



Strategic Advantages of Partnership between EPA and the Financial Community

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RiskMetrics Group: Composite View of Risk



*We help investors better understand and manage risk
across a broad spectrum*

RiskMetrics Group

Risk Management

Quantitative risk
management and
portfolio analytics

Corporate
Governance

Corporate
governance and
proxy voting
services

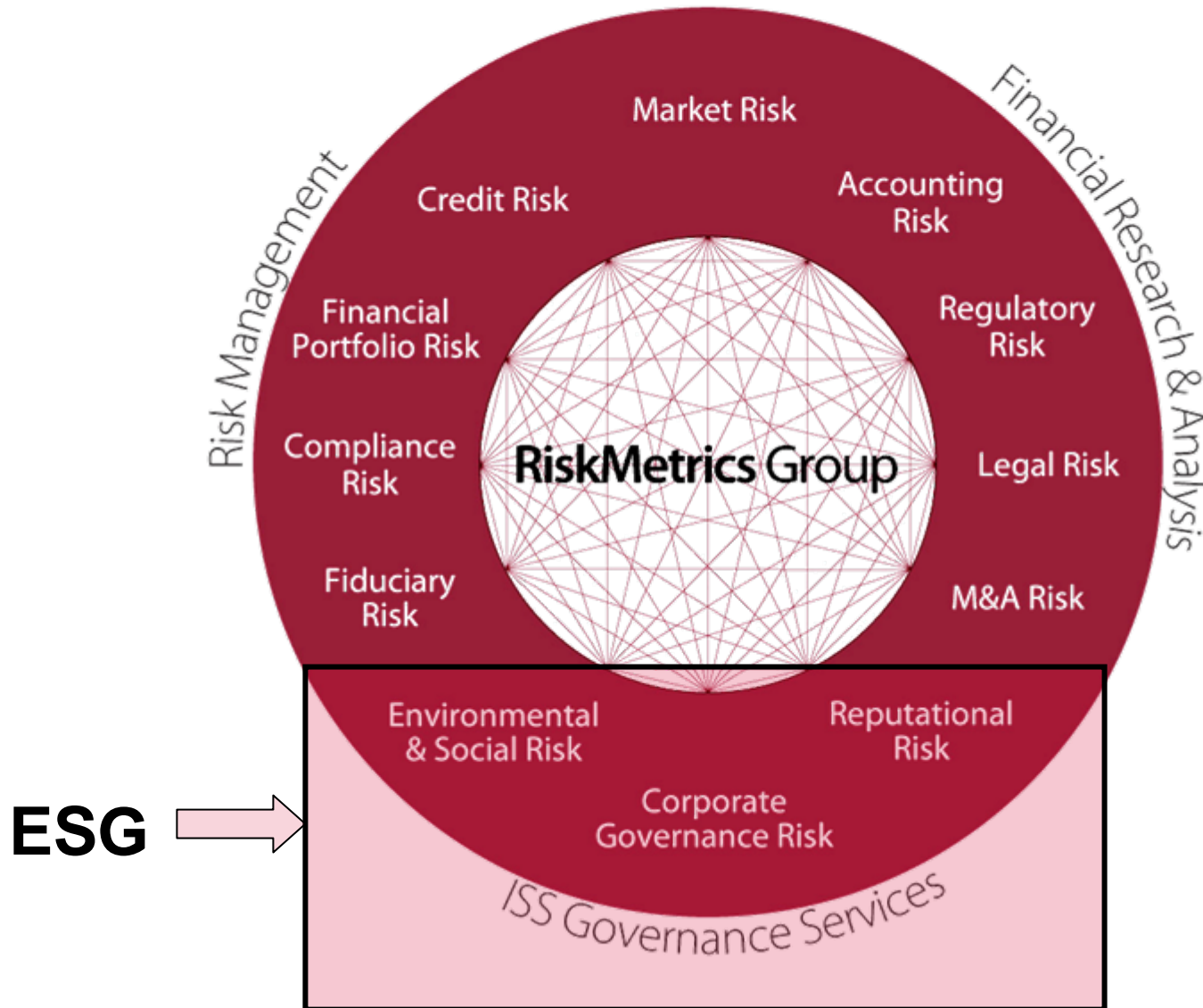
Financial Research
& Analysis

Forensic
accounting, legal
and regulatory
research

*ESG Risk Assessment covers 21,000 companies, 500+ Key
Performance Indicators in 19 offices throughout the globe.*



