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Issue 01 - Revision: 00

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**Safe Work Requirement**

**HEALTH MANAGEMENT PLAN**

**ECDC-QHSE-PR-01**

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| Introduction ECDC thought the human health was the basic requirement and foundation of any business. Emergency Responsible Hospital or Nurse Service will be invited to screen our project against major health threats and make recommendations. This will be done by audits of ECDC. The audits will cover but not limited:  · On site medical facilities; · On site emergency evacuation facilities; · Food storage/preparation/refrigeration; · Occupational health hazards; · Living quarter’s safety and sanitation;  · Occupational health: for the duration of the project a reactive policy will be maintained. · Medical Competence\Certification\Accreditation.  Materials Safety Data Sheets (MSDS) will be available for each product in use during the operation. The Doctor on site to have all data sheets prior to commencement of operations. All personnel will have basic first aid training in line with training requirements.  First aid kits will be kept in the site office and somewhere which is required, and in the ECDC vehicles. Public Health     Sleeping Accommodation All accommodation would be constructed to provide the basic requirements which make all employees are satisfy by the accommodation and also to provide the neede protection against pests and adverse weather conditions. Food Hygiene Safety Management  1. **Kitchens**   Kitchens would be designed and constructed to ensure a linear flow of activities from goods delivery to serving of meals. To avoid any cross-contamination, cooked and uncooked food shall always be prepared and stored separately. The floor area of a kitchen shall be at least 1 square metre (m2) per person served (e.g. the kitchen area for a mess seating 100 persons shall be at least 100 square metres, but all personnel sitting at one time was not available and realistic ). The floor shall be durable and without crevices in which dirt, bacteria and insects can lodge. Angles and junctions between floor and wall shall be coved. Adequate drainage shall be provided. Shallow, glazed half-round floor channels with removable gratings shall be installed. All sinks, wash hand basins and potato peelers shall have water seal traps to prevent drain odour. For camps equipped with manholes and grease traps, these shall be situated outside the building.  Walls shall be smooth, impervious, light in colour and durable from floor to ceiling. The ceiling shall be smooth and coved at wall joints and easy to clean. Adequate lighting shall be provided (minimum of **150 Lux** intensity in general working areas). No items shall be kept on window ledges. Fly screens shall be fitted on all kitchen windows that can be opened. Doors shall be tight-fitting.    The kitchen shall be air-conditioned and vented. A hood shall be fixed over cooking ranges and an extractor fan of a suitable size shall be installed. Cloths shall not be used to wipe and dry dishes / crockery and cutlery - air drying or paper cloth shall be used. Wash hand basins shall be provided in kitchens, together with a liquid soap dispenser or liquid soap. Hands shall be washed after every stage of food preparation. Disposable paper towels or shall be provided.  Sufficient number of refrigerator and chest freezers shall be provided. As fish tends to taint other food, a separate freezer is preferred. Where this is not practical, fish shall be placed in separate compartments or shelves.  **Pork and pork products would be not available for the religion reason in ECDC . camp and worksite.**  Separate areas / surfaces shall be provided for preparation of cooked and uncooked foods. Colour coded cutting boards made of polypropylene or other non-absorbent synthetic materials shall be provided for meats, chicken, fish and vegetables. These shall always be kept clean and disinfected after each use. A purpose made polypropylene chopping block shall be provided for cutting large joints of meat. It shall always be kept clean, disinfected, smooth and free of cracks or fissures.  Samples of all meals served during each meal shall be marked and kept in a freezer for 48 hours after serving.  A cleaning schedule shall be prepared and implemented for kitchen and equipment.   1. **Pantry**   A pantry shall be not provided for kitchen as per reality design. But In food store shall have shelves and benching for storing dry food items or alternatively plastic / metal bins with tight fitting lids shall be provided.  A facility for defrosting frozen foods shall be provided. This may be either a purpose built "Rapid Thaw Cabinet", a refrigerator or a chill room with a temperature of 10-15 Deg. C Defrosting times of meat and poultry shall be in accordance with **Appendix A**. Once food is thawed it shall not be refrozen.   