

**Torres Rojas, Genara**

*FOI #12666*

**From:** katiez@sccl.org  
**Sent:** Thursday, October 06, 2011 2:44 PM  
**To:** Duffy, Daniel  
**Cc:** Torres Rojas, Genara; Van Duyne, Sheree  
**Subject:** Freedom of Information Online Request Form

Information:

First Name: Katie  
Last Name: Zimmerman  
Company: SC Coastal Conservation League  
Mailing Address 1: 328 East Bay Street  
Mailing Address 2: PO Box 1765  
City: Charleston  
State: SC  
Zip Code: 29402  
Email Address: [katiez@sccl.org](mailto:katiez@sccl.org)  
Phone: 8437251292  
Required copies of the records: Yes

List of specific record(s):

I am seeking the study commissioned by the Ports Authority of NYNJ on shoreside power for the cruise terminal in Brooklyn's Red Hook community. I have seen quotes from this study in the press e.g. the community pays 9M in health costs when there is not shoreside power for cruise ships, but cannot find the actual study. Please provide me with the study--it would be extremely helpful for my research. I would be happy to receive this information in an electronic format in order to reduce costs.

**THE PORT AUTHORITY OF NY & NJ**

Daniel D. Duffy  
FOI Administrator

January 25, 2012

Mr. Katie Zimmerman  
SC Coastal Conservation League  
328 East Bay Street, P.O. Box 1765  
Charleston, SC 29402

Re: Freedom of Information Reference No. 12666

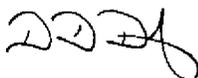
Dear Mr. Zimmerman:

This is a response to your October 6, 2011 request, which has been processed under the Port Authority's Freedom of Information Policy for the study commissioned by the Port Authority on shoreside power for the cruise terminal in Brooklyn Red Hook community.

Material responsive to your request and available under the Policy, which consists of 5 pages, is enclosed, for a \$1.25 photocopying charge for this material (25¢ per page). Payment should be made in cash, certified check or money order payable to "The Port Authority of New York & New Jersey" and should be sent to my attention at 225 Park Avenue South, 17<sup>th</sup> Floor, New York, NY 10003.

Please refer to the above FOI Reference number in any future correspondence relating to your request.

Sincerely,



Daniel D. Duffy  
FOI Administrator

Enclosure

225 Park Avenue South  
New York, NY 10003  
T: 212 435 3642 F: 212 435 7555

**Value Human Health Effects in Kings County, 2009 \$**

<b>Kings County</b>	<b>FIPS 36047</b>	<b>PM</b>	<b>NOX</b>	<b>SO2</b>	<b>VOC</b>	<b>Total Kings County</b>
Annual Reduction (tons)		6.5	95.3	99.2	2.1	203.1
Per Ton Value of Health Effects		159,383	13,293	65,755	28,596	0
Value of Annual Reductions		\$ 1,035,990	\$ 1,266,856	\$ 6,522,880	\$ 60,052	\$ 8,885,777

**NPV @ 15 years, 4% Discount Rate    98,795,510**

**Assumptions:**

- Dispersion of criteria pollutants impact Brooklyn and therefore the estimated reductions will benefit Brooklyn
- To monetize the estimated reduction in PM, used an average value of PM10 and PM25. For a more accurate valuation a breakout of emission reduction for both pollutant is needed.
- The analysis is based 15 years of annual reductions, as stated in the report.
- Carbon dioxide is a national/global impact that has not been included in this analysis. For your information, the USDOT recommends a value of \$33 per metric ton for monetizing national benefits of CO2 reduction.
- In accordance with the Port Authority's CBA manual and framework, a 4% discount rate is used to discount the future cash flows to their present values.

**Port Authority Regional Cost Benefit Analysis Framework  
Benefit Valuations**

**Value of Air Pollution Reduction**

**Source: Nicholas Z. Muller and Robert Mendelsohn, Measuring the Damages of Air Pollution in the United States, 2007**

Values are adjusted as follows:

M&M's county-level estimates are based on a uniform value of statistical life (VSL) of \$2.0 million (in 2000 dollars). We use a uniform VSL of \$6.0 million (in 2009 dollars). M&M also estimated national gross annual damage reduction for each pollutant from the Clean Air Act for both their baseline valuation of \$2.0 million and for USEPA's valuation of \$6.2 million. We assume linear growth between the two valuations to determine damages for USDOT's intermediate VSL, and apply this growth factor to the county-level estimates. Finally, we adjust for inflation.

