City of Oak Harbor

OAK HARBOR MARINA

RESPIRATORY PROTECTION PROGRAM

JANUARY 2001

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POLICY STATEMENT

POLICY STATEMENT

Oak Harbor Marina POLICY AND PROCEDURES			
Subject: **RESPIRATORY PROTECTION PROGRAM**		POLICY # _____	
EFFECTIVE DATE _____/_____/_____	Supersedes Policy #_____/Date_____	Approved Date	

PURPOSE
The purpose of this policy is to outline a program for respiratory protection for all Marina employees.

POLICY
It is Marina policy to provide respiratory protection equipment and require its use in work that presents a health hazard from irritating and/or potentially toxic atmospheres. Marina employees are not, and shall not be allowed to be, exposed to work in oxygen deficient atmospheres.

RESPONSIBILITY
The enforcement of this policy is the responsibility of all supervisory employees.

SCOPE
This policy applies to all Marina employees.

PROCEDURE

Employee

1. Use respiratory protection as outlined in Respiratory Protection Safety Guide, as outlined in material safety data sheets for specific chemical use, and in other situations that pose a health hazard to the respiratory system.

2. Shall not use contact lenses in any contaminated atmosphere where a respirator is required.

3. Shall maintain issued respiratory equipment in good working condition at all times.

4. Shall not modify the head straps or any other feature of a respirator.

5. Shall immediately report any defects in respiratory equipment to his/her supervisor.

6. Shall not have more than a 2 - 3 day growth of facial hair that could prevent proper fit of respirators. (Mustache to lip corner is acceptable.)

Assistant Harbormaster

1. Shall ensure that each new employee requiring the use of respirators be properly trained prior to the use of any respiratory protection equipment.
2. Shall ensure that a fit test is conducted for all employees after issue but prior to use of respiratory protective equipment. (Public Works will assist in conduct of fit tests.)

3. Shall ensure that the proper respirator is used on each job, monitor work area conditions, and the degree of employee exposure or stress.

4. Shall conduct frequent unscheduled observation of employee activities throughout the Marina to confirm proper respirator use.

5. Shall provide annual training sessions for employees in the selection, use, and limitations of respiratory protection equipment.

6. Shall maintain a record of those employees who have been trained.

Harbormaster

1. Shall develop a respiratory protection program for all department employees that requires the following elements (29 CFR 1910.134):

    a. Written standard operating procedures governing the selection and use of respirators.
    b. Selection of respirators on the basis of hazards to which the worker is exposed.
    c. Instruction and training of users in the proper use of respirators and their limitations.
    d. Assignment of respirators for exclusive use of an individual where practicable.
    e. Regularly cleaning and maintenance of respirators.
    f. Storage of respirators in a convenient, clean, and sanitary location.
    g. Routine inspection of respirators during cleaning and repair when necessary.
    h. Appropriate surveillance of work area conditions and degree of employee exposure or stress maintained.
    i. Regular inspection and evaluation of the continued effectiveness of the program.
    j. Restrictions on use of respirators by persons unless they are physically able to perform the work and use the equipment.
    k. Approved or accepted respirators used when they are available.

2. Shall use engineering controls where appropriate to prevent atmospheric contamination.

3. Shall ensure that all necessary equipment will be available for all employees to comply with this policy and the procedure outlined in Respiratory Protection Safety Guide.

RESPIRATORY PROTECTION PROGRAM

RESPIRATOR SELECTION, USE & MAINTENANCE

I. Respirator Selection

All respirators are designed for use in specific situations. To select the proper respirator, consider the following factors:

1. Type (gas, vapor, fume, mist, dust/particulate) and concentration (amount) of hazard.

2. Duration of exposure to the hazard.

3. Work requirements and conditions (level of effort, temperature, confined space work, etc.)

4. Characteristics and limitations of the respirator.

5. Medical factors (health of the user).

Attachment 1 is a guide to be used for selecting the proper type of respiratory protection equipment.

Attachment 2 describes the number coding system used to identify different types of respirator cartridges, pre filters, and cartridge retainers.

Attachment 3 shows the various types of cartridges and describes their uses and limitations.

IF YOU ARE UNSURE OF WHICH RESPIRATOR TO USE, CHECK WITH THE ASSISTANT HARBORMASTER. IF CHEMICAL PRODUCTS ARE TO BE USED, CONSULT THE MSDS FOR INFORMATION ON HAZARDS AND APPROPRIATE PROTECTIVE EQUIPMENT.

II. Respirator Types

The type of respiratory EQUIPMENT AVAILABLE FOR USE IN MARINA WORK is the DALLOZ F950MX/PF half-mask cartridge respirator. The basic function of this type of respirator is described below.

A. Cartridge Respirator (Air-Purifying)

The cartridge respirator protects the user from low concentrations of gases, vapors, dusts, and mists. The cartridge respirator can be used with a full face or half face unit. If goggles are required for a particular assignment, the full face unit should be used.

CAUTION! *CARTRIDGE TYPE RESPIRATORS SHALL ONLY BE USED IF ALL OF THE FOLLOWING CONDITIONS ARE MET:*

1. Oxygen concentration must be at least 19.5%, and
2. Gas/vapor/fume/dust/mist concentrations must not exceed the limitations of the cartridge to be used, and

3. The gas/vapor/fume/mist must have good warning properties (i.e. it must have a smell or taste that will be noticed if the cartridge fails or is defective), and
4. The user has been successfully fit-tested for the respirator to be used, and has had a medical evaluation, and
5. The user has performed negative and positive fit checks prior to each use. See *Attachment 4* for instructions.

The available types of cartridges are shown in *Attachment 3*. These cartridges may be used with either the half facepiece or full facepiece units.

III. Cleaning and Maintenance

Respiratory equipment will be provided to each full time employee for his/her exclusive use. Cleaning of respiratory equipment shall be performed by each employee on his/her own equipment. In the event that equipment is used by more than one person, it shall be cleaned and disinfected after each use, and stored in a sanitary plastic baggie. Units assigned to individual employees shall be cleaned after each use. Emergency respiratory equipment (chlorine full face respirators) shall be inspected each month. Results shall be recorded on the appropriate log sheet.