1. **Dining Hall (Mess)**   The mess would be large enough to seat 30% of the camp's population one time. Tables and chairs of reasonably comfortable type shall be provided and maintained in a clean condition. The mess shall be air conditioned and well lit (minimum light intensity of **150 Lux**). At least two electronic fly-killers shall be installed, but advice on numbers & positioning shall be per reality. Wash hand basins shall be provided. The basins shall be provided with soap.   1. **Dry Food Store**   All food items shall be stored in a well-lit and air conditioned room large enough to ensure that an adequate supply of food, which includes extra stock for emergencies, is available at all times. Food shall be stored in a way that enables good stock rotation. "**First In, First Out**" practice shall be established and applied. All dry food shall be stored on shelves or benches. The area underneath shall be kept clean at all times (for this reason wooden pallets shall not be used to store food products). Metal or plastic bins with tight fitting covers shall be used for loose grains, flour, etc. Food shall be stored such that it is readily accessible and proper shelving shall be provided where appropriate. Nothing shall be stored underneath benches. Shelves shall have a non-absorbent finish that is easy to clean. Cupboards shall not be used. Cleaning chemicals, detergents, mops and brushes shall not be kept in food stores. The store shall always be kept in a clean and tidy condition, and free of any spillages and pests.   1. **Cold Stores**   Cold storage and refrigerated equipment shall be provided to keep foodstuff at the following temperatures in table 1:   |  |  | | --- | --- | | Frozen Food | Minus 18 °C | | Chilled Food | Minus 3 °C to 1 °C | | Refrigerated Food | 1 °C to 4 °C |   The shelf-life of foodstuffs shall be in accordance with **Appendix B.** Fish and fish products shall be stored in a separate freezer. Where this is not practical, fish shall be placed in separate compartments or shelves. Walk-in freezers / chillers shall have metal shelves and good lighting. **They shall be equipped with safety devices to prevent accidental lock-in**. A thermometer gauge shall be fixed outside the unit to give temperature readings of the equipment. The gauge shall be maintained in good working order. Ice-cream and ice shall not be stored in the same freezer as meat, fish or poultry to avoid cross contamination.  All fresh fruits and vegetables consumed without peeling or cooking and eaten raw are to be disinfected. 80 ppm of chlorine dilution with a contact time of 20 minutes shall be applied and then rinsed to remove all traces of chemicals. Wash salads thoroughly before eating.     1. **Catering Service - Food Handlers and Personal Hygiene**   Food handlers, catering supervisor and camp boss shall be trained in food hygiene. The training shall include elements of:   1. causes of food poisoning 2. basic bacteriology 3. personal hygiene 4. prevention of food contamination 5. pest control 6. cleaning 7. Food Hygiene and Food Safety   Unauthorized persons shall not be allowed in areas where food is prepared / handled. A notice to this effect shall be placed outside these areas.  All food handlers must possess a current Medical Fitness Certificate issued by the Ministry of Health or equal organization in The Certificate shall be carried by the individual during working hours. The service company camp boss shall keep copies of all certificates readily available on site. The ECDC HSE department shall have the right to review Medical Fitness Certificates and to stop the work of any employee who fails to produce their Certificate.  Any food handler suffering from diarrhoea, vomiting, high temperature, or who has septic sores or cuts in his hands or body shall immediately report to his supervisor and shall be kept away from food handling work until he gets clearance from a ECDC approved Medical Practitioner. **Each food handler shall be provided with a minimum of three uniforms, aprons, caps and non-slip footwear.**  **Food handlers must have a clean and tidy appearance, clean hands with short fingernails and short hair which should be covered during food preparation. Jewellery shall not be worn while working with food. Food handlers shall wear plastic disposable gloves whilst serving of food. Gloves should be replaced after every use.**  Food handlers shall maintain good personal hygiene. Food handlers shall wash their hands after visiting the toilet, after smoking, before touching food and between handling raw and cooked food. Smoking shall not be allowed in food preparation or storage areas.   1. **Pest Control**   General cleanliness and good housekeeping of camps and surroundings shall be maintained as the primary method of pest control. Pests of public health significance include flies, mosquitoes, cockroaches, rats, and ants.  A pest control programme shall be developed and maintained for each camp. Spraying in and around camps shall be carried out once a week.  Only the ECDC approved pesticides listed in Table 2 shall be used.  *Table 2: ECDC .-approved Pesticides*   |  | | --- | | Product | | Baygon EC20 | | Actellic 50 EC | | Icon 2.5 EC | | Icon 2% Fog | | Icon 10 WP | | Klerat Rodenticide | | Sheltox / Baygon / Actellic aerosols |   Any other pesticide must be approved by ECDC Project HSE Department prior to use. All pesticides used must have a SHOC card in accordance with ECDC HSE Management. Only trained personnel shall be authorized to handle pesticides or to operate pesticide spraying equipment. Personal protective equipment and clothing (PPE) shall be used in accordance with the relevant SHOC card. Keeping of animals shall not be allowed in ECDC camps. e.g., dogs, cats, rabbits etc.   1. **Sanitary Facilities and Sewage**   Toilet and washing facilities shall be provided in, or adjacent to living quarters, work place and recreation areas. Minimum requirements are specified in **Appendix C.