

City of Lynchburg
Procurement Division
900 Church Street
Lynchburg, Virginia 24504
Telephone No.: (434) 455-3970
Fax No.: (434) 845-0711

**Addendum for Invitation for Bids
College Hill WTP Interior Renovations
2016-075**

Date: 05/12/2016
From: Lisa Moss, Buyer VCA
RE: Addendum No. 1

This Addendum supplements and amends the original Plans and Specifications and shall be taken into account in preparing proposals and shall become a part of the Contract Documents. The Bidder shall indicate receipt of this Addendum and all previously issued Addenda on the Bid Form.

Questions and answers:

1. If there is one electrical panel on each floor can it be utilized for flooring sub? If not, will the contractor be responsible for providing a generator?

Answer: The electrical panels can be used for flooring sub provided it has enough capacity. It is up to the contractor to verify panel capacity and empty receptacles. Contractor will be responsible for a generator if the capacity is not available.

2. Who is responsible for completing the inspections?

Answer: Inspections will be daily by the City inspector (Tom Cantrell) and at other key points by City Building Officials (as required) and the Architect (as needed).

3. Who do we contact for additional site visits?

Answer: Contact Scott Parkins for additional site visits.

Clarifications and supplemental information:

- A. See attached Pre-bid Conference Meeting notes.

- B. See Attachment "A" - Asbestos Management Plan report UT-101, dated January 1989. See SK-1 for location of ACM floor tile and mastic to be removed for new floor installation. This is the only space that requires the contractor to consider ACM for bidding purposes. Any additional ACM discovered will be a change in contract amount.

Company Name: _____ Address: _____ Date: _____

Authorized Signature: _____ Title: _____

Print Name: _____ Telephone No.: _____ Fax No.: _____



Pre-Bid Meeting Conference

Date: 5-9-2016

Owner: City of Lynchburg (COL)

Project: Department of Water Resources
College Hill Water Treatment Plant: Interior Renovations
City Project No. 11030-BG

Meeting Location: College Hill Water Treatment Plant Administration
Building Conference Room located at 601 Taylor Street Lynchburg VA.

Time: 11:00- 12:00

Architect: Architectural Partners
Comm. No. 11119

Last Day for Submittal of Questions: 9:00 a.m. on May 17, 2016

Bid Date: May 25, 2016
Time: 3:00 pm

The following is a list of items discussed at the Pre-Bid Meeting Conference.

1. Attendee Sign-In sheet was circulated and will be posted on City of Lynchburg website.
2. Introductions were made.
3. Stephanie Suter (COL) noted that the contract documents, including the addenda, are located on the City's web site. <http://www.lynchburgva.gov/current-solicitations>.
4. Deadline for bidding related questions submitted to Lisa will be no later than 9:00 a.m. on May 17, 2016
5. Bid opening will be at City Hall, Bidder's Room, Third Floor May 25, 2016 at 3:00pm.

6. Bid Bond of 5% is required (acknowledge in Bid Form).
7. Contract documents require Certificates of Insurance, Performance & Labor & Material Bonds.
8. Stephanie noted there is a \$500/day liquidated damages included in this contract. 240 calendar days construction period is listed in the Construction Agreement.
9. Scott Parkins , City of Lynchburg Utilities engineer, will be the City's Project Manager. Tom Cantrell, City of Lynchburg's Construction Coordinator will be the direct contact for any field issues between the Contractor and the City.
10. Architect & engineers described the construction type, equipment, and associated site work for the project. The architects and engineers are located within a mile of the project and will be available for reviews, RFI's and ASI's as required by the City.
11. Mark Smith, architect briefly described the phasing of work and the building components. Phasing plans may be adjusted once the contractor has reviewed project and can offer alternative phasing/scheduling that if mutually agreed to. Key components of the interior building alterations and renovation include, minor demolition of non-load bearing walls, new flooring, painting, ceilings, lockers, gypsum wallboard partitions and doors.
12. Chris Snyder (mechanical engineer) described the HVAC and plumbing scope of work. It was explained that the HVAC consists of removing selected pieces of heating equipment and abandoned fans and ventilators and replacement with new heating and air conditioning equipment to add cooling for the renovated locker and toilet rooms. Some existing equipment will remain. It was explained that there will be multiple indoor fan coil units matched to single outdoor units with one outdoor unit for areas on each of the two floors served. During the walk through, the proposed locations of the outdoor units was pointed out. It was also explained that the plumbing systems serving the renovated spaces will be reworked as necessary to serve new fixtures and largely involves serving new fixtures where existing fixtures are to be removed. Hot water and cold water will be tied back into the existing piping and new sanitary piping will be installed as necessary to serve the new fixtures with the sanitary piping for the 2nd floor being installed above the existing finished spaces on the first floor.
13. Walt Miles (electrical engineer) briefly described the scope of the electrical work to include new lighting and power distribution to new HVAC equipment in affected areas and to accommodate rearrangement of ceiling light fixtures to coordinate with new ceilings. Panel locations were pointed out during the walk through of the building.

14. Scott noted that access to the site will be at the 6th Street entrance (existing loading dock to building). This entrance is available at all times. If the contractor requires access through Taylor Street Chemical Building entrance (opposite side of building) this gate can be accessed as well.
15. Dumpster can be located on 6th Street yard.
16. Parking and temporary facilities will be made available in close proximity (adjacent parking lot) to building site.
17. Scott discussed the security restraints associated with the site. The City requires the contractor to sign-in for access. Gate and building access passes will be issued for duration of project.
18. Contractor has a possible area for lay down area and staging at the yard behind 525 Taylor side of the site. The existing building has an elevator and loading dock which may be suitable for the contractor to access the interior of building with materials and equipment. The loading dock can be used on an as-need basis.
19. Scott stated that if anyone needs to see the site during the bidding period, please call him at (434) 455-4248 to arrange a visit time. The Owner is encouraging contractors to visit the site prior to bidding.
20. It was emphasized that all questions, substitutions, etc... basically all communication needs to go through Lisa Moss, at the City of Lynchburg. This information will be submitted to the architects and engineers for response as addenda. No verbal communications are binding.
21. Building permit fee is waived, however, contractor is responsible for permit application.
22. Question/ Answer / Clarification period was given with the following:

Q: Is there asbestos in the building?
A: Asbestos Management Plan UT-101 dated January 1989 will be attached to Addenda No.1 for the contractor's review.

Q: Has the Code Official reviewed the design?
A: Mark Smith, architect, will review documents with the City's Building Official for any design concerns and review comments prior to permit application.

Q: Is electric provided? Voltage?

A: Yes. As for voltage, contractor can confirm required voltage during building walk-through or during future visit to building.

Q: What are possible working hours?

A: Normal building operations are 7a.m. - 7p.m. For extended hours of work, the building can be used 24-7.

1. Meeting was adjourned at 11:30 with a following walk-thru of the site. Attendees were allowed to walk the site and the interior of the building. Architect, engineers and COL staff were present on-site for contractor's questions and comments.
2. End of site visit at approximately 12:30.
3. End of minutes.

Respectfully submitted,



Mark W. Smith
Architect

Cc: City of Lynchburg (COL), MEAD, file

ARCHITECTURAL PARTNERS, P.C.
10 Ninth Street, Lynchburg Virginia 24504
Phone:434/846-8456

Attachment - A
May 12, 2016

**ASBESTOS MANAGEMENT PLAN
CITY OF LYNCHBURG
NEW FILTRATION PLANT**

UT-101

Prepared for:

**CITY OF LYNCHBURG
LYNCHBURG, VIRGINIA**

Prepared by:

**ENVIRONMENTAL PROTECTION SYSTEMS
A Division of Enviro/Analysis Corporation
Chantilly, Virginia**

**Project No. 6.89.1203.01
January, 1989**

REPORT CERTIFICATION

We hereby certify that the inspection, sampling and assessment of ACBM at the New Filtration Plant facility was performed by Environmental Protection Systems (EPS) on November 15, 1988 under the direction of the following licensed personnel:

VIRGINIA ASBESTOS LICENSE NUMBER

Brian J. Burgher, P.E.	Management Planner	#000227
C. Edwin Craft	Management Planner	#000255
	Inspector	#000384
Tracy C. McAlister	Inspector	#000426

SUMMARY

This Management Plan has been prepared for the New Filtration Plant facility located at 525 Taylor Street, Lynchburg, Virginia. It is part of an overall Management Plan prepared for all City of Lynchburg buildings. The approach used for this effort follows the requirements set forth by the U. S. Environmental Protection Agency (USEPA) at 40 CFR 763: Asbestos-Containing Materials in Schools. While these regulations apply only to school facilities, they represent the most current and comprehensive regulations regarding asbestos inspection and management.

