29 CFR 1910.134

RESPIRATORY PROTECTION

NOTE: THIS SAMPLE PROGRAM IS PROVIDED TO ASSIST IN COMPLYING WITH 29 CFR 1910.134, RESPIRATORY PROTECTION. IT IS NOT INTENDED TO SUPERSEDE THE REQUIREMENTS DETAILED IN THE STANDARD. EMPLOYERS SHOULD REVIEW THE STANDARD FOR PARTICULAR REQUIREMENTS WHICH ARE APPLICABLE TO THEIR SPECIFIC SITUATION AND TO MAKE THE NECESSARY CHANGES. EMPLOYERS WILL NEED TO ADD INFORMATION RELEVANT TO THEIR PARTICULAR FACILITY IN ORDER TO DEVELOP AN EFFECTIVE, COMPREHENSIVE PROGRAM.

Respiratory Protection Program

1.0 Purpose

(Company Name) has determined that employees performing ***(list the activities requiring respirators)*** are exposed to respiratory hazards during routine operations. These hazards include wood dust, particulates, and vapors, and in some cases represent Immediately Dangerous to Life or Health (IDLH) conditions. The purpose of this program is to ensure that all company employees are protected from exposure to these respiratory hazards.

Engineering controls, such as ventilation and substitution of less toxic materials, are the first line of defense at ***(Company Name)***; however, engineering controls have not always been feasible for some of our operations, or have not always completely controlled the identified hazards. In these situations, respirators and other protective equipment must be used. Respirators are also needed to protect employees' health during emergencies. The work processes requiring respirator use at ***(Company Name)*** are outlined in Table 1 in the Scope and Application section of this program.

In addition, some employees have expressed a desire to wear respirators during certain operations that do not require respiratory protection. As a general policy

(Company Name) will review each of these requests on a case-by-case basis. If the use of respiratory protection in a specific case will not jeopardize the health or safety of the worker(s), ***(Company Name)*** will provide respirators for voluntary use. As outlined in the Scope and Application section of this program, voluntary respirator use is subject to certain requirements of this program.

2.0 Scope and Application

This program applies to all employees who are required to wear respirators during normal work operations, and during some non-routine or emergency operations such as a spill of a hazardous substance. This includes all employees performing ***(Applicable job tasks)*** . All employees working in these areas and engaged in certain processes or tasks (as outlined in the table below) must be enrolled in the company' s respiratory protection program.

In addition, any employee who voluntarily wears a respirator when a respirator is not required (i.e., in certain maintenance and coating operations) is subject to the medical evaluation, cleaning, maintenance, and storage elements of this program, and must be provided with certain information specified in this section of the program. Employees who voluntarily wear filtering facepieces (dust masks) are not subject to the medical evaluation, cleaning, storage, and maintenance

provisions of this program.

Employees participating in the respiratory protection program do so at no cost to them. The expense associated with training, medical evaluations and respiratory protection equipment will be borne by the company.

TABLE 1:

VOLUNTARY AND REQUIRED RESPIRATOR USE AT ***(Company Name)***

Respirator	**Department/Process**
Filtering facepiece (dust mask)	Voluntary use for warehouse workers
Half-facepiece APR or PAPR with P100 filter	Prep and Assembly Voluntary use for maintenance workers when cleaning spray booth walls or changing spray booth filter
SAR, pressure demand, with auxiliary SCBA	Maintenance - dip coat tank cleaning
Continuous flow SAR with hood	Spray booth operations Prep (cleaning)*
Half-facepiece APR with organic vapor cartridge	Voluntary use for Dip Coat Tenders, Spray Booth Operators (gun cleaning), andMaintenance workers (loading coating agents into supply systems)
Escape SCBA	Dip Coat, Coatings Storage Area, Spray Booth Cleaning Area

* until ventilation is installed.

3.0 **Responsibilities**

A. **Program Administrator**

The Program Administrator is responsible for administering the respiratory protection program. Duties of the program administrator include:

- Identifying work areas, processes or tasks that require workers to wear respirators, and evaluating hazards.
- Selection of respiratory protection options.
- Monitoring respirator use to ensure that respirators are used in accordance with their certifications.
- Arranging for and/or conducting training.
- Ensuring proper storage and maintenance of respiratory protection equipment.
- Conducting qualitative fit testing with Bitrex.
- Administering the medical surveillance program.
- Maintaining records required by the program.
- Evaluating the program.
- Updating written program, as needed.