**  Toilet and washing facilities shall be kept clean and in good working order at all times.  Toilets and washroom fittings shall be constructed of material which can be easily cleaned. The floors, walls and ceilings shall have a surface finish that can be easily cleaned.  All toilets shall have window openings to the outside air, or be provided with an artificial ventilation system. The proportion of window surface shall be not less than 10% of the floor area.  Lighting of at least 200 Lux shall be provided in all toilets and washing facilities.  A continuous supply of cold and hot water shall be provided in, or adjacent to all toilets and washing facilities.  Floor of showers shall be provided with slip free material.  Shower cubicles shall be provided with doors or curtains.  Sewage effluent shall be managed and sewage sludge shall be disposed of in accordance with ECDC Waste Management.   1. **Waste Management**   Domestic wastes (including kitchen wastes), office wastes and clinical wastes shall be stored, collected and disposed of in accordance with ECDC Waste Management Plan.   1. **Water Supply**   Water for drinking, cooking, washing and toilets in camps shall be provided from ECDC and Client-approved sources.  A minimum water supply of 300 litres per person per day shall be provided.  Water shall be distributed from source by pipes made from UPVC, steel or cast-iron materials approved by the company. No lead pipes shall be used.  Water shall be stored in aboveground tanks made either in stainless steel, galvanized steel or reinforced fibre glass.  **Water supplies for domestic use shall be disinfected by chlorinating so that a residual free chlorine level of 0.2 mg/l to 0.5mg/l is maintained throughout the distribution system. Site Manager shall check and record the chlorine level every two weeks.**  If water is trucked in, the tanker truck shall be licensed in accordance with local traffic requirements. All water tankers shall be painted blue （or white）and shall have the words "POTABLE WATER" written in white on both sides of the tanker in Arabic and in English.  Water tankers shall not be used for any other purpose and shall be kept clean and in good repair. Each water tanker shall be inspected by ECDC Project HSE Department before renewal of its licence / registration.  Water supplied to camps shall comply with the chemical and bacteriological limits specified in WHO Standard. Bacteriological limits in water storage tanks shall be checked monthly and the tanks shall be cleaned annually.   1. **Laundry**   Laundry services shall be provided for all personnel accommodated in camps. The service shall include washing of bed linen, towels, work clothing and personal clothing.  Laundry facilities shall be kept clean and maintained in working order.  Laundry from any individual that has an infectious disease shall be stored and washed separately from other laundry. A Client Medical Officer would be consulted to determine any specific washing and handling requirements.  A drying area that is protected against dust and animals shall be provided.   1. **Recreational Facilities**   Recreational facilities shall be provided in ECDC camp. As a minimum, indoor facilities in Recreation Room would include TV, DVD, and videos. Alcohol and Drugs (Illegal Substances) **It is illegal for anyone to drink alcohol or use illegal drugs in.**  **ECDC prohibits any employee from use of any alcohol or drugs, Any employee in violation of this provision shall be dismissed by ECDC, and ECDC shall reserve the right for further prosecution to remedy the losses to its reputation, economic interests, legal affairs and other aspects caused by such behavior.**  .     Health Effects of Alcohol Most of the time, drinking alcohol does not cause any problems. But drinking too much or at the wrong time can be harmful. Drinking even small amounts of alcohol before, or while carrying out hazardous work tasks can impair work performance and thereby increase the risk of a workplace accident.  Alcohol is absorbed into the bloodstream within a few minutes of being consumed, and is carried to all parts of the body including the brain. It takes a person with a healthy liver about 1 hour to break down and remove 1 unit of alcohol (a unit is equivalent to 10 ml of pure alcohol and equates to approximately one half pint of beer, one measure of spirits, or one small glass of wine). Therefore if someone drinks heavily in the evening, they may still have alcohol in their bloodstream the following morning. Black coffee, cold showers and fresh air will not speed up the breakdown of alcohol - only time can remove alcohol from the bloodstream.  