

Key Issues in Estimating Closure & Post-Closure Costs



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Financial Assurance Training Workshop

Garden City – May 7, 2013

Emporia – May 14, 2013

Our vision is 'healthy Kansans living in safe and sustainable environments'.
The state belongs to all of us - "Kansas Don't Spoil It"

Overview

- **Applicability - Universe of Landfills**
- **Key Issue Regarding Closure & PC Cost Estimates**
- **KDHE's Review of Closure & Post-Closure Cost Estimating Process**
- **Major Items & Activities in Closure & Post-Closure Care**

Overview (cont.)

- **Key Regulatory Requirement for Preparing Cost Estimates**
- **Suggestions for Permittees**
- **Phase-In Period for Preparing Closure & Post-Closure Care Estimates**
- **Actions Required by KDHE and Permittees**
- **Summary Comments**

Applicability - Universe of Landfills

- **Active Landfills by Type**
 - **Subtitle D MSW: 18**
 - **Small Arid Landfills: 33**
 - **Industrial: 37**
 - **C&D: 96**
 - **Waste Tire: 22**
- **Total 206**

Applicability - Universe of Landfills (cont.)

- **Closed by Type with FA Required**
 - **Subtitle D MSW: 2**
 - **Industrial: 2**
 - **C&D: 2**
- **Financial Assurance During Post-Closure - only required if environmental monitoring is needed to ensure protection of human health and/or the environment**

Key Issue Regarding Closure & Post-Closure Cost Estimates

- **Closure & PC cost estimates are inaccurate & below current construction and professional services rates due to outdated representative unit costs**
- **Existing cost estimating worksheets don't define all activities required to close landfills in their current operational status**

Key Issue Regarding C & PC Cost Estimates (cont.)

- **Since 2007 We Have Been Working with All Permittees to:**
 - **Update Landfill Permit Documents**
 - **Permit drawings & operating plans**
 - **Inconsistencies & omission of activities regarding C & PC**

Key Issue Regarding C & PC Cost Estimates (cont.)

- **Current Worksheets have Unit Costs that have not been updated since 1998 and have not been adjusted for inflation**
- **Based on federal inflation index for the Gross Domestic Product – the Implicit Price Deflator – Costs have increased 34.8% from 1998 thru 2012 or an average of 2.5% per yr.**

KDHE's Review of C&PC Cost Estimating Process

- **R.S. Means Cost Works 2013 for Site Work and Landscape**
 - **Option: Non-union/open shop wages & regional costs for our state**
 - **Landfill construction activities were not defined well (contractor bidding)**
- **State of Oklahoma's MSWLF C & PC**
- **State of Arkansas' MSWLFs C & PC**

KDHE's Review of C&PC Cost Estimating Process (cont.)

- **U.S. EPA's Cost Pro 6.0 (2009)**
 - **Closure and Post-Closure Care Cost Estimating Software**
 - **Software intended primarily for EPA and state personnel**
 - **Assess whether cost estimates for HW treatment, storage & disposal facilities represent current pricing**

KDHE's Review of the C&PC Estimating Process

- Reviewed current worksheets – items & activities with 1998 unit costs**
- Current worksheets covered most major activities**
- Additional activities and more detail were needed**
- Revised worksheets and instructions were developed**

KDHE's Review & Decision

- Use one form for closure - indicate the facility type – instructions help identify applicable items and activities**
- Use one form for post-closure – indicate the facility type; only applicable to MSWLFs, SALs, industrials with environmental monitoring and certain C&Ds**
- Use one form for estimated life – only applies to MSWLFs & SALs**

Major Activities During Closure

- **Preparing the Site for Construction of Final Cover**
- **Final Cover**
- **Erosion Control**
- **Gas System**
- **GW Monitoring System**
- **Leachate Collection System**

Major Activities During Closure (cont.)