This Management Plan is intended to document the results of facility inspections and subsequent analyses conducted during the period of November - December, 1988, using the procedures specified by USEPA in 40 CFR 763 and associated guidance provided by EPA-approved training courses. It is based on available information during that period, and is therefore subject to the following limitations and considerations:

1. Inspections were only conducted in exposed and/or accessible areas. Except where otherwise authorized, no physical destruction of walls, ceilings or floors was conducted to evaluate ACBM located behind or within these building materials.
2. Materials covered by this Management Plan are those defined as Asbestos-Containing Building Materials (ACBM) as required by 40 CFR 763. Other Asbestos-Containing Materials (ACM) such as automobile brake linings, oven and kiln fireproofing and electrical wiring are not comprehensively covered. Any ACM included in this Management Plan is provided for information purposes only and should not be used as a complete inventory of ACM.
3. This Management Plan documents the location, quantity and condition of ACBM determined from site inspection on November 15, 1988. Recommended response actions are therefore based on the observed status of identified ACBM. Any changes to the condition of ACBM may substantially change the response actions recommended, requiring modification to this plan by the City of Lynchburg.

MANAGEMENT PLAN
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1.0 INTRODUCTION

An inspection of the New Filtration Plant facility, located at 525 Taylor Street, Lynchburg, Virginia, was conducted on November 15, 1988 by Environmental Protection Systems (EPS) under contract to the City of Lynchburg. The objective of this inspection was to determine the location, distribution, condition and composition of all accessible asbestos-containing building materials (ACBM) located within this facility using the most recent inspection guidelines. Specifically, the inspection was performed using the procedures set forth by the U.S. Environmental Protection Agency (EPA) regulations at 40 CFR 763.

Consistent with these regulations, this inspection was completed in five phases as follows:

1. Completion of an initial walk-through survey to determine the location, amount, distribution, condition, accessibility and friability of all material suspected of containing asbestos.
2. Determination and classification of homogeneous areas of suspect material to determine a sampling scheme in accordance with EPA regulation 40 CFR 763.
3. Collection of bulk samples and photographs of all suspect material identified during the initial walk-through survey.
4. Submission of bulk samples to an accredited laboratory for determination of material composition using polarized light microscopy with dispersion staining.
5. Documentation of the location, composition, and quantity of both friable and nonfriable asbestos.

This report presents the approach, results and all supporting information from the inspection of the New Filtration Plant facility. The report includes the

following sections:

- 2.0 Inspection Procedure
- 3.0 Sampling Procedure
- 4.0 Analytical Procedure
- 5.0 Quality Assurance/Quality Control Procedure
- 6.0 Summary of Results
- 7.0 Recommendations
- 8.0 Resource Requirements

The results are supported by detailed information such as analytical results, photographs and facility floor plans provided as Appendices.

2.0 INSPECTION PROCEDURE

The inspection of this facility consisted of a walk-through visual examination in accordance with EPA regulations contained in 40 CFR 763.85. As specified, the EPS inspection team conducted the following activities:

1. Visually inspected all accessible areas to identify the location and amount of suspected ACBM.
2. Touched all suspected ACBM to determine if it was friable or not.
3. Identified all homogeneous areas of friable suspected ACBM and all homogeneous areas of nonfriable suspected ACBM.
4. Assessed the condition, accessibility and potential for future damage of all suspect friable ACBM.
5. Classified the material as either friable surfacing material, thermal system insulation, friable miscellaneous material, or nonfriable suspected ACBM to develop a sampling scheme in accordance with 40 CFR 763.86.
6. Classified the material by assessment code in accordance with 40 CFR 763.86 as follows:
 1. Damaged or significantly damaged thermal system insulation ACM.
 2. Damaged friable surfacing ACM.
 3. Significantly damaged friable surfacing ACM.
 4. Damaged or significantly damaged friable miscellaneous ACM.
 5. ACBM with potential for damage.
 6. ACBM with potential for significant damage.
 7. Any remaining friable ACBM or friable suspected ACBM.

The inspection was completed by EPS team members Tracy McAlister, Task Manager, Susan Gee and Neil O'Connor, with project supervision provided by C. Edwin Craft. EPS inspectors have successfully completed EPA inspection training courses and are licensed in accordance with Title 54 Chapter 7.01, Virginia licensing regulations.

3.0 SAMPLING PROCEDURE

Following the walk-through inspection and assessment of the facility, the EPS inspection team developed a sampling strategy and sampled all suspect ACBM in accordance with sampling requirements defined in 40 CFR 763.86 and EPA guidance for random sampling procedures. No suspect material was assumed to be ACBM for this investigation except for fire doors. Consistent with this guidance, EPS identified sampling locations for each homogeneous area of ACBM. Sample locations were recorded on building floor plans which were then used during sampling by the inspection team.

A critical step in this process was the delineation of different suspect ACBM and definition of homogeneous areas for sampling where necessary to confirm asbestos content. This definition formed the basis upon which subsequent steps of the inspection and management planning process were completed.

In general, homogeneous areas were defined as those in each building that contained a given type of suspect ACBM. ACBM was identified using a consistent coding system as summarized in Table 3-1. This approach involved noting on a building floor plan the location of each type of suspect ACBM using this coding system to delineate different materials (e.g., ceiling tile, floor tile) and different types of each material (e.g., brown floor tile, green floor tile). Following notation of each material, homogeneous areas were defined based upon area, operating system and functional use criteria. For example, all areas containing the same type of floor tile throughout a building as determined by physical appearance, age and general condition were considered to be one

TABLE 3-1
 ASBESTOS IDENTIFICATION
 MATERIAL CODE LEGEND

MATERIAL CODE	DESCRIPTION
BI	BOILER INSULATION
C	CONCRETE
CT	CEILING TILE
CT1	1 X 1 CEILING TILE
CT2	2 X 2 CEILING TILE
CT3	2 X 4 CEILING TILE
CT4	OTHER CEILING TILE
FFG	FOIL COVERED FIBERGLASS BATT
FT	FLOOR TILE
G	GYPSUM BOARD
GL	GLASS
M	METAL
P	PLASTER (HARD, SMOOTH)
P	PIPE INSULATION
PJI	PIPE JOINT INSULATION
S	SPRAY-ON MATERIAL
TI	TANK INSULATION
TFG	TAR-COVERED FIBERGLASS BATT
T	TECTUM
TB	TRANSITE BOARD
VFG	VINYL COVERED FIBERGLASS BATT
W	WOOD
DI	DUCT INSULATION
FI	FLUE INSULATION
DP	DAMAGED PLASTER (WATER OR CONTACT)
HVAC	HVAC CONNECTION
DW	DOMESTIC WATER
HW	HOT WATER
CW	COLD WATER
SL	STEAM LINE
DB	DECORATIVE BOARD
VI	VALVE INSULATION

homogeneous area. This approach was used even in situations where that type of floor tile was scattered throughout a building. Similarly, each mechanical system component (e.g., boiler tank, hot water piping system) containing similar suspect ACBM was defined as one homogeneous area.

Once homogeneous areas were defined, a sampling strategy was developed for each area to provide random samples of ACBM in accordance with the minimum sampling requirements defined by EPA in 40 CFR 763.86. Table 3-2 provides a summary of this sampling strategy. The selection of sample locations was conducted in a consistent manner to ensure valid unbiased results. The approach to sample location was as follows:

1. Surfacing Material: locations were determined by dividing the area into a 3 X 3 grid pattern and selecting the appropriate number of sample locations using random number tables.
2. Thermal System Insulation: locations were selected in a random manner for each homogeneous thermal system. Samples were taken in locations to minimize insulation damage wherever practical. If homogeneous areas extended throughout broad areas of the building, samples were taken in different sections of the building (e.g., boiler room, hallways, different floors) to ensure a complete profile of the homogeneous system.
3. Miscellaneous Friable Material: location of samples of other suspect friable ACBM such as ceiling tile, surface plasters and fiber board were selected in a random manner for each defined homogeneous area. Samples were taken in locations to minimize the visible damage to these materials such as the edges or hidden locations wherever practical.
4. Nonfriable Suspect ACBM: for nonfriable suspect ACBM not assumed to be ACBM, sample locations were selected in a random manner for each defined homogeneous area. Locations were also selected to minimize visible damage to these materials at the edges or hidden locations wherever practical.

This overall approach was applied universally for all City of Lynchburg facilities to ensure consistent, reproducible results.

