

BLOCK

671

LOT

3

ADDRESS (SITE)

NW Corner of Brick Blvd
& Cedar Bridge Ave

PERMIT NO.

2244-92

RECEIVED

OCT 13 1992



CONSTRUCTION PERMIT APPLICATION

Applicant Completes: Sections I, II, III (optional), IV, VI and VII

I. IDENTIFICATION

- Proposed Work-site at: Blvd E Cedar Bridge Avenue
- Name of Owner in Fee: County of Ocean Tel. (708) 929-2039
Address 5 Mott Place Toms River, N.J. 08753
street municipality zip code
- Ownership in Fee: Public ☒ Private ☐
- Principal Contractor: Tomorrow's Env. Concepts Tel. (609) 298-6000
Address Route 206 PO Box 377, Columbus, N.J. 08022
License No. OR, if new home, Builder Reg. No. 00421 Exp. Date 7/17/93
Federal Emp. No. 22-3077647 Social Security No. _____
- Architect or Engineer _____ Tel. (_____) _____
Address _____
- Responsible Person _____ Tel. (_____) _____
In Charge of Work _____

V. FEE SUMMARY (for office use only)

		Update	Update
1. Building	\$ 38 -		
2. Electrical			
3. Plumbing			
4. Fire Protection			
5. Other			
6. Subtotal	\$ 38 -		
7. Less 20% for State Plan Review			
8. Subtotal			
9. DCA Training Fee	4 -		
10. Subtotal			
11. Cert. of Occupancy	20 -		
12. Other			
13. TOTAL	\$ 62 -		

VI. BUILDING/SITE CHARACTERISTICS

- Number of Stories _____
- Height of Structure _____ ft.
- Area—Largest Floor _____ sq. ft.
- Building Area—All Floors _____ sq. ft.
- Volume of Structure _____ cu. ft.
- Construction Classification _____
- Total Land Area Disturbed _____ sq. ft.
- Flood Hazard Zone _____
- Base Flood Elevation _____ ft.
- Wetlands yes _____ sq. ft.
no _____
- Fire Grading _____
- Max. Live Load _____
- Max. Occupancy Load _____

II. PROPOSED WORK

- ☐ Minor Work (single trade)
- ☐ Small Job (\$5,000 and no prior approvals)
- ☐ New Building
- ☐ Addition
- ☐ Alteration
- ☐ Fire Protection
- ☐ Plumbing
- ☐ Electrical
- ☒ Asbestos Abatement
- ☐ Demolition

Est. Cost

4,445

TOTAL COSTS

OPTIONAL (for office use only)

Plans Rec'd By	Date Rec'd	Rejection Date	Approval Date	Re-viewer	Resubmission Dates	Re-viewer
DC	10/13/92		10/16/92	PA	12/18/92	PA

III. DO YOU WANT: (optional) 1. ☐ Partial Releases 2. ☐ Prototype Processing

IV. DOES OR WILL YOUR BUILDING CONTAIN ANY OF THE FOLLOWING?

- ☐ Elevators/Escalators/Lifts/Dumbwaiters/Moving Walks
- ☐ High Pressure Boilers
- ☐ Pressure Vessels
- ☐ Refrigeration Systems
- ☐ Cross-Connections/Backflow Preventers
- ☐ Hazardous Uses/Places of Assembly
- ☐ Sprinklers
- ☐ Smoke Control Systems in Open Wells
- ☐ Underground Storage Tanks

VII. DESCRIPTION OF BUILDING USE

A. RESIDENTIAL

- ☐ Hotels (R-1)
 - ☐ Multi-Family (R-2)
 - ☐ Two-Family (R-3) BOCA
 - ☐ Two-Family (R-4) CABO
 - ☐ One-Family (R-3) BOCA
 - ☐ One-Family (R-4) CABO
- No of dwelling units:
Before Construction _____
After Construction _____
Net gain or loss _____

B. NON-RESIDENTIAL

- State Specific Use:
Commercial
- Use Group: _____
- Change in Use Group, Indicate Former: _____

LDS BR 10310912

ZNA

CERTIFICATION IN LIEU OF OATH

I. OWNER SECTION (to be completed if the applicant is the owner in fee)

I hereby certify that I am the owner in fee of the property listed on Page 1.

Mark the following applicable boxes:

A. ☐ I further certify that a new home (private residence) will be constructed on this property for my own use and occupancy. This dwelling is to be occupied by myself and is not to be used for any purpose other than single family residential use. I attest that all construction, plumbing, or electrical work will be done, in whole or in part, by me or by subcontractors under my supervision, in accordance with all applicable laws; and, I further acknowledge that said new home is not covered under the New Home Warranty and Builders Registration Act (N.J.S.A. 46:3B-1 et seq.) and that such fact shall be disclosed to any person purchasing this property within ten years of the date of issuance of a certificate of occupancy.

I UNDERSTAND THAT IN MARKING BOX A, I ACKNOWLEDGE THAT I AM ASSUMING RESPONSIBILITY FOR THE WORK DONE ON SAID PROPERTY, THE CONDITION OF THE PROPERTY PRIOR TO, DURING, AND AFTER ANY WORK PERFORMED, AND FOR THE PERFORMANCE OF THE SUBCONTRACTORS I HIRE, EMPLOY, OR OTHERWISE CONTRACT OR WITH WHOM I MAKE AGREEMENTS TO PERFORM WORK. I AM VOLUNTARILY AND KNOWINGLY ASSUMING THIS RESPONSIBILITY.

B. ☐ I further certify the following as required by the New Jersey Uniform Construction Code, N.J.A.C. 5:23-2.15(e)1.vii:

I personally prepared the plans submitted for: 1) the new home referred to in A.; or, 2) an addition, alteration, renovation, or repair to an existing single family residence owned and occupied by myself and located on the property listed on Page 1; or, 3) a new structure that will be physically separate from, but that will be deemed part of, an existing single family residence that is owned and occupied by myself and located on the property listed on Page 1.

C. ☐ I further certify that I will perform or supervise the following work:

C.1. ☐ Building C.2. ☐ Fire Protection

I further certify that I will perform the following work:

C.3. ☐ Electrical C.4. ☐ Plumbing

D. ☐ I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I understand that if any of the above statements are willfully false, I am subject to punishment.

Signature _____ Date _____

II. AGENT SECTION

(to be completed if the applicant is not the owner in fee)

I hereby certify the following as required by the New Jersey Uniform Construction Code, N.J.A.C. 5:32-2.15(d): the proposed work is authorized by the owner in fee; and I have been authorized by the owner in fee to make this application as his agent.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I understand that if any of the above statements are willfully false, I am subject to punishment.

☐ Check if contractor.

Agent Name Testwell Craig Testing Labs, Inc.

Address 5439 E. Harding Hwy.
May's Landing, N.J. 08330

Telephone (609) 625-1700

Signature [Signature] Date 10/12/92

OFFICE DATE RECEIVED: _____

VIII. PRIOR APPROVALS CHECKLIST (office use only)	LOCAL APPROVAL		COUNTY APPROVAL		REGIONAL APPROVAL		STATE APPROVAL		COMMENTS
	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	
☐ Planning Board									
☐ Zoning Board									
☐ Sewer Authority									
☐ Water Authority									
☐ Fire Department									
☐ Police Department									
☐ Health Department									
☐ Soil Conservation									
☐ N.J. Dept. of Community Affairs									
☐ N.J. Department of Transportation									
☐ N.J. Dept. of Environmental Protection									
☐ Utility Dig No.									
☒ Other <i>See below</i>									
☐									
☐									

IX. SUBCODES AND SPECIAL REGULATIONS APPLICABLE (office use only—optional)

Name of Code & Edition	Name of Code & Edition	Other
Building _____	Energy _____	_____
Electrical _____	Barrier Free _____	_____
Plumbing _____	Flood Hazard _____	_____
Fire Protection _____	As Built Elevation Cert. _____	_____
Mechanical _____	Other _____	_____

X. CERTIFICATES ISSUED (office use only)	DATE EXPIRED
☐ Temporary Certificate of Occupancy	No. _____
☐ Temporary Certificate of Occupancy	No. _____
☐ Continued Certificate of Occupancy	No. <i>2014</i>
☐ Certificate of Occupancy	No. <i>12/18/12</i>
☒ Certificate of Approval	No. _____



CERTIFICATE

Date Issued 12/18/92
Control #
Permit # 2244-92

IDENTIFICATION

Block 671 Lot 3
Work Site Location Old Carvel NW corner of Brick Blvd & Cedarbridge
Brick, N.J. 08723
Owner in Fee County of Ocean
Address 5 Mott Place
Toms River, N.J.
Tele. () Tomorrow's environmental Concerns
Contractor Route 206
Address Columbus, N.J. 08022
Tele. ()
Lic. No. or Bldgs. Reg. No.
Federal Emp. No.
or Social Security No.

Home Warranty No. N/A
Use Group
Maximum Live Load
Description of Work/Use:

Removal of 935 Sq. Ft. of Asbestos

Type of Warranty Plan: [] State [] Private
Construction Classification
Maximum Occupancy Load

CERTIFICATE OF OCCUPANCY/APPROVAL

☐ CERTIFICATE OF OCCUPANCY

This serves notice that said building, structure, or equipment has been constructed or installed in accordance with the New Jersey Uniform Construction Code, and is approved for use and/or occupancy.

☐ CERTIFICATE OF CONTINUED OCCUPANCY

This serves notice that based on a general inspection of the visible parts of the building there are no imminent hazards and the building is approved for continued occupancy.

☐ TEMPORARY CERTIFICATE OF OCCUPANCY

If this is a Temporary Certificate of Occupancy the following conditions must be met no later than 19 or the owner will be subject to a fine or order to vacate:

CONSTRUCTION OFFICIAL

Arthur J. Kelly

Fee \$
Paid [] Check No.
Collected by:



CERTIFICATE

Date Issued 12/18/92
Control #
Permit # 2244-92

IDENTIFICATION

Block 671 Lot 3
Work Site Location Old Carvel NW corner of Brick Blvd&Cedarbridge
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Tele. ()
Contractor Tomorrow's environmental Concerns
Address Route 206
Columbus, N.J. 08022
Tele. ()
Lic. No. or Bldgs. Reg. No.
Federal Emp. No.
or Social Security No.

Home Warranty No. N/A
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Fee \$
Paid [] Check No.
Collected by:

CONSTRUCTION OFFICIAL



CONSTRUCTION PERMIT

Date Issued
Control #
Permit #

10/28/92

2244-92

IDENTIFICATION Block

671

Lot

3

Work Site Location

Northwell - Cedarbridge

Owner in Fee

1200 N. 1st St. Suite 1000

Address

3.1111 1111

Tele. ()

024-2037

Contractor

Turner Construction Company

Address

1111 1111 1111

Tele. ()

024-2037

Lic. No. or Bids. Reg. No.

Exp. Date

Federal Emp. No.

22 317647

or Social Security No.

is hereby granted permission to perform the following work:

☒ BUILDING ☐ PLUMBING ☐ OTHER
☐ ELECTRICAL ☐ FIRE PROTECTION

DESCRIPTION OF WORK:

Wireless removal

NOTE: If construction does not commence within one (1) year of date of issuance, or if construction ceases for a period of six (6) months, this permit is void.

Estimated Cost of Work \$

4445

PAYMENTS (Office Use Only)

Building

Plumbing

Electrical

Fire Protection

Other

Other

DCA Training Fee

Cert. of Occ.

Other

Total

Check No.

Cash

Collected By:

SPECIFICATIONS
FOR
ASBESTOS ABATEMENT AND RELATED WORK
AT
OLD CARVEL
BRICK TOWNSHIP, NEW JERSEY

Prepared for: County of Ocean
Department of Buildings & Grounds
5 Mott Place
Toms River, New Jersey 08753
(908) 929-2039

Prepared by: Testwell Craig Testing Labs., Inc.
5439 East Harding Highway
Mays Landing, New Jersey 08330
(609) 625-1700

September 1992
Lab No 43930

Part I

1.00 Access to Work Site and Hours of Work

A. All arrangements for access to the work site shall be made through the Owner's Representative. Unless otherwise specified the contractor will perform all work between the hours of 8:00 AM to 4:30 PM, Monday through Friday. Access at times other than those given in Contractor's schedule will be at the Contractor's expense. The Contractor will be responsible for Owner's incurred costs for security, testing, air monitoring, supervision and all other related Owner incurred costs at such periods as he undertakes or proposes to undertake such work other than at times described in the approved schedule.

1.01 Notifications

A. The contractor shall notify the following agencies in writing ten (10) days prior to the start of the asbestos removal project. The Contractor must submit two (2) copies of each notice to Testwell Craig Laboratories, Incorporated, prior to the application for the asbestos abatement permit from the local building official.

1. US Environmental Protection Agency
Asbestos NESHAPS Contracts
Air & Hazardous Material Division
26 Federal Plaza
New York, New York 10007
2. New Jersey Department of Community Affairs
Bureau of Construction Code Enforcement
CN 805
Trenton, New Jersey 08625
3. New Jersey Department of Health
Asbestos Control Project
CN 360
Trenton, New Jersey 08625
4. New Jersey Department of Labor
Asbestos Control and Licensing
CN 054
Trenton, New Jersey 08625

Old Carvel, Brick Twp.
Lab# 43930

5. New Jersey Department of Environmental
Protection
Division of Waste Management
Bureau of Field Operations
120 Route 156
Yardville, New Jersey 08620

Notification to the agencies in Section A above shall be on the required forms (where applicable) and include the following information:

1. Name and address of owner of building.
2. Name and address of the operator of the building.
3. Name and address of contractor.
4. Address and description of the building, including size, age and prior use of the building or area, and amount of friable asbestos material present in square feet and/or linear feet, as applies. Designate room numbers and other locations information unless entire building is involved.
5. Scheduled starting and completion dates for removal.
6. Procedures and equipment (including ventilating system) that will be employed to comply with 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants.
7. The name and address of the Department of Environmental Protection registered waste hauler and of the Department of Environmental Protection registered landfill where the asbestos waste will be deposited. Such landfill should also comply with 40 CFR Part 61.
8. The name and address of the Monitoring Firm to perform air monitoring on behalf of the contractor's employees.
9. Contractor shall obtain all permits and certificate of Occupancy.

B. The contractor shall notify the Owner's Asbestos Safety Monitoring Firm in writing at least 48 hours prior to commencement of any preparation of work.

1.02 Documentation of Worker's Qualifications

A. The contractor shall post the names, signatures, and photocopies of state issued licenses for all workers to be doing asbestos removal work on the job site. In addition, contractor must display a sign in letters larger than 4 inches tall indicating, "Licensed by the State of New Jersey for Asbestos Work". N.J.S.A 34:5A-32 et seq.

B. The contractor shall comply with all applicable requirements of 40 CFR Part 61, "Accepted Engineering Practices", and N.J.A.C. 5:23-8.

1.03 Air Monitoring & Inspections

A. The contractor is responsible for all OSHA required air monitoring for his employees.

B. Air monitoring and visual inspection in the adjacent to the work area will be conducted throughout the abatement project by the Owner's air monitoring technician and/or the Owner's representative in accordance with these specifications.

C. The Contractor shall provide the required respirators and protective clothing to all workers, and to all official representatives of the state & federal government or other designated party who may inspect the job site.

D. The Contractor shall cooperate fully with all aspects of the air monitoring programs which are conducted by the independent air monitoring consultant.

1.04 Definitions

A. The following words, terms and abbreviations when used in this document shall have the following meanings unless the context clearly indicates otherwise.

1. Abatement - procedures to decrease or eliminate fiber release from precast, spray or trowel applied asbestos-containing building materials. Includes encapsulation, enclosure and removal.

2. Airlock - system for permitting ingress or egress without permitting air movement between a contaminated area and an uncontaminated area, typically consisting of two curtained doorways at least three feet (one-meter) apart.
3. Amended water - water to which a wetting agent is added. The wetting agent is a combination of chemicals which aids in the penetration of the material and increases the probability of individual fiber wetting.
4. Air Monitoring - the process of measuring the fiber content (fibers of a specified size range) of a specific volume of air in a stated period of time.
5. Asbestos - a general term used to describe a group of naturally occurring hydrated mineral silicates. Including but not limited to the asbestiform varieties chrysotile (serpentine) ; crocidolite (riebeckite); amosite (cummingtonite-grunerite); anthophyllite; tremolite and actinolite.
6. Asbestos-containing material - any material which contains more than 1 percent asbestos by weight.
7. Asbestos Safety Technician (AST) - a person certified by the New Jersey Department of Community Affairs, hired by an Asbestos Safety Control Monitor who continuously monitors and inspects the asbestos abatement work pursuant to N.J.A.C. 5:23-8 and these specifications.
8. Barrier - polyethylene sheeting that completely seals off the work area to prevent contamination of the surrounding area.
9. Clean room - an uncontaminated area or room which is part of the worker decontamination enclosure system, with provisions for storage of workers' street clothes and protective equipment. Also referred to as Change Room.
10. Construction permit for asbestos abatement - requires official approval to commence any asbestos hazard abatement job.
11. Contractor - the Asbestos Removal Contractor.
12. Critical Barrier - two layers of 6 mil polyethylene sheeting that completely seals off the work area to prevent the distribution of fibers to

the surrounding area, such as the opening between the top of non-removable lights, HVAC systems, windows, doorways, entrance ways, ducts, grilles, grates, diffusers, wall clocks, speaker grilles, floor drains, sink drains, etc..

13. Curtained Doorway - a device to allow ingress or egress from one room to another while minimizing air movement between the rooms. Typically constructed by placing three overlapping sheets of plastic over an existing or temporarily framed doorway and securing each along the top of the doorway, with the vertical edge of one along one vertical side of the doorway and the vertical edge of the other along the opposite vertical sides. Two curtained doorways spaced a minimum of three feet (one meter) apart form an airlock.
14. Decontamination Enclosure System - a series of connected rooms, with curtained doorway between any two adjacent rooms, for the decontamination of workers or of materials and equipment. A decontamination enclosure system always contains an airlock.
15. Employee - an asbestos abatement worker having proper training, instruction and licensing.
16. Encapsulation - treatment of asbestos containing materials, generally ceilings, using a liquid to bond or seal the surface to minimize the potential for fiber release.
17. Enclosure - an impermeable barrier (made of wood, metal, etc.) placed around asbestos containing material.
18. Equipment Decontamination Enclosure System - a decontamination enclosure system for materials and equipment, typically consisting of a designated area of the work area, a washroom and an uncontaminated area.
19. Equipment Room - a contaminated area or room which is part of the worker decontamination enclosure system, with provisions for storage of contaminated clothing and equipment.
20. Friable - any material which when dry may be crumbled, pulverized, or reduced to a powder by hand pressure or mechanical means.

21. Fixed Object - a unit of equipment or furniture which cannot be removed from the work area(s).
22. Glove Bag - a plastic bag specially designed to contain sections of pipe for the purpose of removing short lengths of damaged asbestos material without releasing fibers into the air.
23. HEPA Filter - a High Efficiency Particulate Absolute filter capable of trapping and retaining 99.97 percent of asbestos fibers greater than 0.3 microns in length.
24. HEPA Vacuum- vacuum cleaner equipped with HEPA filter(s).
25. Holding Area - a chamber between the washroom and uncontaminated area in the equipment decontamination enclosure system. The holding area is comprised of an airlock.
26. Moveable Object - a unit of equipment or furniture in the work area(s) which can be removed from the work area(s).
27. Negative Pressure - air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (work area).
28. NIOSH - National Institute for Occupational Safety and Health.
29. Plastic Sheeting - polyethylene sheet material, of the thickness indicated.
30. Repair - corrective action using recommended work practices to minimize the likelihood of fiber release from small damaged areas of ACM.
31. Removal - the act of properly eliminating and disposing asbestos containing or contaminated materials from a building.
32. Sealant - a liquid or solution to be used as a binding agent, such as a diluted encapsulant or a water based paint, on dried exposed surfaces from which asbestos-containing material has been removed. The color of the coat shall be separate and distinct from the underlying substrate.

33. Separation barrier - a constructed wall with no door that separates the clean area from the work area having a fire rating, if applicable and does not interfere with the means of egress. Polyethylene sheeting (minimum 2 layers of 6 mil) shall be placed on the work site of the barrier so that it completely seals off the work area to prevent the distribution of fibers to the surrounding area.
34. Shower Room - a room constituting an airlock, between the clean room and the equipment room in the worker decontamination enclosure system, with hot and cold or warm running water suitable arranged for complete showering during decontamination. The shower room always comprises an airlock.
35. Surfactant - a chemical wetting agent added to water to improve penetration of the ACM. Surfactants are used to ensure that all Asbestos Containing Materials are thoroughly wet before removal.
36. Wet Cleaning - the process of reducing asbestos contamination in a building by using cloths, mops, or other cleaning tools which have been dampened with amended water to decontaminate the area and by disposing these cleaning tools as asbestos contaminated waste.
37. Washroom - a room between work area and the holding area in the equipment decontamination enclosure system. The washroom comprises an airlock.
38. Work Area - the place in a building which asbestos abatement occurs.
39. Worker Decontamination Enclosure System - a decontamination enclosure system for workers, typically consisting of a clean room, a shower room and an equipment room.

1.05 Personnel Requirements and Training

A. All of the Contractor's workers must have valid training, a minimum of one years experience in asbestos abatement and a current asbestos workers permit as issued by the State of New Jersey, and shall comply with all applicable requirements of N.J.S.A. 34:5A-32 et seq. and 29 CFR 1926.58(k)(3), as well as other non-training requirements of 29 CFR 1926.

B. The Contractor shall furnish proof that all of the Contractor's personnel on the job (supervisors and workers) have been given medical examinations as required by OSHA regulations, 29 CFR 1910 and 29 CFR 1926. As a minimum, the examination should include a chest roentgenogram, a medical history with specific reference to respiratory disease and pulmonary function tests. This information should be provided to the Owner during the pre-construction meeting.

C. The Contractor shall provide a minimum of two job foremen, each with a minimum of two years of successful experience in asbestos removal operations similar in scope and magnitude to this project. One foreman shall be required to remain inside each of the work areas at all times that work is in progress. The Contractor shall submit the qualifications of these persons to the Owner.

1.06 Asbestos Consultant/Asbestos Safety Technician

A. Testwell Craig Testing Laboratories, Inc. shall perform all air sampling specified. They shall have access to all areas of the asbestos removal project at all times and shall continuously inspect and monitor the performance of the contractor and his employees to verify that their performance complies with this specification. An Asbestos Safety Technician shall be on site at all times that work is in progress, from the initial preparation of the work area to the completion of the abatement operation. The AST is present to protect the Owner's interest and to ensure compliance of N.J.A.C. 5:23-8. The air sampling, monitoring and inspections made by the AST shall not relieve the Contractor of his monitoring obligations.

