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# Environmental conflict and grassroots activism in the Crockett/Rodeo area

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**ENVIRONMENTAL CONFLICT AND GRASSROOTS ACTIVISM  
IN THE CROCKETT/RODEO AREA**

**A Thesis**

**Presented to**

**The Faculty of the Department of Environmental Studies**

**San Jose State University**

**In Partial Fulfillment**

**of the Requirements for the Degree**

**Master of Science**

**by**

**Sandra J. Dare**

**August 1999**

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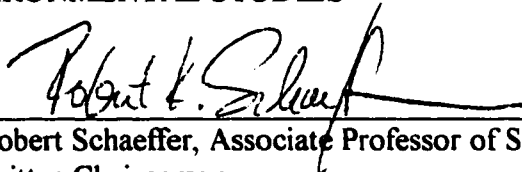
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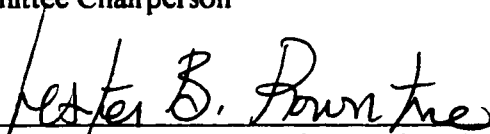
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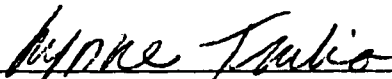
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## ABSTRACT

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### **Environmental Conflict and Grassroots Activism in the Crockett/Rodeo Area**

by Sandra J. Dare

Grassroots groups have emerged as stakeholders in local environmental conflicts. Research on specific cases is needed to illustrate the responses of community groups to local environmental problems. This thesis addresses the activities of three grassroots community groups in response to environmental threats from industry. The study examines the formation of grassroots organizations, their action strategies, the results of their activity, and level of empowerment.

The study design used a qualitative case study method to examine three community mobilization cases in the Crockett/Rodeo area of Contra Costa County, California. The information was obtained by interviewing, archival and document analysis, and participant-observation.

This research found that the citizen's groups studied were similar to groups discussed in the literature, except for employment and educational level. Groups were most successful when they demonstrated technical expertise and gained instrumental empowerment.

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**Key Words: Conflict resolution, empowerment theory, environmental conflict environmental justice, grassroots environmental groups, grassroots organizations, participatory democracy**



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## LIST OF ABBREVIATIONS

<b>BAAQMD</b>	<b>Bay Area Air Quality Management District</b>
<b>C&amp;H</b>	<b>California and Hawaiian Sugar Refining Company</b>
<b>CEQA</b>	<b>California Environmental Quality Act</b>
<b>CAC</b>	<b>Crockett Advisory Committee</b>
<b>CBE</b>	<b>Communities for a Better Environment</b>
<b>CCA</b>	<b>Citizens for Cleaner Air</b>
<b>CCHW</b>	<b>Citizens Clearinghouse for Hazardous Waste</b>
<b>CEC</b>	<b>California Energy Commission</b>
<b>CCP</b>	<b>Crockett Cogeneration Plant</b>
<b>CIA</b>	<b>Crockett Improvement Association</b>
<b>CPPC</b>	<b>Crockett Power Plant Committee</b>
<b>DEA</b>	<b>Diethanolamine</b>
<b>EDF</b>	<b>Environmental Defense Fund</b>
<b>EIR</b>	<b>Environmental Impact Report</b>
<b>ENI</b>	<b>Energy National, Inc.</b>
<b>EPA</b>	<b>Environmental Protection Agency</b>
<b>GNA</b>	<b>Good Neighbor Agreement</b>

<b>HPC</b>	<b>Hercules Powder Company</b>
<b>MSDS</b>	<b>Material Safety Data Sheet</b>
<b>NEPA</b>	<b>National Environmental Policy Act</b>
<b>NRDC</b>	<b>Natural Resources Defense Council</b>
<b>NTC</b>	<b>National Toxics Coalition</b>
<b>NDEA</b>	<b>Nitrosamines</b>
<b>PRC</b>	<b>Pacific Refining Company</b>
<b>PTI</b>	<b>Pacific Thermonetics, Inc.</b>
<b>RCA</b>	<b>Rodeo Citizens Association</b>
<b>RCO</b>	<b>Rodeo Citizens Organization</b>
<b>SCLDF</b>	<b>Sierra Club Legal Defense Fund</b>
<b>SEA</b>	<b>Shoreline Environmental Alliance</b>
<b>WOC</b>	<b>Wicklnd Oil Company</b>

# CHAPTER 1

## PROBLEM STATEMENT

### Introduction

Grassroots environmental groups have emerged as stakeholders in an effort to reduce toxic pollution and prevent project sitings in their communities which they perceive to be environmentally destructive. This research explored community mobilization and activism patterns through three case studies in one particular area, the Crockett/Rodeo community in the San Francisco Bay Area. These case studies examined the characteristics, motivations, activities, goals, obstacles, and results of local grassroots activism.

Research on specific cases is needed to illustrate the response of different community groups to environmental threats. Although researchers have studied various aspects of community activism, including environmental injustice and racism (Boerner and Lambert 1995; Bullard 1990, 1992, 1993a, 1993b, 1994; Capek 1992, 1993; Colopy 1994; Commission for Racial Justice 1987; Mohai and Bryant 1992; Taylor 1992), formation of grassroots movements (Brown and Masterson-Allen 1994; Cable and Degutis 1991; Cable, Walsh, and Warland 1988), composition of grassroots groups (Freudenberg 1984a), concern about toxic waste (Hamilton 1985), participation and empowerment (Rich and others 1995), and coping with environmental threats (Hallman



and Wandersman 1992), additional study is needed in the areas of activists' motivations and the results of their strategies in response to toxic and environmental threats (Brown and Masterson-Allen 1994; Cable and Degutis 1991; Cable, Walsh, and Warland 1988; Capek 1992; Hamilton 1985; Rich and others 1995).

Local environmental threats can pose potentially chronic or acute physical and emotional harm to human health (Rich and others 1995, 658). According to the literature, concerned citizens have joined together to attempt to control, prevent, or eliminate hazards from their neighborhoods because national environmental regulations and regional governments often fail to protect local communities (Brown and Masterson-Allen 1994; Cable and Benson 1993; Capek 1992; Colopy 1994; Freudenberg 1984a; Hamilton 1985; Rich and others 1995).

A study of community organizing in response to local environmental problems in the Crockett/Rodeo area since the mid-1980s provides case studies for the understanding the motivations of grassroots groups and the strategies, both effective and ineffective, which are used.

### The Big Problem

Public health and safety are at risk from toxic chemicals and other hazardous materials throughout the nation. Pollutants contaminate the air, water, land, and food supply (Freudenberg 1984a, 444). The media has expanded the public's awareness of chemical accidents and toxic contaminants that have exposed residents to "physical, emotional, and financial harm" (Rich and others 1995, 657). These events have the

potential to harm the health of local residents, reduce property values, and alienate citizens from local government (Rich and others 1995). Although it is difficult to determine the full scope of the problem, some scholars estimate that millions of people on a national level will face chemical exposures or accidents in the future (Rich and others 1995, 658).

Nationwide, more than 41 million people live within a three-mile radius of manufacturing companies that store or produce extremely hazardous chemicals, such as ammonia, chlorine, and hydrochloric acid. According to a report by the National Environmental Law Center and the U.S. Public Interest Research Group (1998), the three-mile area is the "vulnerable zone," which means that these residents' lives and health are at risk in the event of an accident. Industries that handle toxic chemicals have the potential for incidents with disastrous human and environmental consequences (National Environmental Law Center and U.S. Public Interest Research Group 1998). As Landrigan and Gross of the National Institute for Occupational Safety and Health argue (Freudenberg 1984a, 444), "there are already in our environment sufficient quantities of hazardous wastes to provide a legacy of disease and death to our descendants for generations to come."

In 30 states across the nation, approximately 169 refineries process crude oil and release toxic waste on a daily basis. An average-sized refinery releases over 10,000 gallons of oil waste to the surrounding air, water, and land each day. These pollutants include carcinogens and numerous other toxic chemicals. In 1993, refineries reported the release of 800 million pounds of toxic substances into the environment. These figures do

not include many other toxic chemicals that are not covered by the federal community right-to know-laws (Communities for a Better Environment 1996, 37).

