PLAINTIFF'S EXHIBIT
ATT-277

AT&T Bell Laboratories

subject: Insulation and Pipe Removal Project at AT&T Communications, 811 10th Avenue, NYC, NY

date: December 10, 1984

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Summary

An insulation and pipe removal project was evaluated for AT&T Communications at 811 10th Avenue, New York, NY by the Environmental Health, Environmental Management and Safety (EHEM&S) Center of AT&T Bell Laboratories on August 9 and September 6, 1984. Various methods for removing asbestos-containing insulation from pipes and fan rooms were examined during work, transport and cleanup. Numerous personal and area samples were collected to measure airborne fiber concentrations.

During the initial sampling of asbestos work activity on August 9, 1984, the 8-hour time weighted average (TWA) fiber concentrations were less than the Occupational Safety and Health Administration (OSHA) Permissible Exposure Level (PEL)of 2.0 fibers/cc. The 8-hour TWA fiber concentrations exceeded the OSHA action level of 0.1 fibers/cc. Medical monitoring is required by OSHA for all work activity that exceeds this action level.

Elevated fiber concentrations in the air plenum resulted from employees entering during work activity to complete pipe removal. The highest fiber concentrations were produced by dry sweeping during clean-up.

Recommended work procedures were evaluated by air sampling on September 6, 1984. Lower fiber concentrations resulted from the wetting of insulation prior to its removal and transport. The use of a glove bag was impractical due to the difficulty of working within a confined area. The HEPA vacuum did not effectively capture fibers during pipe wrap removal.

Cutting the pipes with a torch or saw is the preferred method of pipe removal. The use of HEPA vacuum greatly reduced airborne fiber levels during clean-up.

Follow up sampling was performed on November 29, 1984, with recommended work procedures in place. Area and personnel samples were below the 8-hour TWA action level of 0.1 fibers/cc. Adherence to recommended work practices is required to minimize airborne fiber concentrations.

Recommendations for asbestos work practices and use of personal protective equipment are presented within this report.

A summary of State and Federal requirements for asbestos removal and disposal is presented in Attachment D.

Methodology

The NIOSH recommended sampling and analytical method 7400 was utilized on August 9, 1984. This method was issued as an alternative to P&CAM 239 due to its improved sensitivity and reproducibility. The original NIOSH analytical and sampling method (P&CAM 239) was utilized on September 6, 1984.

Airborne fiber samples were collected on mixed cellulose ester filters. The filters were attached to MSA sampling pumps and operated at a flow rate of approximately 2.0 liters per minute. The pumps were calibrated using a Kurz Model 541 Mass Flow Meter and a precalibrated precision rotameter before and after sampling.

Filter samples were analyzed in accordance with NIOSH Method 7400 and P&CAM 239. These methods involve sizing and counting fibers using a phase contrast microscope. All fibers are counted which have a physical dimension of longer than 5 micrometer and a length to diameter ratio of 3 to 1 or greater.

Fiber concentrations, expressed as fibers per cubic centimeter (fibers/cc), were calculated from the sampling and analytical data. The location and description of all personal and area samples are presented in the results. Actual and projected time weighted averages (TWA) have been calculated for personal samples so they can be compared to the regulated exposure limits for asbestos. Air samples taken during the recommended work activity were of short duration to assess fiber concentrations associated with specific practices.

Results

The sampling results from August 9, 1984 are presented in Tables 1-4.

The sampling results from September 6, 1984 are presented in Tables 5-8.

The sampling results from November 29, 1984 are presented in Tables 9-12.

Conclusions

Based on the sampling results, the following conclusions were reached:

1. The use of recommended work practices resulted in lower fiber concentrations.

2. Wetting the insulation during the removal of pipe wrap is preferred over the use of a glove bag or HEPA vacuum to reduce airborne fiber levels.

3. The use of a torch or electric saw to cut pipes resulted in lower fiber levels than breaking the pipe joints with a hammer.

4. The use of a plastic bag to contain loose pipe wrap minimized the contamination of the work area.

5. Fiber concentrations outside the work area were not detectable during the use of recommended work practices.

6. Plenum fiber concentrations during recommended work practices were not detectable. Employees did not enter the plenum during recommended work activity.

7. Fiber levels in the near and far area samples during recommended work practices were lower than the initial sampling results.