TABLE 3-2
 SAMPLING STRATEGY
 CITY OF LYNCHBURG
 ASBESTOS INSPECTION

MATERIAL	MINIMUM NUMBER OF SAMPLES	REASON
Friable Surfacing Material <1000 sf	3	Required number of samples under 763.86
Friable Surfacing Material <5000 sf	5	Required number of samples under 763.86
Friable Surfacing Material >5000 sf	7	Required number of samples under 763.86
Non-friable Surfacing Material (e.g., hard plaster) including all layers	3	Minimum number to ensure identification as ACBM
Thermal System Insulation	3	Required number of samples under 763.86
Thermal System Insulation Patch	1	Required number of samples under 763.86
Insulated Mechanical System - Tees, Joints Valves	3	Minimum number to ensure identification as ACBM
Ceiling Tile	3	Minimum number to ensure identification as ACBM (Smaller numbers may be taken for small areas of tile)
Floor Tile, Including Mastic	2	Minimum number to ensure identification as ACBM
Other Non-friable Suspect ACBM	As needed	Minimum number to ensure identification as ACBM

4.0 ANALYTICAL PROCEDURE

40 CFR 763.87 requires that bulk samples be analyzed at laboratories which have received interim accreditation for polarized light microscopy (PLM) analysis under the EPA Interim Asbestos Bulk Sample Analysis Quality Assurance Program. Both EPS laboratories have received accreditation under this program. Bulk samples for this project were analyzed at the EPS-Jackson laboratory, located at 160 Upton Drive, Jackson, Mississippi (EPA Laboratory Identification Number 4551). Procedures used by the laboratory exceed the minimum requirements established by EPA under 40 CFR 763 Appendix A to Subpart F: Interim Method for the Determination of Asbestos in Bulk Insulation Samples. Results of bulk analysis using PLM list the percentage composition of specific types of asbestos (e.g., chrysotile, amosite, crocidolite), total asbestos, and non-asbestos substances such as glass fibers, perlite, plaster, rubberoid, and tile components found in each bulk sample.

5.0 QUALITY ASSURANCE/QUALITY CONTROL PROCEDURE

Rigorous Quality Assurance/Quality Control (QA/QC) procedures were followed by EPS to ensure the integrity and compliance of procedures used for inspection of City of Lynchburg facilities. The QA/QC protocol established by EPS consists of three major components: (1) Field Survey QA/QC, (2) Analytical QA/QC, and (3) Report QA/QC. Each of these areas is discussed below.

5.1 FIELD SURVEY QUALITY ASSURANCE/QUALITY CONTROL

A QA/QC inspection of approximately 20 percent of the gross square footage of buildings surveyed during this project was performed by EPS. The re-inspection was conducted to ensure that all surveys were performed in accordance with guidelines established in the contract and that all material identified was properly sampled and labeled. An independent QA/QC review was also performed with each inspection team involved in the field survey program to ensure uniformity in sampling identification and sampling techniques.

5.2 ANALYTICAL QUALITY ASSURANCE/QUALITY CONTROL

In accordance with EPS standard procedures, analytical QA/QC procedures were followed to ensure the integrity of all sample analyses and analytical techniques by our qualified analysts associated with this project. As part of this program, laboratory blank samples were analyzed by the analyst for comparison with reference results to ensure accurate visual evaluation by our analysts. In addition, five percent of all samples were reanalyzed by an independent laboratory analyst for verification of laboratory results.

5.3 REPORT QUALITY ASSURANCE/QUALITY CONTROL

As part of the internal QA/QC program, all reports were thoroughly inspected by a minimum of three EPS professionals. The report QA/QC program consisted of inspecting all building summaries and analytical and QA/QC results to ensure that all buildings and building materials were properly documented. To aid in the report QA/QC inspections, all reports were thoroughly inspected by the Project Director and inspection team members.

6.0 SUMMARY OF RESULTS

This section presents a summary of the results of the inspection and assessment of ACBM in the New Filtration Plant facility. The New Filtration Plant facility consists of one building covering 48,800 square feet. A total of 38 bulk samples of suspect material were collected by EPS within the facility.

Table 6-1 presents a summary of ACBM found in the New Filtration Plant facility. An assessment of friable ACBM was conducted to characterize the material in order to define appropriate response actions. Table 6-1 also presents a summary of the assessment of friable ACBM within the New Filtration Plant facility based on visual inspection of the type, severity and extent of damage.

The detailed results of this inspection and assessment are provided in the following Appendices:

- o Appendix A provides the survey summary for each sample collected.
- o Appendix B presents floor plan(s) showing the location of all samples taken and distribution of ACBM.
- o Appendix C provides the detailed analytical results for each sample.
- o Appendix D provides detailed response actions.
- o Appendix E provides facility photographs.
- o Appendix F presents the Operations and Maintenance Plan.

TABLE 6-1
SUMMARY OF ASBESTOS-CONTAINING MATERIAL
NEW FILTRATION PLANT

MATERIAL	LOCATION	ESTIMATED QUANTITY	ASSESSMENT CATEGORY*	PERCENT ASBESTOS
FT-4	Locker Room 2nd Floor	1000 sf	5	2-3
FT-5	Locker Room 2nd Floor	300 sf	5	3-5
FT-6	Room by Stairs 2nd Floor	500 sf	5	3
FT-7	Room by Stairs 2nd Floor	200 sf	5	3-4
FT-8	4th Floor	300 sf	5	3-4
FT-9	4th Floor	300 sf	5	5

* Assessment Categories:

1. Damaged or significantly damaged thermal system insulation ACM.
2. Damaged friable surfacing ACM.
3. Significantly damaged friable surfacing ACM.
4. Damaged or significantly damaged friable miscellaneous ACM.
5. ACBM with potential for damage.
6. ACBM with potential for significant damage.
7. Any remaining friable ACBM or friable suspected ACBM.

7.0 RECOMMENDATIONS

Based on the inspection results for the New Filtration Plant facility, Table 7-1 presents a summary of the recommendations for management of asbestos-containing building materials. A detailed description of these recommendations is provided in Appendix D. ACM floor tiles should be incorporated into the Operations and Maintenance Program (O&M) provided in Appendix F.

TABLE 7-1
SUMMARY OF RECOMMENDATIONS
NEW FILTRATION PLANT

MATERIALS ADDRESSED	LOCATION	RECOMMENDATION*
1. Floor Tile	Locker Room 2nd Floor, Room by Stairs 2nd Floor, 4th Floor	O&M Plan

* See Appendix D for a detailed explanation of the response action recommendation.

8.0 RESOURCE REQUIREMENTS

This section presents an estimate of economic resources required by the City of Lynchburg to complete recommended response actions and carry out additional management activities including reinspections, operations and maintenance activities, periodic surveillance and training activities required at the New Filtration Plant facility. Resource requirements are summarized in Table 8-1. For comparison, Table 8-2 gives a detailed summary of cost for removal of all ACBM from the building. Table 8-3 provides a unit cost summary of replacement and removal costs. All costs were based on current (1988) market conditions in the Mid-Atlantic region. Some fluctuation of these costs may occur in the future due to the increase market demand in the asbestos industry.

TABLE 8-1
SUMMARY OF RESOURCE NEEDS
NEW FILTRATION PLANT

ACTION	COST ESTIMATE (1988 DOLLARS)
I. O&M Program	<u>\$ 500</u>
TOTAL	\$ 500

TABLE 8-2
SUMMARY OF TOTAL REMOVAL COSTS
NEW FILTRATION PLANT

MATERIAL	REMOVAL COST	REPLACEMENT COST	TOTAL
1. Floor Tile 4	\$ 3,000	\$ 2,000	\$ 5,000
Floor Tile 5	900	\$ 600	1,500
Floor Tile 6	1,500	\$ 1,000	2,500
Floor Tile 7	600	\$ 400	1,000
Floor Tile 8	900	\$ 600	1,500
Floor Tile 9	900	\$ 600	1,500
TOTAL	7,800	5,200	13,000

TABLE 8-3
 ENVIRONMENTAL PROTECTION SYSTEMS
 UNIT COST SUMMARY 1988

MATERIAL	REMOVAL COST	REPLACEMENT COST	TOTAL COST	
PIPE INSULATION	20	10	\$ 30	(\$15-40/LF)
PIPE JOINT INSULATION:				
W/PI	20	10	\$ 30	(\$15-40/EA)
W/O PI	30	15	\$ 45	(\$20-100/EA)
TANK INSULATION	15	10	\$ 25	(\$15-30/SF)
BOILER INSULATION	15	10	\$ 25	(\$20-30/SF)
DUCT INSULATION	10	10	\$ 20	(\$10-50/SF)
FLUE INSULATION	10	10	\$ 20	(\$10-50/SF)
CEILING TILES	5	2.50	\$ 7.50	(\$5-20/SF)
ACOUSTICAL PLASTER	17	3	\$ 20	(\$10-30/SF)
HARD PLASTER	25	5	\$ 30	(\$10-40/SF)
SPRAY-ON FIRE-PROOFING	12	3	\$ 15	(\$10-30/SF)
FLOOR TILES	3	2	\$ 5	(\$3-10/SF)
SOILS (2")	3		\$ 3	(\$1-10/SF)
CLEAN	\$0.50/SF			

