

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Diving Unit Safety Assessment

Operational Standards and Procedures



July 2011

FOREWORD

This document represents the standards and procedures for a Diving Unit Safety Assessment (DUSA) inspection under the auspices of the National Oceanic and Atmospheric Administration (NOAA) as of the approval date of this manual. As diving progresses so shall the standards contained in this manual. This manual has been reviewed and approved by the OMAO Director and the NOAA Diving Control and Safety Board.

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SECTION 1: INTRODUCTION

1.1 Purpose

This document establishes the standards and procedures for the administration of the NOAA Diving Unit Safety Assessment (DUSA) program.

1.2 Scope

The DUSA program applies to all National Oceanic and Atmospheric Administration (NOAA) divers. Changes to DUSA standards, procedures, and requirements will be made by the NOAA Diving Safety Officer (NDSO) only and these changes will not go into effect until all responsible personnel are notified.

1.3 Overview

The DUSA is a comprehensive inspection program designed to assess the operational readiness and adherence to existing regulations, requirements, policies, and standards of NOAA diving units and personnel. The major areas evaluated during an assessment include: administration, training, diving equipment, air compressor system(s) and air/gas stowage, support equipment, diving and rescue procedures. These assessments will be conducted by a DUSA Team (DT) consisting of NOAA Diving Safety Officer (NDSO) and/or NOAA Diving Center (NDC) representatives serving as DUSA Inspectors (DI) and/or Diving Medical Officer (DMO).

DUSA is a risk control tool which investigates problems at an operational and administrative level so they may be viewed and addressed. The criteria for selecting facilities to undergo compliance assessment must be attuned to the different levels and types of diving activity performed by a unit and address the controls needed to eliminate deficiencies at their root causes. The purpose of the DUSA program is to preserve NOAA Diving resources by identifying gaps in compliance with Safety and Occupational Health Regulations.

SECTION 2: ASSESSMENT PROTOCOL

2.1 Site Assessment

- A. *Tier I assessment* is an inspection performed by an independent DI or off-site personnel, e.g., NDSO, NDC trained inspector, Line Office Diving Officer (LODO), Staff Office Diving Officer (SODO), or Unit Diving Supervisor (UDS) from another Line/Staff Office or by a contractor.
- B. *Tier II assessment* is a self-inspection performed by qualified NOAA personnel from within the facility. This assessment is the annual Unit Inspection which is required to be submitted to the UDS by January 31. The checklist to perform this inspection is found on the NDC Website.

2.2 DUSA Findings Ratings

- A. DUSA findings have the potential to affect the health and safety of the individual diver and the safety of the facility or equipment used by divers to conduct operations. By utilizing a ‘probability/severity’ Risk Assessment Code (RAC) matrix, a RAC value is assigned to each finding. The rating of the unit’s inspection is based on the lowest RAC assigned which may affect the unit’s authorization to dive. Finding Ratings are described in table below:

<i>DUSA Rating</i>	<i>Description</i>	<i>Examples</i>
RAC 1 – Unit is suspended from conducting diving operations until reauthorized by the Diving Program Manager.	Indicates substantial probability that death or serious physical harm could result, and management knew or should have known of the hazard. The DI or DT has the authority to immediately halt diving operations that in their opinion are unsafe. The findings are immediately confirmed with the LODO/SODO and NDSO.	<i>Flagrant lack of compliance with NOAA regulations, standards, and procedures.</i>
RAC 2 – A temporary suspension is issued until all Corrective Actions (CA) are completed, prior to the authorization to continue diving operations is granted by the LODO/SODO.	Indicates moderate probability injury or illness. At least one area evaluated does not meet the minimum requirements for safe diving operations or the unit is unable to demonstrate or maintain the minimum equipment, personnel, or level of dive proficiency in order to comply with NOAA diving standards. A temporary suspension is issued until CA(s) are completed prior to the authorization to continue diving operations by the LODO/SODO.	<i>Dive unit is non-compliant with maintaining appropriate life-saving equipment or personnel to conduct diving operations.</i>
RAC 3 – It is required that CA(s) are completed and confirmed by LODO/ SODO within 30 days of the issued CAP.	Indicates that equipment or diver(s) must be removed from operations due to lack of appropriate maintenance or authorization. The potential for injury to the diver or injury to others if the equipment or diver is un-expectedly utilized in an unauthorized status prior to completion of CA(s).	<i>Critical equipment is out of service, has not been properly removed from service. or is in need of immediate repair.</i>
RAC 4 – Complete CAP confirmed by LODO/ SODO.	Suggests programmatic, written, or other administrative deficiencies with minor probability of resulting in an injury or illness.	<i>Unit is unaware of proper forms and administrative procedures to follow.</i>
RAC 5 – Complete CAP confirmed by LODO/ SODO.	Majority of areas evaluated meets the minimum requirements. Any recommended CAs will not interfere with safe diving operations.	<i>Minor administrative issues.</i>

