



## Shelter in Place

2009 • Running time 48 minutes • Directed by Zed Nelson • Distributed by Journeyman Pictures

The vast, sprawling complexes of oil refineries and petrochemical plants help make the Texas economy one of the biggest in the world. But does the wealth come at too a high a price for low-income African-American neighborhoods close to the refineries?

Why are these industries allowed to release millions of tons of toxic pollutants into the air each year, including thousands of tons in “accidental” and “unscheduled” releases that force residents to take shelter in their own homes as plumes of toxic chemicals pass overhead?

Beautifully filmed and burning relevant, *Shelter in Place* speaks to the roots of the environmental justice movement in North America.

—Adapted from the distributor’s website at [Journeyman Pictures](http://Journeyman Pictures)

TEACHER’S GUIDE



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# Shelter in Place



## **Curator**

*This film was selected by Amity Doolittle, senior lecturer and research scientist at the Yale School of Forestry and Environmental Studies.*

## **Writers**

*The film guide was written by Caroline Scanlan, with research support from Liz Felker and Elham Shabahat, graduate students at the Yale School of Forestry and Environmental Studies.*

## **WHY THIS FILM WAS CHOSEN**

This documentary presents intimate stories of specific individuals living in the community adjacent to refineries in Corpus Christi and Port Arthur, Texas, who are exposed to toxic emissions from the petrochemical industry. The film maintains a balanced perspective by interviewing residents as well as company representatives and government officials.

However, by the end of the film, it becomes clear that companies are exploiting a legal loophole that allows them to release large quantities of unplanned emissions known as “upsets” without penalty while simultaneously denying that the emissions affect human health.

Meanwhile, local residents mount legal challenges to the emissions but are frustrated in their efforts to demonstrate a causal relationship between polluting industries and health problems, especially where there are multiple toxins involved.

## **THE ENVIRONMENTAL JUSTICE FOCUS OF THE FILM**

This film shows how communities affected by toxic chemicals face enormous difficulties when they try to make their voices heard. To begin with, the overall health of the community members may be seriously compromised not only by the direct exposure to “upsets” and “chemical cocktails” but also by the lack of medical care and the chronic stress that comes from knowing that they and their children may suffer long-term damage from exposure to the pollution. This stress, in turn, makes residents more vulnerable.

When the community challenged the polluters and pointed to actual harm to their health from the unregulated emissions, the company demanded that they demonstrate a direct connection between their exposure to specific chemicals and their compromised health. While the cumulative effect of the pollution may be scientifically evident, it remains difficult to prove a causal relationship because individual responses will vary and the actual emissions are not documented.

Finally, the residents may find themselves stymied by the complex, frustrating, and sometimes intractable process of gaining a hearing, demonstrating damages, developing regulations, and implementing controls. Meanwhile, the pollution and stress continue at a high cost to the lives and health of these low-income residents. This unfair stalemate highlights the injustice that flows from the imbalance of power between corporate interests and local communities.



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*Petrochemical plants help make the Texas economy one of the biggest in the world. But does the wealth come at too high a price to the local community?*

## SUGGESTED SUBJECT AREAS

|                          |                 |
|--------------------------|-----------------|
| African-American Studies | Pollution       |
| Capitalism               | Race and Racism |
| Environmental Justice    | Toxic Chemicals |
| Environmental Science    | Toxic Waste     |

## REVIEWS

*“Shelter in Place...the impressive directorial debut of Zed Nelson, focuses on communities living next door to oil refineries in Texas....Beautifully shot, Shelter in Place is an emotionally engaging portrait of a people without a voice, trapped by their economic circumstances in an area whose air quality is affecting every generation.” —International Film Guide*

*“Shelter in Place is a perfect example of an issue-driven documentary. It’s a combination of beautiful filmmaking [and] an important situation that also maintains the importance of great storytelling. The film really shows small-town Texas and the Texan mentality perfectly, and you can’t avoid being taken into these people’s lives and their experience.” —The Frontline Club*



## FILM SEQUENCES

00:00–09:00 Upsets in petrochemical plants and consequences for communities in Texas  
09:00–15:00 The impact of emissions and upset events on children  
15:00–21:00 What is “shelter in place”?  
21:00–28:00 Efforts by community members to combat upsets  
28:00–38:00 Does the law help?  
38:00–48:00 The legal battle and struggle for hope

