PRECISION
Environmental Co.

5500 Old Brecksville Road · Independence, Ohio 44131
(216) 642-6040 · fax (216) 642-6041

Site Specific Work Plan and Health and Safety Plan

Asbestos Abatement and Hazardous/Regulated Waste Cleanup

Cleveland Trencher
Euclid, OH

Scope of Work (Asbestos) The project involves removal and disposal of asbestos-containing pipe insulation, hanging roof materials, debris piles, and decontamination of interior building structures, and exterior concrete slabs, located throughout the project site.

Worker Training, Personnel Protection & Safety All personnel working on this project will be as certified as an asbestos worker (including equipment operator) and/or an asbestos supervisors by the Ohio Department of Health and will have received the mandatory associated EPA training for each classification. Each worker shall also have 40-hour Hazardous Waste Operations Training (HAZWOPER). Each worker and supervisor is current in the required medical surveillance program. Each individual employee will be fit tested to ensure a proper fit of his or her respirator. Records of training, medical surveillance, and fit testing shall be kept on site and made available for inspection throughout the project.

All Precision Environmental personnel will be issued hard hats, work boots, and safety glasses to be worn at all times during the project. All personnel shall wear Tyvek suits, and, depending on the initial exposure assessments, half-mask respirators equipped with HEPA filters. All employees shall dispose of coveralls in dirty room, and shower and clean respirator prior to exiting the work area.

Ground Fault Circuit Interrupters (GFCI's) will be used according to 29 CFR 1926.404(b)(1)(ii).

In accordance with OSHA 29 CFR 1926.59, Hazard Communication, Precision Environmental Co. shall have on site a list of Hazardous chemicals to be used on site, a corresponding MSDS (Material Safety Data Sheet) for each chemical, and a copy of Precision Environmental's Written Hazard Communication Program.

Permits & Notifications Copies of all permits and notifications shall be forwarded to the owner's representative prior to commencing work.

Air Monitoring Precision shall collect all required OSHA personal air samples on 25% of the work force during asbestos abatement operations. A complete record of all personal air monitoring and results will be furnished to the owner's representative. Written reports of all air monitoring tests shall be posted at the job site or a central location on a regular basis.

Note Perimeter air sampling plan by RCS Environmental attached in separate document

Asbestos Work Area Preparation & Removal Procedures All work area preparation and removal procedures described herein shall be supervised by a Competent Person. HEPA vacuums shall be utilized for all work procedures to collect small particles/debris resulting from asbestos removal and/or decontamination operations. Prior to commencing all asbestos removal work, Precision Environmental Co. shall post asbestos warning signs and danger tape as required by OSHA's Asbestos Standard for the Construction Industry, 29 CFR 1926.1101.

All asbestos-containing pipe insulation, to be removed per the specification's scope shall be removed using wet methods, and glovebag or wrap and cut methods. Pipe insulation shall be accessed with either aerial boom lifts or scissors lifts using appropriate personal fall protection.

All asbestos-containing debris piles, hanging roof materials, and building decontamination to be removed per the specification's scope shall be removed using wet methods. Debris piles including one inch of soil underneath (where debris is on soil) shall be removed with skid steer loaders. Non-porous surfaces i.e. concrete slab shall be washed and left on site. Hanging roof material shall be accessed with either aerial boom lifts or scissors lifts using appropriate personal fall protection. ***All concrete slab surfaces shall be cleaned, washed, and cleared to no visible remaining gross debris.***

*****Note - North end office building shall have all windows and doors sealed with polyethylene sheeting from the inside and the entrance boarded up.***

Disposal - All asbestos containing waste materials shall be double bagged in 6-mil asbestos bags, or double wrapped in 6-mil poly sheeting, or placed in double lined dumpsters, shall bear asbestos labeling, generator information and shall be transported by and to an EPA approved asbestos landfill. Waste shipment records shall be maintained and copies shall be submitted upon removal of asbestos waste from the project site, and after arrival at the landfill. All DOT regulations shall be strictly adhered to.

Hazardous/Regulated Waste Removal Based on previous analytical and project site knowledge there are numerous containerized and drummed paints, coatings, oils, cleaners. The site is overgrown with vegetation and ha s potential chemical contact and inhalation hazards. PPE will include hard-hat, work boots, chemical resistant gloves, tychem suits, and safety glasses. Should drums need to be opened personnel shall wear half face or full face air-purifying respirators with combination chemical cartridges.

Characterization Previous Analytical, Field observations and subsequent verification will be used to characterize and classify listed containers and complete appropriate TSD facility profiles. Information used for characterization includes generator knowledge, obvious odors, obvious labels, visual inspection of color and texture, pH, MSDS sheets, and previous analysis. Additional analysis (as necessary) to complete a full characterization will be completed prior to the commencement of work. Completed profiles will be presented to the owner for review and signature. Signed profiles will be submitted to TSD's for disposal approvals.

Containerized Materials A number of containers (including 2 or 3 small above ground storage tanks) have been identified for removal. These containers were found to contain oil, oily water, grease, non-hazardous solid grease, sodium hydroxide, paint/thinners (pumpable), and paint/thinners (solid). Some of this material will be considered hazardous waste under RCRA, based on its characteristics and/or composition.

Each container will be evaluated for structural integrity. If any container is not in DOT shippable condition, the container will be repaired (replace lid, ring, bung/s), consolidated, over packed or repackaged.

All containers will be collected in a staging area in preparation for transportation off-site. The facility shall also be walked to verify that any containers previously unidentified or overlooked are collected. Similar materials, especially oils, may be bulked together into the same drum to facilitate shipping. Empty containers from this process will be labeled in preparation for shipment to a drum or metal scrap recycler.

Electrical Transformers Several pole-mounted electrical transformers have been identified on-site. These transformers have been identified as non- TSCA. These will be sent to a transformer recycler for appropriate handling. The recycler will verify the PCB levels prior to processing the transformers.

Decontamination and Disposal Any hand tools and non-disposable PPE that may come in direct contact with hazardous waste will be washed, if necessary in the *Contamination Reduction Zone*, with a mild detergent and water then rinsed with clean water. All wash/rinse waters along with any clothes, brushes, and/or paper produces used for cleaning/drying will be collected in appropriate containers for disposal. All used disposable PPE will be collected and discarded into appropriate containers.

Each container will be properly labeled/marked as required and appropriate shipping papers, manifest, and LDR's will be prepared for each container. Containers will be loaded into licensed transportation vehicles and transported to TSD's for final disposal.

At the completion of the project, the client/representative shall receive copies of all relevant paperwork related to transportation and disposal.. Client will have the option to inspect the site and approve prior to contractor's demobilization.

Decontamination Zones/Center

The objective of decontamination procedures is to minimize the risk of exposure to hazard substances by limiting the spread of contamination from the work area. Decontamination will be accomplished in accordance with 29 CFR 1910.120 and 29 CFR 1926.1101. The work area will be divided into 3 controlled zones. The zones will be known as the Exclusion Zone (contaminated zone), Contamination Reduction Zone or CRZ (decontamination zone), and the Support Zone (clean zone).

Exclusion (Hot) Zone (active work areas)

The exclusion zone is the work area where actual abatement operations are taking place. The perimeter of the exclusion zone shall be demarcated. Access restricted to only those personnel who have received certified training and are wearing the proper level of protection. Entry and exit in the exclusion zone must be made through the CRZ.

Contamination Reduction (Warm) Zone (decon trailer north end inside fence)

The purpose of the Contamination Reduction Zone (CRZ) is to limit the spread of contaminated material from the exclusion zone to the support zone. All equipment and PPE will be decontaminated in this area prior to entry into the support zone. This is effectively accomplished by the decontamination shower.

In compliance with 29 CFR 1926.1101 a three chambered personnel decontamination center shall be constructed at the entrance/exit of the work areas or a decon trailer provided. The personnel decontamination center shall consist of a clean room, shower and equipment room of sufficient size to accommodate the work crew as well as load-out activities.

Support (Cold) Zone (north end outside fence)

The support zone is the clean area outside the exclusion zone and the CRZ. No materials, tools, PPE, or personnel are permitted to enter this area without first passing through the CRZ.

Equipment Decontamination

Skid steer loaders, asbestos dumpsters, and other equipment that cannot be decontaminated through the personnel decontamination center shall be decontaminated prior to exiting or being removed from the work zones. This shall be done by rinsing the equipment over bermed polyethylene sheeting. All rinse water shall be collected and filtered prior to disposal.

Utilities

Upon mobilization to the project site, Precision shall establish necessary utilities needed for performance of the work. Water shall be obtained from adjacent hydrant(s) or utilization of water tanks. All necessary electrical service shall be obtained utilizing portable generators.

Fall Protection

Workers shall be properly trained in fall hazard recognition and in the use of all equipment that exposes an employee to a fall from height. Employees shall be trained in the use and inspection of personal fall protection. All workers will use personal fall protection in accordance with OSHA requirements when accessing unprotected surfaces. All employees shall be monitored for compliance by the competent person.

Housekeeping (work area safety)

During the course of this project form and scrap lumber with protruding nails, and all other debris and rubble, shall be kept cleared from work areas, passageways, and stairs, in and around buildings or other structures. Employees shall be advised to the hazards of wet walking surfaces when performing gross asbestos and debris removal.

Poison Ivy-Related Plants

Poison ivy, poison oak and poison sumac have poisonous sap (urushiol) in their roots, stems, leaves and fruits. The urushiol may be deposited on the skin by direct contact with the plant or by contact with contaminated objects, such as clothing, shoes, tools, and animals. Employees shall be advised to wear long-sleeved shirts and long pants, tucked into boots and wear cloth or leather gloves.

Insects and animals

Workers shall be protected from biting and stinging insects, by wearing long pants, socks, and long-sleeved shirts. Insect repellents that contain DEET shall be available to employees.

Employees shall be instructed to avoid dead and live animals as they can spread diseases such as Rat Bite Fever and Rabies. Employees shall be instructed to wash hands regularly, and to get medical attention immediately if bitten/scratched.

Heat Stress

Heat stress can be a serious health hazard for employees required to work while exposed to the sun or other heat sources. Supervisors and foremen should look continuously for symptoms and signs of heat stress-related disorders in employees.

Symptoms and Signs of Heat Stress

Disorder	*Symptoms*	*Signs*
Heat Exhaustion	Weakness Fatigue Blurred vision Dizziness Headache	High pulse rate Extreme sweating Pale face Insecure gait Normal to slightly elevated temperature
Heatstroke	Chills Restlessness Irritability	Red face Hot dry skin (usual) Disorientation High temperature (³104F) Erratic behavior Shivering Collapse Convulsions Unconsciousness