- B. DUSA Finding – Incomplete
 - 1) Degraded conditions exist which endanger the lives of personnel conducting operations or the unit is unprepared to such a degree that conducting the DUSA would provide a limited or inconclusive assessment. This may be due to a significant degradation of equipment (e.g., diver-worn, air systems, support equipment), staffing levels, or safety procedures.
 - 2) An Incomplete rating will result in the immediate suspension of a unit’s authority to conduct diving operations and a re-inspection will be required.
 - 3) Egregious conditions or lack of preparation for DUSA may warrant the unit being held responsible for expenses incurred for a re-inspection as determined by the NDSO and LODO/SODO.
- C. Re-inspection of unit assessments rated as RAC 1 or ‘Incomplete’
 - 1) If a DUSA is rated as RAC 1 or ‘Incomplete,’ a re-inspection may be required.
 - 2) Only areas rated RAC 1, or not previously examined, need to be evaluated during the re-inspection as determined by NDSO.
 - 3) Egregious conditions or lack of preparation for DUSA may warrant the unit being held responsible for expenses incurred for a re-inspection as determined by the NDSO and LODO/SODO.
- D. See Appendix 6 for RAC Matrix

2.3 DUSA Findings Tracking

- A. All project findings will be recorded on the computer driven Assessment Manager (AM) by the DI. These findings are then uploaded onto the Web-Hosted Assessment Manager (WHAM). The WHAM is a web-based data tracking system administratively maintained and updated by the NDSO. The corrective action status of all project findings is updated on the WHAM by the project assigned LODO/SODO and/or UDS.
- B. Updates on the status of findings provide information on the progress made to correct a deficiency. These updates may be viewed by NDSO invitees (e.g., Assistant Administrators, OMAO Director, Diving Program Manager (DPM), and Diving Center Manager (DCM). The status of findings may be Open, In-Progress, or Closed. Each status is defined as follows:

Finding Status	Description
Closed	Indicates that finding CAs have been completed; in concurrence with LODO/SODO.
In-Progress	Denotes that closure actions have been initiated but are not yet complete.
Open	Suggests that no action has been taken to correct the finding.

- C. Additional documentation and training will be provided for the WHAM system to all participants.

2.4 Scheduling

- A. Identifying a diving unit's priority on the assessment schedule begins by determining the level of risk associated with the dive activities being performed. Although there is a certain level of risk inherent in all diving operations, quantifying the risk is much more subjective than total number of dives versus depth of dives. In order to identify the High, Moderate, and Low Risks Dive Units, personal knowledge of each unit's activities and divers must be known and that can only come from those who participate at unit level.
- B. Selection Process
- 1) The inspection program will be divided into three regions: Northeast-to-Midwest, Southeast-to-Gulf of Mexico, and Northwest-to-Southwest including Pacific Islands.
 - 2) Every 3 years, each unit and ship will be inspected by a representative from the DUSA program. Inspections will be conducted within specific geographic regions to minimize travel costs.
 - 3) At the beginning of each fiscal year the NDSO and LODO/SODO will meet to determine a prioritized unit list within that year's designated region.
 - 4) The following information will be entered into the DUSA tracking system and used to assist in the scheduling of inspections.
 - i *High Risk Facilities (HRF)* are NOAA dive units that conduct dives which have a higher likelihood of a compliance violation and/or a higher magnitude of consequence if a violation occurs. HRF are determined by mutual agreement of the NDSO, LODO/SODO, and the unit's UDS. Examples of units that may be considered HRFs - units that conduct decompression dives, units that conduct multi-day multi-dive operations on a routine basis, units that conduct specialized dives such as Blue-water diving, overhead obstruction, heavy salvage etc.
 - ii *Medium Risk Facilities (MRF)* are NOAA diving units which pose a moderate risk to the diver's Safety or Occupational Health due to the types of dives performed. MRF are selected by mutual agreement of the NDSO, LODO/SODO, and the unit's UDS. Examples of units that may be considered MRFs – Buoy maintenance, use of light hand tools and lift bags, Item investigation, etc.
 - iii *Low Risk Facilities (LRF)* are NOAA diving units which pose lower risk to the diver's Safety or Occupational Health due to the types of dives performed. LRF are facilities selected by mutual agreement of the NDSO, LODO/SODO, and the unit's UDS. Examples of units that may be considered LRFs – units that conduct routine observation and data collection, units that conduct primarily proficiency dives, dives where no additional equipment is needed other than standard dive equipment, etc.
- C. A DT will inspect each dive unit no less than once every 36 months; however, the interval between inspections should not exceed 48 months. The date of the DUSA will be selected by mutual agreement of the NDSO, LODO/SODO, and the respective unit's UDS. HRFs will take priority over 'lower' risk facilities when planning annual inspection schedules within their respective region. Additional units within close proximity to a HRF regardless of ranking will be inspected to optimize logistics and minimize costs.