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## BACKGROUND AND SYNOPSIS

### **Part 1: Upsets in petrochemical plants and consequences for communities (00:00–09:00)**

The film starts with Jim Marston explaining the concept of upsets for refineries and petrochemical plants in Texas. Community members such as Latasha talk through the consequences of living near a petrochemical plant. Reverend Malveaux discusses how people are treated like they are expendable. When community members complain, it's like no one hears them. Most people there are African-American, poor, and not well educated. They don't have political influence. There is no excuse for houses to be that close to environmental pollution.

### **Part 2: The impact of emissions and upset events on children (9:00–15:00)**

Wilma shows how close residents and children—and even playgrounds—are in relation to the refineries. Children are inhaling chemicals such as benzene and other chemical particles deep into their lungs. The residents, who are all African-American, live in hot spots of pollution and toxic chemicals. Air emissions from Premcor and Motiva move to where the residents and their children live. Community members can smell the emissions and pollutants when there are toxic spells at the refinery, and some people must even go to the emergency room because of the effects of a toxic spill.

### **Part 3: What is “shelter in place”? (15:00–21:00)**

The idea of shelter in place comes into play during emergencies. The police commissioner explains what it might mean for people: remaining indoors, shutting off all devices, etc. The film explores the consequences of a toxic spill in West Port Arthur. Petrochemical companies pay residents to avoid being sued for these toxic spills. Legal representatives explain the reasoning behind paying people to avoid litigation and also deny any long-term effects of chemicals released by refineries.

### **Part 4: Efforts by community members to combat upsets (21:00–28:00)**

Alfred Williams, a local resident, has logged every “upset” at the refinery he lives next to. Using these records, he took the refinery to court. He says, “That’s the way it is in this country. The big, the powerful—they pretty much get what they want, and they pretty much do what they want.” After six years, his lawyers advised him to accept an out-of-court settlement. Port Arthur was once the home of prominent jazz musicians. Now there is a dearth of jobs and economic opportunities. Many residents can't afford to move away, so they must make do with what they have, despite the respiratory problems they face.

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## **Part 5: Does the law help? (28:00–38:00)**

In 2001, the Texas Supreme Court issued a ruling that makes it more difficult for community members to sue refineries. Lawyers hold a community meeting to put together a case against the refineries. Hilton Kelley, a community leader, says that lawyers take the bulk of the money. Kelley wants a different kind of lawsuit: one that will provide uncontaminated, clean air for communities once and for all.

Three kinds of emissions come out of refineries: permissive, fugitive, and upset events. There is no law that limits the number of upset emissions. An Environmental Protection Agency (EPA) representative claims that, in practice, refineries do what the regulatory process allows them to do. The filmmakers question company representatives about emissions, such as benzene, and their carcinogenic effects, and whether there is a connection between high rates of asthma and respiratory disease and the emissions from the refineries.

## **Part 6: The legal battle and struggle for hope (38:00–48:00)**

The film traces the progress of the legal battle. Eventually, in October 2008, the case is thrown out, with the court ruling that it was impossible for the children to prove health claims. After Barack Obama is elected president, community members are hopeful that change will follow. One person says, “People will be held accountable for what they do to other people. Right’s going to win over wrong.” Eric Schaeffer from the EPA claims that upsets can release more emissions in a few days than what would come out of normal operations in a year. Perhaps if the refineries were located near the homes of policymakers and lobbyists, the regulations would be stricter. The film closes with scenes of family life. The legal fight to end “upsets” continues.



