

U-2/SR-71 PHYSIOLOGICAL SUPPORT PROGRAM

COMPLIANCE WITH THIS INSTRUCTION IS MANDATORY

This instruction establishes the ACC U-2/SR-71 Physiological Support Program. It implements AFPD 11-4, *Aviation Services*. Guidance and procedures set forth in this directive delineate responsibilities for this function. This instruction standardizes equipment control procedures, prescribes life support equipment requirements, states general requirements, and outlines the establishment and operation of the U-2/SR-71 Physiological Support Council. This instruction does not apply to Air National Guard (ANG) or U S Air Force Reserve (USAFR) units and members.

SUMMARY OF REVISIONS

Changes all references to PSD to read Physiological Support Squadron (PSPTS). Commander, 9 PSPTS will maintain close coordination with U-2 program managers in ACC Requirements (DRFR) and ACC Operations (DOYR). The manager of the USAF Pressure Suit Depot (Beale) will coordinate changes with U-2 requirements (HQ ACC/DRFR) and U-2 operations (HQ ACC/DOYR). HQ ACC/SGPO will coordinate with HQ ACC/DOYR and HQ ACC/DOST. Deletes requirement for U-2/SR-71 aircrew who are not graduates of Course S-V86-A to attend the course using pressure suit torso harness for parasail activities. Adds wing staff representative to the wing Physiological Support Council. Correctly states requirement for denitrogenation on 100 percent oxygen for a minimum of 30 minutes prior to takeoff for SR-71 high flight. Changes references from AFR 161-33, AFR 50-3, and AFR 50-27 to AFI 48-101, AFI 36-2209, and AFI 11-403. Added Beale flight surgeons should fly one U-2 high flight each.

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Chapter 1

PHYSIOLOGICAL SUPPORT PROGRAM

1.1. General. The physiological support program encompasses the medical and technical support provided to U-2/SR-71 operations. The total integration and maintenance of life support systems, training, and medical support is directed toward optimum crew effectiveness and survival capabilities.

1.2. Purpose. This instruction provides guidance for the effective management of the U-2/SR-71 physiological support program within the Air Combat Command.

1.3. Scope. This instruction applies to U-2/SR-71 physiological support units and to command and staff personnel responsible for the operation of the physiological support activities.

1.4. Objectives. The ACC physiological support program is designed to:

- 1.4.1. Provide physiological support to high altitude reconnaissance wings/squadrons, operating locations (OLs), and contingency operations.
- 1.4.2. Provide training and indoctrination to U-2/SR-71 pilots on the physiological hazards associated with high altitude flight.
- 1.4.3. Provide training and indoctrination in the use and function of pressure suits, ejection seats, parachutes, and related survival, rescue, and protective life support equipment.
- 1.4.4. Provide training in emergency ground/in-flight egress as outlined in the applicable aircraft flight manual.
- 1.4.5. Provide training on survival procedures and hostile force evasion under arctic, desert, jungle, and water conditions.
- 1.4.6. Provide practical experience in water survival while wearing a pressure suit and related survival equipment.
- 1.4.7. Provide assistance to U-2/SR-71 pilots during launch and recovery operations.
- 1.4.8. Provide required maintenance, inspection, and testing of U-2/SR-71 physiological support systems.
- 1.4.9. Provide medical support to U-2/SR-71 pilots.

1.5. Organization. Physiological support is a function assigned to the following levels of command:

- 1.5.1. Surgeon, Headquarters Air Combat Command.
- 1.5.2. Commander, 9th Medical Group, Beale AFB CA.
- 1.5.3. Commander, 9th Physiological Support Squadron, Beale AFB CA.

1.6. Responsibilities:

1.6.1. The ACC Surgeon, HQ ACC/SG, provides the medical, technical, and administrative supervision required to carry out the physiological support program.

1.6.2. The ACC Coordinator, Aerospace Physiology, HQ ACC/SGPO, will:

1.6.2.1. Monitor and provide command guidance to the U-2/SR-71 physiological support program.

1.6.2.2. Monitor logistical requirements of physiological support functions.

1.6.2.3. Provide a coordination point at ACC Headquarters concerning all U-2/SR-71 physiological support matters.

1.6.2.4. May represent the ACC Surgeon at working group meetings, such as Life Support Council, meetings with members of AMC, meetings on special projects, and life support conferences to determine future command requirements.