Addressing a Broad Spectrum of Inter-Related Risk





Focus on Climate Change

"Over the next 40 years, we're looking at the virtual de-carbonization of industrial economies if the warnings of climate scientists are going to be heeded.

Banks need to start re-ordering their investment and lending priorities now, especially in the energy sector, to reflect changing asset and credit valuations."

- Doug Cogan, Director of Climate Change Research, January 2008



CORPORATE GOVERNANCE AND CLIMATE CHANGE: THE BANKING SECTOR

January 2008

A Ceres Report



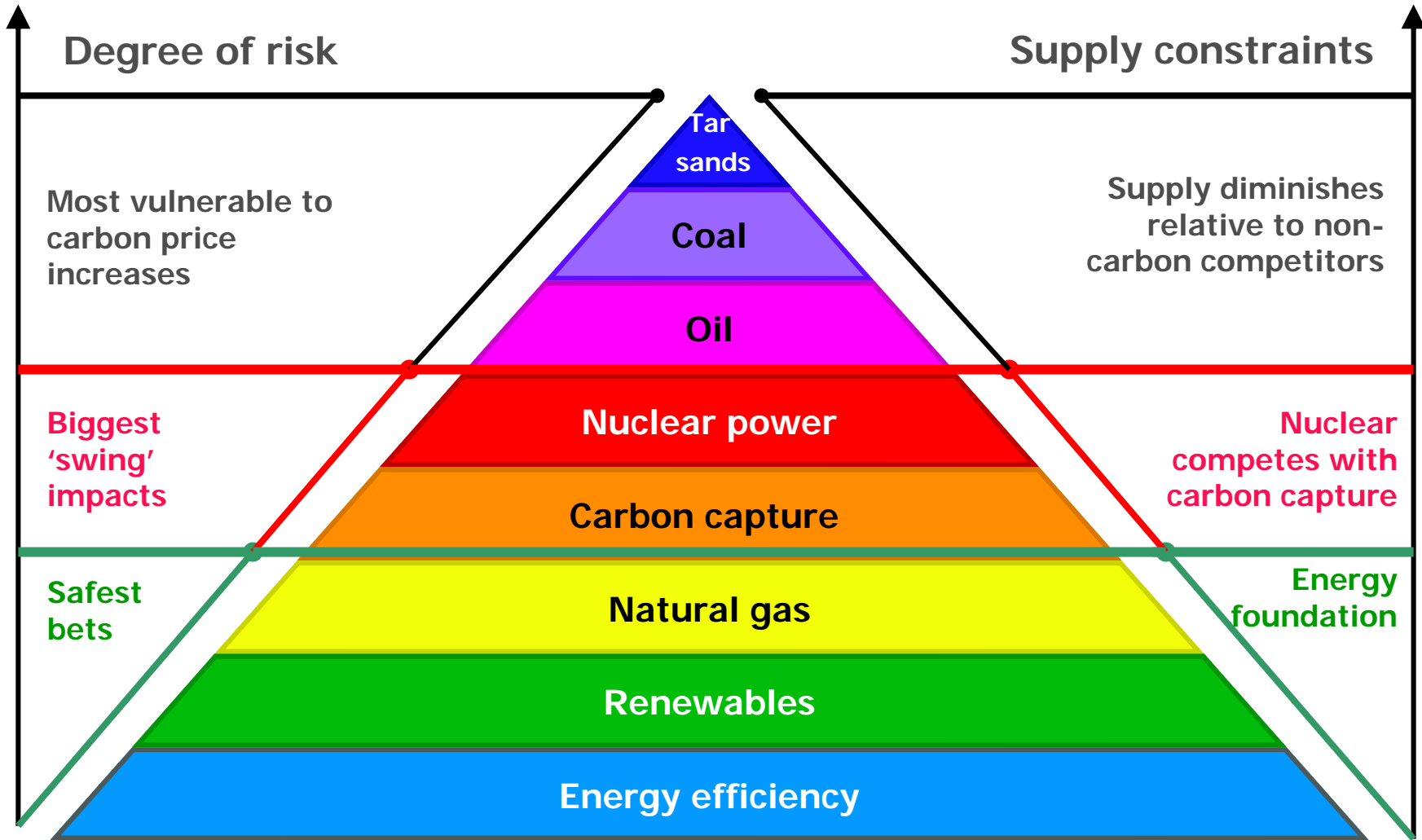
Lead Author:

Douglas G. Cogan





Energy Risk Pyramid





ESG Analytics offers ethical, sustainability, risk portfolio screening and proxy services to the investment community.

Products we offer include:

- ◆ Custom Datafeed Services for auto-upload into investment trading systems
- ◆ Proxy Voting Services on ethical, sustainability, and risk concerns
- ◆ Data files for custom research and analysis on sustainability risk and responsibility
- ◆ Online Portfolio Screening Services

Corporate Environmental Performance Database (CEPD) creates environmental performance profiles based on 20 years of EPA and other government regulatory data.

Purpose and Coverage:

- ◆ To assess the environmental performance impact of 2200 publicly traded companies, including the S&P1500, using a consistent, transparent method to generate key performance indicators
- ◆ Four Pillars: Spills, Superfund Cases, Toxic Emissions, Compliance Fines

Major Uses:

- ◆ Ethical Screening on Socially Responsible Investment Products
- ◆ Sustainability Risk Assessment for all Investment Products
- ◆ Environmental profiles to facilitate qualitative and quantitative analytical strategies
- ◆ Academic Research on Environmental Impact and Performance Analysis

Statutes Covered in the CEPD Database

- Atomic Energy Act**
- Clean Water Act**
- Clean Air Act**
- Emergency Response Notification System for Oil and Chemical Spills**
- Endangered Species Act**
- Federal Insecticide, Fungicide and Rodenticide Act**
- Minerals Management Service**
- Mining Safety and Health Administration**
- Resource Conservation and Recovery Act**
- Resource Conservation and Recovery Act – Corrective Actions**
- Resource Conservation and Recovery Act – Permit Denials**
- Safe Drinking Water Act**
- Superfund Potentially Responsible Parties (SETS)**
- Toxic Release Inventory**
 - Transfers and Releases
 - Energy Recovery and Recycling
 - Treatment
 - Waste Generation
 - Catastrophic Events
 - Dioxin
- Toxic Substance Control Act**

Issue Categories and Agency Data Sources

Fines from Regulatory Compliance Violations

(AEA, CAA, CWA, ESA, FIFRA, MSHA, RCRA, SDWA, TSCA)

- ◆ Environmental Protection Agency
- ◆ Nuclear Regulatory Commission
- ◆ Fish and Wildlife Service
- ◆ Minerals Management Service
- ◆ Mining Safety and Health Administration

Number of Open Superfund Cases

- ◆ Environmental Protection Agency

Toxic Releases

- ◆ Environmental Protection Agency

Spills

- ◆ Emergency Response Notification System

RCRA Corrective Actions and Permit Denials

- ◆ Environmental Protection Agency

Risk Metrics Value Add

Pre-processing and Attributing records from facilities to parents:

- ◆ Gather the regulatory data, including amounts of fines, gallons or pounds of spills, pounds of emissions, or number of violations and superfund sites
- ◆ Attribute facility level data to a parent company
- ◆ Organize the data into the categories: Fines, Toxic Emissions, Spills and Number of Sites

Summarization and Aggregation to package for a variety of Sustainability and Risk assessment product needs

- ◆ Corporate Environmental Performance Profiles
- ◆ Social Summaries, including environmental data
- ◆ SRI investment, including formatting that imports directly into investment trading systems
- ◆ Data incorporated into larger risk assessment tools
- ◆ Academic research for investment and other analysis

Database data going back to 1988

- ◆ 3, 5, and 10 ad 20 year profiles are most common

Value of Our Strategic Partnership with EPA

Improved Data Understanding

Improved Data Quality

Understanding of data sources and how EPA retrieves the data

Improved Understanding of Currently Untapped EPA data

Resources and Emerging Data (ie: Facility Registry System and other targeted datasets)

We are looking forward to the development of www.epa.gov/sor.