SECTION 3: OPERATIONAL CONTROL

3.1 Organization

This section describes the organizational structure of the DUSA program and the relationship of the Line Office/Staff Office (LO/SO) representatives within the program.

3.2 NOAA Diving Safety Officer

The NDSO is the DUSA Program Chief Administrator

3.3 DUSA Inspector

The DI represents the DUSA program during the performance of an assessment.

3.4 DUSA Team

The DT is a group of individuals assigned to conduct DUSA.

3.5 Line Office Diving Officer/Staff Office Diving Officer

The LO/SO representative is an individual appointed to oversee and direct diving activities within a specific LO/SO, and to serve on the NOAA Diving Control and Safety Board

3.6 Unit Diver Supervisor

The UDS is a NOAA diver appointed by a LO/SO Diving Officer to oversee, direct, and approve diving activities conducted within their respective LO/SO unit, and to administer to the needs of assigned divers.

3.7 Unit Inspection Supervisor

The Unit Inspection Supervisor (UIS) is an onsite unit representative during DUSA (e.g., Unit Diving Supervisor (when present), Diving Officer (ships), Divemaster, or Lead Diver) that ensures divers and unit activities are prepared and scheduled for assessment.

SECTION 4: PROCEDURES

4.1 Introduction

- A. Six areas will be evaluated during the DUSA:
 - 1) Administration;
 - 2) Training;
 - 3) Diving Equipment;
 - 4) Air Compressor System(s) and air/gas stowage;
 - 5) Support Equipment; and
 - 6) Diving Operations including Rescue Procedures.
- B. To ensure uniformity of inspection criteria and application of all DUSA procedures, the NDP Unit Inspection Checklist shall be used as an inspection guide. This guide shall be used by both the unit receiving the DUSA as well as the DT conducting the inspection.
- C. Prior to the assessment, the DI shall conduct a pre-inspection briefing with the UDS/UIS, ensuring they are aware of all requirements of the inspection. At the completion of the DUSA, the DI shall conduct a post-inspection briefing to discuss deficiencies and notable findings. A findings report shall be submitted to the NDSO with the data entered into the AM.

4.2 Assessment Areas

- A. Administration and Training
 - 1) All diving-related administration, safety-drills, and training records will be reviewed for completeness and accuracy in accordance with NOAA Diving Regulations (NAO 209-123), NOAA Operations Manuals (Working and Scientific), and the NDP Unit Inspection Checklist (available at www.ndc.noaa.gov).
 - 2) Long-range and short-range training plans will be discussed to ensure the unit maintains qualified personnel to meet the unit's objectives.
- B. Diving Equipment
 - 1) The DI will assess the material condition and functionality of all life-support diving equipment at the unit (e.g., regulators, gauges, BCDs, dry suits). Items will be evaluated to ascertain their state of operational readiness, maintenance, preservation, and cleanliness.
 - 2) The date of last service for all life-support, emergency, and support equipment will be reviewed to ensure compliance with NOAA Diving Regulations, NOAA Operations Manuals (Working and Scientific), and the NDP Unit Inspection Checklist.
 - 3) Diver-worn equipment configuration will be evaluated to ensure compliance with applicable NOAA Diving Operations manuals. LODO/SODO approvals for deviations from standard configurations shall be on hand and will be verified.
 - 4) All NOAA divers' life-support equipment, as listed above, shall be made available for this inspection. Divers' located off-site will be expected to ship their equipment to the inspection site for evaluation. When conditions exist that preclude the availability of this equipment during the dates of the

scheduled inspection, divers shall ship their equipment to the NDC for evaluation by a date agreed upon between the UDS and NDSO. Equipment shipped to the NDC shall include all appropriate return shipping labels with unit accounting codes.