The Program Administrator for ***(Company Name)*** is ***(Responsible Person)***.

B. **Supervisors**

Supervisors are responsible for ensuring that the respiratory protection program is implemented in their particular areas. In addition to being knowledgeable about the program requirements for their own protection, supervisors must also ensure that the program is understood and followed by the employees under their charge. Duties of the supervisor include:

- Ensuring that employees under their supervision (including new hires) have received appropriate training, fit testing, and annual medical evaluation.
- Ensuring the availability of appropriate respirators and accessories.
- Being aware of tasks requiring the use of respiratory protection.
- Enforcing the proper use of respiratory protection when necessary.
- Ensuring that respirators are properly cleaned, maintained, and stored according to the respiratory protection plan.
- Ensuring that respirators fit well and do not cause discomfort.
- Continually monitoring work areas and operations to identify respiratory hazards.
- Coordinating with the Program Administrator on how to address respiratory hazards or other concerns regarding the program.

C. **Employees**

Each employee has the responsibility to wear his or her respirator when and where required and in the manner in which they were trained. Employees must also:

- Care for and maintain their respirators as instructed, and store them in a clean sanitary location.
- Inform their supervisor if the respirator no longer fits well, and request a new one that fits properly.
- Inform their supervisor or the Program Administrator of any respiratory hazards that they feel are not adequately addressed in the workplace and of any other concerns that they have regarding the program.

4.0 **Program Elements**

A. **Selection Procedures**

The Program Administrator will select respirators to be used on site, based on the hazards to which workers are exposed and in accordance with all OSHA standards. The Program Administrator will conduct a hazard evaluation for each operation, process, or work area where airborne contaminants may be

present in routine operations or during an emergency. The hazard evaluation will include:

1. Identification and development of a list of hazardous substances used in the workplace, by department, or work process.
2. Review of work processes to determine where potential exposures to these hazardous substances may occur. This review shall be conducted by surveying the workplace, reviewing process records, and talking with employees and supervisors.
3. Exposure monitoring to quantify potential hazardous exposures. Monitoring will be contracted out. ***(Company Name)*** currently has a contract with ABC Industrial Hygiene Services to provide monitoring when needed.

The results of the current hazard evaluation are the following: (Table 3 at the end of this program contains the sampling data that this section was based on.)

THIS IS ONLY AN EXAMPLE:

Prep-sanding: *Ventilation controls on some sanders are in place, but employees continue to be exposed to respirable wood dust at 2.5 - 7.0 mg/m3 (8 hour time-weighted-average, or TWA). Half-facepiece APRs with P100 filters and goggles are required for employees sanding wood pieces. PAPRs will be available for employees who are unable to wear an APR.*

Prep-cleaning: *Average methylene chloride exposures measured at 70 ppm*

based on 8 hr. TWA exposure results for workers cleaning/stripping furniture pieces. Ventilation controls are planned, but will not be implemented until designs are completed and a contract has been let for installation of the controls. In the meantime, employees must wear supplied air hoods with continuous air flow, as required by the Methylene Chloride standard 1910.1052.

Assembly: *Ventilation controls on sanders are in place, but employees continue to be exposed to respirable wood dust at 2.5 - 6.0 mg/m3 (8 hour TWA); half-facepiece APRs with P100 filters and goggles are required for employees sanding wood pieces in the assembly department. PAPRs will be available for employees who are unable to wear an APR. The substitution for aqueous-based glues will eliminate exposures to formaldehyde, methylene chloride, and epoxy resins.*

Maintenance: *Because of potential IDLH conditions, employees cleaning dip coat tanks must wear a pressure demand SAR during the performance of this task.*

Employees may voluntarily wear half-facepiece APRs with P100 cartridges when cleaning spray booth walls or changing booth filters and half-facepiece APRs with organic vapor cartridges when loading coating agents into supply systems. Although exposure monitoring has shown that exposures are kept within PELs during these procedures, ***(Company Name)*** will provide

respirators to workers who are concerned about potential exposures.