Alcohol reduces physical co-ordination and reaction speeds. It also affects thinking, judgement and mood, and can make a person become more aggressive. Large amounts of alcohol in one session can put a strain not just on the liver but other parts of the body as well, including muscle function and stamina. Drinking alcohol raises a person's blood pressure. This can increase the risk of coronary heart disease and some kinds of stroke. Regular, excessive drinking also increases the risk of liver damage, cirrhosis of the liver, and cancers of the mouth and throat. People who drink very heavily may develop psychological and emotional problems, including depression. Health Effects of Drugs Drug "misuse" refers to the use of illegal drugs and the misuse, whether deliberate or unintentional, of prescribed drugs and substances. Drug misuse can harm the misuser both physically and mentally and, through the misuser’s actions, other people. Simultaneous use of alcohol and drugs is particularly dangerous.  Drugs can affect the brain and body in a number of ways. They can alter the way a person thinks, perceives and feels, and this can lead to either impaired judgement or concentration. Neglect of general health and well-being is common among drug misusers. This may adversely influence their performance at work, even when the misuse occurs outside the workplace. Alcohol and Drugs in the Workplace Alcohol consumption and drug misuse can be a major problem for employers, resulting in:   1. Loss of productivity and poor performance 2. Lateness and absenteeism 3. Increased potential for workplace accidents 4. Effect on team morale and employee relations 5. Bad behaviour or poor discipline 6. Adverse affects on company image and customer relations   A working environment shall be created whereby alcohol or drugs usage does not threaten the safety of ECDC business, the environment and the safety or health of employees.  In situations where an employee is taking prescribed drugs or medication as treatment for a health condition, the employee shall be responsible for informing their Supervisor of any potentially impairing side effects.  Employees who drink alcohol while off-duty shall be responsible for ensuring that they allow adequate time to not be impaired by the effects of alcohol by the time they commence work.  Alcohol and drugs abuse shall be recognized as a treatable, ill health condition. Employees who believe they have a dependency on alcohol or drugs shall be encouraged to come forward in confidence to their Supervisor, or a Medical Practitioner, to seek help and support.  Assistance shall be provided in arranging appropriate rehabilitation treatment (i.e. an individually tailored treatment plan developed by a Medical Practitioner). Rehabilitation options shall include:   1. Medical counselling 2. Education programmes 3. Professional treatment at a specialized health institution  Control and Test Employees discovered to have an alcohol/drugs dependency by means other than self-disclosure shall, depending on the circumstances, be offered assistance in accordance with the rehabilitation policy.  If alcohol/drugs dependency is discovered as a result of a disciplinary situation, the person shall be subject to the normal disciplinary procedure. Dependency shall not be considered as mitigating circumstances in a disciplinary procedure.  Possession, distribution, sale or use of alcohol and illegal drugs, or misuse of legal drugs, on ECDC business premises shall be regarded as serious misconduct. The normal disciplinary measure for serious misconduct shall be summary dismissal. A random testing regime for alcohol and illegal substances would be implemented. **Every shift it is mandatory to test.** **In the event that any illegal drugs are found, or illegal activity is suspected on ECDC business premises, The Local Police shall be contacted.**  Inability of an employee to perform their duties through impairment by alcohol, use of illegal drugs or misuse of legal drugs shall be regarded as serious misconduct. In situations where there are "reasonable grounds" for suspecting that alcohol or drugs may have been brought onto ECDC business premises, searches for alcohol and drugs shall be conducted. Failure to co-operate shall be regarded as serious misconduct. Occupational Health and Hygiene This part describes ECDC requirements for managing occupational health risks associated with the activities of ECDC and service companies.  The following Occupational Health risks should be considered:   1. **Physical** 2. Hearing Conservation/Workplace Noise 3. Heat 4. Sunlight 5. Dust 6. **Chemical** 7. Benzene 8. Hydrogen Sulphide (H2S) 9. Paints and Coatings 10. **Ergonomic** 11. Manual Handling 12. **Psychological** 13. Stress   Biological health hazards refer to Public Health part     Hearing Conservation Exposure to excessive levels of noise can cause permanent damage to hearing known as Noise Induced Hearing Loss (NIHL). The aim of ECDC hearing conservation program is to safeguard the hearing of all personnel engaged in activities which involve exposure to noise by keeping noise exposures in the workplace within mandated limits. This Section defines ECDC minimum requirements for hearing conservation.   1. **Design Limits for Noise Sources**   The maximum sound pressure limit for plant and equipment design shall be 85 dB(A) measured at one metre, the objective being to maintain the work area noise level below 85 dB(A).   