8. The use of a HEPA vacuum is preferred over dry sweeping during the clean up phase of activity.

Recommendations

Project Management

1. A member of management should be assigned to managing all asbestos work projects. The Insulation Work Permit and Supplies and Personal Protective Equipment Checklist (Attachments A & B) should be completed, signed and dated for each 8-hour work tour.

2. These records should be filed in the Building Managers office.

3. Periodic audits should be made by the Regional Safety Coordinator to assure records are being kept.

4. Periodic air monitoring by Safety Coordinator should be conducted to assess employee exposure during new jobs, modified jobs, or practicing new techniques.

5. New employees and employees performing new work techniques must be trained prior to being assigned to a job.

6. Medical monitoring is required for all employees working on jobs where the action level is exceeded. The need for continuing medical monitoring will be evaluated by air monitoring of new and modified jobs.

7. Personal protective equipment is recommended to ensure worker protection and minimize the possibility of contaminating other areas. Work clothing must be vacuumed prior to leaving the work area. No work clothing should be worn or taken home. If possible, showers should be taken by employees after completing work. All potentially contaminated clothing should be stored in a sealed bag prior to laundering by a contracted firm. A suggested asbestos respirator program is attached (Attachment C).

8. Insulation and pipe removal activity is a strenuous job. At a minimum, two employees should be assigned to all work projects.

The following recommendations are guidelines for performing this work in a safe and practical manner. These recommendations are presented in the following attached tables:

Table 13: Pre-Work Guide
Table 14: Work Activity

Attachment A: Insulation Work Permit
Attachment B: Supplies and Personal Protective Equipment Checklist
Attachment C: Asbestos Respirator Program
Attachment D: Asbestos Removal and Disposal Requirements

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Table 1

Area Samples (8/9/84)

Airborne Fiber Concentrations at 811 10th Avenue, New York, NY
AT&T Communications

Sample No.	Sample Description	Sample Duration (mins.)	Volume of Air Sampled (L)	Fibers[1] Counted	Concentration[2] (Fibers/cc)
080984LL 51	sample ba ground hallway during work-dry	113	195.5	6.0	ND[3] (<0.056)
080984LL 52	background sample hallway during transport and cleanup-dry	50	81.3	9.0	ND[3] (<0.134)
080984LL 61	background sample air plenum during work and cleanup -dry	395	464.6	77.0	0.175
BLANK	blank air filter	-	-	2.0	-

1 Fibers Counted in 100 microscope fields; 0.00785 mm^2 per field.

2 Concentrations reported are blank corrected.

3 ND, none detected - less than 100 fibers per 100 fields blank corrected. The value in parenthesis is the minimum analytical limit of detection.

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Table 2

Area Samples 8/9/84

Airborne Fiber Concentrations at 811 10th Avenue, New York, NY
AT&T Communications

Sample No.	Sample Description	Sample Duration (mins.)	Volume of Air Sampled (L)	Fibers[1] Counted	Concentration[2] (Fibers/cc)
080984LL 11	near work area work and transport-dry	275	536.25	132.5 (25 fields)	1.07
080984LL 12	near work area cleanup-dry	52	102.05	129 (25 fields)	5.49
080984LL 41	far work area-dry work and transport	282	451.2	183.5 (50 fields)	0.88
080984LL 42	far work area -dry cleanup	47	73.44	169.5 (50 fields)	5.0

1 Fibers Counted in 100 microscope fields unless otherwise stated in parenthesis; 0.00785 mm^2 per field.

2 Concentrations reported are blank corrected.

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Table 3

Personal Samples (8/9/84)
Airborne Fiber Concentrations at 811 10th Avenue, New York, NY
AT&T Communications

Sample No.	Sample Description	Sample Duration (mins.)	Volume of Air Sampled (L)	Fibers[1] Counted	Concentration[2] (Fibers/cc)
080984LL 21	work - removal and cut (electric saw) - dry	176	315.04	224.0 (50 fields)	1.54
080984LL 22	transport and cleanup	51	86.75	183.5 (50 fields)	4.59
080984LL 31A	work - removal and cut (electric saw) - dry	87	(low volume)		VOID[3]
080984LL 31B	work - removal and cut (electric saw) - dry	95	136.56	207.5 (50 fields)	3.31
080984LL 32	transport and cleanup - dry	52	91.0	170.0	4.05

