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FINAL ASBESTOS INSPECTION REPORT BUILDING 2NS CNC CHARLESTON SC
10/1/1998
ENVIRONMENTAL DETACHMENT CHARLESTON

ASBESTOS INSPECTION REPORT

**BUILDING 2NS
CHARLESTON NAVAL COMPLEX
CHARLESTON, SC**

FINAL REPORT

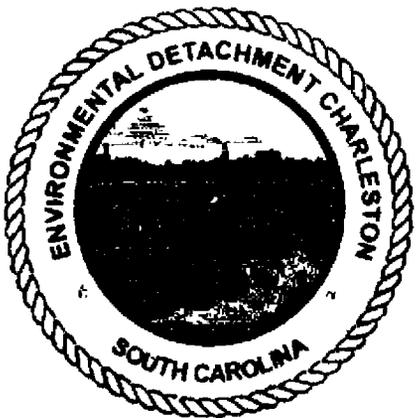
Prepared for:

**DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CHARLESTON, SC**



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OCTOBER 1998

ASBESTOS INSPECTION REPORT

BUILDING 2NS

CHARLESTON NAVAL COMPLEX
CHARLESTON, SC

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Date: 10/31/98

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Date: 10/29/98

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Date: 10/29/98

SURVEY PERFORMED BY:
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CHARLESTON NAVAL COMPLEX

ASBESTOS INSPECTION REPORT

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I. EXECUTIVE SUMMARY

1. INTRODUCTION

Asbestos Building Inspectors from Environmental Detachment, Charleston, SC conducted a survey to identify asbestos containing material (ACM) at Charleston Naval Complex. The survey was conducted in October of 1998. The results of the survey provide an inventory of ACM in one building; Building 2NS.

All inspectors were certified by an EPA accredited training center under the Asbestos Hazard Emergency Response Act (AHERA), as Building Inspectors. All supervisors and inspectors were employees of Environmental Detachment Charleston. Copies of individual certificates are in the **TRAINING** section of this report.

Suspect ACM was identified and sampled in accordance with AHERA guidelines. Some materials may not have been identified as ACM because they were portable and removable (e.g. blackboards, fire hoses, stage curtains), were not safe to sample (e.g. electrical insulation), or sampling would have damaged the material and impaired the normal system operation/integrity (e.g. heating/ventilation/AC systems, furnace, boiler door and pipe gaskets).

Bulk samples were analyzed by the Environmental Detachment, Laboratory Division. The Laboratory participates in the Navy's Asbestos Identification Proficiency Testing Program. The Industrial Hygiene Division of Naval Hospital Charleston analyzed Quality Assurance samples. The QA results were used to verify the accuracy of Environmental Detachment lab analyses. Polarized Light Microscopy (PLM) was used to analyze samples. Materials identified as ACM and either sampled or assumed were designated a homogeneous area by similarity of color, texture and date of application.

Each homogeneous area was assessed in accordance with the "ASBESTOS FACILITY INVENTORY/ASSESSMENT PROTOCOL," NEESA 70.2-010, developed by the NAVAL FACILITIES ENGINEERING SERVICE CENTER (NFESC). The NFESC protocol establishes an algorithm rating for each homogeneous area based on condition, quantity, friability, exposure potential, number of persons exposed, building significance and percentage of asbestos present in the material. The **BUILDING SUMMARY TABLE** lists the ratings for each homogeneous area. The rating is heavily weighted by condition, friability, exposure potential and building significance. If the rating system is used to prioritize buildings for abatement, note that buildings occupied at the time of the inspection have homogeneous areas with significantly higher ratings than unoccupied buildings. Ratings are probably more useful to prioritize abatement of homogeneous areas within a building.

2. FINDINGS SUMMARY

Of the one building inspected, Building 2NS contained confirmed, damaged ACM. See individual **Building Summaries** for specific locations, quantities and conditions. Buildings containing asbestos are required to be included in an Operations and Maintenance (O&M) Program. Any identified asbestos containing material not removed must be maintained following the guidelines of an O&M Plan.

3. RENOVATION/DEMOLITION

The National Emission Standard for Hazardous Air Pollutants (NESHAP) 40 CFR Part 61 requires written notification to the Environmental Protection Agency/local Air Quality Management District at least ten working days prior to demolition or renovation of ACM in quantities of 260 linear feet, 160 square feet, 35 cubic feet, or greater, except in cases of emergencies. Contractors are advised to verify most current regulations prior to start of work.

4. **REPORT ORGANIZATION**

Specific, detailed information on each inspected building is noted in *Section II, BUILDING SUMMARIES*, of this report and includes the following:

- Narrative description of the building
- Building Summary Table
- Laboratory Test Results Table
- Operations & Maintenance Table
- Building drawings indicating ACM locations
- Asbestos Abatement & Demolition Estimates

Following the *BUILDING SUMMARIES*, are tabbed sections for *LABORATORY RESULTS, CHAIN OF CUSTODY records and TRAINING documentation*.

Copies of individual Inspector's certificates and laboratory sample results are included in the appropriate sections.

5. **ABATEMENT COSTS**

Environmental Detachment Charleston inspectors found confirmed, non-friable and not damaged, as well as, damaged and accessible ACM in Building 2NS. We recommend that the facilities' Asbestos Program Manager initially focus his resources on all ACM assessed as friable. Cost estimates for asbestos removal and/or repair and demolition estimates are not included with this report.

6. **DISCLAIMER**

A comprehensive and thorough asbestos survey was conducted on these facilities by certified and experienced Environmental Detachment Charleston inspectors. Every effort was made to identify all asbestos containing material (ACM) in the facility, but due to random sampling techniques mandated by EPA regulations, the possibility always exists that some ACM remains undetected.

II. BUILDING SUMMARIES

The following pages report observations noted and suggest actions required as a result of an Asbestos survey conducted by Environmental Detachment Charleston personnel in October of 1998. One building at Charleston Naval Complex was inspected for possible presence of suspect/assumed asbestos. This section provides *Description, Findings, Observations, Recommended Abatement Action, and Recommendations for Operations and Maintenance* for each building inspected.

Materials identified as ACM and either sampled or assumed were designated as homogeneous areas by similarity of color, texture and date of application. Assessment of each homogeneous area was done in accordance with the *ASBESTOS FACILITY INVENTORY/ASSESSMENT PROTOCOL*, NEESA 70.2-010, developed by the NAVAL FACILITIES ENGINEERING SERVICE CENTER (NFESC). The NFESC protocol establishes an algorithm rating for each homogeneous area based on condition, quantity, friability, exposure and potential number of persons exposed, building significance and percentage of asbestos present in the material. The rating is heavily weighted by condition, friability, exposure potential and building significance. If the rating system is used to prioritize buildings for abatement, it should be noted that buildings occupied at the time of the inspection have homogeneous areas with significantly higher ratings than unoccupied buildings. Ratings are probably more useful in setting priorities for abatement of all homogeneous areas within a single building than in ranking the order of abatement of multiple buildings.

The room numbers shown on the CAD drawings and referenced in the report were assigned by the inspectors at the time of inspection. The Room numbering system is as follows:

Basement, B series; Crawlspace, C series; Attic, A series; Entry/exit points, E series; Roofs, R series; Stairwells, S series; Hallways, H series; 1st floor, 100 series; 2nd floor, 200 series; 3rd floor, 300 series; 4th floor, 400 series, etc.