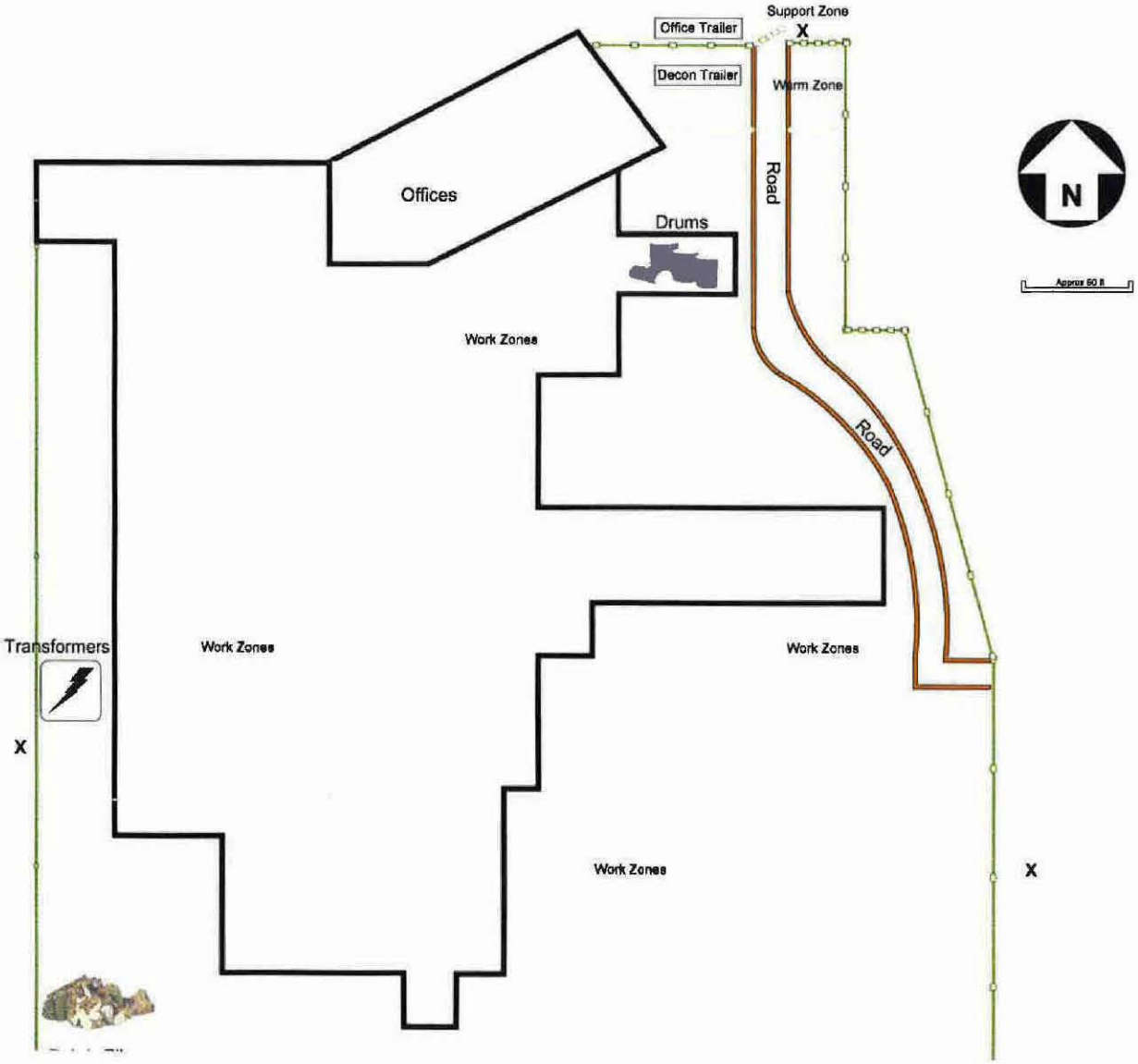
Precision shall provide trained persons to render first aid as follows:

1. To give first aid for heat exhaustion, lay the person down flat in a cool environment, loosen his or her clothing, and give him or her plenty of water to drink.
2. To give first aid for heat stroke, immediately start aggressive cooling of the person and get him or her to a hospital.

Precision shall protect employees from heat stress by:

1. Providing cool, potable water
2. Providing frequent cool-down breaks
3. Timing the heaviest work load for during the coolest part of the workday
4. Encouraging workers to drink water and to cool down
5. Looking for signs and symptoms of heat stress
6. Providing training on heat stress including prevention, recognition, and first aid

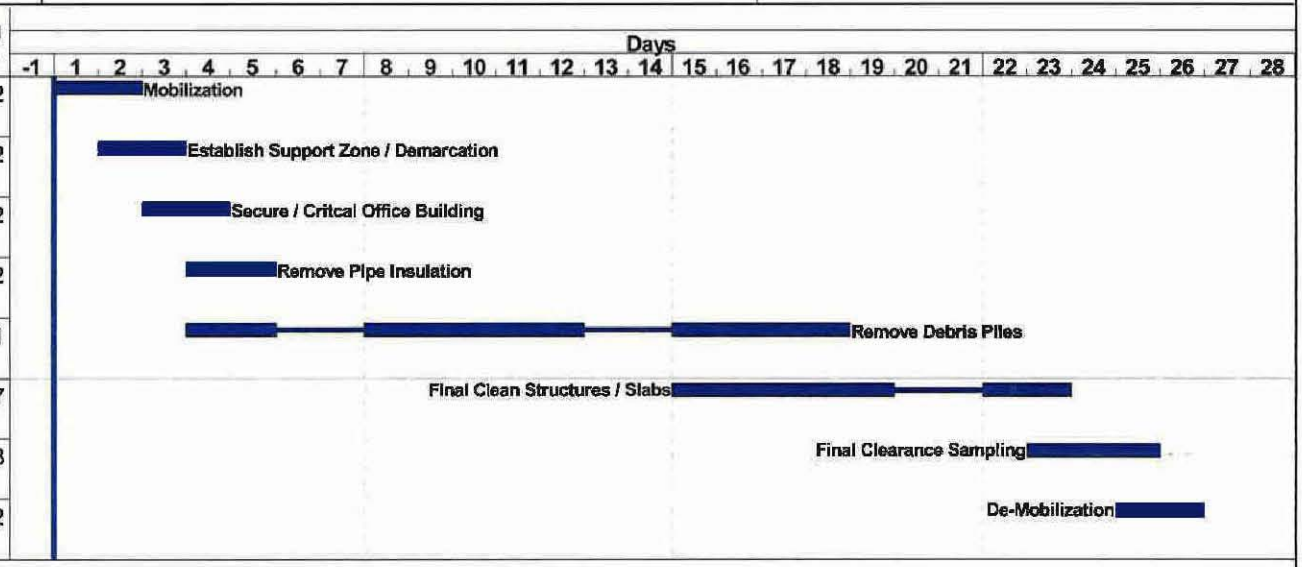
Cleveland Trencher
20100 St. Clair
Euclid, Ohio




To see all the details that are visible on the screen, use the "Print" link next to the map.
E 200th St
St Clair Ave
Mars Flow Control
Trost Manufacturing
A
©2011 Google - Imagery ©2011 DigitalGlobe, USDA Farm Service Agency, GeoEye, U.S. Geological Survey, Map data ©2011 Google

FORMER CLEVELAND TRENCHER FACILITY
20100 St. Claire Avenue
Euclid, Ohio

Activity ID	Activity Description	Orig Dur
1000	Mobilization	2
1010	Establish Support Zone / Demarcation	2
1020	Secure / Critcal Office Building	2
1030	Remove Pipe Insulation	2
1040	Remove Debris Piles	11
1050	Final Clean Structures / Slabs	7
1060	Final Clearance Sampling	3
1070	De-Mobilization	2



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Sheet 1 of 1

Prepared By:

Precision Environmental Co.

PRECISION Environmental Co.

Section 2

Emergency Plan and Phone List

Precision Environmental Company

Emergency Response Procedures

Cleveland Trencher

Euclid, Ohio

Purpose

Dealing effectively with any type of emergency situation requires prompt notification, coordinated mobilization, quick implementation of specific duties and assignments, and the optimum use of job site and community emergency response resources. During the course of asbestos abatement and cleanup at Cleveland Trencher, there may also arise situations or emergencies, which may require modification or breach of the work area.

I. **Fire**

A. The Euclid Fire Department must be notified immediately in the event of a fire by dialing **911**. This policy holds true regardless of the size of the fire or the ease with which it may be extinguished. A second call to the fire department telling them the fire has been extinguished is far better than notification after the fire is out of control.

B. Emergency exits shall be established and clearly marked with duct tape, arrows or other effective designations to permit easy location from anywhere within work area. They shall be secured to prevent access from uncontaminated areas and still permit emergency exiting. These exits shall be properly sealed with polyethylene sheeting, which can be cut to permit egress if needed. These exits may be the worker decontamination enclosure, the waste pass-out airlock and/or other alternative exits satisfactory to fire official.

C. Steps to take in a fire emergency:

1. Any person discovering a fire should quickly and carefully remove anyone who is injured or in immediate danger. This person must be careful not to risk injury to himself, since his health and safety is more important than reporting the fire.

2. The nearest telephone or radio should be used to report the fire. The individual reporting the fire shall provide the following information: that there is a fire; what is on fire; the specific location of the fire; and the name, telephone number and location of the person reporting the fire.

3. Extinguishment of the fire should be attempted only if there is portable fire fighting equipment available and the fire is in its incipient, that is, initial or beginning state and can be safely controlled or extinguished with this equipment. If the size of the fire presents an immediate danger to life or health, evacuation, not fire fighting, should be the primary objective.

4. Fire extinguishers will be located at designated areas on the job site. In the event of a fire, emergency exits shall be used or breached.

5. Evacuation: When evacuation is deemed necessary, there should be no hesitation in requiring personnel to immediately vacate the area. ***Emergency exits and other means of egress from each area shall be noted prior to the start of the job and communicated to all employees.*** An assembly area shall be designated and all personnel required to report there immediately for a roll call to assure that all are present and accounted for. Once out of the building, no one will be allowed to re-enter until the emergency is declared over.

II. Employee Injury

A. Should an incident occur which results in an injury to an employee, an immediate assessment of the severity should be made.

B. No attempts at rescue or first aid should be made until the scene has been surveyed and it is determined that it is safe to enter the area. Particular attention should be given to the possibility of electrical shock, asphyxiating or oxygen deficient atmospheres, overhead hazards, and fall hazards.

C. Designated first aid personnel shall be summoned to the scene. If it is necessary to call an ambulance the person placing the call should be prepared to provide such information as: the location of the accident, type of accident (fall from elevation, heart attack, etc.), the condition of the injured, and where to enter site.

D. An individual shall be directed to meet the ambulance at a previously designated location.

E. The area shall be kept clear of all-unnecessary personnel and equipment that could hinder the emergency response effort.

F. The site entrance shall be secured to prevent any unauthorized entrance by those not directly involved in the emergency response effort.

G. In case of an injury requiring emergency treatment, the treatment shall not be delayed for decontamination purposes. Breach of containment at emergency exits shall be done if necessary. Emergency personnel will be advised of containment conditions.

III. Emergency Phone Numbers

Emergency phone numbers shall be posted at a pre-determined location. Numbers will also be posted at the Precision Field Office.

IV. Power Failure

In the event of a power failure, all work shall be halted, workers shall exit containments and containments shall be sealed until such time that power can be restored.

Cleveland Trencher

Euclid, Ohio

Emergency Phone Numbers

Emergency Assistance		Phone #
FIRE & EMS:		**911**
POLICE		**911**
HOSPITALS:	**Concentra Medical Center** 5500 S. Marginal Road Cleveland, Ohio 44103	**(216) 426-9020**

(When calling Emergency Services, advise dispatcher if employee was working in containment)

Precision Environmental Contacts - 5500 Old Brecksville Road, Independence, Ohio (216) 642-6040

