

ACCELERATED DOCUMENT DISTRIBUTION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9303290007 DOC. DATE: 93/03/23 NOTARIZED: NO DOCKET #
 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylv 05000387
 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylv 05000388
 AUTH. NAME AUTHOR AFFILIATION
 FIELDS, J.S. Pennsylvania Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
 TOMAYKO, W. Pennsylvania, Commonwealth of

SUBJECT: Forwards SAFECO Security Bond 5693538 of \$40,000 for closure of Site 3 located at Susquehanna Steam Electric Station.

DISTRIBUTION CODE: C001D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 21
 TITLE: Licensing Submittal: Environmental Rept Amdt & Related Correspondence

NOTES:

	RECIPIENT ID CODE/NAME	COPIES	L	T	E	N	C	L	R	COPIES	L	T	E	N	C	L	R
		L	T	E	N	C	L	R		L	T	E	N	C	L	R	
	PD1-2 LA	3					3			1					1		
	CLARK, R	1					1										
INTERNAL:	ACRS	6					6								1		0
	OGC/HDS2	1					0								1		1
	RGN1 DRSS/RPB	1					1								01		
EXTERNAL:	EG&G SIMPSON, F	2					2								1		1
	NSIC	1					1										

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,
 ROOM P1-37 (EXT. 504-2065) TO ELIMINATE YOUR NAME FROM DISTRIBUTION
 LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTR 19 ENCL 17

ET-1

R
I
D
S
/
A
D
D
S
/
A
D
D
S



Pennsylvania Power & Light Company

Two North Ninth Street • Allentown, PA 18101-1179 • 215/774-5151

March 23, 1993

Mr. William Tomayko
Regional Facilities Manager
Waste Management Program
Pennsylvania Department of
Environmental Resources
Northeast Regional Office
90 East Union Street, 2nd Floor
Wilkes-Barre, PA 18701-3296

SUSQUEHANNA STEAM ELECTRIC STATION
CONSTRUCTION AND DEMOLITION WASTE LANDFILL
SITE NO. 3; I.D. #101363
SURETY BOND NO. 5693538
CCN 741326
PLE-16678

FILE R9-8C

Dear Mr. Tomayko:

Enclosed is SAFECO Surety Bond #5693538 in the amount of \$40,900 for closure of Site #3 located at the Susquehanna Steam Electric Station. Previously submitted to you on August 11, 1992 was SAFECO Surety Bond #5693511 for \$27,100. Together both bonds total \$68,000 the amount required by the Pennsylvania Department of Environmental Resources in your letter of January 8, 1993.

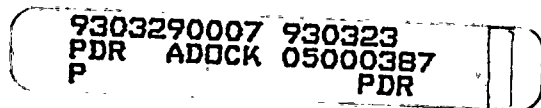
Sincerely,

Jerome S. Fields
Sr. Environmental Scientist - Nuclear

Enclosure

Copies to:
NRC Document Control Desk
NRC Region I
Mr. R. J. Clark, NRC Sr. Project Manager

260638



COOL 1/1

Date Prepared

3-12-93

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WASTE MANAGEMENT

I.D. Number

101363

SURETY BOND
For A Waste Management Facility

To be completed by Permittee/Operator:
Pennsylvania Power & Light Company
Name of Facility: Solid Waste Disposal Site #3

Address: Susquehanna SES, P. O. Box 467
(U.S. Route 11)
Berwick, PA 18603

Municipality: Salem Township

County: Luzerne

Department Use Only:

Solid Waste Permit No.: _____

Date of Permit Issuance: _____

Permit Acreage: _____

Type of Facility: Check one:

- Hazardous
- Municipal
- Residual
- Other (describe) Demolition, Waste Disposal
(Describe facility type/activity)

Purpose: Check one:

(1) Operation and Closure of a Waste Management Facility

- (a) Initial Bond
- (b) Repermit of Existing Facility
- (c) Additional Bond
- (d) Replacement Bond
- (e) Change of Ownership
- (f) Application for Mobile Processing facility permit

(2) Closure of a Waste Management Facility

To be completed by Surety Company:

Bond No.: 5693538

WHEREAS, PENNSYLVANIA POWER & LIGHT COMPANY (1) a Corporation,
(Name of Permittee, or Operator)

incorporated under the Laws in the State of Pennsylvania

or (2) _____, with its principal place of
(Individual, Limited/General Partnership, Registered Fictitious Name Business)

business at Two North Ninth Street, Allentown, PA 18101
(Address)

or (3) _____ has (1) filed application for permit(s); or (2) executed
(municipality or municipal authority)

a _____ (hereinafter "agreement") dated _____
(Consent agreement/consent decree/consent adjudication) (date of agreement)

with the Commonwealth of Pennsylvania, Department of Environmental Resources (hereinafter referred to as the "Department"), or (3) has been ordered by the Department, under the provisions of the "Pennsylvania Solid Waste Management Act", Act of July 7, 1980, No. 97, as amended (hereinafter "Act 97") for the purpose, as indicated above of either (1) the operation and closure or (2) closure of a waste management facility which will affect 4.5 acres
(Acreage to be Under Permit or as Referenced by Order/Agreement, etc)

acres of land owned by PENNSYLVANIA POWER & LIGHT COMPANY in
(Name of Landowner)

Salem Township
(Name of Municipality)

Luzerne County, Pennsylvania (hereinafter referred to as "facility").
(Name of County)

NOW THEREFORE, KNOW ALL MEN BY THESE PRESENTS that we, PENNSYLVANIA POWER & LIGHT COMPANY
(Name of Principal)

_____, as principal, and

SAFECO INSURANCE COMPANY OF AMERICA, a corporation of the State of

Washington, licensed to do business in the Commonwealth of Pennsylvania, and

with its principal place of business at Three Bala Plaza East, Bala Cynwyd, PA 19004
(Address)

_____, as surety,

and intending to be legally bound hereby, are held and firmly bound unto the Department, in the just and full sum of

FORTY THOUSAND NINE HUNDRED AND NO/100----- (\$40,900.00-----) Dollars,
(Written Dollar Amount) (Numerical Dollar Amount)

to the payment whereof, well and truly to be made, we do hereby bind ourselves, our heirs, executors, administrators, assigns and successors, firmly by these presents:

NOW THE CONDITION OF THIS OBLIGATION is such that if the operator shall faithfully perform all of the requirements of (1) the Act of Assembly approved July 7, 1980, P.L. 380, known as the "Solid Waste Management Act."; (2) the Act of Assembly approved June 22, 1937, P.L. 1987, as amended, known as "The Clean Streams Law"; (3) the Act of Assembly approved January 8, 1960, P.L. 2119, as amended, known as the "Air Pollution Control Act"; (4) the applicable provisions of the Act of Assembly approved November 26, 1978, P.L. 1375, as amended known as the "Dam Safety and Encroachments Act"; (5) the applicable provisions of the Act of Assembly approved May 31, 1945, P.L. 1198, as amended, known as the "Surface Mining Conservation and Reclamation Act"; (6) the Act of Assembly approved July 28, 1988, P.L. 556, known as the "Municipal Waste Planning, Recycling and Waste Reduction Act"; (7) the rules and regulations promulgated thereunder; (8) the provisions and conditions of the permits issued thereunder and designated in this bond; (9) any agreement with or order of the Department, and (10) such amendments or additions to the acts, regulations, terms and conditions of the permits, and orders of the Department as may hereinafter be lawfully made (all of which are hereinafter referred to as the "law"), then this obligation shall be null and void, otherwise to be and remain in full force and effect.

LIABILITY UPON THIS BOND shall be for the amount specified herein. Liability upon this bond shall be continuous from the initiation of operations at the facility, and shall continue for the duration of the processing and/or disposal of solid waste at the aforesaid facility and for a period of ten (10) years after approved final closure of the site, unless released in whole or in part by the Department, in writing, prior thereto as provided by the law. In the event any environmental damage is caused by the Principal in violation of the aforementioned law, then the bond shall not be released, but the liability under this bond shall continue until such environmental damage is corrected and the site restored to a condition of compliance with the aforementioned law. This bond shall be in default if the Principal fails, refuses or is unable to complete restoration work as directed, in writing, by the Department. Liability upon this bond shall extend to the entire facility. It is agreed and understood by the Surety and the Principal that this bond covers and includes any and all liabilities and obligations under the aforementioned law which accrued on the permit site prior to the issuance of Permit No. 101363, as well as any and all liabilities and obligations of the Principal to be accrued under the law from the date of issuance of the Permit until such time as the Department shall release, in writing, such liabilities and obligations.

It is acknowledged and agreed by the parties that the liability upon this bond is a penal sum, and as such the Commonwealth retains an interest in such guarantee, which interest may not be affected by bankruptcy, insolvency, or other financial incapacity of the Principal on the bond until release of such liability as provided by the law.