BUILDING 2NS: Degaussing Facility and Boat Pier (533)

1. DESCRIPTION:

Building 2NS is a 4,641 square-foot building. It is a two story, concrete block structure with aluminum windows and a red brick exterior. The flat roofs are covered with a rolled, composition sheet material. The year built was 1961. The following information was identified during the survey and from the analysis of the samples taken:

- ◆ Twenty homogeneous areas were identified during the initial survey.
- ◆ Zero homogeneous areas were assumed to contain asbestos.
- ◆ Twenty of the homogeneous areas were suspected to contain asbestos and sampled to confirm.
- ◆ Four of the suspected homogeneous areas were confirmed to contain asbestos.
- ◆ Sixteen of the suspected homogenous areas did not contain asbestos.

2. FINDINGS:

Twenty homogeneous areas with suspected ACM were identified. Fifty-one samples were collected and analyzed. Sample results are summarized in the Laboratory Test Results table in this section. Friable asbestos was found in no homogeneous areas.

Confirmed ACM. The following homogeneous areas sampled were confirmed to contain asbestos:

- ◆ H-2: MISC, SHEETROCK, PAINTED, 4' x 8', White w/mud & tape, was Non-friable and Not Damaged.
- ◆ H-4: MISC, CAULKING, White, was Non-friable and Not Damaged.
- ◆ H-7: MISC, FLOOR TILE, 9" x 9", Grey w/mastic, was Non-friable and Damaged.
- ◆ H-20: MISC, GLAZING, WINDOW EXTERIOR, White, was Non-friable and Not Damaged.

Asbestos Free. Asbestos was not detected in the following homogeneous areas:

- ◆ H-1: MISC, CINDER BLOCK AND MORTAR, 8" x 8" x 16", Grey
- ◆ H-3: MISC, MORTAR, BRICK, 2" x 4" x 8", Grey
- ◆ H-5: MISC, CEILING TILE, 2' x 2', White
- ◆ H-6: TSI, FITTING, CLOTH WRAPPED, Grey
- ◆ H-8: MISC, GROUT, CERAMIC TILE, 6" x 4" Quarry tile, Grey
- ◆ H-9: SURFACING, PLASTER, Grey
- ◆ H-10: MISC, GROUT, CERAMIC TILE, 1" x 1" Speckled tile, Grey

- ◆ H-11: MISC, GROUT, CERAMIC TILE, 4" x 4" White tile, White
- ◆ H-12: MISC, CAULKING, Grey
- ◆ H-13: MISC, FLOOR TILE, 12" x 12", Blue w/white marble & mastic
- ◆ H-14: MISC, COVING MASTIC, 4" Blue coving, Black
- ◆ H-15: MISC, FLOOR TILE, 12" x 12", Grey w/white marble & mastic
- ◆ H-16: MISC, MORTAR, BRICK, 2" x 4" x 8" Red brick, Grey
- ◆ H-17: MISC, ROOFING, COMPOSITION SHEET, Black
- ◆ H-18: MISC, ROOFING, COATED, Black sealer
- ◆ H-19: MISC, ROOFING, COATED, Silver sealer

Assumed ACM. The following homogeneous areas were assumed to contain asbestos:

- ◆ None.

3. OBSERVATIONS:

No observations.

4. RECOMMENDED ABATEMENT ACTIONS:

Recommended actions for the following homogeneous areas:

- ◆ H-2: MISC, SHEETROCK, 4' x 8', White w/mud & tape: O&M
- ◆ H-4: MISC, CAULKING, White: O&M
- ◆ H-7: MISC, FLOOR TILE, Grey w/mastic: Remove/Repair/ O&M
- ◆ H-20: MISC, GLAZING, White: O&M

5. RECOMMENDATIONS FOR OPERATIONS AND MAINTENANCE:

Operations and Maintenance recommendations for confirmed and assumed homogeneous areas of ACM are found in the Operations & Maintenance Table of this section. The materials listed below should be maintained following the guidelines in an O & M Plan during regular maintenance and small-scale repair activities until removed.

MISC CAULKING is Confirmed, Non-friable ACM.

- ◆ H-4 (CAULKING, White) is located in Rooms 301, E-001, EXT & R-100.

MISC FLOOR TILE is Confirmed, Non-friable ACM.

- ◆ H-7 (FLOOR TILE, Grey w/mastic) is located in Rooms 100, 101, 103, 104, 105, 106, 107, 108, 205, 300 & S-001.

MISC GLAZING is Confirmed, Non-friable ACM.

- ◆ H-20 (GLAZING, White) is located on the Exterior & R-100.

MISC SHEETROCK is Confirmed, Non-friable ACM.

- ◆ H-2 (SHEETROCK, 4' x 8', White w/mud & tape) is located in Rooms 100, 101, 102, 103, 104, 105, 106, 107, 108, 200, 201, 202, 203, 204, 205, 206, 300, E-001, H-100, H-200 & S-001.

BUILDING SUMMARY TABLE

CHARLESTON NAVAL COMPLEX ASBESTOS BUILDING SURVEY

Building No. 2NS

H-No	ACM Y,N,A	Material Description	Quantity	Rating	Fria- bility	Cond	% D	Recommended Action	Cost Estimate	Comments
1	N	Misc, CINDER BLOCK AND MORTAR, 8" x 8" x 16", Grey	2,728 SF	0						
Rooms 101, 102, 103, 104, 105, 106, 107, 108, 109, 200, 201, 202, 204, 205, 206, 300, E-001										
2	Y	Misc, SHEETROCK, PAINTED, 4' x 8', White w/mud & tape	4,742 SF	3	Non	PD	0.0	O&M		
Rooms 100, 101, 102, 103, 104, 105, 106, 107, 108, 200, 201, 202, 203, 204, 205, 206, 300, E-001, H-100, H-200, S-001										
3	N	Misc, MORTAR, BRICK, 2" x 4" x 8", Grey	168 SF	0						
Rooms 109, E-001, R-100										
4	Y	Misc, CAULKING, White	209 LF	3	Non	PD	0.0	O&M		
Rooms 301, E-001, EXT, R-100										
5	N	Misc, CEILING TILE, 2' x 2', White	2,970 SF	0						
Rooms 103, 104, 105, 106, 200, 201, 205, 206, 300, 301, E-001, H-100, H-200										
6	N	TSI, FITTING, CLOTH WRAPPED, Grey	54 LF	0						
Rooms 101, 102, 103, 105, 106, 108, 109, E-001, H-100										
7	Y	Misc, FLOOR TILE, 9" x 9", Grey w/mastic	1,312 SF	4	Non	D	0.2	Remove/Repair/ O&M		
Rooms 100, 101, 103, 104, 105, 106, 107, 108, 205, 300, S-001										
8	N	Misc, GROUT, CERAMIC TILE, 6" x 4" Quarry tile, Grey	328 SF	0						
Rooms 101, 103, 104, 105, 106, 108, 200, 201, 202, 205, 206, H-100, S-001										
9	N	Surfacing, PLASTER, Grey	330 SF	0						
Rooms 101, 102, 204										
10	N	Misc, GROUT, CERAMIC TILE, 1" x 1" Speckled tile, Grey	154 SF	0						
Rooms 102, 204										
11	N	Misc, GROUT, CERAMIC TILE, 4" x 4" White tile, White	232 SF	0						
Rooms 102, 204										
12	N	Misc, CAULKING, Grey	578 LF	0						
Rooms 103, 200, 205, 206, 300, E-001, EXT, H-100, R-100										