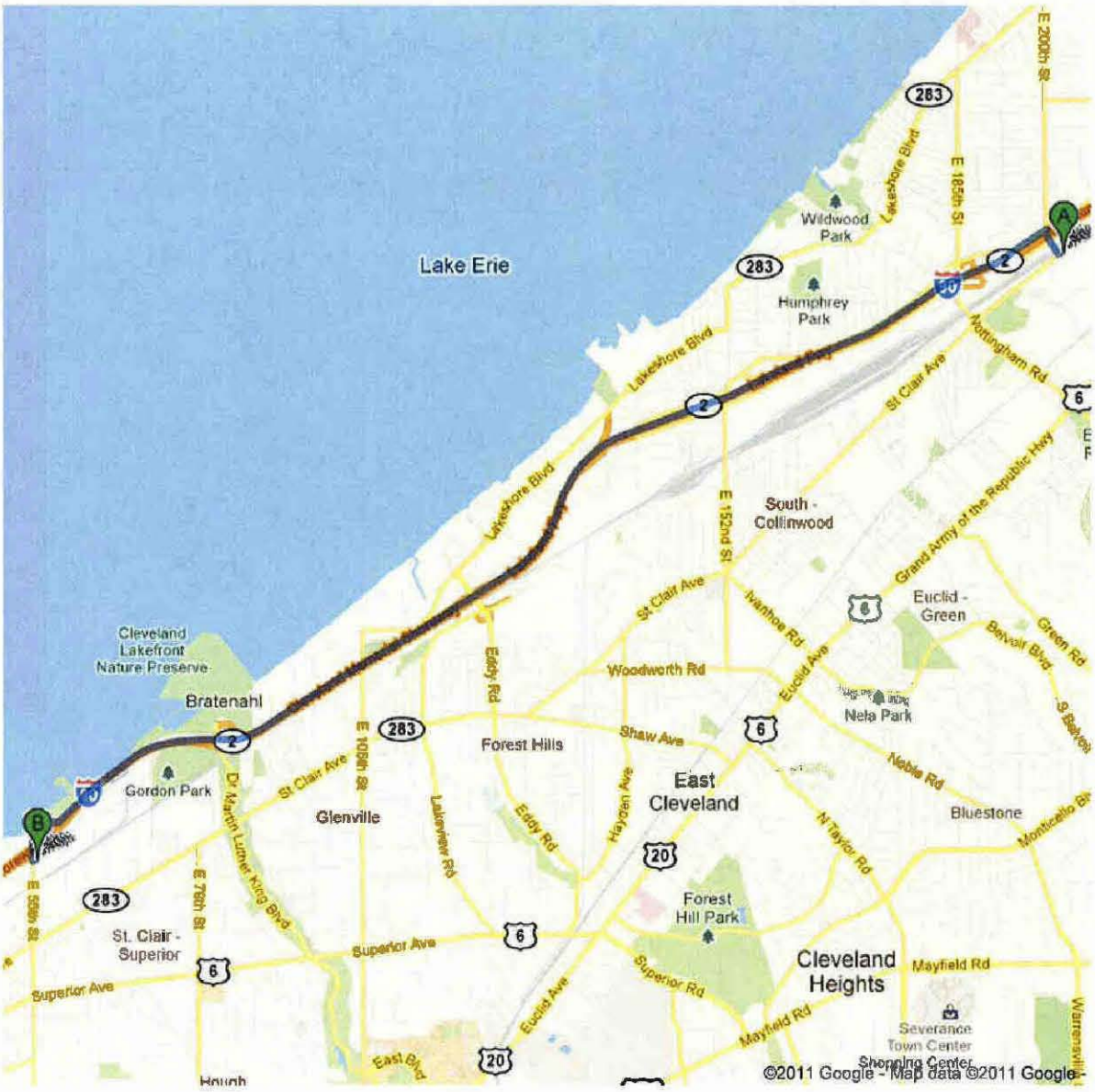
	Mobile	Other
Kenny Yates – Supervisor and First Aid/CPR	(216) 2142562	
Emory Wolf - Superintendent	(216) 214-2474	
Marc Garland – Safety Director	(216) 214-5173	(440) 209-0194
John Savage - Vice President	(216) 214-0401	

Additional Emergency Phone Numbers:

Chemtrec		(800) 424-9300
TSCA Hotline		(800) 424-9065
		(202) 544-1404
ATSDR	Day	(404) 329-2888
	Night	(404) 566-7777
ATF (Explosives)		(800) 424-9555
National Response Center		(800) 424-8802
Pesticide Information Service		(800) 845-7633
EPA Region 5		(312) 353-2000
RCRA Hotline		(800) 424-9346
CMA Chemical Referral Center		(800) 262-8200
National Poison Control		(800) 942-5969
U. S. DOT	Days Only	(202) 366-0656

Google maps

Directions to 5500 S Marginal Rd, Cleveland, OH 44103
7.3 mi – about 11 mins



Section 3

Transportation and Disposal

2011 OhioEPA 2011

Construction and Demolition Debris Facility License

License Expires December 31, 2011

Facility: Minerva Enterprises (CID:54288)
9000 Minerva Rd
Waynesburg, OH 44688

This license has been issued in accordance with the requirements of state law, is subject to revocation or suspension for cause, and is not transferable without the consent of the Board of Health or the Director of the Ohio Environmental Protection Agency.

Licensing Authority: Stark Co - CDDL

Conditions of Licensure

The Licensee hereunder, its agents, employees, and all others in active concert with said licensee, including the facility owner and operator, shall be subject to and shall comply with the following conditions of this license:

1. All applicable requirements of Ohio Revised Code Chapters 3714., 3734., 6111., and 3704.
2. All applicable requirements of Ohio Administrative Code Chapters 3745-37 and 3745-400.
3. Plans, other authorizing documents and administrative and judicial orders applicable to this facility and as approved by the Ohio Environmental Protection Agency and/or the licensing authority.
4. By applying for and accepting this license, the licensee specifically consents in advance and agrees to allow the Director, the Health District, or an authorized representative, to enter upon the licensee's premises at any reasonable time during the construction and/or operation of the facility for the purpose of inspecting, conducting tests, collecting samples, or examining records or reports pertaining to construction, modification, installation, or operation of the facility. The licensee hereby acknowledges and agrees that any and all rights of access granted herein shall not be deemed to be unreasonable or unlawful under Ohio Revised Code Sec. 3714.08.

The licensee, its agents, employees, and all others in active concert with said licensee shall maintain and operate the construction and demolition debris facility to which the license pertains in a sanitary manner so as not to create a nuisance, create a fire hazard, cause or contribute to water pollution, or create a health hazard. This license shall not be construed to constitute a defense to any civil or criminal action brought by the State of Ohio or any duly authorized representative thereof to enforce the provisions of Chapters 3714., 3734., 3767., 6111., or 3704. of the Ohio Revised Code, or the regulations issued thereunder.

Issuance of this license does not relieve the licensee of the duty to comply with all applicable federal, state, and local laws, regulations and ordinances.

[X] If Checked, Additional Conditions Apply to This License (See Back, or Attachment)

William L. Rumpf

Health Commissioner

December 29, 2010
Date Issued

OP ID: PC

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 01/11/11

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER The Fedeli Group P.O. Box 318003 5005 Rockside Road Independence, OH 44131-8003 Rob Snyder, CPCU 216-328-8080 216-328-8081	CONTACT NAME: Pat Cowan PHONE (A/C, No, Ext): 216-643-2749 FAX (A/C, No): 216-328-8081 E-MAIL ADDRESS: pcowan@thefedeligroup.com PRODUCER CUSTOMER ID #: MINER-3
INSURED Minerva Enterprises, LLC 9000 Minerva Road Waynesburg, OH 44688	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : Zurich American Insurance Co. — 16535 INSURER B : Steadfast Insurance Company — 26387 INSURER C : INSURER D : INSURER E : INSURER F :

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR Includes X,C,U GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC			GLO903222004	01/10/11	01/10/12	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 50,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 1,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS X HIRED AUTOS X NON-OWNED AUTOS			BAP903222104	01/10/11	01/10/12	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
A	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DEDUCTIBLE X RETENTION $ 10,000			SEO903222204	01/10/11	01/10/12	EACH OCCURRENCE AGGREGATE	$ 5,000,000 $ 5,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		GLO903222004 OHIO STOP GAP LIABILITY	01/10/11	01/10/12	X WC STATU-TORY LIMITS OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
B	Legal Pollution Liability			PLC903322704 INCL ASBESTOS/LEAD OPS	01/10/11	01/10/12	Limit: Ded:	5,000,000 25,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

PREC-I2

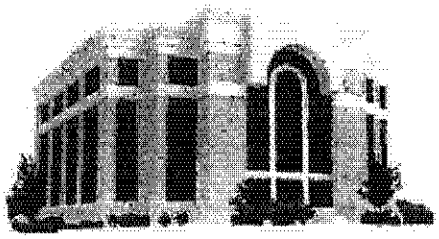
Precision Environmental Co
Attn: Jill Keppler
5500 Old Brecksville Road
Independence, OH 44131

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Pat Cowan



STARK COUNTY
HEALTH DEPARTMENT

RESOLUTION #9-2010

A RESOLUTION TO ADD REQUIREMENTS OR AGENDA TO THE CONSTRUCTION AND DEMOLITION DEBRIS FACILITY LICENSES OF NAMED FACILITIES FOR THE 2011 LICENSING YEAR.

WHEREAS, 3745-37-03(D) of the Ohio Administrative Code provides that, *"The licensing authority of a construction and demolition debris facility may impose such special terms and conditions as are appropriate or necessary to ensure that the facility will comply with Chapter 3714. of the Revised Code and Chapter 3745-400 of the Administrative Code, and to protect public health and safety and the environment."*

WHEREAS, 3714.06 of the Ohio Revised Code provides that, *"Any such license may be issued with such terms and conditions as the board or the director, as appropriate, finds necessary to ensure that the facility will comply with this chapter and the rules adopted under it and to protect the public health and safety and the environment."*

WHEREAS, facility license reviews that were conducted by the Environmental Division of the Stark County Health Department during November, 2010 indicated that the following conditions and terms are necessary to insure compliance and/or to protect public health and safety and the environment for each facility as specified.

BE IT THEREFORE RESOLVED THAT, the Stark County Board of Health attaches these terms and conditions to the Construction and Demolition Debris Facility Licenses as:

Minerva Enterprises LLC.

1. Surface Water Analysis

Analyze all sedimentation ponds for those constituents listed below every 6 months (2 times a year) and submit the results to the Stark County Health Department.

pH	Specific Conductance	Turbidity
Temperature	Total Dissolved Solids (TDS)	Nitrate-Nitrite
Phosphorous, Total	Biological Oxygen Demand	Nitrogen as Ammonia
Chlorides	Chemical Oxygen Demand	Sulfates
Total Organic Carbon	Depth/Pond Level	Flow Rate

Metals (Arsenic, Barium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Zinc)

3951 Convenience Circle, N.W. ● Canton, Ohio 44718-2660 ● (330) 493-9904 ● Fax (330) 493-9920
www.starkhealth.org

2. Topographical Map

By September 30, 2011, Minerva Enterprises LLC., shall submit a current topographical drawing showing the approved limits of waste placement with a contour interval no greater than two feet.

Stark C&D Landfill

1. Surface Water Analysis

Analyze all sedimentation ponds for those constituents listed below every 6 months (2 times a year) and submit the results to the Stark County Health Department.

pH	Specific Conductance	Turbidity
Temperature	Total Dissolved Solids (TDS)	Nitrate-Nitrite
Phosphorous, Total	Biological Oxygen Demand	Nitrogen as Ammonia
Chlorides	Chemical Oxygen Demand	Sulfates
Total Organic Carbon	Depth/Pond Level	Flow Rate

Metals (Arsenic, Barium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium. Zinc)

2. Topographical Map

By September 30, 2011, Stark C&D Landfill, shall submit a current topographical drawing showing the approved limits of waste placement with a contour interval no greater than two feet.

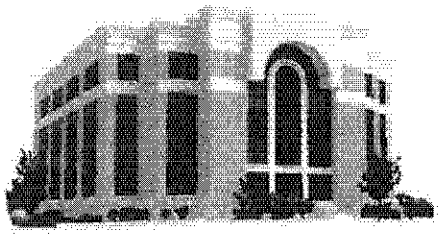
BE IT FURTHER RESOLVED, that the Board of Health, of the Stark County Combined General Health District, adopts this measure to be effective on and after Wednesday, December 8, 2010.

ADOPTED: December 8, 2010
By a majority of the members of the Board of Health of the Stark County Combined General Health District

STARK COUNTY COMBINED BOARD OF HEALTH

Vice PRESIDENT

SECRETARY



STARK COUNTY HEALTH DEPARTMENT

December 29, 2010

Steve Chandler
Minerva Enterprises, LLC
P.O. Box 709
Waynesburg, OH 44688

Dear Mr. Chandler:

On September 30, 2010, this office received an application for a 2011 Construction and Demolition Debris Facility License. Upon review, the application is complete. Therefore, your 2011 Construction and Demolition Debris Facility License is granted. This license is effective for the current approved active licensed disposal area only. The license is subject to special terms and conditions as stated in the enclosed copy of Stark County Board of Health Resolution #9-2010.