Ability to Express Financial Community's Use of the Data and Ideas for Improvement for our Purposes

Adding a unique Facility to Parent ID, such as a trading security ID or Duns Number

Forward Looking Ideas

Looking forward to the Climate Registry database

Looking forward to any possible coordination with international agencies to facilitate the ability to compare data.

Summary of Data

Environment [... return to top](#)

ISS aggregates US government environmental compliance and penalty data to the publicly traded parents it covers. Superfund National Priority List (NPL) site data is the sum of all such sites currently attributed to the company. All other performance indicators presented below represent three-year averages. More extensive and detailed environmental performance information is available in ISS's Corporate Environmental Profiles product.

Data Item		Units	Company Involvement	Industry Average	Industry Rank	Overall Percentile
Superfund Sites	Actual Values	Sites	98	54	8/10	1
	Size-Adjusted Values	Sites / \$10 billion domestic company revenue	3.64	4	9/10	22
Toxic Chemicals	Actual Values	Lbs / yr	18712451	9300570	9/10	1
	Size-Adjusted Values	Lbs / \$1,000 domestic company revenue	0.26	0	8/10	10
Spills	Actual Values	Spills / yr	8	6	7/10	1
	Size-Adjusted Values	Spills / \$10 billion domestic company revenue	1.05000	2	7/10	1
Fines	Actual Values	Fines (\$) / yr	114545	277170	7/10	1
	Size-Adjusted Values	Fine (\$) / \$1 million domestic company revenue	1.42	3	5/10	5

A ranking of one in the Industry Rank row above indicates that the company has the best environmental record for that data item among the companies in its industry group covered by ISS's Corporate Benchmarking Service. Read

Screening Criteria, Part 1

Clients can chose to:

Weight 4 categories (weights are user defined):

Superfund Sites

Compliance Fines

Toxic Emissions

Spills

Compare raw or normalized data (by domestic or total revenues)

Compare by Industry or according to the entire 2200 company Universe

Chose top of bottom percentile ranking of performers, based on chosen criteria



Screening Criteria, Part 2

Environment Criteria

This process will generate a score for every company that will range from 0 to 100 with 100 indicating the best possible score (minimal involvement in the environmental criteria selected). You then identify companies whose score places them in a percentile ranking above or below a threshold of your choosing. You must complete all steps for a successful screen.

1. Performance Score Weighting:
Apply the following weighting to a company's value in each of the environmental performance criteria. (If you do not wish to include one of the following criteria in the company's score, enter a value of 0):

Superfund Sites relative weighting:	<input type="text" value="25"/>
Emissions relative weighting:	<input type="text" value="25"/>
Oil & Chemical Spills relative weighting:	<input type="text" value="25"/>
Fines relative weighting:	<input type="text" value="25"/>

2. Select raw or normalized data as the basis for the score and proceed to step 3.

Raw values. The actual performance numbers.
 Size-adjusted values. The actual performance numbers divided by domestic revenues.