It is the responsibility of each employee to ensure that his/her issued respirator is properly maintained. FAILURE TO DO SO MAY LEAD TO DISCIPLINARY ACTION.

A. Cartridge Respirator

INSPECTION AND MAINTENANCE SHALL BE PERFORMED BEFORE AND AFTER EACH USE

Examine each part of the respirator for defects. Replace any and all defective parts prior to use. Discard and replace the respirator if this is not possible!

Defects may include but are not limited to

- Rubber facepiece - cracks, tears, decomposition, stiffening, and distortion of shape.
- Plastic adapter - distortion of shape or worn out.
- Rubber gasket - cuts, cracks, or scratches.
- Rubber inhalation valve flap - rubber is stiff, distorted, decomposed, or cut.
- Elastic head harness strapping - permanently stretched, stiffened, decomposed, frayed, or cut.
- Snap fasteners (on elastic head straps and rubber facepiece) - worn, distorted, or loose.
- Plastic exhalation valve seat - shows distortion or has scratches or cracks on its sealing surface.
- Rubber exhalation valve seat - shows distortion or has scratches or cracks on its sealing surface.
- Rubber exhalation valve flap - rubber is stiff, distorted, decomposed, or cut.
- Rubber filter clip - distorted, decomposed, or cut.

Replace cartridges and or pre-filters under any of the following conditions:

a. Breathing through the respirator becomes very difficult.
b. Contaminant odors can be detected.
c. Shelf life date has expired (even if unused check with manufacturer).

Washing and Disinfecting Procedures

The respirator MUST be washed and disinfected after each day of use by carrying out the following instructions:

1. Remove the cartridge from the respirator. The cartridge must never be washed.

2. Immerse the respirator in a warm (140-160 F) solution of a germicidal detergent. The facepiece and parts may be scrubbed with a cloth or soft brush. Make sure that all dirt and other foreign matter is removed from the surfaces of the rubber exhalation valve flap and plastic exhalation valve seal.

3. After washing and disinfecting the respirator, rinse it in clean, warm water and then allow the unit to dry.

4. After the unit is dry, attach the cartridges to the unit and store in plastic baggie and Tupperware container provided with the mask.

IV. Storage

Following use and cleaning, all respirators shall be stored in a clean and sanitary manner, in an accessible location. Full face cartridge respirators shall be stored in their supplied or designated case. Personal issue respirators shall be stored in plastic bags or similar dust-free containers. Zip lock baggies and Tupperware containers will be provided to each employee for this purpose.

RESPONSIBILITIES

Respirator Program Manager (Assistant Harbormaster)

1. Coordinate annual training sessions for employees in proper use and limitations of respiratory equipment. The training session shall cover respirator selection, limitations, fitting, maintenance, cleaning, inspection, and storage.

2. Coordinate user medical evaluations and fit testing.

Supervisory Staff

1. Ensure that each new employee requiring the use of respirators is properly trained.

2. Ensure that each employee requiring the use of air-purifying (negative-pressure) respirators is successfully fit-tested for the respirator(s) to be used.

3. Ensure that the proper respirator is used on each job. Monitor work area conditions and the degree of employee exposure or stress.

4. Audit program to maintain effective respiratory protection.

Employees

1. Use respiratory units in accordance with instruction and training received.

2. Ensure that each respirator is inspected routinely before and after each use.

Should you have any questions about this directive, please discuss them with the Assistant Harbormaster. If the problem cannot be resolved, the supervisor should contact the Harbormaster.

RESPIRATOR CRITERIA

Cartridge Respirators (Full face or Half face mask)

1. Cartridge respirators will be used when there is adequate oxygen available.
2. When contaminate level does not exceed the removal rate of the cartridge.
3. Will be used in non stress - medium stress conditions.
4. Could be worn from 15 minutes to 2 hours at a time.

HEALTH EXAMINATION REQUIREMENTS
FOR EMPLOYEES REQUIRED TO USE RESPIRATORS

I. Introduction

The type of work performed in the Marina requires that Marina employees receive a Standard Examination for Respirator Use. This examination is required for all employees required to wear respirators in any non-IDLH atmosphere. The Standard Examination may be performed by a licensed Registered Nurse, Nurse Practitioner, Physician's Assistant, or M.D.

Note: Atmospheres are Immediately Dangerous to Life and Health (IDLH) when they pose an immediate threat to life, would cause irreversible adverse health effects, or would interfere with an individual's ability to escape from a dangerous atmosphere. Marina work (including emergency response) will not expose Marina employees to IDLH atmosphere.

II. Examination Frequency

Examinations will be performed on a periodic basis according to age and medical history.

If medical history is clear of any heart or lung disease, or if significant injury of a nature that might affect qualification, examination will be scheduled by age alone:

Under age 40	Every 3 years
Age 40 through 49	Every 2 years
Age 50 or over	Annually

In the case of positive medical history, a physician will determine the frequency of examination and record his recommendation on the employee's health record.

III. Procedure

A. Employee

1. Complete medical questionnaire for respiratory protection program.

2. Perform pulmonary function test.

3. Undergo evaluation by examiner.

B. Examiner (Non-IDLH Exam)

1. Review medical questionnaire.

2. Evaluate pulmonary function test.

3. Record examine blood pressure, and the results of an auscultation of the

heart and lungs to record:

a. Heart rate.
b. Heart rhythm (regular or irregular).
c. Murmur, gallop, thrill, or click (presence or absence).
d. Wheezing, decreased breath sounds, or adventitious sounds (presence or absence).

4. Sign examination form with recommendations:

a. Class 1: No restrictions on respirator use.
b. Class 2: Some specific use restrictions.
c. Class 3: No respirator use under any circumstances.

5. If unable to complete recommendation because of any findings requiring further evaluation, refer to physician for completion of evaluation.

