



GoM Region Medical Aspects of Fitness for Offshore Work Safety Work Practice (SWP)

1 Purpose / Scope

The GoM Region Offshore Fitness for Duty Policy states that all persons designated as offshore employees shall be evaluated during their pre-placement / post-offer phase and be approved as medically fit to work in the offshore environment. Medical exams as well as agility testing shall include new-hires, transfers and return-to-duty following an absence due to illness or injury. This policy will also apply to those situations where employee performance / behavior calls into question the individual's fitness to work.

These medical aspects outline what is considered to be good practice regarding the level of medical health required for persons working offshore. Both a pre-placement medical evaluation (PME) and agility test (AT) shall occur as part of an overall fitness-for-duty evaluation. The medical evaluation should be carried out by BP authorized physicians. The agility, including musculoskeletal testing, will be carried out by designated vendor providers.

This document has been compiled to aid the examining physician's assessment of the medical fitness of an individual to work in the offshore environment. It should be noted that;

- Certain groups of offshore workers, due to the nature of their employment, are subject to additional medical requirements which are detailed in Appendix A, Catering Crew and Appendix B, Crane Operator.
- The employing company, whether as operator, contractor or sub-contractor, may have particular guidelines laid down by the company's occupational physician, which may have components not set forth below.

It must be emphasized that the company will rely on medical opinions when determining fitness for offshore work. This decision will incorporate the employee or visitor's physical fitness information provided by GoM Occupational Health Team.

The applicability of the guidance contained in this document will to a large extent be determined by the duration and frequency of offshore visits.

Category F All personnel required to work full-time offshore.

Category P All personnel not working offshore full-time but visiting offshore more than four trips in a 12-month period.

Category V Visitors: Personnel who would not be expected to spend more than one night offshore and who would do no more than four trips in a 12-month period. See Appendix C, Medical Assessment of Visitors to Offshore Installations and Appendix D, Sample Briefing Note for Visitors to Offshore Installations.

After implementation and evaluation, these guidelines may undergo necessary modifications to continue to enhance their practical value and utility.

2 General Requirements

2.1 Objectives of the Pre-Placement Medical Evaluation (PME)

The offshore worksite exists in a remote and potentially hostile environment that may be isolated from qualified medical assistance. Adverse weather may cause long delays in a medical evacuation.

In the medical evaluation, the examining physician is responsible for carefully assessing the general physical and mental health of offshore employees with particular regard to the unique nature of the

offshore workplace. The examining physician should verify that offshore personnel are medically fit to work at an isolated location, and that their fitness level would not place the individual, their colleagues and the emergency rescue services at undue risk.

The examining physician should conduct the assessment in accordance with recognized occupational health standards. In order to satisfy the requirement for a proper duty of care, the physician's experience and qualification will include occupational medicine. The physician should also have an appropriate knowledge of the candidate's occupation, associated physical requirements and the work environment.

2.2 The Offshore Workplace

In common with a good occupational medicine practice, the examining physician must verify that the medical assessment of a prospective offshore employee relates to the particular work factors, associated physical requirements and environment of the worksite. The examining physician should therefore have an appropriate knowledge of these factors and assessment, which include, but are not limited to:

- The physical structure of an offshore installation with numerous stairways and ladders requires a reasonable degree of physical stamina and agility, involves moderate to severe physical exertion (climbing walkways, stairs, work tasks, etc.) and exposure to heights.
- The physical and mental health of an individual must not cause an additional hazard, whether to the individual or his or her colleagues, in an emergency situation.
- Adverse weather conditions may prohibit or delay medical access to, or evacuation from, the offshore location.
- Shift work with long hours, for example 12-hour shifts, and changes in routine.
- Absence from home for prolonged periods, which may be one or more weeks.
- Possible exposure to adverse weather.
- Ability to work in adverse conditions.
- Possible smoke, heat and cold exposure.
- Helicopter and boat transportation.
- Emergency situations, including abandonment, may involve the individual being exposed to extremes of physical exertion, to thermal / smoke exposure as well as cold water immersion.
- Requirement to undergo training in emergency response and sea survival / helicopter escape training in simulated situations.
- Ability to carry out evacuations safely during emergency situations.
- Claustrophobia, for example, helicopter travel or in a totally enclosed motor-propelled survival craft (TEMPSC).
- Limited privacy available in off-shore environment.

The above factors and the specific working environment help distinguish the offshore from the onshore workplace. Episodes of ill-health or disability which may be managed in onshore employment create severe health and security risks in offshore work. Thus, those working offshore undergo a more rigorous medical fitness assessment to safeguard their health and safety.

2.3 The Examination

2.3.1 The Medical History

Proof of the identity of the prospective employee (for example by passport, driver's license or similar document) is required for proper verification.

A comprehensive medical, social and occupational history questionnaire must be completed. All affirmative answers in the questionnaire must be discussed with the prospective employee and the results recorded.