1.6.2.5. Monitor the management of the USAF Pressure Suit Depot (Beale) at Beale AFB CA.

1.6.2.6. Serve as the SG focal point for all matters relative to U-2/SR-71 physiological support equipment that require coordination with Headquarters ACC.

1.6.2.7. Monitor, evaluate, and coordinate, U-2/SR-71 physiological support personnel requirements for AFSC 4MOXO, 43AX and MO11K3Y. HQ ACC/SGPO will coordinate with HQ ACC/DOSTL concerning AFSC 1T1 aircrew life support and AFSC 1T0 survival instructor requirements.

1.6.2.8. Conduct or direct staff assistance visits to 9th PSPDS as required by AFI 11-403.

1.6.2.9. Provide staff evaluation on suggestions, and aircraft accident/incident reports applicable to the U-2/SR-71 program. Forward those approved, together with recommendations, to appropriate agencies.

1.6.2.10. Coordinate as requested by Commander, 9th Physiological Support Squadron, with the ACC Reconnaissance Special Operations and Training (HQ ACC/DOYR) and Training Systems and Life Support Branch (HQ ACC/DOST) on U-2/SR-71 physiological support matters which have a bearing on operational procedures.

1.6.2.11. Coordinate on matters pertaining to life support personnel manning, equipment, or training with HQ ACC/DOST.

1.6.3. The Commander, 9th Medical Group, will:

1.6.3.1. Provide the medical and administrative supervision and support required to carry out the physiological support program.

1.6.3.2. Monitor the physiological support program and provide necessary direction to ensure continued mission accomplishment.

1.6.3.3. Keep abreast of physiological and life support matters and maintain close coordination with the wing commander to ensure requirements are effectively and efficiently carried out by the 9th Physiological Support Squadron.

1.6.3.4. Provide a flight surgeon to support operating locations where a resident U.S. military flight surgeon with high altitude life support experience is not available.

1.6.4. The Commander, 9th Physiological Support Squadron (9 PSPTS) will:

1.6.4.1. Keep abreast of the latest state-of-the-art developments in life support equipment pertinent to U-2/SR-71 operations.

1.6.4.2. Coordinate procedures for the care, use, control, aircrew training, and safeguarding of all U-2/SR-71 physiological support equipment requirements with HQ ACC/SGPO.

1.6.4.3. Manage the physiological support function in accordance with applicable directives.

1.6.4.4. Ensure local operating instructions are established for all physiological support operations.

1.6.4.5. Ensure that physiological support technicians are adequately trained, rotated through all phases of the 9 PSPTS operation, and maintain currency in their specialty.

1.6.4.6. Ensure that applicable operating instructions, technical orders, manuals, and equipment directives are available and used.

1.6.4.7. Evaluate all physiological support configuration changes, requests for tech data changes, and material deficiency reports applicable to the U-2/SR-71 program. Forward evaluations when required to HQ ACC/SGPO and HQ ACC/DOSTL for coordination.

1.6.4.8. Maintain close coordination with wing and squadron commanders, detachment commanders, directors of operations, aircrew members, and other staff agencies on matters concerning physiological support operations in relation to the U-2/SR-71 missions.

1.6.4.9. Coordinate directly with the ACC Command Coordinator for Aerospace Physiology on physiological support matters.

1.6.4.10. Contact with the Senior Year Systems Program Office (SPO) is permitted, when necessary.

1.6.4.11. Ensure that deficiency reports and all applicable reports are routed through HQ ACC/SGPO.

1.6.4.12. Ensure personnel are trained and available to accomplish preflight physical examinations for mission aircrews prior to high altitude flights.

1.6.4.13. Be responsible for the management of the USAF Pressure Suit Depot, Beale AFB CA.

1.6.4.14. Conduct staff assistance as required.

1.6.4.15. Support all 9 RW Deployment Taskings and ensure all Unit Type Code (UTC) requirements are available.

1.6.4.16. Ensure that physiological support technicians continue to meet high standards. Prompt action is necessary to remove technicians determined to be unsuitable for this program to ensure that the mission is not compromised in any way.

