

Toxics Release Inventory & Emission Reductions 1987-1990 in the Lower Mississippi River Industrial Corridor

U.S. Environmental Protection Agency
Office of Pollution Prevention and Toxics

May 14, 1993

Preface

This briefing was prepared at the request of the U.S. EPA Office of Air and Radiation (OAR). Its primary purpose is to compile data on air toxics emission sources reporting under the Toxics Release Inventory (TRI) in the Lower Mississippi River Industrial Corridor. OAR also requested that available information on emissions reduction programs, population characteristics, and related environmental equity issues reported about this geographic area be included.

This summary provides an introduction to issues involving toxic chemical emissions, reduction programs, and related topics, with a specific focus on air releases. It is an example of a type of data summary which could be compiled about many other areas of the U.S. where aggregations of industries report under TRI. In other areas, different environmental media may be of primary interest. This summary also shows how TRI and other data can be combined with the 1990 Census of Population using the analysis and display capabilities of a geographic information system (GIS). These analyses can be a significant addition to data compiled from various primary and secondary sources, such as EPA and State reports, books and the media.

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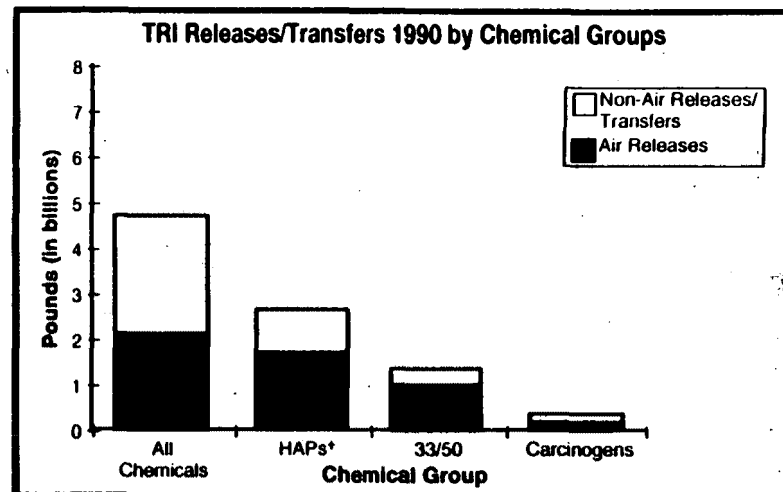
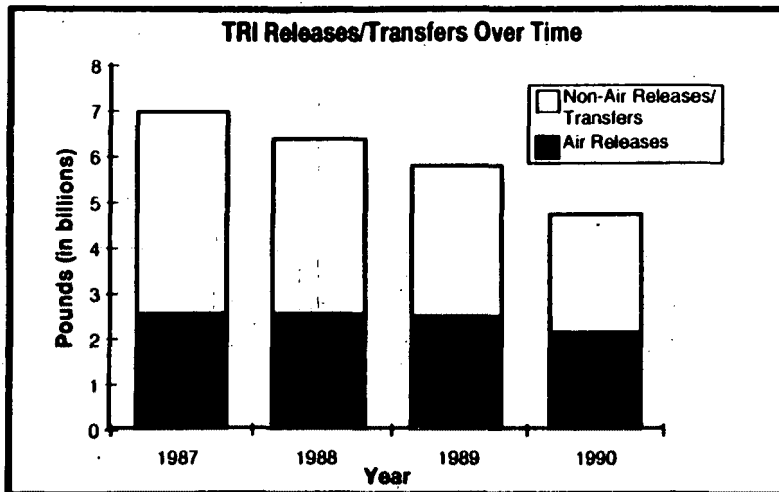
Briefing Overview

- The briefing includes summaries of Toxics Release Inventory (TRI) data for several sets of chemicals in three geographic levels. Special attention is focused on air releases, on the contribution of the chemical industry to emissions levels, and on voluntary or regulatory efforts likely to reduce emissions.
 - TRI and 33/50 Program Overview and U.S. Data Summary
 - Louisiana State Characterization
 - Lower Mississippi River Industrial Corridor Characterization
 - Equity Issues and Demographic Data
 - Impact of Reduction Efforts
 - Conclusions

TRI Program Overview

- The TRI includes annual reports of releases and transfers (“emissions”) of over 300 chemicals and chemical categories
- Data are reported by manufacturing facilities meeting certain size and volume of chemical manufacturing or use thresholds
- While not including all chemicals and facilities of interest, TRI is the most comprehensive set of emissions data available
- TRI data are mandated by statute to be publicly available
- Since the program’s inception, many agencies, industries and citizen groups have used TRI to set priorities for toxic chemical reductions

U.S. TRI Emissions Over Time



1990 Data					
Chemical Classes	# of Chemicals	Releases and Transfers	% from Chemical Industry	Total Air Releases	% Air Releases
All	322	4,830,980,821	44	2,200,561,441	46
HAPs*	173	2,707,575,101	36	1,602,415,493	59
33/50	17	1,180,341,451	17	899,618,000	76
Carcinogens*	125	423,908,730	36	280,447,829	66

* Clean Air Act Amendments Hazardous Air Pollutants
 * de minimus list plus Trichloroethylene

- About 46% of total TRI emissions are air releases (2.2 billion lbs. in 1990)
- The chemical industry (SIC 28) contributed 44% of total TRI emissions, and 32% of air releases in 1990

33/50 Program Overview

- Voluntary TRI release reduction program established in 1991; seeks 50% reduction in total TRI emissions across 17 toxic chemicals and categories by 1995, with an interim goal of 33% reduction by 1992
- 1988 TRI data are used as a baseline; success is evaluated by annual TRI reporting and a review of reduction methods
- The program asks parent companies to achieve reductions using a company-specified mix of facilities, chemicals and media; EPA Regional offices have also sought reduction from geographic groupings of facilities
- 74% of U.S. total emissions of 33/50 chemicals are air releases from fugitive or point sources
- 19% of U.S. total 33/50 emissions are from the chemical industry