LIST OF APPENDICES

- APPENDIX A - SURVEY SUMMARY
- APPENDIX B - FLOOR PLAN(S)
- APPENDIX C - ANALYTICAL RESULTS
- APPENDIX D - RESPONSE ACTIONS
- APPENDIX E - FACILITY PHOTOGRAPHS
- APPENDIX F - OPERATIONS AND MAINTENANCE PLAN

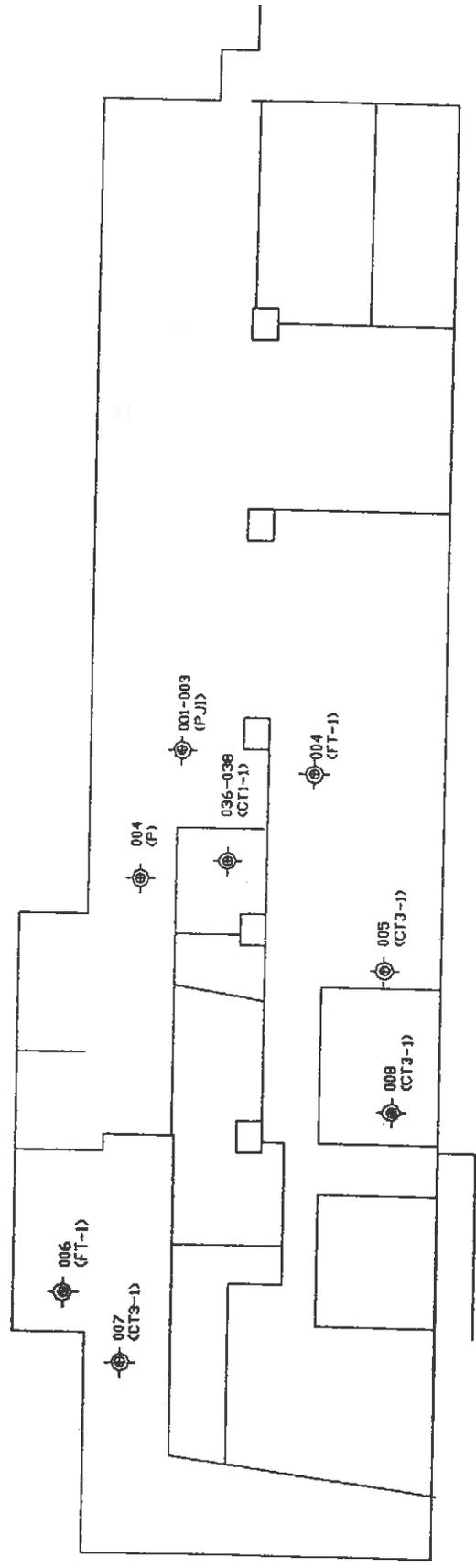
APPENDIX A - SURVEY SUMMARY

SURVEY SUMMARY
THE NEW FILTRATION PLANT FACILITY

MATERIAL	CODE	LOCATION	NO. OF SAMPLES	ESTIMATED QUANTITY
Pipe Joint Insulation	PJI	Pipe Tunnel, 1st Floor	3	30 Joints
Floor Tile	FT-1	Offices 1st Floor, Front Entrance 1st Floor	2	8,000 sf
Floor Tile	FT-2	Restroom & Lunch Room, 2nd Floor	2	3,000 sf
Floor Tile	FT-3	Office 2nd & 3rd Floor	2	2,000 sf
Floor Tile	FT-4	Locker Room 2nd Floor	2	1,000 sf
Floor Tile	FT-5	Locker Room 2nd Floor	2	300 sf
Floor Tile	FT-6	Room by Stairs 2nd Floor	2	500 sf
Floor Tile	FT-7	Room by Stairs	2	200 sf
Floor Tile	FT-8	4th Floor	2	300 sf
Floor Tile	FT-9	4th Floor	2	300 sf
Ceiling Tile	CT1-1	1st Floor Kitchen	3	500 sf
Ceiling Tile	CT3-1	Front Entrance 1st Floor	3	8,000 sf
Ceiling Tile	CT3-2	Restroom, Lunch 2nd Floor, 2nd Floor Office	3	3,500 sf
Ceiling Tile	CT3-3	Office 2nd and 3rd Floor	3	100 sf
Plaster	P	Restroom 5th Floor, Hallway 1st and 2nd Floor, Meter Room 7th Floor	5	5,000 sf

APPENDIX B = FLOOR PLANS

LEGEND
 SAMPLE POINT-POSITIVE
 SAMPLE POINT-NEGATIVE

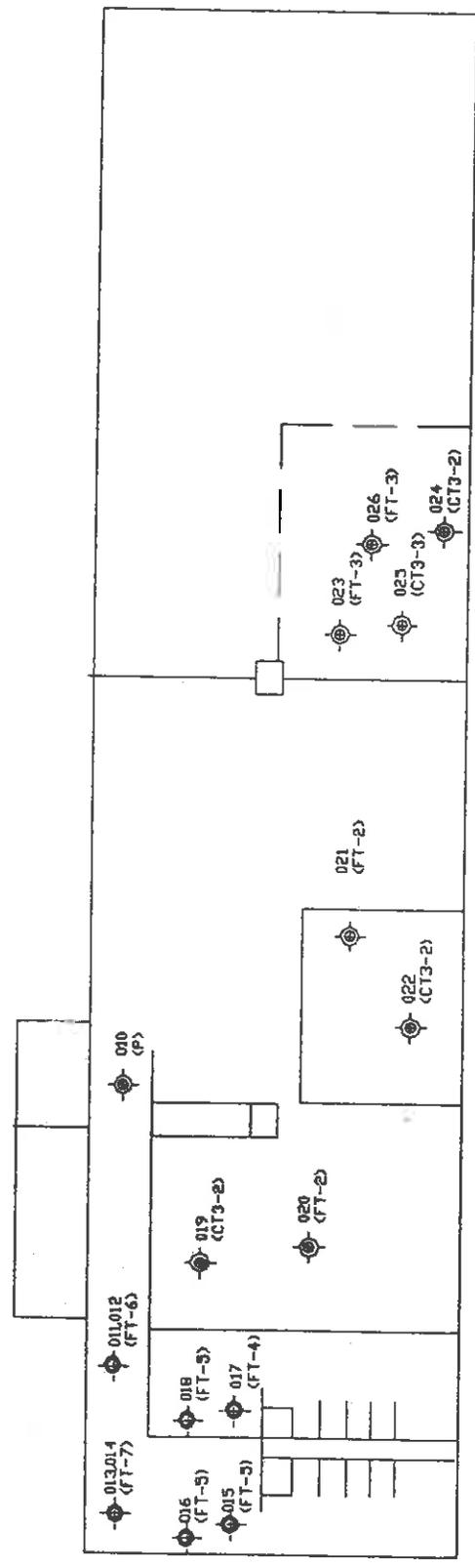


FIRST FLOOR
 SAMPLE POINT LOCATIONS

ENVIRONMENTAL PROTECTION SYSTEMS
 2008 CONCRETE PARKWAY, SUITE 2100
 CHANTILLY, VA 20151
 JACKSON, MS 39201
 PENSACOLA, FL 32504
 NASHVILLE, TN 37203
 FAIRLAWN, NJ 07410
 ENGINEERS, PLANNERS, SCIENTISTS

EPS

PROJECT NAME: NEW FILTRATION PLANT
 SCALE: NONE DRAWN BY: SBI
 DATE: DECEMBER 16, 1988 APPROVED BY: RJB
 PROJECT NUMBER: 6831403.01 DRAWING NUMBER: 203.01.01.01