1 Fibers Counted in 100 microscope fields unless otherwise stated in parenthesis; 0.00785 mm^2 per field.

2 Concentrations reported are blank corrected.

3 VOID - filter cassette cracked resulting in low volume sample.

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Table 4

Personal Samples (8/9/84)

Airborne Time Weighted Average (TWA) Fiber Concentrations
811 10th Avenue, New York, NY
AT&T Communications

Sample No.	Sample Description	Sample Duration (mins.)	Concentration (fibers/cc)	Actual[1] TWA Concentration (fibers/cc)	8-hour[2] TWA Concentration (fibers/cc)	Regulated[3] 8-hour TWA Concentrations fibers/cc)
080984LL 21	work - removal and cut (electric saw) - dry	176	1.54	2.23	1.05	2.0 (OSHA-PEL)
080984LL 22	transport and cleanup - dry	51	4.59			0.1 (AT&T-C and OSHA - action level)
080984LL 318	work - removal and cut (electric saw) - dry	95	3.31	3.57	1.09	2.0 (OSHA-PEL)
080984LL 32	transport and cleanup cut - dry	52	4.05			0.1 (AT&T-C and OSHA - action level)

1 Actual TWA concentration expresses exposure to fibers during actual work period.

2 8-hour TWA concentration assumes no exposure during the remainder of the work period.

3 Regulated 8-hour TWA concentrations present OSHA Permissible Exposure Limit (PEL) and AT&T-C and OSHA action level.

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Table 5

Area Samples (9/6/84)
Airborne Fiber Concentrations at 811 10th Avenue, New York, NY
AT&T Communications

Sample No.	Sample Description	Sample Duration (mins.)	Volume of Air Sampled (L)	Fibers[1] Counted	Concentration[2] (Fibers/cc)
090684LL 30	background sample hallway during work	92	179.4	5.5	ND[3] (<0.061)
090684LL 31	background sample hallway during transport	58	106.1	3.0	ND[3] (<0.103)
090684LL 60	background sample air plenum during work	213	383.4	4.5	ND[3] (<0.028)

1 Fibers Counted in 100 microscope fields; 0.00785 mm^2 per field.

2 Concentrations reported are blank corrected.

3 ND, none detected - less than 100 fibers per 100 fields blank corrected. The value in parenthesis is the minimum analytical limit of detection.

Table 6

Area Samples (9/6/84)
Airborne Fiber Concentrations at 811 10th Avenue, New York, NY
AT&T Communications

Sample No.	Sample Description	Sample Duration (mins.)	Volume of Air Sampled (L)	Fibers[1] Counted	Concentration[2] (Fibers/cc)
090684LL 10	near work area cut, glove bag - dry	69	135.9	22.0	0.164
090684LL 11	near work area cut, electric saw -wet	58	110.2	10.5	0.088
090684LL 12	near work area cut, HEPA - dry	85	157.25	79.0	0.537
090684LL 20	far work area cut, glove bag - dry	66	130.9	21.5	0.168
090684LL 21	far work area cut, electric saw - wet	60	115.8	27.0	0.240
090684LL 22	far work area cut, electric saw, HEPA - dry	83	160.2	31.5	0.204

1 Fibers Counted in 100 microscope fields; 0.00785 mm^2 per field.

2 Concentrations reported are blank corrected.

3 ND, none detected - less than 100 fibers per 100 fields blank corrected. The value in parenthesis is the minimum analytical limit of detection.

Table

Personal Samples (9/6/84)

Airborne Fiber Concentrations at All - 10th Avenue, New York, NY
AT&T - Communications

Sample No.	Sample Description	Sample Duration (mins.)	Volume of Air Sampled (L)	Fibers[1] Counted	Concentration[2] (Fibers/cc)
090684LL40	work - glove bag - dry	42	82.74	31.5	0.395
090684LL41	work - cut with torch - wet	20	39.0	10.5	0.250 *
090684LL42	work - knife, wet	23	48.3	5.5	ND[3] (<0.225)
090684LL43	work - cut (electric saw)-wet	45	90.0	9.5	ND[3] * (<0.121)
090684LL44	work - cut, HEPA - dry	19	38.0	18.5	0.487
090684LL45	transport - wet	26	50.7	25.0	0.505
090684LL46	work - cut (electric saw)-wet	11	21.7	10.0	0.427*
090684LL47	clean up - HEPA - dry	16	32.5	9.0	ND[3]

1 Fibers Counted in 100 microscope fields; 0.00785 mm^2 per field.

2 Concentrations reported are blank corrected.

3 ND, none detected, less than 10 fibers per 100 fields blank corrected. The value in parenthesis is the minimum analytical limit of detection.

