

ODOUR MANAGEMENT MATRIX

Potential Odour Sources	Activities	Normal Operations	Operational Devices	Operation in Low Potential Odour Conditions	Operation in High Potential Odour Conditions*
<b>GORE Composting Operation</b>					
	Biosolids/ wood chips mixing	6:00 to 15:00, Monday to Friday	Windssocks, Weather station data	Finish by 15:00	Finish by 15:00
	Building piles	6:00 to 15:00, Monday to Friday	Windssocks, Weather station data	No restrictions	Finish by 15:00, staff to check temperature and wind conditions to potentially delay process
	Moving piles	7:00 to 15:00, Monday to Friday	Windssocks, Weather station data	Cover by 16:00	Cover by 15:00, staff to check temperature and wind conditions to potentially delay process
	Hauling and stockpiling dewatered biosolids	22:00 to 07:00 Sunday; 22:00 to 15:00 Monday to Thursday	Windssocks, Weather station data	22:00 to 07:00 Sunday; 22:00 to 15:00 Monday to Thursday	22:00 to 6:00 Sunday to Thursday
<b>Compost Cure Site Operations</b>					
	Biosolids - pile formation	6:00 to 15:00 Monday to Friday	Windssocks, Weather station data	No restrictions	Finish by 15:00, staff to check temperature and wind conditions to potentially delay process
	ECF unfinished compost - pile formation	24/7 in operational intervals	Windssocks, Weather station data	No restrictions	Spray piles with ADC/Ecosorb (odour control mixture) last shift and first shift each day
	Pile turning	8:00 to 15:00, Monday to Friday	Windssocks, Weather station data	Finish by 15:00	Finish by 15:00, staff to check temperature and wind conditions to potentially delay process, and spray piles with ADC/Ecosorb (odour control mixture) if still odorous
	Product inventory	8:00 to 19:00	Windssocks, Weather station data	No restrictions	No restrictions
	Final product screening	6:00 to 19:00	Windssocks, Weather station data	No restrictions	No restrictions
	Yard waste receipt	Usually in spring/fall, 7:30 to 19:00	Windssocks, Weather station data	No restrictions	No restrictions
	Receipt of 2" minus feedstock from IPTF	24/7 in operational intervals	Windssocks, Weather station data	No restrictions	Amend and cover with wood chips, spray piles with ADC/Ecosorb (odour control mixture) last shift and first shift each day
	Yard waste storage	24/7 in operational intervals	Windssocks, Weather station data	Cover daily with wood chips	Cover daily with woodchips
	Yard Waste De-Bagging	6:00 to 16:00, Monday to Friday	Windssocks, Weather station data	6:00 to 16:00, Monday to Friday	Finish by 15:00, staff to check temperature and wind conditions to potentially delay de-bagging process
	Yard Waste Turning	6:00 to 16:00, Monday to Friday	Windssocks, Weather station data	6:00 to 16:00, Monday to Friday	Finish by 15:00, staff to check temperature and wind conditions to potentially delay curing process
<b>Edmonton Composting Facility</b>					
	Dredge operation - Lagoon Cell 5	24/7 in operational intervals	Windssocks, Weather station data	Aerator shut off during non-freezing periods	Aerator shut off during non-freezing periods
	Receipt of Pre-processed MSW from IPTF	7:30 to 19:00	Scada system in ECF (differential pressure)	Maintain negative building pressures	Maintain negative building pressures
	Direct receipts of loads to ECF tip floor (through overhead doors)	7:30 to 19:00	Scada system in ECF (differential pressure)	Maintain negative building pressure, keep duration as short as possible	Maintain negative building pressure, keep duration as short as possible
	All MSW storage on ECF tip floor	48 to 60 hours	Scada system in ECF (differential pressure)	Maximum feedstock storage 96 hours	Maximum feedstock storage 96 hours
	Tip floor truck loading	24/7 in operational intervals	Scada system in ECF (differential pressure)	Keep discard bay doors closed when no truck is parked.	No hauling
	Mixing drum and stationary drum conveyors download	As space available, 24/7	Scada system in ECF (differential pressure)	Maintain negative air pressure in download building	Maintain negative air pressure in download building
	Loadout primary residuals	As space available, 24/7		Keep primary residuals doors closed	Keep primary residuals doors closed
	Primary residuals management	24/7 in operational intervals	Scada system in ECF (differential pressure)	Maintaining negative building pressure, disposal in external landfill until RDF opens	Maintaining negative building pressure and disposal in external landfill until refuse derived fuel operation starts
	Loading bays	As space available, 24/7	Scada system in ECF (differential pressure)		
	Sorain turning operation	24/7 in operational intervals	Scada system in ECF (differential pressure)	Maintain negative building air pressure, keep all doors closed – delay, if possible maintenance where doors are required to be open	Maintain negative building air pressure and keep all doors closed. Delay, if possible, maintenance where doors are required to be open
	Bay download	As space available, 24/7	Scada system in ECF (differential pressure)		
	Finishing circuit operation (Secondary residuals and unfinished compost)	24/7 in operational intervals		No restrictions	If necessary, use portable odour misting system