- C. Air Compressor and Air/Gas Stowage
 - 1) Divers' air compressors will be examined to ensure compliance with NOAA standards.
 - 2) Maintenance records and air test results will be reviewed for timeliness and compliance with the NDP Unit Inspection Checklist requirements. Air compressors with overdue air tests will be immediately removed from service pending the completion of proper testing.
 - 3) Air/Gas stowage will be evaluated to ensure the space provided is adequate in size for proper ventilation, cooling testing, and security.
- D. Support and Safety Equipment
 - 1) All dive support and safety equipment will be inspected to ensure compliance with NOAA standards and the NDP Unit Inspection Checklist requirements.
 - 2) Maintenance records will be reviewed for completeness and timeliness.
 - 3) All safety equipment items will be evaluated to ascertain their state of operational readiness, maintenance, preservation, and cleanliness.
- E. Diving Operations/Diver Rescue
 - 1) A dive operation (actual or staged) and the rescue and retrieval of an unconscious diver will be observed and evaluated for compliance with NOAA regulations. The types of dive rescues evaluated will be either working, scientific, or recompression chamber operations.
 - 2) The onsite supervisor (e.g., Divemaster or Lead diver) shall retain complete responsibility for conducting the diving operations and rescue drill(s), and the safety of personnel. The DI has authority to direct the dive supervisor to terminate the dive or drill if in his opinion the potential for a life-threatening injury is increased by the inappropriate actions of the dive supervisor or divers.
 - 3) Diving activities to be evaluated include pre- and post-dive briefings, diver worn equipment assembly, line-up of chamber systems, dive or chamber operations, rescue procedures, and breakdown of dive site or chamber systems.
 - 4) The dive rescue drills will be agreed upon by NDSO and UDS prior to initiation of DUSA.

SECTION 5: REPORTS / LETTERS

5.1 DUSA – Letter of Notification

The NDSO will forward a DUSA Letter of Notification of the impending inspection to the UDS and the respective LODO/SODO. The letter will contain specific criteria for the inspection, identification of the DUSA team member(s), and a list of events. A sample DUSA notification letter (Appendix 2) may be modified as necessary for specific diving unit's requirements

5.2 DUSA – Project Findings Report

The DI will submit the DUSA project findings to the NDSO via the AM who will in-turn upload the project into the WHAM. Once the project is uploaded, the WHAM will immediately notify the LODO/SODO and UDS via email. This report will contain an evaluation of the DUSA, including comments and 'optional' photos, that substantiate the assessment findings. Major discrepancies from the NOAA Diving regulations, OSHA Diving Regulations, NDP Operations Manual (Working/Scientific), and/or NDP Unit Inspection Checklist shall be noted, together with recommendations, comments for improvements, or CA(s) of the discrepancies. A summary of diving operations and diver rescue-drills will also be included.

5.3 DUSA – Letter of Completion

Upon satisfactory completion of the DUSA and recommended corrective actions, the UDS and LODO/SODO will receive a Letter of Completion from the NOAA Diving Safety Officer. (Appendix 3)

5.4 DUSA – Letter of Suspension

If a rating of RAC 1 or 'Incomplete' is assigned, the DI shall notify the NDSO (verbally and in writing) of the details of the infraction(s) within 24 hours. The NDSO shall immediately notify the UDS, LODO/SODO, and DPM both verbally and in writing with a DUSA immediate 'Notification of Suspension Report' which includes a written summary of RAC 1 findings. The unit will not be reauthorized to conduct diving operations until a letter of authorization is issued by the DPM.

5.5 DUSA – Letter of Authorization

If a unit has been suspended from conducting diving operations and the LODO/SODO and NDSO agree all required CA(s) have been successfully completed, then the unit will be authorized to dive once they receive a Letter of Authorization issued by the DPM. (Appendix 5)

SECTION 6: RESPONSIBILITIES

This section assigns responsibilities to LO/SO personnel for the execution of the DUSA program.