The employee must sign the completed questionnaire as being a complete and true record and should recognize the significance of such action.

2.3.2 Assessment Components

Assessment components include a full clinical examination including but not limited to:

- Blood pressure and pulse.
- Height and weight.
- Dip-stick urinalysis (for glucose, protein, blood).
- Audiometry (meeting OSHA guidelines).
- Spirometry to minimally include FVC and FEV1 assessment.
- A full vision test including uncorrected / corrected near and far acuities, color discrimination and depth perception.
- Blood testing to include typical chemical profile (blood sugar, electrolytes, t. chol, HDL chol, LDL chol, trig., GGT, ALT, AST) and CBC with differential.
- Further testing (for example Hemoglobin A1C, stool culture, EKG, CXR), may be required to clarify clinical findings or because of particular job requirements, for example catering personnel, crane operators and fire team members.
- Tetanus diphtheria booster if requiring update (last booster > 10-yrs ago).
- A full baseline musculoskeletal evaluation should be performed by a physician which includes:
 - Upper and lower extremity range of motion;
 - Upper and lower extremity muscle strength;
 - Upper and lower extremity gross and fine motor coordination;
 - Cervical and trunk range of motion;
 - Grip strength;
 - Proprioception and stereognosis; and
 - Cardiovascular fitness.

2.4 Confidentiality

All information will be treated confidentially in accordance with the recognized code of medical ethics.

2.5 Visitors

In cases where a visit offshore is arranged on short notice and it is not possible to arrange a prompt medical assessment, the recommendation for visitors (as detailed in Appendix C, Medical Assessment of Visitors to Offshore Installations and Appendix D, Sample Briefing Note for Visitors) shall be followed.

2.6 Medical Approval Authority

Authorization for non-regular testing or the desire to discuss any specific medical issue may be obtained by contacting GoM Occupational Health.

Information regarding fitness for work of individuals recently hired or assigned offshore, both BP and contractors will be reviewed and approved by third party administrator (at present CHR). Any questions should be forwarded to GoM Occupational Health for review. All other evaluation results and opinion of fitness to work in the offshore environment shall be sent or faxed to the GoM Occupational Health for review and approval status determination.

GoM Occupational Health upon reviewing these results will communicate any questions, additional concerns or requests for additional information either directly to the examinee or on occasion via the examining physician. Finally, the approval status (approved with restriction, approved without restriction, or not approved) will (in specific extenuating circumstances) be determined solely by the GoM Health Team and communicated to both the examinee and BP hiring Human Resources agent.

2.7 Information to Be Provided To Examinee

The examining physician should supply the individual (examinee) having undergone medical examination with a complete copy of his / her examination, to include office test results, laboratory results, physician's exam results and any other record generated by the evaluation. Further, it is the examining physician's responsibility to assure that the examinee understands the results and is given appropriate recommendation for any indicated follow-up (which would typically occur via the examinee's personal health care provider at his / her own expense unless otherwise authorized by the GoM Occupational Health).

2.8 Newly Diagnosed Conditions

BP employees and contractors shall notify the appropriate occupational health and/or management regarding any newly diagnosed illness/injury. This information will be used to make proper assessment of the individuals' fitness for offshore work.

2.9 Medical Assessment Protocol for Fire Team Members

Refer to Appendix G for details regarding the protocol used to assess the fitness of fire team members.

3 Guidance: Conditions Which May Disqualify for Offshore Work

The following conditions (**Sections 3.1 – 3.20**) may disqualify an individual from working offshore. However, this list is non-exhaustive and the evaluating physician is required to assess each case or condition individually and grant exceptions, if necessary, based on his clinical judgment.

3.1 Infectious Diseases

Individuals with an active infectious disease can result in a risk to other individuals.

3.2 Malignant Neoplasms

- An individual with ongoing malignant disease (currently on chemotherapy or radiation treatment).
- Exceptions may be possible in certain circumstances depending on the natural history, probable complications, and prognosis of the condition.

3.3 Diseases of the Digestive System

- Individuals with history of active digestive disorders causing severe or recurrent symptoms. For example recent history of esophagitis, gastritis, cholelithiasis, inflammatory bowel disease.
- Individuals with active peptic ulcers or gastric erosion with recent history of bleeding.
- Individuals with large abdominal or inguinal hernias with risk of incarceration.
- Individuals with hemorrhoids, abscesses, fistulae and fissures causing intractable pain, or recurrent bleeding.

3.4 Diseases of the Liver and Pancreas

- An individual with chronic or recurring pancreatitis.
- An individual with esophageal varices and/or ascites.
- An individual with chronic active Hepatitis B, Hepatitis C or other cirrhotic conditions.