In Contra Costa County, California, industries store approximately 123 million pounds of toxic, explosive, and highly corrosive chemicals; 72 million pounds of these substances are located within ten miles of the Crockett/Rodeo study site. The County has the eleventh worst record, nationwide, for the number of toxic accidents during 1985-1995, when 1,900 incidents were reported. These incidents included spills, leaks, toxic gas releases, flaring, explosions and fires. Chemical plants and refineries reported nearly 90 percent of the incidents (Contra Costa Building Trades Council and others 1996, 2). Between 1989 and June 1997, refineries have been responsible for nearly all of the 55 major industrial accidents that have killed workers, injured thousands of people, closed schools and roads, and required evacuation of workers and residents in the County (Communities for a Better Environment and others 1997, 7)

In the past, the primary strategies to identify and manage these health hazards have been scientific research and government regulation (Cole 1992, 635). But more recently an additional approach, local citizen activism, has developed on a national scale. This movement is propelled by citizens fighting for the health of their families and the environmental quality of their local communities.

According to the literature, citizens form these grassroots organizations and participate in community activism after they have perceived that the government is either unwilling or unable to address environmental problems (Brown and Masterson-Allen 1994, Cable and Benson 1993, Capek 1992, Colopy 1994, Freudenberg 1984a). These

local groups lack the political and financial strength of corporations. They try to counterbalance the power of polluters by grassroots organizing to attempt to control pollution or block plant siting in their communities (Capek 1992, Crowfoot and Wondolleck 1990, Gould, Schnaiberg, and Weinberg 1996).

To date, government and industry efforts to protect the public, workers, and the surrounding communities have focused on preparing for and responding to accidents (National Environmental Law Center and U.S. Public Interest Research Group 1998). On a daily basis, equipment and safety systems fail, workers make mistakes, and toxics are released to the surrounding communities (National Environmental Law Center and U.S. Public Interest Research Group 1998). Activists are demanding more efforts to prevent accidents and reduce the levels of hazardous chemical emissions through the redesign of production systems, the substitution of toxic substances, and improved personnel training (National Environmental Law Center and U.S. Public Interest Research Group 1998).

### The Local Problem

This thesis focuses on the motivations and strategies of the grassroots community activist movement in the Crockett/Rodeo area since the mid-1980s. These towns provide affordable housing with prices ranging from the low to mid-\$180,000s and rental units averaging \$459/month (U.S. Bureau of the Census 1990). The area is populated by lower middle-class and middle-class people with median household incomes of approximately \$39,000, which is approximately 16 percent less than the Contra Costa County median income of \$45,087 (U.S. Bureau of the Census 1990). The residents are concerned about

health problems related to living near refineries, including headaches, respiratory ailments, sore throats, and cancer (Bruggers 26 January 1997, 5 [A]).

This research design compares activism in the Crockett/Rodeo area to other local citizen activist groups in the grassroots anti-toxics movements using survey and case study methods. The scope of the study is limited to activities related to the siting of a 245 megawatt power plant and the efforts to limit the communities' exposure to toxic environmental hazards from two refineries.

The Crockett/Rodeo residents live within the three-mile "vulnerable zone" of several major industrial facilities: California and Hawaiian Sugar Refining Company (C&H), Crockett Cogeneration Plant (CCP), Pacific Refining Company (PRC), Wickland Oil Company (WOC), and Tosco Oil Refinery (Tosco). (Prior to April 1997, Tosco was owned by Union Oil Company and called Unocal.) These companies store toxic, explosive, and highly corrosive chemicals on-site. In 1996, Unocal ranked in the top ten chemical storage sites in Contra Costa County with approximately 1.5 million pounds of chemicals such as sulfuric acid, ammonia, hydrogen sulfide, and sulfur dioxide (Contra Costa Building Trades Council and others 1996, 11).

In addition to the routine daily emissions, the residents of the area are plagued by exposure to accidental chemical releases and spills called "incidents". During the seven years from 1989 through 1995, these companies reported the following number of incidents: C&H had 8, PRC had 86, Unocal had 474, and Wickland had 6 (Contra Costa Building Trades Council and others 1996, 3). According to a report by Communities for a Better Environment and others (1997) some incidents are classified as major industrial

accidents, resulting in injury, illness, school closures, or evacuations. Six major accidents occurred at PRC, eight at Unocal, and one at Tosco between March 1989 and June 1997 (Communities for a Better Environment and others 1997, 7).

The study explores the motivations and strategies of community groups in Crockett/Rodeo to several major events that have occurred since 1983. These specific events include the releases from PRC and Unocal and the CCP siting.

### Research Questions

The primary research question addressed in this thesis is whether the strategies used by grassroots community groups in Crockett/Rodeo were effective in empowering local citizens and achieving stated activists goals.

Grassroots groups organize to perform various activities, such as gaining technical knowledge, networking with existing environmental groups, educating the public, lobbying politicians and community leaders, and taking legal action (Freudenberg 1984a). These grassroots groups require leaders and members with the skills and commitment to develop effective strategies to challenge government agencies and big businesses (Christensen 1995, Cole 1992, Mondros 1994).

The Crockett/Rodeo groups' major goals were the improvement of air quality, as measured by the reduction of toxic releases, and the prevention of a power plant siting. Did they succeed in these goals? This study analyzed the tactics and action strategies of activists in Crockett/Rodeo to determine whether they met their stated goals. An

examination of three cases studies and interviews with the activists were used to answer the following specific questions:

1. Are activists in the Crockett/Rodeo area similar to members from other grassroots groups in the anti-toxics movement?

This thesis examines whether Crockett/Rodeo activists have characteristics similar to other grassroots community activists located in the vicinity of toxic polluters (See table 1).

2. What characteristics contribute to effective group leaders and members?

This thesis suggests that the grassroots activists in the Crockett/Rodeo area were successful because they had leaders and members with persistence and determination.

3. What factors mobilize local grassroots environmental activism?

This thesis suggests that local residents are motivated by concern for the health and safety of their neighborhoods. Unwanted sitings and hazardous events alarm and anger local residents. If the government does not respond to their concerns, they are motivated to take action.

4. What tactics and strategies have been employed by the local residents and grassroots groups to reduce industrial pollution and block the power plant?

The local grassroots groups employed tactics and strategies, such as recruiting, organizing, generating public awareness, lobbying public officials, and participating in public hearings.

5. Have the tactics and activities of grassroots environmental organizations and community activists improved the air quality as measured by a reduction of toxic releases in the communities?

The local groups have been successful in reducing toxic releases and improved refinery safety.

6. Have grassroots efforts effected siting decisions, zoning, and local safety ordinances?

The local groups have been directly responsible for improved siting decisions and strengthened safety policies and ordinances.

7. Did the activists perceive that the process empowered or disempowered the individuals?

The groups were empowered because they achieved an empowered outcome. The individuals gained psychological empowerment because they felt that their efforts made a positive difference in the community.

8. Was the community empowered by receiving measurable benefits?

The community received financial mitigations and gained self-sufficiency.

Data from the literature were analyzed to develop a set of common characteristics for comparison to the three case studies in the Crockett/Rodeo area.

### Summary

The information for this thesis was collected by archival analysis and interviews with 30 activists who were involved in the three Crockett/Rodeo cases. Their responses



were compared to the set of common characteristics, motivations, and strategies developed from the literature. The goal is to add to the research on citizen empowerment when grassroots groups form in response to local environmental conflicts. This research is limited by the recall bias of the respondents and the inability to interview all participants.

## CHAPTER 2

### RELATED RESEARCH

#### Environmental Movements

The environmental movement during the past 100 years has been divided into three major social movements: the progressive conservation movement, the mainstream environmental movement, and the grassroots community-based movement (Cable and Cable 1995, Gottlieb 1993). Turner (1981, 1) describes a social movement as “a collectivity” mobilized to promote or resist change that can be limited in scope and duration or can be broad and enduring. Participants intentionally seek to make changes through collective behavior in response to existing situations that are deemed unacceptable or inadequate (Turner 1981, 4). These movements may contain organizations that form and splinter. The contemporary environmental movement, which has fluid boundaries and diverse organizations, can be described as “movements within movements within movements” (Turner 1981, 5).

The first environmental movement, or wave, began just before the turn of the century in response to environmental destruction associated with the expansion of industry nationwide and the closure of the American frontier in 1890. Unrestricted economic development led to widespread clearcutting, massive strip mining, poor sanitation, and air and water pollution in urban and industrial areas. Pollution and the

loss of natural areas became important concerns that were born during the Progressive Era of the 1880s-1920s (Cable and Cable 1995, 55; Gottlieb 1993, 55).

Several national environmental organizations were formed to advance the cause of progressive conservation, including the Sierra Club (1892) and the National Audubon Society (1886). The federal government responded to environmental progressives by enacting legislation to protect forests and navigable waterways and by preserving federal lands (Cable and Cable 1995, 55).

