1. **GENERAL.** Industrial hygiene surveys are conducted to accurately assess worker exposures to chemical, physical and biological agents in the workplace and to provide recommendations for their reduction or elimination. Periodic workplace evaluations are made to assure the effectiveness of the implemented controls and determine the need for continued medical surveillance. If there is a significant production, process, material or control change for a particular work operation, that work operation must be reevaluated. The procedures in this chapter, along with Chapters 3 and 4, should be followed to evaluate employee exposures, determine compliance with standards regulating occupational exposure to air contaminants, and to assess the effectiveness of controls. An exposure assessment strategy (Chapter 4) should be developed to define acceptable and unacceptable exposures as related to exposure standards.

Note:BUMED field industrial hygienists and other Navy medicine occupational health personnel do not determine personnel exposures to chemicals from an environmental source (except during spill events where first responder safety is the primary medical concern (as specified in reference 2-1)). Please see section 3e below, Areas Specifically Excluded from Industrial Hygiene Surveys, for more information.

2. **DEFINITIONS.**
   a. **Employee exposure.** Exposure that occurs regardless of the use of personal protective equipment.
   b. **Experienced industrial hygienist.** For the purposes of this chapter, an experienced industrial hygienist is a civil service General Schedule 690 Series employee GS-12 and above or a military industrial hygiene officer (IHO) (Medical Service Corps subspecialty 1861) Lieutenant (O-3) and above. Additionally, a Certified Industrial Hygienist (CIH®) is considered experienced at any grade or rank.
   c. **Industrial hygienist.** Those professionals classified in the civil service as General Schedule 690 Series or military IHO (Medical Service Corps subspecialty 1861).
   d. **Negative determination.** The qualitative or quantitative determination made by an industrial hygienist that an employee is not exposed at or above the action level (AL) (or 50% of the Occupational Exposure Limit (OEL)). In many cases, this determination can be made by reviewing the chemical, physical, biological and toxicological characteristics of the material, quantity of use, frequency of use, conditions under which it is used and past experience with similar operations. In other instances, sampling may be necessary to ascertain the extent of exposure. Sampling may also be required by regulation (e.g., asbestos). If a single quantitative evaluation is made, the 95 percent upper confidence limit will be used. If multiple samples are taken, they should be evaluated using statistical tests, which are discussed in Chapter 4 (e.g., tolerance tests, confidence intervals, log-probability plots).
   e. **Positive determination.** For exposure assessment purposes, the qualitative or quantitative determination made by an industrial hygienist that an employee is exposed at or above
the AL (or 50% OEL). In many cases for a chemical, biological or physical agent, monitoring needs to be conducted to verify the determination.

f. Survey. A workplace evaluation to determine employee exposures to chemical, biological and physical hazards and to recommend procedures for reducing or eliminating those exposures. The following categories of surveys exist:

(1) **Initial industrial hygiene survey.** The first comprehensive industrial hygiene survey of a command. A command will have only one initial survey.

(2) **Periodic industrial hygiene survey (PIHS).** Scheduled cyclic surveys following an initial survey.

(3) **Shop specific supplements to a periodic industrial hygiene (SPIH) survey.** Shop specific supplements are used for shop-specific evaluations that are reported independently of the PIHS to ensure that all shops are evaluated at the required frequency based on Defense Occupational Environmental Health Readiness System-Industrial Hygiene (DOEHRS-IH) shop priorities.

(4) **Other (special) surveys.** Surveys that focus on a specific hazard, evaluation or generated in response to a customer’s special request.

g. Work operation/process. A specific job, duty or function. In each work operation, the location, ventilation, materials and equipment used should be considered. For example, welding in a confined space is a different exposure situation than in the open air.

h. Workplace. The entire unit, command or activity where a type of work is performed, typically under one Unit Identification Code. Examples include shipyards, fleet readiness centers (FRCs) and naval facilities (NAVFAC) activities/public works centers. Workplace for afloat commands is defined as the entire ship.

i. Worksite. The shop, code or workcenter where a specific operation is performed within a workplace.

3. **SURVEYS.** Workplace evaluations to identify and quantify health hazards are accomplished through industrial hygiene surveys and will be completed under the supervision of an experienced industrial hygienist. Industrial hygiene technicians or exposure monitors (both military and civilian) may assist in the sampling portion of a survey as long as technical direction is provided by an industrial hygienist. Under no circumstances will they independently conduct industrial hygiene surveys, interpret industrial hygiene data or recommend control methods.

a. **Initial Industrial Hygiene Survey.** Since all subsequent surveys will be compared to this survey, it is critical that all aspects of the workplace are evaluated and findings are fully documented. Typical documentation gathered during the initial survey includes:

(1) Initial determination of potential personnel exposures at or above the AL (or 50% OEL). This determination is to be made by an industrial hygienist who is familiar with the operation/process being evaluated. A positive determination indicates there are personnel exposures above the AL (or 50% OEL). A negative determination indicates that, based on past sampling results or professional judgment, personnel exposures are not expected to exceed the AL (or 50% OEL). In many cases, under normal or foreseeable operating conditions. All negative determinations must be fully
and accurately documented to support the decision. A negative determination is not permitted if personnel are required to wear respirators for that stressor. Lastly, initial exposure data could lead to the decision that there is insufficient information available for an immediate positive/negative determination. Further sampling and/or documentation is required to assess exposures. If additional sampling must be conducted, an exposure assessment strategy should be developed (see Chapter 4).

(2) Description of work operation/process, including work practices and procedures, frequency and duration of operation and a diagram of the work area.

(3) A list of all potentially hazardous materials used, stored, handled or produced. Include a description of how they are used, amount on hand and estimated consumption rates. The activity's Hazardous Materials Authorized Use List, as required by Chapter 7 of reference 2-2, provides this information.

(4) A list of potential physical hazards (e.g., noise, heat, ergonomic risks or ionizing and non-ionizing radiation), including a brief description of their source(s).

(5) A list of biological/infectious agents (e.g., in laboratories).

(6) Direct reading screening measurements for each work area where applicable.

(7) Description and efficiency of existing controls. Include type of personal protective equipment (PPE), administrative controls, and engineering controls and evaluations of their effectiveness.

(8) The number of personnel assigned to each work operation/process (total, male and female).

(9) A summary of carcinogens and reproductive hazards present.

(10) Interviews with employees reporting symptoms or related safety and health problems.