33/50 Program Chemicals

- 33/50 Program focuses on 17 chemicals and categories that were targeted for their health and environmental risks, and because of significant opportunities for emissions reduction
- Chemicals and categories of concern:

benzene

cadmium & compounds

carbon tetrachloride

chloroform

chromium & compounds

cyanide & compounds

dichloromethane

lead & compounds

mercury & compounds

methyl ethyl ketone

methyl isobutyl ketone

nickel & compounds

tetrachloroethylene

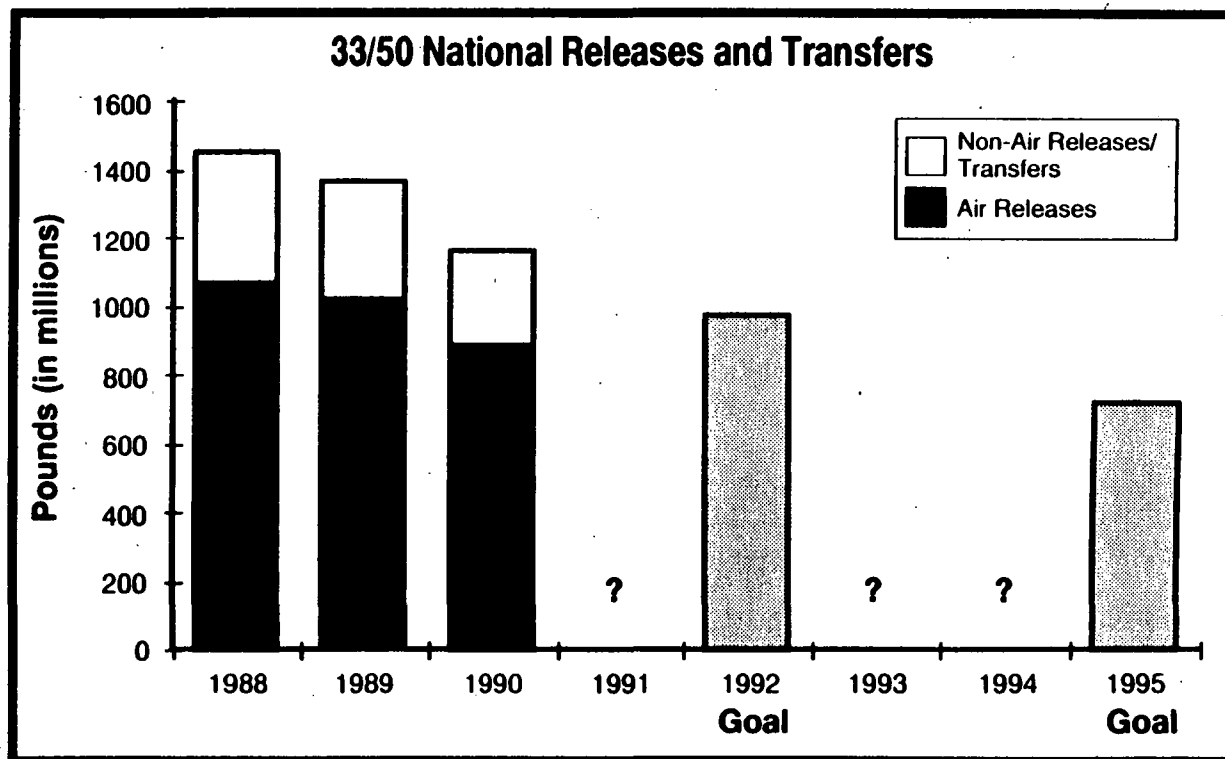
toluene

1,1,1-trichloroethane

trichloroethylene

xylene

U.S. TRI Releases and Transfers of 33/50 Chemicals



- Total TRI emission of 33/50 chemicals declined 19.5% between 1988 and 1990.
- Total TRI air releases of 33/50s declined 16.4% between 1988 and 1990.

33/50 Program Commitment Status

- Commitments are made by parent company and relate to total releases and transfers for parent company
- Companies with TRI facilities in more than one EPA Region are contacted by Headquarters, while single-Region parent companies are targeted by their respective Regions
- Of about 7664 parent companies eligible for the 33/50 program, 1135 (15%) have committed to reducing at least 449 million lbs. by 1995
- Nationally, 61% of 33/50 emissions are associated with committed parent companies

Selected Louisiana Characteristics

- State population in 1990 was 4.2 million, 21st largest in the U.S.*
- 68% of the state's population lived in urban areas and 32% in rural ones, a figure slightly larger than the U.S. average of 25%*
- Louisiana's 1990 cancer death rate of 186 per 100,000 population ranked the state as the 5th highest in the nation in cancer death rate*
- Louisiana's 1989 infant mortality rate was 11.3 per 1000 live births, which placed Louisiana 6th highest in the nation in cancer death rate*
- 25.7% of the non-elderly population in Louisiana did not have health insurance in 1988*

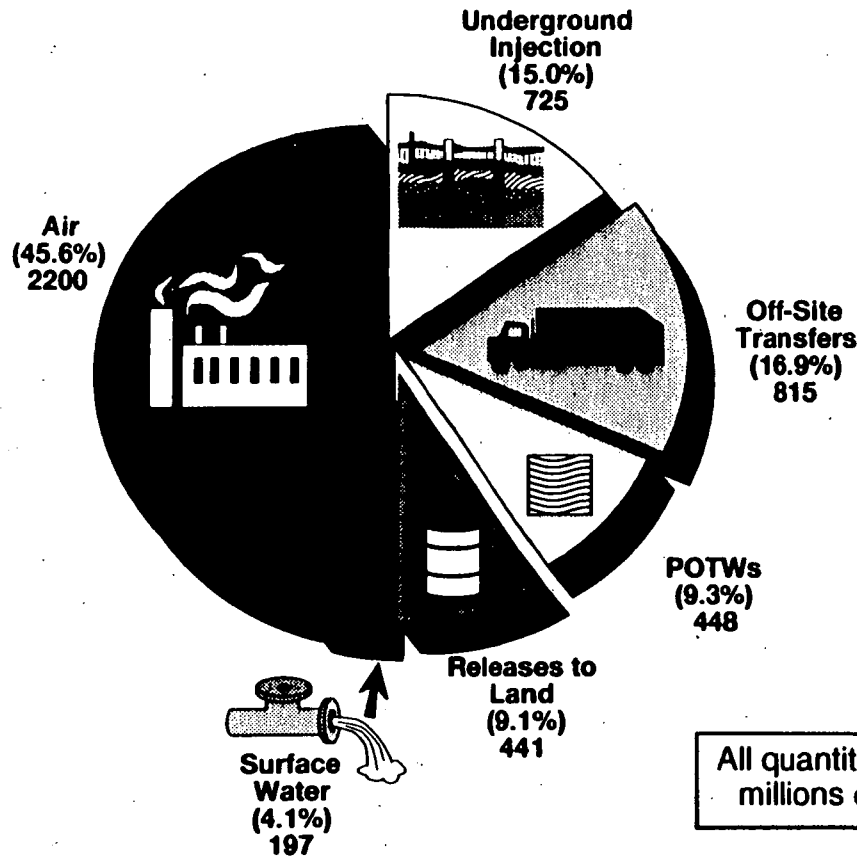
Sources: * U.S. Bureau of the Census
* 1992 Green Index