B. The Asbestos Safety Technician shall have the authority to require that all workers present a valid work card before entering the worksite. He shall also have the authority to direct verbally and in writing the actions of the contractor to assure compliance. The Technician shall have the authority to test the seal of the respirators of all who enter the work site to ensure proper fit. In matters of gross negligence or flagrant disregard for the safety of others, including the possibility of contaminating the building environment and the appearance of an emergent unsafe condition at the work site, the Technician shall direct such corrective action as may be necessary.

C. The Asbestos Safety Technician upon receipt of testing results indicating that concentrations above 0.010 fibers per

cc have occurred outside the containment barriers or above 0.020 fibers/cc within the clean room of the decontamination chamber during the abatement action shall report these results immediately to the contractor and to the owner's representative so that prompt corrective action may be taken.

D. The Asbestos Safety Technician shall keep a daily log of on-site observations concerning contractor's compliance with activities required under this specification listing all deficiencies encountered. In addition, this log shall list the names of all persons entering the work area. This log shall be made available upon request at all times to the Owner's Representative.

E. During the removal phase of the duties of the Asbestos Safety Technician shall be as follows:

1. Monitoring outside the work area shall be provided throughout removal operations, to ensure that no outside contamination is occurring.
2. Filters, cassettes and sampling train shall be assembled as specified in NIOSH 7400 method and 40 CFR 763. The flow rate shall be between 0.5 and 16 liters per minute. The total volume shall be a volume sufficient to achieve a detection limit of 0.010 f/cc. Pumps shall be calibrated before and after sampling and a record kept of this calibration.
3. The Asbestos Safety Technician shall take a minimum of three (3) samples per day. One stationary sample at decontamination unit entrance/exit and the remaining samples adjacent to work area but remote from the decontamination unit entrance. In the selection of adjacent areas to be monitored, preference shall be given to rooms adjacent to critical barriers and/or occupied areas.
4. If the Contractor's barriers or other control methods are observed to malfunction and if the Contractor does not correct the problems immediately upon notification, the Asbestos Safety Technician shall have the authority to halt removal of asbestos in the affected work area. In such a situation additional sampling of at least 5 samples per day per area shall be performed by the Asbestos Safety Technician at the Contractor's expense.

5. The analysis of air samples (excluding final air tests) shall be done using NIOSH #7400 Method (A rules).
 6. The evaluation criteria shall be 0.010 fibers per cubic centimeters.
 7. A series of smoke tests shall be performed at the decontamination unit entrance/exit, by the asbestos safety technician to ensure continuous negative air pressure. This test shall be performed before each work shift and every four hours thereafter until the end of the work shift.
 8. The Asbestos Safety Technician shall calculate the required number of negative air filtration units for each work area. This calculation shall be made whenever the volume of the work area changes. The Asbestos Safety Technician shall inform the Owner's Representative and the Contractor of any discrepancies between the number of units required and those in operation within the work area.
 9. A record shall be kept in a daily log of all on-site observations, inspections and required activities.
 10. The Asbestos Safety Technician shall ensure that all asbestos waste shall be removed from the worksite daily unless it is placed in a locked, secure container outside of the work area until removal by a registered waste hauler.
- F. Final Certification tests shall be conducted as follows:
1. Within 48 hours after final clean-up and before the removal of critical barriers, a visual inspection and a final air test shall be performed by the Asbestos Safety Technician for the Owner. This test is required to establish safe conditions for removal of critical barriers and to permit occupancy and/or demolition activity to begin. Sufficient time following clean-up activities shall be allowed so that all surfaces are dry during monitoring. At least 24 hours shall be allowed to pass after any wet cleaning has been done before the post-removal tests are begun.
 2. Normal occupancy use conditions shall be simulated using aggressive sampling techniques.

3. Evaluation criteria:

- a. **Transmission Electron Microscopy:** A minimum of 13 samples is required: five samples collected inside the abatement area, five samples collected outside the abatement area, two field blanks, and one sealed blank. Sampling and analysis must be completed according to the protocol outlined in 40 CFR 763. The work area will be considered clean if either: the arithmetic mean of the asbestos structure concentrations of the five samples collected inside the work area is equal to or less than 70 structures per square millimeter; or the three blank samples have an arithmetic mean of the asbestos structure concentration on the blank filters that is less than or equal to 70 s/sq mm and the average airborne asbestos concentration measured inside the abatement area is not statistically higher than the average airborne asbestos concentration measured outside the abatement area as determined by the "Z-test".

Note: The Owners representative will make the determination as to whether the Z-test is to be used.

If test results exceed these parameters, the Asbestos Safety Technician shall so inform the Contractor and the Owner's representative. If these criteria have not been met the Contractor shall be required to re-clean all surfaces using wet cleaning methods and provide negative HEPA-filtered exhaust air during the re-cleaning process. This process of re-cleaning, allowing surfaces to dry and re-testing shall be repeated until compliance is achieved.

- b. **Phase Contrast Microscopy:** A set of five samples will be collected in each area of PCM clearance. If any of the samples in any set of air test results exceeds 0.010 fiber/cc, the Asbestos Safety Technician shall so inform the Contractor and the Owners' representative. If these criteria have not been met the Contractor shall be required to re-clean all surfaces using wet cleaning methods and provide negative HEPA-filtered exhaust air during the re-cleaning process. This process of re-cleaning, allowing surfaces to dry and re-testing shall be repeated until compliance is achieved.

Note: All costs incurred by the owner as a result of the work area failing to meet final clearance will be the Contractor's responsibility. The work schedule for all projects requiring Transmission Electron Microscopy includes 72 hour time. The Contractor will compensate the Owner for the difference in costs if less than 72 hour turnaround time is required on TEM samples in order to satisfy contractual agreements.

G. Final inspection shall be conducted by the Asbestos Safety Technician as follows:

1. Upon notice by the Owner's representative or by the Contractor and at least 48 hours after the removal of the critical barriers, a final inspection shall be made to ensure the absence of any visible signs of asbestos or asbestos containing materials and that all removed asbestos and asbestos contaminated materials have been properly disposed of off-site.
2. Acceptable airborne fiber levels have been attained.
3. The Asbestos Safety Technician shall ensure that all asbestos waste has been removed from the work site by a registered waste hauler.

H. The Asbestos Safety Technician shall prepare a comprehensive final report, including daily logs, required inspection reports, observations and air monitoring results. The Asbestos Consultant shall maintain the report as a permanent record and present a copy to the Owner.

Part 2 - CONTRACTOR RESPONSIBILITIES AND DESCRIPTION OF WORK

2.00 Scope of Work

A. This section covers the furnishing of all labor, materials, facilities, equipment, services, employee training and testing, permits and agreements necessary to perform the work required for asbestos abatement in accordance with these specifications, EPA, OSHA Regulations, NIOSH recommendations, State of New Jersey Regulations, and any other applicable federal, state, and local government regulations. Whenever there is a conflict or overlap of the above references the most stringent provisions shall apply. It shall be the contractor's responsibility to verify exact quantities and locations of all asbestos containing materials.

The quantities shown are for informational purposes only. Prospective bidders should bid this project according to what is observed during the Pre-bid walk through.

B. Description of Work: Perform the work and provide the services as follows:

1. Worker training, respiratory protection and fit-testing, and OSHA required medical examinations.
2. Work area preparation including protection of all surrounding fixtures as described herein.
3. The asbestos abatement shall commence within 15 working days of receipt of contract and be completed within 10 calendar days thereafter.
4. Asbestos abatement to include the following:
 - a. Isolate the work areas from remaining areas through the use of critical barriers.
 - b. A two chambered decontamination unit is required for all areas of this project.
 - c. The Contractor is to supply all water and power.
 - d. Remove the following materials utilizing general isolation techniques:
 1. Approximately 935 square feet of asbestos containing **mastic** under two layers of non-asbestos floor tiles.
5. Final clearance will be determined by **Phase Contrast Microscopy** according to the protocol outlined in section 1.06F.3.b of this specification.

C. Sequence of Work shall be as follows:

1. The Contractor will insure that prior to abatement preparation, that all movable objects have been removed from the abatement area.

2. The Contractor will restrict access to areas where abatement is to take place from remainder of the building. The Owner will ensure that no persons occupy the building from the time that the Contractor mobilizes until the Certificate of Occupancy has been granted.

3. The Contractor shall pre-clean the abatement area by HEPA vacuuming all surfaces.

4. The Contractor will construct to operational all final barriers, seals, and decontamination chambers as directed by the Asbestos Safety Technician.

5. The Contractor will contact the Owner, the New Jersey Departments of Health and Community Affairs, the Asbestos Safety Control Monitor for inspection and approval.

6. The Contractor shall give the AST in writing 24 hours notice requesting a pre-commencement inspection.

7. Once the abatement has begun the AST shall make progress inspections and perform a Pre-Sealant inspection before the encapsulation process begins. The inspector shall insure that no visible debris is left on the substrate before any encapsulation begins.

8. The Owners Testing Laboratory shall perform final air testing after a 24 hour waiting period from any wet wiping or cleaning. The final air tests will be performed by Phase Contrast Microscopy. The testing and analysis shall be done in compliance with the 40 CFR 763 and NJAC 5:23-8. If the results are higher than the allowable threshold the contractor will re-clean the abatement area and the testing firm must re-test. This sequence will continue until the test results are acceptable.

9. Once the appropriate air testing results are met, the Contractor will remove all critical barriers and separation barriers inside the abatement area. No tape, polyethylene sheet plastic or other construction debris can remain in the abatement area after this cleaning.

10. The AST will perform a final visual inspection of the abatement area. The Contractor must notify state inspectors 24 hours prior to the AST's final visual.

2.01 STANDARD OPERATING PROCEDURES

A. The Contractor shall develop and implement a written standard procedure for abatement work to ensure maximum protection and safeguard from asbestos exposure of the workers, visitors, general public, and the environment.

The standard operating procedure shall ensure:

1. Tight security on a 24 hour basis from unauthorized entry into the work space.
2. Remove asbestos in ways that minimize release of fibers.
3. Safe work practices in the work place, including provisions for inter-room communications, exclusion of eating, drinking, smoking, or in any way breaking respiratory protection.
4. Proper protective clothing and respiratory protection prior to entering the work space from the outside.
5. Packing, labeling, loading, transporting, and disposing of contaminated material in a way that minimize exposure and contamination.
6. Proper exit practices from the work space to be the outside through the showering and decontamination facilities.
7. Emergency evacuation for medical or safety (fire and smoke) so that exposure will be minimized.
8. Safety from accidents in the work space, especially from electrical shocks, slippery surfaces, and entanglements in loose hoses and equipment.
9. Provisions for effective supervision, air monitoring and personnel monitoring for exposure during the work.
10. Engineering systems that minimize exposure to fibers in the work space.
11. The contractor shall submit these plans and procedures at least ten (10) days prior to abatement.

2.02 NOTIFICATIONS, PERMITS, WARNING SIGNS, LABELS, AND POSTERS

A. Erect English warning signs around the work space and at every point of potential entry from the outside, with the words "Danger" Asbestos Hazard, Do Not Enter". The warning signs shall be a bright color so that they will be easily noticeable. The size of the sign and the size of the lettering shall be no less than OSHA requirements. Warning signs shall be posted at the entrance to the work area and around its perimeter at intervals of no more than twenty-five (25) feet.

B. Provide the OSHA required labels for all plastic bags and all drums utilized to transport contaminated material to the landfill.

C. Provide any other signs, labels, warnings, and posted instructions that are necessary to protect, inform and warn people of the hazard from asbestos exposure. Post in a prominent and convenient place for the workers a copy of the latest applicable regulations from OSHA, EPA, and NIOSH.

2.03 EMERGENCY PRECAUTIONS

A. Establish emergency and fire exits from the work area. Post these in the administrative area on the worksite.

B. The Contractor shall be prepared to administer first aid to the injured personnel after decontamination. Seriously injured personnel shall be treated immediately or evacuated without delay for decontamination. When an injury occurs, precautions shall be taken to reduce airborne fiber concentrations (i.e. misting of the air with water) until the injured person has been removed from the work area.

C. Before the Contractor starts the removal of asbestos materials, the local police and fire departments shall be notified as to the danger of entering the work area. The Contractor shall make every effort to help these departments form plans of action should their personnel need to enter the contaminated area.

2.04 SUBMITTALS DURING THE WORK

A. Submit copies of the following items to the Asbestos Safety Control Monitor and the Consultant:

1. Security and safety logs showing names of persons entering work space, date and time of entry and exit, record of any accident, emergency evacuation, and any other safety and/or health incident.
2. Disposal Certificates.
3. Required Permits, Clearances, and Licenses.
4. All Contractor's Air Monitoring and inspection Results.

2.05 OWNER/CONTRACTOR RESPONSIBILITIES

- A. The Contractor or persons employed by the Building Owner shall clean with wet cloths and/or with HEPA vacuums as appropriate all movable items that can be removed from the work area without disrupting the asbestos material. This shall include furniture, equipment, drapes, curtains. The cloths used for cleaning shall be disposed of as asbestos contaminated waste.
- B. The Owner will provide the Contractor with a list of items that cannot be removed, or are damaged prior to abatement activities.
- C. The Owner will stop all deliveries that may be scheduled to the work area while work is in progress.
- D. The Owner will have authorized personnel on site at all times or supply contractor with means of contacting such personnel without unreasonable delay. Such personnel shall have access to all areas and have knowledge of electrical and air handling equipment. Such personnel shall assist Contractor in case of any power failure or breakdown to shut down air supply systems, to reset and control all protective systems such as alarms, sprinklers, locks, etc.. The Owner shall insure no active air handling systems are operating within the work area.
- E. The Owner will not occupy the building in which work is being performed during the entire asbestos abatement operation, including completion of clean-up, but excluding re-insulation.
- F. During this period, the Contractor shall be responsible in all areas affected by his operation for:

1. Building Security - Fire and smoke detection systems
2. Maintaining the existing building and utility systems such as plumbing or electrical installations.
3. The Contractor shall provide security to prevent unauthorized entry into the work area, and maintenance of decontamination chambers, isolation barriers and negative air systems.

G. Should the failure of any utility occur, the Owner will not be responsible to the Contractor for loss of time or any other expense incurred.

2.06 USE OF BUILDING FACILITIES

A. The Contractor will provide all required amounts of water and electric power required at the site.

B. The Owner shall provide telephone service and a telephone at the job site for use by the Contractor and the Consultant.

C. The Contractor shall provide all electrical, water, and waste connections, tie-ins, extensions, and construction materials, supplies, etc.

D. The Contractor shall provide a separate temporary electric panel board to power his equipment. The Owner shall designate an existing power box in close proximity to the work area. Contractor's licensed electrician shall provide temporary tie-in via cable, outlet boxes, junction boxes, receptacles and lights, all with ground fault interruption. All temporary electric shall be in accordance with OSHA Regulations, specifically but not limited to, 1926 Subpart K.

E. Contractor shall provide fire protection in accordance with all state and local fire codes.

F. When temporary services lines are no longer required, they shall be removed by the Contractor. Any parts of the permanent service lines, grounds and buildings, disturbed or damaged by the installation and/or removal of the temporary service lines, shall be restored to their original condition by the Contractor, in a manner satisfactory to the Owner.

G. Contractor shall provide hot shower water necessary for use in the decontamination unit.

2.07 USE OF THE PREMISES

A. The Contractor shall confine his apparatus, the storage of materials, and supplies, and the operation of his workmen to limits established by law, ordinances, and the directions of the Owner. All flammable or combustible materials shall be properly stored to obviate fire and in areas approved by the Owner.

B. The Contractor shall assure that no exits from the building are obstructed, that appropriate safety barriers are established to prevent access, and that work areas are kept neat, clean, and safe.

C. All surrounding work, fixtures, soil lines, drains, water lines, pipes, electrical conduit, wires, utilities, railings, shrubbery, landscaping, etc. which is to remain in place shall be carefully protected and, if disturbed or damaged, shall be repaired or replaced as directed by the Owner, at no additional cost.

D. Any or all routes through the building to be used by the Contractor shall first be approved by the Owner and the Consultant.

E. The Owner shall provide toilet facilities on site for the Contractors use.

2.08 ELECTRICAL FIXTURES AND HVAC REGISTERS DUST CONTROL

A. Prior to the commencement of any removal and cleaning activities, any existing lighting fixtures and ceiling suspension system shall be decontaminated using a HEPA vacuum equipped with a soft brush attachment.

B. All HVAC registers diffusers, induction units, etc. shall receive no replacements or changes. Existing fixtures shall be shut down by the Owner's personnel prior to any work in the area.

2.09 PROTECTION AND DAMAGE

A. Replace or repair any items damaged, due to work performed under this contract, equal to their original construction and finish. Repaired or replaced items will be subject to the Owner's approval.

- B. Use rubber-tired vehicles which use non-volatile fuels for conveying material inside building and provide temporary covering, as necessary, to protect floors.
- C. No materials shall be thrown from windows or doors of buildings. Building waste system shall NOT be used to remove refuse.
- D. Debris shall be removed from the site daily. Premises shall be left neat and clean after each work shift, so that work may proceed the next regular workday without interruption.
- E. Protect floors along removal routes from damage, wear and staining.
- F. Liquidated damages of \$1000.00 will be assessed for each week or part thereof that the asbestos removal permit remains open past the ten day period.

2.10 RESPIRATORY SYSTEMS

- A. Provide all workers, foremen, superintendents, authorized visitors and inspectors personally issued and marked respiratory equipment approved by NIOSH and OSHA. When respirators with disposable filters are employed, provide sufficient filters for replacement as necessary by the worker.
- B. The Contractor shall require that each person entering the Work Area wear an approved respirator and protective clothing. There shall be no exceptions to this rule.
- C. Respiratory protection shall be in accordance with OSHA Regulation 1910.1001 (d), OSHA Regulation 1910.134 and ANSI z88.2-1980. Respirators chosen shall also be approved by NIOSH under the provisions of 30 CFR Part. 11.
- D. Respiratory protection shall be determined by airborne fiber concentration (fibers per cubic centimeter of air).

At a minimum, respiratory protection shall be:

- 0.01 - 1.0 f/cc - Dual Cartridge, Air Purifying respirator with HEPA cartridge.
- 1.0 - 10.0 f/cc - Powered Air Purifying respirator with HEPA cartridge.

10.0 and above - Type C supplied air pressure demand respirator.

E. NO ONE is to be permitted into the work area without proper protection. No disposable dust masks shall be used at any time.

F. All personnel engaged in asbestos abatement procedures requiring an air purifying respirator shall have an unobstructed face/mask seal (i.e., no facial hair).

2.11 PROTECTIVE CLOTHING

A. Provide to all workers, foremen, superintendents and authorized visitors and inspectors protective disposable clothing (TYVEK) consisting of full-body coveralls, head covers, gloves and 18 inch high boot type covers or reusable footwear.

B. Provide eye protection and hard hats as required by job conditions and safety regulations.

C. Reusable footwear, hard hats and eye protection devices shall be left in the "contaminated Equipment Room" until the end of the asbestos abatement work.

D. Disposable protective clothing shall be discarded and disposed of as asbestos waste every time the wearer exits from the work space to the outside through the decontamination facility.

E. The Contractor shall also maintain sufficient supply of all other related items such as towels, soap, etc..

2.12 AIR MONITORING - CONTRACTOR

A. The Contractor shall employ a certified laboratory and NIOSH certified air test technician to conduct air sampling and analysis in accordance with OSHA Regulations, 29 CFR, 1910.1001 (Asbestos Standard for General Industry), 1926.58 (Asbestos Standards for Construction), and 1910.134 (Respirator Standard).

B. The Testing Laboratory shall be a current proficient participant in the NIOSH PAT Program. The laboratory identification number shall be submitted and approved by the Consultant.

C. The Contractor shall require a competent person from his testing laboratory to perform the following functions:

1. Monitor the set up of the work area enclosure and ensure its integrity.
2. Insure that employees are adequately trained in the use of proper work practices, proper personal protective equipment and in decontamination procedures.
3. Insure that employees USE proper work practices, proper personal protective equipment and proper decontamination procedures.
4. Supervise all employee exposure monitoring. Such monitoring shall comply in all respects with OSHA Regulation 1926.58 Appendix "A".
5. Conduct air sampling as per OSHA 1926.58 and as described herein.

D. Air monitoring and inspection of the Contractor's employees shall be conducted under the supervision of the Contractor's competent person.

E. Continuous air monitoring and inspections will include work area samples, personal samples from the breathing zone of a laborer to establish 8-hour TWA's.

F. Sampling and analyses shall be performed in accordance with the NIOSH #7400 method.

G. Air sample results shall be relayed verbally to the consultant within 24 hours followed by written results posted on the job site within 48 hours after the samples have been taken. Results shall be inscribed on official letterhead.

H. All costs for required air monitoring by the contractor's competent person shall be borne by the contractor.

PART 3

3.00 DISPOSAL OF ASBESTOS WASTE

This subsection shall apply to the removal of asbestos from the job site and the disposal of asbestos waste.

Old Carvel, Brick Twp.
Lab# 43930

All Asbestos waste generated in Ocean County is to be disposed of at the Ocean County Landfill (OCLF), Belford, New Jersey.

A. The contractor is required to give a notice 10 days prior to the disposal to the New Jersey Department of Environmental Protection, Division of Waste Management, Bureau of Field Operations. The contractor is required to give 24 hour oral notification to the Ocean County Landfill. In addition, all disposal procedures must comply with CAA 112, 42 U.S.C 7412, and 40 CFR 61.156.

OCEAN COUNTY LANDFILL (OCLF) - Asbestos Procedures

I. Notification:

** The Contractor shall supply the following information. **

A. Generator

- 1) Name, address and telephone number
- 2) Applicable Federal, State and Local permits

B. Contractor

- 1) Name, address and telephone number
- 2) Qualifications for work with asbestos and asbestos containing material
- 3) Applicable approval and certification letters from Federal, State and Local agencies

C. Hauler

- 1) Name, address and telephone number
- 2) NJDEP Industrial Waste Hauler Permit

D. Job

- 1) Name and address (must be inside OCLF Waste District)
- 2) Quantity and nature of material to be removed

E. Written Notification

- 1) Copy of 10-day notification letter submitted to NJDEP
- 2) Letter containing information listed above 10 days prior to expected date of removal

F. Oral Notification

The Contractor shall provide 24 hour notification prior to the shipping to confirm quantity and form of payment.

II. Compliance

The generator, contractor and hauler shall insure that the asbestos containing material is removed, transported and disposed in compliance with current EPA Regulations 40 CFR 61, OSHA Regulation 29 CFR 1910.1001 and NJAC 7:26.