(11) Any other information necessary to accurately describe workplace conditions.

b. Periodic Industrial Hygiene Survey (PIHS). Once the initial survey has been completed, it is updated on a regular basis with the PIHS (in combination with shop specific supplements discussed in paragraph 3. c). The PIHS process provides information on new operations, changes in on-going operations, and documents/evaluates the effectiveness of existing control measures (e.g., PPE, ventilation). Findings of other surveys or consultations made during the specified period are summarized. Sampling may not be required for the PIHS. If no sampling is required in the exposure monitoring plan and there are no additional processes/operations or significant changes to existing processes/operations, a walkthrough survey documenting these findings is adequate. The basic elements of a periodic survey are detailed in Appendix 2-A, and summarized in Appendix 2-B. Command hazard categories are outlined in Appendix 2-C.

(1) Category I periodic survey reports will include all Priority 1 shop evaluations every year as a minimum, and any applicable Priority 2 and 3 shops as determined by the Industrial Hygiene Program Office (IHPO) so as to ensure these reassessments do not exceed the two and four year shop periodicity cycles, respectively. In some cases it may remain administratively simpler to include all category shops (i.e., 1, 2 and 3) in
the annual report every year for smaller CAT 1 commands with predominantly Priority 1 shops. However, workload and administrative efficiencies should be realized by using the shop specific supplemental approach for larger CAT I commands (e.g., shipyards, FRCs, etc.).

(2) Category II periodic survey reports will include all Priority 1 and 2 shop evaluations every 2 years at a minimum, and include applicable Priority 3 shops as determined by the IHPO so as to ensure Priority 3 shop evaluations do not exceed the 4 year periodicity. Additionally, all Priority 1 shops shall be reassessed and results reported as discussed in paragraph 3.c below as part of the shop specific supplement to the periodic survey. When an IHPO sub-categorizes CAT II command survey to apportion workload the IHPO will ensure Priority 1, 2 and 3 shops are evaluated and results reported in accordance with applicable intervals.

(3) Category III periodic survey reports will include all Priority 1, 2 and 3 shop evaluations every 4 years as a minimum. In addition, Priority 1 and 2 shops shall be evaluated annually or biannually and reported per the shop specific supplement report discussed in paragraph 3.c below.

Note: Priority 1, 2 and 3 shop classification guidance and re-evaluation frequencies are contained in Appendix 2-D.

c. Shop Specific Supplements to a Periodic Industrial Hygiene Survey (SPIH): SPIH surveys are used for shop-specific evaluations that are reported independently of the PIHS to ensure that all shops are evaluated at the required frequency based on the shop’s priority. For example, this type report would be used annually for Priority 1 shop evaluation conducted at CAT II or CAT III commands during the non-periodic survey year. See Appendix 2-B for a summary of the required elements for both PIHS and SPIH survey reports.

d. Shop Priority Exceptions: All afloat activity shops will be designated as “Priority 2” shops and will receive a singular command based PIHS every 2 years as outlined in Appendix 2-C. All Reserve Center shops will be designated as “Priority 3” shops and will receive a singular command based PIHS every 4 years. Reserve Centers with industrial process changes, changes to work practices, or other occupational health concerns should contact their supporting industrial hygiene activity for consultation or possible evaluation.

e. Areas Specifically Excluded from Industrial Hygiene Surveys.

   (1) Unless BUMED industrial hygiene personnel are specifically trained, equipped, and currently certified through the National Sanitation Foundation (NSF) program for Field Certification of Biological Safety Cabinets (BSC), industrial hygiene surveys should not include evaluation of BSCs. Refer to Chapter 6, paragraph 5.d. of the Industrial Hygiene Field Operations Manual (IHFOM) for a more detailed discussion of BSC ventilation measurements.

   (2) BUMED field industrial hygienists and other Navy medicine occupational health personnel do not determine personnel exposures to chemicals from an environmental source (except during spill events where first responder safety is the primary medical concern (as specified in reference 2-1)).
(a) Environmental exposure assessments and sampling are based on environmental (generally Environmental Protection Agency (EPA)) standards, screening levels and risk assessment processes and not on occupational health standards, OELs and exposure assessment strategies.

1. Occupational health standards and OELs are intended to protect adult employees from workplace health hazards eight hours a day, five days a week for 20-30 years. Environmental standards and screening levels may be produced looking at risk for exposure across the entire general population for a lifetime. These differences in assessment can result in an environmental standard or screening level being several orders of magnitude lower than an OEL for the same chemical.

2. Since environmental and occupational exposure assessments and standards are so different, sampling and analytical methods to quantify those exposures are also different.

3. Certification for laboratories performing the analyses differs for environmental versus occupational sampling.

4. Environmental concerns regulated by the EPA (such as concerns from environmental source exposures, environmental restoration situations, etc.…) shall not be treated as occupational exposures using occupational health standards and OELs to measure risk and determine compliance.

(b) Navy Medicine assets are not intended, prepared, equipped or funded for assessments of exposures to chemicals from an environmental situation regulated by the EPA. Such situations are best addressed by qualified environmental professionals.

(c) When medical support for environmental issues (other than spills) is requested by Installation Commanders, Naval Facilities Engineering Command (NAVFAC)/Public Works Center (PWC), or base tenants, Medical Treatment Facility (MTF) Commanding Officers and Officers-In-Charge need to inform the appropriate Navy Medicine Region Environmental Program Manager (NAVMED REPM) before committing to a response.

1. The NAVMED REPM shall assist the MTF in coordinating the response, ensuring the participation of all required subject matter experts.

2. Early coordination is exceptionally important because environmental issues may involve the health of family members, union employees, the public and media.

f. Records Retention. Records of surveys, evaluations and sampling shall be retained for a minimum of 40 years as required in Chapter 8 of reference 2-2, except where specific applicable standards require retention for a longer time (e.g. OPNAVINST 5100.19 Series requires records of noise measurements to be kept for a period of 50 years). Also, refer to reference 2-3, which dictates longer retention times for some records. (e.g. Section SSIC 6200.2a of reference 2-3 dictates some occupational health, industrial and environmental control program records not be destroyed until after 75 years.)
Because of turnover and the transfer of personnel, records should be maintained in a manner to ensure that an industrial hygienist who is unfamiliar with the workplace can access the records and be reasonably confident he/she has all the pertinent information (past and present) on the worksite and the operations being performed therein.