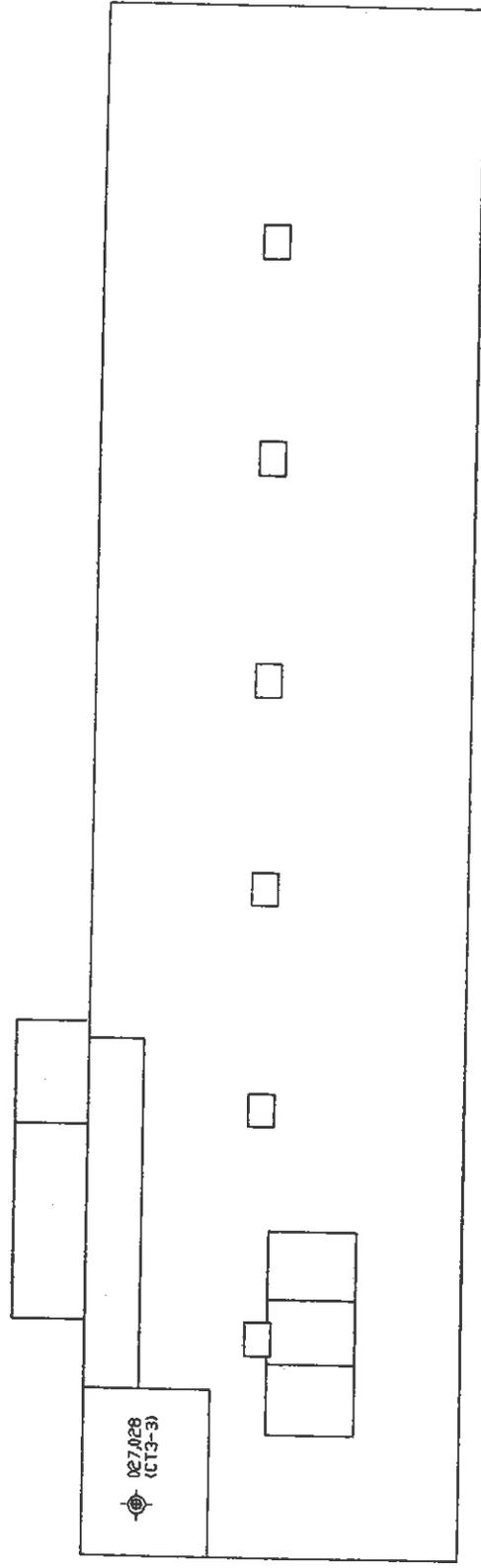
LEGEND
 ◉ SAMPLE POINT-POSITIVE
 ◉ SAMPLE POINT-NEGATIVE

SECOND FLOOR
 SAMPLE POINT LOCATIONS

LEGEND

- ⊙ SAMPLE POINT-POSITIVE
- ⊙ SAMPLE POINT-NEGATIVE

THIRD FLOOR
SAMPLE POINT LOCATIONS

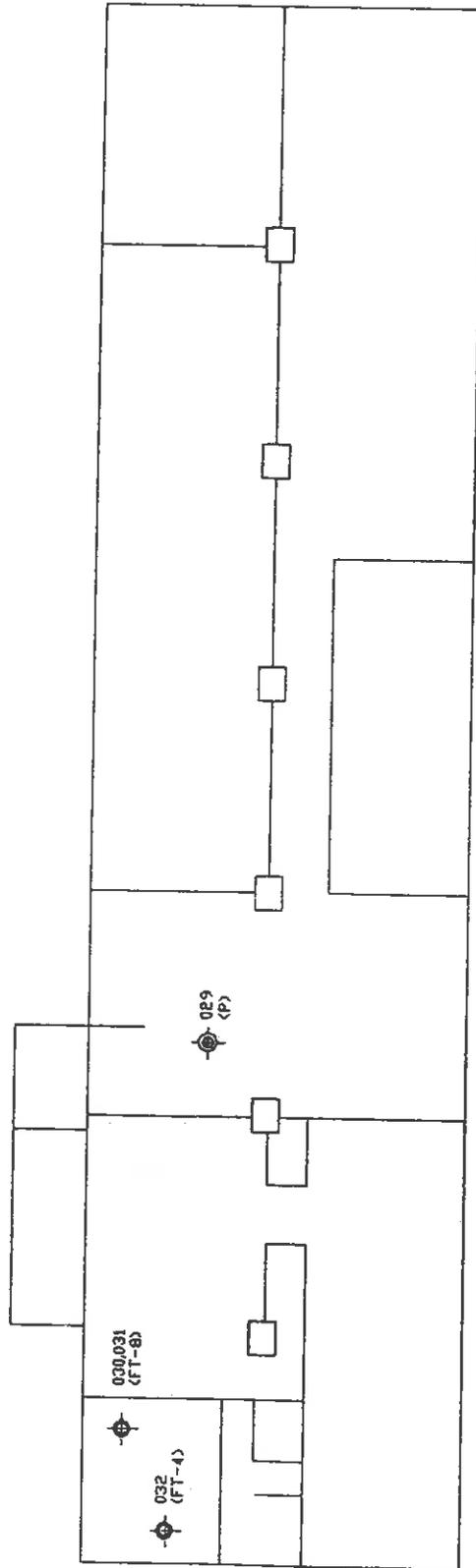


ENVIRONMENTAL PROTECTION SYSTEMS
2000 GERRARD PARKWAY, SUITE 2100
CHARLOTTE, VA 28203
JACKSON, MS 39201
PENSACOLA, FL 32504
NASHVILLE, TN 37203
FAIRLAWN, NJ 07410
ENGINEERS, PLANNERS, SCIENTISTS

ETS

PROJECT NAME: NEW FILTRATION PLANT
SCALE: NONE
DATE: DECEMBER 16, 1988
PROJECT NUMBER: 6.89.1203.01

DRAWN BY: SBI
APPROVED BY: BJB
DRAWING NUMBER: 1203.01.101.03



LEGEND

- ⊕ SAMPLE POINT-POSITIVE
- ⊕ SAMPLE POINT-NEGATIVE

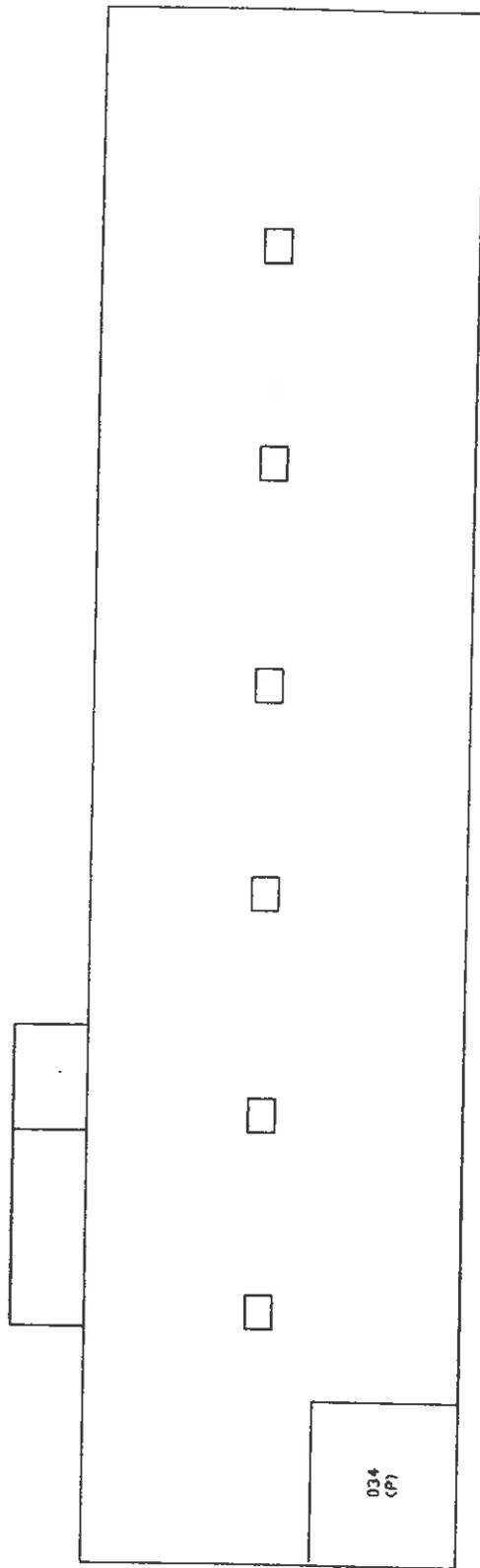
FOURTH FLOOR
SAMPLE POINT LOCATIONS

 ENVIRONMENTAL PROTECTION SYSTEMS 3800 CONCORDE PARKWAY, SUITE 2100 CHANTILLY, VA 22081 JACKSON, MS MEMPHIS, TN PENSACOLA, FL NASHVILLE, TN FAIRLAWN, NJ ENGINEERS, PLANNERS, SCIENTISTS	
PROJECT NAME:	NEW FILTRATION PLANT
SCALE:	NONE
DRAWN BY:	SBI
DATE:	DECEMBER 16, 1988
APPROVED BY:	B.J.B.
PROJECT NUMBER:	5.69.1203.01
DRAWING NUMBER:	1203.01.01.04