3.5 Cardiovascular System

3.5.1 Coronary Heart Disease

- A recent history of myocardial ischemia or myocardial infarction (until clearance from the cardiologist).
- All patients with documented coronary artery disease (CHD) should be taking optimal medication and be in a stable condition, [symptom-free for at least 3 months](#), and they must be able to complete a stress test or other appropriate diagnostic evaluation without cardiac symptoms or signs of reversible ischemia or significant arrhythmia.

3.5.2 Cardiac Transplantation

- Individuals who have undergone cardiac transplant surgery.
- Individuals who have had recent cardiac surgery (until full cardiac clearance is provided).

3.5.3 Cardiac Arrhythmias

- Symptomatic arrhythmias associated with hemodynamic abnormality or compromise.

3.5.4 Pacemakers

- History of syncope or pre-syncope or other complications with the pacemaker insertion.
- Persons with pacemakers may come into contact with electromagnetic fields (EMF) while working offshore. Although, there is no evidence of sources of strong EMF at offshore installations, such individuals should be aware of possible interference of pacemaker activity from such fields.

3.6 Hypertension

- ☐ Persistently uncontrolled hypertension with risk of heart failure or stroke.

3.7 Peripheral Circulation

- ☐ Current or recent history of thrombophlebitis or phlebothrombosis with or without embolizations.
- ☐ Varicose veins associated with varicose ulcers or other complications.
- ☐ Arteriosclerosis or other vascular disease with evidence of circulatory compromise or risk of hemorrhage (for example, intermittent claudication or aneurysm).

3.8 Pulmonary Circulation

- ☐ A history of more than one pulmonary embolism.

3.9 Cerebrovascular Disorders

- ☐ Any cerebrovascular accident or history of transient ischemic attack during the previous 12-months or evidence of general cerebral arteriosclerosis with evidence of dementia.

3.10 Diseases of Blood or Blood Forming Organs

- ☐ Individuals with persistent anemia, until investigated and successfully resolved.
- ☐ Individuals with leukemia, polycythemia rubra vera and disorders of the reticuloendothelial system (unless in long term remission).
- ☐ Individuals with uncontrolled hemorrhagic and thrombotic disorders.
- ☐ Individual with immune-compromising disorder with risk of complications.
- ☐ Any other disease of blood or blood forming organs that may adversely affect performance or safety.

3.11 Mental Disorders

- ☐ Individuals with personality disorders characterized by anti-social behavior affecting the ability to work and board with others.
- ☐ An individual with history of a psychosis/delusional/paranoid disorder.
- ☐ Those with incapacitating phobias of significance involving air or water transport, height or crowding.
- ☐ An individual with history of chronic anxiety and/or recurrent depression which has resulted in functional impairment or absence from work in the previous 6 months.
- ☐ An individual who is currently abusing alcohol and/or drugs.

3.12 Diseases of the Nervous System and Sense Organs

- ☐ Any organic or functional neurological disorder causing, or likely to cause, any significant defect of consciousness, cognitive function, muscular power, balance, mobility, vision, sensation or coordination.
- ☐ An individual with diagnosis of epilepsy with persistent epileptic seizures of any type.
- ☐ Certain high-risk offshore occupational workers, e.g., crane operators, to be considered fit for this

offshore work, should be free of epileptic or any other seizure attack for at least the last 12 months.

3.13 Musculoskeletal System

- ❑ An individual with acute, chronic, or recurrent disease of peripheral nerves, muscles, bones or joints significantly affecting: mobility, balance, co-ordination, ability to perform normal duties and/or evacuation procedures including survival training.
- ❑ An individual with deformity or amputation of body or limb significant enough to prohibit the completion of the essential functions of the job (with or without accommodation), or prevent compliance with all evacuation procedures.

3.14 Skin

- ❑ An individual with clinical evidence of any recurrent and physically disabling skin disease or sensitivity.
- ❑ Any skin condition likely to be aggravated or triggered by possible physical or chemical exposures in the offshore environment, for example oils, detergents or other substances, may disqualify an individual for offshore work.

3.15 Endocrine and Metabolic Disorders

- ❑ An individual with uncontrolled and symptomatic thyroid disorder.
- ❑ An individual with poorly controlled gout.
- ❑ An individual with persistently uncontrolled diabetes.
- ❑ Uncomplicated stable diabetes mellitus with satisfactory control (as defined by Hemoglobin A1C < 7.0), may be acceptable. [Employees with insulin dependent diabetes should show evidence of persistent satisfactory diabetic control as A1C of < 7 for the last 4 months.](#)
- Individuals suffering from other active endocrine disorders such as Addison's disease, Cushing's syndrome, diabetes insipidus and hypoglycemia, either functional or due to pancreatic or adrenal pathology .

