# Attachment 11

## Land Development Plan Project Narrative

# IESI BETHLEHEM LANDFILL
# SOUTHEASTERN REALIGNMENT
# LAND DEVELOPMENT PLAN SUPPORTING DOCUMENTATION

## PROJECT NARRATIVE

## GENERAL OPERATING CONCEPTS

### Background

The IESI Bethlehem Landfill (Permit No. 100020) is located in Lower Saucon Township, Northampton County, Pennsylvania, off of Applebutter Road. In 1993 and 2001, the landfill received Special Exception approval from the Lower Saucon Township Zoning Hearing Board to utilize 206 acres for landfill use. The Southeastern Realignment proposes development of waste disposal area within this 206 acres. The realignment area of development is within an area previously approved for soil stockpile/landfill support activities, includes 22.5 acres of a piggyback liner system over prior approved disposal areas, restores liner grades of Cell 4-E to those approved in 2003, and provides additional capacity atop the Phase III and Phase IV areas. The landfill presently accepts municipal, construction/demolition, DEP approved residual and sewage sludge waste. The waste streams anticipated for the proposed facility will be similar to those currently accepted.

### Daily Operations

No operational changes at the IESI PA Bethlehem Landfill are proposed with the Southeastern Realignment including but not limited to hours of operation, equipment utilized onsite, method of disposal, and procedures for emergencies.

## LINER SYSTEMS

The liner system for the virgin southeasterly area, approximately 6 acres, will be identical to the facility's currently permitted liner system. The liner system that is atop old waste will be a "piggyback" system including geogrid reinforcement in addition to all of the components of the other liner system. The liner systems are designed and will be constructed and operated to prevent the migration of leachate through the liner. The liner system is designed to be resistant to physical failure and to be chemically compatible with the anticipated waste stream and resultant leachate through the use of high density polyethylene (HDPE) geomembrane.

Each element of the liner system will be designed and constructed to meet or exceed the performance standards and requirements of Section 273.251 of the current DEP municipal waste rules and regulations.

## LANDFILL CAPACITY, LIFE EXPECTANCY AND SEQUENCE OF DISPOSAL OPERATIONS

The sequence of operation will be to fill atop existing Phase III and Phase IV; to construct and fill Cells SE-1A, 1B, 2A and 2B, and to construct the remainder of Cell 4-E. The size of each cell, its capacity, longevity, and fill volumes are shown on the following table.

**IESI BETHLEHEM LANDFILL – SOUTHEASTERN REALIGNMENT**

| Cell # | Area Cell (Acres) | Capacity (1) CY | Capacity (1) Tons (2) | Longevity (yrs) (3) |
|---|---|---|---|---|
| Vertical atop Phases III & IV | 0 | 440,600 | 321,638 | 0.75 |
| Cell SE-1A | 7.1 | 464,200 | 338,866 | 0.75 |
| Cell SE-1B | 6.7 | 712,600 | 520,198 | 1.18 |
| Cell SE-2A | 7.6 | 588,600 | 429,678 | 0.96 |
| Cell SE-2B | 6.1 | 936,200 | 683,426 | 1.56 |
| Cell 4-E | 2.9 | 527,400 | 385,002 | 0.34 |
| **TOTAL** | 30.4 | 3,669,600 | 2,678,808 | 5.54 |

(1) Capacity is net of liner system and final cover
(2) Assumes VCF = 0.75
(3) 1,375 Tons/day – 312 days/year