LEGEND

- ◆ SAMPLE POINT-POSITIVE
- SAMPLE POINT-NEGATIVE

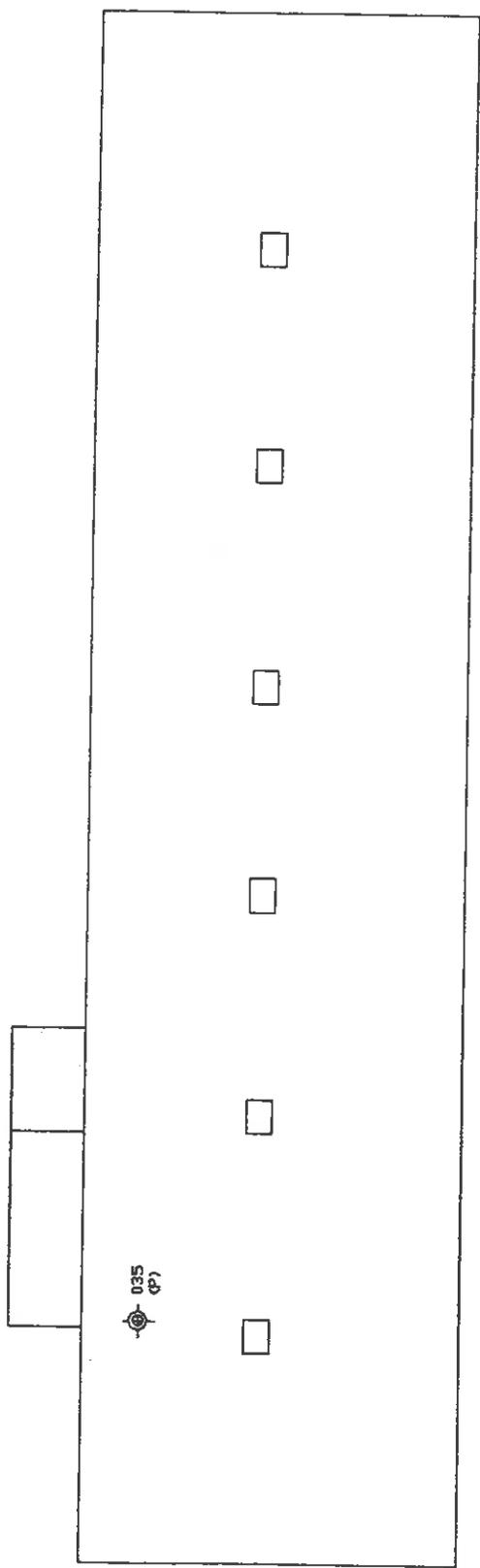
**FIFTH FLOOR
SAMPLE POINT LOCATIONS**



	
ENVIRONMENTAL PROTECTION SYSTEMS	
3940 CONCORDE PARKWAY, SUITE 2100 CHANTILLY, VA 20151	
JACKSON, MS MEMPHIS, TN	
PENSACOLA, FL NASHVILLE, TN FAIRLAWN, NJ	
ENGINEERS, PLANNERS, SCIENTISTS	
PROJECT NAME:	NEW FILTRATION PLANT
SCALE:	NONE
DRAWN BY:	SBI
DATE:	DECEMBER 16, 1988
APPROVED BY:	BJB
PROJECT NUMBER:	6.89.1203.01
DRAWING NUMBER:	1203.01.101.03

LEGEND

- ⊙ SAMPLE POINT-POSITIVE
- ⊙ SAMPLE POINT-NEGATIVE



SEVENTH FLOOR
SAMPLE POINT LOCATIONS



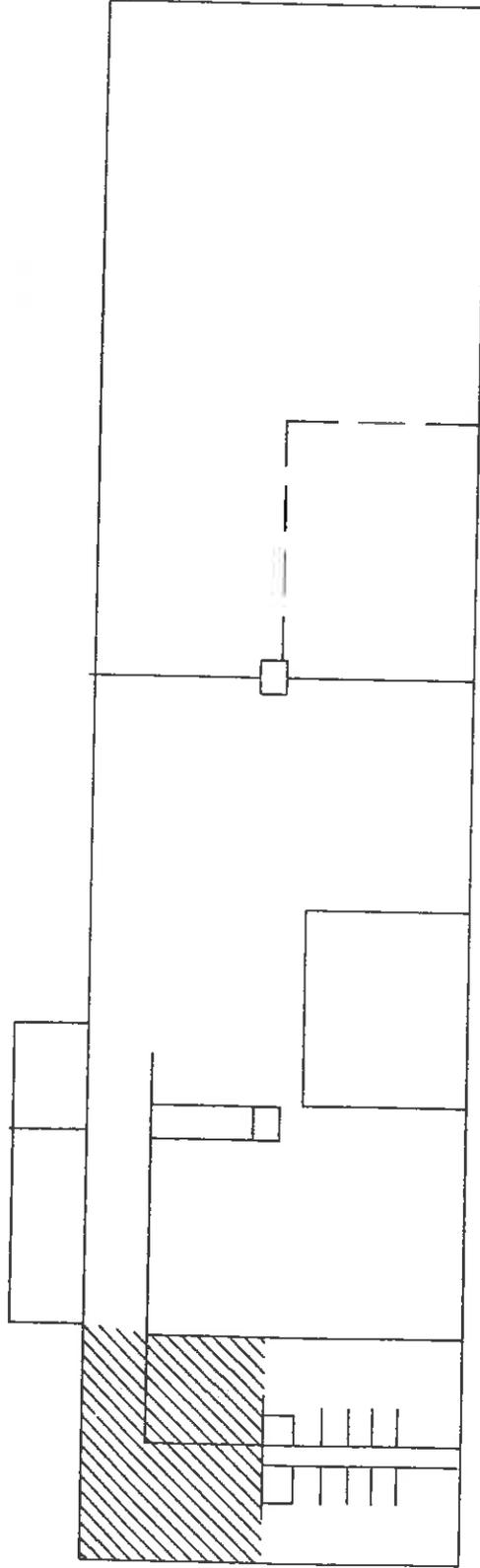
ENVIRONMENTAL PROTECTION SYSTEMS
2000 CONCRETE PARKWAY, SUITE 2100
CHARLOTTE, VA 22001
MEMPHIS, TN
PENSACOLA, FL
FAIRLAWN, NJ
ENGINEERS, PLANNERS, SCIENTISTS

PROJECT NAME:	NEW FILTRATION PLANT
SCALE:	NONE
DATE:	DECEMBER 16, 1988
PROJECT NUMBER:	6.89.1R03.01
DRAWN BY:	SBI
APPROVED BY:	BJB
DRAWING NUMBER:	1203.D1101.06

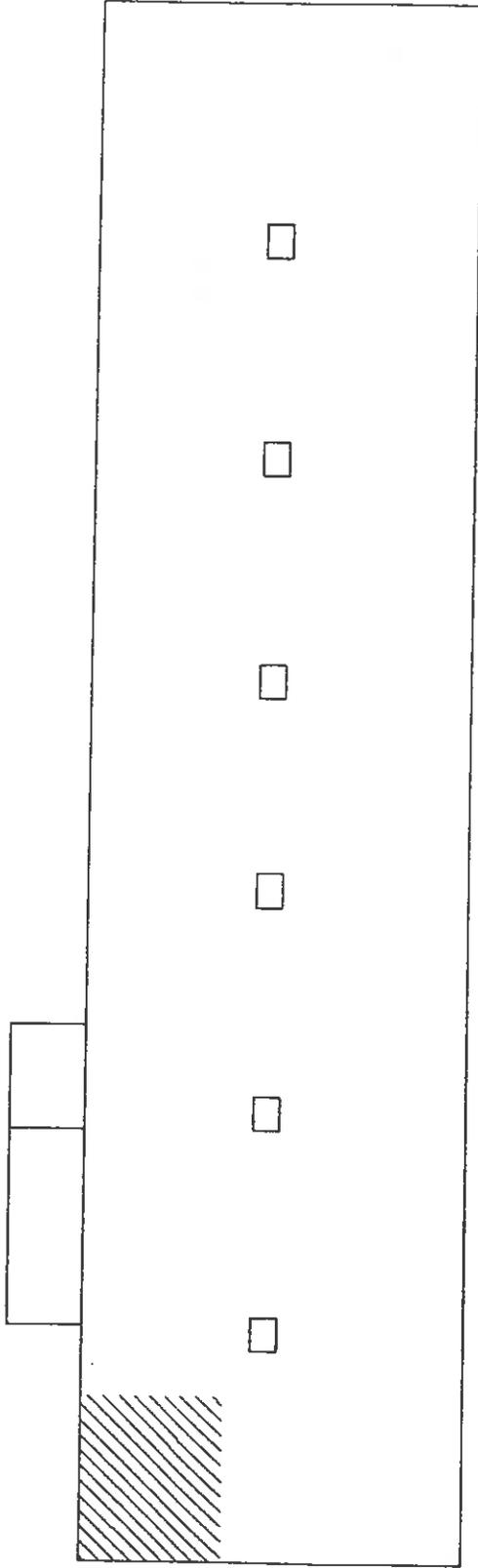
LEGEND

-  ACM FLOOR TILE
-  ACM CEILING TILE

SECOND FLOOR
FLOOR AND CEILING TILE LOCATIONS



	ENVIRONMENTAL PROTECTION SYSTEMS		
	2000 CONGRESS PARKWAY, SUITE 2000 CHARITTY, VA. 22620		
	JACKSON, MS MEMPHIS, TN PENSACOLA, FL NASHVILLE, TN FAIRLAWN, NJ		
	ENGINEERS, PLANNERS, SCIENTISTS		
PROJECT NAME:	NEW FILTRATION PLANT	SCALE:	NONE
		DRAWN BY:	SBJ
DATE:	DECEMBER 16, 1988	APPROVED BY:	RJB
PROJECT NUMBER:	6-89-1203.01	DRAWING NUMBER:	1203.01.0105



