Organics Recycling from MSW at Recology using OREX with Co-Digestion at EBMUD WWTP

October 15th, 2018
Anaergia’s Integrated Solid Waste Systems on Four Continents

**Goa, India**
Processes 36,000 TPY of MSW using OREX and a digester to produce electricity, biogas, and refuse derived fuel (RDF) achieving a 94% recovery.

**San Francisco, CA**
Processes 36,000 TPY of MSW using OREX at Recology

**Cardiff, UK**
Processes 42,000 TPY of SSO food waste using OREX

**Cape Town, South Africa**
Processes 140,000 TPY of MSW using OREX to produce wet fraction for AD and biogas, and refuse derived fuel (RDF) achieving a 94% recovery.

**Singapore**
Processes 35,000 TPY of SSO with 25% contamination using OREX and a digester and generating 2MW of power.

**Limassol, Cyprus**
Processes 140,000 TPY of MSW using OREX and a suite of Anaergia technologies to produce biogas, recyclables, and RDF to achieve 89% recovery.
Key Considerations for Successful Organics Diversion

(1) Process waste with any contamination level

- SSO (10 - 30% Contamination)
- Commercial (30 - 50% Contamination)
- Residential (50 - 70% Contamination)

(2) Minimize cost with ability to recover organics with or without separate collection

(3) Minimize cost by using existing infrastructure at wastewater treatment plants or building large facilities with economies of scale

(4) Produce a clean product that meets regulatory standards

Contamination <0.5% dry basis, >4 mm
Recology / EBMUD
SSO & MSW Processing

SSO 650 TPD → Compost

MSW 1,000 TPD → Landfill

MSW 100 TPD → Bag Opener → Screen

Bag Opener → Overs 50 TPD
Screen → Unders 50 TPD

Organics Extraction (OREX)
- Dry Fraction 35 TPD
- Wet Fraction 15 TPD

Anaerobic Digestion EBMUD

Power
Organic Extrusion (OREX) Press

- Process MSW, Commercial Waste, or SSO with any contamination level
- Reduces contamination by filtering organics through plug, doesn’t create more contamination with hammering
- Produce clean organic stream suitable for new or existing digesters or compost
OREX Line

50 ton/hr

MSW

Pre-Processing

OREX

Organics Polishing System

Polished Organics

Wastewater Treatment Plant

Wastewater

Anaerobic Digestion

New Plant

Anaerobic Digestion

Compost

MSW

Unpolished Extracted Organics

Polished Organics

30-35% TS

12-24% TS
Organics Extracted from SF MSW
ORGANICS TO WWTP, EBMUD
OREX Wet Fraction Data Shows Consistent Quality and Energy Content

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EBMUD Process Flow

Organics from MSW (Anaergia OREX)

- 30% TS
- Dilution Water
- Reception Pit
- Screen
- Film Plastic
- Centrifuge
- Anaerobic Digestion (Thermophilic)
- Gas Conditioning
- Cogeneration
- Power 4.5 MW
- Biosolids Beneficial Use
- Filtrate

Primary/Secondary Sludges

- 5% TS
- Water
Thank you

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