B. **Updating the Hazard Assessment**

The Program Administrator must revise and update the hazard assessment as needed (i.e., any time work process changes may potentially affect exposure). If an employee feels that respiratory protection is needed during a particular activity, he/she is to contact his or her supervisor or the Program Administrator. The Program Administrator will evaluate the potential hazard, arranging for outside assistance as necessary. The Program Administrator will then communicate the results of that assessment back to the employees. If it is determined that respiratory protection is necessary, all other elements of this program will be in effect for those tasks and this program will be updated accordingly.

C. **NIOSH Certification**

All respirators must be certified by the National Institute for Occupational Safety and Health (NIOSH) and shall be used in accordance with the terms of that certification. Also, all filters, cartridges, and canisters must be labeled with the appropriate NIOSH approval label. The label must not be removed or defaced while it is in use.

D. **Voluntary Respirator Use**

(Company Name) will provide respirators at no charge to employees for voluntary use for the following work processes:

- Employees may wear half-facepiece APRs with organic vapor cartridges while working in the dip coat area.
- Warehouse workers may wear filtering facepieces.
- Spray Booth Operators may wear half-facepiece APRs with organic vapor cartridges while cleaning spray guns.
- Maintenance personnel may wear half-facepiece APRs with P100 cartridges while cleaning spray booth walls, and organic vapor cartridges while loading spray guns.

The Program Administrator will provide all employees who voluntarily choose to wear either of the above respirators with a copy of Appendix D of the standard. (Appendix D details the requirements for voluntary use of respirators by employees.) Employees choosing to wear a half facepiece APR must comply with the procedures for Medical Evaluation, Respirator Use, and Cleaning, Maintenance and Storage.

The Program Administrator shall authorize voluntary use of respiratory protective equipment as requested by all other workers on a case-by-case

basis, depending on specific workplace conditions and the results of the medical evaluations.

E. **Medical Evaluation**

1. Employees who are either required to wear respirators, or who choose to wear an APR voluntarily, must pass a medical exam before being permitted to wear a respirator on the job. Employees are not permitted to wear respirators until a physician has determined that they are medically able to do so. Any employee refusing the medical evaluation will not be allowed to work in an area requiring respirator use.

2. A licensed physician at ***(LOCATION OF DOCTOR)***, where all company medical services are provided, will provide the medical evaluations. Medical evaluation procedures are as follows:
   - The medical evaluation will be conducted using the questionnaire provided in Appendix C of the respiratory protection standard. The Program Administrator will provide a copy of this questionnaire to all employees requiring medical evaluations.
   - To the extent feasible, the company will assist employees who are unable to read the questionnaire (by providing help in reading the questionnaire). When this is not possible, the employee will be sent

directly to the physician for medical evaluation.

- All affected employees will be given a copy of the medical questionnaire to fill out, along with a stamped and addressed envelope for mailing the questionnaire to the company physician. Employees will be permitted to fill out the questionnaire on company time.
- Follow-up medical exams will be granted to employees as required by the standard, andlor as deemed necessary by the ABC medical clinic physician.
- All employees will be granted the opportunity to speak with the physician about their medical evaluation, if they so request.
- The Program Administrator has provided the ABC medical clinic physician with a copy of this program, a copy of the Respiratory Protection standard, the list of hazardous substances by work area, and for each employee requiring evaluation: his or her work area or job title, proposed respirator type and weight, length of time required to wear respirator, expected physical work load (light, moderate, or heavy), potential temperature and humidity extremes, and any additional protective clothing required.
- Any employee required for medical reasons to wear a positive pressure air purifying respirator will be provided with a powered air purifying respirator.
- After an employee has received clearance and begun to wear his or

her respirator, additional medical evaluations will be provided under the following circumstances:

* Employee reports signs and/or symptoms related to their ability to use a respirator, such as shortness of breath, dizziness, chest pains, or wheezing.
* The ABC medical clinic physician or supervisor informs the Program Administrator that the employee needs to be reevaluated;
* Information from this program, including observations made during fit testing and program evaluation, indicates a need for reevaluation;
* A change occurs in workplace conditions that may result in an increased physiological burden on the employee.

3. A list of ***(Company Name)*** employees currently included in medical surveillance is provided in Table 2 of this program.