Reference 2-3 provides guidance in the disposition of all records, including records no longer in active use, records of disestablished shore activities, records of decommissioned ships and records of armed conflicts. This reference provides information on naval records retention standards (by standard subject identification code (SSIC) or type of record) and procedures for record disposition, including: disposal, local record retirement (to a storage area within an activity) and record transfer (for storage outside an activity, such as in a Federal Records Center). Occupational health, industrial and environmental control records are specifically discussed in Section SSIC 6200.2 of reference 2-3. Reference 2-3 Appendix A lists step by step procedures for transferring records for storage to Federal Records Centers using form SF 135. Reference 2-3 Appendix B lists procedures for recalling records from Federal Records Centers using form OF 11. Reference 2-3 Appendix C provides a glossary of terms. However, other sections of reference 2-3 may also be applicable. Additional information on Federal Records Centers can be found at http://www.archives.gov/frc/.

g. **Survey Report Format.** Appendices 2-A, 2-B and 2-E provide guidance for industrial hygiene survey report organization and content. The composition of industrial hygiene survey reports for a command (i.e. what shops are included) may vary each year depending upon the DOEERS-IH priorities of individual shops. Criteria for assigning DOEERS-IH shop priorities is summarized in Appendix 2-D.

h. **Survey Report Tracking.** Industrial hygiene survey report completion will be tracked according to DOEERS-IH shop priorities. Industrial hygiene survey reports for each shop will be considered current if the last report date is within 12, 24 and 48 months of the current date for Priority 1, 2 and 3 shops, respectively. A grace period of up to three months can be added to each respective category or shop priority requirement on a case by case basis and depending on the particular circumstances involved, so that under special circumstances if an evaluation exceeds the specified periodicity it can still be considered current.

### 4. **Updating Exposure Monitoring Plans.**

a. As part of the comprehensive initial survey, an Exposure Monitoring Plan (OPNAV Form 5100/14 or equivalent) will be completed for each process/operation that requires sampling/measurements. This could include sampling required by regulation and/or sampling needed to characterize exposures that are at or above the AL (or 50% OEL). The plan should also include assessments needed to document engineering control adequacy (e.g., ventilation measurements).

(1) Sampling required by regulation includes such sampling as Occupational Safety and Health Administration (OSHA) required initial, quarterly, or semiannual substance specific sampling and ventilation measurements.
(2) Sampling needed to characterize exposures is typically used in statistical quantitative exposure assessment. However, please keep in mind, even if you may need a certain number of samples for the statistical assessment, they do not necessarily need to be collected all at once during a year’s exposure monitoring, but can be gathered over time. (e.g. –Rather than putting that you plan to collect the needed 6 samples on the Exposure Monitoring Plan, it would be more realistic and attainable to put that you only plan to collect 1 or 2 of the samples for the process/operation on the yearly Exposure Monitoring Plan, and then continue to have that sampling as required on the subsequent yearly Exposure Monitoring Plans until you have collected enough results to statistically assess the exposures for that process/operation.)

(3) As mentioned above, the Exposure Monitoring Plan should only include sampling required by regulation, sampling needed to characterize exposures that are at or above the AL (or 50% OEL), and/or assessments needed to document engineering control adequacy (e.g., ventilation measurements). It is best to keep the Exposure Monitoring Plan to just these required sampling/measurements. If you wish to include additional sampling/measurements to provide further information or to add to existing statistical assessments, those should be marked as “Optional”. Such optional sampling/measurements should not be included when determining counts for required sampling/measurements in the Exposure Monitoring Plan annual fiscal year metrics. If the optional sampling/measurements are completed, they can be counted with completed sampling/measurements conducted outside the Exposure Monitoring Plan in the Exposure Monitoring Plan annual fiscal year metrics.

b. During the periodic survey (with either shop-based or command-based) the exposure monitoring plan must be updated to reflect current findings. Quantitative negative determinations will permit the exposure monitoring plan to be amended to eliminate unnecessary sampling and redirect resources. New processes/operations, significant changes to existing processes/operations or changes to standards, instructions or directives may require new evaluations and possible additions to the exposure monitoring plan.

c. Please keep in mind that the Exposure Monitoring Plan is to reflect an annual (fiscal year) timeframe, as opposed to the timeframe of the survey based on Shop Priority or Command Category.

5. REFERENCES.

2-1 OPNAV M-5090.1 Series
2-2 OPNAVINST 5100.23 Series
2-3 SECNAV M-5210.1 Series
APPENDIX 2-A
SURVEY REPORTS

1. **GENERAL.** Industrial hygiene survey reports document the interpretation of data collected during the walk-through survey, the quantification phase of a comprehensive industrial hygiene survey, and the resulting exposure assessment. The reports also provide an activity with the current status of occupational health hazards and recommendations for hazard control, personal protective equipment, administrative controls and exposure-based medical surveillance. The survey report is a historical document that shows the operations conducted at given locations and the hazards present at the time of the survey. An industrial hygiene survey report must be able to withstand close scrutiny and, as much as possible, be a self-supporting document. Comprehensive initial industrial hygiene survey reports should be issued within 90 calendar days after the last day of the walk-through portion of the survey. Periodic industrial hygiene survey (PIHS) reports should be issued within 45 days after the last day of the walk-through portion of the survey.

2. **STYLE.** Industrial hygiene survey reports are technical in nature and use terms and language characteristic of the profession. However, each part of the report has a target audience who will have varying degrees of industrial hygiene background. Consider your target audience when writing reports.

3. **INDUSTRIAL HYGIENE SURVEY REPORT TYPES.** There are essentially four principle types of industrial hygiene survey reports: initial (aka baseline) surveys and periodic surveys, shop specific supplements and special surveys. The report elements of the initial and periodic surveys are presented in Sections 5 and 6. The shop specific supplements to the periodic industrial hygiene (SPIH) survey reports are for specific shops that are reported independently of the main PIHS. An example where a SPIH report may be used is for a Priority 1 shop in a CAT II command in a year when the reports for the Priority 2 shops in the command are not due. The purpose of the SPIH surveys is to ensure that all shops are evaluated at the required frequency as discussed in Section 4. The SPIH survey reports may include fewer elements than the PIHS, as outlined in Appendix 2-B. Special industrial hygiene surveys are used to capture other industrial hygiene related evaluations for specific hazards, subjects, engineering system etc., and may have variable survey formats.