**Adjustment for statistical value of life (\$millions)**

M&M baseline VSL	\$2.0	2000 NCPI	\$2.5
USEPA VSL	\$6.2	2000 NCPI	\$7.8
USDOT VSL	\$6.0	2009 NCPI	\$6.0
Percent that USDOT-M&M baseline is of USEPA-M&M baseline			67%

**National Gross Annual Damages (billions of 2000 \$)**

	Particulate Matter (PM25)	Particulate Matter (PM10)	Nitrogen Oxides (NOx)	Ammonia (NH3)	Sulfur Dioxide (SO2)	Volatile Organic Compounds (VOC)	Total
M&M baseline	\$28.3	\$9.1	\$5.8	\$16.4	\$32.0	\$19.3	\$110.9
EPA method	\$71.4	\$11.9	\$26.3	\$41.3	\$80.5	\$45.2	\$276.6
EPA method with USDOT VSL	\$57.0	\$11.0	\$19.5	\$33.0	\$64.3	\$36.6	\$221.3 <-- our interpolation
Adjustment factor	2.01	1.21	3.36	2.01	2.01	1.89	

M&M 2007

**Gross Annual Damages (\$billion/year)**

Pollutant	Mortality	Morbidity	Total	Share M1	Share M2
PM2.5	14.1	2.6	17.4	81.0%	14.9%
PM10	0	7.8	9.1	0.0%	85.7%
NOx	4.4	0.8	6.2	71.0%	12.9%
NH3	8.3	1.5	10	83.0%	15.0%
SOx	16.1	2.9	19.5	82.6%	14.9%
VOC	9.6	1.8	12.1	79.3%	14.9%

**M&M Reported Marginal Benefits Per Ton, 2000 \$**

Kings County	FIPS 36047	PM25	PM10	NOX	NH3	SO2	VOC
Based on \$2.0 million VSL		119,999	14,206	3,656	15,003	25,988	12,402
Adjusted for USDOT's \$6.2 million VS		241,785	17,119	12,268	30,183	52,235	23,493

**Adjusted Marginal Benefit of Abatement Per Ton, 2000 \$**

Kings County	FIPS 36047	PM25	PM10	NOX	NH3	SO2	VOC
Mortality		195,929	0	8,706	25,052	43,127	18,639
Morbidity		36,129	14,673	1,583	4,527	7,768	3,495
Total Health Effects		232,058	14,673	10,289	29,579	50,896	22,134

**Adjusted Marginal Benefit of Abatement Per Ton, 2 @ RCPI = 1.29**

Kings County	FIPS 36047	PM25	PM10	NOX	NH3	SO2	VOC
Mortality		253,132	0	11,248	32,366	55,719	24,081
Morbidity		46,677	18,957	2,045	5,849	10,036	4,515
Total Health Effects		299,809	18,957	13,293	38,215	65,755	28,596

**Value Human Health Effects in Kings County, 2009 \$**

Kings County	FIPS 36047	PM	NOX	SO2	VOC	Total Kings County
Annual Reduction (tons)		6.5	95.3	99.2	2.1	203.1
Per Ton Value of Health Effects		159,383	13,293	65,755	28,596	
Value of Annual Reductions		\$ 1,035,990	\$ 1,266,856	\$ 6,522,880	\$ 60,052	\$ 8,885,777

NPV @ 15 years, 4% Discount Rate      98,795,510

discount  
rate

4%

Year	Annual Reduction (2009 \$)	Discounted Benefit
1	8,885,777	8,544,016
2	8,885,777	8,215,400
3	8,885,777	7,899,423
4	8,885,777	7,595,599
5	8,885,777	7,303,461
6	8,885,777	7,022,559
7	8,885,777	6,752,460
8	8,885,777	6,492,750
9	8,885,777	6,243,029
10	8,885,777	6,002,912
11	8,885,777	5,772,031
12	8,885,777	5,550,030
13	8,885,777	5,336,567
14	8,885,777	5,131,315
15	8,885,777	4,933,956
	NPV	98,795,510

**Marginal Benefit of Abatement (\$/ton) (constant year-2000 USD)**

**Ground Level Sources (Stationary and Mobile)**

County	fips	Ammonia (NH3)	Particulate Matter (2.5)	Nitrogen Oxides (Nox)	Sulfur Dioxide (SO2)	Volatile Organic Compounds (VOC)	Particulate Matter (10)
Kings County	36047	15003	119999	3656	25988	12402	14206
New York County	36061	17081	69486	3047	15898	7112	7380

**Point Sources with Effective Hieght < 250 meters**

County	fips	Ammonia (NH3)	Particulate Matter (2.5)	Nitrogen Oxides (Nox)	Sulfur Dioxide (SO2)	Volatile Organic Compounds (VOC)	Particulate Matter (10)
Kings County	36047	12088	94827	2662	20315	9802	11223
New York County	36061	14093	54365	2228	12546	5566	5760

**Point Sources with Effective Height > 250 meters & < 500 meters**

County	fips	Ammonia (NH3)	Particulate Matter (2.5)	Nitrogen Oxides (Nox)	Sulfur Dioxide (SO2)	Volatile Organic Compounds (VOC)	Particulate Matter (10)
Kings County	36047	7697	31398	344	7138	3249	3642
New York County	36061	9663	20663	580	5170	2125	2162

County	Kings County	New York County
fips	36,047	36,061
Ammonia (NH3)	15,003	17,081
Particulate Matter (2.5)	119,999	69,486
Nitrogen Oxides (Nox)	3,656	3,047
Sulfur Dioxide (SO2)	25,988	15,898
Volatile Organic Compounds (VOC)	12,402	7,112
Particulate Matter (10)	14,206	7,380