

**BONDING WORKSHEETS
FOR
WASTE PROCESSING FACILITIES**

Revised August 30, 2001

Date Prepared

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

I.D. Number

BONDING WORKSHEET A WASTE PROCESSING DECONTAMINATION

How do I start? Select a likely “worst case” scenario where you would have a maximum amount of the facility open and in need of closure. Provide a description of the scenario with references to site development stages:

- | | | |
|--|----|------------|
| 1. Maximum volume of waste to be removed from storage, tipping floor and equipment.: | | CY |
| 2. Unit cost to dispose of waste off-site (this should include, but not be limited to removal, transportation and disposal costs). | | \$/CY |
| 3. Volume of pipes, lines and equipment of the total processing system to be decontaminated | | CY |
| 4. Unit cost to decontaminate equipment. | | \$/CY |
| 5. Area of exposed surfaces to be decontaminated (this should include but not be limited to tipping floor, walls, etc.) | | sq. ft. |
| 6. Unit cost to decontaminate surfaces. | | \$/sq. ft. |
| 7. Volume of waste generated during decontamination. | | CY |
| 8. Unit cost to dispose of decontamination wastes | | \$/CY |
| 9. Number of verification samples needed to verify decontamination. | | |
| 10. Unit cost to sample, analyze and report results (this should include any transportation and/or shipping costs) | | \$/sample |
| 11. Estimate volume of process residuals (wastewater, etc.) | | CY |
| 12. Cost for facility maintenance: | | LS |
| 13. Engineering and QA/QC costs | | LS |
| 14. Cost Summary | | |
| a. Waste Removal (line 1 x line 2) | \$ | |
| b. Equipment decontamination (line 3 x line 4) | \$ | |
| c. Surface decontamination (line 5 x line 6) | \$ | |
| d. Decontamination waste disposal (line 7 x line 8) | \$ | |
| e. Sampling and analysis (line 9 x line 10) | \$ | |
| f. Process residual disposal (line 11 x line 8) | \$ | |
| g. Maintenance (line 12) | \$ | |
| h. QA/QC (line 13) | \$ | |

Total \$

(Place this total on Summary Cost Worksheet – line 1)

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BONDING WORKSHEET B SURFACE WATER MONITORING

Solid Waste Surface Water Sampling

- | | | |
|--|--|----------|
| 1. Number of surface points monitored for Solid Waste Permit | | |
| 2. Unit cost to sample a surface point (record keeping and shipping) | | \$/point |
| 3. Unit cost to analyze sample(s) | | |
| a. Quarterly (25 PA Code §283.233) | | \$/point |
| b. Annually (25 PA Code §283.233) | | \$/point |
| 4. Unit cost to analyze data (includes review of lab QA/QC data, database input, form completion, and data review) | | \$/point |
| 5. Cost to sample and analyze: quarterly
(line 2 + line 3a + line 4) | | \$/point |
| 6. Cost to sample and analyze: annually
(line 2 + line 3b + line 4) | | \$/point |
| 7. Number of years of sampling (_____ + time to close) | | years |

NPDES Surface Discharge Sampling

- | | | |
|--|-----------|----------|
| 8. Number of outfalls monitored | | |
| 9. Monitoring frequency (i.e. monthly, quarterly, etc) | | |
| 10. Number of samples to be taken per point/year | | |
| 11. Unit cost to sample a surface point (record keeping and shipping) | | \$/point |
| 12. Unit cost to analyze sample(s) (including data review and completing DMR) | | \$/point |
| 13. Number of years of sampling (_____ + time to close) | | years |
| 14. Cost Summary –Surface Water Monitoring | | |
| a. Cost of Quarterly Surface Water Monitoring
(line 1 x “4” x line 5 x line 7) | \$ | |
| b. Cost of Annual Surface Water Monitoring
(line 1 x line 6 x line 7) | \$ | |
| c. Cost of NPDES Monitoring
(line 8 x line 10 x [line 11 + line 12] x line 13) | \$ | |
| d. NPDES renewals (includes application development, fees, etc.) use 10% of line 14c | \$ | |
| Subtotal | \$ | |

Adjustment for resampling, assessments, etc.

