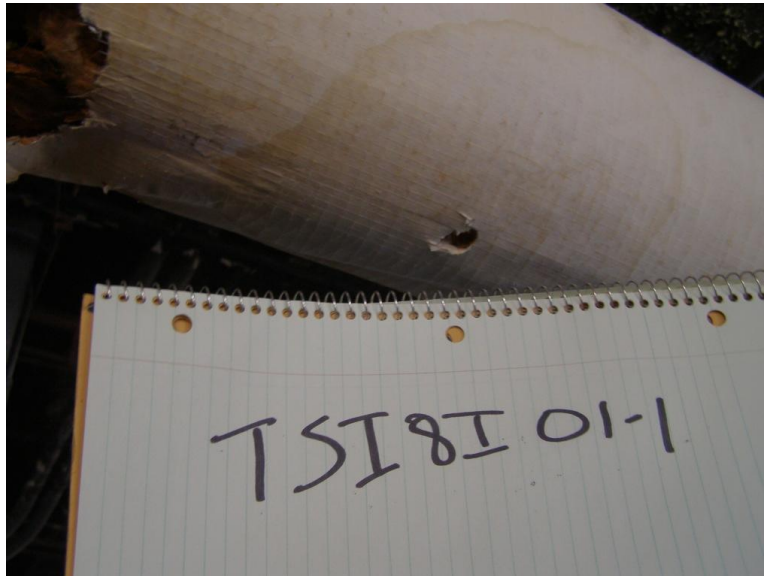
Tsi6i-04-1_6 inch White Wrapped Piping-Green Band



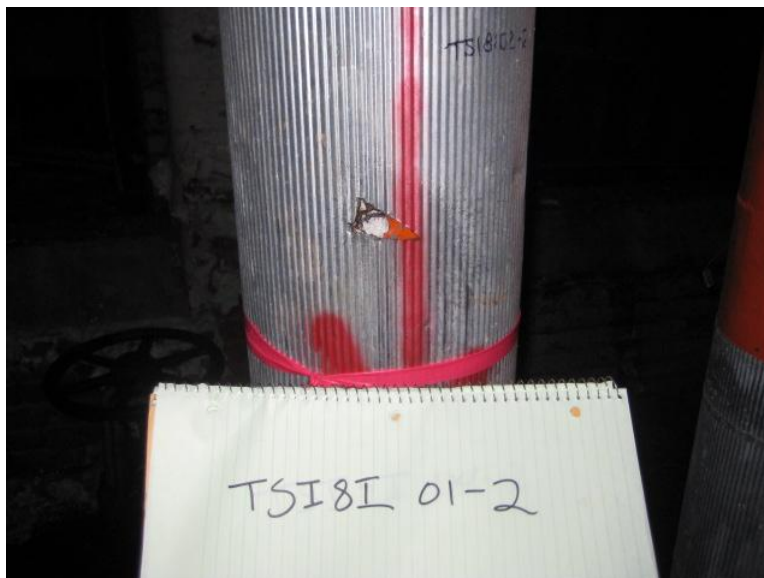
Tsi6i-04-2_6 inch Metal Wrapped Piping



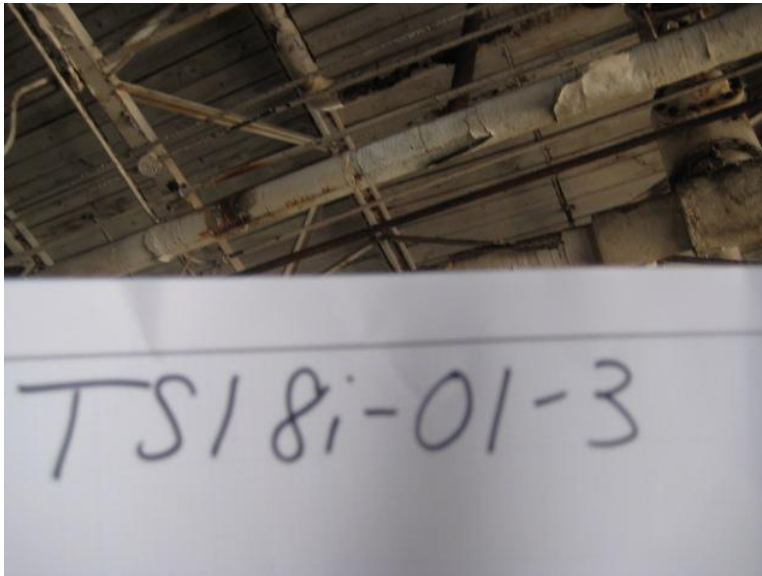
Tsi6i-04-1_6 inch White Wrapped Piping-Green Band