4. **INDUSTRIAL HYGIENE REPORT PERIODICITY, COMPOSITION, DISTRIBUTION AND TRACKING.**
   a. Industrial hygiene surveys will be performed, reported and tracked at periodicities according to both command hazard categories as outlined in Appendix 2-C, and Defense Occupational Environmental Health Readiness System-Industrial Hygiene (DOEHRS-IH) shop priorities as outlined in Appendix 2-D.
   b. The composition of each industrial hygiene survey report (i.e. which shops are included) may vary according to the shop priorities. Elements are detailed in Sections 5 and 6 of this appendix and summarized in Appendix 2-B.
   c. Industrial hygiene survey reports for a command may be distributed in a single document or in separate documents based upon organizational sub-unit (e.g. department, division,
If the industrial hygiene survey reports are in separate documents in the applicable reporting period (i.e. fiscal year), a command industrial hygiene survey report index should be prepared. This index references the provided industrial hygiene survey reports and lists the included shops in each report, as discussed in Section 7.

d. Industrial hygiene survey report completion will be tracked according to DOEHS-IH shop priorities. Industrial hygiene survey reports for each shop will be considered current if the last report date is within 12, 24 and 48 months of the current date for Priority 1, 2 and 3 shops, respectively. A grace period of up to three months can be added to each respective category or shop priority requirement **on a case by case basis** and depending on the particular circumstances involved, so that under special circumstances if an evaluation exceeds the specified periodicity it can still be considered current.

5. **INITIAL SURVEY REPORT ELEMENTS**. The comprehensive initial industrial hygiene survey report contains the following elements:

a. **Cover letter.** A concise letter designating the survey as the initial one, naming the activity where the survey took place, and giving the survey dates. This letter also identifies the individual(s) responsible for the report and credits contributions to the report, including the surveyed command's efforts.

b. **Executive Summary.** This one to two page summary gives the Commanding Officer of the surveyed activity an overview of the initial status of command occupational health programs and identifies those problems that require command level attention for resolution.

c. **Program Findings and Recommendations.** This section presents summaries of the command's major occupational health programs, such as lead, asbestos, hearing conservation, engineering controls, respiratory protection, ergonomics, medical surveillance, etc. The purpose of this section is to provide information for the Safety Office to manage effectively the occupational health aspects of the Navy and Marine Corps safety and occupational health (SOH) programs. A command receiving this survey report is encouraged to ensure industrial hygiene survey reports are reviewed and recommendations incorporated into command hazard tracking system (hazard abatement logs) for documented follow-up actions. Information presented should come from the survey. For example, the medical surveillance program summary should list the command-wide surveillance requirements based on the separate medical surveillance summaries in individual shop survey sections. A recommended format for listing command-wide medical surveillance requirements is in Appendix 2-E. Similarly, the respiratory protection program summary should list all of the respirators required for given tasks, based upon the respiratory protection recommendations in individual shop survey sections.

d. **Workplace Evaluations and Exposure Monitoring Plan.** This section documents the field findings from the walk-through survey, discusses sampling results, evaluates health risk, and provides recommendations for improvement, suggestions for medical surveillance, and an exposure monitoring plan. Include at least the following information:

   (1) **Workplace Assessment.**
(a) **Location.** When appropriate (e.g., for clarifying or detailing the location of the operation, engineering controls or contaminant sources), diagram and identify the operation. Make the diagram detailed enough to graphically describe the location of the operation (by room number or work station) and its physical relationship to its surroundings.

(b) **Description of the Operation.** The description must detail the operation by task, material usage, frequency, duration, and the amount of time spent on each task (time course of events). Include worker classification if appropriate (e.g., welder or carpenter).

(c) **Chemical Hazards.** List the chemical hazards associated with the operation/tasks.

(d) **Physical Hazards.** List any physical hazards found in review of the operation, including but not limited to: noise, radiation, ergonomic risks, temperature, vibration, etc.

(e) **Number of Persons.** The number of personnel who perform the operation and other identifying information as appropriate is recorded here.

(f) **Existing Controls.** Describe controls, their use, and the effectiveness during the operation, such as: substitution, isolation, other engineering controls (e.g., ventilation), administrative controls, and personal protective equipment.

(g) **Hazardous Materials Authorized Use List (HM AUL).** List the hazardous materials used in the operation that are not on the command’s HM AUL. This will provide the command with the information needed to update the HM AUL. If the HM AUL is not specific (e.g., "organic solvents" rather than "methanol and butyl acetate" or "heavy metal fume" instead of "lead fume"), include that finding in the report.

(h) **Reproductive Hazards.** Compare the stressors present in the operation with the reproductive hazards lists reference 2-4, and identify all reproductive hazards. Include a summary table of all reproductive hazards identified.

(i) **Carcinogens.** Compare the stressors present in the operation with the carcinogens listed by the Occupational Safety and Health Administration (OSHA), the National Toxicology Program (NTP), and the International Agency for Research on Cancer (IARC), and the American Conference of Governmental Industrial Hygienists (ACGIH). Include a summary table of all carcinogens identified, showing the listing organization(s) and the classification assigned by each organization.

(2) **Exposure Assessment.** This section documents the results of analysis of the collected data and the health risk of affected workers. Ensure that thorough hazard assessments of all identified reproductive hazards and carcinogens are included. If a negative determination results, a thorough discussion of the rationale should be documented here. A negative exposure assessment can be based on sample results of actual operations, results from similar operations at other locations, or assessments based on the hazards of the materials used, amounts used, frequency and duration of operation, work practices and available engineering controls. A negative determination cannot be based on respiratory protection provided. Short duration of the operation is usually
not a valid rationale for substances with ceiling or short term exposure limits. Exposure assessments should be summarized in a list that shows the current exposure assessment status for each significant process/worktask in each shop. It is recommended that this list be in a consistent format for each shop, so that the lists can be rolled up to command-wide summaries. The list should (as a minimum) contain the following elements: workcenter/shop, work process/task, exposure assessment status, and rationale for exposure assessment.

(3) Findings and Recommendations. Each documented field finding must be followed by a feasible recommendation.

(a) Findings. Present the results of each field finding. Results of measurements and sampling, in most cases, are best presented in tables to provide a summary of the data that is easily understood. Discuss the results of the workplace assessment and sampling. When discussing results, make a definite positive or negative statement as to exposure of personnel relative to established standards. Each finding showing non-compliance with a standard must include an appropriate citation of the referenced standard.