Louisiana TRI Profile

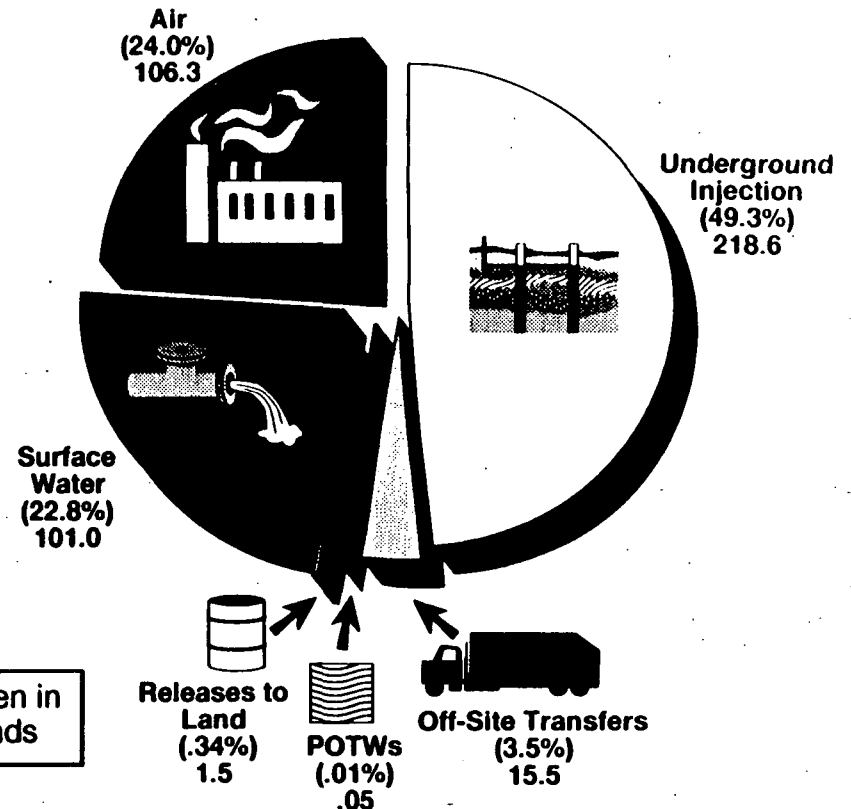
- In 1990, Louisiana was ranked first in the U.S. in total releases of TRI chemicals, with 427.4 million lbs., and second if releases and off-site transfers are combined (443.0 million lbs.) after Texas (535.7 million lbs.)
- 1990 water releases were 101.0 million lbs., ranking first in the U.S.
- 1990 underground injection releases were 218.6 million lbs., ranked second after Texas (240.0 million lbs.)
- Louisiana total air releases in 1990 were 106.3 million lbs., ranking the state 6th in the U.S.
- State TRI total releases declined 48.5% between 1987 and 1990, and its total air releases declined 27.6%

Source: 1990 Toxics Release Inventory Public Data Release. EPA 700-S-92-002.
May 1992; Updated September 1992.

TRI Emissions to Environment – 1990



**United States
Total Emissions:
4,826M**



**Louisiana
Total Emissions:
443M**

All quantities given in millions of pounds

Louisiana Air Toxics Profile

- In 1989, the Louisiana Clean Air Act 184 was passed requiring companies to reduce emissions of priority toxic air pollutants 50% by 1996, based on 1987 levels; regulations were promulgated in late 1991
- A list of 96 priority air toxics was developed in 1991, based on emissions, health effects, exposure, and environmental accumulation
- 24% of Louisiana's total TRI emissions were air releases
- In its comparative risk report, Louisiana rated air toxics as the first priority environmental problem in 1991*
- Between 1987 and 1990, Louisiana TRI facilities' air releases changed:

– All TRI Chemicals	-28%	– 33/50 Chemicals*	-23%
– Carcinogens	-9%	– HAPs	-19%

Source: * LEAP to 2000: Louisiana Environmental Action Plan. June, 1991.

• 1988 is base year for 33/50 Program; 1988-90 reduction was 26%.