6.1 NOAA Diving Safety Officer

- A. Administers the DUSA Program and is appointed by the OMAO Director.
- B. Works in conjunction with the DCM to assign DI(s) to DUSA projects.
- C. Ensures DUSAs are scheduled for all diving units with no less than 30 days advance notice.
- D. Submits DUSA findings to LODO/SODO within 10 business days of receipt of DI findings report.
- E. Monitors the CAs for all RAC 1 evaluations.
- F. Schedules as deemed necessary the re-inspection of any units rated as RAC 1 or 'Incomplete.'
- G. Issues letters applicable to DUSA (e.g., Notifications, DUSA Completion, Suspension, DUSA Authorization) and provides to UDSs and LODO/SODO.
- H. Monitors CAs and informs DPM of completion of CAs for 'suspended' units.
- I. Suspends diving operations deemed unsafe.
- J. Monitors and maintains WHAM.

6.2 DUSA Inspector

- A. Must be thoroughly familiar with the requirements of the DUSA standards and procedures.
- B. Inspectors must be NOAA dive certified at the Working or Scientific level or higher. If contractors are used they must be certified at an equivalent level.
- C. Conducts DUSA inspections and briefs the UIS and NDSO on findings, and is appointed by the NDSO.
- D. Coordinates scheduled DUSA with UDS and UIS to clarify logistics for unit specific DUSA.
- E. Conducts a pre-inspection briefing with the UIS, ensuring the scope and purpose of the DUSA is clearly defined.
- F. Conducts exit briefing to discuss findings and diving operations limitations (if applicable) with the UIS, the Commands (for ships), Laboratory Director (for land-based units), and UDS.
- G. Terminates a DUSA if:
 - 1) Conditions exist which unnecessarily endanger the lives or safety of personnel conducting operations during the DUSA;
 - 2) Operational status of dive systems or staffing is degraded to the point that conducting the DUSA would provide a limited or inconclusive evaluation of the unit's ability to conduct diving operations; or
 - 3) Unit is unprepared to conduct a useful DUSA due to a lack of prior planning (e.g., personnel or equipment readiness).
- H. Immediately notifies the onsite supervisor, Command (ships), and NDSO in the event the DUSA is terminated or if delay occurs due to unit not being prepared for DUSA.

- I. Ensures each deficiency is clearly documented, and the requirements or specifications for each deficiency are cited and fully justified.
- J. Records all findings and submits findings report to NDSO within 7 business days of completion of DUSA.

6.3 Line Office Diving Officer/Staff Office Diving Officer

- A. Ensures full cooperation and participation from all UDSs/units/divers with DUSA programs within their area of responsibility.
- B. Reviews DUSA report of findings and provide comments if disputed. All comments shall be submitted in writing within 10 business days of receipt of report with references to regulations substantiating discrepancies. If no comments are submitted within the required time-line, the report will be considered final.
- C. Has final approval of CAP submitted by UDS to address unit deficiencies.
- D. Tracks CAs on WHAM and notifies NDSO in writing once all CAs are completed for a particular unit.
- E. Circumstances may arise that affect the ability to meet reporting timelines (e.g., travel, time at sea, annual/sick leave); in these cases, notify NDSO in writing that more time is needed and provide proposed completion date.
- F. Maintains authority and issue resolution responsibility for all CAs related to DUSA.
- G. Notifies NDSO in writing upon the completion of all CAs.

6.4 Unit Diving Supervisor

- A. Forwards notice of scheduled DUSA to the appropriate unit(s) no less than 25 days prior to commencement of the DUSA if not co-located at the unit being inspected.
- B. Assigns a UIS to coordinate all phases of DUSA with NDSO and/or DI (e.g., schedule dive personnel, equipment, diving operation, rescue drills, be onsite to accompany DI during assessment).
- C. Prepares CAP within 15 business days of receipt of the DUSA report to address assessment findings, and submits to their LODO/SODO for approval.
- D. Circumstances may arise that affect the ability to meet reporting timelines (e.g., travel, time at sea, annual/sick leave); in these cases, notify LODO/SODO in writing that more time is required and provide proposed completion date.
- E. Performs the CA(s) within their area of assigned responsibility or assigns this responsibility to unit divers.
- F. Monitors and coordinates resolution of CA(s).
- G. Ensures CA(s) status is updated in WHAM.
- H. Notifies LODO/SODO of status and completion of all CA(s).
- I. Notifies LODO/SODO if more time is needed to comply with the agreed upon timeline to resolve CA(s).
- J. Ensures full cooperation and participation with DUSA program from all divers within their units(s).