An urban environmental movement also emerged during the 1880s. It was led by public health advocates, physicians, and labor leaders, who were concerned about the unsanitary conditions of the industrial cities. Because these struggles were waged by urban reformers and labor leaders, Epstein (1995, 2) excludes them from the environmental movement. But Gottlieb (1993, 7) asserts that these groups should be included to understand the historical link between resource development and urban industrial conditions, that is, the relationship between “pollution and loss of wilderness.” He argues that this broader perspective is important not only to understand the history of environmentalism, but because it explains the contemporary movement, which is comprised of groups with rural and urban perspectives.

Until the early 1960s, the conservation movement that emerged in the Progressive Era was relatively small (Dunlap 1992, 89). But in the early 1960s a second wave of environmentalism was launched, spurred by the publication of Rachel Carson's Silent Spring, which brought new environmental threats to the attention of the media, government officials, and the general public. During the 1960s and 1970s, membership

in the existing environmental organizations grew rapidly. Groups like the Sierra Club, the National Audubon Society, The Nature Conservancy, the Wilderness Society, and the National Wildlife Federation, made up the conservationist core of the environmental movement. They were successors to the progressive conservationists of the early twentieth century (Cable and Cable 1995, 70). Taylor (1992, 33) classifies these large, centralized, and bureaucratic groups as incremental reformists. They generally work within the system advocating new laws and policy changes. Their membership is comprised primarily of white, middle-class professionals who are motivated by ideals to preserve nature for aesthetic, recreational, and biological considerations for present and future generations (Cole 1992, Taylor 1992). Until the 1960s, the groups survived on donations from wealthy individuals, endowments, and foundation grants. In 1969, Friends of the Earth formed and joined the incremental reformists as “new environmentalists” (Taylor 1992, 32). Greenpeace (1969) emerged as part of the radical reformists trend that began to develop at that time. The major difference between incremental reformists and radical reformists is the radicals’ emphasis on “direct action, and/or empowerment at the grassroots level” (Taylor 1992, 33). Other differences include a heavy reliance on volunteer support, member donations, and decentralization of power and action (Taylor 1992, 35).

During the 1960s and 1970s, the conservationist organizations were joined by several powerful, new, legal-scientific organizations, such as the Natural Resources Defense Council (NRDC), the Sierra Club Legal Defense Fund (SCLDF), and the Environmental Defense Fund (EDF). These groups were instrumental in passing more

than 30 pieces of major federal environmental legislation during that period (Cable and Benson 1993, 465; Cole 1992, 636).

Congress passed the National Environmental Policy Act (NEPA) in 1970 and established the Environmental Protection Agency (EPA) to monitor and enforce compliance with environmental laws. By the mid-1970s, people believed that the legislation passed earlier in the decade was adequately regulating environmental problems. But this assumption was altered during the Reagan-Bush presidencies of the 1980s and early 1990s. The Reagan administration systematically starved the environmental agencies through budget and personnel cuts. By the mid-1980s these agencies were unable to perform their institutional mandates (Gould, Schnaiberg, and Weinberg 1996, 19). Moore and Head (1993, 124) believe that because environmental organizations were denied direct access to the two administrations between 1980-1992, the groups responded by suing the EPA to enforce the law. As a result, litigation has become a major strategy of NRDC, SCLDF, and EDF since 1980 (Cole 1992, 634).

The perception that the government was failing to protect local communities from environmental hazards provided the impetus for the third wave of environmentalism: the grassroots community-based movement (Babcock 1995, Brown and Masterson-Allen 1994, Cable and Benson 1993, Cole 1992, Hamilton 1985, Krauss 1989, Moore and Head 1993, Taylor 1992). The central issues for these groups were local environmental problems, the quality of life, and the health and safety of people in neighborhoods (Dunlap 1992, Youngstrom 1990). While the previous movements were dominated by national organization, the grassroots community-based movement to prevent toxic

contamination is decentralized and composed of many small local groups (Brown and Masterson-Allen 1994, 271). They formed the “new grassroots” segment of the radical reformists (Taylor 1992, 32).

The 1978 Love Canal incident is widely recognized as the event that galvanized communities against toxic contamination and resulted in the proliferation of grassroots community groups (Cable and Benson 1993, Hamilton 1985, Szasz 1994). The formation and eventual success of the Home Owners Association of Love Canal, New York, by nonprofessional, lower-middle-class and middle-class families generated national attention and spearheaded the movement. The members, primarily women, used outside experts and the assistance of the EDF to learn about the problem. Community residents and leaders, most notably Lois Gibbs, devised the tactics and developed strategies to pressure the government to purchase their contaminated homes. The formation and eventual success of the citizens’ activists group at Love Canal illustrated the power of individuals in a community that felt at risk.

Since the early 1980s, membership in all types of environmental organizations has grown and studies indicate that environmental concern has increased (Dunlap 1992). Citizen’s Clearinghouse on Hazardous Waste (CCHW) and National Toxics Coalition (NTC) estimated that the number of grassroots groups in the United States ranged from 5,000 to 12,000 by the early 1990s (Brown and Masterson-Allen 1994, 270; Cable and Benson 1993, 464; Epstein 1995, 4; Gould, Schnaiberg, and Weinberg 1996, 21). An actual count is unavailable because these groups are often issue-specific and short-lived, disbanding once an incident is resolved (Epstein 1995, 4). In addition there were 150

national environmental social movement organizations and a total annual movement budget of \$600 million dollars provided by 14 million members (Gould, Schnaiberg, and Weinberg 1996, 21).

### Anti-Toxics Grassroots Groups

The literature contrasts grassroots activists and members of mainstream environmental groups. Grassroots activists differ from members of mainstream environmental groups in three respects: motives, backgrounds, and perspectives (Cole 1992, 639). The basis for these differences is related to a localized need rather than a broader collective goal, such as saving the rain forest or endangered species (Brown and Masterson-Allen 1994, 179).

Grassroots activists are generally motivated by concern for the health and safety of their families and the quality of the environment in their local community (Babcock 1995, Brown and Masterson-Allen 1994, Cable and Benson 1993, Capek 1992, Cole 1992, Epstein 1995, Freudenberg 1984a, Hamilton 1985, McWilliams 1994, Moore and Head 1993). Hamilton's (1985, 477) research reveals that the most common indicator of community concern is proximity to the threat, a health and safety issue. The degree of concern within an affected area is also dependent upon individuals' physical location to the threat. Those individuals immediately adjacent, downwind, or downstream who bear the burden of the pollution are more concerned than those at a greater distance (Hamilton 1985, 478).

Grassroots groups generally consist of working-class and minority individuals (Babcock 1995, Brown and Masterson-Allen 1994, Cole 1992, Taylor 1992). Grassroots groups have more female members and leaders than mainstream groups (Babcock 1995, 12; Brown and Masterson-Allen 1994, 273; Cable 1992, 35; Capek 1993, 7; Epstein 1995, 10; Perrole 1993, 2). Freudenberg (1984a) found in his study of toxic waste groups that “housewife” was the most common occupation of leaders of grassroots groups. In many communities, women have traditionally been more involved in local schools, churches, and community groups. These existing networks often provide the basis for organizing new groups. Because many female members and leaders of these groups are housewives or have part-time jobs, they can attend meetings and organize others (Cable, 1992, 37; Epstein 1995, 9).

The large participation of women has been connected to a mother’s concern for the health and safety of her children, when confronted with environmental threats (Blocker and Eckberg, 1989, 591; Cable 1992, 37; Hamilton 1985, 472). Hamilton’s (1985, 472) study indicates that women with children under 18 exhibit the most concern about toxics issues, the “motherhood effect.”

These differences in motivation and background between members of grassroots versus national groups shape the perspective of grassroots group members. Grassroots activists often criticize the mainstream groups for a lack of community ties (Gottlieb 1993, 191). They mistrust government officials because local government is often unresponsive to the perceived environmental threat (Brown and Masterson-Allen 1994, Bullard 1992, Cable and Benson 1993, Cole 1992). The concern about the health and



safety of their children has become a central issue in the anti-toxics struggle and has personalized the perspective, making compromise difficult for many participants.

Although mainstream environmentalists are often willing to find middle ground, mothers involved in anti-toxics issues often view the middle as unacceptable. As one activist explained, "The compromise between a healthy baby and a dead baby is a sick baby" (Gottlieb 1993, 305). The localized nature of the toxic threat adds to the unacceptability of compromise. When an environmental hazard plagues a community, property values fall and residents are unable to move without risking economic disaster.