3. Select whether to see the score relative to industry peers or the entire Portfolio\$creener universe of companies then proceed to step 4.
After generating a score, evaluate companies against the following:
 Other companies in the industry
 All other companies in P\$

4. Identify companies ranked **percent of industry / P\$ Universe**



Standard SRI Datafeed

RT_id	ENTITY_NAME	TICKER	CUSIP	SEDOL	ISIN	AE	ALC005	CON001	FIR001	GAM005	NUCLEAR	STMCELL	TOB005	WEAPON	BDV031	LDS001	ENV	HRI003	NIR001	ANI_TEST	GMO
5641	Spectrum Brands, Inc.	SPC	84762L105	2127833	US84762L1052									T							
20423	Tokyo Dome Corp.	9681	J86775103	6496744	JP3587600002					35											
4370	The Pep Boys - Manny, Moe & Jack	PBY	713278109	2681447	US7132781094									T							
4955	Accor	AC	F00189120	5852842	FR0000120404					2											
42702	Epicept Corp	EPCT	294264205	B08BYH9	US2942642057															T	
25268	Advanced Cell Technology, Inc.	ACTC	00752K105	2988159	US00752K1051							T									
24935	CARSON CUMBERBATCH & CO	CARS	Y11374108	6176789	LK0022N00000		42.62561														
26821	Rockwood Holdings, Inc.	ROC	774415103	B0GWF93	US7744151033									T							
14928	Flamel Technologies S.A.	FLML	338488109	2351397	US3384881096																T
6437	i2corp.com, inc.	ITOO	465756104	2430047	US4657561043					90											
6254	Parlay Entertainment Inc.	PRYNF	70162P101	2402938	CA70162P1018					100											
23974	Force Protection, Inc.	FRPT	345203202	B064LH9	US3452032028									T							
101112	AECOM Technology Corporation	ACM	00766T100	B1VZ431	US00766T1007									T							
74490	CA Goldfields Inc.	CAGI	12476C103	B114SC5	US12476C1036					0											
5543	Trenwick Group Ltd. (frm. Lasalle F	TWKGO	G9032C109	2641214	BMG9032C1091										T						
9913	Rolls-Royce Group plc	RYCEY	775781206	2739001	US7757812067									T							
22223	Hankuk Paper Manufacturing Co.	2300	Y3056X107	6408578	KR7002300002					1											
12248	Constellation Brands, Inc.	STZ	21036P108	2170473	US21036P1084		100														
11790	ManTech International Corporation	MANT	564563104	2825308	US5645631046									T	?						
15012	Fraport AG Frankfurt Airport Servid	FRA	D3856U108	7107551	DE0005773303									T							
13513	CalAmp Corp	CAMP	128126109	2164700	US1281261099									T							
98592	International Stem Cell Corp	ISCO	460378102	B1CK383	US4603781026									T							
5093	Macy's Inc	M	55616P104	2345022	US55616P1049																T
5168	ITT Corp.	ITT	450911102	2465760	US4509111021						T			T							
3938	Baxter International Inc.	BAX	71813109	2085102	US0718131099									T							T
73731	South Shore Resources Inc	SSHO	840265102	B1GH368	US8402651025					0											
6084	Eastern Company	EAST	M2932V106	6298177	EGS37091C013								100								
68561	TrackBets International Inc.	TRKB	89235N109	2099028	US89235N1090					0											
24934	Ceylon Brewery Limited	BREW	Y12742105	6183358	LK0026N00001		99.8948														
25269	Stem Cell Therapeutics Corp.	SSS	858572100	B05KJQ3	CA8585721001									T							
31835	First Aviation Services, Inc.	FAVS	31865W108	2421375	US31865W1080									T							
5035	Pinnacle Entertainment, Inc.	PNK	723456109	2432225	US7234561097					85.81728											?
5384	Covance Inc.	CVD	222816100	2229029	US2228161004																
66806	Raghnath International Ltd	526813	Y7175J105	B03F4W1	INE753B01014																T
6083	Dupniza-BT AD	DUPBT	X18898100	7410282	BG11DUDUBT16								100								
13595	Carmanah Technologies Corp.	CMH	143126100	2775243	CA1431261009									T							
12197	E.I. Du Pont De Nemours & Co.	DD	263534109	2018175	US2635341090																T
5304	Trump Entertainment Resorts Inc	TRMP	89816T103	B08F5H8	US89816T1034					81.58101											
22225	TAKASO RESOURCES B	TAKASC	Y84907107	6141635	MYL7071O0003			T													
11873	ATG, Inc.	ATGCQ	00206P106	2431158	US00206P1066									T							