(b) Recommendations. In sequential order, include at least one feasible recommendation for improvement that corresponds to each finding. Identify the reference or source of each recommendation. If engineering controls are not installed or used properly, identify them for inclusion in the surveyed command's Navy Occupational Safety and Health Hazard Abatement Log. Identify those operations/tasks where employees require enrollment in medical surveillance programs, based upon the exposure assessment per paragraph 5.d(2) of this appendix. Medical surveillance recommendations shall be discussed and summarized as indicated in paragraph 5.g of this appendix.

e. References. Findings that document non-compliance with a standard and recommendations requiring action are based on cited references. Follow the guidance in Chapter 16 of reference 2-2 to select appropriate references. When citing references, be specific enough to assist with improvements without limiting creative responses to problems found in the field. For example, when citing the lack of respirator standard operating procedures, use "OPNAVINST 5100.23G, paragraph 1513.a.(2)."

f. Exposure Monitoring Plan. Including an exposure monitoring plan (documented on OPNAV Form 5100/14) in the industrial hygiene survey report is optional unless the serviced command performs its own exposure monitoring. In this case, it is mandatory that the plan be included for all operations/tasks where monitoring is required. Exposure monitoring plans should include sampling and measurements necessary to characterize exposure of employees determined to be exposed at or above the AL (or 50% OEL), evaluate process engineering controls and satisfy sample collection required by regulation (e.g., lead, asbestos).

g. Medical Surveillance Recommendations. This section should present a summary list of all medical surveillance recommendations for each shop, based upon the industrial hygiene exposure assessments per paragraph 5.d(2) of this appendix. It is recommended that this list be in a consistent format for each shop, so that the lists can be rolled up to command-wide summaries for presentation to designated medical surveillance program
The list should contain (as a minimum) the following elements: workcenter/shop, work process/task, recommended medical surveillance program, estimated number of workers. A recommended format for listing medical surveillance recommendations is in Appendix 2-E. It should be noted that industrial hygienists are not required to recommend medical surveillance for job certifications, unrelated to industrial hygiene exposure assessments, since it is a command supervisor’s responsibility to provide that information. To help commands identify medical surveillance requirements for job certifications, this section should include a reference to the “Medical Surveillance Procedures Manual and Medical Matrix,” NMCPHC-TM OM 6260.

h. Appendices. Include information that enhances or complements the workplace evaluation in an appendix. The following are examples of appendices that could be included:

1. Sampling and Measurement Results. Supporting documentation for all measurements and sample results used to make the workplace evaluation should be included as an appendix to the report. For example, include copies of field data sheets used to record the results of direct reading instruments such as sound levels, ventilation, radio frequency and illumination. Also include copies of all laboratory reports for personal and general area air samples, and bulk and wipe samples.

2. Standard operating procedures for specific programs. When appropriate, include "boiler plate" standard operating procedures to assist the SOH manager in organizing and operating the occupational health programs.

3. Personal protective equipment charts. When available, include personal protective equipment (PPE) charts specific to the activity or workplace to promote proper PPE selection and use.

4. A glossary of terms common to industrial hygiene. Technical terms used in the report are listed with a plain English definition.

6. PERIODIC SURVEY REPORT ELEMENTS.

a. Cover letter. A concise letter naming the activity surveyed, identifying the type of survey conducted and giving the time that transpired from the initial visit to completion of the field work or walk-through. This letter also identifies the individual(s) responsible for the report and credits contributions to the report, including the surveyed command's efforts.

b. Executive Summary. This one to two page summary gives the Commanding Officer of the surveyed activity an overview of the current status of command occupational health programs and identifies those problems which require command attention for resolution. Record repeat technical findings in this section.

c. Program Findings and Recommendations. This section presents summaries of the command's major occupational health programs, such as lead, asbestos, hearing conservation, engineering controls, respiratory protection, ergonomics, medical surveillance, etc. The purpose of this section is to provide information for the Safety Office to effectively manage the occupational health aspects of the SOH program. Information presented should come from the survey. For example, the medical surveillance program summary should list the command-wide surveillance requirements based on the separate medical surveillance summaries in individual shop.
survey sections. A recommended format for listing command-wide medical surveillance recommendations is shown in Appendix 2-E. Similarly, the respiratory protection program summary should list all of the respirators required for given tasks, based upon the respiratory protection recommendations in individual shop survey sections.

d. **Workplace Evaluations and Monitoring Plan.** This section documents data changes relative to the initial survey that were noted during the walk-through survey. It also provides current recommendations for improvement and exposure monitoring.

(1) **Workplace Assessment.**

(a) **Location.** If changes occurred, update the operation diagram(s). This is especially important if there are new or relocated engineering controls or contaminant sources.

(b) **Description of the Operation.** If the operation changes, the description must detail the changes in the operation by task, material usage, frequency, duration, worker classification (for example, welder or carpenter), and the amount of time spent on each task.

(c) **Chemical Hazards.** Ensure this list still accurately reflects chemical hazards present. Update the list if necessary.

(d) **Physical Hazards.** List any changes in physical hazards found when reviewing operations, including but not limited to: noise, radiation, ergonomic risks, temperature, vibration, etc.

(e) **Number of Persons.** Changes in the number of personnel who perform the operation and other identifying information as appropriate are recorded here.

(f) **Existing Controls.** Record any changes in controls, their use or effectiveness (substitution, isolation, engineering controls, administrative controls and personal protective equipment).

(g) **HM AUL, Reproductive Hazards, and Carcinogens.** List chemical substances used in the operation that are not on the command’s HM AUL. This will allow the surveyed command to update the HM AUL. Any changes in the HM AUL triggers an updated comparison with the reproductive hazards lists in reference 2-4 and with the lists of carcinogens published by OSHA, NTP, IARC and ACGIH.

(2) **Exposure Assessment.** This section documents the analysis of the collected data relative to the previous surveys and the health risk of affected workers. If risk changes, make a statement about the resultant change(s) in personnel exposure. If a negative determination results, thoroughly discuss the rationale. Exposure assessments should be summarized in a list which shows the current exposure assessment status for each significant process/worktask in each shop. It is recommended that this list be in a consistent format for each shop, so that the lists can be rolled up to command-wide summaries. The list should (as a minimum) contain the following elements: workcenter/shop, work process/task, exposure assessment status, and rationale for exposure assessment.
(3) **Findings and Recommendations.**

(a) **Findings.** Each documented field finding must be followed by a feasible recommendation. **Findings.** Present the results of each field finding. Results of measurements and sampling, in most cases, are best presented in tables to provide a summary of the data which is easily understood. Discuss the results of the workplace assessment and sampling. When discussing sampling results, make a definite positive or negative statement about exposure of personnel relative to established standards and previous sampling results. Each finding showing non-compliance with a standard must include an appropriate citation of the reference standard.