H-No= Homogenous Area Number, ACM= Asbestos Containing Material: Y=Yes, N= No, A= Assumed, TSI= Thermal System Insulation, Misc= Miscellaneous, Quantity: SF= Square Footage, LF= Linear Feet, Friability: Mod= Moderate, Condition: PD= Potential for Damage, D= Damaged, SD= Significantly Damaged, Recommended Action: O&M= Operation and Maintenance

BUILDING SUMMARY TABLE

CHARLESTON NAVAL COMPLEX ASBESTOS BUILDING SURVEY

Building No. 2NS

H-No	ACM Y,N,A	Material Description	Quantity	Rating	Fria- bility	Cond	% D	Recommended Action	Cost Estimate	Comments
13	N	Misc, FLOOR TILE, 12" x 12", Blue w/white marble & mastic	1,529 SF	0						
Rooms 200, 201, 202, 203, 205, 206, H-200, S-001										
14	N	Misc, COVING MASTIC, 4" Blue coving, Black	378 LF	0						
Rooms 200, 201, 202, 203, 205, 206, H-200										
15	N	Misc, FLOOR TILE, 12" x 12", Grey w/white marble & mastic	110 SF	0						
Rooms 301										
16	N	Misc, MORTAR, BRICK, 2" x 4" x 8" Red brick, Grey	3,436 SF	0						
Rooms 301, EXT, R-100										
17	N	Misc, ROOFING, COMPOSITION SHEET, Black	2,336 SF	0						
Rooms R-100, R-101, R-102										
18	N	Misc, ROOFING, COATED, Black sealer	2,336 SF	0						
Rooms R-100, R-101, R-102										
19	N	Misc, ROOFING, COATED, Silver sealer	2,336 SF	0						
Rooms R-100, R-101, R-102										
20	Y	Misc, GLAZING, WINDOW EXTERIOR, White	772 LF	3	Non	PD	0.0	O&M		
Rooms EXT, R-100										

Note: Cost estimates are not included in this report.

H-No= Homogenous Area Number, ACM= Asbestos Containing Material: Y=Yes, N= No, A= Assumed, TSI= Thermal System Insulation, Misc= Miscellaneous, Quantity: SF= Square Footage, LF= Linear Feet, Friability: Mod= Moderate, Condition: PD= Potential for Damage, D= Damaged, SD= Significantly Damaged, Recommended Action: O&M= Operation and Maintenance

**LABORATORY TEST
RESULTS TABLE**

**CHARLESTON NAVAL COMPLEX
ASBESTOS BUILDING SURVEY
INDUSTRIAL LABORATORY TEST REPORT**

Building No. 2NS

Homo. Area No.	ASB Y/N	Sample Number	Room Number	Material Description:	Date Sampled	Date Analyzed	Sample Results	Percent Asbestos
1	NO	DEGAUS-001	E-001	Misc, CINDER BLOCK AND MORTAR, 8" x 8" x 16", Grey	10/21/98	10/22/98	No Asbestos Detected	0%
1	NO	DEGAUS-002	102	Misc, CINDER BLOCK AND MORTAR, 8" x 8" x 16", Grey	10/21/98	10/22/98	No Asbestos Detected	0%
2	YES	DEGAUS-003	103	Misc, SHEETROCK, 4' x 8', White w/mud & tape	10/21/98	10/22/98	Chrysotile	2%
2	YES	DEGAUS-004	104	Misc, SHEETROCK, 4' x 8', White w/mud & tape	10/21/98	10/22/98	Chrysotile	2%
2	YES	DEGAUS-005	E-001	Misc, SHEETROCK, 4' x 8', White w/mud & tape	10/21/98	10/22/98	Chrysotile	2%
3	NO	DEGAUS-006	E-001	Misc, MORTAR, 2" x 4" x 8", Grey	10/21/98	10/22/98	No Asbestos Detected	0%
3	NO	DEGAUS-007	109	Misc, MORTAR, 2" x 4" x 8", Grey	10/21/98	10/22/98	No Asbestos Detected	0%
4	YES	DEGAUS-008	301	Misc, CAULKING, White	10/21/98	10/22/98	Chrysotile	2%
4	YES	DEGAUS-009	R-100	Misc, CAULKING, White	10/21/98	10/22/98	Chrysotile	2%
5	NO	DEGAUS-010	E-001	Misc, CEILING TILE, 2' x 2', White	10/21/98	10/22/98	No Asbestos Detected	0%
5	NO	DEGAUS-011	H-100	Misc, CEILING TILE, 2' x 2', White	10/21/98	10/22/98	No Asbestos Detected	0%
5	NO	DEGAUS-012	105	Misc, CEILING TILE, 2' x 2', White	10/21/98	10/22/98	No Asbestos Detected	0%
5	NO	DEGAUS-013	200	Misc, CEILING TILE, 2' x 2', White	10/21/98	10/22/98	No Asbestos Detected	0%
5	NO	DEGAUS-014	300	Misc, CEILING TILE, 2' x 2', White	10/21/98	10/22/98	No Asbestos Detected	0%
6	NO	DEGAUS-015	H-100	TSI, FITTING, Grey	10/21/98	10/22/98	No Asbestos Detected	0%
6	NO	DEGAUS-016	103	TSI, FITTING, Grey	10/21/98	10/22/98	No Asbestos Detected	0%
6	NO	DEGAUS-017	109	TSI, FITTING, Grey	10/21/98	10/22/98	No Asbestos Detected	0%
7	YES	DEGAUS-018	100	Misc, FLOOR TILE, Grey w/mastic	10/21/98	10/22/98	Chrysotile	2%
7	YES	DEGAUS-019	103	Misc, FLOOR TILE, Grey w/mastic	10/21/98	10/22/98	Chrysotile	2%
7	YES	DEGAUS-020	104	Misc, FLOOR TILE, Grey w/mastic	10/21/98	10/22/98	Chrysotile	2%
7	YES	DEGAUS-021	205	Misc, FLOOR TILE, Grey w/mastic	10/21/98	10/22/98	Chrysotile	2%
7	YES	DEGAUS-022	300	Misc, FLOOR TILE, Grey w/mastic	10/21/98	10/22/98	Chrysotile	2%
8	NO	DEGAUS-023	105	Misc, GROUT, 6" x 4" Quarry tile, Grey	10/21/98	10/22/98	No Asbestos Detected	0%
8	NO	DEGAUS-024	106	Misc, GROUT, 6" x 4" Quarry tile, Grey	10/21/98	10/22/98	No Asbestos Detected	0%
9	NO	DEGAUS-025	101	Surfacing, PLASTER, Grey	10/21/98	10/22/98	No Asbestos Detected	0%
9	NO	DEGAUS-026	102	Surfacing, PLASTER, Grey	10/21/98	10/22/98	No Asbestos Detected	0%
9	NO	DEGAUS-027	102	Surfacing, PLASTER, Grey	10/21/98	10/22/98	No Asbestos Detected	0%
10	NO	DEGAUS-028	102	Misc, GROUT, 1" x 1" Speckled tile, Grey	10/21/98	10/22/98	No Asbestos Detected	0%
10	NO	DEGAUS-029	204	Misc, GROUT, 1" x 1" Speckled tile, Grey	10/21/98	10/22/98	No Asbestos Detected	0%

TEST METHOD: Method for the determination of Asbestos in bulk building materials (EPA/600/R-93/116) DETECTION LIMIT: 1%