CEPD Backend Data: 5-year Profile Sample

Unique ID	COMPANY_NAME	TICKER	CUSIP	SEDOL	ISIN	S&P500	S&P400	S&P600	GICs	SIC	Year	RCRA_1	RCRA_2	ERNSC_1	ERNSC_2	TRI_1
563	Exxon Mobil Corp.	XOM	30231G102	2326618	US30231G1022	-1	0	0	10102010	2911	0	0	0	0	0	0
563	Exxon Mobil Corp.	XOM	30231G102	2326618	US30231G1022	-1	0	0	10102010	2911	2000	1	6000	19	1007972	97
563	Exxon Mobil Corp.	XOM	30231G102	2326618	US30231G1022	-1	0	0	10102010	2911	2001	1	150	5	25408300	94
563	Exxon Mobil Corp.	XOM	30231G102	2326618	US30231G1022	-1	0	0	10102010	2911	2002	1	8200000	13	1030592	88
563	Exxon Mobil Corp.	XOM	30231G102	2326618	US30231G1022	-1	0	0	10102010	2911	2003	4	1300	11	15600	70
563	Exxon Mobil Corp.	XOM	30231G102	2326618	US30231G1022	-1	0	0	10102010	2911	2004	0	0	9	581077	66
563	Exxon Mobil Corp.	XOM	30231G102	2326618	US30231G1022	-1	0	0	10102010	2911	2005	0	0	0	0	0
5679	E.I. Du Pont De Nemours & Co.	DD	263534109	2018175	US2635341090	-1	0	0	15101020	2820	0	0	0	0	0	0
5679	E.I. Du Pont De Nemours & Co.	DD	263534109	2018175	US2635341090	-1	0	0	15101020	2820	2000	0	0	3	202048	64
5679	E.I. Du Pont De Nemours & Co.	DD	263534109	2018175	US2635341090	-1	0	0	15101020	2820	2001	0	0	2	82090	64
5679	E.I. Du Pont De Nemours & Co.	DD	263534109	2018175	US2635341090	-1	0	0	15101020	2820	2002	1	27500	3	48595	62
5679	E.I. Du Pont De Nemours & Co.	DD	263534109	2018175	US2635341090	-1	0	0	15101020	2820	2003	0	0	2	0	65
5679	E.I. Du Pont De Nemours & Co.	DD	263534109	2018175	US2635341090	-1	0	0	15101020	2820	2004	0	0	1	13000	56
5679	E.I. Du Pont De Nemours & Co.	DD	263534109	2018175	US2635341090	-1	0	0	15101020	2820	2005	0	0	2	157802	0
5762	Merck & Co., Inc.	MIRK	589331107	2578312	US5893311077	-1	0	0	35202010	2834	0	0	0	0	0	0
5762	Merck & Co., Inc.	MIRK	589331107	2578312	US5893311077	-1	0	0	35202010	2834	2000	1	40000	0	0	6
5762	Merck & Co., Inc.	MIRK	589331107	2578312	US5893311077	-1	0	0	35202010	2834	2001	0	0	0	0	6
5762	Merck & Co., Inc.	MIRK	589331107	2578312	US5893311077	-1	0	0	35202010	2834	2002	0	0	0	0	6
5762	Merck & Co., Inc.	MIRK	589331107	2578312	US5893311077	-1	0	0	35202010	2834	2003	0	0	0	0	6
5762	Merck & Co., Inc.	MIRK	589331107	2578312	US5893311077	-1	0	0	35202010	2834	2004	0	0	0	0	8
5762	Merck & Co., Inc.	MIRK	589331107	2578312	US5893311077	-1	0	0	35202010	2834	2005	0	0	0	0	0

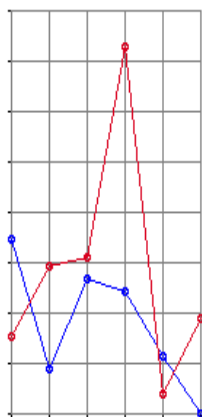


CEPD Profile Data: Spills and Compliance

Reported Spills [ISS Spill Index®](#)