## **PEOPLE FEATURED IN THE FILM**

**Hilton Kelley** – community leader

**Reverend Roy Malveaux** – Baptist minister

**Jim Marston** – regional director, Environmental Defense Fund

**Latasha Zamora** – mother and community member

**Wilma Subra** – chemical analyst and former advisor to the EPA

**Deputy Police Chief John Owens** – emergency management coordinator

**Bill Day** – director of media relations of the Valero Energy Corporation

**Alfred Williams** – Corpus Christi community member

**Don Maierson** – attorney

**Tom Pearson** – attorney

**Joe Arnold** – elected spokesman of a Port Arthur petrochemical company



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**Eric Schaeffer** – former director of regulatory enforcement at the EPA, who, citing cuts to EPA staff by the Bush administration, resigned in 2002

*Hilton Kelley asks community members how many children they know with asthma, and almost all hands go up.*



## DISCUSSION QUESTIONS

1. Hilton Kelley asks community members how many children they know with asthma, and almost all hands go up. How would you conduct research to collect information about children with asthma? What would you do with the results of your research? What information would be critical to communicate to policymakers and the government?
2. How close can petrochemical plants be to residential neighborhoods? What are some laws that protect low-income communities from the harmful effects of living near petrochemical plants?
3. The film mentions that children as young as five months have developed asthma and breathing problems. Why are children disproportionately affected by the chemicals and air pollution?
4. In the event of a toxic spill, law enforcement asks residents to go inside their homes and close all doors and windows. Do you think that doing so provides sufficient protection from toxic fumes? If you were there, what would you demand to ensure you and your family were safe?
5. What are the moral implications of companies avoiding litigation by making individual payments to people who might have suffered the consequences of air pollution from refineries? Consider how many of the people most affected are low-income and likely cannot afford to relocate.
6. What are some racial themes in this film? Notice that affected residents and community members are primarily African-American, while company representatives and lawyers are white. Who is the government listening to? Who is not heard? What are the implications on a societal level of this divide?
7. Company representatives deny or claim ignorance of any health effects of air pollution for people living near petrochemical companies. How would you appeal to these representatives? Would you appeal to their emotions, to logic and reason, or would you cite the law? Could you hold the companies accountable in more ways than one?
8. The film concludes with Alfred Williams expressing hope that the election of Barack Obama might lead to a resolution of his problems with the petrochemical companies. How much faith do we place in our political representatives? When should you trust your political representatives to act, and when should you take action?

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## ACTIVITIES

Read [Hilton Kelley's Senate testimony](#), where he testifies on behalf of refinery communities across the nation and talks about the impacts that residents face due to air pollution by oil refineries. What is your reaction to his testimony? How would you feel if your neighborhood were facing such issues? Look at the language that Hilton Kelley uses to advocate for his community. What can you learn from his framing of the issue, and what would you do differently?

**Watch a short selection** at 4:15, where Hilton Kelley asks residents about children with asthma. Read about the Clean Air Act and how communities can be protected from air pollution from petrochemical companies that release gases harmful to health. How do industrial upsets compromise the protections provided by the Clean Air Act?

Use the [EJSCREEN](#), a mapping tool provided by the EPA, to look at your neighborhood

**Use the environmental justice screening and mapping tool [EJSCREEN](#) developed by the EPA.** Eric Schaeffer, formerly on the staff of the EPA, suggests that if the refineries were located near the homes of policymakers and lobbyists, the regulations would be stricter. Use the a mapping tool to look at your neighborhood and/or state to find out where refineries are located. What is the socio-economic status of people who live nearby? What are the demographics and racial characteristics of the neighborhood?

**Investigate the impact of “chemical cocktails.”** Eric Shaeffer also discusses how challenging it is to understand and study the impacts of chemical cocktails on health. Look up the definition of *cumulative effect*. What are some cumulative effects these community members connect to regularly inhaling unknown amounts of the chemical cocktails produced by petrochemical refineries? What are examples of chemical cocktails you might be exposed to in your own community?

**Trace the attempts to regulate “upset” emissions.** Look up the legal ruling regarding the “upset loophole” in a Washington, D.C., court in December 2008. What was the outcome? Research the progress of this legislation up to the 2015 ruling regarding the loophole. See, for example, a report on the [Sierra Club website](#) regarding the regulations. What is the situation today?