According to Gottlieb (1993, 202), a gap exists between grassroots and mainstream groups. He characterizes mainstream groups as generally international and global in perspective, often institutionalized, aloof, and separated from organizing on the local level.

Although the mainstream national groups periodically support local grassroots groups by lobbying and testifying on their behalf and by providing them with scientific data, the mainstream groups tend to focus on regulatory solutions (Gottlieb 1993, 188). Many grassroots activists find the regulatory and legal system intimidating; therefore, they employ "a community-based political organizing strategy" in contrast to the mainstream groups, which are more comfortable using the legal system (Cole 1992, 640).

In 1981, Lois Gibbs and others established CCHW, an anti-toxics networking group that provides advice to local grassroots struggles (Gottlieb 1993, 189). Greenpeace and the NTC also aid community groups (Epstein 1995, 4).

CCHW adopted the slogan “People United for Environmental Justice,” linking environmental issues to social, racial, and economic justice (Boerner and Lambert 1995, Bullard 1992, Capek 1993, Miller 1993, Moore and Head 1993). Many grassroots organizations were created by minorities based on the principle of environmental justice or environmental racism (Boerner and Lambert 1995). These groups argue that minority populations are exposed to greater environmental hazards than whites (Adeola 1994, Mohai and Bryant 1992, Bullard 1993b, Capek 1993, Commission for Racial Justice 1987, Moore and Head 1993).

The concern with environmental racism has two implications for the grassroots environmental movement. First, many of these minority community groups have emerged from previously established civil rights organizations, churches, anti-poverty groups, and other social action groups on the political left (Bullard 1993b, 24). Their leaders often view the unequal distribution of risk exposure in their neighborhoods as an expression of institutional racism and the racially motivated policies of industry and government. This perspective attracts the participation of community members with previous civil rights backgrounds (Babcock 1995, Bullard 1990, 1993b; Capek 1993).

The second effect of the environmental racism approach is that it enables groups to pursue legal action under Title VI of the 1964 Civil Rights Act, which bans discrimination in federal permitting and siting (Babcock 1995, 17; Boerner and Lambert 1995, 73). Two problems exist with this legal strategy. First, it is often difficult to prove discriminatory intent because many minority neighborhoods are located on inexpensive real estate. Polluters can claim that the location is related to marketplace conditions, not

discrimination (Babcock 1995, 12). Second, many toxic sites and industries were in place before the surrounding communities existed. The neighborhoods developed because of the jobs these industries offered (Boerner and Lambert 1995, 68). The environmental racism theory is limited in applicability to minority neighborhoods when the facility moves in after the people.

Nevertheless, members of lower social classes are more likely to live and work in an area with environmental problems (Cable and Cable 1995, 9). Environmental justice has emerged as a major theme in the framing and mobilization of the grassroots environmental movement (Capek 1993, 5).

### Conflict and Mobilization

Environmental conflicts in a community threaten the tranquillity of everyday life, when residents take positions on issues that influence the health and safety of their families, their property values, their tax basis, and often their employment conditions (McEwen 1992, 332). Neighbors may find themselves on opposing sides because of the tension between jobs and environmental quality, especially when the polluter is also a local employer (Cable and Degutis 1991, 395). These conflicts usually involve various stakeholders from business, government, and environmental groups, and the local citizens who disagree over the use or loss of environmental resources (Crowfoot and Wondolleck 1990, 7).

Research indicates that environmental conflicts mobilize constituencies and produce community leaders, and similar factors motivate individuals to participate

(Cormick 1980, 25). When citizens first discover an environmental threat or toxic hazard, they generally appeal to their local government for action. They trust that government will make it right and safeguard the public from harm. If their appeals are unresolved and they think that their concerns are dismissed or trivialized, their fear turns to anger, and their anxiety becomes a feeling of injustice (Cable and Cable 1995, Capek 1993, Garland 1988, Gould, Schnaiberg, and Weinberg 1996, Hallman and Wandersman 1992). They are angered to discover that public safety does not necessarily take precedence over profit. They conclude that government is unresponsive because government favors business interests to promote economic growth (Brown and Masterson-Allen 1994, 275; Cable and Benson 1993, 470; Cable and Cable 1995, 104). Their anger spurs them to challenge government and demand protection of their families and property.

Individuals speak out and encourage others to join. Garland's (1988) research on women activists reveals that anger was a principal motivator and often the core of their transformation from "private actors" to public leaders. Freudenberg's (1984a) study found that once activists became aware of a hazard, they began educating and organizing the broader community. Citizens band together to create "spatial networks," community groups located near the contamination in their neighborhood (Colopy 1994, 141; Hallman and Wandersman 1992, 111). Participation in grassroots groups seems to help some individuals when they feel powerless regarding environmental threats (Hallman and Wandersman 1992, 110).

Not everyone becomes involved in the community groups in response to an environmental problem. Some people deny or disagree with their neighbors' perceptions of risk. Other residents fear being ostracized by employers and the economic consequences of entering the conflict. Residents of "company towns" fear loss of jobs, tax revenues, and community contributions (Hallman and Wandersman 1992, 112). Employers have the power to intimidate the community because they control the jobs (Cable and Cable 1995, 50).

The extent and intensity of the conflict is dependent upon the underlying nature of the concern. Local conflicts are more intense when human health is the issue, and citizens are less likely to compromise (Gould, Schnaiberg, and Weinberg 1996, 187). Citizens do not understand the corporate theory of acceptable levels of health risk and believe that compromise is defeat when health is endangered (Crowfoot and Wondolleck 1990, 7). The affected community becomes more entrenched because these issues relate to morality and values which are internal differences in philosophy. In contrast, businesses and politicians have a financial interest in the outcome and often do not understand the citizens' moral outrage. These conflicts involve deep differences in basic structural choices--safety and health versus economics (Amy 1983, 15).

The type of environmental hazard has an influence on the timing and sustainability of community mobilization. The pressure associated with a siting issue creates a sense of urgency, thus making the mobilization process easier to implement. It is far more difficult to activate and sustain opposition to an existing polluter because of community ties (Bullard 1994, Gould, Schnaiberg, and Weinberg 1996). The success and

duration of the local movement is dependent upon the group's ability to mobilize resources to support and promote the cause. The opposition generally has greater financial resources and political connections to counter the challenge.

### Power and Empowerment

Understanding power and empowerment is important in the study grassroots groups' tactics. The range of tactics available to local groups is limited by their resources (Christensen 1995, 235). Grassroots groups generally have no formally sanctioned power and must acquire resources to broaden the range of tactics for a greater probability of success. After citizens determine that they must organize to ward off or prevent an unwanted threat, the group must seek technical advice and support to gain knowledge. The group must recruit members and educate the greater community to develop coalitions and increase numbers. Adequate knowledge and technical information form the framework necessary to be taken seriously and gain prestige. Financial resources and volunteer labor must be cultivated (Christensen 1995, 235; Mondros 1994, 5). The polluters and developers have abundant financial resources and grassroots groups use human resources to counterbalance this advantage (Cole 1992, 650).

Power is defined in terms of force, strength, authority, and influence. In a social conflict, power is the ability of one social group to control or sway other in a way that gives the first group an advantage (Cormick 1992, 311). Power is a relative concept, depending on the comparative ability of conflicting entities to control the outcome of a situation (Kriesberg 1982, 11).

While power is an ability, empowerment is a process by which people, organizations, and communities gain power to control problems and matters of interest to them (Florin and Wandersman 1990, 44; Rich and others 1995, 659; Zimmerman 1995,

583). Zimmerman (1995, 582) defines several types of empowerment that are relevant to grassroots groups. First, organizational empowerment is a group of people striving to achieve community level change through collective action by competing for resources, building coalitions with other organizations, or developing influence. The development of an infrastructure enables the group to pursue tactics that individuals cannot perform as effectively, such as attendance at public hearings and public protests (Christensen 1995, 235, 239; Edelstein 1987, 145). Second, psychological empowerment from a community perspective is a perception of group proficiency and the belief that their collective action can make a difference. In this context, psychological empowerment fuels motivation and mobilization of the group. The group needs to feel that their efforts have some probability of success given the available resources and the external limitations impacting the achievement of their goals. The level of group empowerment is not static and can be enhanced by experience and knowledge or diminished by defeat (Zimmerman 1995, 586).