A motion to attach these special terms and conditions was passed by a majority of the members of the Board of Health of the Stark County Combined General Health District, and are effective on and after December 8, 2010. These special terms and conditions are hereby attached as provided by 3745-37-03(D) of the Ohio Administrative Code and 3714.06 of the Ohio Revised Code.

This action is final and may be appealed to the Environmental Board of Review pursuant to sections 3714.10 of the Ohio Revised Code. Issuance of this license does not relieve the licensee of the duty to comply with all applicable federal, state, and local laws, regulations, and ordinances.

Feel free to contact Kirk Norris at (330) 493-9904, ext. 214 if you have any questions.

Sincerely,

William Franks, MPH
Health Commissioner

W/ enclosure

3951 Convenience Circle, N.W. ● Canton, Ohio 44718-2660 ● (330) 493-9904 ● Fax (330) 493-9920
www.starkhealth.org

The following Contains Minerva Enterprises, LLC's (Minerva) Asbestos Disposal Permit as part of Minerva's Air Permits Group.

For Asbestos Disposal Permit Verification Purposes Only, the Primary 3 Pages of The Asbestos Permit are attached below. [Pages 17,18 & 19 of the 25 page permit]

Should you desire Minerva Enterprises, LLC's entire Air Permits Including Asbestos Please email me at: stevechandler40@aol.com.

Minerva's Asbestos Permit is referred to as F001-Asbestos Disposal

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

FINAL

Air Pollution Permit-to-Install and Operate
for
Minerva Enterprises, LLC

Facility ID: 1576001700
Permit Number: P0104984
Permit Type: OAC Chapter 3745-31 Modification
Issued: 1/5/2010
Effective: 1/5/2010
Expiration: 1/5/2020

Taken From Page 19 of 25 Below Outlines Minerva's:

Asbestos Material Acceptance Permit Description

f. The facility can accept for disposal any regulated asbestos-containing material as defined in the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Asbestos, 40 CFR Part 61, Subpart M, Section 141 and OAC rule 3745-20, or any subsequent revisions to either rule. Regulated asbestos-containing material is defined to include:

i. friable asbestos material;

ii. Category I nonfriable asbestos-containing material that has become friable;

iii. Category I nonfriable asbestos-containing material that will be or has been subjected to sanding, grinding, cutting, or abrading; or

iv. Category II nonfriable asbestos-containing material that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

Exact Copy of Page 17 of 25 Below Outlines Minerva's: Annual Permit Limit & Begins Asbestos Specific FOO3 Asbestos Disposal Permit

3. **F003, Asbestos Disposal**

Operations, Property and/or Equipment Description:

Construction and Demolition Waste Landfill Approved to Accept NESHAP-regulated Asbestos-containing Waste Materials

a) This permit document constitutes a permit to install issued in accordance with ORC 3704.03(F) and a permit to operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit to install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit to operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	40 CFR 61.154(a) and (e) and OAC rule 3745-20-06 This PTIO supercedes PTI 15-1292 Modification NESHAP 40 FCR Part 61, Subpart M	Permittee shall not create any visible emissions
b.	The permittee has agreed to limit the volume of material accepted.	A maximum of 1,000,000 tons per year of C & D material containing RACM may be accepted.

(2) Additional Terms and Conditions

a. The landfill, approved to accept asbestos-containing waste materials shall maintain the following work practice standards.

b. There shall be no visible emissions from asbestos-containing waste materials during on-site transportation, transfer, unloading, deposition, compacting operations, or from any inactive asbestos waste disposal sites.

c. Deposition and burial operations shall be conducted in a careful manner that prevents asbestos-containing waste materials from being broken up or dispersed before the materials are buried.

d. The permittee shall inspect each load of asbestos-containing material delivered to the facility. The inspection shall consist of a visual examination to ensure that each shipment of asbestos-containing waste materials is received in intact, leak-tight containers labeled with appropriate hazard warning labels, the name of the waste generator, and the location of waste generation. The inspection also shall determine whether the waste shipment records accompany the consignment and accurately describe the waste material and quantity.

i. If on the basis of the inspection, the waste material is found to be improperly received, the load shall be disposed of in accordance with the procedures in the "Asbestos Spill Contingency Plan," and the discrepancy shall be noted on the waste shipment record.

[40 CFR 61.154(a) and (e)] and [OAC rule 3745-20-06]

e. The permittee shall develop, implement, and maintain an "Asbestos Disposal Operating Procedure and Spill Contingency Plan" consisting of:

i. authorized personnel training;

ii. inspection and disposal operating procedures;

iii. non-conforming load response procedures;

iv. inventory and maintenance procedures for safety and emissions control equipment;

v. record keeping procedures; and

vi. emergency notification procedures.

Authorized personnel shall be knowledgeable in the procedures, and the Plan shall be available for inspection at this facility at all times. Emissions control equipment shall be available for wetting and containing asbestos in

the event of a release or non-conforming load disposal. All equipment required to implement the "Asbestos Disposal Operating Procedure and Spill Contingency Plan" shall be maintained in accordance with good engineering practices to ensure that the equipment is in a ready-to-use condition and in an appropriate location for use.

[OAC rule 3745-20-06, in part] and/or [OAC rule 3745-31-05(A)(3)]

f. The facility can accept for disposal any regulated asbestos-containing material as defined in the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Asbestos, 40 CFR Part 61, Subpart M, Section 141 and OAC rule 3745-20, or any subsequent revisions to either rule. Regulated asbestos-containing material is defined to include:

i. friable asbestos material;

ii. Category I nonfriable asbestos-containing material that has become friable;

iii. Category I nonfriable asbestos-containing material that will be or has been subjected to sanding, grinding, cutting, or abrading; or

iv. Category II nonfriable asbestos-containing material that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

g. The permittee shall ensure that any Category I and/or Category II nonfriable asbestos-containing waste material received does not become friable during processing at the landfill. If any asbestos material arrives at the landfill and meets the description of a regulated asbestos-containing material as described in (a) through (d) above, the landfill shall:

i. cause or permit no visible emissions to the outside air from the asbestos-containing waste materials during on-site transportation, transfer, deposition, or compacting operations;

ii. assure that deposition and burial operations are conducted in a manner which prevents handling by equipment or persons that causes asbestos-containing waste materials to be broken up or dispersed before the materials are buried;

iii. cover the asbestos-containing waste material with at least twelve inches of nonasbestos-containing material, as soon as practicable after deposition, but no later than at the end of the operating day; and

Section 4

Supervisor Qualifications

Precision Environmental Company
Precision ProCut

Respirator Assignment and Fit Test

A successful respirator fit test has been completed by the individual named below using the respirator fit test procedure mandated in 29 CFR 1910.134 Appendix A.

Kenny Yates — XXX-XX-4117 — 2-10-11
Name — SS Number (last 4 digits) — Date

2228 Sw. Harms Rd., Richmond Hts., Ohio 44143
Address (street, city, state, zip)

Respirator Model	Size			Pass	Fail
North 5500/7700 Half Face	S ☐	M ☐	L ☒	☒	☐
3M Powerflow Full Face PAPR	S ☐	M ☐	L ☒	☒	☐
☐ Other	S ☐	M ☐	L ☐	☐	☐

Annual Respiratory Protection Training completed per 29 CFR 1910.134: Yes ☒ No ☐

Annual medical evaluation completed: Yes ☒ No ☐

Type of Fit Test: Qualitative ☒ Quantitative ☐

Type of Qualitative Test: Isoamyl acetate ☒ Bitrex ☐ Saccharin ☐

I hereby certify that that the above named employee has been properly fit tested per the referenced and attached procedures.

Ronnie Walsh
Test Administrator Name — Signature

Kenny Yates
Employee Name — Signature

Concentra.

PRECISION ENVIRONMENTAL COMPANY
PRECISION PROCUT
RESPIRATOR QUALIFICATION

Patient Name: Kenny Yates

SSN: (last 4) XXX - XX - 4117

This letter certifies that the above named individual has been evaluated and completed the medical surveillance program provided by Precision Environmental and Precision ProCut. The medical surveillance program meets or exceeds the requirements of 29 CFR 1910.120, 29 CFR 1910.134 and 29 CFR 1926.1101.

The healthcare provider for this surveillance examination is:

Concentra Medical Centers
4600 Hinckley Industrial Parkway
Cleveland, Ohio 44109

The above named patient has been examined in accordance with the above requirements and has been found to be:

☒ Qualified for respirator use without restrictions
☐ Not qualified for respirator use

Physician Signature — Date (print clearly or type)

Ronnie Abella, M.D.
Printed Physician Name

TSI Training Services International

Asbestos Contractor Supervisor Refresher

Certificate

This is to certify

Kenny Yates

XXX-XX-4117

has attended and successfully completed the Asbestos Hazard Emergency Response Act mandatory course for the Asbestos Contractor Supervisor Refresher and has passed an examination in that course with a minimum score of 70% or better. Training was in accordance with 40 CFR Part 763 [AHERA]. The above student received the requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act, State of Indiana requirements under 326 IAC 19-2, Chapter 5201-24 Ohio Administrative Code, and the Illinois Department of Public Health (IDPH) under section 855.120 of Title 77. IDPH recognition based on student request.

Training Manager	Expiration Date	Date(s) of Course	Examination Date	Course Location
Daryl D. Sill	2/19/12	2/19/11	2/19/11	Independence, OH

TSI
11 TSI 38777 csr

CONCENTRA Medical Center
MEDICAL EXAMINER'S CERTIFICATE
Kenny Yates

Ronnie L. Abella, M.D.
55-R1902

State of Ohio
Department of Health
Division of Quality Assurance - Asbestos Program

Asbestos Hazard Abatement Specialist

Kenneth A Yates
Precision Environmental Company
5500 Old Brecksville Road
Independence OH 44131

Certification Number: AS2553
Expiration Date: 03/05/2012
DOB: 08/31/1949
This certification is issued pursuant to Chapter 3710 of the — Certification Card is

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE

KENNETH A YATES
CLASS (EXPIRES)
C SUPR(08/11)

CERT# 09-11704
DMV# 774229691
MUST BE CARRIED ON ASBESTOS PROJECTS

CERTIFICATE OF ACHIEVEMENT

CISP

Construction Industry Service Program
of Greater Cleveland

honors

Ken Yates

for achievement in completing

OSHA 30-HOUR FOR CONSTRUCTION

AUGUST 4, 11, 18, 2006

JOHN C. PORADA
ADMINISTRATOR

WAYNE J. CREASAP
DIRECTOR OF SAFETY/EDUCATION

DARLENE FOSSUM
OSHA
CONSTRUCTION TEAM LEADER

STEPHEN M. BINN
ASSISTANT DIRECTOR OF SAFETY/EDUCATION

PRECISION Environmental Company
5722 Schaaf Road · Independence, Ohio 44131 · (216) 642-6040

Certifies that

KENNETH A. YATES
818 Wayside Avenue, Cleveland, Ohio 44110

Successfully completed the course on

LEAD HAZARD AWARENESS

Conducted in accordance with 29 CFR 1926.62

Course Date: March 14, 1996
Certificate Number: 031496162

Principal Instructor

HAZARDOUS WASTE WORKER REFRESHER TRAINING COURSE

NAME: Kenneth Yates	
S.S. #: XXX-XX-4117	
DATE COMPLETED INITIAL COURSE: 2/10/06	REFRESHER COMPLETION DATE: 3/10/07
NEXT REFRESHER TRAINING DUE WITHIN ONE YEAR OF THE REFRESHER COMPLETION DATE. 3/10/08	
CERTIFICATE #: 277504117HWR0307	

COMPLIES WITH OSHA REGULATION 29 CFR 1910.120

LABORERS-AGC EDUCATION AND TRAINING FUND

37 Deerfield Road
P.O. Box 37
Pomfret Center, CT 06259
(860) 974-0800

HAZARDOUS MATERIALS TECHNICIAN

This certificate of completion is awarded to

Kenny Yates

For completion of eight hours of Hazardous Material Technician refresher training according to OSHA 1910.120

Precision Environmental

HHI Consulting, Inc

University of Cincinnati

Occupational Health & Safety Continuing Education Program
Co-Sponsored by *Training Services International*

Kenny Yates

Precision Environmental
5500 Old Brecksville Road
Independence OH 44131

Has Successfully Completed the

Lead Safety for Renovation, Repair and Painting Initial Training Course

Program Director

R-I-18456-10-02513
Certificate Number

6/5/2010
Issue Date Language - English

Course Principal Instructor

8
Continuing Education

5/13/10
Course Date

Occupational Health & Safety Continuing Education, UC Kettering Campus, 3100 E. Galbraith Rd., Cincinnati, OH

10 TSI 35602 RRF

American Heart Association
Learn and Live.