1. **Hearing Conservation Standards**   The standards for hearing conservation defined in Table 3 shall be adopted.  *Table 3: Noise Level Standards*   |  |  |  |  | | --- | --- | --- | --- | | **Action Level**  **dB(A)** | **Action required** | | | | **Personal Noise Dose**  **(Leq) (8 hr)** | **Noise Level** | | | **80** | Identify jobs where noise dose exceeds 80 dB(A)  Include such personnel in an audiometric program. | Identify and mark working areas and activities where steady noise levels exceed 80 dB(A). Noise level layout to be displayed at the facility. | | | **Make hearing protection available** | | | | **85** | Personnel shall not be exposed to a personal equivalent continuous noise dose of 85 dB(A) over a working day | | Identify and mark working areas and activities where steady noise levels exceed 85 dB(A). Noise level layout to be displayed at the facility.  Mark tools where noise levels exceed 85 dB(A) . | | **Mandatory use of hearing protection** | | | | **115** | Personnel shall not enter areas where steady noise levels are above 115 dB(A) irrespective of duration or the use of hearing protectors | | Identify and mark working areas and activities where steady noise levels exceed 115 dB(A). Noise level layout to be displayed at the facility. | | **135** | Personnel shall not enter areas where impulse noise levels are above 135 dB(A) irrespective of duration or the use of hearing protectors | | Identify and mark working areas and activities where impulse noise levels exceed 135 dB(A). Noise level layout to be displayed at the facility. |  1. **Assessment of Noise Levels and Noise Dose**   A review of the existing noise layout and personal exposure levels shall be conducted by ECDC HSE Department every year, or as facilities, equipment and operations change.   1. **Noise Control Measures**   Noise shall primarily be controlled at the source. Noise control shall be implemented considering the following hierarchy:  Define noise limits before the design and purchase of new equipment and tools.   1. Use engineering principles of segregation and enclosure. 2. Maintain plant and tools properly. 3. Where it is not feasible to control noise at source, the following control measures shall be implemented:  * Reduce the number of exposed personnel by separating noisy from non-noisy work. * Reduce exposure times by job sharing and automation. * Provide personal hearing protection.   **Audiometry**  Personnel exposed to a daily noise does of 80 dB(A) shall have an audiometry test conducted every two years. In cases where personal daily noise dose exceeds 95 dB(A) audiometry testing shall be performed every year.   1. Record keeping – audiometry results are to be retained as part of the individual’s medical file. 2. Training – all personal exposed above 80 db(A) shall be trained on the health effects of noise exposure. 3. Counselling – all personnel with a recorded hearing loss.   Reporting of noise induced hearing loss – shall be in accordance with ECDC Incident Investigation and Report Procedures. Heat There are many International Standards for Heat Exposure. However, these may be not fully inappropriate to the work environment.  In the absence of appropriate quantitative standards, health risk exposure due to heat shall be controlled, as appropriate to the environmental conditions, by applying the following:   1. moderating work rate 2. forced ventilation and air conditioning 3. shade 4. water supply 5. scheduled rest breaks 6. scheduling work in cooler parts of the day, or at night 7. programming work for a cooler part of the year   All personnel shall be vigilant in identifying the symptoms of heat stress in themselves or their co-workers. These symptoms include:   1. rashes 2. heat cramps 3. heat syncope (fainting) 4. heat exhaustion (dizziness, tiredness, general weakness, delirium) 5. heat stroke (body temperature above 40C, skin very hot, often sweating has stopped, confusion, unconscious)   If heat stress symptoms are identified, work shall cease until appropriate measures to control heat exposure are implemented. Sunlight Exposure to ultraviolet (UV) radiation from the sun can lead to the following health effects:   1. Sunburn (skin redness, tenderness, swelling, blistering, fever, nausea) 2. Premature wrinkling 3. Skin cancer 4. Sun sensitivity (allergic reaction to sun exposure) 5. Immune system suppression and disease 6. Eye damage (including burning of the cornea, cataracts)   Health risk due to the sun's radiation shall be controlled, as appropriate to the environmental conditions, by applying the following:   1. Scheduling heavy work in order to limit exposure to the sun between 10 a.m. and 4 p.m. 2. Shade 3. Protective clothing to cover the torso, legs and arms 4. Headgear or a hat to protect the face, ears, neck and eyes 5. Sunglasses rated for protection against UV radiation 6. High Sun Protection Factor (SPF) sunscreen for all exposed areas of skin should be made available by the Employer   All personnel shall be vigilant in identifying the symptoms of sunburn in themselves or their co-workers, and shall take appropriate measures to protect themselves from the sun's radiation. Dust Personnel shall not be exposed to levels of dust or Man Made Mineral Fibres (MMMF) in air in excess.  