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Table 8

Personal Sample (9/6/84)
Airborne Fiber Concentrations at 811 - 10th Avenue, New York, NY
AT&T - Communications

Sample No.	Sample Description	Sample Duration (mins.)	Volume of Air Sampled (L)	Fibers[1] Counted	Concentration[2] (Fibers/cc)
090684LL50	work glove bag - dry	20	40.0	30.0	0.776
090684LL51	work cut, torch - dry	22	44.0	8.0	ND[3] (<0.248)
090684LL52	work knife, wet	20	38.6	13.5	0.339
090684LL53	work cut, electric saw - wet	16	31.2	22.5	0.733
090684LL54	work cut, HEPA - dry	19	37.4	22.5	0.612
090684LL55	transport - wet	25	48.75	8.5	ND[3] (<0.223)
090684LL56	work cut, electric saw - wet	10	19.7	12.0	0.580
090684LL57	clean up HEPA - dry	14	25.6	22.5	0.893

1 Fibers Counted in 100 microscope fields; 0.00785 mm^2 per field.

2 Concentrations reported are blank corrected.

3 ND, none detected, less than 10 fibers per 100 fields blank corrected. The value in parenthesis is the minimum analytical limit of detection.

Table 9

Area Samples (11/29/84)
Airborne Fiber Concentrations at 811 10th Avenue, New York, NY
AT&T Communications

Sample No.	Sample Description	Sample Duration (mins.)	Volume of Air Sampled (L)	Fibers[1] Counted	Concentration[2] (Fibers/cc)
112984LL01	far work area during work and cleanup	315	614.25	9.5	ND[3] (<0.018)
112984LL02	near work area during work and cleanup	315	582.75	14.0	0.024
112984LL03	background sample hallway during work and cleanup	315	611.1	5.0	ND[3] (<0.018)

1-Fibers Counted in 100 microscope fields; 0.00785 mm^2 per field.

2-Concentrations reported are blank corrected.

3-ND, none detected - less than 10 fibers per 100 fields blank corrected. The value in parenthesis is the limit of detection.

Table 10

Personal Samples (11/29/84)
Airborne Fiber Concentrations at 811 10th Avenue, New York, NY
AT&T Communications

Sample No.	Sample Description	Sample Duration (mins.)	Volume of Air Sampled (L)	Fibers[1] Counted	Concentration[2] (Fibers/cc)
112984LL04	work - wet cut, electric saw and torch	107	224.7	52.5	0.250
112984LL05	work - wet assist cutting and cleanup	108	216.0	32.0	0.156
112984LL07	work - wet cut, electric saw and torch cleanup	111	216.5	38.0	0.186
112984LL08	work - wet cut, electric saw	70	140.0	7.5	ND[3] (<0.078)
112984LL09	work - wet assist cutting and cleanup	70	148.4	9.0	ND[3] (<0.073)

1-Fibers Counted in 100 microscope fields; 0.00785 mm^2 per field.

2-Concentrations reported are blank corrected.

3-ND, none detected - less than 100 fibers per 100 fields blank corrected. The value in parenthesis is the limit of detection.

Table 11

Personal Samples (11/29/84)
Airborne Time Weighted Average (TWA) Fiber Concentrations
811 10th Avenue, New York, NY
AT&T Communications

Sample No.	Sample Description	Sample Duration (mins.)	Concentration[2] (Fibers /cc)	8-hour TWA Concentration Fibers	Regulated 8-hour TWA Concentrations (Fibers/cc)
112984LL04	work - wet cut, electric saw and torch	107	0.250	0.067	2.0 (OSHA-PEL)
112984LL08	work - wet cut, electric saw	70	ND[3] (<0.078)		0.1 (AT&T-C and OSHA action level)
112984LL05	work - wet assist cutting and clean up	108	0.156	0.046	2.0 (OSHA-PEL)
112984LL09	work - wet assist cutting and cleanup	70	ND[3] (<0.073)		0.1 (AT&T-C and OSHA action level)

1-Fibers Counted in 100 microscope fields; 0.00785 mm^2 per field.

2-8-hour TWA concentration assumes no exposure during the remainder of the work period.