- a. Use 0% of subtotal if no assessments in last 2 yrs.
- b. Use 5% of subtotal if assessment in last 2 yrs.
- c. Use 10% if in assessment, abatement or increased monitoring

\$ _____

Total

\$ _____

(Place this total on Summary Cost Worksheet – line 2)

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BONDING WORKSHEET C GROUNDWATER MONITORING SYSTEM

1. Number of wells in the approved monitoring plan. _____
 - a. Shallowest well depth _____ ft.
 - b. Deepest well depth _____ ft.
 - c. Average well depth _____ ft.
 - d. Number with dedicated pumps _____
2. Unit cost to upgrade a well with a dedicated pump _____ \$/well
3. Unit cost to install a well ((including, drilling, installation, developing and pump installation) _____ \$/well
4. Number of wells to be installed (wells in the approved plan that haven't been installed) _____
5. Number of wells to be replaced over the life of the monitoring period (use 10% of line 1 and round up) _____
6. Number of pumps to be replaced/repared (use 25% of line 1 over the monitoring period) _____
7. Unit cost to purge and sample a well (include methane monitoring, record keeping and shipping) _____ \$/well
8. Unit cost to analyze sample(s)
 - a. Quarterly (25 PA Code §283.233) _____ \$/well
 - b. Annually (25 PA Code §283.233) _____ \$/well
9. Unit cost to analyze data (includes review of lab QA/QC data, database input, form completion, statistical analysis and data review) _____ \$/well
10. Cost to purge, sample and analyze: quarterly (line 7 + line 8a + line 9) _____ \$/well
11. Cost to purge, sample and analyze: annually (line 7 + line 8b + line 9) _____ \$/well
12. Number of years of sampling (_____ + time to close) _____ years

13. Cost Summary –Groundwater Monitoring System

- a. System upgrade ([line 1 – line 1d] x line 2) \$ _____
- b. Wells to be Installed (line 3 x line 4) \$ _____
- c. Wells to be replaced (line 3 x line 5) \$ _____
- d. Pumps to be replaced (line 2 x line 6) \$ _____
- e. Cost of Quarterly Monitoring
(line 1 x "4" x line 10 x line 12) \$ _____
- f. Cost of Annual Monitoring
(line 1 x line 11 x line 12) \$ _____

Subtotal \$ _____

Adjustment for resampling, assessments, etc.

- a. Use 0% of subtotal if no assessments in last 2 yrs.
- b. Use 5 % of subtotal if assessment in last 2 yrs.
- c. Use 10% if in assessment, abatement or increase
monitoring \$ _____

Total \$ _____

(Place this total on Summary Cost Worksheet – line 3)

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BONDING WORKSHEET D OTHER MONITORING AND REPORTING

Please list the annual costs to maintain the following permits/registrations that apply. Additional space is provided for items applicable to your facility, but not listed.

- | | | |
|---|----|-------------|
| 1. Title V or other air permit (include the annual permit fee, cost to complete emissions inventory and emissions fees) | \$ | |
| 2. NSPS Annual Report preparation cost | \$ | |
| 3. Solid Waste Annual Report preparation cost | \$ | |
| 4. Local permit or Host Agreement requirements | \$ | |
| 5. UST/AST registration | \$ | |
| 6. Other _____ | \$ | |
| 7. Other _____ | \$ | |
| 8. Other _____ | \$ | |
| 9. Other _____ | \$ | |
| 10. Other _____ | \$ | |
| 11. Number of years of monitoring/maintenance
(_____ + time to close) | | _____ years |

Total (sum of lines 1 to 10 x line 11)

\$

(Place this total on Summary Cost Worksheet – line 4)

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BONDING WORKSHEET E SUMMARY COST WORKSHEET

Cost Summary – Waste Processing

- | | |
|---------------------------------|-----------------|
| 1. Decontaminating the Facility | \$ _____ |
| 2. Surface Water Monitoring | \$ _____ |
| 3. Groundwater Monitoring | \$ _____ |
| 4. Other Monitoring | \$ _____ |
| 5. Other Costs ¹ | \$ _____ |
| Subtotal | \$ _____ |

Inflation

- | | |
|--|----------|
| 6. Inflation rate (projected inflation for the next three years based on the inflation for the prior three years). | _____ % |
| 7. Inflation cost for facility (subtotal x line 6) | \$ _____ |

Contingency and administrative fees

- | | |
|--|-----------------|
| 8. Administrative fees (10%) (subtotal x 0.1) | \$ _____ |
| 9. Contingency fee amount
(subtotal x rate of contingency fee from Table 1) | \$ _____ |
| Total (subtotal + line 7 + line 8 + line 9) | \$ _____ |

¹ You should include any costs that would be incurred by the Department, but were not included in these sheets. Provide separate sheets for documentation.