3.16 Genitourinary System

- ❑ An individual with recurrent urinary infections or prostatitis.
- ❑ An individual with nephritis and/or nephrosis.
- ❑ An individual with polycystic disease, hydronephrosis or unilateral nephrectomy with disease in the remaining kidney.
- ❑ An individual with renal transplant surgery.
- ❑ An individual with enuresis or incontinence, recent or active.
Note: A physician needs to evaluate the individual's incontinence or painful condition to determine if the individual should be offshore. Some minor incontinence issues won't prohibit working offshore.
- ❑ An individual with hydrocele or any painful condition of the testicles.
- ❑ An individual with history of recent or recurrent renal, ureteric or vesicle calculi or with active symptoms.
- ❑ Gynecological disorders, such as significant menorrhagia, disabling dysmenorrhea, pelvic inflammatory disease or other conditions affecting functional capability may disqualify an individual from working offshore.

3.17 Respiratory System

- ❑ A history of recurrent spontaneous pneumothorax.
- ❑ An individual with obstructive airways disease, such as chronic bronchitis, emphysema, and any other pulmonary disease (evidence of profound decline in FVC, FEV1).
- ❑ Individual with restrictive or fibrotic pulmonary disease resulting in significant symptoms and

profound decline in pulmonary functions.

- ☐ A person with history of new or recently discovered pulmonary tuberculosis until treatment is concluded and the attending physician has certified that the patient is no longer infectious
- ☐ An individual with current or past history of asthma. (See Appendix F, Asthma)
- ☐ [History of uncontrolled sleep apnea \(with evidence of somnolence, fatigue or unusual lack of alertness while working\).](#)

3.18 Ear, Nose, and Throat

3.18.1 Ear

- ☐ An individual with a disorder of the tympanic membrane or chronic middle ear disease, resulting in intractable pain and/or dizziness.
 - Individuals with inner ear disorders with severe motion sickness, vertigo, etc. (for example Meniere's disease).
- ☐ [An individual with functional, severe, or profound hearing loss sufficient to interfere with communications or safety.](#)
- ☐ If necessary, safe hearing aids may be worn offshore. But, the examinee should not be dependent on such an aid to hear, recognize, or understand a safety warning.

3.18.2 Nose

- ☐ An individual with chronic recurrent sinusitis.
- ☐ Severe hay fever or history of allergic reactions to various environmental factors.

3.19 Eyes

- An individual with inadequate visual acuity.
- Uncorrected visual acuity should be at least 20/100 in both eyes. Visual acuity, corrected, must be at least 20/40 in the better eye, by recognized test type procedures.
- A person with recent loss of vision in one eye.
- A well-adapted monocular individual may be acceptable provided the job functions can be performed efficiently and safely.
- An individual with total color blindness.
- Color perception should be adequate for the particular type of employment to be undertaken.
- Any eye disease or visual defect rendering, or likely to render, the applicant incapable working safely.

3.20 Medicines

- Individuals on anticoagulants, cytotoxic agents, immune-suppressants, and steroids.
- Individuals on psychotropic medications, for example tranquilizers, narcotics, or hypnotics.
- Any employee in possession of medications that he/she has reason to believe may impair their ability to function or be fully alert.

4 Key Documents, Tools, References, Appendices

Appendix A - Catering Crew

Appendix B - Crane Operators

Appendix C - Medical Assessments of Visitors to Offshore Installations

Appendix D - Briefing Note for Visitors to Offshore Installations

Appendix E - Pregnancy and Offshore Work

Appendix F - Asthma

Appendix G - Medical Assessment Protocol for Offshore Fire Team Members

GoM Region Offshore Fitness for Duty Policy

Revision Log

Revision Date	Authority	Custodian	Revision Details
08/18/2015	Health Manager	Health Advisor	Reviewed with no changes. Next review date 02/01/2016
08/14/2012	Director of Health and Safety	Health and Industrial Hygiene Team Leader	<p>2.2 removed peer group pressure</p> <p>2.3.2 removed " This will be conducted separately by an occupational therapist..."</p> <p>2.6 removed section on documentation and attachments</p> <p>2.7 changed Medical Director to GoM Occupational Health</p> <p>3.2 removed "frank"</p> <p>3.3 removed "herniation until satisfactorily surgically repaired" to "large abdominal or inguinal hernia until satisfactorily repaired."</p> <p>3.5.1 changed "6 months" to "3 months"; added other appropriate diagnostic evaluation</p> <p>3.13 Removed "note, detailed musculoskeletal eval..."</p> <p>Removed "a limb prosthesis may be acceptable..."</p> <p>3.15 changed A1C from <8 to <7. Added: Employees with insulin dependent diabetes should show evidence of persistent satisfactory diabetic control as A1C of <7 for the last 4 months.</p> <p>3.17 added: Sleep Apnea criteria – If an employee has a history of sleep apnea, it should be well controlled. There should be no evidence of unusual lack of alertness, somnolence, and or fatigue.</p> <p>3.18 added: Employee should not have profound or severe hearing loss which could interfere with recognizing verbal safety warnings.</p> <p>Added Appendix G-Medical Assessment Protocol for Fire Team Members</p>
04/06/2009	GoM HSSE Director- Curtis Jackson	GoM HSSE Programs- Dennis Johnson	Updated document to include controlled header/footer and added document number. Changed custodian name to Blythe Allen-Hardy, GoM Medical Director.
06/20/2002	GoM HSSE Director	GoM L48 Medical Director, Dr. Connie Petrick	Initial issue as controlled document

APPENDIX A

Catering Crew

Food handlers potentially represent a specific source of disease transmission in a remote area, such as offshore environment. Since a food borne epidemic can produce significant morbidity and lost time, it is critical to consider the various sources of disease in the food delivery and handling system. Food handlers, especially in remote locations, require proper medical evaluation to ensure health and safety of the employees.