1.6.4.17. Ensure task evaluations are performed on all assigned personnel in their major task areas. Evaluations will be documented on AF Form 803.

1.6.4.18. Maintain close coordination with U-2 program managers in ACC Requirements (DRFR) and ACC Operations (DOYR).

1.6.5. The Commander, Aerospace Medicine Squadron supporting 9RW will:

1.6.5.1. Ensure that medical guidance and support are provided to U-2/SR-71 operations.

1.6.5.2. Formalize standard procedures, i.e., operating instructions, hospital regulations, and base regulations, for aeromedical support of remote flying missions.

1.6.5.3. Ensure flight surgeons accomplish a trip report on each TDY to remote locations which covers any particular problems involving areas of aeromedical concern and any planned or proposed corrective measures. This report will be accomplished within 5 working days after return from TDY for submission to the medical facility commander, with information copies to Commander, 9 PSPTS; the 9th Aerospace Medicine Squadron Commander, the operating location commander; and the flying unit squadron commander.

1.6.5.4. Establish the rapport necessary to monitor the health and welfare of U-2/SR-71 aircrews on a continuing basis.

1.6.5.5. Ensure that all U-2/SR-71 aircrews are pretested for medications approved by AFI 48-101/ACC Sup 1 prior to assignment to operating locations. Testing will be done to rule out drug intolerance or idiosyncrasy. Crew members may be issued medications approved by AFI 48-101/ACC Sup 1 by supporting flight surgeons to produce sound sleep prior to a mission. A note will be entered on the SF 600, Health Record-Chronological Record of Medical Care, and in the PHS 731, International Certificate of Vaccination, giving the date presented, name of the drug, dosage, and any side effects, and the flight surgeon's signature as a minimum entry. These medications will be used only in the most unique circumstances and with the full knowledge of the commander and operations officer concerned.

1.6.5.6. Ensure flight surgeons fly with as many aircrew as possible in mission-support aircraft. All flight surgeons assigned to Beale should fly at least one high flight in a U-2RT/ST to familiarize themselves with the unique environment and stresses of the high altitude reconnaissance.

1.6.5.7. Ensure all assigned flight surgeons are fully trained in all medical aspects of the operations and are fully acquainted with the aircrews and their families.

1.6.5.8. Establish, provide, and document limited preflight physical examination training for all 9 PSPTS personnel, or designated 9 PSPTS preflight examination instructors, on an initial and annual refresher basis.

1.6.5.9. Ensure preflight physical examinations of aircrews are performed prior to missions.

1.6.6. The commanders of contingency operating locations provide the supervision required to carry out the physiological support program.

1.7. Personnel Qualifications:

1.7.1. Only Biomedical Sciences Corps officers (AFSC 43AX) and pilots (AFSC M011K3Y) who are graduates of the Aerospace Physiologist Course, USAF School of Aerospace Medicine, will be assigned to U-2/SR-71 physiological support functions. All officers will be graduates of the Hyperbaric Training for Aerospace Physiology Officers course. All assigned Aerospace Physiological Officers (APO) should participate in at least one high flight in the U-2/SR-71 to familiarize them with the unique environment and stresses of the high altitude reconnaissance mission. Additional familiarization flights to include low flights should be provided to APOs to ensure current and credible training and operational mission support by the 9 PSPTS to U-2/SR-71 pilots.

1.7.2. All 4M0X0s will have completed Hyperbaric Chamber Enlisted Team Training (HCETT) course.

1.8. Point of Contact. HQ ACC/SGPO is designated as the Headquarters ACC point of contact for policy, procedures, staff assistance, and training relating to all U-2/SR-71 physiological support equipment.

Chapter 2

USAF PRESSURE SUIT DEPOT (BEALE)

2.1. General. The USAF Pressure Suit Depot (Beale) Beale AFB CA is established as the single point of configuration control, maintenance, and procurement of U-2/ SR-71 life support equipment.

2.2. Objective. This section outlines the responsibilities and procedures for the management of the USAF Pressure Suit Depot (Beale.)