Heartsaver® First Aid

Kenny Yates

APRIL 2010 — Issue Date
APRIL 2012 — Recommended Renewal Date

Training Center: OHIO 216-332-9484
TC Address / Contact Info: Health Comprehensive Care ACLS & CPR

Instructor: CRAIG DUNNING RN-CCRN-TNCC-EMT

Holder's Signature

Fill in the circles of the modules NOT completed. This card contains unique security features to protect against forgery.

Section 5

Worker Qualifications

Worker documentation shall be submitted when work crew is known.

Section 6

Respiratory Protection Program

1.0 PURPOSE

To provide guidance, in compliance with 29 CFR 1910.134, 29 CFR 1926.1101(h)(2), and 29 CFR 1926.62(f)(1), in the selection and proper use of respirators for protection from respiratory hazards during the course of working with known and unknown hazardous materials. These materials may include but are not limited to asbestos, lead, mold, and other respiratory hazards.

2.0 APPLICATION

This procedure applies to the Precision Environmental Company and Precision ProCUT facilities and jobsites when employees are determined to require the use of respiratory protection.

Compliance with local laws and regulations is mandatory. Where the customer's procedures are more protective than OSHA or local requirements, Precision Environmental will comply with the more protective requirements.

3.0 RESPONSIBILITY

The Safety Director is the designated Respiratory Protection Program Administrator and is solely responsible for all facets of the program and has full authority to make necessary decisions to ensure the success of this program. The Program Administrator will develop and maintain written detailed instructions covering each of the basic elements in this program, and is the sole person authorized to amend these instructions. This company has expressly authorized the Program Administrator to halt any operation of the company where there is danger of serious personal injury.

Project Managers and Supervisors shall be responsible for implementation of the Respiratory Protection Program on projects. This includes ensuring that proper selection of respirators, fit testing, training, and maintenance has been conducted for employees on all projects.

4.0 DEFINITIONS

4.1 Air-Purifying Respirators are respirators which can purify the air, but do not supply air. They must never be used in oxygen-deficient atmospheres. They include:

- Gas and Vapor Respirators (Chemical Cartridge Respirators)
- Particulate Respirators (Mechanical Filter Respirators)

- Powered Air-Purifying Respirators (PAPR)
- Combination Gas, Vapor, and Particulate Respirators

4.2 Air-Supplying Respirators are respirators which provide a supply of breathable air different from the workplace air. They include:

- Self-Contained Breathing Apparatus (SCBA)
- Supplied-Air Respirators (SAR)
- Combination Self-Contained and Air-Supplying Respirators

4.3 Chemical Cartridge Respirators - See Gas and Vapor Respirators.

4.4 Combination Gas, Vapor, and Particulate Respirators filter out gases, vapors, and particulates by passing the contaminated air through a cartridge or canister containing both a particulate filter and a gas/vapor absorbing device.

4.5 Combination Self-Contained and Air-Supplying Respirators are respirators usually used in atmospheres that are immediately dangerous to life or health. The auxiliary cylinder permits escape if the regular air line supply is cut off.

4.6 Filtering Facepiece (dust mask) means a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium.

4.7 Gas And Vapor Respirators (also known as chemical cartridge respirators) are respirators which remove gases and/or vapors by passing the contaminated air through cartridges containing charcoal or other special material that traps these contaminants. Cartridges must be matched to the contaminants. These cartridges are used to protect against contaminants that have adequate warning properties of smell or irritation. This allows the wearer to judge when a cartridge is no longer usable. Some cartridges are dated as well, and should not be used after the expiration date.

4.8 Immediately Dangerous to Life and Health (IDLH) is a term used to describe a very hazardous atmosphere where employee exposure can:

- Cause serious injury or death within a short time.

- Cause serious delayed (chronic) effects.

4.9 Negative Pressure Respirator is a respirator in which the pressure inside the face piece is lower than the outside pressure. (This means that all negative-pressure respirators must have a tight fitting face piece with a good seal between the respirator and the face. If the fit is poor and a leak occurs, the outside

contaminated air at the higher pressure will leak into the face piece at the lower pressure.) Since leaks would be occurring around the seal rather than through the air-purifying elements of the respirator, contaminated air would enter the worker's breathing zone.

4.10 Particulate Respirators (also known as mechanical filter respirators) are respirators which depending upon the design of the filters, can filter out dust, fog, fume, mist, spray, or smoke by passing the contaminated air through a pad or filter. Filters should be changed at frequent intervals, when they become clogged, or when it becomes difficult to breathe through them.

4.11 Positive Pressure Respirator is a respirator in which the pressure inside the respirator face piece is greater than the pressure outside the face piece or the atmospheric pressure. Theoretically, a leak would be outward and exposure to the contaminant is less likely to occur.

4.12 Powered Air-Purifying Respirators use a blower to draw contaminated air through an element that removes the contaminant and to supply purified air to a face piece, helmet, or hood. The purifying element may be either a filter, a cartridge, or a combination of the two.

4.13 Qualitative Fit Test is a pass/fail fit test that relies on the wearer's sensory response to detect the challenge agent.

4.14 Quantitative Fit Test is a fit test that uses an instrument to measure the challenge agent inside and outside the respirator.

4.15 Respiratory Hazards occur when a toxic or harmful material is present in the atmosphere at a concentration that is high enough to impair body function. Some respirators protect against air contaminants while others protect against both air contaminants and oxygen deficiency.

4.16 Self-Contained Breathing Apparatus (SCBA) are respirators which provide a transportable supply of breathable air, and afford complete respiratory protection against toxic gases and oxygen deficiency.

4.17 Supplied-Air Respirators (SAR) provide air through an air line or air hose. The air may be supplied from a compressor or through a large diameter tubing with its inlet placed in uncontaminated air.

5.0 PROCEDURES

5.1 General Requirements

5.1.1 The program administrator shall assure that an effective respiratory protection program is implemented by:

- Conducting PPE Hazard Assessment to determine the workplace risks and hazards to which employees may be exposed (for Precision's PPE Hazard Assessment see Appendix 6);

- Developing a written standard operating procedure covering the training, selection, use and maintenance of respirators;

- Providing the correct respirators for the specific hazards;

- Maintaining surveillance of work area conditions and degree of employee exposure or stress;

- Conducting a regular inspection and evaluation to determine the continued effectiveness of the program.

5.1.2 Respirators are to be used only where engineering control of respiratory hazards is not feasible, while engineering controls are being installed, or in emergencies.

5.1.3 When effective engineering controls are not feasible, employees that are exposed to the effects of inhaling hazardous dust, gases, mist, vapors and fumes must be provided with respiratory protection devices.

5.1.4 Respirators shall only be used by those employees who have been properly fitted and trained in the proper use, care, storage and maintenance of the respirators.

5.1.5 Respirators shall be assigned to individual workers for their exclusive use.

5.1.6 Respirators shall not be worn when conditions prevent a good face seal. Such conditions may be a growth of beard, side burns, a skull cap that projects under the face piece, or temple pieces on glasses. Also the absence of one or both dentures can seriously affect the fit of a face piece.

5.1.7 All employees who are required to wear a respirator for personal protection through the course of their normal job requirements, shall be clean shaven at the beginning of the day. No beards or long side burns that

reach the seal of the respirator shall be allowed. Mustaches are permissible as long as they do not reach the seal of the respirator.

5.1.8 Contact lenses shall not be worn under self-contained breathing apparatus (SCBA) or supplied air respirators (SAR).

5.1.9 All employees who require corrective prescription lenses and are required to wear a full-face respirator (Air Purifying, Supplied Air or SCBA) shall be provided a pair of prescription eyeglass inserts.

5.2 Respirator Selection

5.2.1 Respirators shall be selected on the basis of hazards to which the worker is exposed.

5.2.2 Only NIOSH certified respirators shall be selected and used.

5.2.3 Respirator parts which are not certified for use together must NEVER be interchanged.

5.2.4 Respirator parts manufactured by a different respirator supplier must NEVER be interchanged.

5.3 Medical Qualifications

5.3.1 Employees required to wear respiratory protection shall be examined annually by a physician to ensure that they are physically able to wear respirators while working.

5.3.2 The physician conducting the exam shall determine what health and physical conditions are pertinent and shall certify the employee's ability to use a respirator in compliance with the requirements of **29 CFR 1910.120, 29 CFR 1910.134** and **29 CFR 1926.1101**..

5.4 Training

5.4.1. Respirator training shall include:

- The contaminants to be encountered, their toxic properties and the probable concentration to be expected.

- The reasons for using the respirator and the protection to be provided.

- Description of the respiratory protective device. This shall include the capabilities and limitations of the respirator, the parts of the respirator, and instructions on checking for proper fit and operating condition.

- Actual process of putting the respirator on and adjusting for proper fit.

- Wearing the respirator for a period of time in normal air to become familiar with its use.

- Instruction on the proper maintenance and storage of the respirator.

- Fit testing.

- Respirator training records shall be maintained in the employee training record file.

5.5 Fit Testing

5.5.1. Qualitative fit testing procedures (Appendix 2) shall be performed initially on all employees required to wear respirators and repeated at least annually (or at appropriate intervals when there is a significant change in the wearer's physical status).

5.5.2. Any employee who is not clean-shaven or who has any other facial features which intrude into the respirator sealing surface, shall not be fit tested and shall not be allowed to wear a respirator.

5.5.3. All records related to respirator fit testing shall be maintained in the employee's file and in the Precision employee database.

5.5.4. To assure proper protection, the facepiece fit shall be checked by the wearer each time the respirator is worn. Test procedures shall include simple field tests (negative and positive fit test).

5.6 Respirator Inspection, Maintenance and Storage

5.6.1 Employees using respirators must guard against damage to the respirators and immediately replace any defective respirator or respirator parts.

5.6.2. Respirators shall be properly maintained per the procedures in Appendix 3 to assure proper performance and maximum employee protection. This maintenance program shall include:

- Periodic inspection of all respirators. Respirators shall be inspected routinely by the user and immediately before each use.

- Regular cleaning and sanitizing of respirators. (All equipment shall be cleaned and sanitized on a daily basis when used.)

- Inspection of respirator component parts when they are cleaned and replacement of defective parts.

5.6.3. Respirators shall be cleaned after each use and stored in a convenient and sanitary location. Storage containers for clean respirators, in the form of plastic bags or covered boxes, shall be provided.

5.6.4. Respirators shall be stored to protect them from dust, sunlight, heat, extreme cold, excessive moisture, and damaging chemicals. Unprotected respirators can sustain damaged parts or face piece distortion that make them ineffective.

5.6.5. Respirators for emergency use, self-contained breathing apparatus (SCBA), and supplied air respirator systems (SAR) shall be thoroughly inspected at least once a month and after each use.

APPENDIX 1

Precision Environmental Respirator Assignment and Fit Test

A successful respirator fit test has been completed by the individual named below using the respirator fit test procedure mandated in 29 CFR 1910.134 Appendix A.