6.5 Unit Inspection Supervisor – Diving Officer (ships), Divemaster or Lead Diver

- A. Ensures full cooperation and participation with DUSA program from all divers within their area of responsibility.
- B. Forwards notice of impending DUSA to the appropriate divers and support personnel no less than 20 days prior to the DUSA commencement.
- C. Coordinates all phases of DUSA with UDS and DI (e.g., schedule, personnel, equipment, coordinate dive operations, rescue drills, accompany DI during assessment).
- D. Ensures all requirements of DUSA are readily accessible and/or ready for inspection in a timely manner (e.g., inspection and dive operations schedule, equipment laid out, records available, personnel onsite and available).
- E. Coordinates resolution of all CA(s) listed in the CAP with UDS.
- F. Notifies UDS upon completion of all CA(s).
- G. Notifies respective UDS when more time is needed to comply with the agreed upon CAP.

APPENDIX 1

ACRONYM DEFINITIONS

As used in this manual, the listed acronyms are defined as follows:

AM	Assessment Manager
CAP	Corrective Action Plan
CA(s)	Corrective Action(s)
DCM	Diving Center Manager
DMO	Diving Medical Officer
DPM	Dive Program Manager
DI	DUSA Inspector
DT	DUSA Team
DUSA	Diving Unit Safety Assessment
HRF	High Risk Facility
LODO	Line Office Diving Officer
LRF	Low Risk Facility
MFR	Medium Risk Facility
NDC	NOAA Diving Center
NDP	NOAA Diving Program
NDSO	NOAA Diving Safety Officer
NAO 209-123	NOAA Administrative Order 209-123
NOAA	National Oceanic and Atmospheric Administration
RAC	Risk Assessment Codes
SEP	Standardized Equipment Program
UDS	Unit Diving Supervisor
UIS	Unit Inspection Supervisor
WHAM	Web-Hosted Assessment Manager

APPENDIX 2
LETTER OF NOTIFICATION

MEMORANDUM FOR: UDS

FROM: Steven C. Urick,
Diving Safety Officer, NOAA Diving Program

SUBJECT: Notification of Impending DUSA

The (Unit Name) is scheduled for a Diving Unit Safety Assessment (DUSA) on (date). The DUSA provides a critical assessment of the unit's operational diving capabilities and compliance with NOAA Diving Regulations (NAO 209-123), NOAA Diving Operations Manuals (Working and Scientific), and the 'NOAA Diving Program (NDP) Unit Inspection Checklist.' Units should use the 'NDP Unit Inspection Checklist' as a guide to prepare for this inspection.

The DUSA Inspection Team will be composed of the following personnel:

- DUSA Inspector;
- DUSA Assistant; and
- Diving Medical Officer (when appropriate).

On the first day of the DUSA, a pre-briefing will be held with the DUSA Inspector and a designated Unit Inspection Supervisor (UIS) to discuss the general schedule. At that time, the DUSA Inspector is to be provided a folder containing the following information:

- Schedule of events;
- Completed NDP Unit Inspection Checklist;
- List of all qualified divers assigned including: name, level of diver qualification, and all dive station qualifications (i.e., standby diver training, chamber operator, etc.);
- List of known diving-related administrative, qualification, and personnel deficiencies;
- List of known diving related equipment and systems deficiencies including those listed in the most recent NDP Annual Unit Inspection Checklist;
- List of any outstanding deficiencies noted at unit;
- Written verification of diver worn equipment waiver(s); and
- Maintenance records for all diver worn equipment authorized for use not issued through the SEP.

A review of administrative records will be conducted. All records should be assembled in a convenient location so they may be examined by the DUSA Inspector on the first day.

DUSA STANDARDS AND PROCEDURES

An equipment inspection will be performed including: diver worn life support equipment (regulator, BCD, and dry suits), emergency equipment, and support and diver's air systems. Divers located offsite and enrolled in the Standardized Equipment Program will be expected to ship their equipment to the inspection site for evaluation. All diver worn equipment shall be laid out and ready for a timely inspection.

During the diving operations phase of the DUSA, the UDS or designee will retain complete responsibility for conducting the dives and the safety of personnel. This includes all appropriate pre- and post-dive briefings and checklists. Diving rescue scenarios will be mutually agreed upon by the UDS and the DUSA Inspector.