6. Refer completed examination form with recommendation to physician for certification.

C. Physician

1. Complete the necessary evaluations; refer to additional tests as needed.

IV. Criteria for Automatic Approval

A. Examiner may immediately recommend approval (or approve, if M.D.) if all the following conditions are met:

1. No positive responses to questions on medical questionnaire.

2. Clean shaven (no beard - mustache to lip corner only is O.K.). Presence of beard will require fit test by trained individual prior to approval.

3. Normal blood pressure: Below 140/90 (up through 139/89). See section V. A. below for other than normal blood pressure.

4. Heart - regular rhythm, between 60 - 90 BPM (exceptions to lower limit to 60 may be made at the discretion of the examiner if it is felt to be a physiologic bradycardia [athletic heart]); no murmur (except left sternal border, I/VI, without radiation); no gallops, thrills, or clicks.

5. Lungs - no wheezes, decreased breath sounds, or other adventitious sounds.

V. Criteria for Further Evaluation (Referral to Physician)

A. Abnormal blood pressure (140/90 or over)

1. Diastolic 90 through 99 - requires retest after rest. If persistent, must have private physician evaluation prior to approval.

2. Diastolic 100 + - requires private physician evaluation prior to approval.

3. Systolic 160 + - NO SPIROMETRY until private physician evaluation and report.

4. Diastolic 110 + - NO SPIROMETRY until private physician evaluation and report.

B. Positive response on medical history form are handled as follows:

1. History of heart problem - refer to M.D. unless already evaluated by private physician within past 5 years and has been determined to be benign.

2. History of lung problem as adult - refer to M.D. (Childhood asthma, resolved as adult - approve if PFT's and examination of lungs are O.K.).

3. History of acne - note visibility and severity, and active vs. Old scarring. If respirator required for more than 1 hour/day AND active lesions, refer to M.D.; otherwise, approve.

4. History of epilepsy - elicit complete history.

a. Childhood only - approve.
b. Alcohol related in past (no episodes in 3 years)
- No heavy chronic drinking (defined as 3 drinks/day, 7 days/week.
- No binge drinking.
- No history of blackouts and/or delirium tremens in 3 years.

If meets all above criteria, approve. If any question, refer to M.D.

c. Adult epilepsy - refer to M.D.

C. Results of pulmonary function test will be handled as follows:

1. For non-IDLH examination, results treated as follows: FEV1 or FVC.

< 75% - Refer to PMD before approval

75 - 80% - Pass at discretion of examiner, based on history exam.

2. EXCEPTION
If respiratory use is to be very sporadic, such as perhaps 1 hour per week, and

not under conditions of heavy physical labor, may certify for those with greater than 65% predicted; wallet card will be marked with the time and effort limitations.

D. Positive findings on the heart-lung screen requiring referral to M.D. include:

1. Irregular rhythm.

2. Bradycardia or tachycardia (less than 60 or more than 90 BPM). Exception to lower limit of 60 may be made at discretion of examiner if bradycardia is felt to be physiologic.

3. Murmur (except left sternal border, I/VI, without radiation).

4. Gallop, thrill, or click.

5. Significant wheezing, decreased breath sounds, or other adventitious sounds.

_____ _____

Medical Doctor Date

MEDICAL QUESTIONNAIRES

EMPLOYEE MEDICAL HISTORY

_____ _____

Last Name, First Name, Middle Initial Age

_____ _____

Division/Department Work Telephone

MEDICAL HISTORY

(This information is confidential and for review by Medical personnel only. This medical history questionnaire will be kept on file at the doctor's office.) A copy of this form and your test results are available to you or can be sent to your physician with your signed consent.

1. Have you ever had, or have you ever been treated for:

Respiratory Problems	**No**	**Yes**
Emphysema	____	____
Chronic Bronchitis	____	____
Asthma	____	____
Chronic Cough	____	____
Shortness of Breath	____	____
Other Respiratory Problems	____	____

Cardiovascular Problems	**No**	**Yes**
Heart Trouble	____	____
High Blood Pressure	____	____
Chest Pain with Exertion	____	____
Chest Pressure or Squeezing with Exertion	____	____

Other Health Problems	**No**	**Yes**
Diabetes		
Epilepsy		
Serious Arthritis		
Severe Claustrophobia		
Ruptured Eardrum		
Sinusitis (severe)		
Impaired Sense of Smell		

Smoking History	**No**	**Yes**
Ever Smoked?		
Smoke Now?		
Started at Age		
Current Consumption _____ per day		
Eyeglasses		
Contact Lenses		
If Yes, Type _____		

For all items you have answered with YES, please give the details briefly below. Name the problem or disease, the type of treatment (briefly), and the result of treatment (i.e., "Good," "Fair," "Poor").

Problem	**Year(s)**	**Type of Treatment**	**Result**

List all **Head** and **Chest** serious injuries or surgery:

Injury/Surgery **Year** **Result**

_____

_____

2. Are you now under the care of a doctor? _____ **No** _____ **Yes**

   For what condition? _____

3. Are you taking any drugs or medicines now? _____ **No** _____ **Yes**

4. When was your last complete physical examination? _____

   Where Done: _____ By Whom: _____

5. What type of respirator are you being evaluated for? (Have Supervisor assist with Items 5 - 8).

   a. Air purifying? _____ **No** _____ **Yes**
   b. S.C.B.A. (Self Contained Breathing Apparatus)? _____ **No** _____ **Yes**

6. Approximately how frequent do you expect to be using a respirator? _____

7. Approximately how many hours per day/week/month do you expect to wear a respirator? _ _____

8. When you are wearing a respirator, are your work tasks sedentary (quiet mostly, sitting work) _____ ; moderately strenuous _____ ; very strenuous _____ .

   I understand that false answers to the above questions may result in my being placed in a dangerous position (to myself and others) because I might be certified for work that I actually may be physically unable to perform safely. I hereby state that I have answered this medical questionnaire to the best of my knowledge and that the answers are complete and true.

