General Guidelines for Municipal Solid Waste Management Under Risks of Covid-19 Outbreak:
Collection, Sorting, Treatment and Sanitary Landfilling

1. General Conditions
- The operation and management of municipal solid waste (MSW) must continue (including collection & sweeping, sorting, treatment, and final disposal) based on the provisions set out in the Lebanese legislation and contractual procedures. Additionally, vehicles/trucks shall be equipped with disinfectants/sanitizers.
- Stop using electronic devices for personnel registration or door access that require physical/touch contact (for finger printing or to punch security codes or other) and replace those with alternative methods that do not require physical/touch contact.
- Grant access only to essential personnel and people of relevance.
- Prevent employees with sickness symptoms from working and ask them to immediately seek medical support.
- Disinfectants to be used should be compliant with the specifications and standards set by the Coronavirus Preventive Measures Follow-up Committee (CPMFC).
- It is recommended to abide by the hygiene, cleanliness, disinfection, hands cleaning, and other relevant preventive instructions issued by the Ministry of Public Health (MoPH).
- The Ministry of Environment advises all stakeholders to follow these guidelines as additional preventive measures, if and where needed.

2. Personal Protective Gear (PPG) for MSW Field Personnel
MSW field personnel are the field labor working in MSW collection, sweeping, sorting, treatment and landfilling (final disposal), in addition to maintenance personnel, and drivers of vehicles, machinery, and equipment. Thus, it is recommended to:
- Provide comprehensive protective gear that covers the entire skin of personnel. Each personnel should have his own (PPG) with his/her name on it. The PPG comprises of long-sleeve puncture resistant overhaul, surgical mask, face shield, anti-puncture gloves that are liquid resistant, and hard toe-shoes.
- Secure additional spare PPG at facilities in case the PPG of any worker gets damaged.
- Train personnel to wear and take- off their PPG without touching their skin.
- Wear disposable gloves under the anti-puncture gloves.
- Replace face masks in a timely manner when they become humid.
- Provide each personnel with two personalized PPG boxes to be available in the locker rooms: one for washable PPG and the second for non-washable PPG.
- Disinfect daily non-washable PPG and the personalized PPG boxes with a certified disinfectant. The washable PPG should be washed on a daily basis at a temperature of 60°C.
- Personnel should wash their hands with water and soap for at least 30 seconds before putting their PPG and after removing them, and whenever needed especially during breaks.
- Personnel should wear disposable gloves and face masks before leaving the facilities.
- Ensure social distancing of at least 2 meters between the personnel while dressing/undressing. Dressing room should be properly ventilated in a periodic manner, and the ventilation system shall be equipped with a suitable high standard filter wherever applicable. Should the dressing room fail to ensure the recommended social distancing, it is recommended to modify the working hours of each set of personnel in a manner that would ensure the required social distancing.
- Dispose of single-use PPGs in sealed bags and place them in a well-sealed second bag (marked with the Letter “C”) before disposal.

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3. Offices and Control Rooms of MSW Collection, Sorting, Treatment and Landfill Facilities

Below is a list of recommendations:
- Clean the premises on a regular basis, at least once before each work shift, using one of the disinfectants certified by the CPMFC.
- Place a hand sanitizer near the entrance of each room in the building; every person entering or exiting the room should sanitize their hands.
- Reduce the number of personnel reporting to the offices to a minimum and promote working from home for personnel whose jobs can be done remotely.
- Assign exclusive teams of personnel to report to the premises to limit interaction between employees.
- Place liquid soap and disposable paper towels in the washrooms.
- Maintain social distancing among employees (of at least two meters from one another) while in the facilities.

4. Collection of MSW

Below is a list of recommendations:
- Organize the work teams with the minimum number without negatively impacting the ability to effectively collect MSW and ensure public cleanliness.
- Establish exclusive teams (driver and workers) – without changing any of the team members.
- Limit the use of each waste collection vehicle to a single exclusive driver and team of workers.
- Disinfect vehicles (and cab) regularly at least once a day (the cab shall be disinfected either in the evening or at least 12 hours before using it, special attention shall be given to the seat, gearbox stick, and steering wheel), and clean and disinfect the collection bins after emptying them.
- Clean and disinfect the waste vehicle facilities daily (once before each work shift).
Remark: In case quarantine facilities for infected people are established within a given municipality (outside healthcare facilities) or infected people isolated within their residences, it is preferable that the concerned municipalities provide special exclusive bins for the waste generated from these facilities/residences. In addition to the above procedures, collected waste shall be shipped in sealed bags to infectious healthcare waste treatment facilities or directly to sanitary landfills.
- In areas where door-to-door collection takes place, limit contact between the waste collectors and household residents by putting a schedule whereby residents should place their waste bags outside their doors at a designated time to ensure timely collection.

5. MSW Treatment Facilities

Below is a list of recommendations:
- Limit the number of personnel in solid waste treatment facilities without compromising on work functionality.
- Limit the number of personnel working at the manual sorting station and ensure a minimum distance of 2 meters between one another.
- Disinfect materials before workers initiate their manual sorting.
- Designate the sorting station personnel into teams; the same team members should work exclusively with one another at the sorting station.
- During work shifts, equipment, tools, sorting station and worker areas should be cleaned and disinfected.
- Categorize the waste according to date of sorting and type; sorted and treated waste material should be retained in the facility for 9 days before handing over.
- Maintain, at minimum, a distance of 2 meters between personnel during work shifts.
- Clean and disinfect facilities after working hours and during shift breaks.
- In case of maintenance works, ensure proper clean up and disinfection afterwards.

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