**Safe Work Requirement**

WASTE MANAGEMENT PLAN

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| Statement This Plan provides guidance to all personnel about how to handle, store, transport and dispose of various wastes encountered in ECDC operations. They are intended to assure that ECDC manages its wastes in accordance with all legal and contract requirements. The failure to follow applicable regulations regarding different kinds of waste can result in serious fines to the Company, criminal prosecution of individuals and potential loss of work from the Operator.  Compliance with these procedures will also help minimize waste and result in more efficient operations. Objective The objective of this Waste Management Plan is to achieve and maintain compliance with standards.  The objectives and goals of waste management are:   1. Minimize the generation of waste material by judicious use of material and reuse or recycle material, when feasible, 2. Treatment or disposal of wastes such that the disposal activity and the treated waste have minimal impact on the surrounding environment, 3. Treatment or disposal of waste meet with government environmental rule and Client standards and contract agreement. 4. Promote awareness of and adherence to proper waste management procedures by site workers.  SCOPE This plan is designed for use at all ECDC offices, base, sites and workshops that carry responsibility for waste minimization and management compliance. Definitions      5. **Hazardous Substance:**   Any material, chemical or waste that is classified as hazardous (according to government regulations) or is otherwise a potential hazard to human health or the environment. For the purposes of internal reporting, refined petroleum products such as motor oil, kerosene, petrol, gasoline are to be considered hazardous.   1. **Waste (ECDC Waste):**   ECDC waste is any material (solid, liquid, gas or mixture) discarded from operations (manufacturing, laboratory, cafeteria, office or other business related activities) for which ECDC has direct responsibility.   1. **Hazardous Wastes:**   Any waste which is classified as hazardous (according to government regulations) or is otherwise a potential hazard to human health or the environment.  Any liquid or solid waste, which because of its quantity, physical, chemical or infectious characteristics, can be hazardous or potentially hazardous to human health, to plants or animals and to air, soil or water.  Hazardous waste can arise from commercial, industrial, agricultural or any other activities. It includes explosive, radioactive, flammable, toxic and corrosive substances which may cause disease, as well as any substances identified as hazardous by a decision from the Minister.  Hazardous waste can be hazardous or potentially hazardous when improperly handled, stored, transported, treated or disposed of.  Within ECDC, hazardous waste can include the following:   |  |  | | --- | --- | | * Oily sand / soil | * Oily sludge | | * Hazardous waste chemicals | * Waste lubricants/ waste oil | | * Hazardous Lab waste chemicals | * Hazardous empty drums | | * Sewage Sludge | * Clinical waste | | * Batteries | * OBM and OBM cuttings | | * Tyres | * Pigging sludge | | * NORM | * Others | | * Oil Based Mud (OBM) |  |   Sewage sludge is defined as treated sewage in semi-liquid form (e.g. septic tank sludge), the third parties was available to cope with it.   1. **Waste water:**   Used water comes from homes, communities, farms, camps, bases, well sites and other industrial operations. Wastewater includes both sanitary (domestic) sewage and industrial wastewater.   1. **Industrial Wastewater:**   Industrial waste water is related to industrial processes such as: manufacturing, cleaning, equipment testing, chemical blending, mechanical, electronic operations; includes the runoff and leach ate from areas that receive pollutants such as wash bays, fuel and chemical storage areas; includes all other wastewater that is not defined as domestic/sanitary waste water.   1. **Domestic Wastewater (also called Sanitary Wastewater):**   Any wastewater primarily derived from dwellings, camps and business buildings; includes kitchen, bathroom (sewerage) and laundry wastewater; sometimes sub- classified as grey water (from showers and kitchens) and black water (from toilets).   1. **Waste Minimization:**   Source reduction and control, reuse and recycling; focuses on the prevention of waste generation.   1. **Waste Management:**   Characterization, storage, transportation, and disposal of waste; focuses on waste handling.   1. **Site:**   A site may be either   1. A land or vessel/site where ECDC provides services and conducts operations under its direct control or influence 2. Projects managed by ECDC for clients, or 3. Real estate or site that is occupied (or planned to be occupied) by ECDC whether leased, owned, or co-inhabited with other entities. 4. **Spill:**   Any undesired loss of primary containment of a substance irrespective of quantity recovered or presence of impermeable secondary containment. For severity loss reporting, ECDC recognizes three types of reportable substance spills: a) hazardous substances, b) crude oil, and c) produced water.   1. **Non-Hazardous Wastes**   Non-Hazardous Wastes defines as any solid or semi-solid material which does not pose any danger to the environment or to human health if it is dealt with in a safe scientific way. No solid non-hazardous waste shall be mixed with any category of hazardous waste.  Within ECDC non-hazardous waste can be any of the following:   |  |  | | --- | --- | | * Domestic waste | * Kitchen refuse | | * Non-hazardous waste chemicals | * Non-hazardous empty drums | | * Office waste | * Scrap metal | | * Water based drilling mud cuttings (WBMC) | * Tree/grass cuttings | | * Water based drilling mud (WBM) | * **Others** |  1. **Domestic Waste**   Domestic waste includes kitchen refuse and tree/grass cuttings. Office waste includes paper and other wastes generated in an office environment. Domestic and office waste may include recyclable materials such as paper, steel cans, aluminium cans, printer toner cartridges and disused computers.   