_____ _____
Applicant's Signature Date

THIS SPACE FOR HEALTH STAFF ONLY

Comments on History Form

Cardiopulmonary Evaluation:

	ACTUAL	Predicted	% of Prediction
FEV 1			
FVC			

BLOOD PRESSURE: _____

HEART: _____

LUNGS: _____

REQUEST FOR MEDICAL CLEARANCE FOR EMPLOYEE RESPIRATOR USE

Employee	Social Security Number	Date of Birth

Supervisor	Department/Division

Circle Type or Types of Respirator(s) to be used:

1. Atmosphere-supplying respirator
2. Open-circuit SCBA
3. Air-purifying (non-powered)
4. Combination air-line and SCBA

Level of Work Effort (circle one) (indicate usage code if more than one):

Light _____ Moderate _____ Heavy _____ Strenuous

Extent of Usage (circle one):

1. On a daily basis
2. Occasionally - but more than once a week
3. Rarely - or for emergency situations only

Time of Anticipated Effort (while wearing respirator) in Hours: _____

Special Work Considerations (i.e. high places, temperature, hazardous material, protective clothing, emergency chlorine leak response, confined space entry, etc.):

_____

_____

_____

_____

OAK HARBOR MARINA
EMPLOYEE EXAMINATION RESULTS

EMPLOYEE NAME	SSN# _____-_____-	DATE OF HIRE _____/_____/
POSITION		

IDLH EXAM (circle) **YES** **NO**

STANDARD EXAM (circle) **YES** **NO**

PHYSICIAN'S EVALUATION

Date of Evaluation: _____

_____ Respirator Use Approved: _____ Respirator Use Disapproved:

CLASS: (circle)
1. No restrictions
2. Some specific use restrictions
3. No use permitted

Reasons: _____

_____

Restrictions:

_____

_____

Exam Frequency: _____ **Annually** _____ **2/ Years** _____ **3/ Years**

APPROVAL CERTIFICATION EXPIRES ON: _____

Evaluating Physician: _____

Training & Safety Officer _____ **Date** _____

PULMONARY FUNCTION TEST INSTRUCTIONS

PLEASE READ PRIOR TO COMING FOR TEST

1. Do not eat a heavy meal at least two (2) hours before the test.

2. Wear loose/comfortable clothing. (No tight fitting belts or pants.)

3. If you are on brochodilators (medicine used to help open up part of your airway when you are wheezing or when you have respiratory problems), please notify nurse at the time of the test and bring medication with you.

4. Please re-schedule test with your department if:

    a. You have had a cold/flu involving chest congestion and/or coughing within two (2) weeks of the test.
    b. You're exhausted from working a night shift so that you will not be able to perform test well. If you are on permanent night shift, may come back for testing in the afternoon after a nap.

5. Notify nurse at the time of the test if you have dentures or loose teeth.

BRING THE COMPLETED QUESTIONNAIRE WITH YOU TO YOUR SCHEDULED APPOINTMENT

ATTACHMENT 1:

SELECTING RESPIRATORY PROTECTION

ATTACHMENT 1:
SELECTING RESPIRATORY PROTECTION

HAZARD

OXYGEN DEFICENCY	TOXIC CONTAMINANT

POSITIVE PRESSURE SCBA	POSITIVE PRESSURE COMBINATION AIRLINE WITH AUXILARY SCBA	IMMEDIATELY DANGEROUS TO LIFE & HEALTH (IDLH)	NON (IDLH)

POSITIVE PRESSURE SELF CONTAINED BREATHING APPARATUS	POSITIVE PRESSURE AIRLINE WITH 5 OR 30 MINUTE AUXILIARY AIR CYLINDERS

PARTICULATE

GAS OR VAPOR

DUST, MIST OR FUME RESPIRATOR	AIRLINE RESPIRATOR

HALF MASK CHEMICAL CARTRIDGE RESPIRATOR	FULL FACE CHEMICAL CARTRIDGE RESPIRATOR	AIRLINE RESPIRATOR

GAS OR VAPOR AND PARTICULATE

HALF MASK CHEMICAL CARTRIDGE RESPIRATOR WITH APPROPRIATE FILTER	FULL FACE CHEMICAL CARTRIDGE RESPIRATOR WITH APPROPRIATE FILTER	AIRLINE RESPIRATOR

*****

Stand-by personnel must be present with suitable rescue equipment for [IDLH] conditions.

NOTE: Criteria for need of Stand-by Person;

1. **Whenever an SCBA is required.**
2. **Whenever a harness and lifeline is required.**

ATTACHMENT 2:

DALLOZ (WILLSON) F950MX/PF
HALF MASK RESPIRATORS

ATTACHMENT 3:

3M CARTRIDGE SELECTION GUIDE

ATTACHMENT 4:

CARTRIDGE RESPIRATOR SAFETY GUIDE

RESPIRATORY PROTECTION SAFETY GUIDE
CARTRIDGE RESPIRATORS

DANGER OR HAZARD REFERENCE (Department Respiratory Protection Program Policy)

- Toxic gases, oxygen deficient atmospheres, respiratory irritants.

HEALTH HAZARD

- Acute/chronic toxicity, suffocation, and respiratory distress.

HAZARD WARNING

- MSDS, Gas Meters, (gas, vapors, fumes, mists, dust/particulates).

PERSONAL PROTECTIVE EQUIPMENT

- Full face cartridge respirator.
- Half-face cartridge respirator.
- Appropriate cartridge (see Table 18-1), WILSON Cartridge Selection Guide.