• Clean Air Act Amendments Hazardous Air Pollutants

Louisiana TRI Air Releases

		All TRI Chemicals			33/50 Chemicals			Carcinogens			HAPs*		
		Air Releases	% Change from		Air Releases	% Change from		Air Releases	% Change from		Air Releases	% Change from	
			1987	1988		1987	1988		1987	1988		1987	1988
United States	1987	2,709,439,712	-	-	1,101,273,317	-	-	376,339,126	-	-	1,904,439,984	-	-
	1988	2,631,938,926	-3	-	1,075,621,783	-2	-	351,838,594	-7	-	1,885,065,787	-1	-
	1989	2,553,313,314	-6	-3	1,034,417,103	-6	-4	329,475,768	-12	-6	1,780,729,068	-6	-6
	1990	2,200,561,441	-19	-16	899,618,000	-18	-16	280,447,829	-25	-20	1,602,415,493	-16	-15
Louisiana	1987	146,401,819	-	-	18,118,971	-	-	10,233,537	-	-	51,801,074	-	-
	1988	132,701,661	-9	-	18,818,807	4	-	9,391,474	-8	-	46,582,822	-10	-
	1989	134,730,417	-8	2	14,901,500	-18	-21	11,829,832	16	26	46,546,121	-10	0
	1990	105,927,761	-28	-20	13,920,655	-23	-26	9,291,674	-9	-1	42,201,976	-19	-9
Industrial Corridor	1987	106,927,284	-	-	8,558,498	-	-	6,133,314	-	-	26,388,892	-	-
	1988	100,517,814	-6	-	10,695,436	25	-	5,886,964	-4	-	26,103,734	-1	-
	1989	92,304,519	-14	-8	7,623,172	-11	-29	5,163,104	-16	-12	22,750,805	-14	-13
	1990	68,394,340	-36	-32	6,098,684	-29	-43	3,870,010	-37	-34	19,332,157	-27	-26

* Clean Air Act Amendments Hazardous Air Pollutants

Louisiana's and the Industrial Corridor's air releases of 33/50 chemicals declined 26% and 43% respectively, between 1988 and 1990, much faster than the U.S. rate of 16%

Louisiana Chemical Industry

- Louisiana ranks third among states producing chemicals in terms of dollar value of chemical shipments, after Texas and New Jersey
- Louisiana's chemical industry is the largest single manufacturing employer in the state
- The chemical industry represents 41.2% of all value added to products in Louisiana's manufacturing facilities
- Chemical industry contributes 89% of total TRI releases and transfers in Louisiana and 80.4% of the state's total air releases

Source: Press reports in New Orleans Times-Picayune

- | | |
|------------------|------------------------|
| Ascension | Plaquemines |
| East Baton Rouge | Saint Charles |
| Iberville | Saint James |
| Jefferson | Saint John the Baptist |
| Orleans | West Baton Rouge |

Lower Mississippi River Industrial Corridor Characteristics

- Total population in the 10 parishes was 1,562,918 in 1990, 37% of the state total; 41% were racial minorities, compared to 33% in the state
- Six parishes were in the top 10th percentile of the U.S. for total emissions of TRI chemicals in 1990; three were among the top 10 counties in the U.S. (Jefferson, Ascension, and St. James)
- Total 1990 TRI air releases in Ascension Parish (31 million lbs.) were higher than those in 27 states
- 1990 air releases in the industrial corridor account for 18.2% of all 1990 TRI emissions
- 1990 33/50 emissions account for 2.5% of the total emissions in the industrial corridor as opposed to 24.4% for the U.S. In the corridor, 33/50 air releases account for 64.5% of the 33/50 emissions and 8.9% of total air releases, as compared to 76.2% and 40.9% for the U.S.
- Between 1987-90, facilities' air releases in the corridor changed:

– all TRI chemicals	-36%	– 33/50 Chemicals	-29%
– Carcinogens	-37%	– HAPs*	-27%

• Clean Air Act Amendments Hazardous Air Pollutants

• 1988-90 reduction of 33/50 chemicals was 43%.

Lower Mississippi River Industrial Corridor Air Releases

Parishes Ranked by Total 1990 TRI Air Releases

Parish Name	All TRI Chemicals		33/50 Chemicals		Carcinogens		HAPs *	
	1990 Pounds	% of State Total	1990 Pounds	% of State Total	1990 Pounds	% of State Total	1990 Pounds	% of State Total
Ascension	30,211,503	29%	792,141	6%	776,815	8%	4,210,911	10%
Saint James	15,258,055	14%	137,378	1%	99,853	1%	398,131	1%
East Baton Rouge	9,237,842	9%	1,465,954	11%	933,513	10%	6,054,179	14%
Iberville	4,075,523	4%	1,097,747	8%	893,605	10%	2,876,722	7%
Saint Charles	3,585,977	3%	467,155	3%	506,642	5%	1,282,933	3%
Jefferson	1,889,764	2%	995,535	7%	141,399	2%	1,359,866	3%
West Baton Rouge	1,524,947	1%	14,654	0%	23,586	0%	1,284,342	3%
Orleans	1,195,295	1%	353,515	3%	236,484	3%	651,074	2%
Plaquemines	818,960	1%	659,267	5%	221,551	2%	714,674	2%
Saint John the Baptist	596,474	1%	115,338	1%	36,542	0%	499,325	1%
Study Area (10 Parishes)	68,394,340	65%	6,098,684	44%	3,869,990	42%	19,332,157	46%
Louisiana Total	105,927,761		13,920,655		9,291,674		42,201,976	

Chemical Industry Contribution

	All TRI Chemicals	33/50 Chemicals	Carcinogens	HAPs*
Industrial Corridor	90%	45%	69%	76%
Louisiana Total	80%	33%	48%	62%

* Clean Air Act Amendments Hazardous Air Pollutants

Note: TRI data for individual parishes and facilities were derived from
EPA's Toxics Release Inventory System as of May 20, 1992

