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Monitoring plan for air and for compost produced at Pitkaliya Composter

1. Air monitoring plan

Emission samples shall be taken from AMP01 to AMP 07 as per drawing attached.

Air monitoring point reference	Source
AMP 1	Ambient
AMP 2	Ambient
AMP 3*	Biofilter 1
AMP 4*	Biofilter 2
AMP 5*	Maturation Area
AMP 6*	Biofilter 3
AMP 7*	Biofilter 4

*Sampling technique for AMP 3, 4, 5, 6 and 7 needs be either through a funnel method or a static chamber.

Parameter	Air Monitoring Point	Frequency	Test method	Unit
CO ₂	AMP 1-2, 5	Quarterly analysis of all parameters mentioned	ISO 12039	mg/Nm ³
SO ₂	AMP 1-2, 5		EN 14791	mg/Nm ³
Methane (CH ₄)	AMP 1-2, 5		EN 25139	mg/Nm ³
Nitrous oxide (N ₂ O)	AMP 1-2, 5		BS EN ISO 21258:2010	mg/Nm ³
H ₂ S	AMP 3-4, 6-7		NIOSH 6013 1994	mg/Nm ³
Mercaptans	AMP 3-4, 6-7		NIOSH 2542 1994	mg/Nm ³
PM ₁₀	AMP 3-4, 6-7		EN 12341	µg/Nm ³
Total dust	AMP 3-4, 6-7		UNI EN 13284-1:2003	mg/Nm ³
Ammonia (NH ₃)	AMP 3-4, 6-7		NIOSH 6015 1994	mg/Nm ³
Total Volatile Organic Compounds (VOCs)	AMP 3-4, 6-7		EN ISO 16017-1: 2001	mg/Nm ³
Bioaerosols	AMP 3-4, 6-7		VDI 4257 Part 2	

2. Monitoring of the compost produced on site

Sampling strategy shall be as per BS EN 12579:2013. The following is a list of parameters to be tested and the standards to be used.

Parameter	Frequency	Test Method	Unit
Physical Properties	Quarterly analysis of all parameters mentioned.		
Dry matter		BS EN 13040: 2007	%
Organic dry matter		BS EN 13039: 2011	%
Chemical Properties			
pH		BS EN 13037: 2011	
Conductivity		BS EN 13038: 2011	
Stability/ maturity – (Microbial respiration rate)		ORG0020	mg CO ₂ /organic matter/day
PAH ₁₆		ISO 13859:2014	mg/kg dry matter
Health Concerns			
<i>Salmonella</i>		ABPR 2003, schedule 2, part II or BS EN ISO 6579: 2002	25g fresh mass
<i>E. coli</i>		BS ISO 16649-2: 2001	CFU ¹ fresh mass
Mercury		BS ISO 16772: 2004	mg/kg dry matter
Cadmium		BS EN 13650: 2001 (soluble in aqua regia)	mg/kg dry matter
Chromium		BS EN 13650: 2001 (soluble in aqua regia)	mg/kg dry matter
Lead		BS EN 13650: 2001 (soluble in aqua regia)	mg/kg dry matter
Nickel		BS EN 13650: 2001 (soluble in aqua regia)	mg/kg dry matter
Plant nutrients			
Total nitrogen	BS EN 13654-1: 2001 (Kjeldahl) or BS EN 13654-2: 2001 (Dumas), as appropriate	mg/kg dry matter	

Copper		BS EN 13650: 2001 (soluble in aqua regia)	mg/kg dry matter
Zinc		BS EN 13650: 2001 (soluble in aqua regia)	mg/kg dry matter
Weed seeds			
Weeds test		OFW004-006	Mean number/litre of compost