RESPONSIBLE PERSON

- Each employee is responsible for selection and use of respiratory protection equipment.
- **No person shall use a respirator unless trained, successfully passed fit test, and has been certified by a doctor that he/she has no physical limitation.**

RESPONSE/ACTION

- Select the appropriate respirator for the job at hand.
    - ◊ Refer to material safety data sheet when using any chemicals.
- Select the appropriate cartridge for the job when using a half-face or full-face respirator (refer to Table 18-1 for WILSON cartridge selection guide).
- Inspect respirator for:
    - ◊ Tightness of connections
    - ◊ Conditions of face piece
    - ◊ Conditions of headbands
    - ◊ Condition of cartridge
    - ◊ Condition of valves
    - ◊ Rubber or elastomer for pliability
    - ◊ Rubber or elastomer for deterioration

- Remove all projections under the face piece that will prevent a good seal such as:
    - ◊ Facial hair
    - ◊ Sideburns
    - ◊ Temple pieces on glasses
    - ◊ Skull cap

- Position chin firmly in chin cup and manually shift mask until the most comfortable position is located.
- Adjust straps for a comfortable fit.
- Cover air inlets with palms of hands.
- Gently breathe in so that face piece collapses slightly.
- Hold breath for 10 seconds.
- If the respirator remains slightly collapsed and no inward leaks are felt, the facepiece probably fits tight enough.
- If a leak is detected adjust straps and repeat process until the face piece remains slightly collapsed for 10 seconds.
- Close off exhalation valve with palm.
- Exhale gently.
    - ◊ A small build-up of positive pressure, but no outward leaks usually indicates a good face piece fit.
- Clean respirator after each day's use and place in a plastic bag or another container provided for this purpose. **Do not hang respirator by straps on a nail or hook.**
- Once per week (or more often if needed), respirators shall be completely cleaned and disinfected by the following procedure:
    - ◊ Remove the air-purifying cartridges from the respirator. Air purifying cartridges must never be washed and disinfected.
    - ◊ Immerse the respirator in a warm water solution of soap or Phisoderm. The respirator face piece and parts may be scrubbed gently with a cloth or soft brush. Make sure that all foreign matter is removed from all surfaces of the rubber exhalation valve flap and plastic exhalation valve seats.
    - ◊ Disinfect with a commercial solution, or 2 tablespoons of bleach per gallon of water.
    - ◊ After washing and disinfecting the respirator, rinse the same with clean, warm water and ten allow the respirator to dry.
    - ◊ After the respirator is dry, reattach the air-purifying cartridges.
    - ◊ Store the respirator in a plastic bag or other container for this purpose.
    - ◊ Replace worn out parts immediately.

Table 18-1
3M Respirator Cartridge Selection Guide
for most common known contaminants

ATMOSPHERIC CONTAMINANTS	PRE FILTER	FILTER	CARTRIDGE RETAINER
ACIDS	**7255**	**7252**	**7287**
CHLORINE	**7255**	**7252**	**7287**
DUSTS & PAINTS	**- -**	**7255**	**7287**
ENAMEL PAINTS	**7255**	**7251**	**7287**
ORGANIC VAPORS	**7255**	**7251**	**7287**
PESTICIDES	**7255**	**7251**	**7287**

Additional cartridges are available for combined hazards. Please refer to **3M Easi-Air Respirator Selector Guide, and or 3M Easi-Air Instruction Booklet** for detailed use of respirators, fit testing and cartridge use and limitations. If you still have questions contact your supervisor and/or Safety Officer.

ATTACHMENT 5:

A. TRAINING RECORDS & FIT TEST CERTIFICATIONS
B. DOSH / OSHA STANDARDS
C. MISCELLANEOUS

RESPIRATORY PROTECTION
TRAINING PROGRAM

Topics of Discussion & Training:

I. RESPIRATORY HAZARDS

A. Chronic/Acute

B. Types of Hazards

1. Dust, Fumes, & Mists
2. Gases & Vapors
3. Oxygen deficiency

C. The Body's Reaction to Hazards

D. Identifying Hazards

1. Visual
2. MSDS
3. Warning Labels
4. Test Meters

II. PHYSICAL & MEDICAL REQUIREMENTS

III. RESPIRATORY PROTECTION EQUIPMENT

A. Respirator Selection

1. Identify Hazard

B. Negative Pressure Respirators (Air-Purifying)

1. Particulate
2. Easi-Air Dual Cartridge
   - Half Mask
   - Full Face
3. Selection/Use/Cleaning & Maintenance/Storage
4. Fit Testing

IV. OAK HARBOR MARINA RESPIRATORY PROTECTION PROGRAM

A. Program Outline

B. Responsibilities

1. Employees
2. Supervisors
3. Management

V. TRAINING & CERTIFICATION

A. Test

B. Certification

Approximate in-training time is 4 hours.

EMPLOYEE ACKNOWLEDGEMENT OF TRAINING RECORD FORM

EMPLOYEE NAME	SSN# _____-_____-	DATE OF CLASS _____/_____/
POSITION	OAK HARBOR MARINA	

I _____ acknowledge that training was given to me on the following SUBJECT(S):

_____

_____

_____

_____

Training Time: Hours _____ Minutes

Signed: _____

Training Location:

_____

_____

_____

Training Instructor:

_____

_____

_____

Signed _____

Course Description:

_____

_____

_____

Course/Instructor Evaluation:

_____

_____

_____

JOB DESCRIPTION
RESPIRATOR SPECIFICATION FORM

JOB DESCRIPTION (write below)

Contaminant	Concentration Level	ppm	mg/m3

Recommended Respiratory Protection	First Choice	Second Choice

NIOSH Approval Numbers

OSHA Standard for Contaminant

RESPIRATOR ISSUANCE AND TRAINING

Employee | Employee Number | Title | Date

RESPIRATOR: Γ Self-Contained Γ Supplied Air Γ Chemical Cartridge with pre-filter Γ Dust/Fume Mist Filter

_____ Γ Powered Air Γ Chemical Cartridge Γ Dust/Mist Filter Γ HEPA Filter

Model | Application | NIOSH Approval Number

LIMITATIONS: Γ Beard Γ Denture Γ Glasses Γ None

Explain:

FITTING: Γ Satisfactory Positive Pressure Test Γ Satisfactory Isoamyl Acetate Test

Γ Satisfactory Negative Pressure Test Γ Satisfactory Sweetener Test

MAINTENANCE: Γ Individual Γ Plant Γ Other

Cleaning: Γ Daily Γ Weekly Γ Other Disposal: Γ Daily Γ Weekly Γ Other

Indicator

Employee Signature | Date

Approved | Date

OAK HARBOR MARINA
RESPIRATORY PROTECTION PROGRAM
TRAINING CERTIFICATION

I have received Respiratory Protection Training as described in the Respiratory Protection Program. The training was conducted on _____ (date).