- **Operations and Inventory Removal**
- **Demolition/Removal of Site Improvements**
- **Replace/Rebuild Site Access Controls**
- **Borrow Area Reclamation**

Items to Complete Closure Cost Estimate

- **Administrative Services**
- **Contingency**
- **Professional Services**
 - **Engineering**
 - **Topographic & Boundary Survey**
 - **Corrective Action Engineering Services (CQA oversight, testing, reporting & certification)**

Major Activities During Post-Closure

- **Final Cover Routine Maintenance**
- **Final Cover Repairs**
- **Access Road Repairs**
- **Surface Water Management O&M**
- **Leachate Collection System O&M**
- **Gas Monitoring System O&M**
- **Gas Extraction System O&M**
- **Corrective Action Evaluation & Implementation**

Items Needed to Complete Post-Closure Cost Estimate

- **Administrative Services**
- **Contingency**
- **Professional Services**
 - **Engineering**
 - **Topographic & Boundary Survey**
 - **Corrective Action Engineering Services (CQA oversight, testing, reporting & certification)**

Key Regulatory Requirement for Preparing Cost Estimates & Options

- **Third Party Costs:** Calculate by
 - Representative Costs from KDHE
 - Actual Invoices Paid by O/O for Same Work
 - Written bids from Professional Contractors – no financial interest
 - Authoritative Sources, e.g., R.S. Means, Engineering News Record

Suggestions for Permittees

- **Evaluate your unit costs against other sources for similar activities in your area of our state**
- **The sources for your estimate are needed**
- **If bidding information is used, include day-time telephone number of bidder so we can verify your unit cost factors and total costs**

Suggestions for Permittees (cont.)

- Every 5 years KDHE will require that representative estimates be prepared by professional engineers (P.E.s) with the expertise to prepare landfill C&PC cost estimates
- In intervening years an inflation factor can be applied to unit costs developed during the prior renewal yr; quantities will need to be updated; some may require assistance from your PE/PCC, **PCC: Primary Care Consultant**

Phase-In Period for Preparing C&CP Care Cost Estimates

- **Starting now and for permit renewals starting July 2013 – Landfill permittees will need to use the new 2013 forms; they are available now on the KDHE-BWM web site now in MS Excel**
- **If an item is not applicable for your landfill, you need to indicate NA (Not Applicable) in the Source of Unit Cost Information/NA column**

Phase-In Period for Preparing C&CP Care Cost Estimates

- **July 2014 – Landfill permittees will need to use the updated 2014 form; estimates will need to be prepared by you working with your PE/PCC using unit costs that KDHE will have prepared and/or by using one of the other three options authorized by regulation, K.A.R. 28-29-2101 (c)(2)**

Actions Required by KDHE & Permittees

- KDHE will prepare revised C&PC care cost forms for landfill permittees for 2013, 2014 & 2015 & future years**
- The 2014 form effective July 1, 2014 will be prepared based on cost data accepted by KDHE from 2013 & early 2014 multiplied by the GDP inflation factor for 2013**

Actions Required by KDHE & Permittees (cont.)

- The updated unit cost data will be provided to permittees by May 1 of each year**
- Effective May 1, 2014 Permittees will need to use an on-staff or an independent PE to help them prepare - starting July 1, 2014 and for first 2 quarters of 2015 - C&PC care cost estimates and then every 5 years**

Actions Required by Permittees & KDHE (cont.)

- **In intermediate years:**
 - **permittees may have their financial management personnel & landfill engineering staff or**
 - **their on-staff or independent PEs prepare their cost estimates**

Summary Comments

- **Current cost estimates and financial assurance instruments are inadequate to show and provide for:**
 - **current environmental risks and liabilities if your company or local government filed for bankruptcy and KDHE had to assume the role of project/contract manager to close your facility and then maintain it for at least 30 years of post-closure care**

Summary Comments (cont.)

- **KDHE – BWM requests your input and cooperation to help**
 - **improve the landfill closure and post-closure cost estimating process**
 - **so representative cost estimates and corresponding amounts of financial assurance can be provided by all companies and local governments operating landfills & be in compliance with state statutes & regulations**

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Summary Comments (cont.)

- **2013 Landfill Closure & Post-Closure Care Excel spreadsheet forms are available at the BWM website address:**
- **http://**
www.kdheks.gov/waste/forms_swlf.html
- **This same address is available on the bottom of the paper copies of the forms that you received today**

Summary Comments (cont.)

- **This presentation and the following three presentations will be available for your review next week on the BWM web site.**

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