Catering vendors for BP are required to follow the standard protocols and procedures of the industry, which includes, but are not limited to:

- Medical clearance, which consist of, but not be limited to:
 - Thorough clinical examination of potential communicable disease portals, for example, skin, ears, upper respiratory tract and gastrointestinal tract.
 - Laboratory examination of at least one fecal specimen for the presence of enteric pathogens should be performed at the pre-employment examination and before commencing food-handling duties. Fecal specimens should be obtained at subsequent periodic examinations if there is clinical suspicion of gastrointestinal infection or possible carrier status.

Where a positive finding results, further investigation requirements should be discussed with a specialist in communicable diseases in order to assess the significance.

- A chest x-ray is normally included if clinically indicated.
- It is vital that food handlers report medical problems relating to any potential communicable disease. Additional investigations and fitness for duty assessment may be required in the following circumstances:
 - Frank or suspected gastrointestinal disease.
 - Close contact with an individual known to be suffering from gastroenteritis.
 - Returning from a visit to an area with known high endemic incidence of gastrointestinal disease.
 - A stool sample should be submitted with immediate cessation of all food handling duties until a negative result is obtained. In the case of frank gastrointestinal disease, three negative specimens will be required before return to food handling duties.

BP may determine that additional requirements could become applicable in the future, and will notify vendors as additional requirements become necessary.

APPENDIX B

Crane Operators

As crane operators have such a safety critical role, the strictest adherence to these fitness guidelines must be maintained. In addition to the general guidelines noted for Class F offshore employees, special attention must be paid to the following criteria;

- Visual acuity.
- Depth perception.
- Color perception.
- Unrestricted mobility.
- Good coordination.

APPENDIX C

Medical Assessment of Visitors to Offshore Installations

- The medical status of a visitor may be as significant as that of an offshore employee in terms of the exacerbation of medical conditions. In deciding whether a visitor is fit to proceed offshore, their medical condition should be considered. It is recommended that off-shore operators develop a practical procedure to ensure that due consideration is given to visitors' medical status so that potential problems can be identified and appropriate provisions made to safeguard the individual and others. Such a procedure needs to include a **briefing note** to all visitors prior to departure, drawing their attention to the importance of assessing fitness and listing the conditions considered to be of significance. This note could also include general advice regarding adequate supplies of personal medication, spare glasses and/or contacts, etc.
- An example of a BP briefing note is given in Appendix D.

APPENDIX D

Briefing Note for Visitors to Offshore Installations

- It is the responsibility of the visitor to understand the specific risks associated with visiting an offshore facility. He or she should make sure that they do not have any physical or functional limitations which can cause increased risk for their safety and well-being. If necessary, they can discuss, with their personal physician their physical fitness to visit an offshore facility. The visitor should be familiar with the BP GoM Medication Policy requirements. For any questions or concerns contact GoM Occupational Health at 281-366-3459.
- Medical conditions that may require special consideration include but are not limited to:
 - Current infections.
 - Significant impairment of vision.
 - Significant impairment of hearing.
 - Impairment of mobility (especially steps).
 - Fear of heights or flying.
 - Diabetes mellitus.
 - Epilepsy, fainting attacks, episodes of unsteadiness.
 - Cardiac or circulatory problems, including pacemakers.
 - Chest pain or shortness of breath on exertion.
 - Asthma.
 - Peptic or duodenal ulceration.
 - Colostomy or ileostomy.
 - Significant prostate problems.
 - Recent major surgery.
 - Pregnancy.
 - Spinal or extremity impairment or problems.

Note: If you wear corrective lenses and your vision without these is poor, you are advised to carry a spare pair in case of loss or breakage. Finally, if you are taking regular medication, please verify that you bring an additional week's supply in the original pharmacy container.

APPENDIX E

Pregnancy and Offshore Work

With understanding that pregnancy is not a medical condition but is a normal physiological state, it is however appropriate to consider any additional medical risks faced by the pregnant employee in an offshore environment.

Any employee who wishes to work offshore while pregnant should undergo a risk assessment and understand the significance of the findings.