2.3. Staff Responsibilities. The manager of the USAF Pressure Suit Depot (Beale):

2.3.1. Will be assigned in writing by HQ ACC/SGPO.

2.3.2. Is directly responsible for configurations control, quality control, maintenance procedures, and procurement of all life support and related survival equipment for the U-2/SR-71 program.

2.3.3. Is the designated command single control point for review and approval of Engineering Change Proposals (ECPs), Design Change Notices (DCNs) , suggestions, configuration changes, requests for Tech Data Changes (TDCs), Material Deficiency Reports (MDRs), Unsatisfactory Reports (URs), and aircraft incident reports applicable to all life support equipment and related survival equipment for the U-2/SR-71 program.

2.4. Procedures:

2.4.1. All proposals for authorization and new item procurement of life support related system items for the U-2/SR-71 program will be routed through the pressure suit depot manager for approval.

2.4.2. All agencies proposing changes to any environmental or life support related systems of U-2/SR-71 aircraft will route the proposal through the pressure suit depot manager for approval.

2.4.3. The depot manager will review all proposed changes for impact upon the physiological support program and forward the proposed change with his approval/disapproval (IAW appropriate technical orders) to the appropriate authority.

2.4.4. The purpose of this review is to eliminate duplicate reports, changes, etc., and to assure all are valid, properly worded, completed, and assigned correct priorities.

2.4.5. One copy of each report or change proposal will be returned to the initiating activity showing action taken.

2.4.6. The USAF Pressure Suit Depot (Beale) is authorized to maintain historical records on U-2/SR-71 physiological support equipment for research purposes. These records shall be maintained for as long as the research data is deemed necessary.

2.4.7. Direct contact is authorized with AMC WR/LR and Det 4 645 MATS on U-2/SR 71 physiological support equipment. WR/LR is the Program management office for all U-2 items and Det 4 manages SR-71 items. All major decisions made by the manager of the USAF Pressure Suit Depot (Beale) that pertain to U-2/SR-71 physiological support equipment and/or environmental systems on these aircraft will be coordinated with HQ ACC/SGPO, U-2 Requirements (HQ ACC/DRFR) AND U-2 Operations (HQ ACC/DOYR) and Life Support Section (HQ ACC/DOSTL).

Chapter 3

PHYSIOLOGICAL SUPPORT MANAGEMENT AND OPERATIONS

3.1. General. Physiological support operations permit U-2/SR-71 aircrews to successfully operate at extremely high altitudes in a physiologically hazardous environment and to sustain life during emergency survival. In fulfilling these requirements:

3.1.1. Physiological support personnel must be qualified, trained, and of the highest caliber. Document qualifications, certifications, initial, and recurring training requirements in individual Career Field Education and Training Plans (CFETPs).

3.1.2. U-2/SR-71 aircrews must be properly trained to successfully overcome the physiological hazards of high altitude flight and problems of emergency egress and survival.

3.1.3. Physiological-support equipment must be maintained properly in accordance with applicable directives and technical orders.

3.2. Objective. This section outlines management responsibilities, maintenance and inspection requirements, general security and safeguarding procedures for life support equipment, and aircrew training requirements.

3.3. Staff Responsibilities:

3.3.1. Appropriate commanders, staff personnel, and supervisors are responsible for compliance with this regulation.

3.3.2. The Commander, 9 PSPTS, is directly responsible for the management of physiological support functions.

3.4. High/Low Flight Support Responsibilities:

3.4.1. Provide aggressive support at all levels to ensure proper maintenance of life support equipment and the safe and timely launch/recovery of U-2/SR-71 aircraft. This includes, but is not limited to, aircrew dressing, high and low flight cockpit hookup, equipment preflight and postflight testing.

3.4.2. The dress/launch teams will consist of:

3.4.2.1. For an SR-71, five personnel (four technicians and one launch team supervisor).

3.4.2.2. For a U-2 RT/ST high flight, five personnel for dress and integration check (four technicians and one launch team supervisor), three personnel for launch (two technicians and one launch team supervisor).