III. Disposal

- A. Contractor shall insure that all asbestos containing materials are removed and handled while wet. Asbestos containing material which is stripped away, or otherwise removed, shall be packed while still wet into double plastic bags, 6 mil thick minimum. Bags shall be sealed and properly labeled. Hauler is responsible for supplying proper protective clothing while inside the Asbestos Cell. Clothing is to be in compliance with Section II above. In the opinion of OCLF, after research, at a minimum should include the following: Full Tyvek Protective Suit, Hard Hat, Safety Eye Protection, Respirator with Asbestos Filters, Gloves and Boots. Drivers and/or helpers will be inspected for proper protective clothing.
- B. All containerized waste shall be carefully loaded on trucks or other appropriate vehicles for transport. Before and during transport, care shall be exercised to insure that no unauthorized persons have access to material.
- C. When the hauler arrives at the Scale House, he shall present the following:
- 1) Origin and Destination Form
 - 2) DOT Vehicle Registration
 - 3) NJDEP Industrial Waste Permit
 - 4) Originator Indemnification Form (see note below)
 - 5) Hauler Indemnification Form (see note below)
 - 6) OCLF Asbestos Form
 - 7) DEP Asbestos Form
 - 8) Payment

Note: On July 2, 1991 the Board of Chosen Freeholders of the County of Ocean resolved that it authorizes and directs the **Director and Clerk of the Board** to execute the Transporter's Certification and Indemnification Certificate and Generator's

Certification and Indemnification Certificate
required by the OCLF Corporation as per the New
Jersey Board of Public Utilities Docket No. 826-583.

- D. OCLF will visually inspect the load, truck and personnel for conformance to applicable regulations.
 - E. OCLF will instruct the hauler as to location of disposal.
 - F. At the burial site the Hauler or Contractor shall carefully remove the sealed plastic bags and place them on the Cell.
 - G. OCLF will cover the disposed waste immediately with 3 feet of fill.
 - H. The OCLF accepts asbestos material between the hours of 9:00 AM - 10:30 AM and 1:00 PM - 2:30 PM, Monday through Friday.
 - I. The rate at the OCLF is a sliding scale dependant on the volume of the delivery. Should asbestos be delivered in the afternoon after the time specified and before closing of the landfill, OCLF will charge an additional fee of \$50.00 per quarter hour for the additional time.
- B. Disposal of asbestos waste shall be conducted as follows:
- 1. All asbestos waste materials destined for disposal shall be wetted and packaged in permanently sealed, leak tight containers (such as 6 mil plastic bags, double bagged with visible labels) before it can be transported and disposed. No hauling of loose asbestos or asbestos contaminated debris is permitted.
 - 2. A locked, secure container shall be provided if asbestos waste is to be stored outside unattended.
- C. Notify the Owner's Asbestos Consultant in writing not less than 48 hours prior to the proposed time of removing and delivery of contaminated waste to the landfill. The Owner's Asbestos Consultant may elect to observe this operation.

D. The waste hauler must possess a valid solid waste transporter registration. A licensed solid waste transporter shall be a commercial collector/hauler or shall be the removal company if they are so registered.

E. Asbestos waste can be hauled in trucks or in dumpster containers provided the load is comprised only of asbestos in bags and does not contain any other wastes which could compromise the integrity of the permanent containers.

F. If rough surfaces or other materials are present in the load which could potentially puncture the permanent containers, then those containers shall be enclosed in temporary fiber or steel drums during loadings, transport and unloading operations. In addition, asbestos waste shall not be loaded into or hauled with vehicles containing collection devices.

G. Use only enclosed or covered trucks to haul impermeable containers to prevent loss or damage to containers en route to sanitary landfill.

H. Allow only sealed plastic bags or impermeable containers to be deposited in landfill. Leave damaged, broken or leaking plastic bags in the impermeable container and deposit entire container in landfill. Obtain prior approval from appropriate regulatory officials before disposing contaminated materials from high pressure vacuum collection system in the approved landfill.

I. Ensure that there are no visible emissions to the outside air from site where materials and waste are deposited.

J. Contractor may recycle uncontaminated impermeable containers.

PART 4 - PRODUCTS

4.01 QUALITY

A. Buy American Clause

1. All materials used in the performance of this specification must be manufactured in the United States of America.

B. Brand Names and Approved Equals

1. The contractor shall use Brand Named materials specified or an approved equal. (NEW JERSEY STATUTE 40A: 11-13 SPECIFICATIONS)

2. The contractor shall provide to the Owner and the Consultant, materials he/she plans to use during abatement activities. Changes in the submission of these materials shall be provided prior to abatement commencing. The Owner shall approve/disapprove these submissions.

3. No abatement activities shall occur prior to the Owner's consent and the Consultant's recommendation of the use of these products.

4. BRAND NAMES AND/OR DESCRIPTIONS USED IN THIS SPECIFICATION FOR BID PROPOSAL ARE TO ACQUAINT PROSPECTIVE BIDDERS WITH THE TYPE OF EQUIPMENT DESCRIBED (OR COMMODITY) AND WILL BE USED AS A STANDARD BY WHICH ALTERNATE OR COMPETITIVE MATERIALS OFFERED WILL BE JUDGED. COMPETITIVE ITEMS MUST BE EQUAL TO THE STANDARD DESCRIBED AND BE OF THE SAME REPUTATION FOR QUALITY AND WORKMANSHIP. VARIATIONS BETWEEN EQUIPMENT DESCRIBED AND MATERIAL OFFERED ARE TO BE FULLY EXPLAINED IN AN ACCOMPANYING LETTER. IN THE ABSENCE OF ANY CHANGES BY THE BIDDER, IT WILL BE PRESUMED AND REQUIRED THAT MATERIALS AS DESCRIBED IN THESE SPECIFICATIONS BE DELIVERED.

4.02 - MATERIALS

A. The wetting agent shall be BWE 5000 as manufactured by Better Working Environments Inc., of San Diego OR an approved equal.

B. Encapsulating material shall be bridging and/or penetrating in nature and must be applied in two coats. Acceptable encapsulants shall be TRI-COTE AE as manufactured by the United Products Corporation of Little Rock Arkansas OR A-B-C Asbestos Binding Compound as manufactured by California Products Corporation of Cambridge Massachusetts.

C. Cement to be used to seal ends, tears and penetrations shall be fire-rated and asbestos-free as manufactured by CHILDERS or an approved equal, if applicable.

D. Framing materials shall consist of 2 x 4 studs and sections of 3/4" plywood from first quality lumber.

E. The contractor shall use only polyethylene sheeting with a minimum thickness of 6 mil.

F. The use of drums is permissible as long as said drums contain lining that is leak-proof. The exterior of drums must have clear and permanent labeling and labeling specified by OSHA and EPA regulations.

G. All waste shall be discarded in properly labeled and 6 mil thick polyethylene double bags.

H. Asbestos warning signs shall be in English script and placed in areas as required by OSHA and the EPA.

I. All tape shall be of high quality polyethylene film tape #827 as manufactured by the Kendall Company, Polyken Division of Boston, Massachusetts.

J. Spray adhesive may be used as manufactured by the 3-M Company.

K. Disposable clothing to be used shall be of the same composition as Dupont's Tyvek or Kimberly Clark's Duraguard.

4.03 - TOOLS AND EQUIPMENT

A. Asbestos filtration devices shall be equipped with HIGH EFFICIENCY PARTICULATE ABSOLUTE (HEPA) filter systems such as the MICROTRAP as manufactured by Asbestos Control Technology Corporation of Maple Shade, New Jersey OR the HOG 2000 as manufactured by the Control Resource System of Michigan City, Indiana or an approved equal.

B. Scaffolding is to be used when and where needed as long as its use is monitored and is safety tested and approved for such work conditions by OSHA and any other safety regulatory agency.

C. Transportation and storage equipment shall be used so that no accumulations of ACM shall occur on a daily basis. This equipment shall be constructed and registered as such to store and/or transport waste material without any threat to persons or the environment of possible contamination.

D. All vacuum equipment to be used shall use HEPA filtering systems. Such vacuums shall be similar if not equal to the system manufactured by NILFISK of AMERICA headquartered in Malvern, Pennsylvania.

Part 5 - EXECUTION

5.00 - PERMITS, NOTIFICATIONS, LICENSES

A. The contractor shall present a duplicate copy of his asbestos contractors license issued by the New Jersey Department of Labor with his bid. Only licensed contractors may perform work described and required by this specification. As required by law, the contractor shall maintain on the project site a valid Contractors license.

B. The Contractor shall apply for the necessary permits for asbestos abatement.

C. The contractor shall maintain at all times a staff of at least six employees on each worksite including:

1. An English speaking supervisor.
2. An English speaking foreman.
At least one foreman in each work area is required.
3. Four laborers.

ALL CONTRACTOR EMPLOYEES MUST POSSESS A VALID NJ ASBESTOS REMOVER/LABORER'S PERMIT AND MAKE AVAILABLE TO THE OWNER, CONSULTANT, NJDCA, NJDOL, NJDOH AND AST THESE PERMITS UPON REQUEST AT THE PROJECT SITE. ALL EMPLOYEES MUST HAVE A MINIMUM OF AT LEAST SIX (6) MONTHS EXPERIENCE IN ASBESTOS ABATEMENT IN THE STATE OF NEW JERSEY.

D. The contractor shall also present to the AST, Owner, and Consultant prior to the commencement of abatement, proof that a NJDEP Registered Waste Hauler Permit exists. NO PRECOMMENCEMENT INSPECTION SHALL TAKE PLACE UNTIL SUCH PROOF EXISTS AND IS SATISFACTORY TO THE NJDCA, THE ASCM/AST, THE OWNER AND THE CONSULTANT.

5.01 - INSPECTIONS

A. The AST will perform inspections throughout the entire asbestos abatement project. The AST inspections are as follows:

1. Precommencement inspections by the AST will occur prior to each phase of abatement. The AST will observe and will check compliance of the following:

- a. critical/separation barriers in place
- b. AFD units in place and operating
- c. notifications, variances, permits and licenses in place
- d. waste container on site and labeled
- e. OSHA signs posted
- f. emergency plans and numbers posted
- g. decontamination chamber in place and operating
- h. poly on walls and floor in place
- i. proper supplies of bags, suits, filters, towels, masks and other equipment
- j. proper discontinued use of HVAC systems
- k. ground fault interrupters are in place outside of the work area and operable

2. Progress inspections by the AST will occur a minimum of twice a day during random time periods. The AST observes the progress of work and the manner in which it is carried out while work is in progress. The AST will check the following:

- a. asbestos being wetted with amended water
- b. workers wearing proper protection
- c. observe critical, wall and floor poly
- d. workers using proper techniques
- e. general housekeeping and egress/ingress maintained
- f. AFD functioning properly
- g. other pertinent observations such as emergencies and visitors observations

3. Cleanup inspections will occur as work progresses to ensure that the work area is clean and that no asbestos containing materials are left exposed. Equipment must also be placed in an orderly fashion to promote means of ingress and egress.

4. Pre-sealant inspections shall take place after all exposed surfaces have been wet-wiped and are found cleaned. The contractor shall notify the AST that an inspection is requested 48 hours prior to the actual inspection time. The AST shall, in writing, notify the contractor and Owner of the results of the inspection.

5. The AST shall perform a final visual inspection after being notified that such an inspection is requested at least 24 hours in advance. NO FINAL VISUAL INSPECTION SHALL TAKE PLACE IMMEDIATELY AFTER ANY WET CLEANING.

B. During any inspection by State or Federal agencies, the Contractor must have a supervisor present.

C. The New Jersey Department of Community Affairs and the New Jersey Department of Labor are authorized to make unannounced and periodic inspections during the entire abatement process to observe AST and Contractor compliance with applicable statutes.

D. The Consultant, Testwell Craig Testing Laboratories, Inc., will also make random and periodic inspections to observe contractor compliance with specifications and statutes. Directives from the consultant shall be given to the AST to be forwarded to the contractor.

5.02 - DECONTAMINATION FACILITIES AND PROCEDURES

A. DECONTAMINATION CHAMBER

1. The decontamination facility shall be constructed of 2"x 4"x 8' wooden framing covered with two layers of 6-mil poly sheeting on all sides.

2. Airlocks shall be installed between contaminated area, equipment room, shower room, and clean room. Air locks shall consist of three layers of 6 mil. poly each and shall be alternately secured. Each airlock shall be weighted down.

3. All individual chambers shall be at least 4 feet square to allow access with a stretcher in the event of emergencies.

4. The shower shall have both hot and cold water receptacles, liquid shampoo and liquid soap, both in plastic containers, so that workers and visitors can decontaminate prior to entering the clean room.

5. The contractor shall provide all connections for water and electrical hook-ups necessary to perform the work described in this specification.

6. The clean room shall contain an area where street clothes, towels, and cleaned respirators can be stored. The Contractor shall maintain an adequate supply of towels and soap for visitors and inspectors at all times.

7. The equipment room shall be provided by the contractor where work materials, footwear, and contaminated work clothing can be stored.

8. The decontamination chamber shall be located in the area as defined in the diagrams.

9. During abatement operations, the Contractor shall be allowed to use the decontamination chamber for waste egress.

B. DECONTAMINATION SEQUENCE - PERSONAL

1. ALL workers and visitors who will enter the work area shall remove all street clothes, put on clean overalls, and respirators while in the clean room. The person will then proceed through the showers and dirty (equipment) room and enter the work area.

2. Before leaving, the worker will remove all gross contamination with the use of HEPA vacuums. With the help of another worker, the person shall remove disposable TYVEK clothing. Contaminated clothing shall be placed in labeled poly bags and left in the work area until completion of the project.

3. The worker then proceeds to the shower room. Respiratory protection shall still be worn while showering. Such protection shall be removed after the person has completely showered to prevent inhalation of asbestos fibers.

Old Carvel, Brick Twp.
Lab# 43930

4. After showering the person moves to the clean room and dresses in either new coveralls for re-entry, or street clothes if leaving.

5. NO EATING, DRINKING, SMOKING OR CHEWING SHALL OCCUR IN THE WORK AREA OR DECONTAMINATION CHAMBER.

6. No footwear that is not readily cleanable, shall remain in the equipment room and, at the end of the project, will be discarded as contaminated waste.

7. NO EXCEPTIONS TO THESE DECONTAMINATION PROCEDURES WILL BE ALLOWED!!!

Guarantee

The contractor shall guarantee, in writing, that all asbestos has been removed, the work area is free of asbestos and asbestos dust, and disposal was performed to the complete satisfaction of the Owner, the Owner's Consultant (Testwell Craig Testing Laboratories, Inc.), EPA, OSHA, NJDCA, NJDOH and any other government agency having jurisdiction.

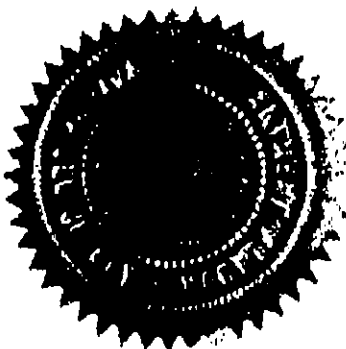
*****END OF SECTION*****

State of New Jersey
Department of Labor
DIVISION OF WORKPLACE STANDARDS
ASBESTOS LICENSE

LICENSE NUMBER: 00421

ISSUE DATE: 07/17/91

EXPIRATION DATE: 07/17/93



THIS LICENSE has been issued in accordance with and subject to the provisions of the Asbestos Control and Licensing Act, P. L. 1984, c. 173.

Employer: Tomorrow's Environmental Concerns

Address: Route 206
PO Box 206
Columbus, NJ 08022

TYPE "A" LICENSE

Responsible Individual: Edward Knorr, Vice-President

This license is **VALID ONLY FOR THE EMPLOYER NAMED HEREIN** and must be readily available at the work site for inspection by the Commissioners of Labor and Health and the contracting agency.

AD-418-2-901


Commissioner



State of New Jersey

JIM FLORIO
GOVERNOR

DEPARTMENT OF COMMUNITY AFFAIRS
DIVISION OF CODES AND STANDARDS
BUREAU OF CODE SERVICES

MELVIN R. PRIMAS, JR.
COMMISSIONER

LOCATION:

3131 PRINCETON PIKE, BLDG. 3
LAWRENCEVILLE, NEW JERSEY

MAILING ADDRESS:

CN 816
TRENTON, N. J. 08625-0816
FAX # (609) 530-8858

CERTIFICATE - ASCM AUTHORIZATION/REAUTHORIZATION

September 18, 1992

This is to certify that the Department of Community Affairs has

() Authorized
(XX) Reauthorized

Testwell Craig Testing Laboratories Inc.
PO Box 0477
Mays Landing NJ 08330

TO ACT AS AN ASBESTOS SAFETY CONTROL MONITOR

ASCM # 00013

EFFECTIVE DATE: October, 01 1992

DATE OF EXPIRATION: September 31, 1993

NOTE: Please note that Quarterly Fee statements must be sent to this Department after each quarter. If no work is performed in a given quarter then a zero fee statement must be sent to this Department.

Sincerely,

Patrick T. Ryan
Coordinator AST/ASCM

3318:PR



ASBESTOS ABATEMENT NOTIFICATION

October 13, 1992

Project: Old Carvel

Street: N/W Corner of Brick Boulevard & Cedar Bridge Road

Town: Brick Township

Contractor: Tomorrow's Environmental Concerns Lic. #: 00421
Address: Route 206 PO Box 377, Columbus, New Jersey 08022

ASCM: Testwell Craig Testing Laboratories, Inc. Lic. #: 00013
Address: 5439 East Harding Highway, Mays Landing, New Jersey 08330

OSHA Air Monitor: Tomorrow's Environmental Concerns
Address: Route 206, PO Box 377, Columbus, New Jersey 08022

Building Owner: The County of Ocean
Street: 5 Mott Place
Town: Toms River
Phone: (908) 929-2039 County: Ocean Zip: 08753

Engineer/Architect: Testwell Craig Testing Laboratories, Inc.
Street: 5439 East Harding Highway
Town: Mays Landing
Phone: (609) 625-1700 County: Atlantic Zip: 08330

Waste Hauler: Tomorrow's Environmental Concerns
Address: Route 206, PO Box 377, Columbus, New Jersey 08022

Land Fill: Ocean County Landfill
Town: Ocean County, New Jersey

Job Size: (Circle One) Minor Small Large

Quantity of Waste Generated: CU. Yds.: 15
(All Applicable) Linear Footage:
 Sq. Footage: 935

Proposed Start date: 10/29/92 Proposed Finish Date: 10/30/92

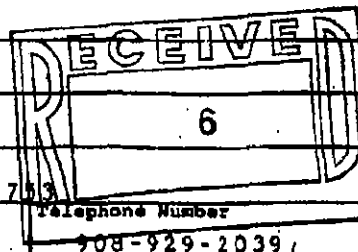
Cost of Work: \$4,445.00

(To be filled in by the Construction Official)
Construction Permit No.: Date Issued: / /

State of New Jersey

NOTIFICATION OF ASBESTOS ABATEMENT
(Pursuant to NJAC 8:60-7 and 12:120-7)

Date of Notification (1) 11/01/1992		Name of Building Owner/Operator (2) County of Ocean	
Agencies Notified/Type Notification		Street Address 5 Mott Place	
☒ EPA ☒ DEP ☒ DOL ☒ DOH ☒ DCA	☐ Initial Notification ☐ Amended Notification	City, State, Zip Code Toms River, New Jersey 08753	
		Name of Contact Wilbur G. Buck	
		Telephone Number 908-929-2039	



FACILITY INFORMATION

Name of Facility Where Abatement is Taking Place (3) Old Carvel Building			Type of Facility (4) ☐ School (K-12) ☒ Subchapter S (Other than K-12) ☐ Other (i.e., private & commercial buildings, homes, etc.)		
Street Address N/W Corner of Brick Blvd. & Cedar Bridge Road			Square Feet / # of Floors / Bldg. Age 1400 / 2 / 39 yrs		
City (5) Brick Township	County (6) Ocean	County Code (7) (STATE USE ONLY)	Current Use (Prior if being demolished) offices/commercial		
Name of Monitoring Firm hired by Building Owner (8) Testwell Craig Testing Lab		ASCM No. 00013	Name of Contractor (9) Tomorrow's Environmental Concerns		
Street Address 565 E. Harding Highway, P.O. Box 477			Street Address Route 206, P.O. Box 377		
City, State, Zip Code Mays Landing, NJ 08330			City, State, Zip Code Columbus, NJ 08022		
Project Manager for Monitoring Firm Theresa Russell		Telephone Number 609-625-1700	Telephone Number 609-298-6000		License Number 00421
Scheduled Start Date (10) 11/01/1992		Sched. Completion Date (11) 11/01/1992	Name of OSHA Monitor Edward Knorr		
Occupancy Status During Abatement (Check only one) ☒ Facility Closed/Vacated During Entire Period of Abatement ☐ Abatement Performed Outside of Normal Facility Hours - Describe: ☐ Other - Describe:			Street Address Route 206, P.O. Box 377		
			City, State, Zip Code Columbus, NJ 08022		

Scope of Work (Check all that apply)

- | | | |
|--|---|--|
| ☒ Demolition | ☐ Renovation | ☐ Full Containment with Negative Pressure |
| ☒ Large Project (> 160 SF or > 250 LF ACM) | ☐ Small Project (< 160 SF or < 250 LF ACM) | ☒ Mini-Enclosure |
| ☐ Minor Project (< 25 SF or < 10 LF ACM) | | ☐ Glovebag Procedure |

Location of Asbestos-Containing Material (ACM) in Facility (12)	Location Normally Used Solely by Maintenance/Custodial Staff (12)	Description of Asbestos-Containing Material (ACM) (i.e., thermal systems, insulation, surfacing, VAT, or other miscellaneous)	Amount (Specify SF or LF)	Abatement Type			
				REMEDIATION	REPAIR	ENCLOSURE	ENCLOSURE
1st floor	x	Floor tile mastic only	935sf	xx			

Name of Registered Waste Hauler Tomorrow's Environmental Concerns		NJDEP Waste Hauler ID No. 17391	Cubic Yards of Waste 18	Name of Registered Landfill Ocean County Landfill	
City, State Columbus, New Jersey			Disposal Date 11-2-92	City, State Belford, NJ	
Completed By (Print or Type) Edward J. Knorr		Title Vice President	Signature <i>Edward J. Knorr</i>		Date 10-15-92

REB-
MAY 90

TOWNSHIP OF BRICK

OCEAN COUNTY, NEW JERSEY

401 CHAMBERS BRIDGE ROAD, BRICK, N. J. 08723

OFFICE OF:



(201) 477-3000

January 10, 1990

Re: Tank Removals and Demolitions

From: Arthur J. Cierzo, Construction Official

Please advise all applicants for the above that they must send a copy of attached application to the State within thirty days prior to the beginning of work, they must also submit certification on tanks being emptied and purged to the building department with a receipt from where tanks were discarded before a final can be signed off.

AJC/jkg



STATE OF NEW JERSEY

THOMAS H. KEAN
GOVERNOR

DEPARTMENT OF COMMUNITY AFFAIRS
DIVISION OF HOUSING AND DEVELOPMENT

ANTHONY M. VILLANE JR., D.D.S.
COMMISSIONER

3131 PRINCETON PIKE
CN 816
TRENTON, N. J. 08625-0816

Re: Your variation request for -----
----- Our Ref.#-----

Dear :

A preliminary review of your request for a variation for the subject project has been completed. The following omissions/nonconformances/discrepancies have been noted:

A. PLANS

- 3 sets of plans.
- Location(s) of negative air filtration unit(s).
- The location(s) of the decontamination chamber(s).
- The location(s) of occupants and abatement work areas.
- The exits to be used by workers and occupants.
- The location of the waste container.
- The route of travel for waste removal.
- The route of workers to exit the building.
- Separation barriers and critical barriers.