MMMF include those fibres that are manufactured from natural rock or other materials, readily melted slags , glass or metallic oxide fibres. They can be classified into four groups:   1. insulation wools 2. refractory or ceramic fibres 3. continuous filament fibres 4. special purpose fibres 5. Exposure shall be controlled considering the following hierarchy:  * Use engineering principles of enclosure, isolation, local exhaust ventilation and wet techniques * Provision of respiratory protective equipment.  Chemicals A wide range of chemicals are used in the Petroleum industry. Chemicals of particular concern, with respect to management of health hazards, are those which:   1. cause irreversible harmful effects (e.g. carcinogens) 2. are absorbed through the lungs or skin 3. have an exposure response relationship which is ill defined 4. have stringent occupational exposure limits (OELs) 5. have poor warning properties 6. are volatile   Specific health management requirements for a number of key hazardous chemicals are defined in the following section.   1. **Benzene**   Benzene is a component of many crude oils and has been detected in condensates. Prolonged and repeated exposure to benzene has been associated with the development of leukaemia.  The benzene content of process streams shall be measured. The use of pure benzene is not permitted.   1. **Hydrogen Sulphide (H2S)**   H2S is a highly toxic gas. Brief exposure to high concentrations of H2S can cause rapid unconsciousness without warning symptoms. Death due to respiratory paralysis may follow within a few minutes.  At low concentrations H2S has the odour of rotten eggs. At high concentrations, however, the odour is not detectable due to rapid paralysis of the sense of smell.  H2S exposure shall be managed in accordance with Industry Standard.  **Personal H2S monitors shall**:   1. Be tested and approved for use in hazardous areas 2. Be tested and certified for the detection of H2S in ambient air temperature conditions from 0oC to 55oC 3. Cover a range of 0-50 ppm with a continuous read-out 4. Sound an audible alarm at 10 ppm 5. Be provided with a reliable field calibration kit and calibrated at least once per day, or once per shift 6. Be maintained and/or repaired by technicians trained and certified by the manufacturer, or the manufacturer’s appointed agent 7. **Paints and Coatings**   Many paints, solvents, thinner and stripping fluids contain hazardous chemicals which give off toxic vapours which will cause dizziness, nausea, eye and nose irritation, and if allowed to become concentrated by inadequate ventilation, may lead to more severe symptoms such as unconsciousness, vomiting or bronchitis.  Certain paints may contain heavy metals which are highly toxic (e.g. lead, mercuric oxides). These are not now common, but may be encountered when stripping old equipment.  Although few paints and coatings are corrosives or particularly irritant to the skin, contact dermatitis is a frequent result of insufficient protection, particularly if paint thinners or solvents are used for skin cleaning.  Water-based paints/coatings shall be selected in preference to solvent-based paints/coatings, whenever practicable to do so.  The following precautionary measures shall be implemented, particularly if solvent-based paints / coatings have to be used.   1. Self-contained breathing apparatus shall be worn when painting in confined spaces. 2. Respiratory protection shall be worn when spray painting, unless specific exhaust ventilation systems are in place 3. Goggles, overalls and impermeable gloves shall be worn when handling or mixing products 4. Long-sleeved and long-legged clothing shall be worn 5. Other control measures shall include:  * The airflow from behind the operator shall be maintained at a minimum of 1.5 m/s * Paint spray equipment shall be regularly maintained, and users trained to use it correctly * Solvents shall not be used for cleaning the skin, and appropriate skin cleansers shall be provided  Ergonomics Ergonomics is a multi-disciplinary science that considers the interaction between humans and their working environment to improve the design of work systems, workplaces and products. Ergonomics aims at establishing a well-designed work environment by achieving a practical balance between design functionality and ease of use.  Health hazards resulting from poor ergonomic design are mainly muscular-skeletal disorders (e.g. injuries to the back, neck, hands, arms and feet). In many situations the hazards are not easily identified, because many of these injuries build up over a period of time, rather than being caused by a single incident.  Ergonomic considerations also include noise, lighting, thermal environment and vibration. These issues are discussed separately within this Section.  Ergonomic controls shall be considered throughout the full lifecycle of project, especially at definition phase and execution phase Manual Handling The following control measures shall be implemented to control health risks due to manual handling in both industrial and office work environments:   1. Avoid the need for manual handling, as far as reasonably practicable. 2. Use a lifting device or seek assistance to lift loads. 