3.4.2.3. For a U-2R/S high flight, three personnel (two technicians and one launch team supervisor).

3.4.2.4. For a U-2RT/ST low flight, three personnel (two technicians and one launch team supervisor).

3.4.2.5. For a U-2R/S low flight, two personnel (one technician and a launch team supervisor).

3.4.2.6. The launch team supervisor will perform the final cockpit check.

3.4.3. Deviations in the team composition described above should be avoided if possible, but if required, must be approved by the Commander, 9 PSPTS. A quarterly summation of these deviations with reason for the deviations, will be forwarded to HQ ACC/SGPO at the beginning of each new quarter of the fiscal year.

3.4.4. Launch team supervisors will be designated by the Commander, 9 PSPTS according to qualifications, leadership, and rank. Those individuals selected as launch team supervisors will be designated and authorized to function as such, in writing, and will be responsible for the safe and orderly conduct of all aspects of the launch preparation and procedure according to established 9 PSPTS guidelines.

3.4.5. A preflight physical will be accomplished prior to each high flight. The examination will at a minimum, include the following: temperature, blood pressure, ears, nose, and throat (ENT) evaluation, and the aircrew member's ability to perform a valsalva maneuver. A brief 24-hour history of the aircrew member's health will also be recorded. This history will include the amount of sleep of the aircrew member and the food eaten prior to reporting to 9 PSPTS for the flight. Prior to training missions, this examination may be given by aerospace physiologist or qualified physiological support personnel. Should any question arise as to the aircrew member's medical condition, the AP flight surgeon on call and the mobile officer will be contacted immediately. At operating locations where a U-2/SR-71 designated flight surgeon is available, he/she will perform this examination.

3.4.6. Physiological support personnel will ensure that aircrews are dressed, tested, and denitrogenated on 100 per cent oxygen for a minimum of 60 minutes in the U-2 and 30 minutes in the SR-71, prior to the scheduled takeoff time high flights. Denitrogenation times will be closely observed. Deviations in the start of prebreathing, resulting in a conflict between prebreathing requirements and scheduled takeoff time will be logged on the flight data sheet and reported to the mobile officer before takeoff. At Beale, deviations from the prebreathing requirements due to an early takeoff will be reported as soon as possible to the on-call flight surgeon and the Commander, 9 PSPTS who will then brief the Operations Group Commander. At forward operating locations, the 9 PSPTS supervisor will notify the operating location operations officer and flight surgeon of deviations from prebreathing requirements.

3.5. Maintenance and Inspection of Physiological-Support Equipment:

3.5.1. All U-2/SR-71 physiological support equipment will be maintained, inspected, and repaired in accordance with applicable technical orders and manuals and other related physiological support equipment directives. The following will be accomplished:

3.5.1.1. Maintain a current index, technical order, technical manual and publication file for all U-2/SR-71 life support equipment. The Commander, 9 PSPTS, will maintain equipment accountability in accordance with applicable directives.

3.5.1.2. Maintain records or wall charts reflecting the status of all incomplete modifications and current Time Compliance Technical Orders (TCTOs) and inspections required on all U-2/SR-71 physiological support equipment. Due dates for survival rations will also be maintained on file.

3.5.1.3. Maintain applicable AFTO inspection forms on file for record/control purposes. Equipment may be identified with a locally assigned number in addition to the manufacturer's ID number to aid in maintaining accountability.

3.5.1.4. Parachute/fabrication personnel will accomplish all inspections requiring inflation testing of life rafts in accordance with applicable technical orders.

3.5.1.5. Only physiological support personnel are authorized to install and remove survival kits and parachutes in U-2/SR-71 aircraft and to perform preflight connections and postflight disconnections of U-2/SR-71 life support systems.

3.5.1.6. Detailed check lists (or work cards) will be used by physiological support personnel for all equipment inspections and cockpit hookup of physiological support systems. Forms and check lists will be reviewed at least semiannually by Commander, 9 PSPTS, or other persons designated by the Commander, 9 PSPTS. Records will be kept to document compliance.

3.5.1.7. Beale Form 356, **Inspection Data Timeline**, will be used for all U-2/SR-71 equipment items where flying time, down time, or use time is maintained. Accumulated time continues on all equipment after overhaul.