B. SPECIFICATIONS

- 3 sets of specifications.
- Specific work procedures (not a copy of Sub-8).
- Method(s) of removal.

C. OCCUPANTS.

- The number of intended occupants.
- Their purpose for being in the building.
- Their location within the building.
- The time of day they will be in the building.



ASBESTOS ABATEMENT NOTIFICATION

DATE: 10/14/92

(PRINT OR TYPE)

(If applicable variance#)

Project: Old Carvel

Street: Brick Blvd • Cedar Bridge Avenue

Town: Brick Town

Contractor: Tomorrow's Excavation, Concrete

Address: Rt 206 PO Box 4377
Columbus NJ

Lic No: 00421

A.S.C.M.:

Lic No:

Address:

OSHA Air Monitor:

Address:

Building Owner:

Street:

Town:

Phone: () -

County:

Zip:

Engineer/Architect:

Street:

Town:

Phone: () -

County:

Zip:

Waste Hauler:

Address:

Lic. No.:

Land Fill:

Town:

Job Size: (Circle One) Minor

Small

Large

Quantity of Waste Generated:
(All Applicable)

CU. Yds.:

Linear Footage:

Sq. Footage:

Proposed Start Date: / /

Proposed Finish Date: / /

Cost of work:\$

(To be filled in by the Construction Official)

Construction Permit No.:

Date Issued: / /

0843A

1/19/89

Permit
Review Check List

Project: _____

Address: _____

Municipality: _____

ASCM Firm: _____

Date received: _____ Date reviewed: _____

Reviewed by: _____

- ☐ 1. UCC Form (F-100) Applications for a permit
- ☐ 2. UCC Form (F-110) Building Subcode
- ☐ 3. Health Waiver or Assessment
- ☐ 4. Notification form for Asbestos Abatement
- ☐ 5. Plans
 - ☐ a. Separation Barriers
 - ☐ b. Critical Barriers
 - ☐ c. Scope of Work
 - ☐ d. Route of travel to waste container
 - ☐ e. Copy of site plan
 - ☐ f. Copy of floor plan and/or plans if a multi-story
- ☐ 6. Specifications
 - ☐ a. Scope of Work
 - ☐ b. Type of removal (Glove bag, full containment)
 - ☐ 1. Where (specific locations; Re. plans)
 - ☐ 2. Quantity (Ln ft) (Sq. ft)
- ☐ 7. Documentation of non-occupancy or copy of variance
- ☐ 8. Release of plans and specifications by the ASCM
- ☐ 9. Permit Fee

Comments: _____

ASBESTOS JOBS

Under D.C.A. Subchapter 6

	<u>LARGE</u>	<u>SMALL</u>	<u>MINOR</u>
Square Feet	> 160	< 160 to > 25	< 25
Linear Feet	> 260	< 260 to > 10	< 10
Worker Training	5 day (W)	5 day (W)	2 day (M&C)
MOI Permit	Yes	Yes	No
Contractor License	Yes	Yes	No
Construction Permit	Yes	Yes	No
Notice to Adm. Authority	Yes	Yes	No
Completion Report to Adm. Av.	Yes	Yes	Yes
Contractor Daily Log	Yes	No ^{1,2}	N/A
Contractor Written Emerg. Plan	Yes	No ^{1,2}	N/A
Econ. Unit	Yes	No ²	No
Work Area Enclosure	Yes	Yes	General Isolation ³
eg. Air Filtration	Yes	No ²	No
Daily Air Monitoring	Yes	No ²	No
Smoke Test ⁴	Yes	No ²	No
Final Air Sample	Yes	Yes	Yes(glovebag)
Recommendation Inspection	Yes	Yes	No
Progress Inspection	Yes	Yes	No
Re-Sealant Inspection	Yes	No ^{1,2}	No
Clean-Up Inspection	Yes	Yes	No
Approved Landfill	Yes	Yes	Yes

Notes

- Highly recommended.
- ASCM may request variance.
- Ground cover, local vents sealed, etc.
- Smoke test is required for all glovebag type removals.

Old Travel Building & Dry Cleaners

B: 671

L: 3

permit # 2254-92

OCEAN COUNTY LANDFILL

ROUTE 70

MANCHESTER, NEW JERSEY 08733

FACILITY ID No. 1518B

RECEIPT DOCUMENT NUMBER

TARE WEIGHT 92057294 R

GROSS WEIGHT 0.0000 (0)

TO: TDM133342
 TOMORROWS ENVIRONMENT CONCERN
 RT. 206 PO BOX 377
 COLUMBUS NJ 08022

DATE	OPEN	ENTRY TIME	DEP NO	PLATE NO	QUANTITY	CLASS	DESCRIPTION	UNITS	UNIT PRICE	AMOUNT
12/17/92					30.0000	10:14	dry Industrial Waste / Asbestos	10:17 Check	102.18	3065.25
*** Current Account Balance: 0.00 *** TRANSPORTERS SIGNATURE <i>Frank Stevens</i>										
DOCUMENT TOTAL									3065.25	



Testwell Craig Laboratories, Inc
5439 E. Harding Highway
Mays Landing, New Jersey 08330
Phone: (609) 625-1700

Environmental Division
Optical Microscopy Laboratory
Air Samples Analysis
Method: NIOSH 7400

Project: M-OCE 3-008

Sampling Date: October 30, 1992

Client: OCEAN COUNTY

Site: OLD CARVEL - DEMO BLDG - BILLING #45116

Field Number	Field Tech	Sample Location	Type	Volume (liters)	Time Mins	Lab Tech.	Date Analyzed	Log Number	Fiber Concentration f/cc at P(0.05)
921030001	GC	DECON CLEAN ROOM	Area Sample	1350	90	GC	10/30/92	0014581	< 0.0020 f
Comments:									
921030002	GC	OUTSIDE CRITICAL BARRIER	Area Sample	1350	90	GC	10/30/92	0014582	< 0.0020 f
Comments: #002 & #003 SAMPLES MAY CONTAIN WOOD FIBERS									
921030003	GC	NEGATIVE AIR EXHAUST	Area Sample	1350	90	GC	10/30/92	0014583	< 0.0020 f
Comments: #002 & #003 SAMPLES MAY CONTAIN WOOD FIBERS									
921030004	GC	FIELD BLANK	Field Blank	0	0	GC	10/30/92	0014584	0.0000
Comments:									
921030005	GC	INSIDE FINAL AIR CENTER	Area Sample	1350	90	GC	10/30/92	0014585	< 0.0020 f
Comments:									
921030006	GC	INSIDE FINAL AIR FRONT QUAD	Area Sample	1350	90	GC	10/30/92	0014586	< 0.0020 f
Comments:									
921030007	GC	INSIDE FINAL AIR REAR QUAD	Area Sample	1350	90	GC	10/30/92	0014587	< 0.0020 f
Comments:									
921030008	GC	INSIDE FINAL AIR NORTH QUAD	Area Sample	1350	90	GC	10/30/92	0014588	< 0.0020 f
Comments:									
921030009	GC	INSIDE FINAL AIR SOUTH QUAD	Area Sample	1350	90	GC	10/30/92	0014589	< 0.0020 f
Comments:									
921030010	GC	FIELD BLANK	Field Blank	0	0	GC	10/30/92	0014590	0.0000
Comments:									

BLANKS ☒ WERE ☐ WERE NOT
PROVIDED WITH SAMPLES.

f Limit of quantitation based on volume of air collected, and 5.5 f/100 fields limit of detection for the NIOSH 7400 method.
The reported value is calculated by using the higher value of either the actual concentration or the reliable limit of quantitation reported at P(0.05), indicating the 95% confidence level (UCL) at 2 standard deviations.

Samples will be retained for 90 days, then disposed of unless a written request for return is provided by the client.

Laboratory Accreditations:
NUMBER 2171, ELAP NYS DOH #10878

Microscope Data:
Olympus, Phase Contrast, Model CH 2
Calibrated on 10/30/92

John T. Thompson Jr.
Laboratory Director or Approved Signatory

All reports are the confidential property of our clients and the information contained herein may not be published or reproduced pending our written approval.
Copyright (C) 1992 Testwell Craig Laboratories, Inc.



TESTWELL CRAIG TESTING LABORATORIES, INC.

South Jersey Division 565 E. Harding Highway, Mays Landing, NJ 08330-2203 (609) 625-1700
FAX (609) 625-6325

New York Division
47 Hudson Street
Rossmore, NY 10562
(914) 762-9000
FAX (914) 762-9638

Florida Division
104 N.W. 51st Street
Miami, Florida 33166
(305) 593-0561
FAX (305) 477-0687

Connecticut Division
6 Lake Avenue
Danbury, CT 06810
(203) 743-7281
FAX (203) 791-2451

North Jersey Division
50 Passaic Avenue
Fairfield, NJ 07006
(201) 882-8377
FAX (201) 882-8478

Albany Division
518 Clinton Avenue
Albany, NY 12206
(518) 436-4114
FAX (518) 436-4454

Address correspondence to the above:

TESTING ENGINEERS • STEEL • WATER • CONCRETE • CHEMICAL ANALYSIS • SOILS • TEST BORINGS • CORE DRILLING • ASPHALT • RESEARCH

FINAL INSPECTION REPORT

CLIENT COUNTY OF OCEAN LAB NO. 45116
PROJECT OLD CARVEL DATE 10/30/92
CONTRACTOR TEC Tommie Univ. Concrete TECHNICIAN Greg M. Chitt
WORK AREA(S) Div 2 Bldg

- ☒ DECONTAMINATION UNIT HAS BEEN DISMANTLED AND THE POLY, AND WASTE
- ☒ WATER HAS BEEN DISPOSED OF PROPERLY
- ☒ WASTE DUMPSTER HAS BEEN REMOVED FROM THE SITE BY A LICENSED
- ☒ WASTE HAULER
- ☒ WORK AREA(S) IS FREE OF ALL TAPE RESIDUE, POLY, SPRAY GLUE
- ☒ RESIDUE, AND ENCAPSULANT OVERSPRAY
- ☒ WORK AREA(S) HAS BEEN RESTORED TO IT'S ORIGINAL CONDITION PRIOR
- ☒ TO ABATEMENT
- ☒ CONTRACTOR HAS REMOVED ALL OSHA DANGER SIGNS

LIST OF DAMAGES BY CONTRACTOR:

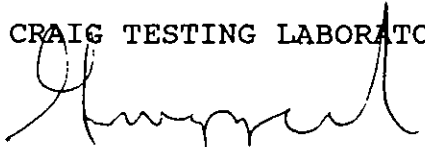
Bldg is to be Demolitioned.

- ☒ CONTRACTOR HAS REMOVED ALL SUPPLIES AND BELONGINGS OFF SITE
- ☒ DCA HAS BEEN NOTIFIED FOR FINAL INSPECTION AND HAS COMPLETED THEIR INSPECTION

DCA REPRESENTATIVE DATE / /

PLEASE BE ADVISED THAT THE ABOVE LISTED WORK AREA HAS BEEN INSPECTED AND FOUND X TO BE NOT TO BE SATISFACTORY AND IN COMPLIANCE WITH CONTRACT SPECIFICATIONS AND N.J.A.C. 5:23-8.

TESTWELL CRAIG TESTING LABORATORIES, INC.


ASBESTOS SAFETY TECHNICIAN
license # 00853



TESTWELL CRAIG TESTING LABORATORIES, INC.

South Jersey Division 565 E. Harding Highway, Mays Landing, NJ 08330-2203 (609) 625-1700
FAX (609) 625-6325

New York Division
47 Hudson Street
Rosining, NY 10562
914) 762-9000
FAX (914) 762-9638

Florida Division
104 N.W. 51st Street
Miami, Florida 33166
(305) 593-0561
FAX (305) 477-0687

Connecticut Division
6 Lake Avenue
Danbury, CT 06810
(203) 743-7281
FAX (203) 791-2451

North Jersey Division
50 Passaic Avenue
Fairfield, NJ 07006
(201) 882-8377
FAX (201) 882-8478

Albany Division
518 Clinton Avenue
Albany, NY 12206
(518) 436-4114
FAX (518) 436-4454

Address correspondence to the above:

TESTING ENGINEERS • STEEL • WATER • CONCRETE • CHEMICAL ANALYSIS • SOILS • TEST BORINGS • CORE DRILLING • ASPHALT • RESEARCH

CERTIFICATE OF COMPLETION

CLIENT COUNTY OF OCEAN LAB NO. 45116

PROJECT OLD CARVEL DATE 10/30/92

CONTRACTOR TEC TECHNICIAN Gregg M. Kell

WORK AREA(S) Demo Bldg

PLEASE BE ADVISED THAT THE ABOVE LISTED WORK AREA HAS BEEN TESTED, INSPECTED AND FOUND TO BE SATISFACTORILY CLEANED AND IN COMPLIANCE WITH CONTRACT SPECIFICATIONS AND N.J.A.C. 5:23-8.

TESTWELL CRAIG TESTING LABORATORIES, INC.

ASBESTOS SAFETY TECHNICIAN
license # 66570

FINAL AIR TESTING RESULTS:
PCM ☒ TEM

inside	< .005	F\CC	F\CC
inside	< .005	F\CC	F\CC
inside	< .005	F\CC	F\CC
inside	< .005	F\CC	F\CC
inside	< .005	F\CC	F\CC
		F\CC	F\CC
		F\CC	F\CC
		F\CC	F\CC
		F\CC	F\CC
		F\CC	F\CC

State of New Jersey

NOTIFICATION OF ASBESTOS ABATEMENT
(Pursuant to NJAC 8:60-7 and 12:120-7)

Need waste manifest

Date of Notification (1) <u>11/01/11 15/1/19 12/1</u>		Name of Building Owner/Operator (2) County of Ocean	
Agencies Notified		Street Address 5 Mott Place	
Type Notification ☒ EPA ☒ DEP ☒ DOL ☒ DOH ☒ DCA		City, State, Zip Code Toms River, New Jersey 08753	
☒ Initial Notification ☐ Amended Notification		Name of Contact Wilbur G. Buck	
		Telephone Number 908-929-2039	

FACILITY INFORMATION

Name of Facility Where Abatement is Taking Place (3) Old Carvel Building			Type of Facility (4) ☐ School (K-12) ☒ Subchapter S (Other than K-12) ☐ Other (i.e., private & commercial buildings, homes, etc.)		
Street Address N/W Corner of Brick Blvd. & Cedar Bridge Road			Square Feet 1400		
City (5) Brick Township			# of Floors 2		
County (6) Ocean			Bldg. Age 39 yrs		
County Code (7) (STATE USE ONLY)			Current Use (Prior if being demolished) offices/commercial		
Name of Monitoring Firm Hired by Building Owner (8) Testwell Craig Testing Lab			Name of Contractor (9) Tomorrow's Environmental Concerns		
ASCM No. 00013			Street Address Route 206, P.O. Box 377		
Street Address 565 E. Harding Highway, P.O. Box 477			City, State, Zip Code Columbus, NJ 08022		
City, State, Zip Code Mays Landing, NJ 08330			Telephone Number 609-298-6000		
Project Manager for Monitoring Firm Theresa Russell			License Number 00421		
Telephone Number 609-625-1700					
Scheduled Start Date (10) 11/01/13 10/1/19 12/1			Name of OSHA Monitor Edward Knorr		
Sched. Completion Date (11) 11/10/13 11/1/19 12/1			Street Address Route 206, P.O. Box 377		
Occupancy Status During Abatement (Check only one) ☒ Facility Closed/Vacated During Entire Period of Abatement ☐ Abatement Performed Outside of Normal Facility Hours - Describe: ☐ Other - Describe:			City, State, Zip Code Columbus, NJ 08022		

Scope of Work (Check all that apply)

- | | | |
|--|---|--|
| ☒ Demolition | ☐ Renovation | ☐ Full Containment with Negative Pressure |
| ☒ Large Project (> 160 SF or > 260 LF ACM) | ☐ Mini-Enclosure | ☐ Glovebag Procedure |
| ☐ Small Project (> 25 < 160 SF or > 10 < 260 LF ACM) | | |
| ☐ Minor Project (< 25 SF or < 10 LF ACM) | | |

Location of Asbestos-Containing Material (ACM) in Facility (13)	Is Location Normally Used Solely by Maintenance/Custodial Staff (12)			Description of Asbestos-Containing Material (ACM) (i.e., thermal systems insulation, surfacing, VAT, or other miscellaneous)	Amount (Specify SF or LF)	Abatement Type				
	Yes	No	N/A			R E M O V A L	R E P A I R	E N C A P S U L E	E N C L O S U R E	
1st floor			x	floor tile mastic only	935sf	xx				

Name of Registered Waste Hauler Tomorrow's Environmental Concerns	NJDEP Waste Hauler ID No. 17391	Cubic Yards of Waste 18	Name of Registered Landfill Ocean County Landfill
City, State Columbus, New Jersey		Disposal Date 11-2-92	City, State Belford, NJ
Completed By (Print or Type) Edward J. Knorr	Title Vice President	Signature <i>Edward J. Knorr</i>	Date 10-15-92

ASB-
MAY 90

TOWNSHIP OF BRICK

OCEAN COUNTY, NEW JERSEY

401 CHAMBERS BRIDGE ROAD, BRICK, N. J. 08723

OFFICE OF:



(908) 477-3000

FACISIMILE CORRESPONDENCE

(908) 920-4850

DATE 12/18/92 TO FAX NO 609-625-6325 PAGES TO FOLLOW 1
TO Theresa Russell
ATTN 1
FROM Brick Bldg Dept
MESSAGE

SPECIFICATIONS
FOR
ASBESTOS ABATEMENT AND RELATED WORK
AT
OLD CARVEL
BRICK TOWNSHIP, NEW JERSEY

Prepared for: County of Ocean
Department of Buildings & Grounds
5 Mott Place
Toms River, New Jersey 08753
(908) 929-2039

Prepared by: Testwell Craig Testing Labs., Inc.
5439 East Harding Highway
Mays Landing, New Jersey 08330
(609) 625-1700

September 1992
Lab No 43930

Part I

1.00 Access to Work Site and Hours of Work

A. All arrangements for access to the work site shall be made through the Owner's Representative. Unless otherwise specified the contractor will perform all work between the hours of 8:00 AM to 4:30 PM, Monday through Friday. Access at times other than those given in Contractor's schedule will be at the Contractor's expense. The Contractor will be responsible for Owner's incurred costs for security, testing, air monitoring, supervision and all other related Owner incurred costs at such periods as he undertakes or proposes to undertake such work other than at times described in the approved schedule.

1.01 Notifications

A. The contractor shall notify the following agencies in writing ten (10) days prior to the start of the asbestos removal project. The Contractor must submit two (2) copies of each notice to Testwell Craig Laboratories, Incorporated, prior to the application for the asbestos abatement permit from the local building official.

1. US Environmental Protection Agency
Asbestos NESHAPS Contracts
Air & Hazardous Material Division
26 Federal Plaza
New York, New York 10007
2. New Jersey Department of Community Affairs
Bureau of Construction Code Enforcement
CN 805
Trenton, New Jersey 08625
3. New Jersey Department of Health
Asbestos Control Project
CN 360
Trenton, New Jersey 08625
4. New Jersey Department of Labor
Asbestos Control and Licensing
CN 054
Trenton, New Jersey 08625

Old Carvel, Brick Twp.
Lab# 43930

5. New Jersey Department of Environmental
Protection
Division of Waste Management
Bureau of Field Operations
120 Route 156
Yardville, New Jersey 08620

Notification to the agencies in Section A above shall be on the required forms (where applicable) and include the following information:

1. Name and address of owner of building.
2. Name and address of the operator of the building.
3. Name and address of contractor.
4. Address and description of the building, including size, age and prior use of the building or area, and amount of friable asbestos material present in square feet and/or linear feet, as applies. Designate room numbers and other locations information unless entire building is involved.
5. Scheduled starting and completion dates for removal.
6. Procedures and equipment (including ventilating system) that will be employed to comply with 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants.
7. The name and address of the Department of Environmental Protection registered waste hauler and of the Department of Environmental Protection registered landfill where the asbestos waste will be deposited. Such landfill should also comply with 40 CFR Part 61.
8. The name and address of the Monitoring Firm to perform air monitoring on behalf of the contractor's employees.
9. Contractor shall obtain all permits and certificate of Occupancy.

B. The contractor shall notify the Owner's Asbestos Safety Monitoring Firm in writing at least 48 hours prior to commencement of any preparation of work.

1.02 Documentation of Worker's Qualifications

A. The contractor shall post the names, signatures, and photocopies of state issued licenses for all workers to be doing asbestos removal work on the job site. In addition, contractor must display a sign in letters larger than 4 inches tall indicating, "Licensed by the State of New Jersey for Asbestos Work". N.J.S.A 34:5A-32 et seq.

B. The contractor shall comply with all applicable requirements of 40 CFR Part 61, "Accepted Engineering Practices", and N.J.A.C. 5:23-8.

1.03 Air Monitoring & Inspections

A. The contractor is responsible for all OSHA required air monitoring for his employees.

B. Air monitoring and visual inspection in the adjacent to the work area will be conducted throughout the abatement project by the Owner's air monitoring technician and/or the Owner's representative in accordance with these specifications.

C. The Contractor shall provide the required respirators and protective clothing to all workers, and to all official representatives of the state & federal government or other designated party who may inspect the job site.

D. The Contractor shall cooperate fully with all aspects of the air monitoring programs which are conducted by the independent air monitoring consultant.

1.04 Definitions

A. The following words, terms and abbreviations when used in this document shall have the following meanings unless the context clearly indicates otherwise.

1. Abatement - procedures to decrease or eliminate fiber release from precast, spray or trowel applied asbestos-containing building materials. Includes encapsulation, enclosure and removal.

2. Airlock - system for permitting ingress or egress without permitting air movement between a contaminated area and an uncontaminated area, typically consisting of two curtained doorways at least three feet (one-meter) apart.
3. Amended water - water to which a wetting agent is added. The wetting agent is a combination of chemicals which aids in the penetration of the material and increases the probability of individual fiber wetting.
4. Air Monitoring - the process of measuring the fiber content (fibers of a specified size range) of a specific volume of air in a stated period of time.
5. Asbestos - a general term used to describe a group of naturally occurring hydrated mineral silicates. Including but not limited to the asbestiform varieties chrysotile (serpentine) ; crocidolite (riebeckite); amosite (cummingtonite-grunerite); anthophyllite; tremolite and actinolite.
6. Asbestos-containing material - any material which contains more than 1 percent asbestos by weight.
7. Asbestos Safety Technician (AST) - a person certified by the New Jersey Department of Community Affairs, hired by an Asbestos Safety Control Monitor who continuously monitors and inspects the asbestos abatement work pursuant to N.J.A.C. 5:23-8 and these specifications.
8. Barrier - polyethylene sheeting that completely seals off the work area to prevent contamination of the surrounding area.
9. Clean room - an uncontaminated area or room which is part of the worker decontamination enclosure system, with provisions for storage of workers' street clothes and protective equipment. Also referred to as Change Room.
10. Construction permit for asbestos abatement - requires official approval to commence any asbestos hazard abatement job.
11. Contractor - the Asbestos Removal Contractor.
12. Critical Barrier - two layers of 6 mil polyethylene sheeting that completely seals off the work area to prevent the distribution of fibers to

the surrounding area, such as the opening between the top of non-removable lights, HVAC systems, windows, doorways, entrance ways, ducts, grilles, grates, diffusers, wall clocks, speaker grilles, floor drains, sink drains, etc..