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## SUPPLEMENTAL MATERIAL

### Senate Testimony

- [Hilton Kelley's testimony](#) at the Senate in 2002 about the pollution and impacts of industrial upsets in Port Arthur

### Federal Documents

- EPA, 1999. *Consideration of Cumulative Impacts in EPA Review of NEPA Documents*. <https://www.epa.gov/sites/production/files/2014-08/documents/cumulative.pdf>
- EPA, n.d. Petroleum Refining Effluent Guidelines. <https://www.epa.gov/eg/petroleum-refining-effluent-guidelines>
- EPA, n.d. Clean Air Act Standards and Guidelines for Petroleum Refineries and Distribution Industry. <https://www.epa.gov/stationary-sources-air-pollution/clean-air-act-standards-and-guidelines-petroleum-refineries-and>
- Environmental justice screening and mapping tool. <https://www.epa.gov/ejscreen>
- EPA, 2012. *Final Report: Port Arthur – Environmental Justice Showcase Communities Pilot Program Analysis*. Washington, D.C.: United States Environmental Protection Agency.
- Government Accounting Office, 2001. *Air Pollution: EPA Should Improve Oversight of Emissions Reporting by Large Facilities*. <http://www.gao.gov/new.items/d0146.pdf>

### Websites

Environmental Integrity Project (founded by Eric Schaeffer)

- [Accidents Will Happen](#)
- [Gaming the System: How Off-the-Books Industrial Upset Emissions Cheat the Public Out of Clean Air](#)

Public Citizen ([citizen.org](http://citizen.org))

- [Industrial Upset Pollution: Who Pays the Price?](#)

### Videos

“Shelter in place” public service announcements:

- [Why Shelter in Place During Chemical Releases](#)
- [How to Shelter in Place During Chemical Releases](#)
- [Preparedness Minute](#)

## Peer-Reviewed Research and Literature

Ozymy, J. and Jarrell, M.L. (2011). "Upset over Air Pollution: Analyzing Upset Event Emissions at Petroleum Refineries." *Review of Policy Research*, 28:365-382. doi:10.1111/j.1541-1338.2011.00502.x.

Jarrell, Melissa L. and Ozymy, Joshua. (2010). [Excessive Air Pollution and the Oil Industry: Fighting for Our Right to Breathe Clean Air](#). *Environmental Justice*, 3:3, 111-115.

Ragothaman, Aiswarya and Anderson, William. (2017). "Air Quality Impacts of Petroleum Refining and Petrochemical Industries." *Environments*, 4(3):66. 10.3390/environments4030066.  
[https://www.researchgate.net/publication/319911732\\_Air\\_Quality\\_Impacts\\_of\\_Petroleum\\_Refining\\_and\\_Petrochemical\\_Industries](https://www.researchgate.net/publication/319911732_Air_Quality_Impacts_of_Petroleum_Refining_and_Petrochemical_Industries)

Bruno, Tianna and Jepson, Wendy. (2018). "Marketisation of environmental justice: U.S. EPA environmental justice showcase communities project in Port Arthur, Texas." *Local Environment*, 23:3 276-292.  
doi:[10.1080/13549839.2017.1415873](https://doi.org/10.1080/13549839.2017.1415873)

Bullard, R. (1992). "Environmental blackmail in minority communities." In: B. Bryant and P. Mohai, eds. *Race and the Incidence of Environmental Hazards*. Boulder: Westview Press, 82-95.

## Written Media and Related News

Milman, Oliver. (2017). "'Your eyes start itching': Pollution soars in Houston after chemical industry leaks." *The Guardian*.  
<https://www.theguardian.com/us-news/2017/sep/02/houston-hurricane-harvey-pollution-petrochemical-plants>

"Zed Nelson turns the heat on Big Oil." (2011).  
<https://www.theguardian.com/film/2011/jan/14/zed-nelson-shelter-in-place>

"Health Effects of Oil and Gas Emissions Investigated in Texas." (2017).  
<https://www.scientificamerican.com/article/health-effects-of-oil-and-gas-emissions-investigated-in-texas/>

"More than 40 sites released hazardous pollutants because of Hurricane Harvey." (2017).  
<https://www.nytimes.com/interactive/2017/09/08/us/houston-hurricane-harvey-hazardous-chemicals.html>

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“More Than 1 Million Pounds of Chemical Plant Emissions Have Been Reported Since Harvey Hit.” (2017).

<https://www.citylab.com/environment/2017/08/harvey-houston-chemical-plants-emissions/538476/>

“If built, the Keystone XL pipeline would end in one toxic town.” (2014).

<https://on.nrdc.org/2wofpzR>

“Toxic Town Lures Industry While Residents Wheeze.” (2007).

<https://cnb.cx/2y0SNHa>