LEGEND

-  ACM FLOOR TILE
-  ACM CEILING TILE

SEVENTH FLOOR
FLOOR AND CEILING TILE LOCATIONS

ENVIRONMENTAL PROTECTION SYSTEMS	
3800 CONROE PARKWAY, SUITE 2100 CHARLETTA, VA 22902	
JACKSON, MS MEMPHIS, TN PENSACOLA, FL NASHVILLE, TN FAIRLAWN, NJ	
ENGINEERS, PLANNERS, SCIENTISTS	
PROJECT NAME:	NEW FILTRATION PLANT
SCALE:	NONE
DRAWN BY:	SBI
DATE:	DECEMBER 16, 1988
APPROVED BY:	B.J.B.
PROJECT NUMBER:	6.82.1203.01
	DRAWING NUMBER: 1203.01.101.06

APPENDIX C - ANALYTICAL RESULTS

**ENVIRONMENTAL PROTECTION SYSTEMS
ANALYTICAL RESULTS**

Client Name: City of Lynchburg Date Collected: 11/15/88 Date Analyzed: 11/22/88
 Project No.: 6.89.1203.01 Collector: Neil O'Connor
 Project Location: New Filtration Plant Analyst: Deborah Smith
 Building ID: 101

LAB ID NO.	DESCRIPTION	
001	PJI	Pipe Tunnel - 1st Floor
002	PJI	Pipe Tunnel - 1st Floor
003	PJI	Pipe Tunnel - 1st Floor
004	FT-1	1st Floor
005	CT3-1	1st Floor
006	FT-1	Front Entrance - 1st Floor
007	CT3-1	Front Entrance - 1st Floor
008	CT3-1	Office - 1st Floor
009	P	Hallway - 1st Floor
010	P	Hallway - 2nd Floor

LAB ID NO. -->	PERCENT COMPOSITION										
	001	Dup	002	003	004	005	006	007	008	009	010
Pyrosilite											
Opasite											
Microcidolite											
TOTAL ASBESTOS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Glass Fibers	50	40	30	30		40		40	40		ND
Wood Fibers											
Cellulose Fibers			5	5	5	30		30	30		
Plastic Fibers											
Perlite											
Diatoms						10		15	15		
Quartz											
Vermiculite											
Mortar/Plaster	50	60	25	25		15				10	10
Plastic								10	10	85	85
Paint											
Tar/Adhesive						5	5	5	5	5	5
Tile Components											
Soil					90		95				
Other											
Asphalt			40	40	5						

COMMENTS:

**ENVIRONMENTAL PROTECTION SYSTEMS
ANALYTICAL RESULTS**

Client Name: City of Lynchburg Date Collected: 11/15/88 Date Analyzed: 11/22/88
 Project No.: 6.89.1203.01 Collector: Neil O'Connor
 Project Location: New Filtration Plant Analyst: Deborah Smith
 Building ID: 101

LAB ID NO.	DESCRIPTION	
011	FT-6	Room by Stairs - 2nd Floor
012	FT-6	Room by Stairs - 2nd Floor
013	FT-7	Room by Stairs - 2nd Floor
014	FT-7	Room by Stairs - 2nd Floor
015	FT-4	Locker Room - 2nd Floor
016	FT-5	Locker Room - 2nd Floor
017	FT-4	Locker Room - 2nd Floor
018	FT-5	Locker Room - 2nd Floor
019	CT3-2	Rest Room

LAB ID NO. -->	PERCENT COMPOSITION									
	011	Dup	012	013	014	015	016	017	018	019
Asbestos	3	3	3	3	4	3	5	2	3	
Chrysotile										
Amosite										
Actinolite										
TOTAL ASBESTOS	3*	3*	3	3	4	3	5	2	3	ND
Glass Fibers										40
Wood Fibers										
Cellulose Fibers					30					30
Plastic Fibers										
Perlite										20
Diatoms										
Quartz										
Vermiculite										
Mortar/Plaster										5
Plastic										
Paint										
Tar/Adhesive										5
Tile Components	95	94	97	97	66	97	95	98	97	
Soil										
Other: Mastic										
Asphalt	2	3								

COMMENTS: * Asbestos in tile only.

**ENVIRONMENTAL PROTECTION SYSTEMS
ANALYTICAL RESULTS**

Client Name: City of Lynchburg Date Collected: 11/15/88 Date Analyzed: 11/22/88
 Project No.: 6.89.1203.01 Collector: Neil O'Connor
 Project Location: New Filtration Plant Analyst: Deborah Smith
 Building ID: 101

LAB ID NO.	DESCRIPTION	
020	FT-2	Rest Room - 2nd Floor
021	FT-2	Lunch Room - 2nd Floor
022	CT3-2	Lunch Room - 2nd Floor
023	FT-3	Office - 2nd Floor
024	CT3-2	Office - 2nd Floor
025	CT3-3	Office - 2nd Floor
026	FT-3	Office - 3rd Floor
027	CT3-3	Office - 3rd Floor
028	CT3-3	Office - 3rd Floor
029	P	Meter Room

LAB ID NO. -->	PERCENT COMPOSITION										
	020	Dup	021	022	023	024	025	026	027	028	029
ysotile											
bsite											
ocidolite											
TOTAL ASBESTOS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Glass Fibers				40		40	40		40	40	
Wood Fibers											
Cellulose Fibers				30		30	30		30	30	
Plastic Fibers											
Perlite				20		20	20		20	20	
Diatoms											
Quartz											
Vermiculite											
Mortar/Plaster				5		5	5		5	5	20
Plastic											40
Paint											
Tar/Adhesive				5		5	5		5	5	40
Tile Components	100	100	100		100			100			
Soil											
Other											

COMMENTS: * Asbestos in tile only.

**ENVIRONMENTAL PROTECTION SYSTEMS
ANALYTICAL RESULTS**

Client Name: City of Lynchburg Date Collected: 11/15/88 Date Analyzed: 11/22/88
 Project No.: 6.89.1203.01 Collector: Neil O'Connor
 Project Location: New Filtration Plant Analyst: Deborah Smith
 Building ID: 101

LAB ID NO.	DESCRIPTION	
030	FT-8	4th Floor
031	FT-8	4th Floor
032	FT-9	4th Floor
033	FT-9	4th Floor
034	P	Rest Room - 5th Floor
035	P	7th Floor
036	CT1-1	Kitchen - 1st Floor
037	CT1-1	Kitchen - 1st Floor
038	CT1-1	Kitchen - 1st Floor

LAB ID NO. -->	PERCENT COMPOSITION									
	030	Dup	031	032	033	034	035	036	037	038
Asbestos	4	5	3	5	5					
Amphibole										
Chrysotile										
ACTinolite										
TOTAL ASBESTOS	4	5	3	5	5	ND	ND	ND	ND	ND
Glass Fibers										
Wood Fibers								80	80	80
Cellulose Fibers										
Plastic Fibers										
Perlite										
Diatoms										
Quartz										
Vermiculite										
Mortar/Plaster						10	10			
Plastic						60	60	20	20	20
Paint										
Tar/Adhesive						30	30			
Tile Components	96	95	97	95	95					
Soil										
Other										

COMMENTS: * Asbestos in tile only.

APPENDIX D - RESPONSE ACTIONS

RESPONSE ACTION

MATERIAL: Floor Tile - FT-4 (Orange w/Black & Cream 9 X 9)

QUANTITY/LOCATION: 1,000 sf - Locker room 2nd floor

ASSESSMENT CATEGORY: 5. ACBM with potential for damage

RECOMMENDED
RESPONSE ACTION: Incorporate into O&M Program to prevent future damage.

REASON FOR RESPONSE: Cost-effective approach to control friability of ACBM using currently acceptable methods for operations and maintenance of non-friable ACBM.

SCHEDULE: Begin: January, 1989
Complete: N/A

RESPONSE ACTION

MATERIAL: Floor Tile - FT-5 (Maroon w/White, 9 X 9)

QUANTITY/LOCATION: 300 sf - Locker room 2nd floor

ASSESSMENT CATEGORY: 5. ACBM with potential for damage

RECOMMENDED
RESPONSE ACTION: Incorporate into O&M Program to prevent future damage.

REASON FOR RESPONSE: Cost-effective approach to control friability of ACBM using currently acceptable methods for operations and maintenance of non-friable ACBM.