Factors to be considered during this risk assessment may include:

- Previous obstetric history, particularly any risk factors or history of ectopic pregnancy, hyperemesis, pre-eclampsia, premature labor or pregnancy induced diabetes.
- Other relevant medical conditions which may complicate pregnancy, such as endocrine disease, cardiovascular disease or epilepsy, should also be taken into account.
- The nature of the work and potential exposure to physical, biological or chemical agent.
- Ride in helicopter 1-2 hours.
- Must be able to evacuate safely in emergency situations.

A pregnant employee may be considered for working offshore if following conditions are satisfied:

- The pregnancy has been assessed by a physician as low risk and confirmed at ultrasound as intrauterine.
- The employee understands and accepts the additional risks entailed in working offshore while pregnant.
- Regular clinical review of the employee and her fitness to work offshore.

Contraindications to working offshore while pregnant include;

- Active complication of current pregnancy including threatened miscarriage, hyperemesis and multiple pregnancy (two or more fetuses).
- Any concomitant complicating medical condition such as cardiac disease or diabetes.

These factors are in addition to the entire document, Medical Aspects of Fitness for Offshore Work.

(Adapted from the Oil & Gas UK Medical Advisory Committee, 2003, 2008).

APPENDIX F

Asthma

Asthma has a clinical spectrum that varies widely from mild infrequent episodes that create minimal interference, to severe frequent episodes with significant symptoms that may be disabling.

When assessing an individual with an asthmatic tendency for offshore work, the following, non-exhaustive list of issues may need to be considered:

- The spectrum and severity of the disorder.
- Exercise capacity (including emergencies).
- Work related triggers (exertion, cold air, dusts, chemicals, anxiety, etc).
- The ability to use a breathing apparatus.
- The effects of medication.
- Evidence of incapacity or complications.
- The requirements of the job.

The following criteria should not prevent an individual from being deemed fit for offshore work:

- Clinically mild symptoms that are not incapacitating.
- Stable condition with infrequent and predictable episodes.
- No severe attacks or hospital admissions when on regular therapy.
- Normal exercise capacity where exercise induced symptoms are absent or well controlled.
- Able to tolerate a breathing apparatus (if required).

APPENDIX G

Medical Assessment Protocol for Offshore Fire Team Members

- A. Baseline Medical Evaluation
1. All participants must complete the respiratory questionnaire at baseline screening.
 2. Based on answers, those who have history of significant cardiovascular or respiratory problems may not be able to participate (see pulmonary and cardiovascular system disqualifying conditions).
 3. Those who do not have significant past medical history will undergo a physical examination.
 4. Those who satisfactorily clear the physical examination will undergo an agility test (functional capacity test).
 5. **Individuals who do not have any significant limitations based on past medical history, physical examination and agility testing will be selected to participate as voluntary offshore fire team members.**
- B. Periodic Medical Evaluation
1. All selected voluntary firefighters will undergo periodic medical evaluation as follows:
 - a. Complete respiratory questionnaire annually.
 - b. Undergo repeat physical examination and agility testing every 2 years.
 2. Based on findings of the questionnaire, physical examination, and agility testing they will be reevaluated to continue to work as firefighters.
 3. Feedback and counseling will be provided to participants regarding their level of fitness. Exam and agility results will be reviewed and communicated with any recommendations to the firefighters.
 4. "For cause" fitness for duty testing can occur anytime there are documented concerns regarding a firefighter's safety.
- C. Components of physical examinations, diagnostic testing and agility test:
1. Medical evaluation of candidates including history, physical examination, and diagnostic tests (as indicated) shall be performed on each candidate in order to detect any physical or medical condition(s) that could adversely affect the candidate's ability to safely perform all essential job tasks under emergency conditions.
 2. If a candidate presents with a condition that temporarily interferes with his/her ability to safely perform essential job tasks, the medical evaluation shall be postponed until the candidate has recovered from that condition.
 3. The baseline and biannual physical examination shall include each of the following components:
 - Vital signs
 - Head, eyes, ears, nose, and throat (HEENT)
 - Vision
 - Neck

- Cardiovascular
 - Pulmonary
 - Gastrointestinal
 - Genitourinary
 - Hernia
 - Lymph node
 - Neurological
 - Musculoskeletal
 - Skin
4. Body weight and height
 - a. Body weight and height shall be measured and recorded at baseline and bi-annually.
 - b. Those with a BMI over 30 are generally not encouraged to be a part of the fire team.
 5. Far visual acuity.
 - a. Monocular (blind in one eye) vision is a disqualifying condition.
 - b. Far visual acuity at least 20/40 binocular, corrected with contact lenses or glasses.
 - c. Color perception. The employee should be visually able to distinguish signaling devices.
 - d. Peripheral vision in the horizontal meridian 120 degrees or more in the better eye.
 - e. Free of any eye condition that will prevent firefighter from safely performing essential job tasks.
 6. Ears and Hearing
 - a. No history of chronic vertigo or impaired balance as demonstrated by the inability to tandem gait walk.
 - b. On audiometric testing, average hearing loss in the unaided better ear not more than 40 decibels (dB) at 500 Hz, 1000 Hz, and 2000 Hz when the audiometric device is calibrated to ANSI Z24.5.
 - c. Free of any ear condition (or hearing impairment) that that will prevent firefighter from safely performing essential job tasks.
 7. Pulmonary System
 - a. No evidence of obstructive lung diseases (e.g., emphysema, chronic bronchitis, asthma, etc.) with an FEV1/FVC >75% of the predicted, with both FEV1 and FVC normal (>0.80%).
 - b. Oxygen saturation >90% at rest.
 - c. Free of any pulmonary condition that that will prevent firefighter from safely performing essential job tasks.
 - d. Disqualifying conditions include but are not limited to:
 - i. Any active chronic respiratory infectious disease and pulmonary hypertension.
 - ii. History of asthma –reactive airways disease requiring bronchodilator or corticosteroid therapy in the previous 2 years.