UPON THE HAPPENING OF ANY DEFAULT of the provisions, conditions and obligations assumed under this bond and the declaration of a forfeiture by the Secretary, or his designee, the period for appeal provided by law having expired, the Principal and the Surety hereby authorize and empower the Attorney General or the Commonwealth of Pennsylvania; or any other attorney of any court of record in Pennsylvania, or elsewhere, by him deputized for the purpose, to appear for and confess judgement against the principal and/or the surety, their successors or assigns, in favor of the Commonwealth of any sum or sums of money which may be due hereunder, with or without defalcation or declaration filed, with interest and costs, with release of errors, without stay of execution and with ten (10%) percent added for collection fees, and for the exercise of this power, this instrument, or a copy thereof, any rule of court to the contrary notwithstanding, shall be full warrant and authority. This power shall be inexhaustible. The surety and principal are jointly and severally liable for payment of the bond amount, which shall be confessed to judgement and execution upon forfeiture.

The principal and surety further agree that execution may issue upon judgement so confessed for the full amount of money and accrued interest that is owing from the principal and/or the surety to the Commonwealth, with costs and collection fee upon filing information in writing in the court when such judgement shall be entered.

Full payment shall be made under the bond within 30 days of receipt of the Department's declaration of forfeiture by the surety.

The surety may cancel the bond by sending written notice of cancellation to the Department and the principal on the bond, only under the following conditions:

The notice of cancellation shall be sent by certified mail, return receipt requested. Cancellation may not take effect until 120 days after receipt of the notice of cancellation by the Department and the principal on the bond as evidenced by return receipts.

Within 30 days after receipt of a notice of cancellation, the Principal shall provide the Department with a replacement bond as defined by the law. If the Principal fails to submit a replacement bond acceptable to the Department within the 30 day period, the Department will issue a notice of violation to the Principal requiring that the bond be replaced within 30 days of the notice of violation. If the bond is not replaced within the 30 day period,

the Department may issue a cessation order for permits of the Principal and related parties, and thereafter take action as may be appropriate.

Failure of the Principal to submit a replacement bond within 30 days after the notice of violation constitutes grounds for forfeiture of the bond, and other bonds submitted by the Principal, under the law. If the Department declares the bond forfeited before the expiration of the 120 day period, the notice of cancellation is null and void.

FURTHER, the principal and the surety agree that their liability hereunder shall not be impaired or affected by, (a) any renewal or extension of the time for performance of any of the provisions, conditions or obligations upon which this bond is conditioned, or (b) any forbearance or delay in declaring this bond to be forfeited or in enforcing payment on this bond. The surety hereby waives any right to cover or perform the obligations of the principal upon the principal's default, provided however, that the Department may, in writing, authorize the surety to cover such defaulted obligations if the Department determines that it is in the Department's interest to do so.

FURTHER, the Surety agrees that any collateral held by it as security for its indemnification with respect to this bond is held by the Surety as a trust on behalf of the Department to assure the liabilities and obligations secured by this bond will be performed, fulfilled and complied with. The Surety hereby agrees that, upon its cessation in business, insolvency or bankruptcy, all of its right, title and interest in such collateral shall immediately vest in the Department such that the Department has full ownership thereof.

FURTHER, the Principal and the Surety agree that their liability hereunder shall not be impaired or affected by, (a) any renewal or extension of the time for performance of any of the provisions, conditions or obligations upon which this bond is conditioned, or (b) any forbearance or delay in declaring this bond to be forfeited or in enforcing payment on this bond.

FURTHER, the Department reserves the right to require additional bonding from the Principal, as provided by law, which shall be a supplement to and augment the bond liability provided herein. The Department may release, in writing, a portion of the amount of liability provided in this bond for partial completion of the provisions, conditions and obligations assumed by the Principal herein, as may be authorized by the law, and such amount released shall be a credit upon the total amount of this bond. Nothing herein shall limit or preclude the Department from seeking to enforce any remedy, in addition to the forfeiture of this bond, which may be authorized or provided by law.

IN WITNESS WHEREOF, the principal and surety have hereunto set their hands and seals, intending to be legally bound hereby, this 15th day of March, 19 93.

Principal: PENNSYLVANIA POWER & LIGHT COMPANY

(Print Name of Permittee / Operator)

Affix Corporate Seal Here:

Attest or Witnesses:

Jean A. Smolick
(Print / Type Name)

Jean A. Smolick
(Signature of Above)

Jean A. Smolick
(Print / Type Name)

Jean A. Smolick
(Signature of Above)

By: John R. Biggar, Vice President-Finance
(Print / Type Name and Title)

[Signature]
(Signature of Above)

By: John P. Kierzkowski, Treasurer
(Print / Type Name and Title)

[Signature]
(Signature of Above)

Surety: SAFECO INSURANCE COMPANY OF AMERICA

(Print Name)

Affix Corporate Seal Here:

Attest or Witness:

Teresa R. DelBonifro
(Print / Type Name)

[Signature]
(Signature of Above)

(Print / Type Name)

(Signature of Above)

Pennsylvania Resident Agent

By: Sally A. Mullen, Attorney-in-fact
(Print / Type Name and Title) PA Resident Licensed Agent

[Signature]
(Signature of Above)

By: _____
(Print / Type Name and Title)

(Signature of Above)

(Signature)

(Print / Type Name)

Approved as to legality and form:

PRE-APPROVED OAG 10/15/92
Office of Attorney General

(Chief Counsel / Assistant Counsel)
Department of Environmental Resources

Approved for the Department:

(Type Name and Title)

(Signature of Above)

(Date)



POWER OF ATTORNEY

SAFECO INSURANCE COMPANY OF AMERICA
GENERAL INSURANCE COMPANY OF AMERICA
HOME OFFICE: SAFECO PLAZA
SEATTLE, WASHINGTON 98185

No. 3218

KNOW ALL BY THESE PRESENTS:

That SAFECO INSURANCE COMPANY OF AMERICA and GENERAL INSURANCE COMPANY OF AMERICA, each a Washington corporation, does each hereby appoint KATHRYN G. SCHNEIDER; KATHLEEN M. ZIOBRO; DAVID CHARLES ROSENBERG; JOHN R. MANNERING; HARRY C. ROSENBERG; SALLY A. MULLEN; DIANE M. DIMARTINO; DIANE C. BELL

its true and lawful attorney(s)-in-fact, with full authority to execute on its behalf fidelity and surety bonds or undertakings and other documents of a similar character issued in the course of its business, and to bind the respective company thereby.

IN WITNESS WHEREOF, SAFECO INSURANCE COMPANY OF AMERICA and GENERAL INSURANCE COMPANY OF AMERICA have each executed and attested these presents

this 4th day of January, 19 93

Handwritten signatures and names of the appointed attorneys-in-fact.

CERTIFICATE

Extract from the By-Laws of SAFECO INSURANCE COMPANY OF AMERICA and of GENERAL INSURANCE COMPANY OF AMERICA:

Article V, Section 13. - FIDELITY AND SURETY BONDS ... the President, any Vice President, the Secretary, and any Assistant Vice President appointed for that purpose by the officer in charge of surety operations, shall each have authority to appoint individuals as attorneys-in-fact or under other appropriate titles with authority to execute on behalf of the company fidelity and surety bonds and other documents of similar character issued by the company in the course of its business ...

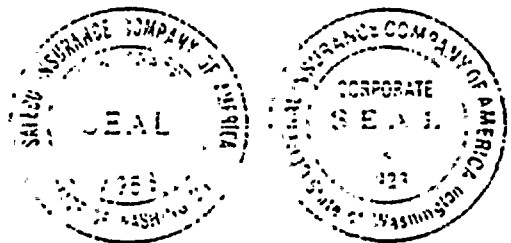
Extract from a Resolution of the Board of Directors of SAFECO INSURANCE COMPANY OF AMERICA and of GENERAL INSURANCE COMPANY OF AMERICA adopted July 28, 1970.

On any certificate executed by the Secretary or an assistant secretary of the Company setting out: (i) The provisions of Article V, Section 13 of the By-Laws, and (ii) A copy of the power-of-attorney appointment, executed pursuant thereto, and (iii) Certifying that said power-of-attorney appointment is in full force and effect, the signature of the certifying officer may be by facsimile, and the seal of the Company may be a facsimile thereof.

I, R. A. Pierson, Secretary of SAFECO INSURANCE COMPANY OF AMERICA and of GENERAL INSURANCE COMPANY OF AMERICA, do hereby certify that the foregoing extracts of the By-Laws and of a Resolution of the Board of Directors of these corporations, and of a Power of Attorney issued pursuant thereto, are true and correct, and that both the By-Laws, the Resolution and the Power of Attorney are still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of said corporation

this 15th day of March, 19 93



Handwritten signature of R. A. Pierson, Secretary.