**LABORATORY TEST
RESULTS TABLE**

**CHARLESTON NAVAL COMPLEX
ASBESTOS BUILDING SURVEY
INDUSTRIAL LABORATORY TEST REPORT**

Building No. 2NS

Homo. Area No.	ASB Y/N	Sample Number	Room Number	Material Description:	Date Sampled	Date Analyzed	Sample Results	Percent Asbestos
11	NO	DEGAUS-030	102	Misc, GROUT, 4" x 4" White tile, White	10/21/98	10/22/98	No Asbestos Detected	0%
11	NO	DEGAUS-031	204	Misc, GROUT, 4" x 4" White tile, White	10/21/98	10/22/98	No Asbestos Detected	0%
12	NO	DEGAUS-032	H-100	Misc, CAULKING, Grey	10/21/98	10/22/98	No Asbestos Detected	0%
12	NO	DEGAUS-033	103	Misc, CAULKING, Grey	10/21/98	10/22/98	No Asbestos Detected	0%
13	NO	DEGAUS-034	S-001	Misc, FLOOR TILE, Blue w/white marble & mastic	10/21/98	10/22/98	No Asbestos Detected	0%
13	NO	DEGAUS-035	202	Misc, FLOOR TILE, Blue w/white marble & mastic	10/21/98	10/22/98	No Asbestos Detected	0%
13	NO	DEGAUS-036	205	Misc, FLOOR TILE, Blue w/white marble & mastic	10/21/98	10/22/98	No Asbestos Detected	0%
14	NO	DEGAUS-037	202	Misc, COVING MASTIC, 4" Blue coving, Black	10/21/98	10/22/98	No Asbestos Detected	0%
14	NO	DEGAUS-038	205	Misc, COVING MASTIC, 4" Blue coving, Black	10/21/98	10/22/98	No Asbestos Detected	0%
15	NO	DEGAUS-039	301	Misc, FLOOR TILE, Grey w/white marble & mastic	10/21/98	10/22/98	No Asbestos Detected	0%
15	NO	DEGAUS-040	301	Misc, FLOOR TILE, Grey w/white marble & mastic	10/21/98	10/22/98	No Asbestos Detected	0%
15	NO	DEGAUS-041	301	Misc, FLOOR TILE, Grey w/white marble & mastic	10/21/98	10/22/98	No Asbestos Detected	0%
16	NO	DEGAUS-042	301	Misc, MORTAR, 2" x 4" x 8" Red brick, Grey	10/21/98	10/22/98	No Asbestos Detected	0%
16	NO	DEGAUS-043	EXT	Misc, MORTAR, 2" x 4" x 8" Red brick, Grey	10/21/98	10/22/98	No Asbestos Detected	0%
17	NO	DEGAUS-044	R-100	Misc, ROOFING, Black	10/21/98	10/22/98	No Asbestos Detected	0%
17	NO	DEGAUS-045	R-100	Misc, ROOFING, Black	10/21/98	10/22/98	No Asbestos Detected	0%
18	NO	DEGAUS-046	R-100	Misc, ROOFING, Black sealer	10/21/98	10/22/98	No Asbestos Detected	0%
18	NO	DEGAUS-047	R-100	Misc, ROOFING, Black sealer	10/21/98	10/22/98	No Asbestos Detected	0%
19	NO	DEGAUS-048	R-100	Misc, ROOFING, Silver sealer	10/21/98	10/22/98	No Asbestos Detected	0%
19	NO	DEGAUS-049	R-100	Misc, ROOFING, Silver sealer	10/21/98	10/22/98	No Asbestos Detected	0%
20	YES	DEGAUS-050	R-100	Misc, GLAZING, White	10/21/98	10/22/98	Chrysotile	2%
20	NO	DEGAUS-051	EXT	Misc, GLAZING, White	10/21/98	10/22/98	No Asbestos Detected	0%

TEST METHOD: Method for the determination of Asbestos in bulk building materials (EPA/600/R-93/116) DETECTION LIMIT: 1%