8. Cardiovascular System

a. Disqualifying conditions include but are not limited to:

- i. History of coronary artery disease, including history of myocardial infarction, angina pectoris, coronary artery bypass surgery, coronary angioplasty, and similar procedures.
- ii. History of cardiomyopathy or congestive heart failure, including signs or symptoms of compromised left or right ventricular function, including dyspnea, S3 gallop, peripheral edema, enlarged ventricle, abnormal ejection fraction, and/or inability to increase cardiac output with exercise.
- iii. History of syncope, recurrent.
- iv. History of a medical condition requiring an automatic implantable cardiac defibrillator or history of ventricular tachycardia or ventricular fibrillation due to ischemic or valvular heart disease, or cardiomyopathy.
- v. Evidence of third-degree atrioventricular block.
- vi. Need for cardiac pacemaker unless cleared by a cardiologist and BP Occupational Health every 6 months.
- vii. Hypertension with evidence of end organ damage or not controlled by medications.
- viii. Thoracic or abdominal aortic aneurysm.
- ix. Carotid artery stenosis resulting in ≥ 50 percent reduction in blood flow.
- x. Peripheral vascular disease resulting in symptomatic claudication.
- xi. Any cardiac or vascular condition that results in not being able to safely perform essential job tasks.

9. Gastrointestinal System

a. Disqualifying conditions include but are not limited to:

- i. Presence of uncorrected inguinal/femoral hernia regardless of symptoms.
- ii. Any gastrointestinal condition that results in not being able to safely perform essential job tasks.

10. Urinary System:

a. Disqualifying conditions include but are not limited to:

- i. Renal failure or insufficiency requiring continuous ambulatory peritoneal dialysis (CAPD) or hemodialysis.
- ii. Any urinary condition that results in not being able to safely perform essential job tasks.

11. Musculoskeletal System

a. Disqualifying conditions include:

- i. Scoliosis of thoracic or lumbar spine with angle ≥ 40 degrees.
- ii. History of multiple spinal surgeries or spinal surgery involving fusion of more than 2 vertebrae, discectomy or laminectomy, or rods that are still in place.

- iii. Any spinal or skeletal condition producing sensory or motor deficit(s) or pain due to radiculopathy or nerve root compression.
- iv. Any spinal or skeletal condition causing pain that frequently or recurrently requires narcotic analgesic medication.
- v. Cervical vertebral fractures with multiple vertebral body compression greater than 25 percent; evidence of posterior element involvement, nerve root damage, disc involvement, dislocation (partial, moderate, severe), abnormal exam, ligament instability, symptomatic, and/or less than 6 months post injury or 1 year since surgery.
- vi. Thoracic vertebral fractures with vertebral body compression greater than 50 percent; evidence of posterior element involvement, nerve root damage, disc involvement, dislocation (severe — with or without surgery), abnormal exam, ligament instability, symptomatic, and/or less than 6 months post injury or 1 year since surgery.

- vii. Lumbosacral vertebral fractures with vertebral body compression greater than 50 percent; evidence of posterior element involvement, nerve root damage, disc involvement, dislocation (partial, moderate, severe), fragmentation, abnormal exam, ligament instability, symptomatic, and/or less than 6 months post injury or 1 year since surgery.
- viii. Bone hardware such as metal plates or rods supporting bone during healing.
- ix. History of total joint replacement.
- x. Amputation of either thumb proximal to the mid-proximal phalanx.
- xi. Chronic non-healing or recent bone grafts.
- xii. History of more than one dislocation of shoulder without surgical repair or with history of recurrent shoulder disorders within the last 5 years with pain or loss of motion, and with or without radiographic deviations from normal.
- xiii. Any spinal or skeletal condition that results in not being able to safely perform essential job tasks.

12. Neurological System

- a. Disqualifying conditions include but are not limited to:
 - i. Major Gait disorder.
 - ii. History of transient ischemic attack, reversible ischemic neurological deficit, or ischemic stroke.
 - iii. Multiple sclerosis with activity or evidence of progression within previous 3 years.
 - iv. Myasthenia gravis with activity or evidence of progression within previous 3 years.
 - v. Progressive muscular dystrophy or atrophy.
 - vi. Uncorrected cerebral aneurysm.