(b) **Recommendations.** In sequential order, include a feasible recommendation for improvement that corresponds with each finding. Identify the reference for each recommendation. If engineering controls are not installed or used properly, clearly identify them for inclusion in the surveyed command's Navy Occupational Safety and Health Hazard Abatement Log. Identify those operations/tasks where employees require enrollment in medical surveillance programs, based upon the exposure assessment per paragraph 6.d(2) of this appendix. Medical surveillance recommendations shall be discussed and summarized as indicated in paragraph 6.g of this appendix.

e. **References.** Cite references for all non-compliant findings and for recommendations requiring action. Follow the guidance in Chapter 16 of reference 2-2 to select appropriate references. When citing references, be specific enough to assist with improving the situation without limiting creative responses to problems found in the field. For example, when citing the lack of respirator standard operating procedures, use "OPNAVINST 5100.23G, paragraph 1513.a.(2)."

f. **Exposure Monitoring Plan.** Including an exposure monitoring plan (documented on OPNAV Form 5100/14) in the industrial hygiene survey report is optional unless the serviced command performs its own exposure monitoring. In this case, it is mandatory that the plan be included for all operations/tasks where monitoring is required. Exposure monitoring plans should include sampling and measurements necessary to characterize exposure of employees determined to be exposed at or above the AL (or 50% OEL), evaluate process engineering controls and satisfy sample collection required by regulation (e.g., lead, asbestos).

g. **Medical Surveillance Recommendations.** This section should present a summary list of all medical surveillance recommendations for each shop, based upon the industrial hygiene exposure assessments per paragraph 6 d (2) of this appendix. It is recommended that this list be in a consistent format for each shop, so that the lists can be rolled up to command-wide summaries for presentation to designated medical surveillance program managers. The list should contain (as a minimum) the following elements: workcenter/shop, work process/task, recommended medical surveillance program, estimated number of workers. A recommended format for listing medical surveillance recommendations is in Appendix 2-E. It should be noted that industrial hygienists are not required to recommend medical surveillance for job certifications, unrelated to industrial hygiene exposure assessments, since it is a command supervisor’s task.
responsibility to provide that information. To help commands identify medical surveillance requirements for job certifications, this section should include a reference to the “Medical Surveillance Procedures Manual and Medical Matrix,” NMCPHC-TM OM 6260.

h. Appendices. Include new or revised information that enhances or complements the workplace evaluation in an appendix. The following appendices are strongly recommended when changes occur:

1. Sampling and Measurement Results. Supporting documentation for all measurements and sample results used to make the workplace evaluation should be included as an appendix to the report. For example, include copies of field data sheets used to record the results of direct reading instruments such as sound levels, ventilation, radio frequency and illumination. Also include copies of all laboratory reports for personal and general area air samples, and bulk and wipe samples.

2. Standard operating procedures for specific programs. When appropriate, include "boiler plate" standard operating procedures to assist the SOH manager with organizing and operating occupational health programs.

3. Personal protective equipment charts. When available, include PPE charts specific to the activity or workplace to promote proper PPE selection and use.

4. A glossary of terms common to industrial hygiene. When new technical terms are introduced in the periodic report, add them and their plain English definitions here.

i. Repeat technical findings. If there are many repeat findings in periodic surveys, you may want to include a comprehensive list here.

7. COMMAND INDUSTRIAL HYGIENE SURVEY REPORT INDEX. If the industrial hygiene survey reports for a Command are provided in multiple documents (e.g. by department, division, directorate, etc.) during the applicable reporting period, then a Command Industrial Hygiene Survey Report Index shall be prepared. This index references/cites all of the previously provided industrial hygiene survey reports and includes a list of all the shops surveyed in each individual report. The shop list should include the shop name, priority (per Appendix 2-D) and survey report date.
## APPENDIX 2-B

**REPORT ELEMENT REQUIREMENTS FOR PERIODIC INDUSTRIAL HYGIENE SURVEYS AND SHOP SPECIFIC SUPPLEMENT TO PERIODIC INDUSTRIAL HYGIENE SURVEY**

<table>
<thead>
<tr>
<th>REPORT ELEMENT</th>
<th>PERIODIC INDUSTRIAL HYGIENE SURVEY REPORT ELEMENTS</th>
<th>SHOP SPECIFIC SUPPLEMENT TO PERIODIC INDUSTRIAL HYGIENE SURVEY REPORT ELEMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover letter</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>Required</td>
<td>Required only when MORE than 4 shops are included</td>
</tr>
<tr>
<td>Executive Summary</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Program Findings and Recommendations</td>
<td>Required</td>
<td>Optional</td>
</tr>
<tr>
<td>Workplace Evaluations and Monitoring Plan</td>
<td>Required</td>
<td>Required, but only for those shops surveyed</td>
</tr>
<tr>
<td>References</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Exposure Monitoring Plan</td>
<td>As Required and Should cover entire command or command component (directorate, department, etc.) encompassed by the survey report</td>
<td>As Required to include updates</td>
</tr>
<tr>
<td>Medical Surveillance Recommendations</td>
<td>As Required and Should cover entire command or command component encompassed by survey report</td>
<td>As Required</td>
</tr>
<tr>
<td>Appendices</td>
<td>As Required</td>
<td>As Required</td>
</tr>
</tbody>
</table>