Largest 33/50 Emitters in Industrial Corridor

Ranked by Total 1990 Air Releases

Facility Name	Total Air Rank	Total Air Releases	33/50 Rel./Trans. Rank*	33/50 Air Releases	Carcinogens Air Releases	HAPs Air Releases	33/50 Total Rel./Trans.	Total Releases/Transfers
FREEPORT MCMORAN RESOURCE AGRICO CHEM. CO. DIV.	1	14,211,310	77	0	1,000	74,255	0	56,538,815
TRIAD CHEMICAL	2	11,302,774	77	0	500	90,739	0	11,777,898
CF INDUSTRIES INC.	3	10,769,954	77	0	1,249	136,999	0	11,759,589
EXXON CHEMICAL BATON ROUGE CHEMICAL PLANT	4	3,717,187	8	351,600	252,351	2,540,041	377,077	3,987,042
SHELL CHEMICAL CO. GEISMAR PLANT	5	2,074,036	33	0	145,000	978,976	43,277	2,126,937
DOW CHEMICAL CO. LOUISIANA DIV.	6	1,947,392	8	391,715	546,805	1,004,552	414,023	2,440,708
SHELL OIL CO. NORCO MFG. COMPLEX - EAST	7	1,831,932	5	351,000	298,160	618,602	476,953	3,862,895
EXXON CHEMICAL CO. BATON ROUGE PLASTICS PLANT	8	1,619,527	62	2,548	0	453,464	2,576	1,646,025
BORDEN CHEMICAL & PLASTICS	9	1,595,125	37	15,067	74,988	676,064	30,232	5,804,405
ARCADIAN CORP.	10	1,546,505	77	0	0	97,505	0	15,984,770
SID RICHARDSON CARBON & GASOLINE CO.	11	1,245,735	77	0	0	1,245,735	0	1,245,735
GEORGIA-PACIFIC CORP. PORT HUDSON	12	1,043,155	10	274,800	274,800	930,100	275,050	1,061,505
EXXON BATON ROUGE REFINERY	13	955,392	2	690,666	67,499	770,779	706,448	1,041,679
BASF CORP.	14	927,920	9	66,080	52,014	743,417	302,958	2,384,462
ALLIED-SIGNAL INC. BATON ROUGE SOUTH	15	778,062	47	20,019	20,019	481,436	20,487	956,367
BP OIL CO.	16	776,900	3	636,805	221,540	692,585	670,731	1,057,018
GEORGIA GULF CORP.	17	766,274	60	3,163	124,398	590,684	3,900	813,935
AGRICO CHEMICAL CO. DIV. OF FREEPORT MCMORAN	18	703,717	77	0	0	255	0	36,155,967
AIR PRODUCTS & CHEMICALS INC. (NEW ORLEANS FACILITY)	19	691,043	77	0	0	283,059	0	724,858
CIBA-GEIGY CORP.	20	628,506	4	598,192	5,997	606,246	610,604	883,515
SHELL OIL CO. NORCO MFG. COMPLEX - WEST	21	594,860	24	79,500	50,900	317,820	79,500	705,444
AMERICAN CYANAMID CO. FORTIER PLANT	22	582,489	29	38,390	45,976	236,939	52,560	162,040,814
VULCAN MATERIALS CO. CHEMICALS DIV. GEISMAR FACILITY	23	570,953	7	377,110	324,203	557,744	402,272	664,962
UNION CARBIDE INDUSTRIAL CHEMICALS	24	486,465	44	22,919	78,413	206,168	22,919	526,136
LE CHEM INC.	25	416,222	77	0	0	404,222	0	2,031,114
RUBICON INC. GEISMAR SITE	26	411,442	16	52,916	38,118	353,325	117,747	4,411,189
DU PONT PONTCHARTRAIN WORKS	27	397,178	20	44,326	20,627	357,377	97,398	1,700,086
AGRICO CHEMICAL CO. TAFT PLANT	28	392,255	77	0	0	0	0	1,173,555
UNIROYAL CHEMICAL CO. INC.	29	371,718	1	187,568	47,803	270,288	2,356,180	9,557,184
UNION TX PRODUCTS CORP. GEISMAR ETHYLENE PLANT	30	361,560	21	93,400	92,960	124,560	93,685	361,855

*The 25 facilities with the highest 33/50 air releases are highlighted in grey and shown on the "Lower Mississippi River Industrial Corridor" Map.

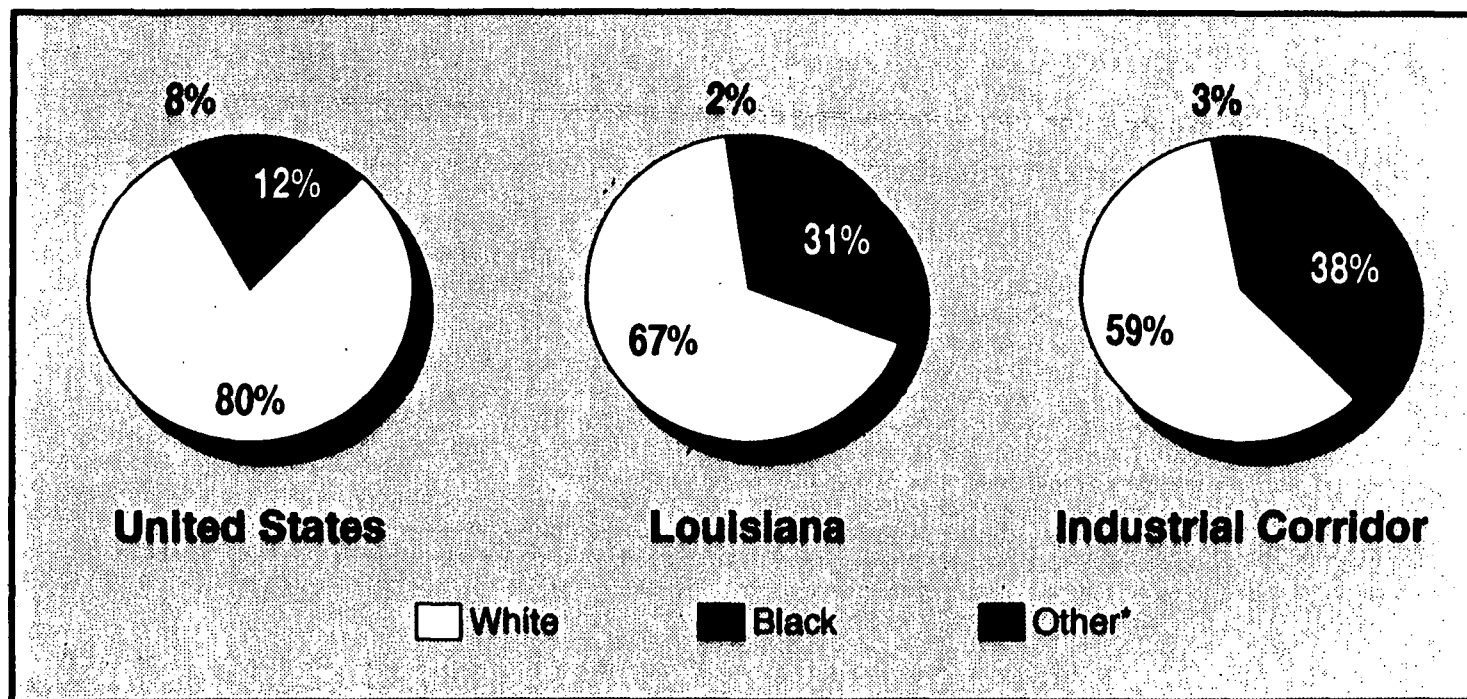
Largest 33/50 Emitters in Industrial Corridor (cont.)

