



Demonstrating against toxic waste disposers in their neighborhood. Arizona State Capitol, February 12, 2000.



The record for this permit falls short of the required demonstration to be protective...potential facility impacts on the surrounding residential and commercial community were not addressed. --Letter from Alton Washington, Deputy City Manager to Jacqueline Schaefer, Director, Arizona Dept. of Environmental Quality.

A controversial south Phoenix hazardous waste facility is among 18 of Arizona's 26 waste sites that have been operating under temporary permits for 20 years. The sites...have faced fewer safety and cleanup regulations and milder financial liability requirements than those required under permanent permits. --Pat Kossan, Arizona Republic, Friday, Nov. 12, 1999

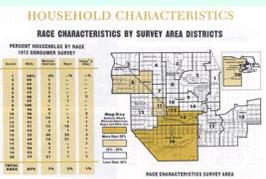
I'm a resident here...this whole situation is political. Money can be replaced, but their lives can't. You can't see these emissions. They're small, they're minute. But you never know what they could do to a child. -- Robert Benjamin, neighborhood resident



Innovative Waste Utilization, the first "temporary" hazardous waste facility to be considered for a permanent permit.



The majority of hazardous waste sites in Arizona have only temporary permits to operate.



In 1972, a marketing survey taken by the Arizona Republic showed that the racial segregation in South Central Phoenix (depicted as Districts 13 and 5 on this map) continued.

Table 2 - Racial Composition of TSDF Cluster Area

Census Tract	Non-Hispanic White	Hispanic	African-American
1125.06	46.15%	42.48%	8.42%
1143	21.01%	56.47%	17.26%
1148	6.63%	58.08%	32.55%
Average for 3 CTs:	24.59%	52.37%	19.41%
Average for Maricopa County:	71.91%	20.48%	3.48%

1995 Special Census data shows that people of color still make up a much higher than average proportion of the population in the Census Tracts with TSDFs.

Controversies: Legal and Political Battles over Hazardous Waste in Central Arizona

Researcher: Diane Sicotte

RESEARCH QUESTIONS

- What is the role of local government, local elites, and planning and zoning laws in the production of environmental inequalities?
- How does social stratification make environmental inequalities "unintentional, unavoidable, inexorable"?
- What is the role of science and the scientific expert in the battles fought over environmental inequalities?
- What is the history of the development of these inequalities in Central Arizona? Were the processes that led to them different in rural, suburban and urban areas?
- What are the social bases for community collective action in fighting environmental inequalities? Which factors lead to success or failure?

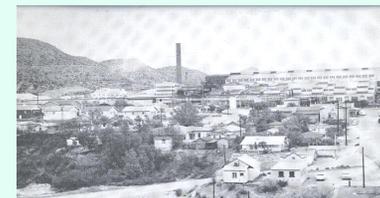
INITIAL FINDINGS

South Central Phoenix Hazardous Waste Disposal Facilities Controversy

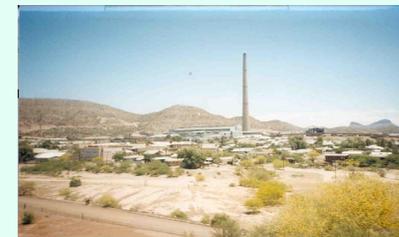
1. **Hazardous Waste Treatment, Storage and Disposal Facilities (TSDFs) are geographically clustered in an area historically populated by African-American and Mexican-American residents,** who came to Phoenix to work in the cotton and sugar beet fields around the time of World War I. These agricultural workers settled in segregated areas of Phoenix south of the railroad tracks. The industrial area of South Central Phoenix has been home to nonwhite residents since the city was founded in 1887, and the racial concentration of minorities has changed little since then.
2. **Preexisting social networks for political activism:** Although the affected area is populated mostly by Mexican-Americans, African-American protesters are equally active in fighting the TSDFs. (This could be due to preexisting organizational networks for activism in the Black community dating back to civil rights struggles of the 1960s. These are largely absent in the Mexican-American community, and Mexican-American networks for activism center around the Catholic Church.)
3. **Political opportunity created by conflict between elites:** The City of Phoenix opposes the permanent permitting of TSDFs within city limits, seeing it as a "uniquely hazardous activity" that is an inappropriate land use. In contrast, the Arizona Department of Environmental Quality sees permanent permits as providing more protection to the public, and claims that they are mandated by law to approve permanent permits if the permits are adequate.