3. If manual handling is unavoidable, assess the injury risk by identifying: 4. work tasks involving twisting, stooping, reaching, strenuous pushing or pulling, or repetitive handling 5. loads that are heavy, bulky, unwieldy or unstable 6. working environments that constrain posture, restrict movement or have physical obstructions 7. Assess and implement options for reducing risk of injury, including consideration of: 8. design factors (e.g. altering the design of the physical working environment through automation, mechanization, or changing the workplace layout) 9. work organization factors (e.g. reducing physical strain through job rotation, adequate breaks and group working) 10. Educate and train personnel in identifying manual handling hazards and good handling technique.  Stress Stress is a person's, or group of people's, adverse reaction to excessive pressure. If stress is excessive and goes on for some time, it may lead to metal and physical ill health (e.g. depression, nervous breakdown, heart disease) and considerable reduction in workplace productivity. People have differing thresholds of pressure which will cause stress symptoms - but everyone is vulnerable to stress, depending on the particular pressures at any given time.  Stress is usually caused by a sequence of events that may be related to a person's work, personal circumstances, or a combination of these. Stress is rarely caused entirely by work-related factors, but work may be a major factor.  The following control measures shall be implemented to minimize the potential for work-related stress:   1. Watch for signs of stress in staff and intervene promptly 2. Ensure that staff have the skills, training and resources they need to be confident and able to carry out their work tasks 3. Assess opportunities for varying working conditions and flexibility 4. Ensure that people are treated fairly and that bullying / harassment in the workplace is not tolerated 5. Maintain good two-way communication with staff, especially at times of change 6. In the event that a person complains about work-related stress, the following control measures shall be implemented: 7. Listen to, and be understanding of their concerns 8. Act promptly to resolve the problem, if able to do so 9. Involve the person concerned in deciding how to deal with the problem 10. Encourage and assist the person to seek additional support, if required (e.g. stress counselling)  Medical Facilities, Reporting Management    Purpose This section describes ECDC management of medical examinations, medical treatment and medical facilities. It applies to all ECDC employees, and all Sub-Contractors authorised to work on behalf of ECDC. Scope  1. Medical examinations 2. Medical treatment 3. First aid 4. Clinics 5. Ambulance services 6. Nursing levels  Medical Examination Requirement What medical examinations entail and the frequency of medical examination are based on an analysis of risk associated with a particular job or job type. Certain jobs with specific HSE risk are listed below with exam requirements and frequency intervals defined. This list is to be reviewed and updated regularly as high risk jobs are identified that may require additional content or different frequency of examination. The examining Medical Officer can, at any time, order additional tests as deemed necessary by individual circumstance.  **Medical requirements for HSE classified jobs are detailed in the table below.**  Table Medical Requirements for HSE Classified Jobs   |  |  |  | | --- | --- | --- | | **Job Classification** | **Exam Frequency (minimum)** | **Exam Requirements** | | Driver | Biennial | Routine medical  Vision check | | Food Handlers | Annual | Routine medical  Stool | | Rig Staff | Biennial | Routine medical  Assess ability to perform strenuous tasks | | Welders | Biennial | Routine medical  Eye examinations | | Individuals at Health Risk (Diabetic, Hypertensive, Obese) | Biennial | Routine medical  Vision check  Blood test  Liver function  Kidney function  Cardiac function | | All other interior based staff | Biennial | Routine medical | | All others not defined above  < 40 yrs old  > 40 yrs old | Biennial | Routine medical  Routine medical + ECG |  1. **ECDC Employees**   Medical examinations to ensure the fitness of an individual for a particular job shall be classified as one of four categories:   1. Pre-employment examination 2. Pre-placement examination 3. Routine medical examination 4. Medical Board   These are discussed in more detail in the following sections.  The results of any medical examination shall be communicated to management as one of three categories:   1. fit without restriction 2. fit with specified restrictions 3. unfit   All medical examinations shall be conducted in accordance with **CLIENT fitness to work standards**.  All medical examinations shall be conducted by a CLIENT approved hospital.   1. **Pre-Employment Examinations**   All proposed new employees shall undergo a pre-employment medical examination. They should afford it at the first time before their employment. These can be conducted by a CLIENT-approved Medical Practitioner in Riyadh or Khobar.  A firm offer of employment shall not be made until an opinion on whether the person is fit for the job, including any restrictions, has been communicated to management by ECDC Project HSE and HR Department.   