1. **Non Hazardous Industrial Waste**   Non Hazardous Industrial Waste includes uncontaminated iron scrap, electrical cable, tyres, wood and paper.  Domestic and Office Waste   1. **Storage**   Domestic kitchen refuse shall be stored in black-coloured bins lined with black or grey-coloured refuse plastic bags. Recyclable domestic and office waste shall be stored in yellow-coloured refuse bins lined with yellow-coloured plastic bags.  In locations or camp where the waste generation is large, skips of suitable size shall be provided.   1. **Collection**   Service trucks of suitable size shall be used for the collection of kitchen refuse. Tipping trucks provided with netting or tarpaulin shall be used for the collection of tree/grass cuttings.   1. **Disposal**   Third parties and Service company was available to cope with it.  Non-Hazardous Industrial Waste  This waste shall be segregated at source for recycling and transportation to a dedicated licensed waste facility for recycling.   1. **Hazardous Wastes**   General Requirements:  No hazardous waste could be mixed with any other category of waste;  Hazardous waste could be appropriately labelled and packed.   1. **Oily Sand**   Contaminated oily sand shall be transferred to a licensed waste management facility capable of accepting the waste, in a vehicle licensed to transport hazardous waste from third party.   1. **Non-Recyclable Batteries**   Dry cell batteries that cannot be recycled shall be placed in ordinary refuse bags together with domestic waste.   1. **Clinical Wastes**   Clinical wastes including medical wastes and medical ‘sharps’ shall be stored in dedicated yellow bags or cartons (U.N. Hazardous Material Standard Number Din. U 30 739) designated for this purpose.   1. **Chemical Waste**   Chemicals (hazardous and non-hazardous) which cannot be re-used or sent back to the supplier, shall be disposed of in accordance with the waste disposal options stipulated on the ECDC and Client approved Safe Handling of Chemicals (SHOC) card.  Non-hazardous and hazardous chemical containers (including plastic and metal drums) shall be emptied, cleaned and punctured by the user/waste generator and transported with the SHOC card of the chemical to a waste facility capable of accepting hazardous and/or non hazardous waste.  Sand contaminated with chemicals should also be treated as a chemical waste and disposed as stipulated in the SHOC card for that chemical. Responsibilities    Senior Tool Pusher  1. Ensure that the crew has a written Waste Management Plan and is implemented. 2. Assign a responsible person for The Plan. 3. Ensure that any subcontractor is managed and audited as per Client standard and the plan. 4. Ensure that appropriate employees are trained on the requirements of The Plan. 5. Arrange to collect, Segregate and store the waste in designated place. The waste should be collected in different colour boxes according to the waste segregation requirements. 6. Arrange to transport the waste to designated place if requires. 7. Ensuring the implementation of all pollution prevention methods. 8. Ensuring the site is clean and tidy. 9. All incoming vehicles shall be supervised during the loading of waste contents in location.  Camp Boss  1. Arrange to collect, Segregate and store the camp waste in designated place. 2. Arrange to transport the waste to designated place if requires. 3. Inspection and maintenance the sewage treatment system.  HSE Supervisor  1. Support the S.T.P and the Responsible person for The Plan to complete it and implement. 2. Supervise the process of collection, segregation, storage and disposal of waste, to ensure the plan is followed. 3. Provide necessary training to the crew and instruct the crew on waste management. 4. Supervise subcontractor’s activities to make sure subcontractor’s activities comply with client’s standards and contract requirements. 5. The certificated waste service company should obey the segregation to transfer the waste and supply the detail. 6. The waste awareness and segregation would be trained among ECDC employees.  Waste Minimization The best waste management practice is to avoid creating waste in the first place.   1. Use only what you need. For example, when greasing, use enough to provide proper lubrication but don’t get carried away. Gobs of grease not in contact with the surface requiring lubrication do more harm than good. 2. Completely empty one container before opening another of the same product. Open containers are more likely to create a spill hazard and leftover products often eventually become waste if we decide to discard them. If we use them up, they never become waste. 3. Plan your work. Consider all possibilities that something can be reused instead of being thrown out and replaced. For example, if we can launder and reuse a cloth rag instead of throwing away a disposable paper towel, we’re on the right track. 4. What can you do to minimize waste? Once you start to think about it, the possibilities are endless. 5. The next-best waste management practice is to recycle a waste instead of throwing it away. Recycling keeps waste out of a landfill and reduces pressure on our natural resources. 6. The final and least desirable option is disposal. And if we decide that we have to dispose of something, there is only one way to do it: Properly and legally  Procedures for Unidentified Waste Whilst the intention should always be to maintain the identity of all materials received and handled on site in order to be able to manage wastes safely, occasionally wastes will arise where such information is not readily available. Stored legacy wastes identified on site will fall into this category.  