_____
Employee Signature

_____
Social Security Number

_____
Division

I hereby certify that the above named employee has been provided with Hazard Communication Training on: _____ (date).

Γ Has been trained in the use, limitations and maintenance of 3M Brand respirator(s).

Γ Has passed a qualitative fit test using the 3M FT-10 with 3M Brand respirator(s).

Γ Could not be fit tested due to: _____

_____
Instructor's Signature

DOSH
RESPIRATORY PROTECTION
STANDARD

ع12-64-6 Respiratory Protection

A. Permissible practice.

1. In the control of those occupational diseases caused by breathing air contaminated with harmful dust, fog, fumes, mists, gases, smoke, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted, engineering-control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to the standards contained in this section.

2. Respirators shall be provided by the employer when the equipment is necessary to protect the health of the employee. The employer shall provide the respirators which are applicable and suitable for the purposes intended. The employer shall be responsible for the establishment and maintenance of a respiratory protective program which shall include the requirements outlined in section ع12-64-6(B).

3. The employee shall use the provided respiratory protection in accordance with instruction and training received.

B. Requirements for a minimal acceptable program.

1. Written standard operating procedures governing the selection and use of respirators shall be established.

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

3. The user shall be instructed and trained in the proper use of respirators and their limitations.

4. Respirators shall be regularly cleaned and disinfected. Those used by more than one worker shall be cleaned and disinfected after each use.

5. Respirators shall be stored in a convenient, clean, and sanitary location.

6. Respirators used routinely shall be inspected during cleaning. Worn or deteriorated parts shall be replaced. Respirators for emergency use such as self-contained devices shall be thoroughly inspected after each use and at least once a month.

7. Appropriate surveillance of work area conditions and the degree of employee exposure or stress shall be maintained.

8. There shall be regular inspection and evaluation to determine the continued effectiveness of the program.

9. Approved or accepted respirators shall be used when they are needed. The respirator furnished shall provide adequate respiratory protection against the particular hazard for which it is designed in accordance with standards established by competent authorities. (NIOSH is recognized as an agency competent to test and approve this equipment.)

10. Persons shall not be assigned to tasks requiring use of respirators unless it has been determined that they are physically able to perform the work and use the equipment. A physician shall determine what health and physical conditions are pertinent. The respirator user's medical status should be reviewed periodically (for instance, annually).

C. Proper selection of respirators shall be made according to the guidance of ANSI Z88.6.

D. Air Quality.

1. Compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration shall be of high purity. Oxygen shall meet the requirements of the United States Pharmacopoeia for medical or breathing oxygen. Breathing air shall meet the minimum requirements for Grade D breathing air as described in ANSI/CGA G-7.1. Compressed oxygen shall not be used in supplied-air respirators or in open-circuit, self-contained, breathing apparatus that have previously used compressed air. Oxygen shall never be used with airline respirators.

2. Breathing air may be supplied to respirators from cylinders or air compressors.

   a. Cylinders shall be tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (40 CFR Park 178).
   b. The compressor for supplying air shall be equipped with necessary safety and standby devices. A breathing-air type compressor shall be used. Compressors shall be constructed and situated so as to avoid entry of contaminated air into the system, and suitable, inline, air-purifying sorbent beds and filters installed to further ensure breathing air quality. In an atmosphere immediately dangerous to life or health or from which the wearer cannot escape from without the use of a respirator, a receiver of sufficient capacity or a respirator equipped with an escape in event of compressor failure, and alarms to indicate compressor failure and overheating shall be installed in the system. If an oil-lubricated compressor is used, it shall have a high-temperature or carbon monoxide alarm, or both. If only a high-

temperature alarm is used, the air from the compressor shall be frequently tested for carbon monoxide to insure that it meets the specifications in paragraph (1) above.

3. Air-line couplings shall be incompatible with outlets for other gas systems to prevent inadvertent servicing of air-line respirators with nonrespirable gases or oxygen.

4. Breathing-gas containers shall be marked in accordance with ANSI/CGA C-4.

E. Use of respirators.

1. Standard procedures shall be developed for respirator use.

2. The correct respirator shall be specified for each job. The respirator type is usually specified in the work procedures by a qualified individual supervising the respiratory protective program. The individual issuing them shall be adequately instructed to ensure that the correct respirator is issued and properly fitted.

3. Written procedures shall be prepared covering safe use of respirators in dangerous atmospheres that might be encountered in normal operations or in emergencies. Personnel shall be familiar with these procedures and the available respirators.

a. In areas where the wearer, with failure of the respirator, could be overcome by a toxic or oxygen-deficient atmosphere, at least one additional person shall be present. Communication (visual, voice, or signal line) shall be maintained between both or all individuals present. Planning shall be such that one individual will be unaffected by any likely incident and have the proper rescue equipment available to be able to assist the other in case of emergency.

b. Persons using air-line respirators in atmospheres immediately hazardous to life or health shall be equipped with safety harnesses and safety lines for lifting or removing persons from hazardous atmospheres or other equivalent provisions for the rescue of persons from hazardous atmospheres shall be used. A standby person with suitable, self-contained, breathing apparatus shall be at the nearest fresh air base for emergency rescue.

4. Respiratory protection is no better than the respirator in use, even though it is worn conscientiously. Frequent random inspections shall be conducted by a qualified individual to ensure that respirators are properly selected, used, cleaned, and maintained.