SAFECO INSURANCE COMPANY OF AMERICA
 FINANCIAL STATEMENT — DECEMBER 31, 1991

Assets		Liabilities	
Cash and Bank Deposits	\$ 23,162,325	Unearned Premiums	\$ 328,921,950
*Bonds — U.S. Government	101,112,511	Reserve for Claims and Claims Expense	1,034,490,448
*Other Bonds	1,277,363,786	Funds Held Under Reinsurance Treaties	725,150
*Stocks	404,129,813	Reserve for Dividends to Policyholders	8,007,561
Real Estate	39,787,131	Additional Statutory Reserve	1,039,192
Agents' Balances or Uncollected Premiums	130,857,735	Reserve for Commissions, Taxes and Other Liabilities	<u>163,031,504</u>
Accrued Interest and Rents	40,026,032	Total	\$1,536,215,805
Other Admitted Assets	<u>105,831,470</u>	Capital Stock	\$ 2,500,000
		Paid in Surplus	13,639,941
		Unassigned Surplus	<u>569,915,057</u>
		Surplus to Policyholders	<u>586,054,998</u>
Total Admitted Assets	<u>\$2,122,270,803</u>	Total Liabilities and Surplus	<u>\$2,122,270,803</u>



* Bonds are stated at amortized or investment value; Stocks at Association Market Values. Securities carried at \$236,042,014 and real estate carried at \$4,282,725 are deposited as required by law.

I, PHILIP A. STEPHENS, Senior vice-president of SAFECO Insurance Company of America, do hereby certify that the foregoing is a true, and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 1991, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 1st day of March, 1992.

Philip A. Stephens
 Senior Vice-President

**BONDING WORKSHEET A
LANDFILL
DECONTAMINATING THE FACILITY
(REVISION JANUARY 18, 1993)**

Reference
Sources

1. Maximum volume of solid waste required to be moved or disposed as part of closure (includes cost for solidification).	<u>0</u>		
2. Estimated volume of contaminated soils or materials (from accidents, spills, prior remediations).	<u>0</u>		
3. Total volume of waste (Line 1 + Line 2).	<u>0</u>		
4. Unit cost to place waste during closure or dispose off-site (include any analyses or transportation cost).	<u>0</u>	<u>---</u>	
5. Total cost to dispose of waste (Line 3 x Line 4).	<u>0</u>		
6. Landfill equipment to be decontaminated:			
a. Amount of heavy equipment (i.e., compactors, dozers, pans, front end loaders).	<u>N/A</u>		
b. Amount of light equipment (i.e., pick-ups, generators, pumps).	<u>N/A</u>		
7. Unit cost to decontaminate equipment:			
a. Unit cost for heavy equipment.	<u>N/A</u>	<u>---</u>	
b. Unit cost for light equipment.	<u>N/A</u>	<u>---</u>	
8. Total cost to decontaminate equipment [(Line 6a x Line 7a) + (Line 6b x Line 7b)].		<u>N/A</u>	
9. Estimated volume of contaminated liquid generated during decontamination of equipment.	<u>0</u>		
10. Unit cost to dispose of contaminated liquids (including any transportation).	<u>0</u>	<u>---</u>	
11. Total cost to dispose of contaminated liquids (Line 9 x Line 10).		<u>---</u>	
12. Engineering and Quality Assurance/Quality Control Fees.		<u>0</u>	
13. Cost for decontaminating the facility (Line 5 + Line 8 + Line 11 + Line 12).		<table border="1"><tr><td>\$ 0</td></tr></table>	\$ 0
\$ 0			

**BONDING WORKSHEET B
LANDFILL
CAP AND FINAL COVER PLACEMENT
(REVISION JANUARY 18, 1993)**

- 1. Maximum area to be capped and covered (includes areas that will be open at any one time). 4.5 Acres
- 2. Unit cost of one foot of stable intermediate cover material for base of cap (includes material cost, transportation and placement). N/A
- 3. Unit cost of materials to be used for the cap (includes transportation and installation costs).

Layer	Type or Make	
a. Geotextile	N/A	<u> </u>
b. Clay or synthetic membrane	N/A	<u> </u>
c. Drainage layer	N/A	<u> </u>
d. Other	N/A	<u> </u>

References

See Attached Letter for References

- 4. Unit cost of two feet (unless another depth is required by the Department) of final cover material (includes material cost, transportation and placement).* \$24,800
- 5. Total unit cost for installation of cap and final cover (Line 2 + Line 3a + Line 3b + Line 3c + Line 3d + Line 4). \$24,800
- 6. Quality Assurance/Quality Control and engineering fees.(35%) \$ 8,680
- 7. Cost for Cap and Final Cover Placement Worksheet [(Line 1 x Line 5) + Line 6]. **\$33,480**

Calculations 4.5 acres x 43,560 sq.ft./acre x 2 ft cover = 392,040 cu.ft.
 392,040 cu.ft. x 1 cu.yd./27 cu.ft. = 14,520 cu.yd.
 (Approx. 11,420 cu.yd. of cover available onsite; purchase 3,100 cu.yd.)