3.5.1.8. AFTO Form 95, **Significant Historical Data**, will be kept on equipment to reflect significant historical data; i.e., TCTO compliance, bootie or face seal replacement, visor change, etc. It will also be used to record routine periodic, annual, and 24/36 month inspections. Adjustments, repairs, and condition of the equipment item will be noted on the AFTO Form 95 at each inspection interval.

3.5.1.9. High flight data sheets will be used for each flight to reflect all equipment used. These sheets will be maintained for one year, then forwarded to the USAF Pressure Suit Depot (Beale) for disposition.

3.5.1.10. Check lists for maintenance inspections will be kept until the equipment is due factory overhaul.

3.5.2. The inspection and maintenance of physiological support equipment will be recorded in the Aircrew Life Support Management System (ALSMS) or the appropriate AFTO forms as indicated:

3.5.2.1. AFTO Form 334, **Helmet and Oxygen Mask/Connector Inspection Data**, for HGU series flying helmets and MBU series oxygen masks.

3.5.2.2. AFTO Form 336, **Life Preserver Inspection Record**, for life preservers.

3.5.2.3. AFTO Form 338, **Survival Kit Record**, for survival kits.

3.5.2.4. AFTO Forms 391, **Parachute Log**, and 392, **Parachute Repack, Inspection and Component Record**, for parachutes and low flight harness.

3.5.3. Physiological support personnel are authorized to calibrate all testers and equipment (related to the 9 PSPTS function) using the master calibration kit (DN-D278-4140-3).

3.5.4. All physiological-support equipment required for a low flight in the U-2 will be maintained, inspected, and repaired by qualified physiological support personnel at forward operating locations.

3.6. Quality and Productivity Improvement Advisors Element:

3.6.1. A Maintenance Quality Assurance (QA) Section will be established in 9 PSPTS and staffed by fully trained personnel. These personnel will provide for continuity, standardization of procedures, and quality assurance of all life support equipment and training aids assigned to physiological support.

3.6.2. This section will be responsible for the review and maintenance of all check lists, monitoring Service Bulletin compliance, and conducting inspections to ensure proper maintenance of all technical data files.

3.6.3. The 9 PSPTS Maintenance QA Section will conduct quality assurance evaluations of each section at least once per quarter, and report all serious or repeat discrepancies in a quarterly report to the Manager of the USAF Pressure Suit Depot. A file copy of the report will be forwarded to the appropriate branch superintendent. Evaluation may include, but is not limited to, procedures, record keeping, and compliance with good safety practices. The Depot Manager should forward a copy of these quarterly reports to the Commander, 9 PSPTS, when it is determined that an identified problem may be common to other users.

3.6.4. Facilitates implementation of Air Force and MAJCOM quality policies, programs, and procedures. Provides advice, guidance and information to the commander on matters pertaining to the quality program. Maintains constant awareness of the effectiveness of the quality program through metrics and analysis. Serves as the facilitator for and advisor to the Squadron Improvement Council. Facilitates the quality journey through training, process charting, etc.. Ensures staff receives the latest information via AFQI/MAJCOM. Interfaces with element NCOICS and section OICs to enhance the quality journey.

3.7. U-2/SR-71 Crew Member Training. Accomplishment of required aircrew training is the responsibility of the Operations Group Commander. Physiological support personnel are responsible for

providing life support continuation training as outlined in Table 3.1, pressure suit (pilot's protective assembly), and the physiological hazards of flight. Training includes hands on experience in equipment and survival component operation, parachute descent procedures, water survival, egress and survival techniques, and use of the pressure suit in a high altitude environment in an altitude chamber.

Table 3.1. Minimum Continuation Training Requirements

Subject	Frequency
Egress	180 Days
Hanging Harness	180 Days
Local Area Survival	Initial
Combat Survival, High Threat	Biennial
Water Survival	Biennial
Life Support Equipment Training	Annual

3.7.1. Pressure suit training will be conducted in accordance with AFI 11-403, AFI 11-403 ACC Sup 1, and this instruction.

3.7.2. AETC Survival Training Requirements:

3.7.2.1. U-2/SR-71 aircrews must be graduates of USAF Water Survival Course S-V86-A and USAF Combat Survival Training, Course S-V80-A, in accordance with ACCR 55-2 (ACCI 11-301).