4. All examinations and questionnaires are to remain confidential between the employee and the physician.

F. **Fit Testing**

1. Fit testing is required for employees wearing half-facepiece APRs for

exposure to wood dust in Prep and Assembly, and maintenance workers who wear a tight-fitting SAR for dip tank cleaning. Employees voluntarily wearing half-facepiece APRs may also be fit tested upon request.

2. Employees who are required to wear half-facepiece APRs will be fit tested:
   - Prior to being allowed to wear any respirator with a tight fitting facepiece.
   - Annually.
   - When there are changes in the employee' s physical condition that could affect respiratory fit (e.g., obvious change in body weight, facial scarring, etc.).

3. Employees will be fit tested with the make, model, and size of respirator that they will actually wear. Employees will be provided with several models and sizes of respirators so that they may find an optimal fit. Fit testing of PAPRs is to be conducted in the negative pressure mode.

4. The Program Administrator will conduct fit tests following the OSHA approved Bitrex Solution Aerosol QLFT Protocol in Appendix B (B4) of the Respiratory Protection standard.

5. The Program Administrator has determined that QNFT is not required for the respirators used under current conditions at ***(Company Name)***.

If conditions affecting respirator use change, the Program Administrator will evaluate on a case-by-case basis whether QNFT is required.

G. **Respirator Use**

Respiratory protection is required for the following personnel;

TABLE 2: ***(Company Name)*** **Personnel in Respiratory Protection Program**			
Name	**Department**	**Job Description/ Work Procedure**	**Respirator**
		Operator	Half mask APR P100 filter when sanding/ AR continuous flow hood for cleaning
		Dip tank cleaning	SAR, pressure demand with auxiliary SCBA
		Spray Booth	SAR, continuous

H. **General Use Procedures**

1. Employees will use their respirators under conditions specified by this program, and in accordance with the training they receive on the use of

each particular model. In addition, the respirator shall not be used in a manner for which it is not certified by NIOSH or by its manufacturer.

2. All employees shall conduct user seal checks each time that they wear their respirator. Employees shall use either the positive or negative pressure check (depending on which test works best for them) specified in Appendix B- 1 of the Respiratory Protection Standard.
3. All employees shall be permitted to leave the work area to go to the locker room to maintain their respirator for the following reasons: to clean their respirator if the respirator is impeding their ability to work, change filters or cartridges, replace parts, or to inspect respirator if it stops functioning as intended. Employees should notify their supervisor before leaving the area.
4. Employees are not permitted to wear tight-fitting respirators if they have any condition, such as facial scars, facial hair, or missing dentures, that prevents them from achieving a good seal. Employees are not permitted to wear headphones, jewelry, or other articles that may interfere with the facepiece-to-face seal.

I. **Emergency Procedures**

The following work areas have been identified as having foreseeable emergencies:

- Spray Booth Cleaning Area - spill of hazardous waste

- Dip Coat Area - malfunction of ventilation system, leak in supply system
- Coatings Storage Area - spill or leak of hazardous substances

When the alarm sounds, employees in the affected department must immediately don their emergency escape respirator, shut down their process equipment, and exit the work area. All other employees must immediately evacuate the building. ***(Company Name)*** ' s Emergency Action Plan describes these procedures (including proper evacuation routes and rally points) in greater detail.

Emergency escape respirators are located: ***(This is specific to the facility)***

- Locker #1 in the Spray Booth Area
- Storage cabinet #3 in Dip Coat/Drying Area
- Locker #4 in the Coatings Storage Area

Respiratory protection in these instances is for escape purposes only. ***(Company Name)*** employees are not trained as emergency responders, and are not authorized to act in such a manner.

J. **Respirator Malfunction**

1. For any malfunction of an APR (e.g., such as breakthrough, facepiece leakage, or improperly working valve), the respirator wearer should inform

his or her supervisor that the respirator no longer functions as intended, and go to the designated safe area to maintain the respirator. The supervisor must ensure that the employee receives the needed parts to repair the respirator, or is provided with a new respirator.

All workers wearing atmosphere-supplying respirators will work with a buddy. Buddies shall assist workers who experience an SAR malfunction as follows:

2. If a worker in the spray booth experiences a malfunction of an SAR, he or she should signal to the buddy that he or she has had a respirator malfunction. The buddy shall don an emergency escape respirator and aid the worker in immediately exiting the spray booth.