13. Curtained Doorway - a device to allow ingress or egress from one room to another while minimizing air movement between the rooms. Typically constructed by placing three overlapping sheets of plastic over an existing or temporarily framed doorway and securing each along the top of the doorway, with the vertical edge of one along one vertical side of the doorway and the vertical edge of the other along the opposite vertical sides. Two curtained doorways spaced a minimum of three feet (one meter) apart form an airlock.
14. Decontamination Enclosure System - a series of connected rooms, with curtained doorway between any two adjacent rooms, for the decontamination of workers or of materials and equipment. A decontamination enclosure system always contains an airlock.
15. Employee - an asbestos abatement worker having proper training, instruction and licensing.
16. Encapsulation - treatment of asbestos containing materials, generally ceilings, using a liquid to bond or seal the surface to minimize the potential for fiber release.
17. Enclosure - an impermeable barrier (made of wood, metal, etc.) placed around asbestos containing material.
18. Equipment Decontamination Enclosure System - a decontamination enclosure system for materials and equipment, typically consisting of a designated area of the work area, a washroom and an uncontaminated area.
19. Equipment Room - a contaminated area or room which is part of the worker decontamination enclosure system, with provisions for storage of contaminated clothing and equipment.
20. Friable - any material which when dry may be crumbled, pulverized, or reduced to a powder by hand pressure or mechanical means.

21. Fixed Object - a unit of equipment or furniture which cannot be removed from the work area(s).
22. Glove Bag - a plastic bag specially designed to contain sections of pipe for the purpose of removing short lengths of damaged asbestos material without releasing fibers into the air.
23. HEPA Filter - a High Efficiency Particulate Absolute filter capable of trapping and retaining 99.97 percent of asbestos fibers greater than 0.3 microns in length.
24. HEPA Vacuum- vacuum cleaner equipped with HEPA filter(s).
25. Holding Area - a chamber between the washroom and uncontaminated area in the equipment decontamination enclosure system. The holding area is comprised of an airlock.
26. Moveable Object - a unit of equipment or furniture in the work area(s) which can be removed from the work area(s).
27. Negative Pressure - air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (work area).
28. NIOSH - National Institute for Occupational Safety and Health.
29. Plastic Sheeting - polyethylene sheet material, of the thickness indicated.
30. Repair - corrective action using recommended work practices to minimize the likelihood of fiber release from small damaged areas of ACM.
31. Removal - the act of properly eliminating and disposing asbestos containing or contaminated materials from a building.
32. Sealant - a liquid or solution to be used as a binding agent, such as a diluted encapsulant or a water based paint, on dried exposed surfaces from which asbestos-containing material has been removed. The color of the coat shall be separate and distinct from the underlying substrate.

33. Separation barrier - a constructed wall with no door that separates the clean area from the work area having a fire rating, if applicable and does not interfere with the means of egress. Polyethylene sheeting (minimum 2 layers of 6 mil) shall be placed on the work site of the barrier so that it completely seals off the work area to prevent the distribution of fibers to the surrounding area.
34. Shower Room - a room constituting an airlock, between the clean room and the equipment room in the worker decontamination enclosure system, with hot and cold or warm running water suitable arranged for complete showering during decontamination. The shower room always comprises an airlock.
35. Surfactant - a chemical wetting agent added to water to improve penetration of the ACM. Surfactants are used to ensure that all Asbestos Containing Materials are thoroughly wet before removal.
36. Wet Cleaning - the process of reducing asbestos contamination in a building by using cloths, mops, or other cleaning tools which have been dampened with amended water to decontaminate the area and by disposing these cleaning tools as asbestos contaminated waste.
37. Washroom - a room between work area and the holding area in the equipment decontamination enclosure system. The washroom comprises an airlock.
38. Work Area - the place in a building which asbestos abatement occurs.
39. Worker Decontamination Enclosure System - a decontamination enclosure system for workers, typically consisting of a clean room, a shower room and an equipment room.

1.05 Personnel Requirements and Training

A. All of the Contractor's workers must have valid training, a minimum of one years experience in asbestos abatement and a current asbestos workers permit as issued by the State of New Jersey, and shall comply with all applicable requirements of N.J.S.A. 34:5A-32 et seq. and 29 CFR 1926.58(k)(3), as well as other non-training requirements of 29 CFR 1926.

B. The Contractor shall furnish proof that all of the Contractor's personnel on the job (supervisors and workers) have been given medical examinations as required by OSHA regulations, 29 CFR 1910 and 29 CFR 1926. As a minimum, the examination should include a chest roentgenogram, a medical history with specific reference to respiratory disease and pulmonary function tests. This information should be provided to the Owner during the pre-construction meeting.

C. The Contractor shall provide a minimum of two job foremen, each with a minimum of two years of successful experience in asbestos removal operations similar in scope and magnitude to this project. One foreman shall be required to remain inside each of the work areas at all times that work is in progress. The Contractor shall submit the qualifications of these persons to the Owner.

1.06 Asbestos Consultant/Asbestos Safety Technician

A. Testwell Craig Testing Laboratories, Inc. shall perform all air sampling specified. They shall have access to all areas of the asbestos removal project at all times and shall continuously inspect and monitor the performance of the contractor and his employees to verify that their performance complies with this specification. An Asbestos Safety Technician shall be on site at all times that work is in progress, from the initial preparation of the work area to the completion of the abatement operation. The AST is present to protect the Owner's interest and to ensure compliance of N.J.A.C. 5:23-8. The air sampling, monitoring and inspections made by the AST shall not relieve the Contractor of his monitoring obligations.

B. The Asbestos Safety Technician shall have the authority to require that all workers present a valid work card before entering the worksite. He shall also have the authority to direct verbally and in writing the actions of the contractor to assure compliance. The Technician shall have the authority to test the seal of the respirators of all who enter the work site to ensure proper fit. In matters of gross negligence or flagrant disregard for the safety of others, including the possibility of contaminating the building environment and the appearance of an emergent unsafe condition at the work site, the Technician shall direct such corrective action as may be necessary.

C. The Asbestos Safety Technician upon receipt of testing results indicating that concentrations above 0.010 fibers per

cc have occurred outside the containment barriers or above 0.020 fibers/cc within the clean room of the decontamination chamber during the abatement action shall report these results immediately to the contractor and to the owner's representative so that prompt corrective action may be taken.

D. The Asbestos Safety Technician shall keep a daily log of on-site observations concerning contractor's compliance with activities required under this specification listing all deficiencies encountered. In addition, this log shall list the names of all persons entering the work area. This log shall be made available upon request at all times to the Owner's Representative.

E. During the removal phase of the duties of the Asbestos Safety Technician shall be as follows:

1. Monitoring outside the work area shall be provided throughout removal operations, to ensure that no outside contamination is occurring.
2. Filters, cassettes and sampling train shall be assembled as specified in NIOSH 7400 method and 40 CFR 763. The flow rate shall be between 0.5 and 16 liters per minute. The total volume shall be a volume sufficient to achieve a detection limit of 0.010 f/cc. Pumps shall be calibrated before and after sampling and a record kept of this calibration.
3. The Asbestos Safety Technician shall take a minimum of three (3) samples per day. One stationary sample at decontamination unit entrance/exit and the remaining samples adjacent to work area but remote from the decontamination unit entrance. In the selection of adjacent areas to be monitored, preference shall be given to rooms adjacent to critical barriers and/or occupied areas.
4. If the Contractor's barriers or other control methods are observed to malfunction and if the Contractor does not correct the problems immediately upon notification, the Asbestos Safety Technician shall have the authority to halt removal of asbestos in the affected work area. In such a situation additional sampling of at least 5 samples per day per area shall be performed by the Asbestos Safety Technician at the Contractor's expense.

5. The analysis of air samples (excluding final air tests) shall be done using NIOSH #7400 Method (A rules).
 6. The evaluation criteria shall be 0.010 fibers per cubic centimeters.
 7. A series of smoke tests shall be performed at the decontamination unit entrance/exit, by the asbestos safety technician to ensure continuous negative air pressure. This test shall be performed before each work shift and every four hours thereafter until the end of the work shift.
 8. The Asbestos Safety Technician shall calculate the required number of negative air filtration units for each work area. This calculation shall be made whenever the volume of the work area changes. The Asbestos Safety Technician shall inform the Owner's Representative and the Contractor of any discrepancies between the number of units required and those in operation within the work area.
 9. A record shall be kept in a daily log of all on-site observations, inspections and required activities.
 10. The Asbestos Safety Technician shall ensure that all asbestos waste shall be removed from the worksite daily unless it is placed in a locked, secure container outside of the work area until removal by a registered waste hauler.
- F. Final Certification tests shall be conducted as follows:
1. Within 48 hours after final clean-up and before the removal of critical barriers, a visual inspection and a final air test shall be performed by the Asbestos Safety Technician for the Owner. This test is required to establish safe conditions for removal of critical barriers and to permit occupancy and/or demolition activity to begin. Sufficient time following clean-up activities shall be allowed so that all surfaces are dry during monitoring. At least 24 hours shall be allowed to pass after any wet cleaning has been done before the post-removal tests are begun.
 2. Normal occupancy use conditions shall be simulated using aggressive sampling techniques.

3. Evaluation criteria:

- a. **Transmission Electron Microscopy:** A minimum of 13 samples is required: five samples collected inside the abatement area, five samples collected outside the abatement area, two field blanks, and one sealed blank. Sampling and analysis must be completed according to the protocol outlined in 40 CFR 763. The work area will be considered clean if either: the arithmetic mean of the asbestos structure concentrations of the five samples collected inside the work area is equal to or less than 70 structures per square millimeter; or the three blank samples have an arithmetic mean of the asbestos structure concentration on the blank filters that is less than or equal to 70 s/sq mm and the average airborne asbestos concentration measured inside the abatement area is not statistically higher than the average airborne asbestos concentration measured outside the abatement area as determined by the "Z-test".

Note: The Owners representative will make the determination as to whether the Z-test is to be used.

If test results exceed these parameters, the Asbestos Safety Technician shall so inform the Contractor and the Owner's representative. If these criteria have not been met the Contractor shall be required to re-clean all surfaces using wet cleaning methods and provide negative HEPA-filtered exhaust air during the re-cleaning process. This process of re-cleaning, allowing surfaces to dry and re-testing shall be repeated until compliance is achieved.

- b. **Phase Contrast Microscopy:** A set of five samples will be collected in each area of PCM clearance. If any of the samples in any set of air test results exceeds 0.010 fiber/cc, the Asbestos Safety Technician shall so inform the Contractor and the Owners' representative. If these criteria have not been met the Contractor shall be required to re-clean all surfaces using wet cleaning methods and provide negative HEPA-filtered exhaust air during the re-cleaning process. This process of re-cleaning, allowing surfaces to dry and re-testing shall be repeated until compliance is achieved.

Note: All costs incurred by the owner as a result of the work area failing to meet final clearance will be the Contractor's responsibility. The work schedule for all projects requiring Transmission Electron Microscopy includes 72 hour time. The Contractor will compensate the Owner for the difference in costs if less than 72 hour turnaround time is required on TEM samples in order to satisfy contractual agreements.

G. Final inspection shall be conducted by the Asbestos Safety Technician as follows:

1. Upon notice by the Owner's representative or by the Contractor and at least 48 hours after the removal of the critical barriers, a final inspection shall be made to ensure the absence of any visible signs of asbestos or asbestos containing materials and that all removed asbestos and asbestos contaminated materials have been properly disposed of off-site.
2. Acceptable airborne fiber levels have been attained.
3. The Asbestos Safety Technician shall ensure that all asbestos waste has been removed from the work site by a registered waste hauler.

H. The Asbestos Safety Technician shall prepare a comprehensive final report, including daily logs, required inspection reports, observations and air monitoring results. The Asbestos Consultant shall maintain the report as a permanent record and present a copy to the Owner.

Part 2 - CONTRACTOR RESPONSIBILITIES AND DESCRIPTION OF WORK

2.00 Scope of Work

A. This section covers the furnishing of all labor, materials, facilities, equipment, services, employee training and testing, permits and agreements necessary to perform the work required for asbestos abatement in accordance with these specifications, EPA, OSHA Regulations, NIOSH recommendations, State of New Jersey Regulations, and any other applicable federal, state, and local government regulations. Whenever there is a conflict or overlap of the above references the most stringent provisions shall apply. It shall be the contractor's responsibility to verify exact quantities and locations of all asbestos containing materials.

The quantities shown are for informational purposes only. Prospective bidders should bid this project according to what is observed during the Pre-bid walk through.

B. Description of Work: Perform the work and provide the services as follows:

1. Worker training, respiratory protection and fit-testing, and OSHA required medical examinations.
2. Work area preparation including protection of all surrounding fixtures as described herein.
3. The asbestos abatement shall commence within 15 working days of receipt of contract and be completed within 10 calendar days thereafter.
4. Asbestos abatement to include the following:
 - a. Isolate the work areas from remaining areas through the use of critical barriers.
 - b. A two chambered decontamination unit is required for all areas of this project.
 - c. The Contractor is to supply all water and power.
 - d. Remove the following materials utilizing general isolation techniques:
 1. Approximately 935 square feet of asbestos containing **mastic** under two layers of non-asbestos floor tiles.
5. Final clearance will be determined by **Phase Contrast Microscopy** according to the protocol outlined in section 1.06F.3.b of this specification.

C. Sequence of Work shall be as follows:

1. The Contractor will insure that prior to abatement preparation, that all movable objects have been removed from the abatement area.

2. The Contractor will restrict access to areas where abatement is to take place from remainder of the building. The Owner will ensure that no persons occupy the building from the time that the Contractor mobilizes until the Certificate of Occupancy has been granted.

3. The Contractor shall pre-clean the abatement area by HEPA vacuuming all surfaces.

4. The Contractor will construct to operational all final barriers, seals, and decontamination chambers as directed by the Asbestos Safety Technician.

5. The Contractor will contact the Owner, the New Jersey Departments of Health and Community Affairs, the Asbestos Safety Control Monitor for inspection and approval.

6. The Contractor shall give the AST in writing 24 hours notice requesting a pre-commencement inspection.

7. Once the abatement has begun the AST shall make progress inspections and perform a Pre-Sealant inspection before the encapsulation process begins. The inspector shall insure that no visible debris is left on the substrate before any encapsulation begins.

8. The Owners Testing Laboratory shall perform final air testing after a 24 hour waiting period from any wet wiping or cleaning. The final air tests will be performed by Phase Contrast Microscopy. The testing and analysis shall be done in compliance with the 40 CFR 763 and NJAC 5:23-8. If the results are higher than the allowable threshold the contractor will re-clean the abatement area and the testing firm must re-test. This sequence will continue until the test results are acceptable.

9. Once the appropriate air testing results are met, the Contractor will remove all critical barriers and separation barriers inside the abatement area. No tape, polyethylene sheet plastic or other construction debris can remain in the abatement area after this cleaning.

10. The AST will perform a final visual inspection of the abatement area. The Contractor must notify state inspectors 24 hours prior to the AST's final visual.

2.01 STANDARD OPERATING PROCEDURES

A. The Contractor shall develop and implement a written standard procedure for abatement work to ensure maximum protection and safeguard from asbestos exposure of the workers, visitors, general public, and the environment.

The standard operating procedure shall ensure:

1. Tight security on a 24 hour basis from unauthorized entry into the work space.
2. Remove asbestos in ways that minimize release of fibers.
3. Safe work practices in the work place, including provisions for inter-room communications, exclusion of eating, drinking, smoking, or in any way breaking respiratory protection.
4. Proper protective clothing and respiratory protection prior to entering the work space from the outside.
5. Packing, labeling, loading, transporting, and disposing of contaminated material in a way that minimize exposure and contamination.
6. Proper exit practices from the work space to be the outside through the showering and decontamination facilities.
7. Emergency evacuation for medical or safety (fire and smoke) so that exposure will be minimized.
8. Safety from accidents in the work space, especially from electrical shocks, slippery surfaces, and entanglements in loose hoses and equipment.
9. Provisions for effective supervision, air monitoring and personnel monitoring for exposure during the work.
10. Engineering systems that minimize exposure to fibers in the work space.
11. The contractor shall submit these plans and procedures at least ten (10) days prior to abatement.

2.02 NOTIFICATIONS, PERMITS, WARNING SIGNS, LABELS, AND POSTERS

A. Erect English warning signs around the work space and at every point of potential entry from the outside, with the words "Danger" Asbestos Hazard, Do Not Enter". The warning signs shall be a bright color so that they will be easily noticeable. The size of the sign and the size of the lettering shall be no less than OSHA requirements. Warning signs shall be posted at the entrance to the work area and around its perimeter at intervals of no more than twenty-five (25) feet.

B. Provide the OSHA required labels for all plastic bags and all drums utilized to transport contaminated material to the landfill.

C. Provide any other signs, labels, warnings, and posted instructions that are necessary to protect, inform and warn people of the hazard from asbestos exposure. Post in a prominent and convenient place for the workers a copy of the latest applicable regulations from OSHA, EPA, and NIOSH.

2.03 EMERGENCY PRECAUTIONS

A. Establish emergency and fire exits from the work area. Post these in the administrative area on the worksite.

B. The Contractor shall be prepared to administer first aid to the injured personnel after decontamination. Seriously injured personnel shall be treated immediately or evacuated without delay for decontamination. When an injury occurs, precautions shall be taken to reduce airborne fiber concentrations (i.e. misting of the air with water) until the injured person has been removed from the work area.

C. Before the Contractor starts the removal of asbestos materials, the local police and fire departments shall be notified as to the danger of entering the work area. The Contractor shall make every effort to help these departments form plans of action should their personnel need to enter the contaminated area.

2.04 SUBMITTALS DURING THE WORK

A. Submit copies of the following items to the Asbestos Safety Control Monitor and the Consultant:

1. Security and safety logs showing names of persons entering work space, date and time of entry and exit, record of any accident, emergency evacuation, and any other safety and/or health incident.

2. Disposal Certificates.

3. Required Permits, Clearances, and Licenses.

4. All Contractor's Air Monitoring and inspection Results.

2.05 OWNER/CONTRACTOR RESPONSIBILITIES

A. The Contractor or persons employed by the Building Owner shall clean with wet cloths and/or with HEPA vacuums as appropriate all movable items that can be removed from the work area without disrupting the asbestos material. This shall include furniture, equipment, drapes, curtains. The cloths used for cleaning shall be disposed of as asbestos contaminated waste.

B. The Owner will provide the Contractor with a list of items that cannot be removed, or are damaged prior to abatement activities.

C. The Owner will stop all deliveries that may be scheduled to the work area while work is in progress.

D. The Owner will have authorized personnel on site at all times or supply contractor with means of contacting such personnel without unreasonable delay. Such personnel shall have access to all areas and have knowledge of electrical and air handling equipment. Such personnel shall assist Contractor in case of any power failure or breakdown to shut down air supply systems, to reset and control all protective systems such as alarms, sprinklers, locks, etc.. The Owner shall insure no active air handling systems are operating within the work area.

E. The Owner will not occupy the building in which work is being performed during the entire asbestos abatement operation, including completion of clean-up, but excluding re-insulation.

F. During this period, the Contractor shall be responsible in all areas affected by his operation for:

1. Building Security - Fire and smoke detection systems
2. Maintaining the existing building and utility systems such as plumbing or electrical installations.
3. The Contractor shall provide security to prevent unauthorized entry into the work area, and maintenance of decontamination chambers, isolation barriers and negative air systems.

G. Should the failure of any utility occur, the Owner will not be responsible to the Contractor for loss of time or any other expense incurred.

2.06 USE OF BUILDING FACILITIES

- A. The Contractor will provide all required amounts of water and electric power required at the site.
- B. The Owner shall provide telephone service and a telephone at the job site for use by the Contractor and the Consultant.
- C. The Contractor shall provide all electrical, water, and waste connections, tie-ins, extensions, and construction materials, supplies, etc.
- D. The Contractor shall provide a separate temporary electric panel board to power his equipment. The Owner shall designate an existing power box in close proximity to the work area. Contractor's licensed electrician shall provide temporary tie-in via cable, outlet boxes, junction boxes, receptacles and lights, all with ground fault interruption. All temporary electric shall be in accordance with OSHA Regulations, specifically but not limited to, 1926 Subpart K.
- E. Contractor shall provide fire protection in accordance with all state and local fire codes.
- F. When temporary services lines are no longer required, they shall be removed by the Contractor. Any parts of the permanent service lines, grounds and buildings, disturbed or damaged by the installation and/or removal of the temporary service lines, shall be restored to their original condition by the Contractor, in a manner satisfactory to the Owner.
- G. Contractor shall provide hot shower water necessary for use in the decontamination unit.

2.07 USE OF THE PREMISES

A. The Contractor shall confine his apparatus, the storage of materials, and supplies, and the operation of his workmen to limits established by law, ordinances, and the directions of the Owner. All flammable or combustible materials shall be properly stored to obviate fire and in areas approved by the Owner.

B. The Contractor shall assure that no exits from the building are obstructed, that appropriate safety barriers are established to prevent access, and that work areas are kept neat, clean, and safe.

C. All surrounding work, fixtures, soil lines, drains, water lines, pipes, electrical conduit, wires, utilities, railings, shrubbery, landscaping, etc. which is to remain in place shall be carefully protected and, if disturbed or damaged, shall be repaired or replaced as directed by the Owner, at no additional cost.

D. Any or all routes through the building to be used by the Contractor shall first be approved by the Owner and the Consultant.

E. The Owner shall provide toilet facilities on site for the Contractors use.

2.08 ELECTRICAL FIXTURES AND HVAC REGISTERS DUST CONTROL

A. Prior to the commencement of any removal and cleaning activities, any existing lighting fixtures and ceiling suspension system shall be decontaminated using a HEPA vacuum equipped with a soft brush attachment.

B. All HVAC registers diffusers, induction units, etc. shall receive no replacements or changes. Existing fixtures shall be shut down by the Owner's personnel prior to any work in the area.

2.09 PROTECTION AND DAMAGE

A. Replace or repair any items damaged, due to work performed under this contract, equal to their original construction and finish. Repaired or replaced items will be subject to the Owner's approval.