Name _____ Social Security Number _____ Date _____

Address (street, city, state, zip) _____

Respirator Model	Size	Pass	Fail
☐ AO Safety Flexi-Star Half Face	S ☐ M ☐ L ☐	☐	☐
☐ AO Safety 7-Star Full Face	S ☐ M ☐ L ☐	☐	☐
☐ Survivair Full Face PAPR	S ☐ M ☐ L ☐	☐	☐
☐ Racal Full Face PAPR	S ☐ M ☐ L ☐	☐	☐
☐ Other: _____	S ☐ M ☐ L ☐	☐	☐

Annual Respiratory Protection Training completed per 29 CFR 1910.134?: Yes ☐ No ☐

Annual medical evaluation completed?: Yes ☐ No ☐

Type of Fit Test: Qualitative ☒ Quantitative ☐

Type of Qualitative Test: Irritant smoke ☐ Banana oil ☐ Saccharin ☐

I hereby certify that that the above named employee has been properly fit tested per the referenced and attached procedures.

Test Administrator Name _____ Signature _____

Employee Name _____ Signature _____

Irritant Smoke Fit Test Protocol
(attach to back of fit test form)

The following test exercises are to be performed for an accepted fit test. Each test exercise shall be performed for one minute. The respirator shall not be adjusted once the fit test exercises begin. Any adjustment voids the test, and the fit test must be repeated. The test subject shall perform exercises, in the test environment, in the following manner:

(1) Normal breathing. In a normal standing position, without talking, the subject shall breathe normally.

(2) Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.

(3) Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.

(4) Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).

(5) Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song. ***Note: Rainbow Passage cannot be performed during an irritant smoke fit test since eyes must remain closed.***

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.

(6) Bending over. The test subject shall bend at the waist as if he/she were to touch his/her toes.

(7) Normal breathing. Same as exercise (1).

Irritant Smoke (Stannic Chloride) Protocol

(1) The respirator to be tested shall be equipped with high efficiency particulate air (**HEPA**) **or P100** series filter(s).

(2) Only stannic chloride smoke tubes shall be used for this protocol.

(3) No form of test enclosure or hood for the test subject shall be used.

(4) The smoke can be irritating to the eyes, lungs, and nasal passages. The test conductor shall take precautions to minimize the test subject's exposure to irritant smoke. Sensitivity varies, and certain individuals may respond to a greater degree to irritant smoke.

(5) The fit test shall be performed in an area with adequate ventilation to prevent exposure of the person conducting the fit test or the build-up of irritant smoke in the general atmosphere.

(6) The person being fit tested shall don the respirator without assistance, and perform the required user seal check(s).

(7) The test subject shall be instructed to keep his/her eyes closed.

(8) The test operator shall direct the stream of irritant smoke from the smoke tube toward the face seal area of the test subject, using the low flow pump or the squeeze bulb. The test operator shall begin at least 12 inches from the facepiece and move the smoke stream around the whole perimeter of the mask. The operator shall gradually make two more passes around the perimeter of the mask, moving to within six inches of the respirator.

(9) If the person being tested has not had an involuntary response and/or detected the irritant smoke, proceed with the test exercises.

(10) Exercises, 1 through 7 listed above, shall be performed by the test subject while the respirator seal is being continually challenged by the smoke, directed around the perimeter of the respirator at a distance of six inches.

(11) If the person being fit tested reports detecting the irritant smoke at any time, the test is failed. The person being retested must repeat the entire fit test procedure. **If the irritant smoke is not detected then the fit test is passed.**

APPENDIX 2

Precision Environmental's Accepted Fit Test Protocols (OSHA 1910.134 Appendix A)

A. Fit Testing Procedures -- General Requirements

Precision's Supervisors or designated medical provider shall conduct fit testing using the following procedures.

1. The test subject shall be allowed to pick the most acceptable respirator from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

2. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject's formal training on respirator use, because it is only a review.

3. The test subject shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.

4. The test subject shall be instructed to hold each chosen facepiece up to the face and eliminate those that obviously do not give an acceptable fit.

5. The more acceptable facepieces are noted in case the one selected proves unacceptable; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the points in the following item A.6. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.

6. Assessment of comfort shall include a review of the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:

   (a) Position of the mask on the nose

   (b) Room for eye protection

   (c) Room to talk

   (d) Position of mask on face and cheeks

7. The following criteria shall be used to help determine the adequacy of the respirator fit:

   (a) Chin properly placed;

(b) Adequate strap tension, not overly tightened;

(c) Fit across nose bridge;

(d) Respirator of proper size to span distance from nose to chin;

(e) Tendency of respirator to slip;

(f) Self-observation in mirror to evaluate fit and respirator position.

8. The test subject shall conduct a user seal check, either the negative and positive pressure seal checks described in Appendix 4 of this section or those recommended by the respirator manufacturer which provide equivalent protection to the procedures in Appendix 4. Before conducting the negative and positive pressure checks, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. Another facepiece shall be selected and retested if the test subject fails the user seal check tests.

9. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, mustache or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.

10. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician or other licensed health care professional, as appropriate, to determine whether the test subject can wear a respirator while performing her or his duties.

11. If the employee finds the fit of the respirator unacceptable, the test subject shall be given the opportunity to select a different respirator and to be retested.

12. Exercise regimen. Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.

13. The fit test shall be performed while the test subject is wearing any applicable safety equipment that may be worn during actual respirator use, which could interfere with respirator fit.

14. Test Exercises.

(a) The following test exercises are to be performed for Precision's accepted fit test protocols as prescribed in this appendix. The test subject shall perform exercises, in the test environment, in the following manner:

(1) Normal breathing. In a normal standing position, without talking, the subject shall breathe normally.

(2) Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.

(3) Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.

(4) Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).

(5) Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.

(6) Bending over. The test subject shall bend at the waist as if he/she were to touch his/her toes.

(7) Normal breathing. Same as exercise (1).

(b) Each test exercise shall be performed for one minute. The test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried. The respirator shall not be adjusted once the fit test exercises begin. Any adjustment voids the test, and the fit test must be repeated.

B. Qualitative Fit Test (QLFT) Protocols

1. General

(a) The Program Administrator when administering QLFT shall be able to prepare test solutions, calibrate equipment and perform tests properly, recognize invalid tests, and ensure that test equipment is in proper working order.

(b) The Program Administrator shall ensure that QLFT equipment is kept clean and well maintained so as to operate within the parameters for which it was designed.

2. Irritant Smoke (Stannic Chloride) Protocol

This qualitative fit test uses a person's response to the irritating chemicals released in the "smoke" produced by a stannic chloride ventilation smoke tube to detect leakage into the respirator.

(a) General Requirements and Precautions

(1) The respirator to be tested shall be equipped with high efficiency particulate air **(HEPA) or P100** series filter(s).

(2) Only stannic chloride smoke tubes shall be used for this protocol.

(3) No form of test enclosure or hood for the test subject shall be used.

(4) The smoke can be irritating to the eyes, lungs, and nasal passages. The test conductor shall take precautions to minimize the test subject's exposure to irritant smoke. Sensitivity varies, and certain individuals may respond to a greater degree to irritant smoke. Care shall be taken when performing the sensitivity screening checks that determine whether the test subject can detect irritant smoke to use only the minimum amount of smoke necessary to elicit a response from the test subject.

(5) The fit test shall be performed in an area with adequate ventilation to prevent exposure of the person conducting the fit test or the build-up of irritant smoke in the general atmosphere.

(b) Sensitivity Screening Check

The person to be tested must demonstrate his or her ability to detect a weak concentration of the irritant smoke.

(1) The test operator shall break both ends of a ventilation smoke tube containing stannic chloride, and attach one end of the smoke tube to an aspirator squeeze bulb.

(2) The test operator shall advise the test subject that the smoke can be irritating to the eyes, lungs, and nasal passages and instruct the subject to keep his/her eyes closed while the test is performed.

(3) The test subject shall be allowed to smell a weak concentration of the irritant smoke before the respirator is donned to become familiar with its irritating properties and to determine if he/she can detect the irritating properties of the smoke. The test operator shall carefully direct a small amount of the irritant smoke in the test subject's direction to determine that he/she can detect it.

(c) Irritant Smoke Fit Test Procedure

(1) The person being fit tested shall don the respirator without assistance, and perform the required user seal check(s).

(2) The test subject shall be instructed to keep his/her eyes closed.

(3) The test operator shall direct the stream of irritant smoke from the smoke tube toward the faceseal area of the test subject, using the low flow pump or the squeeze bulb. The test operator shall begin at least 12 inches from the facepiece and move the smoke stream around the whole perimeter of the mask. The operator shall gradually make two more passes around the perimeter of the mask, moving to within six inches of the respirator.

(4) If the person being tested has not had an involuntary response and/or detected the irritant smoke, proceed with the test exercises.

(5) The exercises identified in section I.A. 14. of this appendix shall be performed by the test subject while the respirator seal is being continually challenged by the smoke, directed around the perimeter of the respirator at a distance of six inches.

(6) If the person being fit tested reports detecting the irritant smoke at any time, the test is failed. The person being retested must repeat the entire sensitivity check and fit test procedure.

(7) Each test subject passing the irritant smoke test without evidence of a response (involuntary cough, irritation) shall be given a second sensitivity screening check, with the smoke from the same smoke tube used during the fit test, once the respirator has been removed, to determine whether he/she still reacts to the smoke. Failure to evoke a response shall void the fit test.

(8) If a response is produced during this second sensitivity check, then the fit test is passed.

APPENDIX 3

Precision Environmental Respirator Cleaning Procedures (OSHA 1910.13 Appendix B-2)

These procedures are provided for employee use when cleaning respirators. They are general in nature, and the employee as an alternative may use the cleaning recommendations provided by the manufacturer of the respirators used by their employees, provided such procedures are as effective as those listed here. Equivalent effectiveness simply means that the procedures used must accomplish the objectives set forth in this Appendix, i.e., must ensure that the respirator is properly cleaned and disinfected in a manner that prevents damage to the respirator and does not cause harm to the user.

I. Procedures for Cleaning Respirators

A. Remove filters, cartridges, or canisters. Disassemble facepieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.

B. Wash components in warm (110 deg. F maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.

C. Rinse components thoroughly in clean, warm (110 deg. F maximum), preferably running water. Drain.

D. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:

1. Hypochlorite solution (50 ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at (110 deg. F); or,

2. Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6-8 grams ammonium and/or potassium iodide/100 cc of 45% alcohol) to one liter of water at (110 deg. F); or,

3. Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.

E. Rinse components thoroughly in clean, warm (110 deg. F maximum), preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition,

some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.

F. Components should be hand-dried with a clean lint-free cloth or air-dried.

G. Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.

H. Test the respirator to ensure that all components work properly.

APPENDIX 4

Precision Environmental User Seal Check Procedures (OSHA 1910.134 Appendix B-1)

The individual who uses a tight-fitting respirator is to perform a user seal check to ensure that an adequate seal is achieved each time the respirator is put on. Either the positive and negative pressure checks listed in this appendix, or the respirator manufacturer's recommended user seal check method shall be used. User seal checks are not substitutes for qualitative or quantitative fit tests.

I. Facepiece Positive and/or Negative Pressure Checks

A. Positive pressure check. Close off the exhalation valve and exhale gently into the facepiece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.

B. Negative pressure check. Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s), inhale gently so that the facepiece collapses slightly, and hold the breath for ten seconds. The design of the inlet opening of some cartridges cannot be effectively covered with the palm of the hand. The test can be performed by covering the inlet opening of the cartridge with a thin latex or nitrile glove. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

II. Manufacturer's Recommended User Seal Check Procedures

The respirator manufacturer's recommended procedures for performing a user seal check may be used instead of the positive and/or negative pressure check procedures provided that the employer demonstrates that the manufacturer's procedures are equally effective.

APPENDIX 5

Precision Environmental Voluntary Use Procedure
(OSHA 1910.134 Appendix D)

Information for Employees Using Respirators When Not Required Under the Standard

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, of if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.

2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.

3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.

4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

APPENDIX 6

Precision Environmental's Respirator Hazard Assessment

The nature of Precision's work in the field is quite varied and can include the following potential exposures:

Asbestos - The potential for exposure exceeding the PEL are considered to be minimal with proper engineering protocols. Precision, however, requires its supervisors to perform personal air monitoring and all employees to wear proper respiratory protection during during all asbestos abatement and removal projects. Negative exposure assessments are maintained on file.