3.7.3. The following procedures apply to aircrews and 9 PSPTS personnel who go TDY for water survival training:

3.7.3.1. Personnel should coordinate with 9 PSPTS, Aircrew Training Element prior to departure to obtain the required equipment for this training.

3.7.3.2. The cost of training, to include transportation and per diem for U-2/SR-71 crew members and physiological support technicians assisting these crew members attending Course S-V86-A, will be funded from AETC resources as prescribed in AFCAT 36-2223. Operations and training officers should request quotas through MPF Classification and Training. The MPF will use Course Number S-V86-A as reference authority. Physiological support personnel who have previously attended the USAF Water Survival Course S-V86-A, or its equivalents, will use ACC funds if they are scheduled to assist crew members.

3.7.3.3. Training officers will coordinate directly with the 17 Training Squadron (17 TS) (AETC), NAS Pensacola, Florida, notifying the USAF Water Survival School staff of arrival date and number of personnel using pressure suit equipment at least one week in advance of training date.

3.7.4. U-2/SR-71 aircrews must attend Course Number Y190001, High Altitude Life Support Systems and Survival Orientation, at Beale AFB during initial qualification training. In addition, aircrew must complete refresher water survival training at Beale AFB CA biannually and full pressure suit refresher training every three years.

3.7.5. **Life-Support Continuation Training.** The Commander, 9 PSPTS, will provide this training for U-2/SR-71 aircrews, as prescribed by ACCR 55-2 (ACCI 11-301) and table 3.1 of this instruction. Qualified aerospace physiologists, survival instructors, or physiological support personnel may be designated as Life Support Continuation Training instructors. This designation will be in writing by the Commander, 9 PSPTS.

3.8. Hypobaric/Hyperbaric Chamber Operations. Hypobaric/hyperbaric chamber operations are conducted as an integral part of the physiological support program and will be conducted IAW AFI 11-403, AFI 11-403 ACC Sup1, AFI 48-112, and local operating instructions.

3.8.1. All physiological support personnel (AFSC 1T1X0/4M0X0/M011K3Y, or 43A3) who are authorized to participate as inside instructors/observers are required a minimum of one hypobaric chamber flight each month (or one hyperbaric chamber dive if qualified under AFR 48-112). During periods of TDY, commanders and supervisors should make every effort to ensure that these physiological support personnel comply with this paragraph to maintain their proficiency in hypobaric/hyperbaric chamber operations.

3.8.2. Commanders of operating locations and detachments will submit a report, within the first two working days of each month, to the member's home station 9 PSPTS certifying the date of flight/dive, total duration, and type of flight/dive involved for each member who performs such duty. A copy of AF Form 701, Chamber Flight Record, or AF Form 1354, Hyperbaric Chamber Operation Record, will be signed by local chamber supervisory personnel and forwarded within 30 days to the 9 PSPTS. This information will be consolidated in Physiological Training Monthly Report to HQ AFMOA/SGOO, Bolling AFB DC, with an information copy to HQ ACC/SGPO, Langley AFB VA.

Chapter 4

PHYSIOLOGICAL SUPPORT COUNCIL

4.1. General. The Physiological Support Council (PSC) will serve as the central agency for the expedient review and timely solution of problems and recommended improvements pertaining to the physiological support program.

4.2. Objective. This section provides guidance for the establishment and operation of a wing PSC and designates council members.

4.3. Responsibilities:

4.3.1. Commanders will monitor and ensure compliance with the provisions of this section.

4.3.2. Applicable staff agencies will provide professional specialists and technical assistance in their area of interest, as required by the council.

4.3.3. The Commander, 9 PSPTS, will convene and chair all U-2/SR-71 PSC meetings.

4.3.4. Each appointed PSC member will provide a qualified replacement when unable to attend scheduled meetings.

4.4. Purpose. The PSC will review, evaluate, and resolve, if possible, any physiological support problem areas that may occur. The council will recommend courses of action to correct deficiencies or improve equipment, procedures, and any other matters pertaining to physiological support operations.