- B. Use rubber-tired vehicles which use non-volatile fuels for conveying material inside building and provide temporary covering, as necessary, to protect floors.
- C. No materials shall be thrown from windows or doors of buildings. Building waste system shall NOT be used to remove refuse.
- D. Debris shall be removed from the site daily. Premises shall be left neat and clean after each work shift, so that work may proceed the next regular workday without interruption.
- E. Protect floors along removal routes from damage, wear and staining.
- F. Liquidated damages of \$1000.00 will be assessed for each week or part thereof that the asbestos removal permit remains open past the ten day period.

2.10 RESPIRATORY SYSTEMS

- A. Provide all workers, foremen, superintendents, authorized visitors and inspectors personally issued and marked respiratory equipment approved by NIOSH and OSHA. When respirators with disposable filters are employed, provide sufficient filters for replacement as necessary by the worker.
- B. The Contractor shall require that each person entering the Work Area wear an approved respirator and protective clothing. There shall be no exceptions to this rule.
- C. Respiratory protection shall be in accordance with OSHA Regulation 1910.1001 (d), OSHA Regulation 1910.134 and ANSI z88.2-1980. Respirators chosen shall also be approved by NIOSH under the provisions of 30 CFR Part. 11.
- D. Respiratory protection shall be determined by airborne fiber concentration (fibers per cubic centimeter of air).

At a minimum, respiratory protection shall be:

- 0.01 - 1.0 f/cc - Dual Cartridge, Air Purifying respirator with HEPA cartridge.
- 1.0 - 10.0 f/cc - Powered Air Purifying respirator with HEPA cartridge.

10.0 and above - Type C supplied air pressure demand respirator.

E. **NO ONE** is to be permitted into the work area without proper protection. No disposable dust masks shall be used at any time.

F. All personnel engaged in asbestos abatement procedures requiring an air purifying respirator shall have an unobstructed face/mask seal (i.e., no facial hair).

2.11 PROTECTIVE CLOTHING

A. Provide to all workers, foremen, superintendents and authorized visitors and inspectors protective disposable clothing (TYVEK) consisting of full-body coveralls, head covers, gloves and 18 inch high boot type covers or reusable footwear.

B. Provide eye protection and hard hats as required by job conditions and safety regulations.

C. Reusable footwear, hard hats and eye protection devices shall be left in the "contaminated Equipment Room" until the end of the asbestos abatement work.

D. Disposable protective clothing shall be discarded and disposed of as asbestos waste every time the wearer exits from the work space to the outside through the decontamination facility.

E. The Contractor shall also maintain sufficient supply of all other related items such as towels, soap, etc..

2.12 AIR MONITORING - CONTRACTOR

A. The Contractor shall employ a certified laboratory and NIOSH certified air test technician to conduct air sampling and analysis in accordance with OSHA Regulations, 29 CFR, 1910.1001 (Asbestos Standard for General Industry), 1926.58 (Asbestos Standards for Construction), and 1910.134 (Respirator Standard).

B. The Testing Laboratory shall be a current proficient participant in the NIOSH PAT Program. The laboratory identification number shall be submitted and approved by the Consultant.

C. The Contractor shall require a competent person from his testing laboratory to perform the following functions:

1. Monitor the set up of the work area enclosure and ensure its integrity.
2. Insure that employees are adequately trained in the use of proper work practices, proper personal protective equipment and in decontamination procedures.
3. Insure that employees USE proper work practices, proper personal protective equipment and proper decontamination procedures.
4. Supervise all employee exposure monitoring. Such monitoring shall comply in all respects with OSHA Regulation 1926.58 Appendix "A".
5. Conduct air sampling as per OSHA 1926.58 and as described herein.

D. Air monitoring and inspection of the Contractor's employees shall be conducted under the supervision of the Contractor's competent person.

E. Continuous air monitoring and inspections will include work area samples, personal samples from the breathing zone of a laborer to establish 8-hour TWA's.

F. Sampling and analyses shall be performed in accordance with the NIOSH #7400 method.

G. Air sample results shall be relayed verbally to the consultant within 24 hours followed by written results posted on the job site within 48 hours after the samples have been taken. Results shall be inscribed on official letterhead.

H. All costs for required air monitoring by the contractor's competent person shall be borne by the contractor.

PART 3

3.00 DISPOSAL OF ASBESTOS WASTE

This subsection shall apply to the removal of asbestos from the job site and the disposal of asbestos waste.

Old Carvel, Brick Twp.
Lab# 43930

All Asbestos waste generated in Ocean County is to be disposed of at the Ocean County Landfill (OCLF), Belford, New Jersey.

A. The contractor is required to give a notice 10 days prior to the disposal to the New Jersey Department of Environmental Protection, Division of Waste Management, Bureau of Field Operations. The contractor is required to give 24 hour oral notification to the Ocean County Landfill. In addition, all disposal procedures must comply with CAA 112, 42 U.S.C 7412, and 40 CFR 61.156.

OCEAN COUNTY LANDFILL (OCLF) - Asbestos Procedures

I. Notification:

** The Contractor shall supply the following information. **

A. Generator

- 1) Name, address and telephone number
- 2) Applicable Federal, State and Local permits

B. Contractor

- 1) Name, address and telephone number
- 2) Qualifications for work with asbestos and asbestos containing material
- 3) Applicable approval and certification letters from Federal, State and Local agencies

C. Hauler

- 1) Name, address and telephone number
- 2) NJDEP Industrial Waste Hauler Permit

D. Job

- 1) Name and address (must be inside OCLF Waste District)
- 2) Quantity and nature of material to be removed

E. Written Notification

- 1) Copy of 10-day notification letter submitted to NJDEP
- 2) Letter containing information listed above 10 days prior to expected date of removal

F. Oral Notification

The Contractor shall provide 24 hour notification prior to the shipping to confirm quantity and form of payment.

II. Compliance

The generator, contractor and hauler shall insure that the asbestos containing material is removed, transported and disposed in compliance with current EPA Regulations 40 CFR 61, OSHA Regulation 29 CFR 1910.1001 and NJAC 7:26.

III. Disposal

- A. Contractor shall insure that all asbestos containing materials are removed and handled while wet. Asbestos containing material which is stripped away, or otherwise removed, shall be packed while still wet into double plastic bags, 6 mil thick minimum. Bags shall be sealed and properly labeled. Hauler is responsible for supplying proper protective clothing while inside the Asbestos Cell. Clothing is to be in compliance with Section II above. In the opinion of OCLF, after research, at a minimum should include the following: Full Tyvek Protective Suit, Hard Hat, Safety Eye Protection, Respirator with Asbestos Filters, Gloves and Boots. Drivers and/or helpers will be inspected for proper protective clothing.
- B. All containerized waste shall be carefully loaded on trucks or other appropriate vehicles for transport. Before and during transport, care shall be exercised to insure that no unauthorized persons have access to material.
- C. When the hauler arrives at the Scale House, he shall present the following:
 - 1) Origin and Destination Form
 - 2) DOT Vehicle Registration
 - 3) NJDEP Industrial Waste Permit
 - 4) Originator Indemnification Form (see note below)
 - 5) Hauler Indemnification Form (see note below)
 - 6) OCLF Asbestos Form
 - 7) DEP Asbestos Form
 - 8) Payment

Note: On July 2, 1991 the Board of Chosen Freeholders of the County of Ocean resolved that it authorizes and directs the **Director and Clerk of the Board** to execute the Transporter's Certification and Indemnification Certificate and Generator's

Certification and Indemnification Certificate
required by the OCLF Corporation as per the New
Jersey Board of Public Utilities Docket No. 826-583.

- D. OCLF will visually inspect the load, truck and personnel for conformance to applicable regulations.
 - E. OCLF will instruct the hauler as to location of disposal.
 - F. At the burial site the Hauler or Contractor shall carefully remove the sealed plastic bags and place them on the Cell.
 - G. OCLF will cover the disposed waste immediately with 3 feet of fill.
 - H. The OCLF accepts asbestos material between the hours of 9:00 AM - 10:30 AM and 1:00 PM - 2:30 PM, Monday through Friday.
 - I. The rate at the OCLF is a sliding scale dependant on the volume of the delivery. Should asbestos be delivered in the afternoon after the time specified and before closing of the landfill, OCLF will charge an additional fee of \$50.00 per quarter hour for the additional time.
- B. Disposal of asbestos waste shall be conducted as follows:
- 1. All asbestos waste materials destined for disposal shall be wetted and packaged in permanently sealed, leak tight containers (such as 6 mil plastic bags, double bagged with visible labels) before it can be transported and disposed. No hauling of loose asbestos or asbestos contaminated debris is permitted.
 - 2. A locked, secure container shall be provided if asbestos waste is to be stored outside unattended.
- C. Notify the Owner's Asbestos Consultant in writing not less than 48 hours prior to the proposed time of removing and delivery of contaminated waste to the landfill. The Owner's Asbestos Consultant may elect to observe this operation.

D. The waste hauler must possess a valid solid waste transporter registration. A licensed solid waste transporter shall be a commercial collector/hauler or shall be the removal company if they are so registered.

E. Asbestos waste can be hauled in trucks or in dumpster containers provided the load is comprised only of asbestos in bags and does not contain any other wastes which could compromise the integrity of the permanent containers.

F. If rough surfaces or other materials are present in the load which could potentially puncture the permanent containers, then those containers shall be enclosed in temporary fiber or steel drums during loadings, transport and unloading operations. In addition, asbestos waste shall not be loaded into or hauled with vehicles containing collection devices.

G. Use only enclosed or covered trucks to haul impermeable containers to prevent loss or damage to containers en route to sanitary landfill.

H. Allow only sealed plastic bags or impermeable containers to be deposited in landfill. Leave damaged, broken or leaking plastic bags in the impermeable container and deposit entire container in landfill. Obtain prior approval from appropriate regulatory officials before disposing contaminated materials from high pressure vacuum collection system in the approved landfill.

I. Ensure that there are no visible emissions to the outside air from site where materials and waste are deposited.

J. Contractor may recycle uncontaminated impermeable containers.

PART 4 - PRODUCTS

4.01 QUALITY

A. Buy American Clause

1. All materials used in the performance of this specification must be manufactured in the United States of America.

B. Brand Names and Approved Equals

1. The contractor shall use Brand Named materials specified or an approved equal. (NEW JERSEY STATUTE 40A: 11-13 SPECIFICATIONS)

2. The contractor shall provide to the Owner and the Consultant, materials he/she plans to use during abatement activities. Changes in the submission of these materials shall be provided prior to abatement commencing. The Owner shall approve/disapprove these submissions.

3. No abatement activities shall occur prior to the Owner's consent and the Consultant's recommendation of the use of these products.

4. BRAND NAMES AND/OR DESCRIPTIONS USED IN THIS SPECIFICATION FOR BID PROPOSAL ARE TO ACQUAINT PROSPECTIVE BIDDERS WITH THE TYPE OF EQUIPMENT DESCRIBED (OR COMMODITY) AND WILL BE USED AS A STANDARD BY WHICH ALTERNATE OR COMPETITIVE MATERIALS OFFERED WILL BE JUDGED. COMPETITIVE ITEMS MUST BE EQUAL TO THE STANDARD DESCRIBED AND BE OF THE SAME REPUTATION FOR QUALITY AND WORKMANSHIP. VARIATIONS BETWEEN EQUIPMENT DESCRIBED AND MATERIAL OFFERED ARE TO BE FULLY EXPLAINED IN AN ACCOMPANYING LETTER. IN THE ABSENCE OF ANY CHANGES BY THE BIDDER, IT WILL BE PRESUMED AND REQUIRED THAT MATERIALS AS DESCRIBED IN THESE SPECIFICATIONS BE DELIVERED.

4.02 - MATERIALS

A. The wetting agent shall be BWE 5000 as manufactured by Better Working Environments Inc., of San Diego OR an approved equal.

B. Encapsulating material shall be bridging and/or penetrating in nature and must be applied in two coats. Acceptable encapsulants shall be TRI-COTE AE as manufactured by the United Products Corporation of Little Rock Arkansas OR A-B-C Asbestos Binding Compound as manufactured by California Products Corporation of Cambridge Massachusetts.

C. Cement to be used to seal ends, tears and penetrations shall be fire-rated and asbestos-free as manufactured by CHILDERS or an approved equal, if applicable.

D. Framing materials shall consist of 2 x 4 studs and sections of 3/4" plywood from first quality lumber.

E. The contractor shall use only polyethylene sheeting with a minimum thickness of 6 mil.

F. The use of drums is permissible as long as said drums contain lining that is leak-proof. The exterior of drums must have clear and permanent labeling and labeling specified by OSHA and EPA regulations.

G. All waste shall be discarded in properly labeled and 6 mil thick polyethylene double bags.

H. Asbestos warning signs shall be in English script and placed in areas as required by OSHA and the EPA.

I. All tape shall be of high quality polyethylene film tape #827 as manufactured by the Kendall Company, Polyken Division of Boston, Massachusetts.

J. Spray adhesive may be used as manufactured by the 3-M Company.

K. Disposable clothing to be used shall be of the same composition as Dupont's Tyvek or Kimberly Clark's Duraguard.

4.03 - TOOLS AND EQUIPMENT

A. Asbestos filtration devices shall be equipped with HIGH EFFICIENCY PARTICULATE ABSOLUTE (HEPA) filter systems such as the MICROTRAP as manufactured by Asbestos Control Technology Corporation of Maple Shade, New Jersey OR the HOG 2000 as manufactured by the Control Resource System of Michigan City, Indiana or an approved equal.

B. Scaffolding is to be used when and where needed as long as its use is monitored and is safety tested and approved for such work conditions by OSHA and any other safety regulatory agency.

C. Transportation and storage equipment shall be used so that no accumulations of ACM shall occur on a daily basis. This equipment shall be constructed and registered as such to store and/or transport waste material without any threat to persons or the environment of possible contamination.

D. All vacuum equipment to be used shall use HEPA filtering systems. Such vacuums shall be similar if not equal to the system manufactured by NILFISK of AMERICA headquartered in Malvern, Pennsylvania.

Part 5 - EXECUTION

5.00 - PERMITS, NOTIFICATIONS, LICENSES

A. The contractor shall present a duplicate copy of his asbestos contractors license issued by the New Jersey Department of Labor with his bid. Only licensed contractors may perform work described and required by this specification. As required by law, the contractor shall maintain on the project site a valid Contractors license.

B. The Contractor shall apply for the necessary permits for asbestos abatement.

C. The contractor shall maintain at all times a staff of at least six employees on each worksite including:

1. An English speaking supervisor.
2. An English speaking foreman.
At least one foreman in each work area is required.
3. Four laborers.

ALL CONTRACTOR EMPLOYEES MUST POSSESS A VALID NJ ASBESTOS REMOVER/LABORER'S PERMIT AND MAKE AVAILABLE TO THE OWNER, CONSULTANT, NJDCA, NJDOL, NJDOH AND AST THESE PERMITS UPON REQUEST AT THE PROJECT SITE. ALL EMPLOYEES MUST HAVE A MINIMUM OF AT LEAST SIX (6) MONTHS EXPERIENCE IN ASBESTOS ABATEMENT IN THE STATE OF NEW JERSEY.

D. The contractor shall also present to the AST, Owner, and Consultant prior to the commencement of abatement, proof that a NJDEP Registered Waste Hauler Permit exists. NO PRECOMMENCEMENT INSPECTION SHALL TAKE PLACE UNTIL SUCH PROOF EXISTS AND IS SATISFACTORY TO THE NJDCA, THE ASCM/AST, THE OWNER AND THE CONSULTANT.

5.01 - INSPECTIONS

A. The AST will perform inspections throughout the entire asbestos abatement project. The AST inspections are as follows:

1. Precommencement inspections by the AST will occur prior to each phase of abatement. The AST will observe and will check compliance of the following:

- a. critical/separation barriers in place
- b. AFD units in place and operating
- c. notifications, variances, permits and licenses in place
- d. waste container on site and labeled
- e. OSHA signs posted
- f. emergency plans and numbers posted
- g. decontamination chamber in place and operating
- h. poly on walls and floor in place
- i. proper supplies of bags, suits, filters, towels, masks and other equipment
- j. proper discontinued use of HVAC systems
- k. ground fault interrupters are in place outside of the work area and operable

2. Progress inspections by the AST will occur a minimum of twice a day during random time periods. The AST observes the progress of work and the manner in which it is carried out while work is in progress. The AST will check the following:

- a. asbestos being wetted with amended water
- b. workers wearing proper protection
- c. observe critical, wall and floor poly
- d. workers using proper techniques
- e. general housekeeping and egress/ingress maintained
- f. AFD functioning properly
- g. other pertinent observations such as emergencies and visitors observations

3. Cleanup inspections will occur as work progresses to ensure that the work area is clean and that no asbestos containing materials are left exposed. Equipment must also be placed in an orderly fashion to promote means of ingress and egress.

4. Pre-sealant inspections shall take place after all exposed surfaces have been wet-wiped and are found cleaned. The contractor shall notify the AST that an inspection is requested 48 hours prior to the actual inspection time. The AST shall, in writing, notify the contractor and Owner of the results of the inspection.

5. The AST shall perform a final visual inspection after being notified that such an inspection is requested at least 24 hours in advance. NO FINAL VISUAL INSPECTION SHALL TAKE PLACE IMMEDIATELY AFTER ANY WET CLEANING.

B. During any inspection by State or Federal agencies, the Contractor must have a supervisor present.

C. The New Jersey Department of Community Affairs and the New Jersey Department of Labor are authorized to make unannounced and periodic inspections during the entire abatement process to observe AST and Contractor compliance with applicable statutes.

D. The Consultant, Testwell Craig Testing Laboratories, Inc., will also make random and periodic inspections to observe contractor compliance with specifications and statutes. Directives from the consultant shall be given to the AST to be forwarded to the contractor.

5.02 - DECONTAMINATION FACILITIES AND PROCEDURES

A. DECONTAMINATION CHAMBER

1. The decontamination facility shall be constructed of 2"x 4"x 8' wooden framing covered with two layers of 6-mil poly sheeting on all sides.

2. Airlocks shall be installed between contaminated area, equipment room, shower room, and clean room. Air locks shall consist of three layers of 6 mil. poly each and shall be alternately secured. Each airlock shall be weighted down.

3. All individual chambers shall be at least 4 feet square to allow access with a stretcher in the event of emergencies.

4. The shower shall have both hot and cold water receptacles, liquid shampoo and liquid soap, both in plastic containers, so that workers and visitors can decontaminate prior to entering the clean room.

5. The contractor shall provide all connections for water and electrical hook-ups necessary to perform the work described in this specification.

6. The clean room shall contain an area where street clothes, towels, and cleaned respirators can be stored. The Contractor shall maintain an adequate supply of towels and soap for visitors and inspectors at all times.

7. The equipment room shall be provided by the contractor where work materials, footwear, and contaminated work clothing can be stored.

8. The decontamination chamber shall be located in the area as defined in the diagrams.

9. During abatement operations, the Contractor shall be allowed to use the decontamination chamber for waste egress.

B. DECONTAMINATION SEQUENCE - PERSONAL

1. ALL workers and visitors who will enter the work area shall remove all street clothes, put on clean overalls, and respirators while in the clean room. The person will then proceed through the showers and dirty (equipment) room and enter the work area.

2. Before leaving, the worker will remove all gross contamination with the use of HEPA vacuums. With the help of another worker, the person shall remove disposable TYVEK clothing. Contaminated clothing shall be placed in labeled poly bags and left in the work area until completion of the project.

3. The worker then proceeds to the shower room. Respiratory protection shall still be worn while showering. Such protection shall be removed after the person has completely showered to prevent inhalation of asbestos fibers.

Old Carvel, Brick Twp.
Lab# 43930

4. After showering the person moves to the clean room and dresses in either new coveralls for re-entry, or street clothes if leaving.

5. NO EATING, DRINKING, SMOKING OR CHEWING SHALL OCCUR IN THE WORK AREA OR DECONTAMINATION CHAMBER.

6. No footwear that is not readily cleanable, shall remain in the equipment room and, at the end of the project, will be discarded as contaminated waste.

7. NO EXCEPTIONS TO THESE DECONTAMINATION PROCEDURES WILL BE ALLOWED!!!

Guarantee

The contractor shall guarantee, in writing, that all asbestos has been removed, the work area is free of asbestos and asbestos dust, and disposal was performed to the complete satisfaction of the Owner, the Owner's Consultant (Testwell Craig Testing Laboratories, Inc.), EPA, OSHA, NJDCA, NJDOH and any other government agency having jurisdiction.

*****END OF SECTION*****

SPECIFICATIONS
FOR
ASBESTOS ABATEMENT AND RELATED WORK
AT
OLD CARVEL
BRICK TOWNSHIP, NEW JERSEY

Prepared for: County of Ocean
Department of Buildings & Grounds
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Toms River, New Jersey 08753
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Prepared by: Testwell Craig Testing Labs., Inc.
5439 East Harding Highway
Mays Landing, New Jersey 08330
(609) 625-1700

September 1992
Lab No 43930

Part I

1.00 Access to Work Site and Hours of Work

A. All arrangements for access to the work site shall be made through the Owner's Representative. Unless otherwise specified the contractor will perform all work between the hours of 8:00 AM to 4:30 PM, Monday through Friday. Access at times other than those given in Contractor's schedule will be at the Contractor's expense. The Contractor will be responsible for Owner's incurred costs for security, testing, air monitoring, supervision and all other related Owner incurred costs at such periods as he undertakes or proposes to undertake such work other than at times described in the approved schedule.

1.01 Notifications

A. The contractor shall notify the following agencies in writing ten (10) days prior to the start of the asbestos removal project. The Contractor must submit two (2) copies of each notice to Testwell Craig Laboratories, Incorporated, prior to the application for the asbestos abatement permit from the local building official.

1. US Environmental Protection Agency
Asbestos NESHAPS Contracts
Air & Hazardous Material Division
26 Federal Plaza
New York, New York 10007
2. New Jersey Department of Community Affairs
Bureau of Construction Code Enforcement
CN 805
Trenton, New Jersey 08625
3. New Jersey Department of Health
Asbestos Control Project
CN 360
Trenton, New Jersey 08625
4. New Jersey Department of Labor
Asbestos Control and Licensing
CN 054
Trenton, New Jersey 08625

Old Carvel, Brick Twp.
Lab# 43930

5. New Jersey Department of Environmental
Protection
Division of Waste Management
Bureau of Field Operations
120 Route 156
Yardville, New Jersey 08620

Notification to the agencies in Section A above shall be on the required forms (where applicable) and include the following information:

1. Name and address of owner of building.
2. Name and address of the operator of the building.
3. Name and address of contractor.
4. Address and description of the building, including size, age and prior use of the building or area, and amount of friable asbestos material present in square feet and/or linear feet, as applies. Designate room numbers and other locations information unless entire building is involved.
5. Scheduled starting and completion dates for removal.
6. Procedures and equipment (including ventilating system) that will be employed to comply with 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants.
7. The name and address of the Department of Environmental Protection registered waste hauler and of the Department of Environmental Protection registered landfill where the asbestos waste will be deposited. Such landfill should also comply with 40 CFR Part 61.
8. The name and address of the Monitoring Firm to perform air monitoring on behalf of the contractor's employees.
9. Contractor shall obtain all permits and certificate of Occupancy.