Ranked by Total 1990 Air Releases

Facility Name	Total Air Rank	Total Air Releases	33/50 Rel./Trans. Rank*	33/50 Air Releases	Carcinogens Air Releases	HAPs Air Releases	33/50 Total Rel./Trans.	Total Releases/Transfers
AVONDALE INDUSTRIES SHIPYARD DIV.	31	360,300	11	268,000	1,300	269,300	268,000	360,300
COSMAR CO.	32	318,579	23	74,569	163,815	315,017	82,269	338,097
ASHLAND CHEMICAL INC.	33	273,260	70	0	0	273,010	250	277,560
MONSANTO CO.	34	270,562	77	0	12,600	47,362	0	5,675,501
MICHOUD ASSEMBLY FACILITY	35	246,398	13	178,590	189,252	179,090	191,368	276,734
COPOLYMER RUBBER & CHEMICAL CORP.	36	239,657	61	3,500	0	4,074	3,750	241,380
COPOLYMER RUBBER & CHEMICAL CORP.	37	214,351	77	0	199,155	199,155	0	217,775
AMPRO FERTILIZER INC.	38	197,206	77	0	0	166,544	0	231,954
ATLAS STEEL & WIRE CORP.	39	195,270	12	195,270	12,350	195,270	195,270	214,170
UNION CARBIDE CORP. STAR PLANT	40	167,498	73	22	68,535	69,638	22	195,165
CHEVRON CHEMICAL CO.	41	151,381	26	65,199	76,560	151,278	67,885	158,403
STAR ENTERPRISE	42	141,484	28	57,578	5,264	132,714	60,275	8,912,001
SIGMA COATINGS	43	128,475	17	109,274	0	120,476	112,441	159,600
MARATHON OIL CO. LOUISIANA REFINING DIV.	44	116,657	27	36,005	9,387	101,122	60,298	179,063
FORMOSA PLASTICS CORP. LA.	45	115,983	69	106	59,340	111,259	377	148,874
CONTAINER PRODUCTS INC. NEW ORLEANS (LA) PLANT	46	103,441	14	103,441	0	103,441	175,470	175,470
EVANS COOPERAGE CO. INC.	47	101,227	22	89,349	505	90,620	89,349	301,494
GULF WIRE CORP.	48	100,610	19	100,610	67,232	100,610	101,110	101,110
ETHYL PROCESS DEVELOPMENT CENTER	49	94,465	18	78,000	32,455	93,705	108,500	155,165
JEFFERSON FIBERGLASS CO. INC.	50	86,072	77	0	69,780	69,780	0	86,072
EVANS CONTAINER CORP.	51	81,598	31	47,604	5,081	52,675	47,604	81,598
CELOTEX CORP.	52	72,751	25	72,751	0	72,751	72,751	72,751
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SCHUYLKILL METALS CORP.	90	7,218	15	7,218	0	0	142,258	236,734
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*The 25 facilities with the highest 33/50 air releases are highlighted in grey and shown on the "Lower Mississippi River Industrial Corridor" Map.

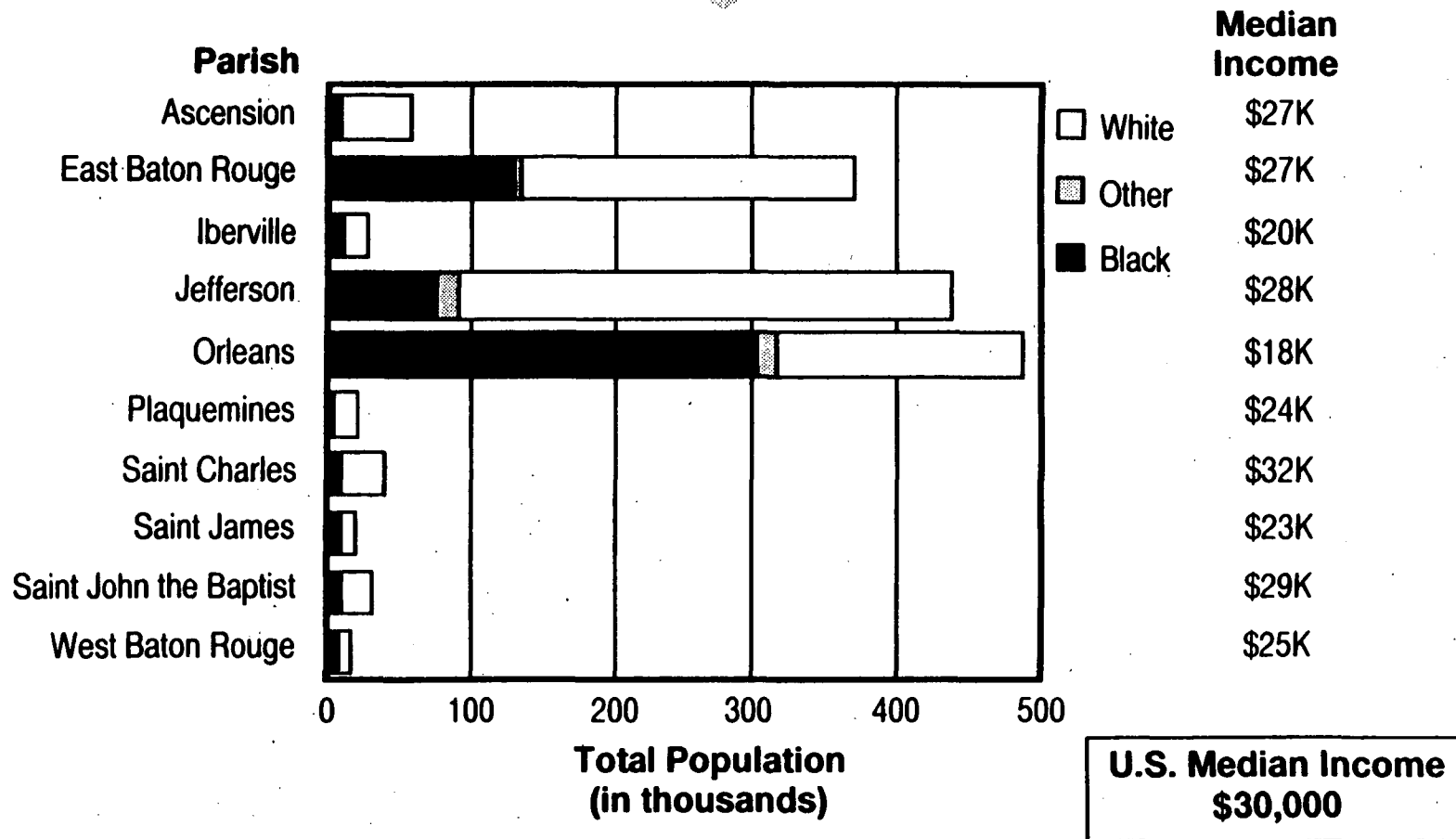
Comparison of Population Characteristics