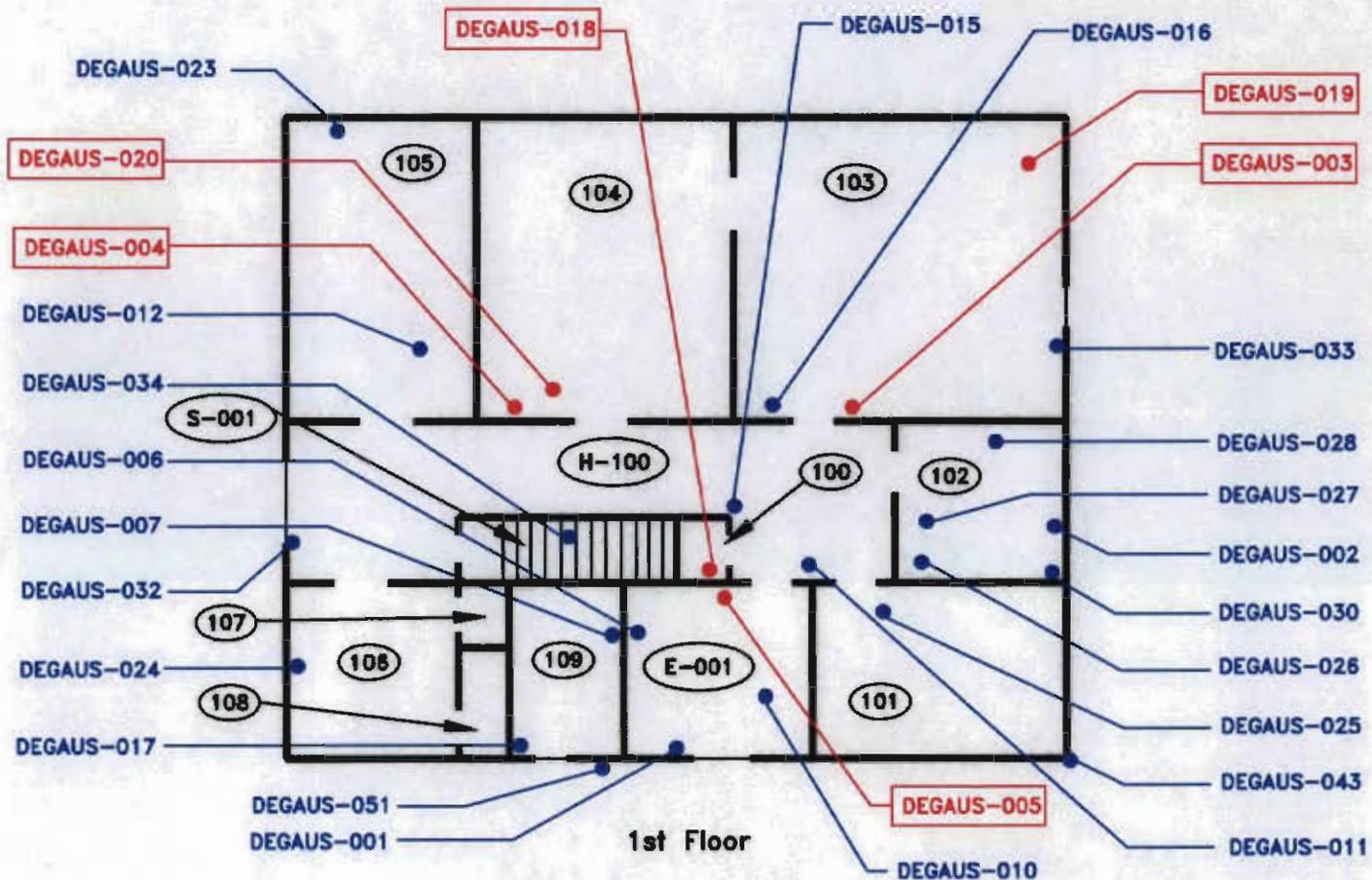
**OPERATIONS AND
MAINTENANCE TABLE**

**CHARLESTON NAVAL COMPLEX
ASBESTOS BUILDING SURVEY**

O&M

Bldg. No.	Homo No.	Material Description	Quantity	Rating	Friability	Condition	% D	Recommended Action
2NS	2	Misc, SHEETROCK, PAINTED, 4' x 8', White w/mud & tape	4,742 SF	3	Non	Not Damaged	0.00	O&M
Locations: Rooms 100, 101, 102, 103, 104, 105, 106, 107, 108, 200, 201, 202, 203, 204, 205, 206, 300, E-001, H-100, H-200, S-001								
2NS	4	Misc, CAULKING, White	209 LF	3	Non	Not Damaged	0.00	O&M
Locations: Rooms 301, E-001, EXT, R-100								
2NS	7	Misc, FLOOR TILE, 9" x 9", Grey w/mastic	1,312 SF	4	Non	Damaged	0.15	Remove/Repair/ O&M
Locations: Rooms 100, 101, 103, 104, 105, 106, 107, 108, 205, 300, S-001								
2NS	20	Misc, GLAZING, WINDOW EXTERIOR, White	772 LF	3	Non	Not Damaged	0.00	O&M
Locations: Rooms EXT, R-100								

Homo No= Homogenous Area Number, ACM= Asbestos Containing Material, TSI= Thermal System Insulation, MISC= Miscellaneous, Quantity: SF= Square Footage, LF= Linear Feet, Friability: Mod= Moderate, Non= Non-Friable, Recommended Action: O&M= Operation and Maintenance, Refer to the Section III Operations and Maintenance Plan for standard O&M and Repair procedures.



LEGEND

(XXX) — Indicates unique room number assigned by Inspector

XXXX-XXX — Indicates sample locations which tested positive for asbestos



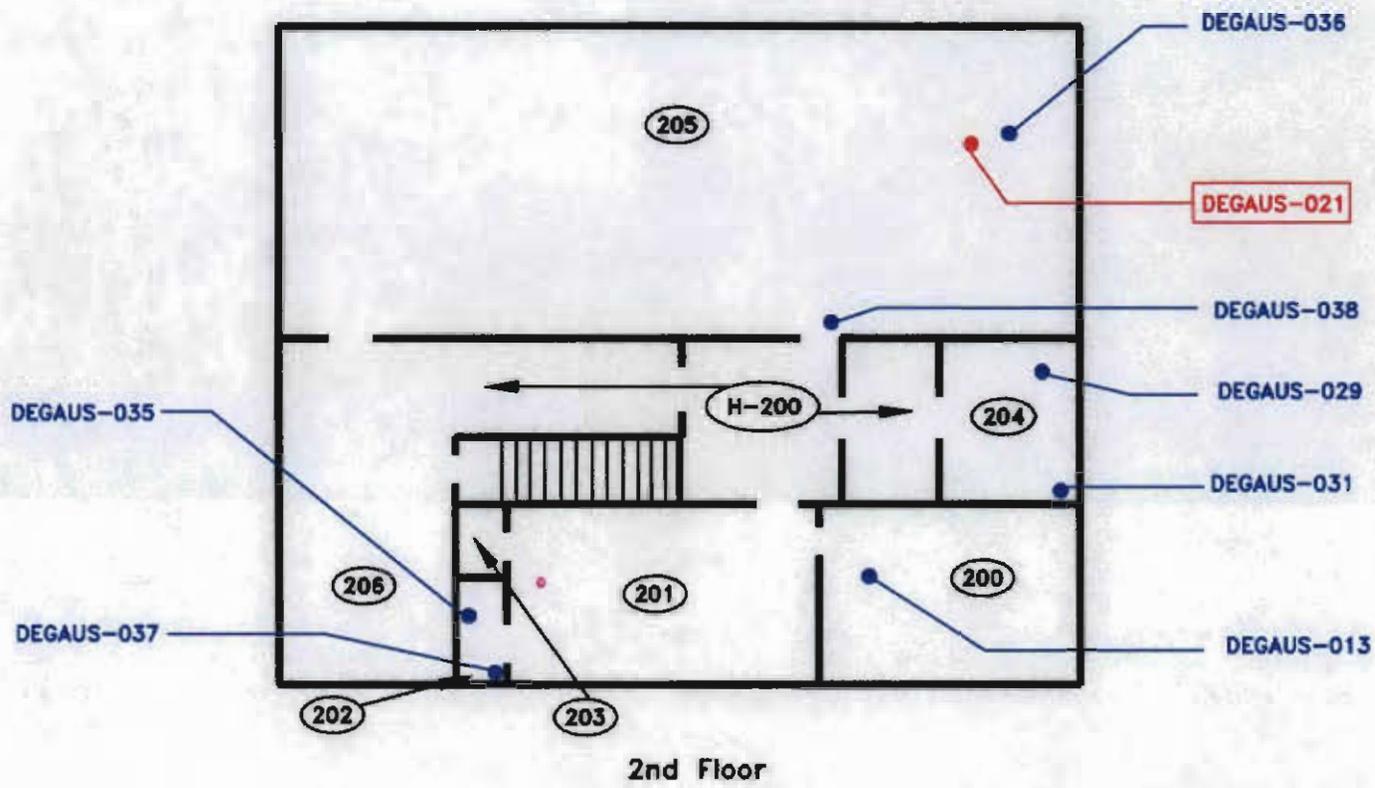
ENVIRONMENTAL DETACHMENT CHARLESTON
 1899 NORTH HOBSON AVENUE - BUILDING 30
 NORTH CHARLESTON, SOUTH CAROLINA 29405-2106