3-ND, none detected - less than 10 fibers per 100 fields blank corrected. The value in parenthesis is the limit of detection.

4-Related 8-hour TWA concentrations present OSHA Permissible Exposure Limit (PEL) and AT&T-C and OSHA action level.

Table 12

Personal Samples
A Comparison of Airborne Time Weighted Average (TWA) Fiber Concentrations
811 10th Avenue, New York, NY
AT&T-Communications

Sample No.	Sample Description	Concentration[1] (fiber/CC)	8/9/84 8-hour TWA Concentration[2] (fibers/cc)	11/29/84 8-hour TWA Concentration[2] (fibers/cc)	Regulated[3] 8-hour TWA Concentration (Fibers/cc)
080984LL21	work - removal and cut - dry	1.54	1.05		2.0 (OSHA-PEL)
080984LL22	transport and cleanup - dry	4.59			0.1 (AT&T-C and OSHA action level)
080984LL31B	work - removal and cut-dry	3.31	1.09		2.0 (OSHA-PEL)
080984LL32	transport and cleanup - dry	4.05			0.1 (AT&T-C and OSHA action level)
112984LL04	work - removal and cut - wet	0.250		0.067	2.0 (OSHA-PEL)
112984LL08	work - removal and cut - wet	ND[4] (<0.078)			0.1 (AT&T-C and OSHA action level)
112984LL05	assist with work - removal and cleanup	0.156		0.046	2.0 (OSHA PEL)
112984LL09	assist with work-removal and cleanup	ND[4] (<0.073)			0.1 (AT&T-C and OSHA action level)

1-Fibers Counted in 100 microscope fields; 0.00785 mm^2 per field.

2-8-hour TWA concentration assumes NO exposure during the remainder of the work period.

3-Regulated 8-hour TWA concentrations present OSHA Permissible Exposure Limit (PEL) and AT&T-C and OSHA action level.

4-ND, none detected - less than 100 fibers per 100 fields blank corrected. The value in parenthesis is the limit of detection.

TABLE 13

PRE-WORK GUIDE

OBJECTIVE

To aid the Supervisor in managing asbestos work - The following guidelines present considerations for safe work activity. The Insulation Work Permit (Attachment A) and the Supplies Checklist (Attachment B) document that proper preventive measures have been taken for each workshift.

A. Assignment of Employees

Medical and Industrial Hygiene considerations must be met before employees begin work on asbestos projects.

Medical	Industrial Hygiene
1. Medical evaluation of employees assigned to project	1. Respirator training
2. Fitness for use of respirator	2. Qualitative Fit-Test

B. Work Area Survey

Necessary tools and protective equipment must be available.

C. Air Plenum Work

The need for air plenum work must be decided by the Supervisor before starting the job. Access to the air plenum corridor is prohibited and all outside openings to the plenum must be sealed until the final area wet mop is completed.

Two options exist if plenum work is determined to be necessary.

1. Schedule and perform work prior to asbestos work activity.

2. Schedule work after completion of asbestos work activity.

TABLE 14

WORK ACTIVITY

Phase 1: Insulation Removal

OBJECTIVE

To minimize the release of dust during all phases of work activity - This is accomplished by wetting the insulation with the penetrant solution and placing the debris in a plastic bag to prevent the release of dust.

1. Wear appropriate personal protective equipment.

2. Position plastic bag under pipe(s) to catch falling debris.

3. Cut insulation with utility knife. Do not use hammer. Wet mist insulation during cutting.

4. Cut insulation in a circular motion around the pipe at two locations. Leave enough room between cuts to allow the use of a torch or saw.

5. Cut insulation along the pipe, joining the two circular cuts.

6. Remove the insulation carefully, mist with penetrant solution, and drop into the plastic bag.

7. Mist the exposed ends of the insulation on the pipe prior to beginning next phase of work.

Phase 2: Cutting the Pipe

OBJECTIVE

To minimize the disruption of the insulation and release of airborne fibers - All exposed insulation must be misted or sealed.

1. If a torch is used, mist the exposed insulation ends prior to cutting. Use sealant compound to seal exposed insulation ends on the small cut pipe pieces.

2. If a torch is not available, a saw can be used. (CAUTION: Tool must be double insulated). Seal the exposed insulation ends with sealant compound PRIOR to cutting with electric saw.