2-B-1
## APPENDIX 2-C
### PERIODIC INDUSTRIAL HYGIENE SURVEY SUMMARY REPORT FREQUENCY

<table>
<thead>
<tr>
<th>ACTIVITY (i.e., COMMAND) HAZARD CATEGORY</th>
<th>INDUSTRIAL HYGIENE REPORT FREQUENCY</th>
<th>ACTIVITY (i.e., COMMAND) EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>I High Hazard</td>
<td>ANNUAL, but focused on Priority 1 shops and other Priority 2 and 3 shops that are due that year</td>
<td>Marine Aviation Logistics Squadrons (MALS), Marine Corps Logistics Base Maintenance Centers (e.g., Barstow, CA and Albany, GA), MEF Corrosion Control, Marine Corps Maintenance Logistics Group Maintenance Battalions, Naval Shipyard, Ship Repair Facility, Fleet Readiness Centers (formerly Naval Aviation Depots), Shore Intermediate Maintenance Activity, Aircraft Intermediate Maintenance Department, Public Works Center, Weapons Ordnance Station, Naval Intermediate Maintenance Facility, Test Center or Laboratory, Medical Centers and Hospitals, Assault Craft Unit, Beach Masters Unit, Amphibious Construction Battalion, Naval Undersea Warfare Center, Naval Surface Warfare Center (NSWC)</td>
</tr>
<tr>
<td>II Moderate Hazard</td>
<td>Every 2 years, command wide with Priority 1 shops evaluated annually thereafter</td>
<td>Marine Corps Bases, Marine Corps Air Stations, Marine Corps Community Services (MCCS), Marine Corps Ground Battalions (i.e., Infantry, Artillery, Tanks, Reconnaissance, and Engineers), Naval Stations, Air Stations, Naval Computer and Telecommunications Area Master Station, Fleet and Industrial Supply Center, Sea Air Land Commando Teams, Aviation Squadrons, Submarine Learning Facility, Fleet Imaging, Naval Facilities Engineering Command Engineering Field Division, Naval Criminal Investigative Service, Naval Base, Exchange, Explosive Ordnance Disposal, Naval Computer and Telecommunication Station, Naval Communication Unit, Fleet Training Center, Fleet Aviation Specialized Operational, Naval Education and Training Command, Fleet Area Control and Surveillance Facility, Naval Ophthalmic Support &amp; Training Activity, NSWC Detachment and all Navy and Military Sealift Command PM1 and PM4 Ships and Submarines, Health Clinic and Branch Clinics.</td>
</tr>
<tr>
<td>III Low Hazard</td>
<td>Every 4 years, command wide with Priority 1 &amp; 2 shops included in supplement</td>
<td>Reserve Centers and all other activities with primarily office or classroom work, such as administrative headquarters staffs and administrative support commands</td>
</tr>
</tbody>
</table>

**Exceptions:** All afloat activity shops will be designated as “Priority 2” shops and will receive a singular combined command/shop based periodic industrial hygiene every 2 years as outlined in reference 7-3. All Reserve Center shops will be designated as “Priority 3” shops and will receive a singular combined command/shop-based periodic industrial hygiene every 4 years.
### APPENDIX 2-D
ASSIGNING SHOP PRIORITIES IN DOEHSRS-IH FOR SHORE ACTIVITIES

**NOTE:** Shop Priorities for all Afloat activities are considered to be Priority 2
All Reserve Center shops will be designated as Priority 3

<table>
<thead>
<tr>
<th>Minimum Assessment Frequency&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Priority 1 – Annual</th>
<th>Priority 2 – Every two years</th>
<th>Priority 3 – Every four years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL DESCRIPTION</strong>&lt;sup&gt;2&lt;/sup&gt; - Shops requiring complex IH assessment or significant monitoring</td>
<td>GENERAL DESCRIPTION&lt;sup&gt;2&lt;/sup&gt; – Shops where work is of moderate to low hazard</td>
<td>GENERAL DESCRIPTION&lt;sup&gt;2&lt;/sup&gt; - Shops where work is primarily in an administrative environment</td>
<td></td>
</tr>
<tr>
<td>Hazards are poorly defined or controlled. Work environment or processes are unstable</td>
<td>Hazards well defined and controlled. Work environment and processes are stable</td>
<td>No hazards. Work environment and processes are stable</td>
<td></td>
</tr>
<tr>
<td>Except as noted below, a requirement for exposure–based occupational health exams for all chemical and physical stressors, all mixed exposures and when IH recommends respirator use. Exceptions: Noise 503 or 512; Blood or Body Fluids – 178 Radiation-Ionizing 505; Radiation - Laser 506; Animal Associated Disease 207; Hazardous Drugs 110; and Specialty exams&lt;sup&gt;3&lt;/sup&gt;</td>
<td>No exposure-driven occupational health exam requirements, other than annual audiograms</td>
<td>No occupational health exam requirements</td>
<td></td>
</tr>
<tr>
<td>Highest rated SEG in shop has a Health Risk Rating (HRR)&lt;sup&gt;4&lt;/sup&gt; of 12 or greater or there are high exposures (e.g., 95th percentile &gt; or equal to 50% OEL), other than noise.</td>
<td>Highest rated SEG in shop has an HRR&lt;sup&gt;4&lt;/sup&gt; less than 12 and greater than 4 or exposure assessment is moderate to low (e.g., 95th percentile &gt;detectable and &lt; 50% OEL)</td>
<td>Exposure assessment is negligible (e.g., no detectable exposure)</td>
<td></td>
</tr>
<tr>
<td>OSHA regulatory exposure assessment or monitoring requirements (OSH Act Section 6b rulemaking)</td>
<td>Minimal potential for hazards to go out of control or create significant risk</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

<sup>1</sup> The required routine assessment frequency establishes a minimum requirement. Shops should be assessed as frequently as necessary to adequately identify, evaluate, and control the occupational health hazards present.

<sup>2</sup> Shop Complexity Categories (A, B, C) established for the 2009 NMAT IH staffing study in Data Call1A may be used as a starting point for revalidating Shop Priority (1, 2, 3) codes as outlined in this appendix for DOEHSRS-IH.


<sup>4</sup>HRR for a SEG is calculated by multiplying the Exposure Effects Rating (EER) by times the Health Effects Rating (HER), according to the guidance presented in the NMCPHC IHFOM, Chapter 4.
### TABLE 1-HEALTH RISK RATING CALCULATION

<table>
<thead>
<tr>
<th>Health Effect Rating/Category</th>
<th>Exposure Effects Rating/Category</th>
<th>1/Negligible</th>
<th>2/Low</th>
<th>3/Moderate</th>
<th>4/High</th>
<th>5/Very High</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/Very High</td>
<td></td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>4/High</td>
<td></td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>3/Moderate</td>
<td></td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>2/Low</td>
<td></td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>1/Negligible</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