SAMPLE LOCATIONS
2NS DEGAUSSING STATION
CHARLESTON NAVAL COMPLEX, CHARLESTON, SC

DATE 10-26-98	PREPARED BY: B.D. MURRAY	REV ORIG
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SCALE: NONE

SHEET 1 of 4



2nd Floor

LEGEND

(xxx) — Indicates unique room number assigned by Inspector

xxxx-xxx — Indicates sample locations which tested positive for asbestos

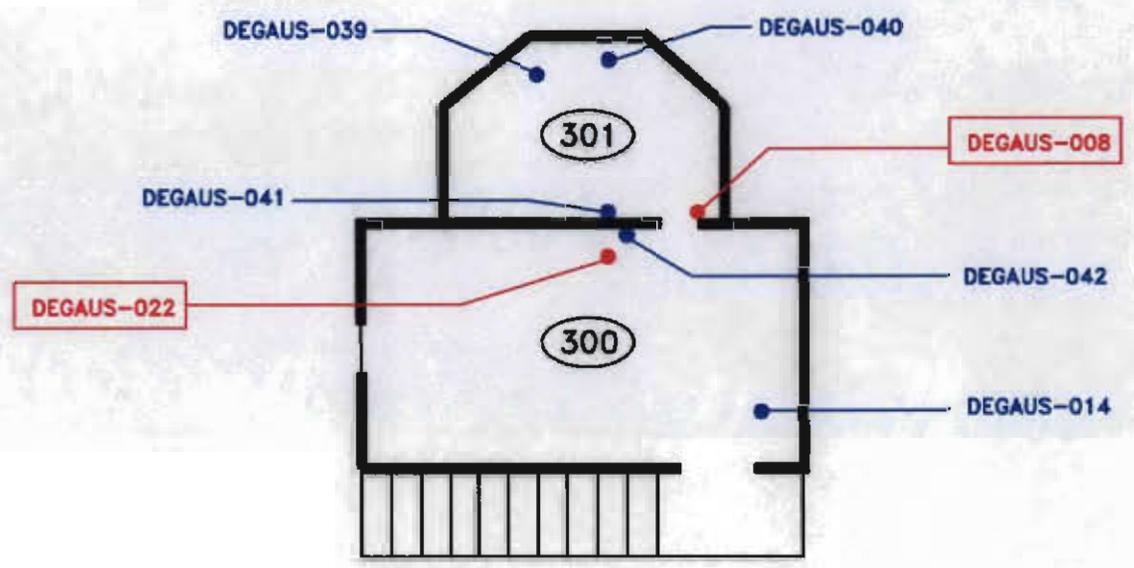


ENVIRONMENTAL DETACHMENT CHARLESTON
 1899 NORTH HOBSON AVENUE - BUILDING 30
 NORTH CHARLESTON, SOUTH CAROLINA 29405-2108

SAMPLE LOCATIONS
 2NS DEGAUSSING STATION
 CHARLESTON NAVAL COMPLEX, CHARLESTON, SC

DATE 10-26-98	PREPARED BY: B.D. MURRAY	REV ORIG
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SCALE: NONE	SHEET 2 of 4
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3rd Floor

LEGEND

(XXX) — Indicates unique room number assigned by Inspector

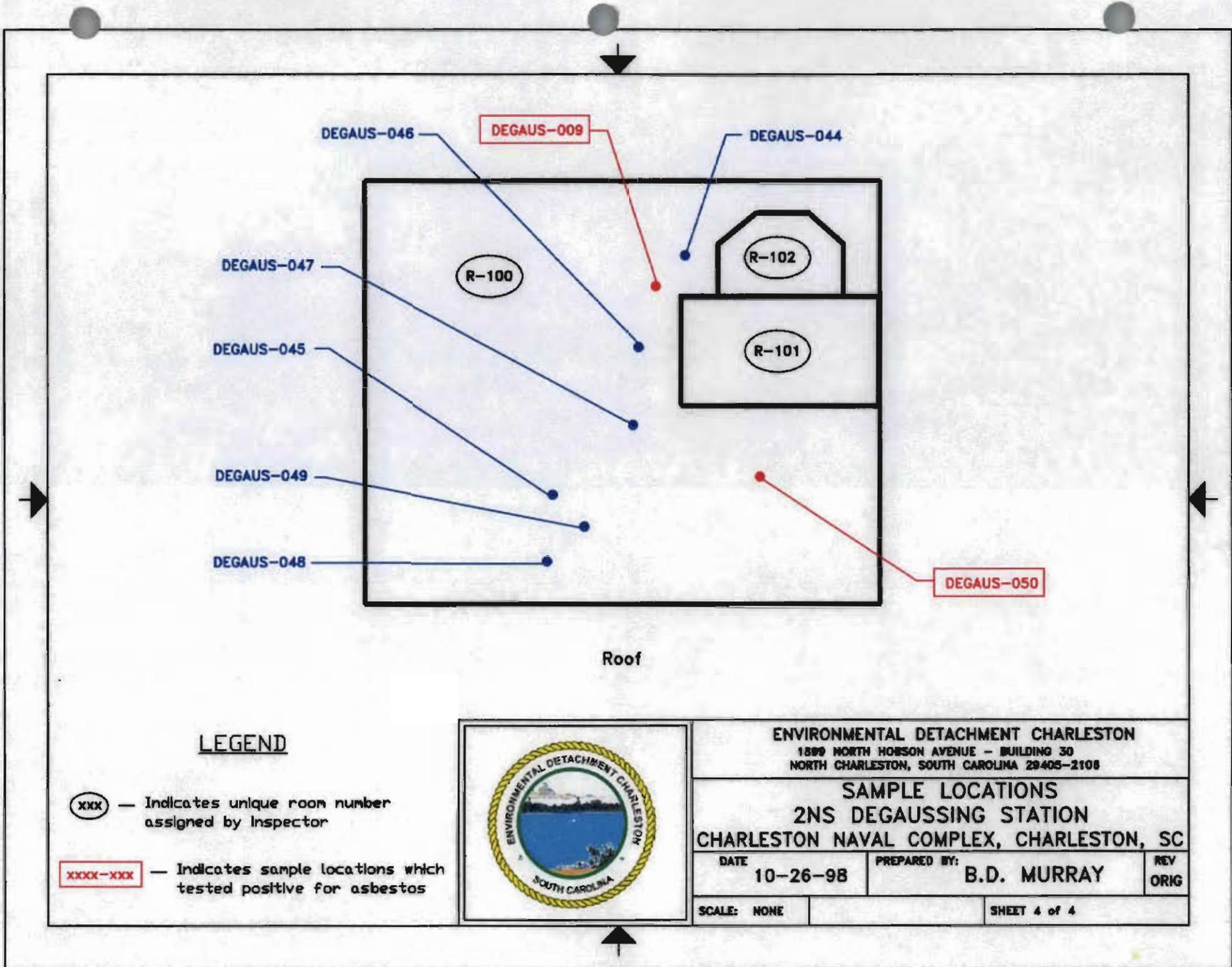
XXXX-XXX — Indicates sample locations which tested positive for asbestos



ENVIRONMENTAL DETACHMENT CHARLESTON
 1899 NORTH HOBSON AVENUE - BUILDING 30
 NORTH CHARLESTON, SOUTH CAROLINA 29405-2108

SAMPLE LOCATIONS
 2NS DEGAUSSING STATION
 CHARLESTON NAVAL COMPLEX, CHARLESTON, SC

DATE 10-26-98	PREPARED BY: B.D. MURRAY	REV ORIG
SCALE: NONE	SHEET 3 of 4	



ASBESTOS LABORATORY SAMPLE LOG



FACILITY: CNC

BUILDING #: ZNS DATE: 10/21/98

INSPECTORS NAMES: MAY / BUTLER
(PRINT)

INSPECTOR SIGNATURE / LICENSE #: R. Butler 22415

SAMPLE NO.	HOMO #	SAMPLE LOCATION (Room #, Floor #, Etc.)	SAMPLE DESCRIPTION	RESULTS
Environmental Detachment Charleston, SC DEGAUS - 001	1	E-001	MORTAR	NONE
Environmental Detachment Charleston, SC DEGAUS - 002	1	Room 102	↓	NONE
Environmental Detachment Charleston, SC DEGAUS - 003	2	Room-103	Sheetrock w/ <u>Mud & TApe</u>	> 1% CHRYSOTILE
Environmental Detachment Charleston, SC DEGAUS - 004	2	Room-104	<u>mud</u>	> 1% CHRYSOTILE
Environmental Detachment Charleston, SC DEGAUS - 005	2	E-001	<u>mud</u> ↓	> 1% CHRYSOTILE
Environmental Detachment Charleston, SC DEGAUS - 006	3	E-001	MORTAR	NONE
Environmental Detachment Charleston, SC DEGAUS - 007	3	Room 109	↓	NONE
Environmental Detachment Charleston, SC DEGAUS - 008	4	Room 301	<u>white CAULKING</u>	> 1% CHRYSOTILE
Environmental Detachment Charleston, SC DEGAUS - 009	4	R-100	<u>WHITE CAULKING</u> ↓	> 1% CHRYSOTILE
Environmental Detachment Charleston, SC DEGAUS - 010	5	E-001	Ceiling Tile	NONE
Environmental Detachment Charleston, SC DEGAUS - 011	5	H-100		NONE
Environmental Detachment Charleston, SC DEGAUS - 012	5	Room 105	↓	NONE