Suitable space for the DUSA Inspector(s) should be provided throughout the DUSA for deliberations, development of findings, and preparation of critiques. Subsequent to the completion of the DUSA, an oral critique will be provided to the UIS and, if applicable, the Commanding Officer and Executive Officer (for ships) or UDS and Laboratory Director (for land-based units).

Oral interviews may be conducted upon request by DUSA Inspector, UIS, or divers.

cc: LODO/SODO

APPENDIX 3
LETTER OF DUSA COMPLETION

MEMORANDUM FOR: UDS

FROM: Steven C. Urick,
Diving Safety Officer, NOAA Diving Program

SUBJECT: DUSA Successful Completion

A DUSA was conducted for (unit receiving DUSA) on [dates]. The LODO/SODO and NOAA Diving Safety Officer (NDSO) has concluded that (unit receiving DUSA) has successfully completed all required corrective actions to conduct diving operations. The overall grade of this DUSA is (RAC 1 – RAC 5).

The DUSA Inspector observed an operational dive including a rescue demonstration; the results are described below.

Results of operational dives:

- Self Contained Underwater Breathing Apparatus (SCUBA)
- Tethered SCUBA
- Recompression Chamber
- Rescue and recovery of an unconscious diver

cc: LODO/SODO

APPENDIX 4
LETTER OF DUSA SUSPENSION

MEMORANDUM FOR: UDS

FROM: Steven C. Urick,
Diving Safety Officer, NOAA Diving Program

SUBJECT: Unit Suspension from Conducting Diving Operations

Following a DUSA on (date), your unit, (unit name), has been suspended from conducting diving operations. This action was based on (Finding/Incomplete). As you know, (unit name) will not be re-authorized to dive until Corrective Actions have been completed and a DUSA Letter of Authorization has been received from the NOAA Diving Program Manager.

The DUSA Inspector and your LODO/SODO concur with the recommendation.

If you choose to appeal this decision, please speak with your LODO/SODO concerning this correspondence.

cc: OMAO Director
NOAA Diving Program Manager
LODO/SODO

APPENDIX 5

LETTER OF DUSA AUTHORIZATION

MEMORANDUM FOR: LODO/SODO

FROM: David A. Dinsmore
Manager, NOAA Diving Program

SUBJECT: Unit Authorization to Conduct Diving Operations

The NOAA (*Unit*) was inspected in accordance with OMAO Policy 1702, Diving Unit Safety Assessment Program, and the *NOAA Standards and Safety Manual* on (date). The inspection was conducted in (location) by (DUSA Inspector) with the cooperation of (Unit Inspection Supervisor).

Consequently, diving operations were suspended by (NDSO) on (date). Subsequent to the suspension all recommended corrective actions have been completed and verified by the (LODO/SODO).

By my authority, I (NOAA Diving Program Manager) hereby lift the suspension and grant (unit name) the authority to continue with diving operations.

cc: OMAO Director
NOAA Diving Safety Officer
Unit Diving Supervisor

APPENDIX 6
RISKS ASSESSMENT CODE

Risk is the probability and severity of loss from exposure to hazards. The assessment step is the application of quantitative or qualitative measures to determine the level of risk associated with a specific hazard. Use the Risk Assessment Code Matrix to help you prioritize the risks.

EVENT PROBABILITY

		Frequent	Likely	Occasional	Seldom	Unlikely
SEVERITY	Catastrophic	1	1	2	3	3
	Critical	1	1	2	3	4
	Major	1	2	3	4	4
	Minor	2	3	4	4	5

Severity

- Catastrophic Complete mission failure, death, or loss of a diver's air system.
- Critical Chief mission degradation, severe injury, occupational illness, or critical system damage.
- Major Key mission degradation, injury, minor occupational illness, or major system damage.
- Minor Trivial mission degradation, injury, occupational illness, or minor system damage.
- Negligible Minimal mission degradation, injury, occupational illness, or negligible system damage.

Probability

- Frequent Occurs often in career/equipment service life (continuously).
- Likely Occurs several times in career/equipment life (occurs frequently).
- Occasional Occurs sometime in career/equipment life (occurs sporadically).
- Seldom Possible to occur in career/equipment life (remote chance of occurrence).
- Unlikely Can assume will rarely occur in career/equipment life (possible, but improbable).