### TABLE 2-EXPOSURE EFFECTS RATING CATEGORIZATION

<table>
<thead>
<tr>
<th>Exposure Effects Rating/Category</th>
<th>IH Exposure Hypothesis based on 95th Percentile Exposure Point Estimate</th>
<th>Exposure Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/Very High</td>
<td>Expected to be at or above the OEL</td>
<td>Gross frequent contact with agents at very high concentrations; Materials have high vapor pressure or dustiness</td>
</tr>
<tr>
<td>4/High</td>
<td>Likely to be an exposure, but between 50% OEL and OEL</td>
<td>Likely contact with agent at high concentrations or infrequent contact at very high concentrations; Materials have significant vapor pressure or dustiness</td>
</tr>
<tr>
<td>3/Moderate</td>
<td>Exposure frequently &lt; 50% OEL, or generally between 10-50% of OEL</td>
<td>Occasional contact with agent at moderate concentrations or infrequent contact at high concentrations; Materials have low vapor pressure or dustiness</td>
</tr>
<tr>
<td>2/Low</td>
<td>Exposure infrequent, &lt; 10% of OEL</td>
<td>Infrequent contact with agents</td>
</tr>
<tr>
<td>1/Negligible</td>
<td>No detectable exposure</td>
<td>Current science cannot determine that there is exposure to agent</td>
</tr>
<tr>
<td>Health Effects Rating/Category</td>
<td>Health Effect</td>
<td>Health Effects Codes (OSHA)</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 5/Very High                    | Acute life-threatening or disabling injury or illness | **Health Hazard:** HE1 - Regulated carcinogens; HE2 – Chronic (cumulative) toxicity - known or suspect human (IARC Group 1 & Group 2A, ACGIH A1 & A2) carcinogens, mutagens; HE17 - Chemical asphyxiants, anoxiants; HE11 – Respiratory effects - acute lung damage, edema  
 **Safety:** Death, Loss of facility or asset  
 **Noise:** Immediate hearing loss, impulse noise |
| 4/High                         | Chronic irreversible health effects of concern      | **Health Hazard:** HE3 – Chronic toxicity - long term organ toxicity other than nervous, respiratory, hematologic, or reproductive; HE5 – Reproductive hazards - teratogens, or other impairment; HE7 – Nervous system disturbances - other than narcosis; HE10 - Respiratory effects (other than irritation) - cumulative lung damage; HE9 - Respiratory effects (other than irritation) – respiratory sensitization – asthma or other  
 **Safety:** Major property damage  
 **Noise:** Noise induced hearing loss, permanent and temporary threshold shifts, will eventually lead to permanent hearing loss |
| 3/Moderate                     | Severe reversible health effects of concern        | **Health Hazard:** HE14 – Irritation of eyes, nose, throat, skin – marked; HE6 - Nervous system disturbances - cholinesterase inhibition; HE12 - Hematologic disturbances – anemias; HE13 - Hematologic disturbances – methemoglobinemia, anemias; HE4 - Acute toxicity - Short-term high risk effects (non-IDLH)  
 **Safety:** Minor property damage |
| 2/Low                          | Reversible health effects of concern               | **Health Hazard:** HE15 – Irritation of eyes, nose, throat, skin – moderate; HE16 – Irritation of eyes, nose, throat, skin – mild; HE8 - Nervous system disturbances - narcosis  
 **Safety:** Minimal threat to personnel, property, first aid, minor supportive medical treatment, but still a violation of a standard. |
| 1/Negligible                   | Nuisance health effects (Reversible health effects of little concern or no known or suspected adverse health effects) | **Health Hazard:** HE19 - Generally low risk health effects - nuisance particulates, vapors or gases; HE 20 - Generally low risk health effects – odor  
 **Safety:** No violation of a standard. |
**APPENDIX 2-E**

**RECOMMENDED FORMATS FOR MEDICAL SURVEILLANCE SUMMARIES**

**MEDICAL SURVEILLANCE TABLES**

(SHOP/COMMAND/AREA OF RESPONSIBILITY (AOR) SUMMARIES)

**Shop: CODE 123 AIR OPS DEPARTMENT (SHOP SUMMARY)**

<table>
<thead>
<tr>
<th>WORK OPERATION/TASK</th>
<th>RECOMMENDED MEDICAL PROGRAM</th>
<th>MEDICAL PROGRAM NUMBER</th>
<th>ESTIMATED NUMBER OF WORKERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLIGHT LINE OPERATIONS</td>
<td>NOISE</td>
<td>503</td>
<td>10</td>
</tr>
</tbody>
</table>

**MEDICAL SURVEILLANCE TABLE (COMMAND SUMMARY)**

Command: **XYZ SQUADRON/12345**

<table>
<thead>
<tr>
<th>WORKCENTER/SHOP</th>
<th>WORK OPERATION/TASK</th>
<th>RECOMMENDED MEDICAL PROGRAM</th>
<th>MEDICAL PROGRAM NUMBER</th>
<th>ESTIMATED NUMBER OF WORKERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR OPS DEPARTMENT (CODE 123)</td>
<td>FLIGHT LINE OPERATIONS</td>
<td>NOISE</td>
<td>503</td>
<td>10</td>
</tr>
<tr>
<td>CORROSION CONTROL DEPARTMENT (CODE 456)</td>
<td>SPRAY PAINTING</td>
<td>RESPIRATOR USER-FULL FACE</td>
<td>716</td>
<td>2</td>
</tr>
</tbody>
</table>

**MEDICAL SURVEILLANCE TABLE (AOR SUMMARY)**

AOR: **NHC ANYWHERE**

<table>
<thead>
<tr>
<th>COMMAND/ UIC</th>
<th>WORKCENTER/SHOP</th>
<th>WORK OPERATION/TASK</th>
<th>RECOMMENDED MEDICAL PROGRAM</th>
<th>MEDICAL PROGRAM NUMBER</th>
<th>ESTIMATED NUMBER OF WORKERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>XYZ SQUADRON/12345</td>
<td>AIR OPS DEPARTMENT</td>
<td>FLIGHT LINE OPERATIONS</td>
<td>NOISE</td>
<td>503</td>
<td>10</td>
</tr>
<tr>
<td>XYZ SQUADRON/12345</td>
<td>CORROSION CONTROL DEPARTMENT</td>
<td>SPRAY PAINTING</td>
<td>RESPIRATOR USER-FULL FACE</td>
<td>716</td>
<td>2</td>
</tr>
<tr>
<td>ABC SQUADRON/98765</td>
<td>AIR OPS DEPARTMENT</td>
<td>FLIGHT LINE OPERATIONS</td>
<td>NOISE</td>
<td>503</td>
<td>12</td>
</tr>
<tr>
<td>ABC SQUADRON/98765</td>
<td>CORROSION CONTROL DEPARTMENT</td>
<td>SPRAY PAINTING</td>
<td>RESPIRATOR USER-FULL FACE</td>
<td>716</td>
<td>3</td>
</tr>
</tbody>
</table>