Lead - The potential for exposure exceeding the PEL are considered to be minimal with proper engineering protocols. Precision, however, requires its supervisors to perform personal air monitoring and all employees to wear proper respiratory protection during during all lead based paint abatement and removal projects. Negative exposure assessments are maintained on file.

Silica - The potential for exposure exceeding the PEL are considered to be minimal with proper engineering protocols. Negative exposure assessments are maintained on file.

Mold – There are no established PELs for microbial mitigation and exposures are considered to be minimal with proper engineering protocols. Precision, however, requires its supervisors and employees to wear proper respiratory protection during all microbial mitigation projects.

Unique situations or projects such as potential exposure to acutely toxic or carcinogenic materials or work activities in confined or poorly ventilated locations as determined by the Project Managers or Program Administrator will be evaluated and monitored on a case by case basis. These situations or projects are not the norm but may require respirators with greater protection factors.

Section 7

Asbestos Abatement Program

1.0 PURPOSE

To establish basic safe work practices and procedures for the abatement of asbestos containing materials (ACM) at all asbestos abatement jobsites where work is preformed by Precision Environmental Company or Precision ProCUT employees.

2.0 APPLICATION

This procedure shall be followed on all Precision Environmental Company jobsites where asbestos abatement is performed by Precision Environmental or Precision ProCUT.

Compliance with local laws and regulations is mandatory. Where the customer's procedures are more protective than OSHA or local requirements, Precision Environmental will comply with the more protective requirements.

3.0 RESPONSIBILITY

The company **Safety Director** is solely responsible for all facets of this program and has full authority to make necessary decisions to ensure the success of this program. The Safety Director will develop written detailed instructions covering each of the basic elements in this program, and is the sole person authorized to amend these instructions. This company has authorized the Safety Director to halt any operation of the company where there is danger of serious personal injury.

4.0 DEFINITIONS

Amended Water Water containing a wetting agent or surfactant.

Asbestos The term asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

Asbestos Control Area An area where asbestos removal operations are performed which is isolated by physical boundaries to prevent the spread of asbestos dust, fibers, or debris.

Area Monitoring Sampling of asbestos fiber concentrations within the asbestos control area which is representative of the airborne concentrations of asbestos fibers, which may reach the breathing, zone (12" of the nose/mouth).

Abatement Procedures to control fiber release from spray or trowel applied asbestos containing building materials. Includes removal only.

Airlock A system for permitting entrance or exit without permitting air movement between a contaminated area and an uncontaminated area, typically consisting of two curtained doorways at least 6 feet apart.

Air Monitoring The process of measuring the fiber content of a specific volume of air in a stated period of time. (Includes personnel and area monitoring).

Asbestos Containing Materials (ACM) Includes any existing construction material within the facility which contains > 1% asbestos.

Asbestos Workers Any workers involved in the disturbance or removal of existing asbestos materials.

Authorized Visitor The building owner, the building owner's representative or a representative of any regulatory or other agency having jurisdiction over the project.

Barrier Polyethylene sheeting which is used to separate contaminated work areas from uncontaminated areas by applying the sheeting to walls, floors and other structures.

Class I Asbestos Work Work activities involving the removal of Thermal System Insulation (TSI) and surfacing Asbestos Containing Material (ACM) and Presumed Asbestos Containing Material (PACM).

Class II Asbestos Work Work activities involving the removal of ACM, which is not thermal system insulation, or surfacing material. Includes but is not limited to, the removal of asbestos containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III Asbestos Work Repair and maintenance operations, where "ACM", including thermal system insulation and surfacing material, is likely to be disturbed.

Class IV Asbestos Work Maintenance and custodial activities during which employees contact ACM and PACM and activities to clean up waste and debris containing ACM and PACM.

Clean Room An uncontaminated area or room, which is part of the worker decontamination enclosure system, which provisions for storage of workers' street clothes and protection equipment.

Competent Person One who is capable of identifying existing asbestos hazards in the work place and selecting the appropriate control strategy for asbestos exposure and who has the authority to take prompt corrective measures to eliminate them. For Class I and Class II work, one who is specially trained in a training course which meets EPA's requirements, and for Class III and IV work, one who is trained in accordance with EPA requirements for maintenance and custodial staff.

Contaminated Material Shall mean an area of material containing asbestos or coated with asbestos.

Disposal The transportation and final disposal of asbestos containing materials to an approved disposal site, in accordance with the Federal, State and Local Regulations.

Decontamination System A series of connected rooms, with curtained doorways between any two adjacent rooms, for the decontamination of workers or of materials and equipment. A

decontamination enclosure system always contains at least one airlock.

Encapsulant A liquid sealant material which is applied to asbestos containing material or asbestos contaminated material to limit the possible release of asbestos fibers into the ambient air. The encapsulant may be a penetrating type or a bridging type. The penetrating type moves into the asbestos material and bind the fibers together, while a bridging type covers over the surface of the asbestos and encloses the fibers.

Encapsulation All specified procedures necessary to coat asbestos-containing or asbestos-contaminated materials with an encapsulant to control the possible release of asbestos fibers into the ambient air.

Equipment Room A contaminated area or room, which is part of the worker decontamination enclosure system, with provision for storage of contaminated clothing and equipment.

Holding Area A chamber between the washroom and an uncontaminated area in the equipment decontamination enclosure system. The holding area comprises an airlock.

HEPA Filter Equipment High efficiency particulate air filtered vacuuming equipment with a filter system capable of collecting and retaining asbestos fibers. Filters shall be of 99.97 percent efficiency for retaining fibers of 0.3 microns in diameter or larger.

HEPA Filter A high efficiency particulate air (HEPA) filter capable of trapping and retaining 99.97% of asbestos particles greater than 0.3 microns in diameter.

Initial Exposure Assessment Initial monitoring performed at the initiation of each asbestos job to accurately determine the airborne concentrations of asbestos to which employees may be exposed.

Isolation Shall mean the act of partitioning off or sealing an area containing asbestos from the adjacent environment.

Medical Examinations Before exposure to airborne asbestos fibers, provide workers with a comprehensive medical examination as required by 29 CFR 1926.1101 and 1910.134. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving asbestos fibers and within 30 calendar days before or after the termination of employment in such occupation.

Negative Air Machine A filtration system which utilizes a series of air filters in combination with an exhaust fan to reduce the level of airborne asbestos in a work area. The final filter in a negative air filtration unit should be a HEPA filter with an efficiency of no less than 99.97% of particles greater than 0.3 microns in diameter.

Negative Initial Exposure Assessment Demonstration by the employer that initial exposure assessments indicate that employee exposure during an operation is expected to be consistently below the PELs.

Permissible Exposure Limit (PEL) The permitted employee exposure level based on an 8 hour time- weighted average (TWA). The PEL for asbestos is 0.1 fiber per cubic centimeter of air TWA (8).

Personal Monitoring Sampling of asbestos fiber concentrations within the breathing zone of an employee.

Regulated or Control Areas A controlled area where all Class I, II and III asbestos work or other asbestos operations, which can or may exceed the PEL, must be performed. Regulated areas must be demarcated and have access limited to authorized persons only.

Removal Shall mean the dismantling and disposal of existing materials, components, equipment, and utilities. Removed items shall be handled, prepared for storage, transported to storage areas, and disposed of as specified.

Shower Room A room between the clean room and the equipment room in the worker decontamination enclosure system, with hot and cold or warm running water and suitably arranged for complete showering during decontamination. The shower room comprises an airlock between contaminated and clean areas. Portable showers shall be used at all locations unless noted otherwise specified.

Time Weighted Average The TWA is an 8-hour time weighted average airborne concentration of particles per volume of air. The Permissible Exposure Limit is 0.1 fiber/cubic centimeter as an 8-hour TWA as set forth in 29 CFR 1926.1101.

Wet Cleaning The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water, and by contaminated waste.

Work Area Asbestos Removal Work Area, area in which asbestos removal will be done. The area which is designated for the containment of the asbestos material.

5.0 PROCEDURES

5.1 Pre-Job

5.1.1 Asbestos abatement projects mandate a very thorough and consistent tracking system from the time of award to the project completion.

5.1.2 Notifications to the Ohio Department of Health, Local Air Quality District, and Ohio Environmental Protection Agency must first be generated. The local fire department may need to be informed of a change in the fire protection system, if applicable, and the local police and emergency medical services may also need to be informed of the project. All notifications should be sent certified mail in order to assure they were received. Asbestos abatement conducted outside the State of Ohio shall comply with all applicable local and state notifications.

5.1.3 The estimator and project manager shall review specifications, drawings and the conditions at the job site for "hazards" or unusual conditions that may exist. An Initial Exposure Assessment should be also be utilized to evaluate potential asbestos exposure.

5.1.4 Various projects may require additional paperwork including shop drawings, work area plans, schedules, storage area plans, fire and safety evaluation plan, worker's health and safety training programs including respiratory protection, and temporary electrical or temporary HVAC system control. All of these requirements will be addressed by Precision Environmental, as needed for the project.

5.1.5 Copies of Supervisor and worker qualifications, certifications, training and medical reports showing the employee's ability to perform the assignment and wear respiratory protection shall be available on site and/or furnished to the owner's representative.

5.1.6 During mobilization all projects shall have emergency telephone numbers and location of emergency services posted. As required by OSHA, personnel trained in First Aid shall be available on the jobsite. All MSDS data sheets shall be available from the Supervisor per requirements of the OSHA's Hazard Communications requirements.

5.1.7 Exposure Assessments

- ***Initial*** At the start of any work operations, an Initial Exposure Assessment must be performed. The purpose of an initial exposure assessment is to determine expected exposures that may be encountered during asbestos operations. The assessment must be performed by a competent person. An initial assessment will take into consideration monitoring results and all observations and information that may indicate employee exposure. Prior to conducting the initial assessment, and until it is documented that employees are not exposed at or above the PEL, or a negative exposure assessment has been made, it will be presumed that workers will be exposed above the TWA. Copies of initial exposure assessments shall be submitted to the owner's representative and maintained at the project location as required.

- ***Negative*** Employee exposure may also be demonstrated to be below the PEL by a Negative Exposure Assessment. Monitoring data from projects within twelve months of the current project may be used. The projects must closely resemble the processes, types of material, control methods, work practices, and environmental conditions existing on the current project. Personnel training and experience must also be similar. The data must show that there is a high degree of certainty that employee exposures will not exceed the TWA and excursion limit.

5.2 Full Containment ACM Removal

During any removal of friable asbestos containing material (ACM), it is imperative the proper methods and procedures are selected. Under normal conditions, some non-friable materials containing asbestos would not be considered hazardous; however, this material will release airborne concentrations of asbestos fibers during demolition and removal and therefore shall be handled in accordance with removal and disposal procedures as specified herein. The removal of friable ACM requires specialized techniques to isolate the work area from the outer environment. One of the most commonly used techniques to abate these areas is the **Full Containment** method.

Work Area Preparation

5.2.1 The first step in full containment procedures involve the isolation of the project area. Precision Environmental shall post caution signs meeting the specifications of OSHA 29 CFR 1926.1101 at locations and approaches to a location where airborne concentrations of asbestos may exceed ambient background levels. Signs will be posted at a distance sufficiently far enough away from the work area to permit the employee/public to read the sign and take the necessary protective measures to avoid exposure. Additional signs may be posted as necessary following construction of work area enclosure barriers. Warning signs shall bear the following information:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING
REQUIRED IN THIS AREA

5.2.2 Labels will be affixed to all containers containing asbestos including waste containers. Labels will be used in accordance with OSHA's Hazard Communication Standard and will contain the following information:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

Precision Environmental will notify all employers of employees who will be performing work within or adjacent to areas of asbestos abatement operations of the presence, location and quantity of ACM or PACM. Notification shall be in writing or personal communication.

5.2.3 Precision Environmental shall shut down and lockout electrical power to all work areas. Temporary power and lighting shall be installed in compliance with all applicable electrical code requirements and **OSHA** requirements for temporary electrical systems.