*Other: U.S. Bureau of Census Categories: "American Indian," "Asian and Pacific Islanders," and "Other"

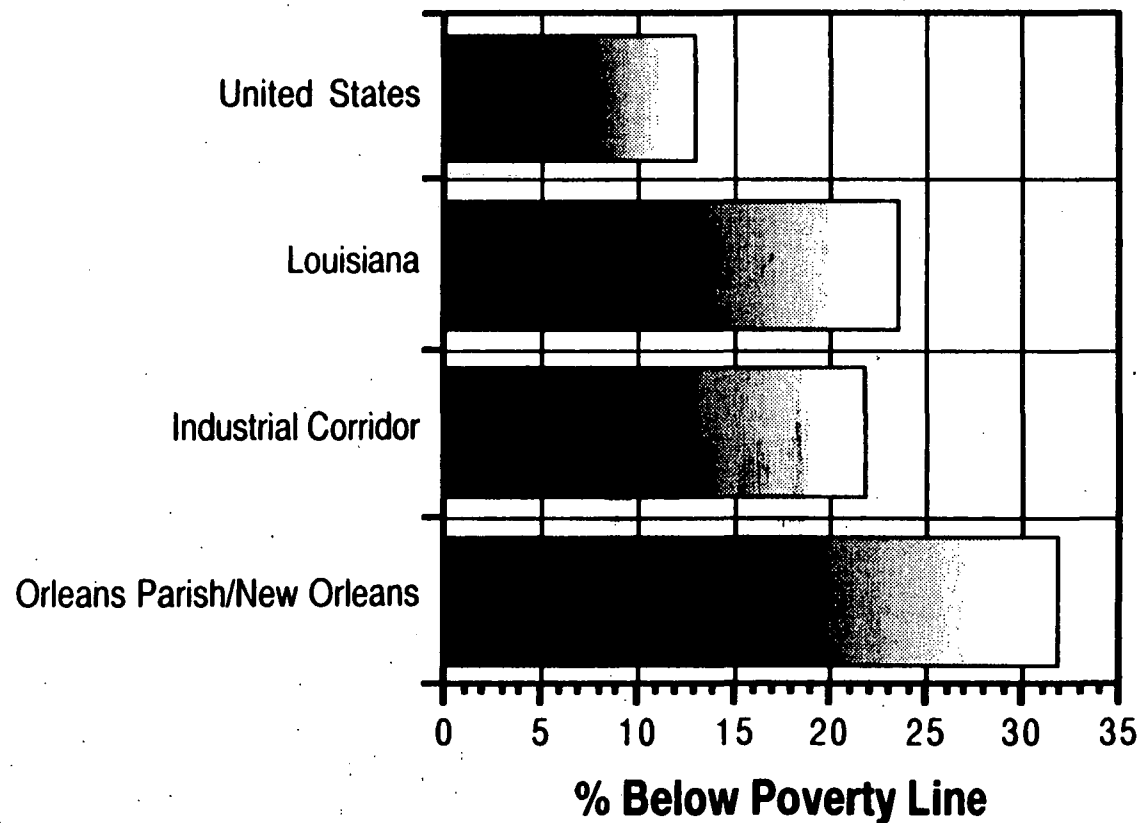
Source: U.S. Bureau of the Census

Comparison of Population Characteristics



• Median Income in 9 out of 10 Industrial Corridor Parishes was Below the U.S. Level

Comparison of Population Below Poverty Line



• In 1989, Louisiana was ranked 2nd among states for the percentage of people below the poverty line

Source: U.S. Bureau of the Census

Lower Mississippi River Industrial Corridor Demographics

Parish Name	Population Characteristics							
	1990 Population	% Race			% Non-White	% Hispanic	Median Income	% Below Poverty Line
		White	Black	Other				
Orleans	496,938	35%	62%	3%	65%	3%	\$18,477	32%
Jefferson	448,306	78%	18%	4%	22%	6%	\$27,916	14%
East Baton Rouge	380,105	63%	35%	2%	37%	2%	\$27,224	20%
Ascension	58,214	76%	23%	1%	24%	2%	\$27,435	18%
Saint Charles	42,437	75%	24%	1%	25%	3%	\$31,777	15%
Saint John the Baptist	39,996	63%	36%	1%	37%	2%	\$29,035	18%
Iberville	31,049	53%	46%	0%	47%	2%	\$20,371	28%
Plaquemines	25,575	72%	23%	4%	28%	2%	\$24,076	23%
Saint James	20,879	50%	50%	0%	50%	1%	\$23,105	26%
West Baton Rouge	19,419	63%	36%	0%	37%	1%	\$24,852	20%
Industrial Corridor	1,562,918	59%	38%	3%	41%	3%	\$26,038	22%
Louisiana Total	4,219,973	67%	31%	2%	33%	2%	\$21,949	24%
National	248,709,873	80%	12%	8%	20%	9%	\$30,056	13%