	Amount	Number	Company (Index)	Industry (Index)
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ISS Spill Index® — Number of Spills / Revenues	Oil Spills > 10,000 gal.			
2005	4,202,100	4	0.57	0.41
2006	0	0	0	0.12
2007	0	0	0	0.01
	Chemical Spills > 10,000 lbs.			
2005	15,600	11	1.57	5.98
2006	581,077	9	1.02	0.24
2007	0	0	0	1.66

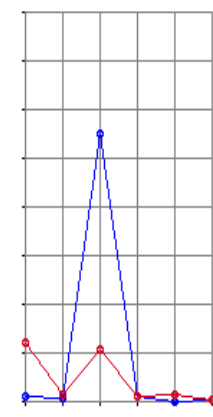


Total, 2005-2007		24	1.05	2.81
Six Year Trend			-48%	26%

Compliance Data [Penalty Indices](#)

	Statute	Penalties	Value	Company (Index)	Industry (Index)
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ISS Compliance Index® — Dollars of Penalties / Revenues	RCRA	4	1,300	0.01	0.10
	CAA	5	314,550	1.30	0.55
	CWA	15	26,500	0.11	2.12
	SDWA	0	0	0	0
	TSCA	0	0	0	0
	FIFRA	0	0	0	0
	MSHA *	4	1,285	0	0.01
	AEA	0	0	0	0
	ESA	0	0	0	0



Year	Penalties	Value	Company (Index)	Industry (Index)
2005	13	211,860	3.02	2.91
2006	9	16,771	0.19	4.09
2007	6	115,004	1.04	1.31

Total, 2005-2007	28	343,635	1.42	2.77
Six Year Trend			-97%	-86%

Industry 6 Year Trend

Company 6 Year Trend



CEPD Profile Data: TRI and Superfund

Toxic Chemicals	Amount (lbs)	Company (Index)	Industry (Index)
ISS Emissions Efficiency Index® — Transfers & Releases / Revenues			
Total Production Waste			
Transfers & Releases (excluding one-time releases) ⓘ *			
2004	18,829,999	0.32	0.17
2005	18,728,213	0.27	0.14
2006	18,579,142	0.21	0.12
<hr/>			
Total, 2004-2006	56,137,355	0.26	0.14
Six Year Trend		-18%	-57%
Energy Recovery and Recycling (onsite and offsite) ⓘ			
2004	148,454,787	2.49	1
2005	135,137,785	1.93	1.01
2006	136,713,619	1.55	2.92
<hr/>			
Total, 2004-2006	420,306,192	1.99	1.64
Six Year Trend		166%	-48%
Treatment (onsite and offsite) ⓘ			
2004	192,636,478	3.23	6.63
2005	182,581,721	2.60	4.61
2006	219,325,117	2.48	4.50
<hr/>			
Total, 2004-2006	594,543,316	2.77	5.25
Six Year Trend		1.94%	7%
One-time Releases ⓘ			
2004	59,793	0	0
2005	38,624	0	0
2006	18,517	0	0
<hr/>			
Total, 2004-2006	116,935	0	0
Six Year Trend		-77%	-64%
Dioxin (included in Total Production Waste) (in grams) ⓘ			
2005	3.45	0	0
2006	3.69	0	0

Hazardous Waste Cleanup Responsibilities	Government Data	Company (Index)	Industry (Index)
Cleanup Indices			
Superfund NPL sites: ⓘ *	98	3.64	5.41
RCRA corrective actions required: ⓘ *	7	0.26	1.09
<hr/>			
Permit Restrictions	Government Data	Company (Index)	Industry (Index)
Permit Restriction Indices			
RCRA permit denials, 2005-2007 ⓘ	0	0	0
MMS facility shut-ins, 2005-2007 ⓘ	3	0.10	0.09

Industry 6 Year Trend

Company 6 Year Trend

Contact Information

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**If you have recommendations for us on how we can better use the data,
please feel free to contact me any time.**