B. The contractor shall notify the Owner's Asbestos Safety Monitoring Firm in writing at least 48 hours prior to commencement of any preparation of work.

1.02 Documentation of Worker's Qualifications

A. The contractor shall post the names, signatures, and photocopies of state issued licenses for all workers to be doing asbestos removal work on the job site. In addition, contractor must display a sign in letters larger than 4 inches tall indicating, "Licensed by the State of New Jersey for Asbestos Work". N.J.S.A 34:5A-32 et seq.

B. The contractor shall comply with all applicable requirements of 40 CFR Part 61, "Accepted Engineering Practices", and N.J.A.C. 5:23-8.

1.03 Air Monitoring & Inspections

A. The contractor is responsible for all OSHA required air monitoring for his employees.

B. Air monitoring and visual inspection in the adjacent to the work area will be conducted throughout the abatement project by the Owner's air monitoring technician and/or the Owner's representative in accordance with these specifications.

C. The Contractor shall provide the required respirators and protective clothing to all workers, and to all official representatives of the state & federal government or other designated party who may inspect the job site.

D. The Contractor shall cooperate fully with all aspects of the air monitoring programs which are conducted by the independent air monitoring consultant.

1.04 Definitions

A. The following words, terms and abbreviations when used in this document shall have the following meanings unless the context clearly indicates otherwise.

1. Abatement - procedures to decrease or eliminate fiber release from precast, spray or trowel applied asbestos-containing building materials. Includes encapsulation, enclosure and removal.

2. Airlock - system for permitting ingress or egress without permitting air movement between a contaminated area and an uncontaminated area, typically consisting of two curtained doorways at least three feet (one-meter) apart.
3. Amended water - water to which a wetting agent is added. The wetting agent is a combination of chemicals which aids in the penetration of the material and increases the probability of individual fiber wetting.
4. Air Monitoring - the process of measuring the fiber content (fibers of a specified size range) of a specific volume of air in a stated period of time.
5. Asbestos - a general term used to describe a group of naturally occurring hydrated mineral silicates. Including but not limited to the asbestiform varieties chrysotile (serpentine) ; crocidolite (riebeckite); amosite (cummingtonite-grunerite); anthophyllite; tremolite and actinolite.
6. Asbestos-containing material - any material which contains more than 1 percent asbestos by weight.
7. Asbestos Safety Technician (AST) - a person certified by the New Jersey Department of Community Affairs, hired by an Asbestos Safety Control Monitor who continuously monitors and inspects the asbestos abatement work pursuant to N.J.A.C. 5:23-8 and these specifications.
8. Barrier - polyethylene sheeting that completely seals off the work area to prevent contamination of the surrounding area.
9. Clean room - an uncontaminated area or room which is part of the worker decontamination enclosure system, with provisions for storage of workers' street clothes and protective equipment. Also referred to as Change Room.
10. Construction permit for asbestos abatement - requires official approval to commence any asbestos hazard abatement job.
11. Contractor - the Asbestos Removal Contractor.
12. Critical Barrier - two layers of 6 mil polyethylene sheeting that completely seals off the work area to prevent the distribution of fibers to

the surrounding area, such as the opening between the top of non-removable lights, HVAC systems, windows, doorways, entrance ways, ducts, grilles, grates, diffusers, wall clocks, speaker grilles, floor drains, sink drains, etc..

13. Curtained Doorway - a device to allow ingress or egress from one room to another while minimizing air movement between the rooms. Typically constructed by placing three overlapping sheets of plastic over an existing or temporarily framed doorway and securing each along the top of the doorway, with the vertical edge of one along one vertical side of the doorway and the vertical edge of the other along the opposite vertical sides. Two curtained doorways spaced a minimum of three feet (one meter) apart form an airlock.
14. Decontamination Enclosure System - a series of connected rooms, with curtained doorway between any two adjacent rooms, for the decontamination of workers or of materials and equipment. A decontamination enclosure system always contains an airlock.
15. Employee - an asbestos abatement worker having proper training, instruction and licensing.
16. Encapsulation - treatment of asbestos containing materials, generally ceilings, using a liquid to bond or seal the surface to minimize the potential for fiber release.
17. Enclosure - an impermeable barrier (made of wood, metal, etc.) placed around asbestos containing material.
18. Equipment Decontamination Enclosure System - a decontamination enclosure system for materials and equipment, typically consisting of a designated area of the work area, a washroom and an uncontaminated area.
19. Equipment Room - a contaminated area or room which is part of the worker decontamination enclosure system, with provisions for storage of contaminated clothing and equipment.
20. Friable - any material which when dry may be crumbled, pulverized, or reduced to a powder by hand pressure or mechanical means.

21. Fixed Object - a unit of equipment or furniture which cannot be removed from the work area(s).
22. Glove Bag - a plastic bag specially designed to contain sections of pipe for the purpose of removing short lengths of damaged asbestos material without releasing fibers into the air.
23. HEPA Filter - a High Efficiency Particulate Absolute filter capable of trapping and retaining 99.97 percent of asbestos fibers greater than 0.3 microns in length.
24. HEPA Vacuum- vacuum cleaner equipped with HEPA filter(s).
25. Holding Area - a chamber between the washroom and uncontaminated area in the equipment decontamination enclosure system. The holding area is comprised of an airlock.
26. Moveable Object - a unit of equipment or furniture in the work area(s) which can be removed from the work area(s).
27. Negative Pressure - air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (work area).
28. NIOSH - National Institute for Occupational Safety and Health.
29. Plastic Sheeting - polyethylene sheet material, of the thickness indicated.
30. Repair - corrective action using recommended work practices to minimize the likelihood of fiber release from small damaged areas of ACM.
31. Removal - the act of properly eliminating and disposing asbestos containing or contaminated materials from a building.
32. Sealant - a liquid or solution to be used as a binding agent, such as a diluted encapsulant or a water based paint, on dried exposed surfaces from which asbestos-containing material has been removed. The color of the coat shall be separate and distinct from the underlying substrate.

- 33. Separation barrier - a constructed wall with no door that separates the clean area from the work area having a fire rating, if applicable and does not interfere with the means of egress. Polyethylene sheeting (minimum 2 layers of 6 mil) shall be placed on the work site of the barrier so that it completely seals off the work area to prevent the distribution of fibers to the surrounding area.
- 34. Shower Room - a room constituting an airlock, between the clean room and the equipment room in the worker decontamination enclosure system, with hot and cold or warm running water suitable arranged for complete showering during decontamination. The shower room always comprises an airlock.
- 35. Surfactant - a chemical wetting agent added to water to improve penetration of the ACM. Surfactants are used to ensure that all Asbestos Containing Materials are thoroughly wet before removal.
- 36. Wet Cleaning - the process of reducing asbestos contamination in a building by using cloths, mops, or other cleaning tools which have been dampened with amended water to decontaminate the area and by disposing these cleaning tools as asbestos contaminated waste.
- 37. Washroom - a room between work area and the holding area in the equipment decontamination enclosure system. The washroom comprises an airlock.
- 38. Work Area - the place in a building which asbestos abatement occurs.
- 39. Worker Decontamination Enclosure System - a decontamination enclosure system for workers, typically consisting of a clean room, a shower room and an equipment room.

1.05 Personnel Requirements and Training

A. All of the Contractor's workers must have valid training, a minimum of one years experience in asbestos abatement and a current asbestos workers permit as issued by the State of New Jersey, and shall comply with all applicable requirements of N.J.S.A. 34:5A-32 et seq. and 29 CFR 1926.58(k)(3), as well as other non-training requirements of 29 CFR 1926.

B. The Contractor shall furnish proof that all of the Contractor's personnel on the job (supervisors and workers) have been given medical examinations as required by OSHA regulations, 29 CFR 1910 and 29 CFR 1926. As a minimum, the examination should include a chest roentgenogram, a medical history with specific reference to respiratory disease and pulmonary function tests. This information should be provided to the Owner during the pre-construction meeting.

C. The Contractor shall provide a minimum of two job foremen, each with a minimum of two years of successful experience in asbestos removal operations similar in scope and magnitude to this project. One foreman shall be required to remain inside each of the work areas at all times that work is in progress. The Contractor shall submit the qualifications of these persons to the Owner.

1.06 Asbestos Consultant/Asbestos Safety Technician

A. Testwell Craig Testing Laboratories, Inc. shall perform all air sampling specified. They shall have access to all areas of the asbestos removal project at all times and shall continuously inspect and monitor the performance of the contractor and his employees to verify that their performance complies with this specification. An Asbestos Safety Technician shall be on site at all times that work is in progress, from the initial preparation of the work area to the completion of the abatement operation. The AST is present to protect the Owner's interest and to ensure compliance of N.J.A.C. 5:23-8. The air sampling, monitoring and inspections made by the AST shall not relieve the Contractor of his monitoring obligations.

B. The Asbestos Safety Technician shall have the authority to require that all workers present a valid work card before entering the worksite. He shall also have the authority to direct verbally and in writing the actions of the contractor to assure compliance. The Technician shall have the authority to test the seal of the respirators of all who enter the work site to ensure proper fit. In matters of gross negligence or flagrant disregard for the safety of others, including the possibility of contaminating the building environment and the appearance of an emergent unsafe condition at the work site, the Technician shall direct such corrective action as may be necessary.

C. The Asbestos Safety Technician upon receipt of testing results indicating that concentrations above 0.010 fibers per

cc have occurred outside the containment barriers or above 0.020 fibers/cc within the clean room of the decontamination chamber during the abatement action shall report these results immediately to the contractor and to the owner's representative so that prompt corrective action may be taken.

D. The Asbestos Safety Technician shall keep a daily log of on-site observations concerning contractor's compliance with activities required under this specification listing all deficiencies encountered. In addition, this log shall list the names of all persons entering the work area. This log shall be made available upon request at all times to the Owner's Representative.

E. During the removal phase of the duties of the Asbestos Safety Technician shall be as follows:

1. Monitoring outside the work area shall be provided throughout removal operations, to ensure that no outside contamination is occurring.
2. Filters, cassettes and sampling train shall be assembled as specified in NIOSH 7400 method and 40 CFR 763. The flow rate shall be between 0.5 and 16 liters per minute. The total volume shall be a volume sufficient to achieve a detection limit of 0.010 f/cc. Pumps shall be calibrated before and after sampling and a record kept of this calibration.
3. The Asbestos Safety Technician shall take a minimum of three (3) samples per day. One stationary sample at decontamination unit entrance/exit and the remaining samples adjacent to work area but remote from the decontamination unit entrance. In the selection of adjacent areas to be monitored, preference shall be given to rooms adjacent to critical barriers and/or occupied areas.
4. If the Contractor's barriers or other control methods are observed to malfunction and if the Contractor does not correct the problems immediately upon notification, the Asbestos Safety Technician shall have the authority to halt removal of asbestos in the affected work area. In such a situation additional sampling of at least 5 samples per day per area shall be performed by the Asbestos Safety Technician at the Contractor's expense.

5. The analysis of air samples (excluding final air tests) shall be done using NIOSH #7400 Method (A rules).
 6. The evaluation criteria shall be 0.010 fibers per cubic centimeters.
 7. A series of smoke tests shall be performed at the decontamination unit entrance/exit, by the asbestos safety technician to ensure continuous negative air pressure. This test shall be performed before each work shift and every four hours thereafter until the end of the work shift.
 8. The Asbestos Safety Technician shall calculate the required number of negative air filtration units for each work area. This calculation shall be made whenever the volume of the work area changes. The Asbestos Safety Technician shall inform the Owner's Representative and the Contractor of any discrepancies between the number of units required and those in operation within the work area.
 9. A record shall be kept in a daily log of all on-site observations, inspections and required activities.
 10. The Asbestos Safety Technician shall ensure that all asbestos waste shall be removed from the worksite daily unless it is placed in a locked, secure container outside of the work area until removal by a registered waste hauler.
- F. Final Certification tests shall be conducted as follows:
1. Within 48 hours after final clean-up and before the removal of critical barriers, a visual inspection and a final air test shall be performed by the Asbestos Safety Technician for the Owner. This test is required to establish safe conditions for removal of critical barriers and to permit occupancy and/or demolition activity to begin. Sufficient time following clean-up activities shall be allowed so that all surfaces are dry during monitoring. At least 24 hours shall be allowed to pass after any wet cleaning has been done before the post-removal tests are begun.
 2. Normal occupancy use conditions shall be simulated using aggressive sampling techniques.

3. Evaluation criteria:

- a. **Transmission Electron Microscopy:** A minimum of 13 samples is required: five samples collected inside the abatement area, five samples collected outside the abatement area, two field blanks, and one sealed blank. Sampling and analysis must be completed according to the protocol outlined in 40 CFR 763. The work area will be considered clean if either: the arithmetic mean of the asbestos structure concentrations of the five samples collected inside the work area is equal to or less than 70 structures per square millimeter; or the three blank samples have an arithmetic mean of the asbestos structure concentration on the blank filters that is less than or equal to 70 s/sq mm and the average airborne asbestos concentration measured inside the abatement area is not statistically higher than the average airborne asbestos concentration measured outside the abatement area as determined by the "Z-test".

Note: The Owners representative will make the determination as to whether the Z-test is to be used.

If test results exceed these parameters, the Asbestos Safety Technician shall so inform the Contractor and the Owner's representative. If these criteria have not been met the Contractor shall be required to re-clean all surfaces using wet cleaning methods and provide negative HEPA-filtered exhaust air during the re-cleaning process. This process of re-cleaning, allowing surfaces to dry and re-testing shall be repeated until compliance is achieved.

- b. **Phase Contrast Microscopy:** A set of five samples will be collected in each area of PCM clearance. If any of the samples in any set of air test results exceeds 0.010 fiber/cc, the Asbestos Safety Technician shall so inform the Contractor and the Owners' representative. If these criteria have not been met the Contractor shall be required to re-clean all surfaces using wet cleaning methods and provide negative HEPA-filtered exhaust air during the re-cleaning process. This process of re-cleaning, allowing surfaces to dry and re-testing shall be repeated until compliance is achieved.

Note: All costs incurred by the owner as a result of the work area failing to meet final clearance will be the Contractor's responsibility. The work schedule for all projects requiring Transmission Electron Microscopy includes 72 hour time. The Contractor will compensate the Owner for the difference in costs if less than 72 hour turnaround time is required on TEM samples in order to satisfy contractual agreements.

G. Final inspection shall be conducted by the Asbestos Safety Technician as follows:

1. Upon notice by the Owner's representative or by the Contractor and at least 48 hours after the removal of the critical barriers, a final inspection shall be made to ensure the absence of any visible signs of asbestos or asbestos containing materials and that all removed asbestos and asbestos contaminated materials have been properly disposed of off-site.
2. Acceptable airborne fiber levels have been attained.
3. The Asbestos Safety Technician shall ensure that all asbestos waste has been removed from the work site by a registered waste hauler.

H. The Asbestos Safety Technician shall prepare a comprehensive final report, including daily logs, required inspection reports, observations and air monitoring results. The Asbestos Consultant shall maintain the report as a permanent record and present a copy to the Owner.

Part 2 - CONTRACTOR RESPONSIBILITIES AND DESCRIPTION OF WORK

2.00 Scope of Work

A. This section covers the furnishing of all labor, materials, facilities, equipment, services, employee training and testing, permits and agreements necessary to perform the work required for asbestos abatement in accordance with these specifications, EPA, OSHA Regulations, NIOSH recommendations, State of New Jersey Regulations, and any other applicable federal, state, and local government regulations. Whenever there is a conflict or overlap of the above references the most stringent provisions shall apply. It shall be the contractor's responsibility to verify exact quantities and locations of all asbestos containing materials.

The quantities shown are for informational purposes only. Prospective bidders should bid this project according to what is observed during the Pre-bid walk through.

B. Description of Work: Perform the work and provide the services as follows:

1. Worker training, respiratory protection and fit-testing, and OSHA required medical examinations.
2. Work area preparation including protection of all surrounding fixtures as described herein.
3. The asbestos abatement shall commence within 15 working days of receipt of contract and be completed within 10 calendar days thereafter.
4. Asbestos abatement to include the following:
 - a. Isolate the work areas from remaining areas through the use of critical barriers.
 - b. A two chambered decontamination unit is required for all areas of this project.
 - c. The Contractor is to supply all water and power.
 - d. Remove the following materials utilizing general isolation techniques:
 1. Approximately 935 square feet of asbestos containing **mastic** under two layers of non-asbestos floor tiles.
5. Final clearance will be determined by **Phase Contrast Microscopy** according to the protocol outlined in section 1.06F.3.b of this specification.

C. Sequence of Work shall be as follows:

1. The Contractor will insure that prior to abatement preparation, that all movable objects have been removed from the abatement area.

2. The Contractor will restrict access to areas where abatement is to take place from remainder of the building. The Owner will ensure that no persons occupy the building from the time that the Contractor mobilizes until the Certificate of Occupancy has been granted.

3. The Contractor shall pre-clean the abatement area by HEPA vacuuming all surfaces.

4. The Contractor will construct to operational all final barriers, seals, and decontamination chambers as directed by the Asbestos Safety Technician.

5. The Contractor will contact the Owner, the New Jersey Departments of Health and Community Affairs, the Asbestos Safety Control Monitor for inspection and approval.

6. The Contractor shall give the AST in writing 24 hours notice requesting a pre-commencement inspection.

7. Once the abatement has begun the AST shall make progress inspections and perform a Pre-Sealant inspection before the encapsulation process begins. The inspector shall insure that no visible debris is left on the substrate before any encapsulation begins.

8. The Owners Testing Laboratory shall perform final air testing after a 24 hour waiting period from any wet wiping or cleaning. The final air tests will be performed by Phase Contrast Microscopy. The testing and analysis shall be done in compliance with the 40 CFR 763 and NJAC 5:23-8. If the results are higher than the allowable threshold the contractor will re-clean the abatement area and the testing firm must re-test. This sequence will continue until the test results are acceptable.

9. Once the appropriate air testing results are met, the Contractor will remove all critical barriers and separation barriers inside the abatement area. No tape, polyethylene sheet plastic or other construction debris can remain in the abatement area after this cleaning.

10. The AST will perform a final visual inspection of the abatement area. The Contractor must notify state inspectors 24 hours prior to the AST's final visual.

2.01 STANDARD OPERATING PROCEDURES

A. The Contractor shall develop and implement a written standard procedure for abatement work to ensure maximum protection and safeguard from asbestos exposure of the workers, visitors, general public, and the environment.

The standard operating procedure shall ensure:

1. Tight security on a 24 hour basis from unauthorized entry into the work space.
2. Remove asbestos in ways that minimize release of fibers.
3. Safe work practices in the work place, including provisions for inter-room communications, exclusion of eating, drinking, smoking, or in any way breaking respiratory protection.
4. Proper protective clothing and respiratory protection prior to entering the work space from the outside.
5. Packing, labeling, loading, transporting, and disposing of contaminated material in a way that minimize exposure and contamination.
6. Proper exit practices from the work space to be the outside through the showering and decontamination facilities.
7. Emergency evacuation for medical or safety (fire and smoke) so that exposure will be minimized.
8. Safety from accidents in the work space, especially from electrical shocks, slippery surfaces, and entanglements in loose hoses and equipment.
9. Provisions for effective supervision, air monitoring and personnel monitoring for exposure during the work.
10. Engineering systems that minimize exposure to fibers in the work space.
11. The contractor shall submit these plans and procedures at least ten (10) days prior to abatement.

2.02 NOTIFICATIONS, PERMITS, WARNING SIGNS, LABELS, AND POSTERS

A. Erect English warning signs around the work space and at every point of potential entry from the outside, with the words "Danger" Asbestos Hazard, Do Not Enter". The warning signs shall be a bright color so that they will be easily noticeable. The size of the sign and the size of the lettering shall be no less than OSHA requirements. Warning signs shall be posted at the entrance to the work area and around its perimeter at intervals of no more than twenty-five (25) feet.

B. Provide the OSHA required labels for all plastic bags and all drums utilized to transport contaminated material to the landfill.

C. Provide any other signs, labels, warnings, and posted instructions that are necessary to protect, inform and warn people of the hazard from asbestos exposure. Post in a prominent and convenient place for the workers a copy of the latest applicable regulations from OSHA, EPA, and NIOSH.

2.03 EMERGENCY PRECAUTIONS

A. Establish emergency and fire exits from the work area. Post these in the administrative area on the worksite.

B. The Contractor shall be prepared to administer first aid to the injured personnel after decontamination. Seriously injured personnel shall be treated immediately or evacuated without delay for decontamination. When an injury occurs, precautions shall be taken to reduce airborne fiber concentrations (i.e. misting of the air with water) until the injured person has been removed from the work area.

C. Before the Contractor starts the removal of asbestos materials, the local police and fire departments shall be notified as to the danger of entering the work area. The Contractor shall make every effort to help these departments form plans of action should their personnel need to enter the contaminated area.

2.04 SUBMITTALS DURING THE WORK

A. Submit copies of the following items to the Asbestos Safety Control Monitor and the Consultant:

1. Security and safety logs showing names of persons entering work space, date and time of entry and exit, record of any accident, emergency evacuation, and any other safety and/or health incident.

2. Disposal Certificates.

3. Required Permits, Clearances, and Licenses.

4. All Contractor's Air Monitoring and inspection Results.

2.05 OWNER/CONTRACTOR RESPONSIBILITIES

A. The Contractor or persons employed by the Building Owner shall clean with wet cloths and/or with HEPA vacuums as appropriate all movable items that can be removed from the work area without disrupting the asbestos material. This shall include furniture, equipment, drapes, curtains. The cloths used for cleaning shall be disposed of as asbestos contaminated waste.

B. The Owner will provide the Contractor with a list of items that cannot be removed, or are damaged prior to abatement activities.

C. The Owner will stop all deliveries that may be scheduled to the work area while work is in progress.

D. The Owner will have authorized personnel on site at all times or supply contractor with means of contacting such personnel without unreasonable delay. Such personnel shall have access to all areas and have knowledge of electrical and air handling equipment. Such personnel shall assist Contractor in case of any power failure or breakdown to shut down air supply systems, to reset and control all protective systems such as alarms, sprinklers, locks, etc.. The Owner shall insure no active air handling systems are operating within the work area.

E. The Owner will not occupy the building in which work is being performed during the entire asbestos abatement operation, including completion of clean-up, but excluding re-insulation.

F. During this period, the Contractor shall be responsible in all areas affected by his operation for:

1. Building Security - Fire and smoke detection systems
2. Maintaining the existing building and utility systems such as plumbing or electrical installations.
3. The Contractor shall provide security to prevent unauthorized entry into the work area, and maintenance of decontamination chambers, isolation barriers and negative air systems.

G. Should the failure of any utility occur, the Owner will not be responsible to the Contractor for loss of time or any other expense incurred.