*Other: U.S. Bureau of Census Categories: "American Indian," "Asian and Pacific Islanders," and "Other"

Industrial Corridor Environmental Equity Issues

- Many of the facilities emitting large amounts of TRI chemicals are located in areas with predominantly minority populations
- Populations within two miles of facilities releasing 90% of total industrial corridor air releases feature a higher proportion of minorities than the state average; facilities releasing 88% have a higher proportion than the Industrial Corridor parishes' average*
- Although no connection between TRI emissions and health risks has been clearly demonstrated, numerous studies and media reports have highlighted the potential for significant risks to these populations from chemical releases
- Several historically black rural communities have been bought out by chemical or petroleum refining facilities as plant buffers
- The State of Louisiana has funded an environmental equity study with LSU to aid in environmental policy development; recommendations from the study are expected in the summer of 1993

*Source: * OPPT GIS analysis using emitter locations and demographic data*

- Louisiana ranks 3rd in the U.S. for percent of 33/50 emissions associated with committed parent companies (86%) after Montana and Delaware
- Many of the Industrial Corridor facilities will be affected by the Hazardous Organic NESHAPs' rule

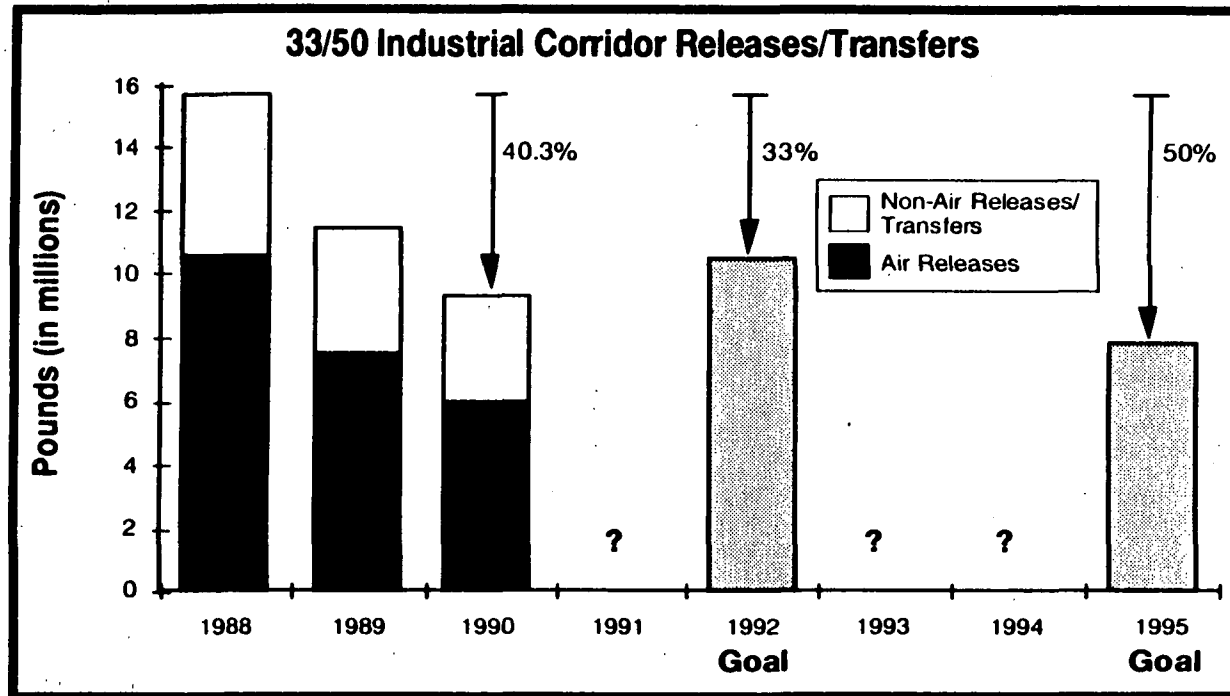
- Several large plants are voluntarily decreasing emissions through internal efforts
- The Louisiana chemical industry has focused attention of its members on achieving voluntary reductions through various practices.

May 1993 • Draft

State Reduction Initiatives

- The Louisiana Clean Air Act 184 mandates faster reductions than the federal Clean Air Act; major sources (those releasing 20,000 lb./yr of any single chemical, or 50,000 lb. of a combination) must implement Maximum Achievable Control Technology by 1996
- In 1991, the state created the Corporate Response Challenge Program with the top 10 facilities releasing TRI chemicals to air, water, and underground
 - The 30 participants in this voluntary program are projected by the state to achieve at least a 75% decline in multimedia aggregate emissions (from 1987) by the end of 1995
 - Data released in 1992 show that participants' air releases declined 27.2% between 1987 and 1990
 - The program's goal is to achieve a 50% reduction in air toxics by the end of 1996

33/50 Company Commitments and Emissions Reductions



- Industrial Corridor facilities reduced 33/50 chemical emissions by 40% from 1988-1990, compared to the U.S. rate of 24%, with air releases declining 43% compared to the U.S. 16%; this exceeds the 33/50 1992 goal of 33% reduction
- Industrial Corridor has 52% 33/50 emitter parent company commitment rate, compared to 15% for the U.S.
- 87% of facility 33/50 chemical emissions in the corridor are covered by parent company commitments, much higher than the U.S. average of 61%

Conclusions

- TRI releases and transfers in most of the industrial corridor parishes are significantly higher than most other counties in the U.S.
- The amounts of chemical emissions, together with the proximity of the facilities to minority and low income populations, has drawn national attention
- Louisiana has identified toxic air releases as a major state environmental priority, and is actively pursuing regulatory and voluntary reduction efforts
- TRI facilities in the industrial corridor have reduced air emissions faster than the national average
- State implementation of its air toxics act should result in major additional decreases in air emissions of 96 toxic chemicals by 1996
- A much higher than average fraction of 33/50 releases and transfers to all media from facilities in the industrial corridor may be reduced under parent company commitments