3. Workers cleaning wood pieces or assembled furniture in the Prep department will work with a buddy. If one of the workers experiences a respirator malfunction, he/she shall signal this to their buddy. The buddy must immediately stop what he or she is doing to escort the employee to the Prep staging area where the employee can safely remove the SAR.

K. **IDLH Procedures**

The Program Administrator has identified the following area as presenting the potential for IDLH conditions:

EXAMPLE

Dip Coat Tank Cleaning: Maintenance workers will be periodically required to enter the dip tank to perform scheduled or unscheduled maintenance. In such cases, workers will follow the permit required confined space entry procedures specified in the ***(Company Name)*** Confined Space Program. As specified in these procedures, the Program Administrator has determined that workers entering this area shall wear a pressure demand SAR. In addition, an appropriately trained and equipped standby person shall remain outside the dip tank and maintain constant voice and visual communication with the worker. In the event of an emergency requiring the standby person to enter the IDLH environment, the standby person shall immediately notify the Program Administrator and will proceed with rescue operations in accordance with rescue procedures outlined in the ***(Company Name)*** Confined Space Program.

L. **Air Quality**

For supplied-air respirators, only Grade D breathing air shall be used in the cylinders. The Program Administrator will coordinate deliveries of compressed air with the company's vendor, Compressed Air Inc., and require Compressed Air Inc. to certify that the air in the cylinders meets the specifications of Grade D breathing air.

The Program Administrator will maintain a minimum air supply of one fully charged replacement cylinder for each SAR unit. In addition, cylinders may be recharged as necessary from the breathing air cascade system located near the respirator storage area. The air for this system is provided by ***(Company Name)*** ' s supplier, and deliveries of new air are coordinated by the Program Administrator.

M. **Cleaning, Maintenance, Change Schedules and Storage**

1. *Cleaning*

Respirators are to be regularly cleaned and disinfected at the designated respirator cleaning station located in the employee locker room.

Respirators issued for the exclusive use of an employee shall be cleaned as often as necessary, but at least once a day for workers in the Prep and Assembly departments.

Atmosphere supplying and emergency use respirators are to be cleaned and disinfected after each use.

The following procedure is to be used when cleaning and disinfecting

respirators:

- Disassemble respirator, removing any filters, canisters, or cartridges.
  - Wash the facepiece and associated parts in a mild detergent with warm water. Do not use organic solvents.
  - Rinse completely in clean warm water.
  - Wipe the respirator with disinfectant wipes (70% Isopropyl Alcohol) to kill germs.
  - Air dry in a clean area.
  - Reassemble the respirator and replace any defective parts.
  - Place in a clean, dry plastic bag or other air tight container.

Note: The Program Administrator will ensure an adequate supply of appropriate cleaning and disinfection material at the cleaning station. If supplies are low, employees should contact their supervisor, who will inform the Program Administrator.

N. **Maintenance**

1. Respirators are to be properly maintained at all times in order to ensure that they function properly and adequately protect the employee. Maintenance involves a thorough visual inspection for cleanliness and defects. Worn or deteriorated parts will be replaced prior to use. No components will be replaced or repairs made beyond those recommended by the manufacturer.

Repairs to regulators or alarms of atmosphere-supplying respirators will be conducted by the manufacturer.

2. The following checklist will be used when inspecting respirators:

Facepiece:

* cracks, tears, or holes
* facemask distortion
* cracked or loose lenses/faceshield

Headstraps:

* breaks or tears
* broken buckles

Valves:

* residue or dirt
* cracks or tears in valve material

Filters/Cartridges:

* approval designation
* gaskets
* cracks or dents in housing
* proper cartridge for hazard

Air Supply Systems:

* breathing air quality/grade

* condition of supply hoses

* hose connections

* settings on regulators and valves

3. Employees are permitted to leave their work area to perform limited maintenance on their respirator in a designated area that is free of respiratory hazards. Situations when this is permitted include to wash their face and respirator facepiece to prevent any eye or skin irritation, to replace the filter, cartridge or canister, and if they detect vapor or gas breakthrough or leakage in the facepiece or if they detect any other damage to the respirator or its components.