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	Secondary residuals - truck loading	24/7 in operational intervals	Windssocks, Weather station data	Residuals transferred to external landfills	Residuals transferred to external landfills and use portable odour misting system
	Unfinished compost - truck loading	24/7 in operational intervals	Windssocks, Weather station data	Option of positioning of portable odour misting system	If necessary, use portable odour misting system
	Blower system	24/7	Scada system in ECF (differential pressure)	No restrictions	No restrictions but option to introduce odour absorbing agents available.
	Biofilter	24/7	Field olfactometer, pressure and temperature readings	No restrictions	If necessary, use portable odour misting system around biofilter area
	ECF Facility Management	24/7	Scada system in ECF (differential pressure)	Drain standing water, site clean up, clean up spilled biosolids.	Drain standing water, site clean up, clean up spilled biosolids.
<b>Integrated Process and Transfer Facility (IPTF)</b>					
	Phase I - Transfer Station	7:00 to 19:00	Weather station data	Maximum residential (putrescible) waste storage 96 hrs. ,operational objective to clean residential (putrescible) waste from tip floor at the end of the day, covered trailers in staging area, optional operation of odour misting system	Maximum residential (putrescible) waste storage 96 hrs. ,operational objective to clean residential (putrescible) waste from tip floor at the end of the day, application of odour neutralizing granulate when possible, adjustment of fans after operating hours, covered trailers in staging area, operation of odour misting system, potential diversion of Collections trucks to external landfills if available.
	Phase II- Pre-processing	7:00 to 19:00	Weather station data	Minimize doors opening, optional operation of odour misting system	Operation of odour misting system, minimize door opening
	Phase III - Refuse Derived Fuel	Not in operation			
	Material movement outside IPTF	7:00 to 19:00	Weather station data	No restrictions	Delay secondary material processing activities
<b>Clover Bar Landfill</b>					
	Operation of tipping area for internal needs	7:00 to 19:00	Weather station data	Cover waste material as soon as placed	Schedule the delivery of waste requiring special handling, restrict the size of active face, cover the waste material as received, diversion of roadkill
	Leachate pumping	7:00 to 19:00	Weather station data	No restrictions	Potential vacuum truck filter
	Landfill gas management	24/7	Weather station data, gas alarm meters, perimeter gas well analysis	Landfill capping, LFG perimeter gas well management,	Landfill capping, LFG perimeter gas well management
<b>EWMC Site</b>					
	Overall site management	7:00 to 19:00	Weather station data	Drain standing water, site clean up, clean up spilled materials.	Drain standing water, site clean up, clean up spilled materials
<b>Biosolids Lagoon (Owned by Drainage Services and operated by EPCOR)</b>					
	Receive stablized wastewater sludge via pipeline from Gold Bar WWTP	Continuous: 24/7/365	None	Stablized sludge is pumped into Cell#5 below the water surface.	Stablized sludge is pumped into Cell#5 below the water surface.
	Receive truck hauled stablized wastewater sludge from ACRWC WWTP	Daily Monday to Saturday 08:00 to 20:00	Below surface discharge pipe on Cell#3W	Stablized sludge is discharged into Cell#3W below the water surface during Nutrigold off-season. Stablized sludge is discharged into Cell#3E above the water surface during Nutrigold season. (June - Oct)	Stablized sludge is discharged into Cell#3W below the water surface during Nutrigold off-season. Stablized sludge is discharged into Cell#3E above the water surface during Nutrigold season.
	Tranfer of Cell#5 supernatant to Cell#2	As required. Pumping is done around the clock until supernatant levels in Cell#5 reduced to acceptable levels	None	Supernatant is pumped from Cell#5 to Cell#2. Discharge is normally below surface	Supernatant is pumped from Cell#5 to Cell#2. Discharge is normally below surface
	Decanting of supernatant and transfer to Cell#4	As required. Pumping is done around the clock until supernatant levels in the working cells is reduced to acceptable levels	None	Supernatant is pumped from various Cells to Cell #4. Discharge is normally below surface of Cell#4	Supernatant is pumped from various Cells to to Cell #4. Discharge is normally below surface of Cell#4
	Supernatant pumping from Cloverbar to WWTP's	Continuous: 24/7/365	None	All supernatant pumping from Cell#4 occurs below the liquid surface	All supernatant pumping from Cell#4 occurs below the liquid surface
	Loading of Nutrigold trucks	6:30 am - 5:30 pm June - October	None	Nutrigold trucks are loaded using pumping and piping infrastructure. Biosolids from Cell#3W eneter the tanker via an extended shoot into the top of the tanker.	Nutrigold trucks are loaded using pumping and piping infrastructure. Biosolids from Cell#3W eneter the tanker via an extended shoot into the top of the tanker.
	Recirculation of biosolids during Nutrigold loading	6:30 am - 5:30 pm June - October	None	Biosolids in Cell#3W are circulated during the periods when the Nutrigold trucks are being loaded. Discharge is usually above the surface.	Biosolids in Cell#3W are circulated during the periods when the Nutrigold trucks are being loaded. Discharge is usually above the surface.

\* High Potential Odour Conditions include - winds blowing towards the communities to north, northwest, or west, calm or very light wind conditions, forecasts indicating that any of these conditions will arise within the next few hours. The high risk condition would be considered to be amplified when these conditions are paired with pleasant outdoor temperatures, which would be expected to draw people outside.

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