- i. All seizure or epileptic conditions to include simple partial, complex partial, generalized, and psychomotor seizure disorders. A candidate with a seizure disorder and/or epilepsy shall not be qualified until he or she has completed 5 years without a seizure on a stable medical regimen or 1 year without a seizure after discontinuing all anti-epileptic/seizure drugs. A candidate shall also have normal neurological examination without structural abnormality on brain imaging, normal awake and asleep EEG with photic stimulation and hyperventilation, as well as a definitive statement from qualified neurological specialist.
- ii. Parkinson's disease and other movement disorders resulting in uncontrolled movements, bradykinesia, or cognitive impairment.
- iii. Any neurological condition that results in not being able to safely perform essential job tasks.

13. Skin

- a. Disqualifying conditions include but are not limited to:
 - i. Metastatic or locally extensive basal or squamous cell carcinoma or melanoma.
 - ii. Any dermatologic condition that would not allow for a successful respiratory face-piece fit test.
 - iii. Any dermatologic condition that results in not being able to safely perform essential job tasks.

14. Blood and Blood-Forming Organs

- a. Disqualifying conditions include but are not limited to:
 - i. Hemorrhagic states requiring replacement therapy.
 - ii. Sickle cell disease (homozygous).
 - iii. Clotting disorders.
 - iv. Any hematological condition that results in not being able to safely perform essential job tasks.

15. Endocrine and Metabolic Disorders

- a. Disqualifying conditions include but are not limited to:
 - i. Diabetes mellitus, which is treated with insulin.
 - ii. Diabetes not treated by insulin, which is not controlled as evidenced by Hemoglobin A1C (Hb A1C) measurement of higher than 7%.
 - iii. Any endocrine or metabolic condition that results in not being able to safely perform essential job tasks.

16. Malignant Conditions

Disqualifying conditions include but are not limited to malignant disease that is newly diagnosed, untreated, or currently being treated.

17. Psychiatric Conditions

Disqualifying conditions include but are not limited to any psychiatric condition that results in not being able to safely perform essential job tasks.

18. Medications

- a. Disqualifying conditions include but are not limited to long term need for:

- i. Narcotics, including Methadone.
- ii. Sedative-hypnotics.
- iii. Drugs that prolong Prothrombin Time, Partial Thromboplastin Time, or INR.
- iv. Beta-adrenergic blocking agents.
- v. Respiratory medications: Inhaled bronchodilators, inhaled corticosteroids, systemic corticosteroids, theophylline, and leukotriene receptor blockers/antagonists.
- vi. Any drug, or medication that results in not being able to safely perform essential job tasks. (see BP GoM Medication Policy)

D. Blood Tests

1. CBC with differential, RBC indices and morphology, and platelet count.
2. Electrolytes (Na, K, Cl, HCO₃, or CO₂).
3. Renal function (BUN, creatinine).
4. Glucose and/or Hb A1C
5. Liver function tests (ALT, AST, direct and indirect bilirubin, alkalinephosphatase).
6. Total cholesterol, HDL, LDL, clinically useful lipid ratios (e.g., percent LDL), and triglycerides.

E. Urine Tests

1. Dipstick analysis for glucose, ketones, leukocyte esterase, protein, blood, and bilirubin.
2. Microscopic analysis for RBC, WBC, casts, and crystals if indicated by results of dipstick analysis.

F. Audiometry

1. Hearing thresholds shall be assessed in each ear at each of the following frequencies:
 - 500 Hz
 - 1000 Hz
 - 2000 Hz
 - 3000 Hz
 - 4000 Hz
 - 6000 Hz
 - 8000 Hz
2. Comparison of audiogram results obtained during yearly evaluations with baseline and subsequent test results. These complete set of results are located with GoM OH.

G. Spirometry

Pulmonary function testing (spirometry) shall be conducted to measure the forced vital capacity (FVC), forced expiratory volume in 1 second (FEV1), and the FEV1/FVC ratio.

H. Chest Radiographs

Chest X-rays shall include an initial baseline and shall be repeated every 5 years or as medically indicated based on evaluation of examining physician.

I. Electrocardiogram

1. A resting EKG shall be performed as part of the baseline medical evaluation and shall be obtained bi-annually thereafter.
2. Comparison of EKGs obtained during bi-annual evaluations with baseline and subsequent EKGs.
3. Stress EKG with or without echocardiography or radionuclide scanning shall be performed as clinically indicated by history or symptoms.

J. Agility testing

Upon successful completion of the medical exam, agility testing will be performed as per established protocol, based on the essential job functions of the firefighter. BP will provide a specific exercise program for employees and or contractors in preparation for fire team agility test.

Gulf of Mexico



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