3. Place any small cut pipe pieces inside the plastic catch bag.

4. Seal with a sealant compound any exposed insulation on pipe runs which are left intact.

5. Seal with a sealant compound the exposed insulation on large cut pipes that cannot fit into a plastic bag.

Phase 3: Transport

OBJECTIVE

To eliminate the possibility of contaminating areas outside the work area - All work clothing must be vacuumed prior to leaving work area.

1. Open the plastic sheeting and place it on the cart. Position the cart under large pipe runs and gently lower piping onto the cart.

2. Try not to rip the pipe wrap. If the pipe wrap rips, seal or mist the exposed area.

3. Place large pipe pieces on the cart.

4. Seal and place the plastic bag on the cart.

5. Cover the piping and the plastic bag with another sheet of plastic. Secure the top sheet to prevent it from opening.

6. Vacuum work clothing before carefully wheeling the cart from the work area to the storage area.

7. Gently remove the piping and plastic. Ensure the cart is clean.

NOTE: Some of these items may have to be done out of sequence, depending upon the specific situation.

Phase 4: Clean Up

OBJECTIVE

To minimize the release of airborne fibers during all clean-up activities -

1. Wear a respirator.
2. Dry sweeping is prohibited.
3. A properly functioning HEPA (High Efficiency Particulate Absolute) vacuum with correct attachments is to be used.
4. Vacuum the work area, floor, adjacent horizontal surfaces, tools and remaining piping adjacent to or below the work area.
5. Continue to wear protection if it is necessary to empty the HEPA vacuum. Carefully empty the vacuum cleaner to minimize the release of airborne fibers. Seal the vacuum bags before placing them into disposal bags.
6. With a respirator on, decontaminate work clothing with the HEPA vacuum. Place respirator and full vacuum bags inside a sealed plastic bag.
7. Place the sealed plastic bag with the removed piping in the storage area.

Phase 5: Post Work Activity

OBJECTIVE

To ensure the work area is clean and work clothing is removed after the job is completed.

1. Wet mop the floor.
2. In locker area: Remove work clothing and place in plastic bag for laundry pick-up.
3. Shower if possible.
4. The Supervisor should visually check the work and locker area. Complete and sign the Insulation Work Permit and file it with Building Manager at the end of the workshift.

ATTACHMENT A

Instructions: This Insulation Work Permit is to be completed by the Supervisor prior to beginning and after completing each workshift. It is to be retained by the Building Manager.

Insulation Work Permit

Work Location _____

Pre-Work:

Employees Assigned to the Job _____
_____
_____
_____

Personnel Assigned Meet Medical/
Environmental Requirements _____

Shift 1st____ 2nd___ 3rd____
HVAC System Shut Down _____
Plenum work Necessary Yes_____ No_____
Plenum Work Scheduled:
Prior to Insulation Work _____
After Final Wet Mop _____
Date Scheduled _____

Plenum Sealed _____
All Tools in Work Area _____
All Personal Protective
Equipment Available _____

Work:

Wet Method Used _____
Personal Protective _____
Equipment Used

Post Work:

HEPA Vacuum of Area/Clothing Done _____
Work Clothing Sealed for Pick-Up _____
Waste Disposal Properly Done _____
Final Wet Mop Done _____
Area Visually Clean _____

Air Sampling Conducted yes_____ no_____

Results Attached yes_____ no_____

_____
Signature and Date

_____
Supervisor

ATTACHMENT B

Instructions: The Supplies Checklist is to be completed by the Supervisor prior to beginning the job.

Job Location: _____

1. Supplies Checklist

	penetrant solution	____
	spray bottle	____
	sealant compound	____
Tools:	utility knives	____
	electric saw	____
	oxygen-acetylene/torch and assorted equipment	____
	cart	____
	plastic clothing disposal bags	____
	plastic debris bags	____
	plastic sheets	____
	HEPA vacuum with attachments	____
	necessary additional tools	____
	mop and bucket	____
	ladder	____

2. Personal Protective Equipment Checklist

Respirators ____

Type _____

_____
Signature and Date

_____
Supervisor

ATTACHMENT C

Asbestos

Respirator Program

I. Introduction

AT&T Communications is committed to eliminating employees' exposure to airborne contaminants by engineering controls. In some specific instances when additional protection from airborne contaminants is desired due to the nature of the substance or operations, personal respirators may be worn.