The process of active involvement is a psychologically empowering personal experience. Participants feel that they are working positively to make a difference. The group activity helps to reverse psychological damage that occurs from the inherent powerlessness of circumstances such as toxics releases (Edelstein 1987, 144).

Grassroots organizations can be "empowering" by enhancing the confidence of the individual members or "empowered" to change the outcome of circumstances in the community (Florin and Wandersman 1990, 44). A distinction between an "empowering process" and an "empowered outcome" is important to evaluate the results of collective



community activity. An empowered process is the mechanism by which organizations and communities attempt to gain control of outcomes. An empowered outcome is the result of the process and may be quantitatively or qualitatively measured (Zimmerman 1995, 585). Grassroots participation is a process that may or may not lead to an empowered outcome. According to Rich and others (1995, 660) citizen participation and empowerment are linked, but the nature of the outcome is the factor that determines whether the participation leads to group empowerment or disempowerment. When the group loses, disempowerment occurs (Brown and Masterson-Allen 1994, 273; Rich and others 1995, 660). Nevertheless, the process may enhance the members skills and knowledge and the experience may provide personal psychological empowerment.

Community empowerment can be described as reactive or proactive dependent upon the circumstances of mobilization. Reactive empowerment is mobilized to fend off an unwanted threat, such as an unwelcome facility siting or hazardous toxics. The majority of grassroots anti-toxics organizing is reactive empowerment. Groups emerge in response to a toxic threat or an unwanted facility and dwindle when the crisis is resolved (Christensen, 1995, 230). Proactive empowerment, such as lobbying and public relations, is utilized to pursue a desired outcome or activity, especially to influence government decisions (Christensen 1995, 243; Rich and others 1995, 666). Although grassroots tactics include these activities, they rarely develop the strength and tenacity of business associations and corporations that perform these functions on a continual basis (Christensen 1995, 244).

The literature describes several other empowerment distinctions including formal, instrumental, and substantive. Formal empowerment is granted by government and business to the public for involvement in decisions. Although procedures allow for this citizen participation, the meeting may be a required "performance" because the decision-makers have already determined the outcome (Christensen 1995, 236). The process can be manipulated by officials to disempower people by giving lip service to their concerns (Rich and others 1995, 666). Also, the public forum can be dominated by competing opposition groups, such as unions and industry organizations. Instrumental empowerment is the citizen's capacity to participate and influence decision-making. Without formal empowerment, instrumental empowerment is more difficult, but not impossible to achieve (Rich and others 1995, 667). Private industry has the financial resources and clout to exert instrumental power on public agencies through direct and indirect methods (Capek 1993, 7). Finally, substantive empowerment is the ability to solve problems and generate the preferred or "empowered" outcome (Rich and others 1995, 668).

In order for citizens to develop substantive empowerment and reach an empowered outcome, a power base must be developed to gain sufficient status and strength in relation to the opposition. The grassroots group must build power in several areas: resources, coalitions, and knowledge (Cormick 1980, Crowfoot and Wondolleck 1990, Kriesberg 1982, Mondros 1994). Service donations of members are the group's primary economic asset (Crowfoot and Wondolleck 1990, 165). Grassroots groups must often use negative tactics, such as controversial press and confrontations in public

meetings in order to build public attention to draw adherents and develop coalitions for their cause (Cormick 1980, 30).

Because the conflict is usually generated by corporations and governments located outside the immediate neighborhood, the community must build outside coalitions to expand political power (Epstein 1995, 10; Gould, Schnaiberg, and Weinberg 1996, 199; Fisher 1984, 155; Fisher and Kling 1989, 207). These coalitions may include mainstream environmental organizations, national and regional anti-toxics groups, politicians, unions, church groups, and social clubs.

Environmental disputes encompass complex legal, economic, and scientific topics; therefore, control and access to information and technical expertise represent power. The developers and corporate polluters can hire experts, while grassroots groups often rely on members and associates to develop knowledge (Amy 1983, 9; Crowfoot and Wondolleck 1990, 164; Freudenberg 1984b, 91). Freudenberg (1984a, 445) found that 88 percent of the groups in his study reported obstacles to obtaining information. Forty-five percent indicated that government agencies blocked their access to data. At times, the Freedom of Information Act was used to obtain material. Public health officials may withhold information or even give out information that residents believe to be false (Freudenberg 1984b, 99). The government routinely minimizes toxic risks, which reduces its obligation to react (Edelstein 1987, 153).

In a community, the power structure includes both formal or governmental power and informal or interest group influence (Christensen 1995, 246). The formal structures of government are shaped as a direct result of interest group influences and remain in

place until disputed by opposing groups (Christensen 1995, 247). Grassroots groups can be empowered and influence decisions within a community (Florin and Wandersman 1990, 45). But in order to alter the formal structures of government, they must first develop sufficient informal power to challenge the status quo (Christensen 1995, 247).

### Government and Politics

In the political arena, grassroots groups are in competition with other interest groups. Economic groups, such as corporations, industry associations, and chambers of commerce, are the most powerful adversaries of grassroots groups (Christensen 1995, 244). These groups have greater levels of instrumental and substantive empowerment. They have the financial resources to use proactive empowerment by continually lobbying elected officials and political elites to promote and protect their businesses (Christensen 1995, 237).

When grassroots groups form, they must acquire resources, coalitions, and knowledge necessary to build the political legitimacy for material participation in decision-making (Crowfoot and Wondolleck 1990, 163). The established economic groups have the financial resources to purchase coalition support and expert knowledge. Money can buy political resources, expand the range of tactics available, and give “a group staying power” (Christensen 1995, 243).

Freudenberg (1984b, 40) contends that individual citizens do not have control over environmental degradation and the associated health risks in their community. He argues that major corporations determine where to site facilities and dump toxics. When

community residents contest these decisions, they have to resort to filing lawsuits, lobbying politicians, and applying public pressure.

Existing laws have only symbolic value unless they are enforced by regulatory officials (Cable and Cable 1995, 45). Pollution will not be voluntarily controlled by polluters; the victims must insist that regulations be enforced (Cole 1992, 649; Cable and Cable 1995, 44). Anti-toxics groups spend much of their energy pressuring government officials to enforce existing laws (Epstein 1995, 14). If a grassroots group is frustrated by government inaction, they can resort to the legal system for resolution (Cable and Cable 1995, 112). Because corporations are legal entities, grassroots groups can take them to court. But this strategy requires financial resources for lawyers, expert witnesses, laboratory research, and court costs (Cable and Cable 1995, 113). The corporate opponents are generally better prepared to wage a costly legal battle (Colopy 1994, 142).

The government relies on tax revenues and industry pursues profits, creating a mutual dependency on continual economic growth (Cable and Cable 1995, 46). Government officials are often unwilling to take actions that might restrain this economic growth (Yeager 1991, 33). Governments may be placed in a contradictory situation because of conflicting goals, the public protection versus corporate expansion (Cable and Cable 1995, 45).

A survey by Freudenberg (1984a, 445) of environmental groups revealed that health fears dominated the list of concerns. Citizens want answers to questions regarding incidents and exposures in their communities. Freudenberg (1986, 8) also found that health officials reported that they often or sometimes responded to citizen's inquiries on

environmental hazards. Four-fifths of the respondents reported that they had contact with a citizen group regarding a serious incident (Freudenberg 1986, 9). When this interaction takes place, a conflict often exists between health officers and community groups regarding the content. Citizen groups believe that information is suppressed or distorted, which can lead to an adversarial relationship between the public and the health officials (Freudenberg 1986, 11). Health officials cite various reasons for this perception: concern of false alarm, the technical nature of the information, government policy, limits of the health department, and different criteria for risk assessment (Ede!stein 1987, Freudenberg 1986). Although these conflicts are sometimes unavoidable, “nothing evokes the wrath of citizens more than the belief that their concerns are not being taken seriously” (Freudenberg 1984a, 447).

#### Characteristics of Grassroots Groups

After a review of the literature on grassroots groups, a pattern of similarities in characteristics, activities, goals, and obstacles is revealed. Freudenberg’s (1984a) study of 110 grassroots environmental groups is the most comprehensive work in this area. Other researchers used a case study approach in their analysis of various aspects of these groups. See table 1 for a listing of the characteristics and the related sources.