5.2.4 Precision Environmental shall shut down and lockout all heating, ventilation and air conditioning systems (HVAC) components that are in supply or pass through the work area. (Note: Interiors of existing duct work may require decontamination). Seal all intake and exhaust vents in the area with tape and 6-mil polyethylene. Also seal any seams in system components that pass through the work area. Removal all HVAC system filters and place in labeled 6 mil polyethylene bags for staging and eventual disposal as asbestos contaminated waste.

5.2.5 Precision Environmental shall provide sanitary facilities for abatement personnel outside of the enclosed work area and maintain them in a clean and sanitary condition throughout the project.

5.2.6 Precision Environmental shall preclean all moveable objects within the work area using a HEPA filtered vacuum and/or wet cleaning methods as appropriate. After cleaning, these objects shall be removed from the work area and carefully stored in an uncontaminated location. Drapes, upholstered furniture and other fabric items shall be cleaned as asbestos contaminated items utilizing HEPA vacuum techniques.

5.2.7 Precision Environmental shall preclean all fixed objects in the work area using HEPA filtered vacuums and/or wet cleaning techniques as appropriate. Careful attention must be paid to machinery behind grills or gratings where access may be difficult but contamination significant. Attention shall be paid to all wall, floor and ceiling penetrations behind fixed items. After precleaning fixed objects will be enclosed in a double layer of 4 mil polyethylene sheeting and seal securely in place with tape. Control panels, gauges, etc. in work area may require owner access during abatement. These shall be designated and enclosures constructed with access flaps sealed with waterproof tape.

5.2.8 Precision Environmental shall seal off all windows, doorways, elevator openings, corridor entrances, drains, ducts, grills, grates, diffuses, skylights and any other openings between the work are and uncontaminated areas outside of the work area with 4 mil polyethylene sheeting and tape.

5.2.9 Precision Environmental shall cover floors with two layers of 6-mil (minimum) sheeting. Additional layer(s) of sheeting shall be utilized as drop cloth(s) to aid in the cleanup of bulk materials. The layers of drop cloth plastic shall be installed so that they can be removed independently from the first two layers installed.

5.2.10 Plastic shall be sized to minimize seams. If the floor area necessitates seams, those on successive layers of sheeting shall be staggered to reduce the potential for water to penetrate to the flooring material. A distance of at least six feet between seams is sufficient. No seams will be located at any wall/floor joints. Floor sheeting shall extend at least 12" up the sidewalls of the work area.

5.2.11 Sheeting shall be installed in a fashion so as to prevent slips between successive layers of material. (Vinyl sheeting may be used for improved traction on floors) Where stairs or ramps are covered with plastic, 3/4" exterior grade plywood treads securely held in place will be provided.

5.2.12 All walls in the work area will be covered with polyethylene sheeting. Walls that are non-porous and will not be damaged by water, surfactant, encapsulant do not necessarily need protection. They can be decontaminated using HEPA vacuums and wet cleaning techniques. Walls with mortar joints (e.g. tile) are considered porous. In addition, openings through these walls to uncontaminated areas of the building must be sealed as described previously. Walls shall be covered with two layers of 4-mil polyethylene sheeting. Wall sheeting shall overlap floor sheeting by at least 12 inches beyond the wall/floor joint to provide a better seal against water damage and for negative pressure. Wall sheeting shall be secured adequately to prevent it from falling away from walls. This will require additional support/attachment when negative pressure ventilation is utilized. The inner most layer of polyethylene (farthest from the building surface) shall be installed as a "drop cloth". It shall be installed such that it can be removed independently from the outer most layer of polyethylene in conjunction with the layer of floor drop cloth.

Decontamination Center

5.2.13 Worker decontamination enclosure systems shall be provided at all locations where workers will enter or exit the work area. One system at a single location is preferred, these systems may consist of existing rooms outside of the work area, if layout is appropriate, that can be enclosed in plastic sheeting and are accessible from the work area. When this situation does not exist enclosure systems may be constructed out of metal, wood or plastic support as appropriate.

5.2.14 The worker decontamination enclosure system shall consist of at least a clean room, a shower room and an equipment room each separate from each other and from the work area by air locks. Entry to and exit from all airlock and decontamination enclosure system chambers shall be through curtained doorways consisting of two sheets of overlapping polyethylene sheeting. One sheet shall be secured at the top and left side, the other sheet at the top and right side. Both sets shall have weights attached to the bottom to insure that they hang straight and maintain a seal over the doorway when not in use.

5.2.15 Access between any rooms in the decontamination enclosure system shall be through an airlock with at least three feet separating each curtained doorway. Pathways into (from clean to contaminated) and out from (contaminated to clean) the work area shall be clearly designated.

5.2.16 The clean room shall be sized to adequately accommodate the work crew. Benches shall be provided as well as hooks for hanging up street clothes. Clean work clothes, clean disposable clothing, replacement filters for respirators, towels and other necessary items will be provided in adequate supply at the clean room. A

location for posting shall also be provided in this area. Lighting, heat and electricity shall be provided as necessary for comfort.

5.2.17 The shower room shall contain one or more showers as necessary to adequately accommodate workers. Each showerhead shall be supplied with hot and cold water adjustable at the tap. The shower enclosure will be constructed to ensure against leakage of any kind. Shower water will be drained, collected and filtered through a system with at least 0.5 - 1.0 micron particle size collection capability.

5.2.18 The equipment room shall be used for storage of equipment and tools at the end of a shift after they have been decontaminated using a HEPA filtered vacuum and/or wet cleaning techniques as appropriate. Replacement filters (in sealed containers until used) for HEPA vacuums and negative pressure ventilation equipment. Extra tools, containers of surfactant and other materials and equipment that may be required during the abatement may also be stored here as needed. A dry lined drum with a labeled 6-mil polyethylene bag for collection of disposable clothing shall be stored in this room. Contaminated footwear (e.g. rubber boots, other reusable footwear) shall be stored in this area for reuse the following workday.

Work Area

5.2.19 Emergency exits shall be established and clearly marked with duct tape, arrows or other effective designations to permit easy location from anywhere within the work area. They shall be secured to prevent access from uncontaminated areas and still permit emergency exiting. These exits shall be properly sealed with polyethylene sheeting, which can be cut to permit egress if needed. These exits may be the worker decontamination enclosure, the waste pass-out airlock and/or other alternative exits satisfactory to fire officials.

5.2.20 The contaminated work area shall be separated from uncontaminated, occupied areas of the building by the construction of airtight barriers. Walls shall be constructed of wood or metal framing to support barriers in all openings larger than 4' x 8'. A sheeting material (plywood, drywall) of at least 3/8" thickness shall be applied to work side of barrier. Cover both sides of partition with a double layer of 6-mil polyethylene sheeting with staggered joints and seal in place. Caulk edges of partition at floor, ceiling, walls and fixtures to form an airtight seal.

5.2.21 Following completion of the construction of all polyethylene barriers and decontamination system enclosures, allow overnight settling to insure that barriers will remain intact and secured to walls and fixtures before beginning actual abatement activities.

5.2.22 All polyethylene barriers inside the work place, in the worker decontamination enclosure system, in the waste container pass-out airlock and at partitions constructed to isolate the work area from occupied areas shall be inspected at least twice daily, prior to the start of each day's abatement activities and following the completion of the day's abatement activities. Smoke tubes shall be used to test the effectiveness of the barrier system as required.

5.2.23 At any time during the abatement activities after barriers have been erected, if visible material is observed outside of the work area or if damage occurs to barriers, work shall immediately stop, repairs be made to barriers, and debris/residue cleaned up using appropriate HEPA vacuuming and wet mopping procedures.

5.2.24 If air samples collected outside of the work area during abatement activities indicate airborne fiber concentrations greater than 0.01 f/cc or pre-measured background levels (whichever is lower) work shall immediately stop for inspection and repair of barriers. Cleanup of surfaces outside of the work area using HEPA vacuums or wet cleaning techniques may be necessary.

5.2.25 Precision Environmental Company shall install and initiate operation of negative pressure ventilation equipment as needed to provide one air change in the work area every 15 minutes. Openings made in the enclosure system to accommodate these units shall be made airtight with tape and/or caulking as needed. If more than one unit is installed, they should be turned on one at a time, checking the integrity of wall barriers for secure attachment and need for additional reinforcement. Insure that adequate power supply is available to satisfy the requirements of the ventilating units. Negative pressure ventilation units shall be exhausted to the outside of the building. They shall not be exhausted into occupied areas of the building. Twelve-inch extension ducting shall be used to reach from the work area to the outside when required. Careful installation, air monitoring and daily inspections shall be done to insure that the ducting does not release fibers into uncontaminated building areas.

ACM Removal Procedure

5.2.26. Wet all asbestos containing material with an amended water solution using equipment capable of providing a fine spray mist; in order to reduce airborne fiber concentrations when the material is disturbed. Do not allow excessive water to accumulate in the work area. Maintain a high humidity in the work area by misting or spraying to assist in fiber settling and reduce airborne concentrations. Wetting procedures are not equally effective on all types of asbestos containing materials but shall none-the-less be used in all cases.

5.2.27 Saturated asbestos containing material shall be removed in manageable sections. Removed material will be containerized before moving to a new location for continuance of work. Surrounding areas shall be periodically sprayed and maintained in a wet condition until visible material is cleaned up.

5.2.28 Material removed from building structures or components shall not be dropped or thrown to the floor. Material should be removed as intact sections or components whenever possible and carefully lowered to the floor. If this cannot be done for materials greater than 50 feet above the floor, a dust-tight chute shall be constructed to transport the material to containers on the floor or the material may be containerized at elevated levels (e.g. on scaffolds) and carefully lowered to the

ground by mechanical means.

5.2.29 For materials between 15 and 50 feet above the ground they may be containerized at elevated levels or dropped onto inclined chutes or scaffolding for subsequent collection and containerization.

5.2.30 Containers shall be sealed when full. Bags shall not be overfilled. ACM shall be adequately wet before sealing containers. They should be securely sealed to prevent accidental opening and leakage by tying tops of bags in an overhead bow or by taping in gooseneck fashion. (Bags may be placed in drums for staging and transportation to the landfill. Bags shall be decontaminated on exterior surfaces by wet cleaning and HEPA vacuuming before being placed in clean drums and sealed with locking ring tops).

5.2.31 Large components removed intact may be wrapped in 2 layers of 6-mil polyethylene sheeting secured with tape for transport to the landfill. Asbestos containing waste with sharp-edged components (e.g. nails, screws, metal lathe, tin sheeting) will tear polyethylene bags and sheeting and shall be placed into drums for disposal.

5.2.32 After completion of all stripping work, surfaces from which asbestos containing materials have been removed shall be wet brushed and sponged or cleaned by some equivalent method to remove all visible residue.

5.2.33 Special circumstances (e.g. live electrical equipment) may prohibit the adequate use of wet methods to reduce fiber concentrations. For these situations dry removal may required and requiring special permits from the relevant agencies.

Clean-up Procedures

5.2.34 Remove and containerize all visible accumulations of asbestos containing material and asbestos contaminated debris utilizing rubber dustpans and rubber squeegees to move material around. Special care shall be taken to minimize damage to floor sheeting. Remove "drop cloth" layer of polyethylene sheeting from walls and floor.

5.2.35 After removal of "drop cloth" layer of polyethylene the following will be in place: (1) two layers of polyethylene sheeting on the floor, (2) one layer of polyethylene sheeting on walls, and polyethylene layers(s) over equipment and wall or ceiling penetrations, and temporary barriers separating the work area from non-work areas.

5.2.36 All surfaces in the work area shall be cleaned using cloths, mops and sponges as appropriate. Excess water and gross wet debris shall be collected with a wet-dry shop vacuum. The vacuum shall be decontaminated prior to removal from the work area.

5.2.37 At this time, a thin coat of an encapsulating agent shall be applied to all surfaces in the work area to seal in non-visible residue including structural members, building