Where wastes of unknown type or composition are identified on site, they should be presumed to be hazardous until further investigation and research provides further information to support decision making. A procedure for identification and management of unidentified wastes should be followed as part of the EMS procedures.  The procedure for screening and assessment of unknown wastes will enable the material to be characterized sufficiently for it to be properly managed. Once the risks have been assessed and integrity of storage media has been evaluated the material can be transferred to the quarantine area in the Hazardous Waste Storage Area. It is recognized that it will not be possible to identify / characterize all wastes without sampling and analysis. Suitable procedures should be followed and further advice should be sought from the HSE Supervisor. Waste Management ECDC recognizes that it has a duty to ensure that any waste it produces is handled safely and in accordance with legal requirements. This means that in practice are responsible for ensuring the safe and proper disposal or recovery of waste that is generated as part of the project, even after it has been passed to another party, such as a waste contractor.  ECDC will take measures to ensure that all waste is stored and disposed of responsibly and in particular will:  Prevent anyone keeping, depositing, disposing or removing ECDC wastes without appropriate environmental permits ensuring that waste is only handled or dealt with by individuals or businesses that are approved to deal with it.  Ensure that waste management permits/licenses are kept current, where required.  Ensure materials are properly packaged for transportation and that all waste containers are appropriately labeled for storage and transportation purposes.  Ensure Material Safety Data Sheet (MSDS) records are kept for all hazardous wastes and accompany the waste during transportation.       Storage Areas and Containers Storage areas will be provided for waste containers at each of the Rig site and base camp within the Project. Hazardous and non-hazardous wastes will be segregated in separate storage units in designated areas. These areas are to be indicated on the facility site plans. Wastes must be stored in a manner to prevent:   1. accidental spillage or leakage; 2. contamination of soils and groundwater; 3. corrosion or wear of containers; 4. loss of integrity from accidental collisions or weathering; 5. theft by people; and 6. Scavenging by animals.   Waste storage containers will be appropriate in terms of volume, composition, and shape and access for the material that is being stored. Only containers in good condition will be utilized. Bungs and lids will be securely fastened or other forms of covering shall be provided. Storage of waste will be carried out in accordance with the MSDS sheet, in a designated area, with a suitable surface and a method to contain any leakage or contaminated runoff water. Containers used must be inert in relation to their content, clearly labeled, indicating the characteristics of the content, date of containerizing or packing, and data on toxicity and/or potential contaminant. Container Suitability and Labelling Prior to allowing the consignment of waste to leave an operational site, the specific designated personnel shall ensure that the waste containers are:   1. clearly labeled - to describe the contents using the appropriate waste labels which should be completed in full (old labels should be removed to avoid confusion); 2. in good condition and are not leaking; 3. appropriate to the waste they contain; 4. appropriately sealed (e.g. with a lid or bung); and 5. Not emitting any harmful gases or generating heat.   See Table 0.1 below for color coding at specific waste streams within ECDC rig site.  Table 0.1 Waste Management Color Coding   | **Color** | **Description** | | --- | --- | | **Blue** | General waste | | **Red** | Hazardous waste | | **Green** | Wood | | **Black** | Scrap metal |   If any of these criteria have not been met, the waste consignment should not be allowed to leave the facility/site. The HSE Supervisor or designated personnel must be contacted who will take all necessary corrective action(s) to rectify the situation before allowing the waste to leave the storage location.  Any unidentified waste should be quarantined at site in the designated area. Classification of the waste may require sampling and testing to confirm the presence or otherwise of hazardous components. Waste collection The Waste will be collected from each site by the Sub Contractors crew and will be segregated properly. Kitchen waste will be collected daily and other waste will be collected as per site requirements Waste Transportation and disposal Waste shall be disposed strictly in accordance with all current COMPANY, government and municipality rules and regulations, in one or both of the following:   1. Non-hazardous waste – to be disposed of in the nearest appropriate municipality facility. 2. Hazardous waste – to be disposed of in Client Industrial Waste Management Facility. 3. Domestic Sewage –a vacuum tanker/truck will be used to transport the Domestic Sewage.  TRAINING OF EMPLOYEES  ECDC site HSE will be responsible to train the concern rig employees for identify, collect, segregate, and handling of waste. They will be trained by the Rig Management on the site. REVIEW OF PLAN Plan will be reviewed in case of   1. Change in Operations 2. Use of Different Chemical Products 3. Change in Environment regulations 4. Change in Procedure 5. Periodical review 6. When it’s reviewed, shall be communicated among all the concerns.   11. Record  11.1 BSA-ECDC-HS-CL-E001-01-Monthly Environmental Report\_v1.0 |  |