1. **Pre-Placement Examinations**   A Medical Officer shall be consulted in the following circumstances to determine if a pre-placement medical examination of an individual is required:   1. Line management is concerned that a person may not be medically fit for a planned job change; 2. A person with a category “b” medical classification (fit with specified restrictions) is planned for a job change involving work tasks that they are not required to perform in their existing position.   The person shall not be placed in a new position until an opinion on whether the person is fit for the job, including any restrictions, has been communicated to management by the examining ECDC. approved Medical Officer.   1. **Routine Medical Examinations**   All expatriate employees shall undergo a routine medical examination for the purpose of renewing their Labour Permit. The frequency and method of examination shall be in accordance with CLIENT related standards. Medical Board A Medical Board shall be convened to assess the fitness of an individual to continue in a particular job position, if:   1. An individual has, or appears to have, a medical problem that is significantly affecting their performance at work; and 2. Attempts to resolve the situation through direct discussion with the individual concerned have either been unsuccessful, or are impractical.   In situations where a Medical Board decides that a person shall be assigned a category “c” medical classification (unfit), medical severance award shall be considered. The details of the award shall depend on prevailing ECDC. policy at the time and the severity of the disability. Medical Treatment  1. ECDC. shall provide medical treatment facilities and primary medical treatment for our employees at own cost, unless authorized by Client to obtain primary medical treatment at Client clinic facilities. 2. ECDC. that are authorized by Client to obtain primary medical treatment at Client clinic facilities shall provide the clinic with a list of all personnel who may require medical treatment at any time during the term of the Contract. 3. The list shall detail the following information: 4. Employee Name 5. Employee number 6. Work location 7. Contract number under which the employee is engaged  First Aid Treatment First Aid treatment would be available at all ECDC. sites, at all times people are at work. First Aid treatment shall include having competent ‘First Aiders’ and fully-stocked First Aid kits. When more than 10 people are working at a particular location, a minimum of 10% of staff shall be competent First Aiders with access to suitable First Aid kits. When less than 10 people are working at a particular location, at least 2 persons are to be competent First Aiders with access to suitable First Aid kits . Additional competent First Aiders with access to First Aid kits shall be provided if the workgroup is more than 20 minutes by road from the nearest clinic or if the work poses a high level of risk.   1. **First Aiders**   Competent First Aiders ( Medic )shall possess a valid certificate of competence in First Aid, The First Aiders shall undertake refresher training at least every 6 months. The training shall be performed by a Subcontractor Nurse or approved teacher. The refresher training shall include familiarization with the Medical Emergency Plan, the layout of the clinic and the location of equipment.   1. **First Aid Team**   First Aid Teams exist to assist in emergency response, particularly in the Interior, where resources are geographically dispersed.  The Medic / Nurse shall maintain a list of names, telephone numbers and locations of each member of the First Aid Team. This list shall be available at the clinic and emergency control client.   1. **First Aid Kits**   All First Aid kits shall be:   1. clearly identifiable 2. stored in an accessible location, and shall not be locked 3. portable.   All first aid kits shall contain, as a minimum, the contents listed which recommended by Client’s health specialist. A list of the contents shall be stored with each kit.  The Medic shall be assigned responsibility to check each First Aid Kit weekly, to maintain the kit fully-stocked, and to record the checks. A record of the checks shall be retained. The location of First Aid kits, and names, telephone numbers and locations of First Aiders shall be centrally posted at each work location. Medic Facility and Services ECDC. will provide a dedicated furnished medical clinic facility for each Rig on a twenty-four (24) hour daily basis for primary care situations, together with adequate primary care medical supplies at the Well location.  ECDC. medical personnel shall comprise trained and qualified male medical dresser(s)/nurse(s) who shall be licensed according to CLIENT policy. ECDC. shall provide written evidence of medical personnel qualifications upon request by clients, for approval by CLIENT Chief Medical Officer.  At the Well location, ECDC. will provide and maintain a minimum stock of medicines, supplies and appliances as required by CLIENT Medical Department and shall provide a list of such items and quantities thereof to be maintained for inspection and advice by CLIENT Chief Medical Officer. Record 6.1 ECDC-HS-CL-H001-01-Eye Wash Station Check v1.0 |