Table 1.--COMMON CHARACTERISTICS OF GRASSROOTS GROUPS

<u>Composition of Members</u>	<u>Reference Source</u>
More female participation & leaders	Babcock 1995, Blocker and Eckberg 1989, Brown and Masterson-Allen 1994, Bullard 1993b, Cable 1992, Capek 1992, Epstein 1995, Freudenberg 1984a, Perrole 1993
Age generally between 26-40, not young	Freudenberg 1984a, Brown and Masterson-Allen 1994
Not highly educated	Brown and Masterson-Allen 1994
Predominantly working-class, blue collar, and housewives	Babcock 1995, Brown and Masterson-Allen 1994, Cable 1992, Cable and Cable 1995, Cole 1992, Epstein 1995, Mondros 1994
Parents with children under 18	Edelstein 1987, Hamilton 1985
Resided in community 6-10 years	Edelstein 1987, Freudenberg 1984a
No previous environmentalism or political activism	Brown and Masterson-Allen 1994
<u>Motivations</u>	<u>Reference Source</u>
Concern for health and safety, including children	Babcock 1995, Blocker and Eckberg 1989, Brown and Masterson-Allen 1994, Cable 1992, Cable and Benson 1993, Cable and Cable 1995, Cable and Degutis 1991, Capek 1992, Cole 1992, Epstein 1995, Freudenberg 1984a, Hamilton 1985, McWilliams 1994, Moore and Head 1993
Most common issue toxics and air pollution	Brown and Masterson-Allen 1994, Bullard 1993b, 1993b, Cable 1992, Capek 1992, Freudenberg 1984a
Quality of community/local environment	Bullard 1993b, Cable 1992, Dunlap 1992, Freudenberg 1984a, Youngstrom 1990

TABLE I. CONTINUED

<u>Motivations</u>	<u>Reference Source</u>
Frustrated by government response	Brown and Masterson-Allen 1994, Bullard 1992, Cable and Benson 1993, Cable and Cable 1995, Cable and Degutis 1991, Capek 1993, Cole 1992, Epstein 1995, Freudenberg 1984a, Youngstrom 1990
Angry at polluter's lack of concern for community	Brown and Masterson-Allen 1994, Cable and Cable 1995, Capek 1993, Gould, Schnaiberg, and Weinberg 1996, Hallman and Wandersman 1992
Feelings of injustice by treatment	Bullard 1993b, Cable 1992, Cable and Cable 1995, Capek 1993, Gould, Schnaiberg, and Weinberg 1996, Hall and Wandersman 1992, Krauss 1989
<u>Common Activities</u>	<u>Reference Source</u>
Consulting experts	Brown and Masterson-Allen 1994, Edelstein 1987 1987, Freudenberg 1984a
Gathering information	Amy 1983, Bullard 1993b, Cable 1992, Cable and Degutis 1991, Capek 1993, Cormick 1980, Crowfoot and Wondolleck 1990, Freudenberg 1984a, Kriesberg 1982, Mondros 1994
<u>Organization and Mobilization</u>	<u>Reference Source</u>
Local Community	Brown and Masterson-Allen 1994, Mondros 1994, Youngstrom 1990
Recruit friends and neighbors	Cable 1992, Cable Walsh, and Warland 1988, Capek 1993
Petition drives	Bullard 1993b, Cable and Degutis 1991, Walsh 1984
Publish newsletters	Cable 1992, Christensen 1995, Walsh 1984
Community workshops & meetings	Bullard 1993b, Christensen 1995



TABLE I. CONTINUED

<u>Organization and Mobilization</u>	<u>Reference Source</u>
Form Coalitions	Cable and Degutis 1991, Capek 1993, Cormick 1980
<u>Motivations</u>	<u>Reference Source</u>
Form Coalitions	1980, Crowfoot and Wondolleck 1990, Edelstein 1987, Epstein 1995, Fisher 1984, Fisher and Kling 1989, Freudenberg 1984a, Gould, Schnaiberg, and Weinberg 1996, Youngstrom 1990
Create overall public awareness	Brown and Masterson-Allen 1994, Bullard 1993b, Cable 1992, Cable and Cable 1995, Cable and Degutis 1991, Capek 1993, Christensen 1995, Edelstein 1987, Mondros 1994, Walsh 1984
Develop political support	Bullard 1993b, Cable 1992, Cable and Cable 1995, Cable and Degutis 1991, Capek 1993, Christensen 1995, Mondros 1994, Walsh 1984
Lawsuits and litigation	Bullard 1993a, Bullard 1993b, Cable 1992, Cable and Cable 1995, Capek 1993, Christensen 1995, Mondros 1994, Walsh 1984
Develop financial resources	Cable 1992, Cable and Cable 1995, Christensen 1995, Cormick 1980, Crowfoot and Wondolleck 1990, Kriesberg 1985
<u>Common Goals</u>	<u>Reference Source</u>
Eliminate the hazard	Cable and Cable 1995, Cole 1992, Walsh 1984
Close the existing facility	Bullard 1993b, Cable and Cable 1995, Freudenberg 1984a
Block the proposed siting	Bullard 1993a, Bullard 1993b, Freudenberg 1984a
Reduce/minimize exposure	Bullard 1993a, Bullard 1993b, Freudenberg 1984a

TABLE 1. CONTINUED

<u>Common Goals</u>	<u>Reference Source</u>
Spread awareness of problem	Bullard 1993b, Brown and Masterson-Allen 1994, Freudenberg 1984a
Authorities to enforce law	Cable and Cable 1995, Cole 1992, Epstein 1995
Stricter legislation & laws Compensation for pollution	Bullard 1993a, Bullard 1993b Bullard 1992, 1993b, Capek 1993
<u>Common Obstacles</u>	<u>Reference Source</u>
Disruption in community	Capek 1993, Freudenberg 1984a
Lack of resources	Cable and Cable 1995, Christensen 1995, Cole 1992, Freudenberg 1984a
Opposition industry or neighbors	Bullard 1994, Cable and Degutis 1991, Capek 1993, Freudenberg 1984a, Gould, Schnaiberg, and Weinberg 1996
Lack of government support	Babcock 1995, Brown and Masterson-Allen 1994, Cable and Benson 1993, Cable and Cable 1995, Cable and Degutis 1991, Capek 1993, Cole 1992, Hamilton 1985, Krauss 1989, Moore and Head 1993, Taylor 1992

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Summary

A brief review of the two movements that preceded the grassroots activists wave provides the understanding of the prior socio-political climate that created these numerous groups with unique agendas. A vast amount of the theoretical literature is concentrated on environmental racism, linking the grassroots movement to the civil

rights movement. The more general framework of environmental justice points to financial factors as key determinants in toxic sitings and overall environmental quality in communities. This economic perspective is associated with power and empowerment. Businesses have the money that provides power and facilitates the empowerment process.

The anti-toxics grassroots movement includes citizens of every racial mix and is predominantly female in gender. Location to the hazard and health issues are the primary indicators of concern and activism. The proximity to unwanted sitings and hazards has a direct bearing on the movement's class composition. This movement is linked to the larger societal pressure of citizens demanding a role in scientific and technological decision- making and participatory democracy.

Hamilton (1985) asserts that minimal sociological research has been done in the study of common patterns that may become evident in community response to toxic and environmental threats. Although considerable focus has been directed towards formation of grassroots movements, limited emphasis has been placed on the consequences, results, activist recruitment, and patterns of commitment (Cable and Degutis 1991). Grassroots community groups provide an area for empowerment research (Florin and Wandersman 1990), particularly when focused on response to local environmental hazards. Most research to date has focused on the disempowering aspects of these threats rather than the empowering results (Rich and others 1995).

This study is designed to explore the mobilizing effect of environmental threats; and the tactics, strategies, and results of grassroots activism. The goal is to add to the research on citizen empowerment in local environmental conflicts.

## CHAPTER 3

### RESEARCH DESIGN

After researching the theoretical literature, numerous case studies, and Freudenberg's (1984a) study of 110 anti-toxics grassroots groups, a set of common characteristics and motivations, typical activities, goals, and obstacles was developed to compare with the research results of the three case studies in the Crockett/Rodeo area. These data are displayed on table 8 in results.

#### Methodology

Case studies are the most flexible of all research designs and particularly applicable to sociological field research. When applied in an intellectually rigorous manner, they offer the strengths of experimental research within natural settings (Yin 1984). The case study design is uniquely advantageous when "how" and "why" questions are being researched in a contemporary setting (Yin 1984). This approach allows the researcher to study a situation in great depth, especially after a body of research evidence has accumulated on a topic. Selective case studies can serve to refine knowledge and focus on specific issues and explanations (Hakim 1987). Qualitative analysis is appropriate when a study is steered by questions, issues, and a search for patterns (Patton 1987).