5. For safe use of any respirator, it is essential that the user be properly instructed in its selection, use, and maintenance. Both supervisors and workers shall be so instructed by competent persons. Training shall provide employees an opportunity to handle the respirator, have it fitted properly, test its facepiece-to-face seal, wear it in normal air for a long familiarity

period, and to wear it in a test atmosphere.

a. Every respiratory wearer shall receive fitting instructions including demonstrations and practice in how the respirator should be worn, how to maintain it, how to adjust it, and how to determine if it fits properly. Fit testing applies to all negative-pressure respirators including single-use respirators. The “test atmosphere” must be applied using recognized qualitative fit-testing procedures utilizing isoamyl acetate, irritant smoke, etc., or quantitative fit testing using dioctyl phthalate (DOP) or sodium chloride. Respirators shall not be worn when conditions prevent a good face seal. Conditions may be a growth of beard, sideburns, a skull cap that projects under the facepiece, temple pieces on glasses, or the absence of dentures. The worker’s diligence in observing these factors shall be evaluated by periodic monitoring. To ensure proper protection, the facepiece fit shall be checked by the wearer each time the respirator is worn. This may be done by following the manufacturer’s facepiece-fitting instructions.

b. Providing respiratory protection for individuals wearing corrective glasses is a serious problem. A proper seal cannot be established if the temple bars of eye glasses extend through the sealing edge of the full facepiece. As a temporary measure, glasses with short temple bars or without temple bars may be taped to the wearer’s head. Contact lenses shall not be worn in contaminated atmospheres with a respirator. Systems have been developed for mounting corrective lenses inside full facepieces. When a worker must wear corrective lenses as part of the facepiece, the facepiece and lenses shall be fitted by qualified individuals to provide good vision, comfort, and a gas-tight seal.

c. If corrective spectacles or goggles are required, they shall be worn so as not to affect the fit of the facepiece. Proper selection of equipment will minimize or eliminate this problem.

F. Maintenance and care of respirators.

1. A program for maintenance and care of respirators shall be adjusted to the type of plant, working conditions, and hazards involved, and shall include these basic services:

a. Inspection for defects (including a leak check);
b. Cleaning and disinfecting;
c. Repair; and
d. Storage.

2. Equipment shall be properly maintained to retain its original effectiveness.

a. All respirators shall be inspected routinely before and after each use. A respirator that is not routinely used but is kept ready for emergency use shall be inspected after each use and at least monthly to assure

that it is in satisfactory working condition.

b. Self-contained breathing apparatus shall be inspected monthly. Air and oxygen cylinders shall be fully charged according to the manufacturer's instructions. It shall be determined whether or not the regulator and warning devices function properly.

c. Respirator inspection shall include a check of tightness of connections and the condition of the facepiece, headbands, valves, connecting tube, and canisters. Rubber or elastomer parts shall be inspected for pliability and signs of deterioration. (Stretching and manipulating rubber or elastomer parts with a massaging action will keep them pliable and flexible and prevent them from taking a set during storage.)

d. A record shall be kept of inspection dates and findings for respirators maintained for emergency use.

3. Routinely used respirators shall be collected, cleaned, and disinfected as frequently as necessary to insure that proper protection is provided for the wearer.

4. Replacement or repairs shall be accomplished only by experienced persons with parts designed for the respirator. No attempt shall be made to replace components or to make adjustment or repairs beyond the manufacturer's recommendations. Reducing or admission valves or regulators shall be returned to the manufacturer or to a trained technician for adjustment or repair.

5. After inspection, cleaning, and necessary repair, respirators shall be stored to protect against dust, sunlight, heat, extreme cold, excessive moisture, or damaging chemicals.

    a. Routinely used respirators, such as dust respirators, may be placed in plastic bags.

    b. Instructions for proper storage of emergency respirators, such as gas masks and self-contained breathing apparatus, are found in "use and care" instructions usually mounted inside the carrying case lid.

TABLE 64-3

Atmospheric Contaminants to be Protected Against	Colors Assigned*
Acid gases	White
Hydrocyanic acid gas	White with ½ inch green stripe completely around the canister near the bottom.
Chlorine gas	White with ½ inch yellow stripe completely around the canister near the bottom.
Organic vapors	Black
Ammonia gas	Green
Acid gases and ammonia gas	Green with ½ inch white stripe completely around the canister around the bottom.
Carbon monoxide	Blue
Acid gases and organic vapors	Yellow
Hydrocyanic acid gas and chloropicrin vapor	Yellow with ½ inch blue stripe completely around the canister near the bottom.
Acid gases, organic vapors, and ammonia gases	Brown
Radioactive materials, excepting tritium and noble gases	Purple (Magenta)
Particulates (dust, fumes, mists fog, or smoke) in combination with any of the above gases or vapors	Canister color for contaminant, as designated above, with ½ inch gray stripe completely around the canister near the top.
All of the above atmospheric contaminants	Red with ½ inch gray stripe completely around the canister near the top.

* Gray shall not be assigned as the main color for a canister designed to remove acids or

vapors.

Note: Orange shall be used as a complete body, or stripe color to represent gases not included in this table. The user will need to refer to the canister label to determine the degree of protection the canister will afford.

G. Identification of gas mask canisters.

1. The primary means of identifying a gas mask canister shall be by means of properly worded labels. The secondary means of identifying a gas mask canister shall be by a color code.

2. All who issue or use gas masks falling within the scope of this section shall see that all gas mask canisters purchased or used by them are properly worded, labeled, and colored in accordance with these requirements before they are placed in service and that the labels and colors are properly maintained at all times thereafter until the canisters have completely served their purpose.

3. On each canister, in bold letters, shall appear:

a. Canister for _____
(Name of atmospheric contaminant)
or
Type N Gas Mask Canister

b. In addition, essentially this wording shall appear beneath the appropriate phrase on the canister label: For respiratory protection in atmospheres containing not more than _____ per cent by volume of _____ (Name of atmospheric contaminant).

4. Canisters having a special, high-efficiency filter for protection against radionuclides and other highly toxic particulates shall be labeled with a statement of the type and degree of protection afforded by the filter. The label shall be affixed to the neck end or to the gray stripe which is around and near the top of the canister. The degree of protection shall be marked as the per cent of penetration of the canister by a 0.3-micron-diameter Dioctyl Phthalate (DOP) smoke at a flow rate of 85 liters per minute.

