Appendix A

CORE DATA INPUTS

APPENDIX A: PRICES USED IN THE ECONOMIC IMPACT ANALYSES

	Price	Year	1996 Price	Unit	Other Supporting Data	Sources
HW transportation costs						
Bulk liquids - 200 miles	$0.24	1992	$0.26	$/ton-mile	Assumes 8.34 lbs/gal	[A]
Bulk solids - 200 miles	$0.23	1992	$0.25	$/ton-mile		[A]
Transportation miles						
Generator to commercial incinerator	200			miles		[B]
Generator to cement kiln	200			miles		[B]
Cost of shipping waste to a commercial facility						
Cement kilns						
liquids	$53	1996	$53	$/ton	Assumes $/ton based on 200 miles	[A]
sludges + solids	$50	1996	$50	$/ton	Assumes $/ton based on 200 miles	[A]
Commercial incinerators						
liquids	$53	1996	$53	$/ton	Assumes $/ton based on 200 miles	[A]
sludges + solids	$50	1996	$50	$/ton	Assumes $/ton based on 200 miles	[A]
Cost of major conventional fuels used by cement kilns						
Coal	$1	1996	$1	$/MBtu	22.958 MBtu/ton	[C,D]
Natural gas	$3	1996	$3	$/MBtu	1029 Btu/cf	[E,F]
Mixture (91.1% coal; 8.9% natural gas)	$2	1996	$2	$/MBtu		[G, C-F]
Cost of major conventional fuels used by LWAKs						
Residual Fuel oil	$3	1996	$3	$/MBtu	6.287 MBtu/barrel	[H,I,J]

Hazardous Waste Prices in 1996 Dollars

Waste Form	Price ($/ton)	Source
Clean Liquids - pre-MACT	20	[K]
- post-MACT	0	[K]
Liquids with Suspended Solids	70	[L]
Highly Contaminated Liquids	301	[L]
Less Contaminated Sludges	320	[L]
Highly Contaminated Sludges	630	[L]
Less Contaminated Solids	683	[L]
Highly Contaminated Solids	1281	[L]

Inflation Index Used to Scale Prices to 1996 Dollars [M]
(GDP implicit price deflator)

Year	Price Index	Scale Factor
1992	100.00	1.10
1993	102.61	1.07
1994	104.95	1.05
1995	107.59	1.02
1996	109.69	1.00

Sources:

[A] "Estimating Costs for the Economic Benefit of RCRA Noncompliance" prepared by DPRA, Incorporated for EPA's Office of Regulatory Enforcement, September 1994, p. 5-4.
[B] "Estimating Costs for the Economic Benefit of RCRA Noncompliance" prepared by DPRA, Incorporated for EPA's Office of Regulatory Enforcement, September 1994, p. 5-10.
[C] "Quarterly Coal Report July-September 1996". Table 21, Average Price of U.S. Coal Receipts by End-Use Sector, 1990-1996. Energy Information Administration.
[D] "Cement Kiln Recycling Coalition (CKRC) August 19, 1996 Comments on Proposed HW Combusion Rule", p.67.
[E] "Natural Gas Monthly March 1997", Table 4: Selected National Average Natural Gas Prices, 1991-1997. Price of gas delivered to industrial consumers. Energy Information Administration.
[F] "1996 Annual Energy Review," Energy Information Administration, Table A4: Approximate Heat Content of Natural Gas, 1949-1996. Provides preliminary estimate for 1995 on the heat content of coal consumed by sectors other than electric utilities.
[G] "U.S. Cement Industry Fact Sheet: Fourteenth Edition," Table 24: Fossil Fuel Mix, prepared by Portland Cement Association, Economic Research Department, Skokie, IL, 1996, p.17.
[H] "Petroleum Marketing Monthly Report ", Table 19: U.S. Refiner Residual Fuel Oil Prices. Average sale price to end users. Energy Information Administration, ftp.eia.doe.gov/pub/petroleum/data/monthly/pmm/tables19.txt, (24 April 1997).
[I] "1996 Annual Energy Review," Energy Information Administration, Table A1: Approximate Heat Content of Petroleum Products and Wood. Provides 1996 data on the approximate heat content of residual fuel oil.
[J] "1993 Annual Energy Review," Energy Information Administration, Table B3: Other Physical Conversion Factors. Provides data on physical conversion factors for energy sources.
[K] Comparable Fuel Work -- Best Estimate
[L] Industry estimates of average market prices.
[M] Frequently Requested NIPA Data: History," Table: Price Indexes and Implicit Deflators for GDP, Gross Domestic Purchases, and GNP, Annually, 1959-1996," U.S. Dept. of Commerce's Bureau of Economic Analysis, www.bea/doc/gov/bea/sumnip-d.html (June 2, 1997)