

IPS Composting System: Tyr, Lebanon

The Union of the Municipalities of Tyr will compost up to 150 tonnes per day of Municipal Solid Waste (mainly household wastes) generated by more than 40 villages and roughly 300,000 persons. Until now, all municipal waste was illegally discarded next to a main irrigation channel in the vicinities of Tyr in the region of Ras El Ain. In 2004, in an effort to reduce illegal dumping of untreated waste and to mitigate associated environmental consequences and potential health diseases, the union council decided to install a composting facility to treat all of its household waste.

Designed and equipped by Grossimex sarl, the ten narrow-bay composting facility will utilize the IPS Composting System from Siemens Water Technologies to process Municipal Solid Waste and green waste. After collection, trucks will deliver the municipal waste to an enclosed receiving area where a primary bulk separation occurs to remove tires, large home appliances, carpets, and other large contaminants.

The operation will employ mechanical bag openers and direct all contents onto two 14-meter long sorting lines where workers will recover recyclable inorganic materials such as plastic, steel, cardboard,

and aluminum cans. The remaining organics will pass over a magnetic pulley to remove any small steel contaminants before being conveyed into a 100 hp hammer-mill for size reduction to less than five centimeters.

Hammer-milled organics will be transferred to the front of the composting bays where an automated agitator will mix and move the material from the front end to the discharge end of the bays over the next 14 days. Front end loaders will transfer the composted material to a curing area in the same building where it will mature for 28 days before it will be screened. After screening, the compost will be distributed to farmers or used as a soil enhancer for municipal green spaces.

Before

Ras El Ain illegal disposal at a water channel



After

IPS Composting System



Union Of The Municipalities Of Tyr, Lebanon

Owner: Tyr Municipality Union

Scheduled start up: March 2008

Engineer: Grossimex sarl

Capacity: 46,800 tons per year

Processing: Municipal Solid Waste (mainly household waste)

Facility Size: Total of 7250 m² of rigid steel covered facility, including a 2450 m² for the receiving and separation zones, and 4800 m² (10 bays, each 53 m long, 2 meter wide and 2.16 m height) for the composting line. Curing area has a total area of 1500 m².

Odor Control: Three biofilters, each 646 m²

IPS-TYRdr-CS-0807