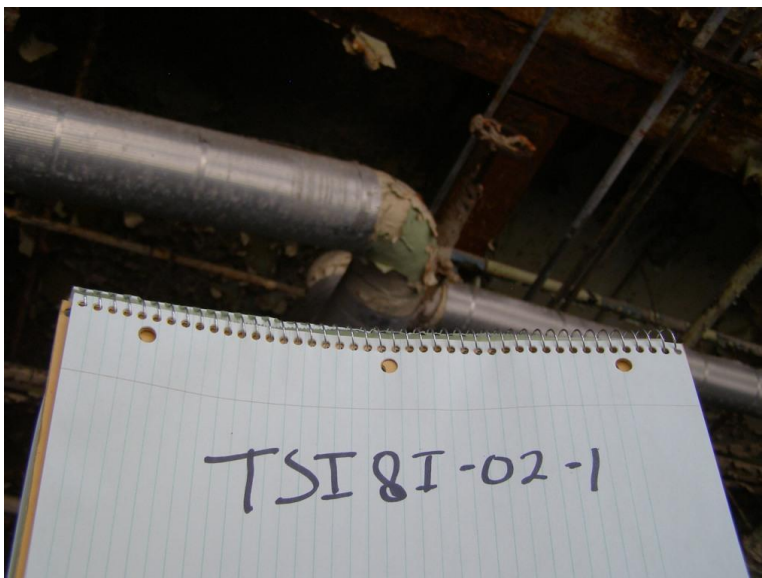
Tsi8i-01-1_8 inch Metal Wrapped Piping with Blue Arrows