ASBESTOS LABORATORY SAMPLE LOG



FACILITY: CNC

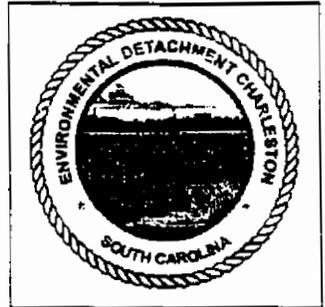
BUILDING #: 2NS DATE: 10/21/98

INSPECTORS NAMES: MAY / BUTLER
(PRINT)

INSPECTOR SIGNATURE / LICENSE #: R. Butler 22415

SAMPLE NO.	HOMO #	SAMPLE LOCATION (Room #, Floor #, Etc.)	SAMPLE DESCRIPTION	RESULTS
Environmental Detachment Charleston, SC DEGAUS - 013	5	Room 200	Ceiling Tile	NONE
Environmental Detachment Charleston, SC DEGAUS - 014	5	Room 300	↓	NONE
Environmental Detachment Charleston, SC DEGAUS - 015	6	H-100	TSI Fitting	NONE
Environmental Detachment Charleston, SC DEGAUS - 016	6	Rm-103		NONE
Environmental Detachment Charleston, SC DEGAUS - 017	6	Rm-109	↓	NONE
Environmental Detachment Charleston, SC DEGAUS - 018	7	Room 100	FLOOR TILE 4'x4' GREY w/MASTIC	> 1% CHRYSO TILE
Environmental Detachment Charleston, SC DEGAUS - 019	7	Room 103	FLOOR TILE GREY	> 1% CHRYSO TILE
Environmental Detachment Charleston, SC DEGAUS - 020	7	Room 10 4	FLOOR TILE GREY	> 1% CHRYSO TILE
Environmental Detachment Charleston, SC DEGAUS - 021	7	Room 205	FLOOR TILE GREY	> 1% CHRYSO TILE
Environmental Detachment Charleston, SC DEGAUS - 022	7	Room 300	FLOOR TILE GREY	> 1% CHRYSO TILE
Environmental Detachment Charleston, SC DEGAUS - 023	8	Rm-105	GROUT	NONE
Environmental Detachment Charleston, SC DEGAUS - 024	8	Rm-104	↓	NONE

ASBESTOS LABORATORY SAMPLE LOG



FACILITY: CNC

BUILDING #: ZNS DATE: 10/21/98

INSPECTORS NAMES: MAY / BUTLER
(PRINT)

INSPECTOR SIGNATURE / LICENSE #: R. Butler 22A15

SAMPLE NO.	HOMO #	SAMPLE LOCATION (Room #, Floor #, Etc.)	SAMPLE DESCRIPTION	RESULTS
Environmental Detachment Charleston, SC DEGAUS - 025	9	Rm-101	PLASTER	NONE
Environmental Detachment Charleston, SC DEGAUS - 026	9	Rm-102		NONE
Environmental Detachment Charleston, SC DEGAUS - 027	9	Rm-102	↓	NONE
Environmental Detachment Charleston, SC DEGAUS - 028	10	Room 102	FLOOR GROUT	NONE
Environmental Detachment Charleston, SC DEGAUS - 029	10	Room 204	↓	NONE
Environmental Detachment Charleston, SC DEGAUS - 030	11	Room 102	WALL GROUT	NONE
Environmental Detachment Charleston, SC DEGAUS - 031	11	Room 204	↓	NONE
Environmental Detachment Charleston, SC DEGAUS - 032	12	H-100	GREY CAULKING	NONE
Environmental Detachment Charleston, SC DEGAUS - 033	12	Rm-103	↓	NONE
Environmental Detachment Charleston, SC DEGAUS - 034	13	S-001	12"X12" BLUE FIT w/MASTIC	* TILE: NOT DETERMINED
Environmental Detachment Charleston, SC DEGAUS - 035	13	Room 202		* TILE: NOT DETERMINED
Environmental Detachment Charleston, SC DEGAUS - 036	13	Room 205	↓	* TILE: NOT DETERMINED

* FLOOR TILE CAN NOT BE DETERMINED TO BE ASBESTOS FREE ON THE BASIS OF PLM. SHEET 3 OF 5

ASBESTOS LABORATORY SAMPLE LOG



FACILITY: CNC

BUILDING #: ZNS DATE: 10/21/98

INSPECTORS NAMES: MAY / BUTLER
(PRINT)

INSPECTOR SIGNATURE / LICENSE #: R. Butler 22415

SAMPLE NO.	HOMO #	SAMPLE LOCATION (Room #, Floor #, Etc.)	SAMPLE DESCRIPTION	RESULTS
Environmental Detachment Charleston, SC DEGAUS - 037	14	ROOM 202	COVING MASTIC	NONE
Environmental Detachment Charleston, SC DEGAUS - 038	14	ROOM 205	↓	NONE
Environmental Detachment Charleston, SC DEGAUS - 039	15	Rm - 301	12"X12" Grey F/T w/MASTIC	* TILE: NOT DETERMINED
Environmental Detachment Charleston, SC DEGAUS - 040	15	Rm - 301		* TILE: NOT DETERMINED
Environmental Detachment Charleston, SC DEGAUS - 041	15	Rm - 301	↓	* TILE: NOT DETERMINED
Environmental Detachment Charleston, SC DEGAUS - 042	16	Rm - 301	MORTAR	NONE
Environmental Detachment Charleston, SC DEGAUS - 043	16	EXT	↓	NONE
Environmental Detachment Charleston, SC DEGAUS - 044	17	ROOF - 100	Roll ROOFING	NONE
Environmental Detachment Charleston, SC DEGAUS - 045	17		↓	NONE
Environmental Detachment Charleston, SC DEGAUS - 046	18		BLACK SEALER	NONE
Environmental Detachment Charleston, SC DEGAUS - 047	18		↓	NONE
Environmental Detachment Charleston, SC DEGAUS - 048	19	↓	SILVER SEALER	NONE

* FLOOR TILE CAN NOT BE DETERMINED TO BE ASBESTOS FREE ON SHEET 4 OF 5 THE BASIS OF TPLM.

ASBESTOS LABORATORY SAMPLE LOG



FACILITY: CNC

BUILDING #: 2NS DATE: 10/21/98

INSPECTORS NAMES: BUTLER/MAY
(PRINT)

INSPECTOR SIGNATURE / LICENSE #: R. Butler 22415

SAMPLE NO.	HOMO #	SAMPLE LOCATION (Room #, Floor #, Etc.)	SAMPLE DESCRIPTION	RESULTS
Environmental Detachment Charleston, SC DEGAUS - 049	19	ROOF - 100	Silver SEALER	NONE
Environmental Detachment Charleston, SC DEGAUS - 050	20	R-100	WINDOW GLAZING	> 1% CHRYSOTILE
Environmental Detachment Charleston, SC DEGAUS - 051	20	EXT	↓	NONE

EMSL Analytical, Inc.