Case study analysis is typically based on two or more research methods, because the use of multiple sources of evidence contributes to the effectiveness of the study (Hakim 1987). Archival and document analysis includes reviews of newspapers, internal memorandums, government reports, policy statements, and group newsletters.

The case study method of research design has been used in a wide variety of studies on grassroots activism including those by Brown and Masterson-Allen (1994); Bullard (1990, 1993a, 1993b); Cable (1992); Cable and Degutis (1991); Capek (1993); Couch (1991); Edelstein (1987); Florin and Wandersman (1990); Hamilton (1985); Krauss (1989); Rich and others (1995); and Walsh (1984). These studies most frequently employed three research methods: archival and document analysis, interviews, and participant observation. Some researchers conducted participant observation of grassroots meetings and public hearings, including those by Brown and Masterson-Allen (1994); Capek (1993); Florin and Wandersman (1990); Rich and others (1995).

In all these studies, the researchers conducted interviews with key group members and opinion leaders in an open-ended format. Bullard (1993b, 26) described in detail the method he employed to reach the influential leaders. He used a "reputational approach" in which he asked each respondent who was the individual or group most responsible for resolving a dispute. Other parties interviewed included nonparticipants, opponents, city officials, and members of national environmental groups.

Attitude and demographic surveys in written or telephone format augmented the research in a portion of the cases (Cable and Degutis 1991, Cable, Walsh, and Warland 1988, Florin and Wandersman 1990, Hamilton 1985, Perrolle 1993). Freudenberg's

(1984a) survey of 110 grassroots groups helped in assessing the types of conflicts, strategies, goals, and demographics of community activists.

Multiple methods of data collection and analysis are necessary because there are several limitations to qualitative methods. Data triangulation is the use of multiple sources of evidence, for example, interviewing a range of people in different roles with varying, often conflicting, points of view. A broad range of data collection techniques and methods enables a broad, holistic case study design (Hakim 1987). A majority of the cited case studies applied data and methodological triangulation. Methodological triangulation encompasses the use of multiple methods to collect the data.

Standardized methods of information analysis are not available for qualitative analysis. Consequently, the researcher's background and the preferred method of collecting data can influence the choice of information collected. When conducting interviews, several researchers cited an inability to interview key players because they declined to participate or had moved. Also, the interview process can be flawed by recall bias, when respondents misremember facts or distort answers.

### Study Site

Crockett and Rodeo are neighboring, unincorporated towns situated on the northern edge of the San Francisco Bay in Contra Costa County (see figure 1). PRC is located in Hercules on the southwest border of Rodeo (see figure 2). CCP is adjacent to C&H on the waterfront in Crockett (see figure 3). Tosco (formerly Unocal) extends from the waterfront on the northeast side of Rodeo to the east side of Highway I-80 (see figure

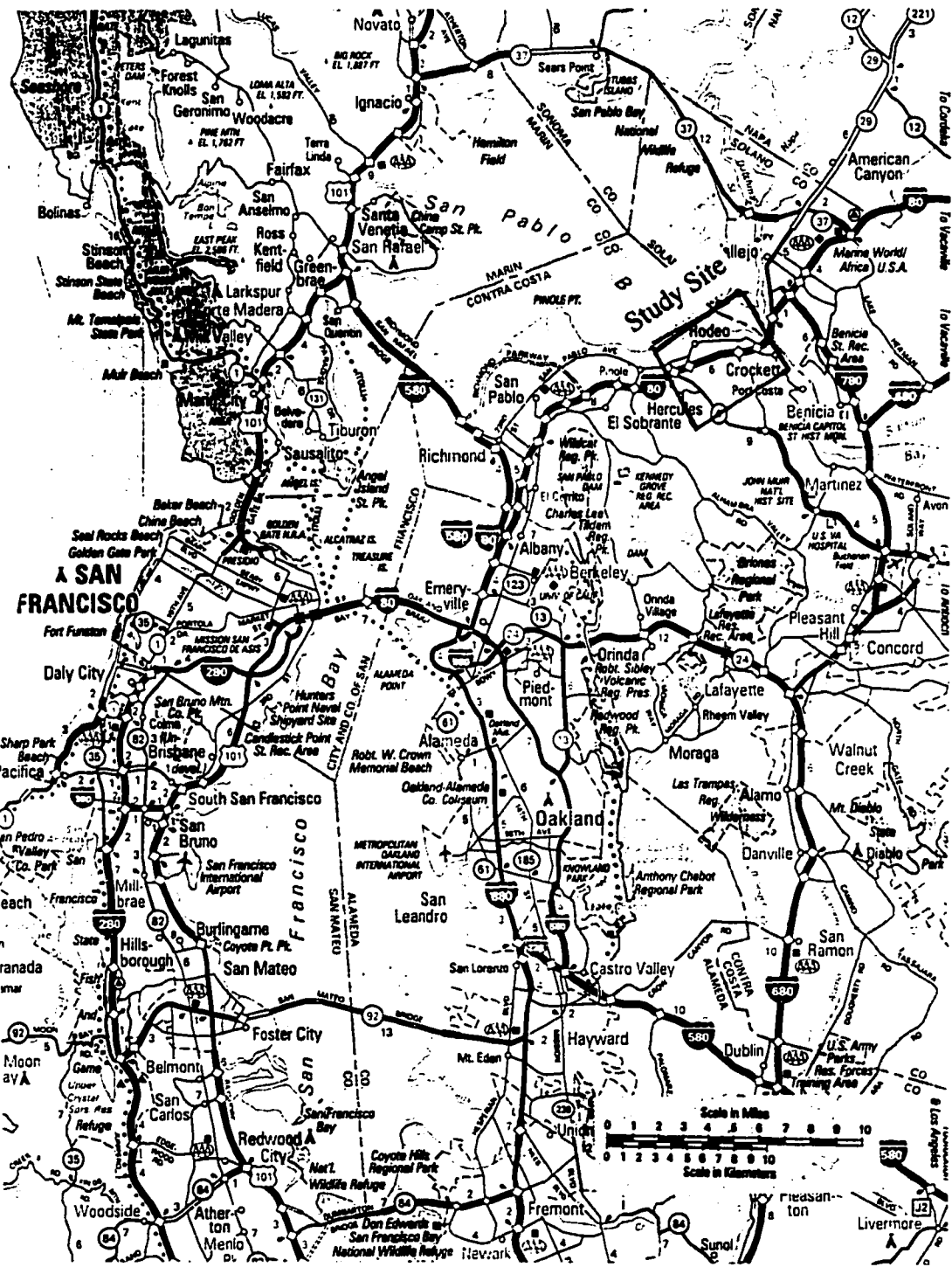


Fig. 1. San Francisco Bay Area. (Base map by American Automobile Association 1999)