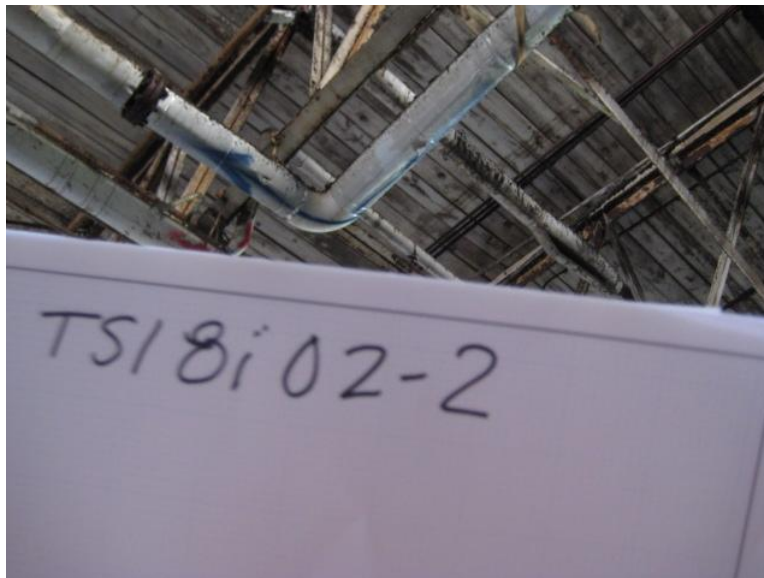
Tsi8i-01-2_8 inch Metal Wrapped Piping



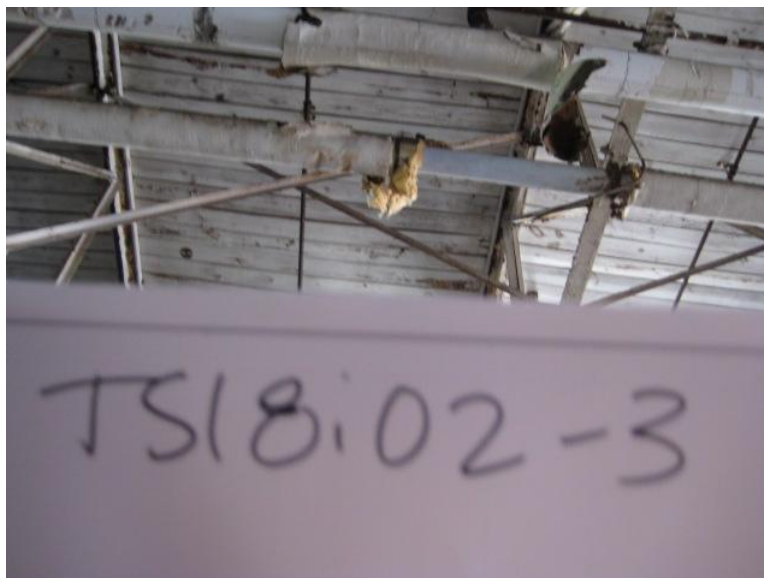
Tsi8i-01-3_8 inch White Wrapped Piping



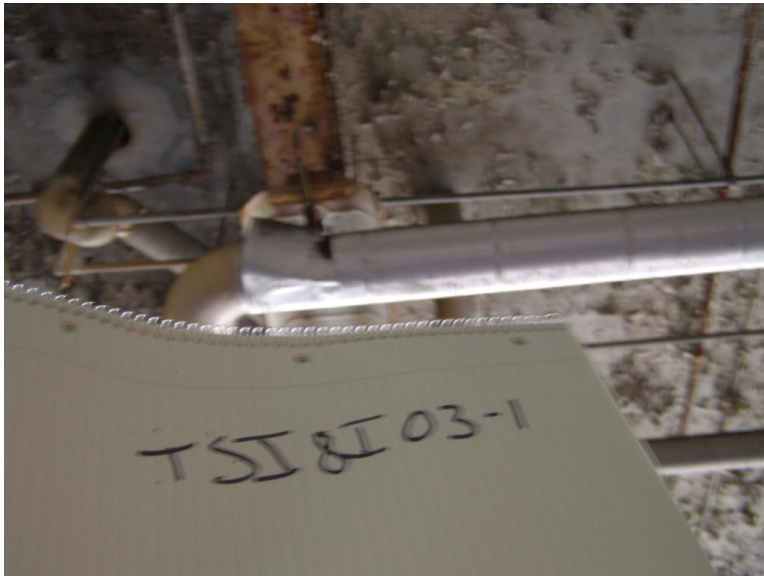
Tsi8i-02-1_8 inch Metal Wrapped Piping



Tsi8i-02-2_8 inch Metal Wrapped Piping



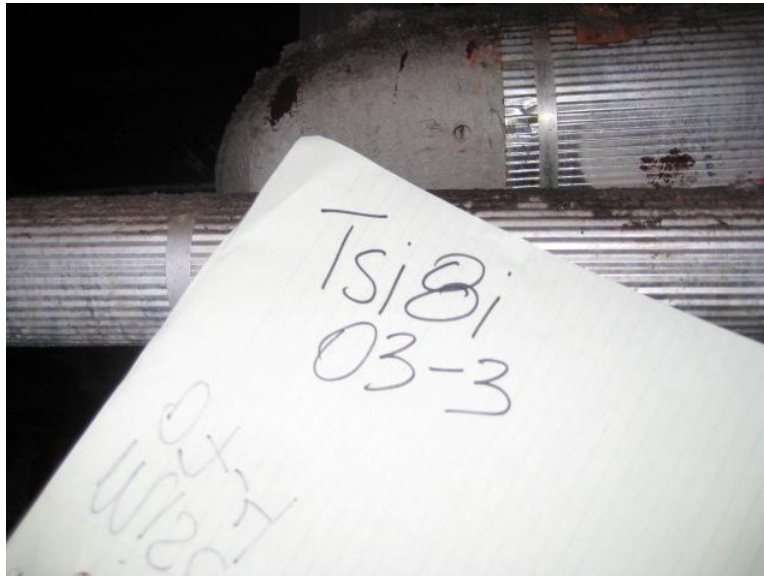
Tsi8i-02-2_8 inch Metal Wrapped Piping



Tsi8i-03-1_8 inch Metal Wrapped Piping-Orange Band



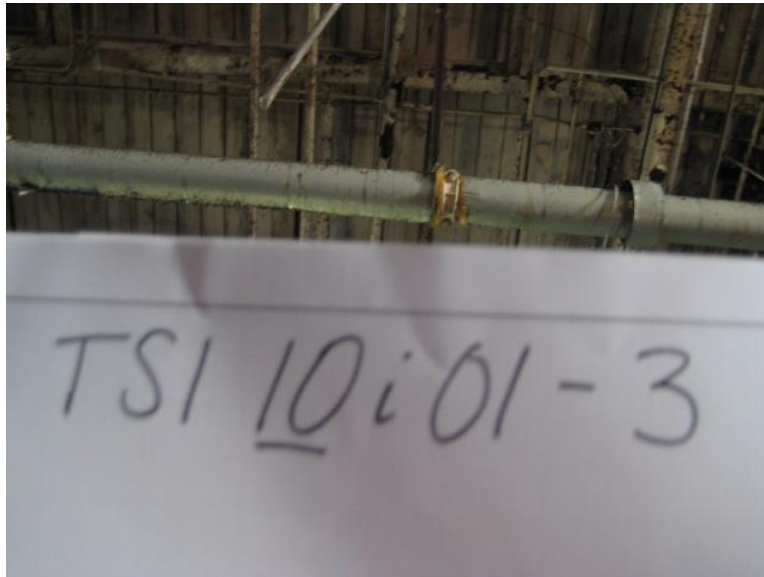