* Reference, W. Knorr - \$8.00 cu.yd. for cover material

**BONDING WORKSHEET C
LANDFILL
REVEGETATION OF FINAL COVER
AND DISTURBED AREA
(REVISION JANUARY 18, 1993)**

Reference
Sources

- | | | |
|--|-----------------------|---------------|
| 1. Maximum area to be revegetated (includes burrow areas). | <u>4.5 Acres</u> | |
| 2. Seeding rate of vegetation (lbs./acre).
(Perennial Rye, Creeping Red Fescu, Kentucky Blue Grass Mix) | <u>150 Lbs./Acre</u> | |
| 3. Cost for seeding - seed price + labor cost (\$/lb.).
[\$85/50 lbs x 2 (PP&L labor cost)] | <u>\$3.40/lb</u> | <u>Aqway</u> |
| 4. Unit cost for seeding (Line 2 x Line 3). | <u>\$510/acre</u> | |
| 5. Fertilizing unit cost for lime rate (tons/acre).
(10-20-20, PaDOT Pub. 408, 1990) | <u>0.34 Tons/Acre</u> | |
| 6. Cost for fertilizer, including labor (\$/ton).
[\$180/Ton x 2 (PP&L labor cost)] | <u>\$360/Ton</u> | <u>Kepner</u> |
| 7. Unit cost for fertilizing (Line 5 x Line 6). | <u>\$122/Acre</u> | |
| 8. Mulching rate (tons/acre). Straw Hay | <u>1.5 Tons/Acre</u> | |
| 9. Cost of mulch, including labor (\$/ton).
[\$2.50/Bale (approx. 35 lbs/Bale) x 2 (PP&L labor cost)] | <u>\$286/Ton</u> | <u>Kepner</u> |
| 10. Unit cost for mulching (Line 8 x Line 9). | <u>\$429/Acre</u> | <u>Kepner</u> |
| 11. Total unit cost for revegetation (Line 4 + Line 7 + Line 10). | <u>\$1061/Acre</u> | |
| 12. Engineering and Quality Assurance/Quality Control fees.(35%) | <u>\$371</u> | |
| 13. Cost for Revegetation of Final Cover and Disturbed
Area Worksheet [(Line 1 x Line 11) + Line 12]. | \$5,146 | |

**BONDING WORKSHEET D
GROUNDWATER MONITORING
(REVISION JANUARY 18, 1993)**

**Reference
Sources**

1. Number of wells monitored.	<u>0</u>	
2. Unit cost to collect and ship sample(s) (per well, per quarter).	<u>N/A</u>	<u>---</u>
3. Unit cost to analyze sample(s) (per well):		
a. Quarterly analyses (Section 273.284 (1-3), Section 288.254(a)(1-2).	<u>N/A</u>	
b. Annual analyses (Section 273.284 (4-6), Section 288.254(a)(3-4).	<u>N/A</u>	<u>---</u>
4. Unit cost to evaluate data (per well, per quarter).	<u>N/A</u>	<u>---</u>
5. Total unit cost to sample and analyze a well for one year [(Line 2 x 4) + (Line 4 x 4) + (Line 3a x 4) + Line 3b].		<u>N/A</u>
6. Years of sampling (sampling for 30 years).	<u>N/A</u>	
7. Quality Assurance/Quality Control and engineering fees.	<u>N/A</u>	
8. Cost for Groundwater Monitoring Worksheet [(Line 1 x Line 5 x Line 6) + Line 7].		\$ 0

**BONDING WORKSHEET E
LANDFILL
GAS MONITORING AND GAS
COLLECTION SYSTEMS
(REVISION JANUARY 18, 1993)**

Reference
Sources

GAS MONITORING SYSTEM

1. Number of locations or wells monitored.		<u>N/A</u>	
Number of wells	<u>0</u>		
Number of locations	<u>0</u>		
2. Unit cost to conduct gas monitoring of lower explosive limits [Section 273.292(e), Section 288.262(e)].	<u>0</u>		<u>--</u>
3. Unit cost to analyze/report data (per well).	<u>0</u>		<u>--</u>
4. Total unit cost to sample and analyze a location for one year (Line 2 + Line 3).	<u>0</u>		
5. Years of sampling (30 years unless otherwise approved by the Department).	<u>0</u>		
6. Total cost for gas monitoring (Line 1 x Line 4 x Line 5).	<u>0</u>		

GAS COLLECTION SYSTEM

7. Number of gas collections required to complete closure of the waste disposal areas.	<u>N/A</u>		
8. Estimate amount of collection piping required for gas collection system (feet).	<u>0</u>		
9. Average unit cost to install gas collection well.	<u>0</u>		<u>--</u>
10. Unit cost of gas collection piping (including installation) (\$/foot).	<u>0</u>		<u>--</u>
11. Total cost for gas collection wells (Line 7 x Line 9).	<u>0</u>		
12. Total cost for gas collection piping (Line 8 x Line 10).	<u>0</u>		