5. Each canister shall have label warning that gas masks should be used only in atmospheres containing sufficient oxygen to support life (at least 16 per cent by volume), since gas mask canisters are only designed to neutralize or remove contaminants from the air.

6. Each gas mask canister shall be painted a distinctive color or combination of colors indicated in table 64-3. All colors used shall be such that they are clearly identifiable by the user and clearly distinguishable from one another. The color coating used shall offer a high degree of resistance to chipping, scaling, peeling, blistering, fading, and the effects of the ordinary atmospheres to which they may be exposed under normal conditions of

storage and use. Appropriately colored pressure sensitive tapes may be used for the stripes.

H. The following table lists the types of respirators permitted for use in an oxygen-deficient atmosphere where the level of contaminants exceed permissible levels (PEL) or when the level of contaminants in the atmosphere exceed permissible levels and IDLH conditions exist.

TABLE 64-4
SELECTION OF RESPIRATORS

I. These respirators are permitted for use in an oxygen-deficient atmosphere where the level of contaminants exceed the PEL.	
Not immediately dangerous to life or health (O_2 concentration above 16.0% but below 19.5%)	1. Air-line, demand, quarter- or half-mask facepiece, with or without escape provisions. 2. Air-line, demand, full facepiece, with or without escape provisions. 3. Air-line, continuous-flow or pressure-demand type, any facepiece, without escape provisions. 4. Air-line, continuous-flow, helmet, hood, or suit, without escape provisions. 5. Hose mask, with or without blower, full facepiece. 6. Self-contained breathing apparatus, demand-type open circuit or negative-pressure-type closed-circuit, quarter- or half-mask facepiece.[a] 7. Self-contained breathing apparatus, demand-type open circuit or negative-pressure-type closed-circuit, full facepiece or mouth piece/nose clamp.[a] 8. Air-purifying, half-mask, or full facepiece respirator with chemical canister and/or appropriate filter.
Immediately dangerous to life or health (O_2 concentration above 16.0% but below 16.0%)	1. Air-line, continuous-flow or pressure-demand type, any facepiece, with escape provisions. 2. Air-line, continuous-flow, helmet, hood, or suit, with escape provisions. 3. Self-contained breathing apparatus, pressure-demand-type open-circuit or positive-pressure-type closed-circuit, quarter- or half-mask, full facepiece, or mouthpiece/nose clamp.

TABLE 64-4 (Continued)
SELECTION OF RESPIRATORS

II. These respirators are permitted for use when the levels of contaminants (gas, vapor,	

or particulates) exceed the PEL and IDLH conditions exist.

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1. Air-line, continuous-flow or pressure-demand type, any facepiece, with escape provisions. a

2. Air-line, continuous-flow, helmet, hood, or suit, with escape provisions. a

3. Self-contained breathing apparatus, pressure-demand-type open-circuit or positive-pressure-type closed-circuit, quarter- or half-mask, full facepiece, or mouthpiece/nose clamp. a

4. Powered particulate-filter, any respiratory-inlet covering. bcd

5. Powered vapor-or gas-removing, any respiratory-inlet covering. a

6. Powered combination particulate-filter and vapor- or gas-removing, any respiratory-inlet covering.bcd

Notes on table 64-4:

(i) For the purpose of this part, “immediately dangerous to life or health” (IDLH) is defined as a condition that either poses an immediate threat to life and health or an immediate threat of severe exposure to contaminants, such as radioactive materials which are likely to have adverse delayed effects on health;

(ii) The escape provision shall be an auxiliary self-contained supply of respirable air of sufficient capacity.

(iii) Small letter “a” means if the air contaminant causes eye irritation, the wearer of a respirator equipped with a quarter- or half-mask or mouthpiece/nose clamp shall be permitted to use either a protective goggle or a respirator equipped with a full facepiece.

(iv) Small letter “b” means when the respirator is used for protection against airborne particulate matter having a permissible time-weighted average concentration less than 0.05 milligram particulate matter per cubic meter of air or less than 2 million particles per cubic foot of air, or for protection against radionuclide particulate matter, the respirator shall be equipped with a high-efficiency filter(s).

(v) Small letter “c” means the respirator is permitted only is escape provisions are provided.

(vi) Small letter “d” means if the powered air-purifying respirator is equipped with a facepiece, the escape provision means the wearer is able to breathe through the filter, cartridge, or canister and through the pump. If the powered air-purifying respirator is equipped with a helmet, hood, or suit, the escape provision shall be an auxiliary self-contained supply of respirable air. [Eff. 12/6/82; am 8/15/87] (Auth: HRS §396-4) (Imp: HRS §396-4)

₰12-64-7 Foot Protection

A. Safety-toe, toe caps, and metatarsal protective footwear shall be worn by employees in all instances where hazards to the foot exist. These include conductive protective-toe footwear (Type 1 and 2), electrical hazard safety-toe footwear, and sole puncture resistance protective-toe footwear.

B. Safety-toe footwear for employees shall meet the testing requirements and specifications in ANSI Z41 and shall be constructed of materials suitable for the exposure it is intended to receive and shall provide protection, comfort, and wearability. [Eff. 12/6/82; am 8/15/87] (Auth: HRS ₰396-4) (Imp: HRS ₰396-4)

₰12-64-8 Electrical Protective Devices

REPEALED. [Eff. 12/6/82; R 8/16/84] (Auth: HRS ₰396-4) (Imp: HRS ₰396-4)

MONTHLY INSPECTION & MAINTENANCE CHECK LIST
YEAR _____

BASE YARD/STORAGE LOCATION _____

SCOTT SCBA MODEL _____

SERIAL # _____

	FACE PIECE	HOSE	REGU-LATOR	LOW AIR ALARM	CYLINDER v-valve t-tank	PSI GAUGE	BACK PACK	CLEAN-ING	DATE	INIT.
JAN										
FEB										
MAR										
APR										
MAY										
JUN										
JUL										
AUG										
SEP										
OCT										
NOV										
DEC										