O. **Change Schedules**

1. Employees wearing APRs or PAPRs with P100 filters for protection against wood dust and other particulates shall change the cartridges on their respirators when they first begin to experience difficulty breathing (i.e., resistance) while wearing their masks.

2. Based on discussions with our respirator distributor about ***(Company Name)***'s workplace exposure conditions, employees voluntarily wearing

APRs with organic vapor cartridges shall change the cartridges on their respirators at the end of each work week to ensure the continued effectiveness of the respirators.

P. **Storage**

1. Respirators must be stored in a clean, dry area, and in accordance with the manufacturer's recommendations. Each employee will clean and inspect their own air-purifying respirator in accordance with the provisions of this program and will store their respirator in a plastic bag in their own locker. Each employee will have his/her name on the bag and that bag will only be used to store that employee's respirator.

2. Atmosphere supplying respirators will be stored in the storage cabinet outside of the Program Administrator's office.

3. The Program Administrator will store ***(Company Name)*** ' s supply of respirators and respirator components in their original manufacturer' s packaging in the equipment storage room.

Q. **Defective Respirators**

1. Respirators that are defective or have defective parts shall be taken out of service immediately. If, during an inspection, an employee discovers a defect

in a respirator, he/she is to bring the defect to the attention of his or her supervisor. Supervisors will give all defective respirators to the Program Administrator. The Program Administrator will decide whether to:

- Temporarily take the respirator out of service until it can be repaired.
- Perform a simple fix on the spot such as replacing a headstrap.
- Dispose of the respirator due to an irreparable problem or defect.

2. When a respirator is taken out of service for an extended period of time, the respirator will be tagged out of service, and the employee will be given a replacement of similar make, model, and size. All tagged out respirators will be kept in the storage cabinet inside the Program Administrator's office.

R. **Training**

1. The Program Administrator will provide training to respirator users and their supervisors on the contents of the ***(Company Name)*** Respiratory Protection Program and their responsibilities under it, and on the OSHA Respiratory Protection standard. Workers will be trained prior to using a respirator in the workplace. Supervisors will also be trained prior to using a respirator in the workplace or prior to supervising employees that must wear respirators.

2. The training course will cover the following topics:

- the ***(Company Name)*** Respiratory Protection Program
- the OSHA Respiratory Protection standard
- respiratory hazards encountered at ***(Company Name)*** and their health effects
- proper selection and use of respirators
- limitations of respirators
- respirator donning and user seal (fit) checks
- fit testing
- emergency use procedures
- maintenance and storage
- medical signs and symptoms limiting the effective use of respirators

3. Employees will be retrained annually or as needed (e.g., if they change departments and need to use a different respirator). Employees must demonstrate their understanding of the topics covered in the training through hands-on exercises and a written test. Respirator training will be documented by the Program Administrator and the documentation will include the type, model, and size of respirator for which each employee has been trained and fit tested.

5.0 **Program Evaluation**

A. The Program Administrator will conduct periodic evaluations of the workplace

to ensure that the provisions of this program are being implemented. The evaluations will include regular consultations with employees who use respirators and their supervisors, site inspections, air monitoring and a review of records.

B. Problems identified will be noted in an inspection log and addressed by the Program Administrator. These findings will be reported to ***(Company Name)*** management, and the report will list plans to correct deficiencies in the respirator program and target dates for the implementation of those corrections.

6.0 Documentation and Recordkeeping

A. A written copy of this program and the OSHA standard is kept in the Program Administrator's office and is available to all employees who wish to review it.

B. Also maintained in the Program Administrator's office are copies of training and fit test records. These records will be updated as new employees are trained, as existing employees receive refresher training, and as new fit tests are conducted.

C. The Program Administrator will also maintain copies of the medical records for all employees covered under the respirator program. The completed medical

questionnaire and the physician' s documented findings are confidential and will remain at ***(Whereever)***. The company will only retain the physician's written recommendation regarding each employee's ability to wear a respirator.

Table 3: Hazard Assessment - ***(DATE)***				
Department	**Contaminants**	**Exposure Level (8 Hrs. TWA)***	**PEL****	**Controls**

* Summarized from Industrial Hygiene report provided by ***(whoever did this).***

** These values were obtained from a survey on average exposures as published in the American Journal of Industrial Hygiene _____.