BONDING WORKSHEET E (cont.)
(REVISION JANUARY 18, 1993)

**Reference
Sources**

13. Estimated cost to install gas flare or other air control system.	<u> N/A </u>	<u> -- </u>
14. Annual cost to operate the above system.	<u> N/A </u>	<u> -- </u>
15. Years of operating for closure.	<u> N/A </u>	
16. Total cost for the gas collection system [Line 11 + Line 12 + Line 13 + (Line 14 x Line 15)].		<u> 0 </u>
17. Engineering and Quality Assurance/Quality Control fees.	<u> 0 </u>	
18. Cost for Gas Monitoring and Gas Collection Systems Worksheet (Line 6 + Line 16 + Line 17).		\$ 0

**BONDING WORKSHEET F
MAINTENANCE COSTS
(REVISION JANUARY 18, 1993)**

Reference
Sources

1. Repair of cap and final cover (assume at minimum 5% of the total facility):		
a. Number of acres.	<u>4.5 Acres</u>	
b. Unit cost for final cover repair.	<u>\$5,022</u>	
c. Unit cost for cap repair.	<u>N/A</u>	
d. Unit cost for revegetation.	<u>\$772</u>	
e. Total [Line a x (Line b + Line c + Line d)].	<u>\$5,794</u>	---
2. Repair of surface water run-on and run-off structures.	<u>N/A</u>	---
3. Repair of fences and gates:		
a. Cost of gates.	<u>0</u>	
b. Cost of posts.	<u>0</u>	
c. Cost of fence.	<u>0</u>	
d. Total (Line a + Line b + Line c).	<u>0</u>	---
4. Repair and maintenance of groundwater monitoring wells:		
a. Number of total wells.	<u>N/A</u>	
b. Cost of maintenance per well.	<u>0</u>	
c. Cost of repairing a well.	<u>0</u>	
d. Total [(30 x Line a x Line b) + (Line a x 0.1 x Line C)].		
Note - This assumes repairing 10% of all wells and a 30-year maintenance period.	<u>0</u>	---
5. Repair and maintenance of gas monitoring and collection wells:		
a. Number of total wells.	<u>0</u>	
b. Cost of maintenance per well.	<u>0</u>	
c. Cost of repairing a well.	<u>0</u>	
d. Total [(30 x Line a x Line b) + (Line a x 0.1 x Line c)].		
Note - This assumes repairing 10% of all wells and a 30-year maintenance period.	<u>0</u>	---

BONDING SHEET F (cont'd)
(REVISION JANUARY 18, 1993)

**Reference
Sources**

6. Repair of leachate collection, conveyance, and treatment facilities:

a. Annual leachate collection zone maintenance cost.	<u>N/A</u>
b. Annual leachate detection zone maintenance cost.	<u>0</u>
c. Estimate cost to repair leachated treatment plan.	<u>0</u>
d. Cost to repair/replace pumps.	<u>0</u>
e. Cost to repair leachate storage tanks.	<u>0</u>
f. Total [(30 x (Line a + Line b)) + Line c + Line d + Line e].	<u>0</u>

Note: Assumes a 30-year maintenance period for the collection and depletion zones.

7. Inspection costs:

a. Cost for a quarterly inspection of the closed landfill.	<u>\$150</u>
b. Years of inspections.	<u>30 (10) *</u>
c. Total (Line a x 4 x Line b).	<u>\$6,000</u>

8. Engineering and Quality Assurance/Quality Control fees. \$4,128

9. Other cost. N/A

10. Cost of Maintenance Cost Worksheet.
 (Line 1e + Line 2 + Line 3d + Line 4d + Line 5d + Line 6f +
 Line 7c + Line 8 + Line 9).

\$15,922

**BONDING WORKSHEET G
LANDFILL
LEACHATE MANAGEMENT
(REVISION JANUARY 18, 1993)**

Reference
Sources

1. Annual volume of leachate generated during closure.	<u> N/A </u>		
2. Time required to pump the annual volume (Line 1/pump capacity).	<u> N/A </u>		
3. Unit pumping cost (\$/hour).	<u> N/A </u>		<u> -- </u>
4. Annual pumping cost (Line 2 x Line 3).		<u> 0 </u>	