This program is designed to establish uniform practices for training and the proper selection, use and maintenance of respirators.

The Occupational Safety and Health Administration (OSHA) has established requirements for an acceptable respirator program in 29 CFR Part 1910, Subpart I, Subsection 1910.134.

II. General

Respiratory protective equipment is designed for unique purposes. Each type has certain advantages and disadvantages. The specific air contaminants, airborne concentration, length of exposure, tasks to be performed and personal limitations must be considered when selecting respiratory protective equipment.

Respiratory protective equipment can be classified in two general categories:

A. Air-Supplied Breathing Apparatus

1. Self-Contained Breathing Apparatus (SCBA)
2. Air-Line Breathing Apparatus (Air Mask or Hood)

B. Air-Purifying Respirators

1. Chemical Cartridge Respirators

2. Particulate or Dust Respirators (Dust Mask)

This Respirator Program will discuss air-purifying respirators which may be worn when working near insulation materials.

Changes in working conditions and practices which release airborne contaminants shall be evaluated to assess their impact on the use of respirators.

This program will be reviewed periodically to ensure its effectiveness:

1. All respiratory protective equipment shall be used in accordance with the manufacturers' instructions and training received.
2. Respirators shall be regularly inspected and maintained prior to their use. Defective equipment shall be repaired or disposed. Problems with respirators shall be reported to supervisors.

III. Maintenance and Care of Respirators

A. Inspection of Respirators

All respirators shall be inspected before and after each use.

This inspection shall include the examination of:

1. the tightness of connections and the condition of the face piece

2. the headbands

3. rubber or elastomer parts for pliability and deterioration

B. Cleaning of Respirators

1. Disposable type respirators shall be used once and disposed. Respirators are to be the last piece of personal protective equipment removed after final vacuuming.

C. Repair of Respirators

1. In general, defective respirators shall be exchanged for new ones, making repairs unnecessary.

D. Storage of Respirators

1. Respirators shall be stored to protect against dust, sunlight, heat, extreme cold, excessive moisture or damaging chemicals.

2. Air-purifying respirators such as dust masks may be stored in plastic bags.

IV. Medical Limitations

A. No person shall use a respirator unless they are able to perform the work and use the equipment. This shall be determined by the Medical and Safety Departments.

B. The medical status of respirator wearers will be reviewed periodically by the Medical Department.

V. Selection, Issuance and Training Practices

A. Selection of Respirators

1. The type and make of respirator will be selected by the supervisor with the assistance of the Regional Safety Coordinator.

2. Only respirators approved by the National Institute of Occupational Safety and Health (NIOSH) may be used. The following disposable respirators are approved for asbestos: 3M 8710, 9900, and 9910.

3. The proper type of respirator for each contaminant will be selected in accordance with the manufacturers' instructions and the assistance of the Regional Safety Coordinator.

B. Issuance of Respirators

1. Air sampling will be performed to determine if the use of a respirator is recommended for certain types of work activity. Area and personal air sampling will be performed periodically to assess airborne contamination and the effectiveness of respiratory protection.

C. Employee Training

The following topics will be presented and discussed during respirator training sessions:

1. The nature of the air contaminants and their potential toxicity.

2. The use of engineering controls and respiratory protective equipment including previous industrial hygiene studies.
3. The proper selection, use and care of respirators.
4. Instruction and training in the actual use of air-purifying respirators including qualitative fit tests.
5. Any other emergency or special instructions.

VI. Operating Procedures for Respirators

A. Respirators should be stored appropriately when not being used. A clean plastic bag can be used for storing respirators.

B. Respirators should not be worn when conditions prevent a good face seal (i.e., beards, eyeglasses and missing dentures).

C. Before and after using a respirator, the employee should inspect the tightness of connections and condition of the face piece, and headbands. If any questionable items are found, they shall be corrected prior to use.

D. To assure proper protection, the fit of the face piece must be checked by the wearer before each use. To check the fit, cup both hands over respirator and exhale vigorously. If air leaks around the nose, tighten the nosepiece. If air leaks around the edges of the respirator, adjust the head straps.

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E. After prolonged use, air purifying respirators should be disposed. Excessive use or damage may result in the impaired performance of respirators.

F. Air purifying respirators must never be worn in an oxygen-deficient or toxic atmosphere. Air-supplied respirators must worn in these conditions. Additional qualifications and training is required prior to the use of air-supplied respirators.