4.5. Procedures:

4.5.1. The 9 RW will establish a PSC. The PSC will convene semiannually. Membership of the wing council should consist of a representative from each of the following staff agencies:

Commander, 9th Physiological Support Squadron (Chairperson).

Wing staff representative.

Operations Group Commander.

Chief, Standardization and Evaluation.

Commander (or representative) from each U-2 squadron.

U-2 Maintenance Squadron Commanders.

Chief, Safety Division

Chief, Wing Quality Assurance.

Commander, Aerospace Medicine Squadron.

Group Life Support Officer.

9th Physiological Support Squadron personnel as required.

4.5.2. Additional members from other specialized and technical areas may be represented, as required.

4.5.3. Commanders of U-2 operating locations will furnish the Commander, 9 PSPTS, with information concerning problem areas, recommended improvement of equipment and procedures, and recommendations/actions for physiological support operations.

4.5.4. Reports from forward operating location commanders concerning physiological support equipment or procedures will be discussed at PSC meetings. Minutes of all council meetings will be recorded in accordance with AFI 37-126. Copies of minutes should be provided to HQ ACC/SGPO and 9 PSPTS, Beale AFB CA, as appropriate.

Chapter 5

PHYSIOLOGICAL SUPPORT EQUIPMENT REQUIREMENTS

5.1. General. U-2/SR-71 physiological support equipment is designed to sustain aircrew members during flight and to provide environmental protection in any survival situation resulting from bailout, crash landing, or ditching. The unique missions of the U-2/SR-71 strategic reconnaissance aircraft require special equipment to provide maximum protection on a global basis.

5.2. Objective. This section provides guidance concerning support equipment requirements for U-2/SR-71 crew members.

5.3. Resonsibilites:

5.3.1. Commanders will ensure compliance according to applicable directives.

5.3.2. 9 PSPTS provides, within ACC, field depot functional activity for all physiological support equipment, which includes standardization of equipment and procedures. Physiological support problems will be coordinated with HQ ACC/SGPO for solution. HQ ACC/SGPO will coordinate with ACC/DOYR and the Senior Year Systems Program Office, as required.

5.3.3. The Commander, 9 PSPTS, or designated representative, will conduct biennial safety and procedural inspections of the 9 PSPTS portion of 9 RW's detachments and operating locations.

5.4. Authorization. Commander of 9 RW is authorized to make changes in survival kit components.

5.4.1. To make changes, the following actions are required:

5.4.1.1. Forward recommended changes to the Commander, 9 PSPTS, who is responsible for feasible studies regarding changes in survival kit components.

5.4.1.2. The Commander, 9 PSPTS, will complete the study and forward it, together with recommended changes, to the commander for approval.

5.4.1.3. If approved, coordination will then be made with HQ ACC/SGPO, Langley AFB VA.

5.5. Mandatory Survival Kit Components and Quantity:

Life Raft/1 Each	Socks, Wool/1 Pair
AP/25S-5A/1 Each	Water Bag, Three Quarts/1 Each
Mark 13-MOD 0 or Mark 124/2 Each	Compass, Lensatic/1 Each
Mirror, Signaling/1 Each	Desalter Kit/1 Each
Sea Marker Dye/1 Each	Signaling Kit/1 Each
Box, Waterproof w/Matches/1 Each	Strobe Light/1 Each
Kit, First Aid, Tropical (Box)/1 Each	*Strobe Light Filter/1 Each
Tourniquet/1 Each	Mittens, Exposure/1 Pair
Whistle, Plastic/1 Each	Rations, General Purpose/1 Each
Survival Radio /PRC 90/112/1 Each	Saw, Survival/1 Each
Spare Radio Battery/1 Each	Sponge (camouflage)/2 Each
Water, Drinking (Canned)/2 Each	Wire Snare/20 Feet
Knife, Pocket/1 Each	Space Blanket/1 Each
Life Raft Repair Plugs/2 Each	Wool Ski Cap/1 Each

Goggles, Ski, Plastic/1 Pair

Survival Manual, AFM 64-5/1 Each

*Survival Weapon, 9 mm/1 Each

*9mm Ammunition

Light, Chemical/1 Each

Note: *= Equipment used at operating locations.