Tsi8i-03-2_8 inch Orange Boiler Wrapped Piping



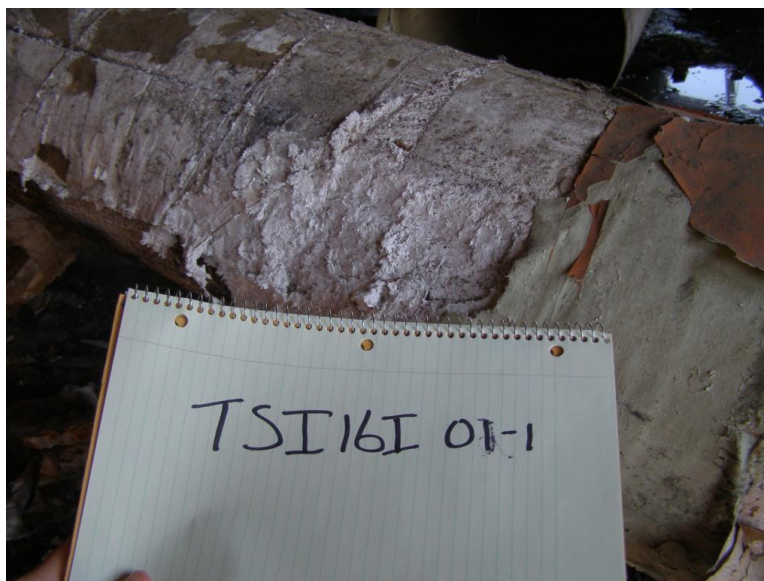
Tsi8i-03-3_8 inch Metal Wrapped Piping



Tsi10i-01-1_10 inch Wrapped Piping



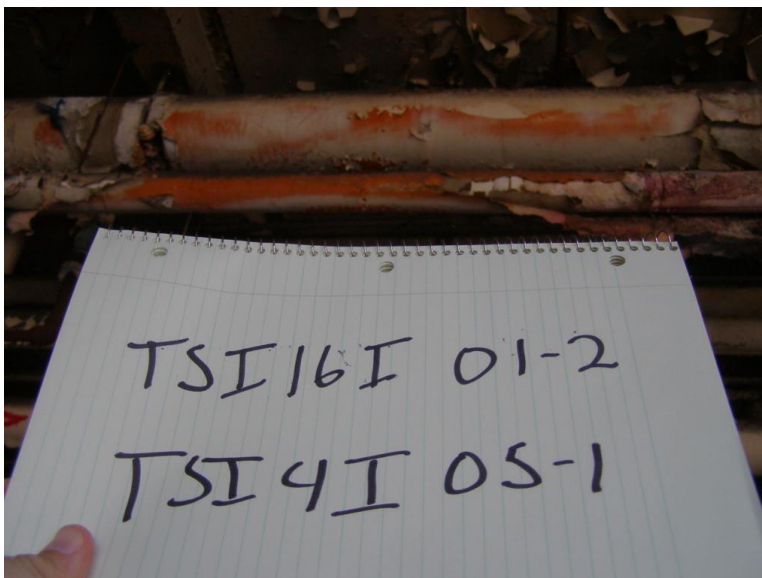
Tsi10i-01-3_10 inch Metal Wrapped Piping



Tsi16i-01-1_16 inch White Wrapped Piping-Orange Band



Tsi16i-01-3_16 inch Orange Boiler Wrapped Piping



Tsi16i-01-2_16 inch White Wrapped Piping-Orange Band; Red Arrows

APPENDIX B
EMSL LABORATORY RESULTS

APPENDIX C

COPY OF INSPECTORS LICENSE