10/28/98



19595 NE 10th Ave., Bay C
North Miami Beach, FL 99179
Phone (305) 650-0578 FAX (305) 650-0578

Charleston Environmental Detachment
1899 North Hobson Ave.
North Charleston,
South Carolina 29405-2106

Project ID: Bldg. 2NS
Attn: Vivian Washington
Reference Number: FL982324

Asbestos Analysis of Bulk Samples Performed by Transmission Electron Microscopy (TEM) Chatfield Method*

SAMPLE ID	DESCRIPTION	% NON-ASBESTOS FIBROUS STRUCTURES	% NON-FIBROUS MATERIAL	TEM RESULTS % ASBESTOS
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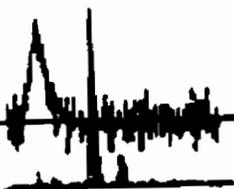
99EM-0001-01	Floor Tile	None Detected	100%	None Detected
99EM-0001-02	Floor Tile	None Detected	100%	None Detected
99EM-0001-03	Floor Tile	None Detected	85%	15% Chrysotile


Analyst


Approved
Signatory

ACCREDITATIONS: NVLAP #200204-0

results near 1% are not reliable by this method and a more accurate TEM method is recommended.



ASBESTOS CHAIN OF CUSTODY FORM



FACILITY: CNC BUILDING #: 2NS

INSPECTOR'S NAME(S): MAY / BUTLER DATE: 10/21/98
(PRINT)

TOTAL NUMBER OF SAMPLES RELINQUISHED: 51

<u>Sample #s</u>	<u>Relinquished by:</u>	<u>Received by:</u>	<u>Date</u>
<u>DEGAUS-001 THRU DEGAUS-051</u>	<u>R. Butler</u>	<u>J. Smith</u>	<u>10-22-98</u>

Additional Information / Comments

ANALYSIS

<u>Analysis Completed</u>	<u>Sample #s</u>
Authenticated by: <u>Jerry J. Smith</u> Date: <u>10-22-98</u>	<u>CNC DET 15</u>
Authenticated by: _____ Date: _____	<u>8-2-00/11/15/1</u>
Authenticated by: _____ Date: _____	

> Identification is determined by Polarized Light Microscopy and Dispersion Staining <

Notify of Results: Moltzen Phone 743-6777 Ext-238

ENVIRONMENTAL DETACHMENT CHARLESTON
1899 NORTH HOBSON AVENUE
NORTH CHARLESTON, SC 29405-2106
(803) 743-6777



EMSL Analytical, Inc.

CHAIN OF CUSTODY

Asbestos

EMSL Representative: Ray Wilkins
 Your Company Name: CHARLESTON ENVIRONMENTAL DEPARTMENT
 Street: 1899 NORTH HARBOR AVE
 Box #: _____
 City/State: NORTH CHARLESTON S.C. Zip: 29405-2006

EMSL-Bill to: SPORT ENCLAVE CHASN
Tom Rizer / North Sumak
 Street: 1899 NORTH HARBOR AVE.
 Box #: 7269 - 30
 City/State: NORTH CHARLESTON S.C. Zip: 29405-2

Phone Results to: Name: VIVIAN WASHINGTON / BILL HERR
 Telephone #: (803) 743-6777 Ext. 248 or 124
 Project Name/Number: Bldg 2NS

Fax Results to: Name: VIVIAN WASHINGTON
 Fax #: (803) 743-9449
 Purchase Order #: N68836-98-74-X062
CNSF 38008CO29

MATRIX

- Air
- Bulk
- Wipe
- Floor Tile
- Drinking Water
- Wastewater
- Soil
- Dust
- Micro-Vac

TURNAROUND

- 6-10 Days
 - 5 Days
 - 72 Hours
 - 48 Hours
 - 24 Hours
 - 12 Hours
 - Same Day*
 - 6 Hours
- *S.D. - A.M. Delivery by Fed. Ex. - Results by Mid-Night or Earlier.

- | | | |
|---|---|--|
| <p>PCM</p> <ul style="list-style-type: none"> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> OSHA <input type="checkbox"/> Other: _____ <p>PLM</p> <ul style="list-style-type: none"> <input type="checkbox"/> EPA 600 <input type="checkbox"/> EPA Point Count <input type="checkbox"/> NY Stratified Point Count <input type="checkbox"/> PLM NOB (Gravimetric) <input type="checkbox"/> Other: _____ <p>SEM</p> <ul style="list-style-type: none"> <input type="checkbox"/> Qualitative <input type="checkbox"/> Quantitative | <p>TEMAIR</p> <ul style="list-style-type: none"> <input type="checkbox"/> AHERA <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <p>TEM BULK</p> <ul style="list-style-type: none"> <input type="checkbox"/> Drop Mount (Qualitative) <input checked="" type="checkbox"/> Charfield <input type="checkbox"/> Charfield with SEM QC <input type="checkbox"/> Conventional (Quantitative) <input type="checkbox"/> EMSL Method <input type="checkbox"/> TEM NOB (Gravimetric) <input type="checkbox"/> TEM NOB (Gravimetric) with SEM QC | <p>TEM WATER</p> <ul style="list-style-type: none"> <input type="checkbox"/> Wastewater <input type="checkbox"/> Drinking Water EPA 100.1 <input type="checkbox"/> Water - NY Wastewater <input type="checkbox"/> Water-NY Drinking Water <p>TEM MICROVAC / WIPE</p> <ul style="list-style-type: none"> <input type="checkbox"/> ASTM D 5755-95 <p>YRD</p> <ul style="list-style-type: none"> <input type="checkbox"/> Asbestos <input type="checkbox"/> Silica <p>OTHER</p> <ul style="list-style-type: none"> <input type="checkbox"/> _____ |
|---|---|--|

SAMPLE NUMBER	LOCATION	VOLUME (if Applicable)
99EM-0001-01	Bldg 2NS, Degaus-035	NA
99EM-0001-02	Bldg 2NS, Degaus-040	NA
99EM-0001-03	Bldg. 53, Todiampolis	NA

Client Sample # (s) 3 Total Samples: 3

Relinquished: William E. May Date: 10/23/98 Time: 0940

Received: Vivian Washington Date: 10/23/98 Time: 0940

Received: EMU Date: 10-24-98 Time: 11:33 am

F4982324

Medical University of South Carolina

College of Health Professions

Program in Environmental Health Sciences

171 Ashley Avenue Charleston, South Carolina, 29425 (803) 792-5315

Certifies that

RICHARD BUTLER

Attended and Satisfactorily completed the

Inspecting for Asbestos in Buildings Refresher

conducted October 13 through October 13, 1998

and satisfactorily passed an exam on October 13, 1998.



IR27010-01856
Certificate number

4
Contact Hours

247-15-7024
ID Number

T. A. Rowland III
T. A. Rowland, III
Program Director

October 13, 1998
Exam Date

October 12, 1999
Certificate Expires

T. A. Rowland III
T. A. Rowland III
Instructor

This certifies that the above recipient has completed the requisite training for Asbestos Accreditation under TSCA Title II.

Medical University of South Carolina

College of Health Professions

Program in Environmental Health Sciences

171 Ashley Avenue Charleston, South Carolina, 29425 (803) 792-5315

Certifies that

WILLIAM E. MAY

Attended and Satisfactorily completed the
Inspecting for Asbestos in Buildings Refresher

conducted August 19 through August 19, 1998

and satisfactorily passed an exam on August 19, 1998.



IR27010-01813

Certificate number

4

Contact Hours

247-98-0917

ID Number

T. A. Rowland, III

T. A. Rowland, III
Program Director

August 19, 1998

Exam Date

August 18, 1999

Certificate Expires

James C. Graves

James C. Graves
Instructor

This certifies that the above recipient has completed the requisite training for Asbestos Accreditation under TSCA Title II.