2.06 USE OF BUILDING FACILITIES

- A. The Contractor will provide all required amounts of water and electric power required at the site.
- B. The Owner shall provide telephone service and a telephone at the job site for use by the Contractor and the Consultant.
- C. The Contractor shall provide all electrical, water, and waste connections, tie-ins, extensions, and construction materials, supplies, etc.
- D. The Contractor shall provide a separate temporary electric panel board to power his equipment. The Owner shall designate an existing power box in close proximity to the work area. Contractor's licensed electrician shall provide temporary tie-in via cable, outlet boxes, junction boxes, receptacles and lights, all with ground fault interruption. All temporary electric shall be in accordance with OSHA Regulations, specifically but not limited to, 1926 Subpart K.
- E. Contractor shall provide fire protection in accordance with all state and local fire codes.
- F. When temporary services lines are no longer required, they shall be removed by the Contractor. Any parts of the permanent service lines, grounds and buildings, disturbed or damaged by the installation and/or removal of the temporary service lines, shall be restored to their original condition by the Contractor, in a manner satisfactory to the Owner.
- G. Contractor shall provide hot shower water necessary for use in the decontamination unit.

2.07 USE OF THE PREMISES

A. The Contractor shall confine his apparatus, the storage of materials, and supplies, and the operation of his workmen to limits established by law, ordinances, and the directions of the Owner. All flammable or combustible materials shall be properly stored to obviate fire and in areas approved by the Owner.

B. The Contractor shall assure that no exits from the building are obstructed, that appropriate safety barriers are established to prevent access, and that work areas are kept neat, clean, and safe.

C. All surrounding work, fixtures, soil lines, drains, water lines, pipes, electrical conduit, wires, utilities, railings, shrubbery, landscaping, etc. which is to remain in place shall be carefully protected and, if disturbed or damaged, shall be repaired or replaced as directed by the Owner, at no additional cost.

D. Any or all routes through the building to be used by the Contractor shall first be approved by the Owner and the Consultant.

E. The Owner shall provide toilet facilities on site for the Contractors use.

2.08 ELECTRICAL FIXTURES AND HVAC REGISTERS DUST CONTROL

A. Prior to the commencement of any removal and cleaning activities, any existing lighting fixtures and ceiling suspension system shall be decontaminated using a HEPA vacuum equipped with a soft brush attachment.

B. All HVAC registers diffusers, induction units, etc. shall receive no replacements or changes. Existing fixtures shall be shut down by the Owner's personnel prior to any work in the area.

2.09 PROTECTION AND DAMAGE

A. Replace or repair any items damaged, due to work performed under this contract, equal to their original construction and finish. Repaired or replaced items will be subject to the Owner's approval.

B. Use rubber-tired vehicles which use non-volatile fuels for conveying material inside building and provide temporary covering, as necessary, to protect floors.

C. No materials shall be thrown from windows or doors of buildings. Building waste system shall NOT be used to remove refuse.

D. Debris shall be removed from the site daily. Premises shall be left neat and clean after each work shift, so that work may proceed the next regular workday without interruption.

E. Protect floors along removal routes from damage, wear and staining.

F. Liquidated damages of \$1000.00 will be assessed for each week or part thereof that the asbestos removal permit remains open past the ten day period.

2.10 RESPIRATORY SYSTEMS

A. Provide all workers, foremen, superintendents, authorized visitors and inspectors personally issued and marked respiratory equipment approved by NIOSH and OSHA. When respirators with disposable filters are employed, provide sufficient filters for replacement as necessary by the worker.

B. The Contractor shall require that each person entering the Work Area wear an approved respirator and protective clothing. There shall be no exceptions to this rule.

C. Respiratory protection shall be in accordance with OSHA Regulation 1910.1001 (d), OSHA Regulation 1910.134 and ANSI z88.2-1980. Respirators chosen shall also be approved by NIOSH under the provisions of 30 CFR Part. 11.

D. Respiratory protection shall be determined by airborne fiber concentration (fibers per cubic centimeter of air).

At a minimum, respiratory protection shall be:

0.01 - 1.0 f/cc - Dual Cartridge, Air Purifying
respirator with HEPA cartridge.

1.0 - 10.0 f/cc - Powered Air Purifying respirator
with HEPA cartridge.

10.0 and above - Type C supplied air pressure demand respirator.

E. NO ONE is to be permitted into the work area without proper protection. No disposable dust masks shall be used at any time.

F. All personnel engaged in asbestos abatement procedures requiring an air purifying respirator shall have an unobstructed face/mask seal (i.e., no facial hair).

2.11 PROTECTIVE CLOTHING

A. Provide to all workers, foremen, superintendents and authorized visitors and inspectors protective disposable clothing (TYVEK) consisting of full-body coveralls, head covers, gloves and 18 inch high boot type covers or reusable footwear.

B. Provide eye protection and hard hats as required by job conditions and safety regulations.

C. Reusable footwear, hard hats and eye protection devices shall be left in the "contaminated Equipment Room" until the end of the asbestos abatement work.

D. Disposable protective clothing shall be discarded and disposed of as asbestos waste every time the wearer exits from the work space to the outside through the decontamination facility.

E. The Contractor shall also maintain sufficient supply of all other related items such as towels, soap, etc..

2.12 AIR MONITORING - CONTRACTOR

A. The Contractor shall employ a certified laboratory and NIOSH certified air test technician to conduct air sampling and analysis in accordance with OSHA Regulations, 29 CFR, 1910.1001 (Asbestos Standard for General Industry), 1926.58 (Asbestos Standards for Construction), and 1910.134 (Respirator Standard).

B. The Testing Laboratory shall be a current proficient participant in the NIOSH PAT Program. The laboratory identification number shall be submitted and approved by the Consultant.

C. The Contractor shall require a competent person from his testing laboratory to perform the following functions:

1. Monitor the set up of the work area enclosure and ensure its integrity.

2. Insure that employees are adequately trained in the use of proper work practices, proper personal protective equipment and in decontamination procedures.

3. Insure that employees USE proper work practices, proper personal protective equipment and proper decontamination procedures.

4. Supervise all employee exposure monitoring. Such monitoring shall comply in all respects with OSHA Regulation 1926.58 Appendix "A".

5. Conduct air sampling as per OSHA 1926.58 and as described herein.

D. Air monitoring and inspection of the Contractor's employees shall be conducted under the supervision of the Contractor's competent person.

E. Continuous air monitoring and inspections will include work area samples, personal samples from the breathing zone of a laborer to establish 8-hour TWA's.

F. Sampling and analyses shall be performed in accordance with the NIOSH #7400 method.

G. Air sample results shall be relayed verbally to the consultant within 24 hours followed by written results posted on the job site within 48 hours after the samples have been taken. Results shall be inscribed on official letterhead.

H. All costs for required air monitoring by the contractor's competent person shall be borne by the contractor.

PART 3

3.00 DISPOSAL OF ASBESTOS WASTE

This subsection shall apply to the removal of asbestos from the job site and the disposal of asbestos waste.

Old Carvel, Brick Twp.
Lab# 43930

All Asbestos waste generated in Ocean County is to be disposed of at the Ocean County Landfill (OCLF), Belford, New Jersey.

A. The contractor is required to give a notice 10 days prior to the disposal to the New Jersey Department of Environmental Protection, Division of Waste Management, Bureau of Field Operations. The contractor is required to give 24 hour oral notification to the Ocean County Landfill. In addition, all disposal procedures must comply with CAA 112, 42 U.S.C 7412, and 40 CFR 61.156.

OCEAN COUNTY LANDFILL (OCLF) - Asbestos Procedures

I. Notification:

** The Contractor shall supply the following information. **

A. Generator

- 1) Name, address and telephone number
- 2) Applicable Federal, State and Local permits

B. Contractor

- 1) Name, address and telephone number
- 2) Qualifications for work with asbestos and asbestos containing material
- 3) Applicable approval and certification letters from Federal, State and Local agencies

C. Hauler

- 1) Name, address and telephone number
- 2) NJDEP Industrial Waste Hauler Permit

D. Job

- 1) Name and address (must be inside OCLF Waste District)
- 2) Quantity and nature of material to be removed

E. Written Notification

- 1) Copy of 10-day notification letter submitted to NJDEP
- 2) Letter containing information listed above 10 days prior to expected date of removal

F. Oral Notification

The Contractor shall provide 24 hour notification prior to the shipping to confirm quantity and form of payment.

II. Compliance

The generator, contractor and hauler shall insure that the asbestos containing material is removed, transported and disposed in compliance with current EPA Regulations 40 CFR 61, OSHA Regulation 29 CFR 1910.1001 and NJAC 7:26.

III. Disposal

- A. Contractor shall insure that all asbestos containing materials are removed and handled while wet. Asbestos containing material which is stripped away, or otherwise removed, shall be packed while still wet into double plastic bags, 6 mil thick minimum. Bags shall be sealed and properly labeled. Hauler is responsible for supplying proper protective clothing while inside the Asbestos Cell. Clothing is to be in compliance with Section II above. In the opinion of OCLF, after research, at a minimum should include the following: Full Tyvek Protective Suit, Hard Hat, Safety Eye Protection, Respirator with Asbestos Filters, Gloves and Boots. Drivers and/or helpers will be inspected for proper protective clothing.
- B. All containerized waste shall be carefully loaded on trucks or other appropriate vehicles for transport. Before and during transport, care shall be exercised to insure that no unauthorized persons have access to material.
- C. When the hauler arrives at the Scale House, he shall present the following:
- 1) Origin and Destination Form
 - 2) DOT Vehicle Registration
 - 3) NJDEP Industrial Waste Permit
 - 4) Originator Indemnification Form (see note below)
 - 5) Hauler Indemnification Form (see note below)
 - 6) OCLF Asbestos Form
 - 7) DEP Asbestos Form
 - 8) Payment

Note: On July 2, 1991 the Board of Chosen Freeholders of the County of Ocean resolved that it authorizes and directs the **Director and Clerk of the Board** to execute the Transporter's Certification and Indemnification Certificate and Generator's

Old Carvel, Brick Twp.
Lab# 43930

Certification and Indemnification Certificate
required by the OCLF Corporation as per the New
Jersey Board of Public Utilities Docket No. 826-583.

- D. OCLF will visually inspect the load, truck and personnel for conformance to applicable regulations.
 - E. OCLF will instruct the hauler as to location of disposal.
 - F. At the burial site the Hauler or Contractor shall carefully remove the sealed plastic bags and place them on the Cell.
 - G. OCLF will cover the disposed waste immediately with 3 feet of fill.
 - H. The OCLF accepts asbestos material between the hours of 9:00 AM - 10:30 AM and 1:00 PM - 2:30 PM, Monday through Friday.
 - I. The rate at the OCLF is a sliding scale dependant on the volume of the delivery. Should asbestos be delivered in the afternoon after the time specified and before closing of the landfill, OCLF will charge an additional fee of \$50.00 per quarter hour for the additional time.
- B. Disposal of asbestos waste shall be conducted as follows:
- 1. All asbestos waste materials destined for disposal shall be wetted and packaged in permanently sealed, leak tight containers (such as 6 mil plastic bags, double bagged with visible labels) before it can be transported and disposed. No hauling of loose asbestos or asbestos contaminated debris is permitted.
 - 2. A locked, secure container shall be provided if asbestos waste is to be stored outside unattended.
- C. Notify the Owner's Asbestos Consultant in writing not less than 48 hours prior to the proposed time of removing and delivery of contaminated waste to the landfill. The Owner's Asbestos Consultant may elect to observe this operation.

D. The waste hauler must possess a valid solid waste transporter registration. A licensed solid waste transporter shall be a commercial collector/hauler or shall be the removal company if they are so registered.

E. Asbestos waste can be hauled in trucks or in dumpster containers provided the load is comprised only of asbestos in bags and does not contain any other wastes which could compromise the integrity of the permanent containers.

F. If rough surfaces or other materials are present in the load which could potentially puncture the permanent containers, then those containers shall be enclosed in temporary fiber or steel drums during loadings, transport and unloading operations. In addition, asbestos waste shall not be loaded into or hauled with vehicles containing collection devices.

G. Use only enclosed or covered trucks to haul impermeable containers to prevent loss or damage to containers en route to sanitary landfill.

H. Allow only sealed plastic bags or impermeable containers to be deposited in landfill. Leave damaged, broken or leaking plastic bags in the impermeable container and deposit entire container in landfill. Obtain prior approval from appropriate regulatory officials before disposing contaminated materials from high pressure vacuum collection system in the approved landfill.

I. Ensure that there are no visible emissions to the outside air from site where materials and waste are deposited.

J. Contractor may recycle uncontaminated impermeable containers.

PART 4 - PRODUCTS

4.01 QUALITY

A. Buy American Clause

1. All materials used in the performance of this specification must be manufactured in the United States of America.

B. Brand Names and Approved Equals

1. The contractor shall use Brand Named materials specified or an approved equal. (NEW JERSEY STATUTE 40A: 11-13 SPECIFICATIONS)

2. The contractor shall provide to the Owner and the Consultant, materials he/she plans to use during abatement activities. Changes in the submission of these materials shall be provided prior to abatement commencing. The Owner shall approve/disapprove these submissions.

3. No abatement activities shall occur prior to the Owner's consent and the Consultant's recommendation of the use of these products.

4. BRAND NAMES AND/OR DESCRIPTIONS USED IN THIS SPECIFICATION FOR BID PROPOSAL ARE TO ACQUAINT PROSPECTIVE BIDDERS WITH THE TYPE OF EQUIPMENT DESCRIBED (OR COMMODITY) AND WILL BE USED AS A STANDARD BY WHICH ALTERNATE OR COMPETITIVE MATERIALS OFFERED WILL BE JUDGED. COMPETITIVE ITEMS MUST BE EQUAL TO THE STANDARD DESCRIBED AND BE OF THE SAME REPUTATION FOR QUALITY AND WORKMANSHIP. VARIATIONS BETWEEN EQUIPMENT DESCRIBED AND MATERIAL OFFERED ARE TO BE FULLY EXPLAINED IN AN ACCOMPANYING LETTER. IN THE ABSENCE OF ANY CHANGES BY THE BIDDER, IT WILL BE PRESUMED AND REQUIRED THAT MATERIALS AS DESCRIBED IN THESE SPECIFICATIONS BE DELIVERED.

4.02 - MATERIALS

A. The wetting agent shall be BWE 5000 as manufactured by Better Working Environments Inc., of San Diego OR an approved equal.

B. Encapsulating material shall be bridging and/or penetrating in nature and must be applied in two coats. Acceptable encapsulants shall be TRI-COTE AE as manufactured by the United Products Corporation of Little Rock Arkansas OR A-B-C Asbestos Binding Compound as manufactured by California Products Corporation of Cambridge Massachusetts.

C. Cement to be used to seal ends, tears and penetrations shall be fire-rated and asbestos-free as manufactured by CHILDERS or an approved equal, if applicable.

D. Framing materials shall consist of 2 x 4 studs and sections of 3/4" plywood from first quality lumber.

E. The contractor shall use only polyethylene sheeting with a minimum thickness of 6 mil.

F. The use of drums is permissible as long as said drums contain lining that is leak-proof. The exterior of drums must have clear and permanent labeling and labeling specified by OSHA and EPA regulations.

G. All waste shall be discarded in properly labeled and 6 mil thick polyethylene double bags.

H. Asbestos warning signs shall be in English script and placed in areas as required by OSHA and the EPA.

I. All tape shall be of high quality polyethylene film tape #827 as manufactured by the Kendall Company, Polyken Division of Boston, Massachusetts.

J. Spray adhesive may be used as manufactured by the 3-M Company.

K. Disposable clothing to be used shall be of the same composition as Dupont's Tyvek or Kimberly Clark's Duraguard.

4.03 - TOOLS AND EQUIPMENT

A. Asbestos filtration devices shall be equipped with HIGH EFFICIENCY PARTICULATE ABSOLUTE (HEPA) filter systems such as the MICROTRAP as manufactured by Asbestos Control Technology Corporation of Maple Shade, New Jersey OR the HOG 2000 as manufactured by the Control Resource System of Michigan City, Indiana or an approved equal.

B. Scaffolding is to be used when and where needed as long as its use is monitored and is safety tested and approved for such work conditions by OSHA and any other safety regulatory agency.

C. Transportation and storage equipment shall be used so that no accumulations of ACM shall occur on a daily basis. This equipment shall be constructed and registered as such to store and/or transport waste material without any threat to persons or the environment of possible contamination.

D. All vacuum equipment to be used shall use HEPA filtering systems. Such vacuums shall be similar if not equal to the system manufactured by NILFISK of AMERICA headquartered in Malvern, Pennsylvania.

Part 5 - EXECUTION

5.00 - PERMITS, NOTIFICATIONS, LICENSES

A. The contractor shall present a duplicate copy of his asbestos contractors license issued by the New Jersey Department of Labor with his bid. Only licensed contractors may perform work described and required by this specification. As required by law, the contractor shall maintain on the project site a valid Contractors license.

B. The Contractor shall apply for the necessary permits for asbestos abatement.

C. The contractor shall maintain at all times a staff of at least six employees on each worksite including:

1. An English speaking supervisor.
2. An English speaking foreman.
At least one foreman in each work area is required.
3. Four laborers.

ALL CONTRACTOR EMPLOYEES MUST POSSESS A VALID NJ ASBESTOS REMOVER/LABORER'S PERMIT AND MAKE AVAILABLE TO THE OWNER, CONSULTANT, NJDCA, NJDOL, NJDOH AND AST THESE PERMITS UPON REQUEST AT THE PROJECT SITE. ALL EMPLOYEES MUST HAVE A MINIMUM OF AT LEAST SIX (6) MONTHS EXPERIENCE IN ASBESTOS ABATEMENT IN THE STATE OF NEW JERSEY.

D. The contractor shall also present to the AST, Owner, and Consultant prior to the commencement of abatement, proof that a NJDEP Registered Waste Hauler Permit exists. NO PRECOMMENCEMENT INSPECTION SHALL TAKE PLACE UNTIL SUCH PROOF EXISTS AND IS SATISFACTORY TO THE NJDCA, THE ASCM/AST, THE OWNER AND THE CONSULTANT.

5.01 - INSPECTIONS

A. The AST will perform inspections throughout the entire asbestos abatement project. The AST inspections are as follows:

1. Precommencement inspections by the AST will occur prior to each phase of abatement. The AST will observe and will check compliance of the following:

- a. critical/separation barriers in place
- b. AFD units in place and operating
- c. notifications, variances, permits and licenses in place
- d. waste container on site and labeled
- e. OSHA signs posted
- f. emergency plans and numbers posted
- g. decontamination chamber in place and operating
- h. poly on walls and floor in place
- i. proper supplies of bags, suits, filters, towels, masks and other equipment
- j. proper discontinued use of HVAC systems
- k. ground fault interrupters are in place outside of the work area and operable

2. Progress inspections by the AST will occur a minimum of twice a day during random time periods. The AST observes the progress of work and the manner in which it is carried out while work is in progress. The AST will check the following:

- a. asbestos being wetted with amended water
- b. workers wearing proper protection
- c. observe critical, wall and floor poly
- d. workers using proper techniques
- e. general housekeeping and egress/ingress maintained
- f. AFD functioning properly
- g. other pertinent observations such as emergencies and visitors observations

3. Cleanup inspections will occur as work progresses to ensure that the work area is clean and that no asbestos containing materials are left exposed. Equipment must also be placed in an orderly fashion to promote means of ingress and egress.

4. Pre-sealant inspections shall take place after all exposed surfaces have been wet-wiped and are found cleaned. The contractor shall notify the AST that an inspection is requested 48 hours prior to the actual inspection time. The AST shall, in writing, notify the contractor and Owner of the results of the inspection.

5. The AST shall perform a final visual inspection after being notified that such an inspection is requested at least 24 hours in advance. NO FINAL VISUAL INSPECTION SHALL TAKE PLACE IMMEDIATELY AFTER ANY WET CLEANING.

B. During any inspection by State or Federal agencies, the Contractor must have a supervisor present.

C. The New Jersey Department of Community Affairs and the New Jersey Department of Labor are authorized to make unannounced and periodic inspections during the entire abatement process to observe AST and Contractor compliance with applicable statutes.

D. The Consultant, Testwell Craig Testing Laboratories, Inc., will also make random and periodic inspections to observe contractor compliance with specifications and statutes. Directives from the consultant shall be given to the AST to be forwarded to the contractor.

5.02 - DECONTAMINATION FACILITIES AND PROCEDURES

A. DECONTAMINATION CHAMBER

1. The decontamination facility shall be constructed of 2"x 4"x 8' wooden framing covered with two layers of 6-mil poly sheeting on all sides.

2. Airlocks shall be installed between contaminated area, equipment room, shower room, and clean room. Air locks shall consist of three layers of 6 mil. poly each and shall be alternately secured. Each airlock shall be weighted down.

3. All individual chambers shall be at least 4 feet square to allow access with a stretcher in the event of emergencies.

4. The shower shall have both hot and cold water receptacles, liquid shampoo and liquid soap, both in plastic containers, so that workers and visitors can decontaminate prior to entering the clean room.

5. The contractor shall provide all connections for water and electrical hook-ups necessary to perform the work described in this specification.

6. The clean room shall contain an area where street clothes, towels, and cleaned respirators can be stored. The Contractor shall maintain an adequate supply of towels and soap for visitors and inspectors at all times.

7. The equipment room shall be provided by the contractor where work materials, footwear, and contaminated work clothing can be stored.

8. The decontamination chamber shall be located in the area as defined in the diagrams.

9. During abatement operations, the Contractor shall be allowed to use the decontamination chamber for waste egress.

B. DECONTAMINATION SEQUENCE - PERSONAL

1. ALL workers and visitors who will enter the work area shall remove all street clothes, put on clean overalls, and respirators while in the clean room. The person will then proceed through the showers and dirty (equipment) room and enter the work area.

2. Before leaving, the worker will remove all gross contamination with the use of HEPA vacuums. With the help of another worker, the person shall remove disposable TYVEK clothing. Contaminated clothing shall be placed in labeled poly bags and left in the work area until completion of the project.

3. The worker then proceeds to the shower room. Respiratory protection shall still be worn while showering. Such protection shall be removed after the person has completely showered to prevent inhalation of asbestos fibers.

Old Carvel, Brick Twp.
Lab# 43930

4. After showering the person moves to the clean room and dresses in either new coveralls for re-entry, or street clothes if leaving.

5. NO EATING, DRINKING, SMOKING OR CHEWING SHALL OCCUR IN THE WORK AREA OR DECONTAMINATION CHAMBER.

6. No footwear that is not readily cleanable, shall remain in the equipment room and, at the end of the project, will be discarded as contaminated waste.

7. NO EXCEPTIONS TO THESE DECONTAMINATION PROCEDURES WILL BE ALLOWED!!!

Guarantee

The contractor shall guarantee, in writing, that all asbestos has been removed, the work area is free of asbestos and asbestos dust, and disposal was performed to the complete satisfaction of the Owner, the Owner's Consultant (Testwell Craig Testing Laboratories, Inc.), EPA, OSHA, NJDCA, NJDOH and any other government agency having jurisdiction.

*****END OF SECTION*****