Hayden, Arizona Class-Action Lawsuit Against a Copper Mining Corporation

1. **Company Town:** Hayden developed as a smelter town in 1911, when the first smelter was built. Initially a mining camp, Hayden became a fairly typical "company town", with the largely Mexican mining and smelting workforce segregated from the largely white management. All buildings in the town were owned outright by the mining company until the 1950s, when homes and businesses were sold. The early development of the town as a temporary mining camp, the lack of concern for safety issues in the mining industry in general, and the nonwhite immigrant workforce all are factors that help explain why there is no buffer between the dwellings in the town and the chemical contaminants emitted by the smelter.
2. **Evidence of polluting:** Government documents from Toxic Release Inventory (reported by the company, ASARCO) show that lead, arsenic, nickel, cadmium, chromium and copper, together with the corrosive sulfur dioxide (sulfuric acid when combined with water) have been emitted by the plant each year in huge quantities.
3. **Many Health Studies, no conclusions:** Several health studies (by the U.S. Dept. of Health, the EPA, and the Arizona Department of Health) were done in the 1970s, 1980s and 1990s. Clear evidence was found that residents of counties where copper ore is smelted and refined had higher than normal rates of death from lung cancer; that children living in copper smelter towns had lead in their blood; and that heavy metals such as lead, arsenic and cadmium were found in household dust, soil and air around the smelters. However, evidence regarding Hayden residents has been inconclusive (the population of Hayden was so small that the higher number of deaths in Hayden did not attain statistical significance). Conclusions could not be drawn from a second health study, so a third study (funded by ASARCO, the copper-mining company that operates the smelter in Hayden) was done. This health study focused on lead and arsenic poisoning in children and adults, and, despite the small number of people sampled, concluded that only a small number of residents had elevated levels of arsenic in their blood. Despite positive blood lead results found in some children in the past, none of the children in the third health study tested positive for lead. The authors of the study then concluded that no contamination was found.



Hayden, Arizona in 1956, just after it was sold by Kennecott Copper. The town is dominated by the smelter's 1,000-ft high smokestack.



Hayden today. Its population declining, Hayden is still very much a smelter town.

Table 4 - Releases for ASARCO Hayden Plant

Toxic Release Inventory Facility Reports for Hayden Smelter and Concentrator
Ten-year Average 1988-1998: Pounds Per Year Released into Environment

Chemical	Fugitive Air	Stack Air	Water	Land
Antimony Compounds	2,054	734	46	544,291
Arsenic Compounds	6,521	7,062	46	593,982
Cadmium Compounds	679	972	46	29,004
Copper Compounds	505,836	38,343	48	6,936,989
Lead Compounds	12,742	33,004	47	1,729,425
Nickel Compounds	499	531	47	65,434
Sulfuric Acid	1,381	76,823	0	496
Zinc Compounds	23,664	13,528	47	8,446,132

Since reporting of toxic releases became mandatory a decade ago, ASARCO has consistently identified itself as one of the top five polluters in Arizona.

Lung Cancer Rate Above Average

By STEVE AUSLANDER, Star Staff Writer

...lung cancer deaths in four Southern Arizona counties are 20 to 93 per cent higher than a predicted statistical average, say two researchers with the National Cancer Institute.

Dr. William J. Blot, one of the researchers, said that even at each death rate 50 per cent higher than predicted in Cochise County, 40 per cent higher in Graham County, 48 per cent higher in Greenlee County and 35 per cent higher in Pima.

Blot and a fellow researcher, Joseph P. ... reporting their findings in the British medical journal, *Lancet*, concluded that the incidence of lung cancer was significantly increased in counties with copper, lead, or zinc smelting and refining industries.

...The findings suggest the influence of community air pollution from industrial emissions containing trace metals.

The researchers said they found higher-than-expected rates for male deaths from lung cancer in 24 of the 38 counties in the U.S. with copper, lead and zinc industries. The rate for women was higher in 24 of the 38.

In a related development, the Federal Occupational Safety and Health Administration (OSHA) has proposed new, more stringent standards governing arsenic emissions at copper smelters.

But copper industry spokesmen dispute the suggestion that there is any connection between their smelters and cancer.

...cautioned that the research does not account for population shifts, which could be significant in high-growth states like Arizona.

(Continued on Page 1A, Col. 1)

In 1976, the Arizona Daily Star reported the results of a national health study which showed higher than predicted lung cancer death rates in counties where copper smelting occurred between 1950 and 1969. A 1990 health study of Arizona smelter counties showed similar higher death rates for smelter areas.



Children's playground in Hayden lies directly up against the plant and smelter.