SCHEDULE: Begin: January, 1989
Complete: N/A

RESPONSE ACTION

MATERIAL: Floor Tile - FT-6 (Flesh w/Black streaks, 9 X 9)

QUANTITY/LOCATION: 500 sf - Room by stairs 2nd floor

ASSESSMENT CATEGORY: 5. ACBM with potential for damage

RECOMMENDED
RESPONSE ACTION: Incorporate into O&M Program to prevent future damage.

REASON FOR RESPONSE: Cost-effective approach to control friability of ACBM using currently acceptable methods for operations and maintenance of non-friable ACBM.

SCHEDULE: Begin: January, 1989
Complete: N/A

RESPONSE ACTION

MATERIAL: Floor Tile - FT-7 (Black w/Flesh streaks, 9 X 9)

QUANTITY/LOCATION: 200 sf - Room by stairs 2nd floor

ASSESSMENT CATEGORY: 5. ACBM with potential for damage

RECOMMENDED
RESPONSE ACTION: Incorporate into O&M Program to prevent future damage.

REASON FOR RESPONSE: Cost-effective approach to control friability of ACBM using currently acceptable methods for operations and maintenance of non-friable ACBM.

SCHEDULE: Begin: January, 1989
Complete: N/A

RESPONSE ACTION

MATERIAL: Floor Tile - FT-8 (Flesh w/Black & Cream streaks,
9 X 9)

QUANTITY/LOCATION: 300 sf - 4th Floor

ASSESSMENT CATEGORY: 5. ACBM with potential for damage

RECOMMENDED
RESPONSE ACTION: Incorporate into O&M Program to prevent future damage.

REASON FOR RESPONSE: Cost-effective approach to control friability of ACBM
using currently acceptable methods for operations and
maintenance of non-friable ACBM.

SCHEDULE: Begin: January, 1989
Complete: N/A

RESPONSE ACTION

MATERIAL: Floor Tile - FT-9 (Maroon w/Orange & Cream streaks, 9 X 9)

QUANTITY/LOCATION: 300 sf - 4th Floor

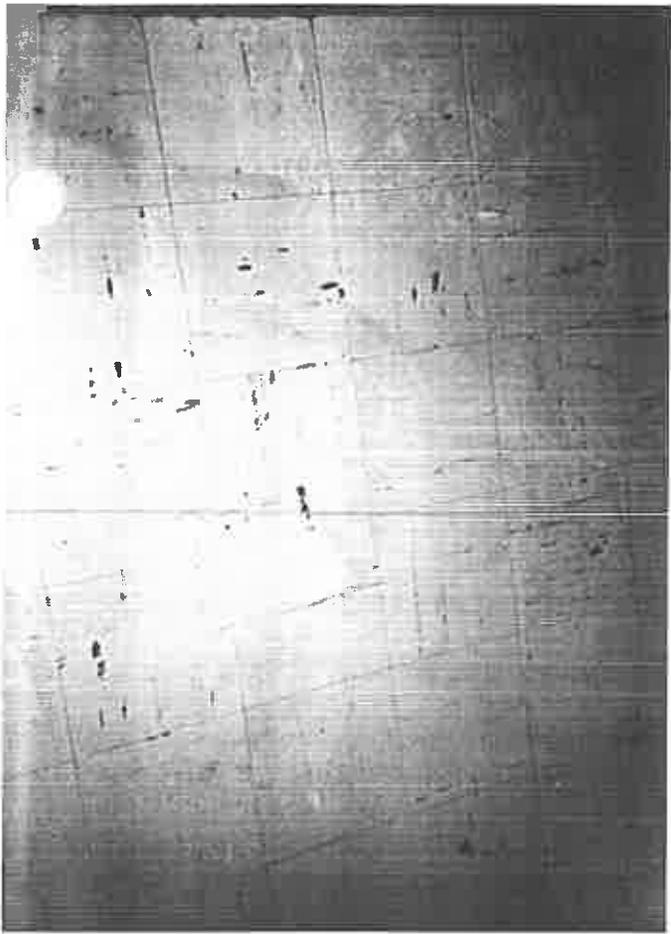
ASSESSMENT CATEGORY: 5. ACBM with potential for damage

RECOMMENDED RESPONSE ACTION: Incorporate into O&M Program to prevent future damage.

REASON FOR RESPONSE: Cost-effective approach to control friability of ACBM using currently acceptable methods for operations and maintenance of non-friable ACBM.

SCHEDULE: Begin: January, 1989
Complete: N/A

APPENDIX E - FACILITY PHOTOGRAPHS



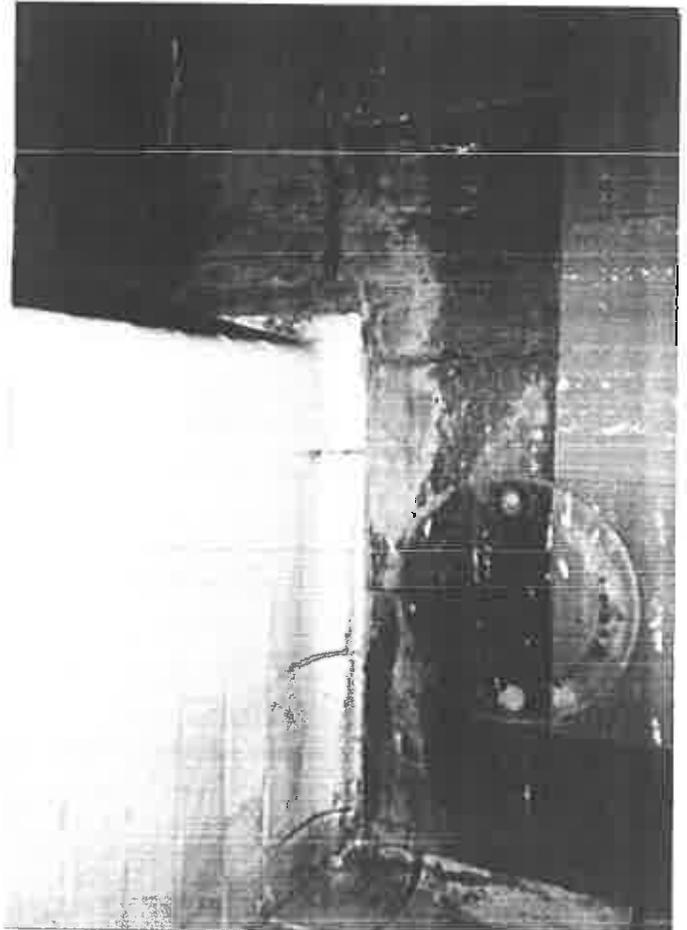
101.01 Room by Stairs, FT-6

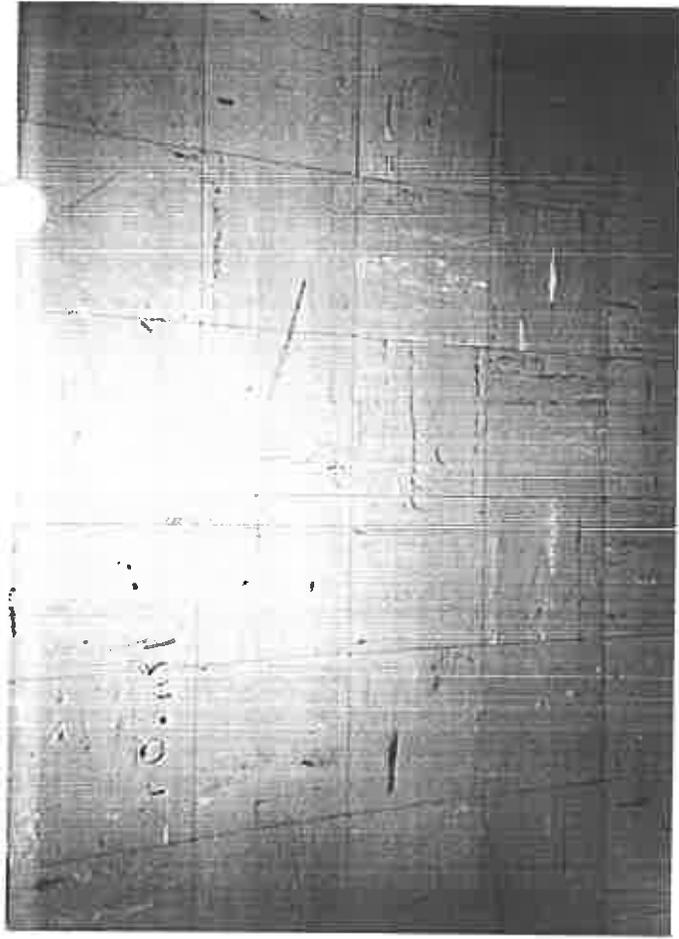


101.02 Room by Stairs, FT-7

101.03 Locker Room, FT-4

101.04 Locker Room, FT-4





101.05 Hallway by Stairs, FT-8



101.06 Hallway by Stairs, FT-9

End of Addendum No.1