OFF-SITE MANAGEMENT

5. Tanker truck capacity (gals.). Note: Do not use a truck capacity which will exceed the local road load limits.	<u> N/A </u>		
6. Number of loads required per year (Line 1/Line 5).			
7. Distance to off-site treatment location (miles).	<u> N/A </u>		
8. Unit cost of off-site transportation (\$/mile).	<u> N/A </u>		<u> -- </u>
9. Annual cost of off-site transportation (Line 6 x Line 7 x Line 8).	<u> N/A </u>		
10. Unit cost of off-site treatment (\$/gal.).	<u> N/A </u>		
11. Annual cost of off-site treatment (Line 10 x Line 1).	<u> N/A </u>		
12. Total cost of off-site leachate management for 3 years [3 x (Line 9 + Line 11)].		<u> 0 </u>	

ON-SITE LEACHATE MANAGEMENT

13. Estimated cost for construction of leachate treatment facility:			
a. Leachate treatment plant.	<u> N/A </u>		
b. Leachate discharge piping (to outfall).	<u> N/A </u>		
c. Post-treatment leachate storage tanks.	<u> N/A </u>		

BONDING WORKSHEET G (cont.)

		Reference Sources
14. Annual cost to operate the leachate treatment facilities (includes all chemical, electrical and labor cost).	<u>N/A</u>	<u>--</u>
15. Years of on-site treatment.	<u>N/A</u>	
16. Total cost of on-site treatment [Line 13a + Line 13b + Line 13c + (Line 14 x Line 15)].		<u>0</u>

DIRECT DISCHARGE TO POTW

17. Estimated cost for construction of leachate pretreatment facility:			
a. Leachate pretreatment plant.	<u>N/A</u>		
b. Leachate discharge piping (to POTW).	<u>N/A</u>		
c. Post-treatment leachate storage tanks.	<u>N/A</u>	<u>--</u>	
18. Annual cost to operate the leachate pretreatment facilities (includes all chemical, electrical and labor cost) and discharge at POTW.	<u>N/A</u>	<u>--</u>	
19. Years of on-site treatment.	<u>N/A</u>		
20. Total cost of on-site treatment [Line 17a + Line 17b + Line 17c + (Line 18 x Line 19)].		<u>0</u>	
21. Cost of Leachate Management Worksheet (Line 4 + Line 12 + Line 16 + Line 20).		<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 5px;">\$ 0</td> </tr> </table>	\$ 0
\$ 0			

**BONDING WORKSHEET H
LANDFILL
SUMMARY OF COST
(REVISION JANUARY 18, 1993)**

1. Total from Worksheet A.	<u>0</u>
2. Total from Worksheet B.	<u>\$33,480</u>
3. Total from Worksheet C.	<u>\$ 5,146</u>
4. Total from Worksheet D.	<u>0</u>
5. Total from Worksheet E.	<u>0</u>
6. Total from Worksheet F.	<u>\$15,922</u>
7. Total from Worksheet G.	<u>0</u>
8. Subtotal (addition of all worksheet totals).	\$54,548

**BONDING WORKSHEET AB
SUMMARY OF BONDING COSTS
(REVISION JANUARY 18, 1993)**

I. SUMMARY OF BONDING WORKSHEETS:

1. Total cost for landfills, Worksheet G	<u>\$54,548</u>
2. Total cost for surface water and other monitoring points, Worksheet I	<u>\$ 0</u>
3. Total cost for incineration, Worksheet J.	<u>\$ 0</u>
4. Total cost for transfer facilities, Worksheet K	<u>\$ 0</u>
5. Total cost for land reclamation of sewage sludge, Worksheet Q	<u>\$ 0</u>
6. Total cost for land disposal of sewage sludge, Worksheet X	
7. Total cost for agricultural utilization of sewage sludge Worksheet Y	<u>\$ 0</u>
8. Total cost for agricultural utilization of municipal and residual waste other than sewage sludge, Worksheet Z.	<u>\$ 0</u>
9. Total cost for composting, Worksheet AA	<u>\$ 0</u>
10. Total cost for facility (add Line 1 to Line 9)	<u>\$54,548</u>

II. INFLATION:

11. Inflation rate (projected inflation for the next three years based on the inflation for the prior three years). Expressed as <u>3.9%</u> (consumer Price Index)	
12. Inflation cost (Line 10 x inflation rate from Line 11)	<u>\$ 2,127</u>

III. CONTINGENCY AND ADMINISTRATIVE FEES:

13. Administrative fees (5%) (Line 10 x 0.05)	<u>\$ 2,727</u>
14. Contingency fee amount (Line 10 x rate of contingency fee from Table 3)	<u>\$ 8,182</u>

IV. TOTAL BONDING COST:

15. Total Bond Liability amount (Line 10 + Line + Line 12 + Line 14)	\$67,584
---	-----------------

WN:jkg/P05