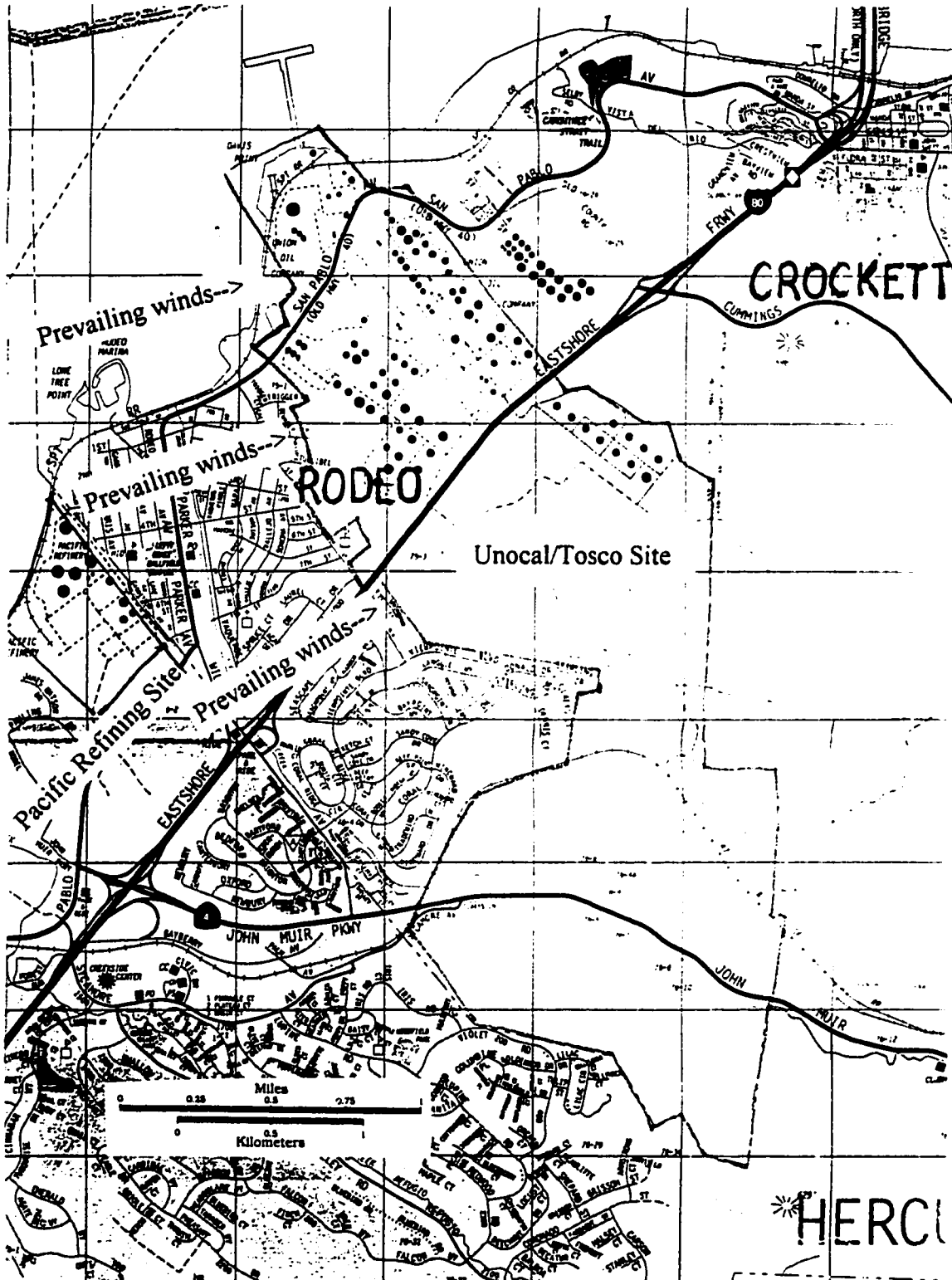


Fig. 2. Crockett, Rodeo, and Hercules areas, featuring boundaries of Unocal and Pacific Refining Company. (Base map by Thomas Bros. Maps 1997)



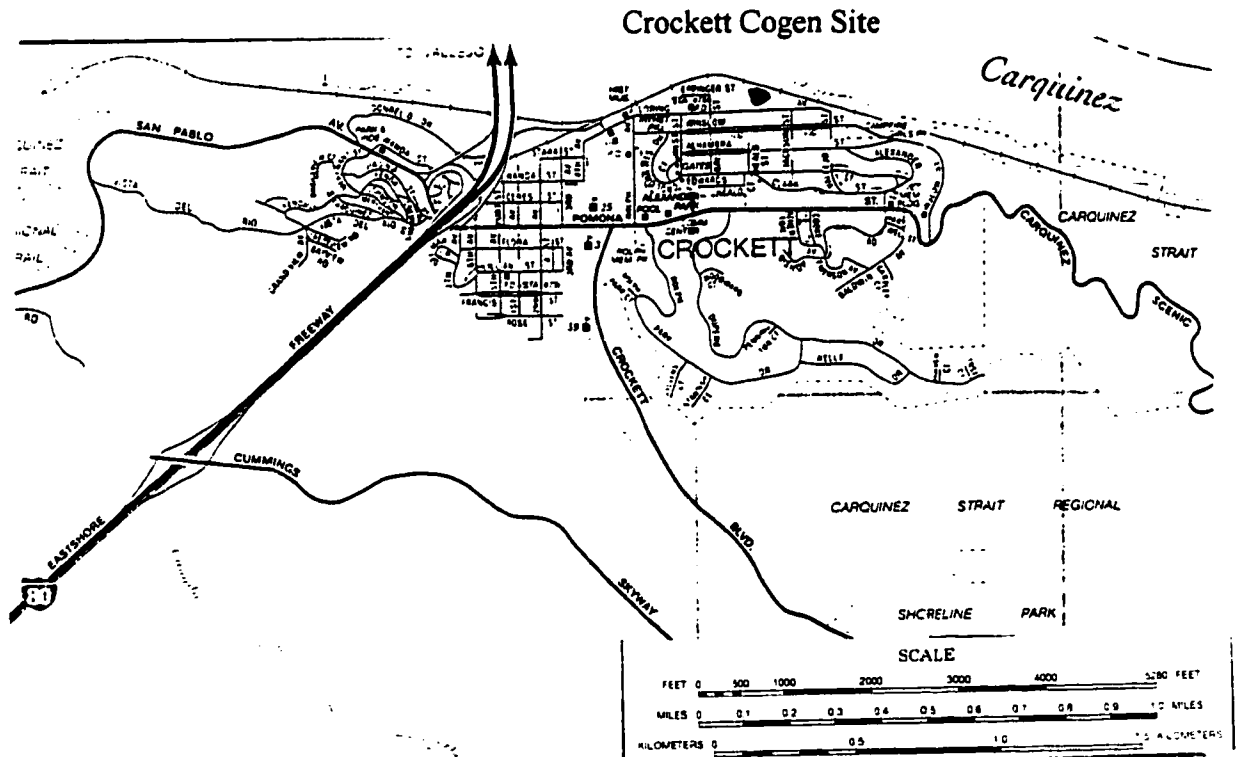


Fig. 3. Crockett area, featuring location of C&H and Crockett Cogeneration Plant. (Base map by California Automobile Association 1996)

2). The communities are both within the boundaries of the John Swett Unified School District. The district elementary school is positioned in Rodeo Tosco's fence line. Crockett is located three miles east and downwind of Tosco.

A study of the Crockett/Rodeo communities' responses to the accidents and releases from the refineries and Crockett's response to the unwanted plant can be compared to other communities nationwide to determine similarities and differences in motivations and empowered outcomes.

### Design and Data Collection

The research design for this thesis is a qualitative case study method. The information in this thesis was collected by three methods: archival and document analysis, interviews, and participant observation. The archival documents and records included internal memos, agendas, minutes, administrative documents, newspaper clippings, legal records, organizational records, and surveys. These records were explored to develop the historic information for the case studies including the incidents and actions of the three entities, the actions and responses of government and politicians, and the responses, tactics, and goals of the residents and activists.

The author prepared an interview guide, a list of questions and issues for a basic checklist, to use when interviewing subjects. The guide was used to develop a systematic and comprehensive framework for compilation and comparison of information gathered from different interviewees. The question format (table 2) was generally standardized, but left open-ended to allow the respondents an opportunity to express opinions and

expand on areas of importance. Any pertinent issues or topics that emerged during the process were further explored on an individual basis, augmenting the basic list of questions. See the interview format on table 2.

#### TABLE 2.--INTERVIEW FORMAT

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1. Sex
2. Age
3. Educational level
4. Occupation at time of participation, including work schedule, full or part time, flexibility?
5. Number and ages of children at time of participation
6. Membership in any environmental groups?
7. Any previous activism or political involvement?
8. How long had you resided in the area at beginning of your involvement?
9. Why did you get involved in local activism? Did a specific event or incident get you involved?
10. What were your feelings and reactions in regards to this event/s or incident/s?
11. What were your initial goals? Goals of the group?
12. What activities did you engage in to pursue these goals? Lobbying, attend meetings, write letters, demonstrate, legal measures, press coverage, etc.
13. What were the results of your activities? What worked and what didn't work?
14. Were you ever discouraged? If so, what was the reason or source of your discouragement?
15. Who did you look to for help? Did you get help from outsiders, experts, engineers, national toxics groups, etc.?

16. Was government response or help sought? If so, was it helpful or a hindrance? Why and how?
  17. How did others get involved?
  18. What changes or results do you see in the community as a result of your efforts?  
Empowerment, cleaner air, financial resources, etc.?
  19. How did this process of involvement influence or affect your personal life? Career change, move, increased political involvement, health, etc.?
- 

The participant-observation method was limited to the on-going activities and meetings in the community and regional anti-toxics group meetings. This form of qualitative observation provided insight into the current activities, processes, and participants. Many of the current activists have engaged in the local anti-toxics movement for more than a decade. Their cooperation and assistance in the research process have been invaluable for contacting former residents and supplying archival records from personal files.

Data triangulation was implemented by the collection of information and opinions on differing sides of the issue, including the refineries, industry advocates, government officials, and community members with opposing points of view.

### Data Analysis

A collection of typical grassroots activists' characteristics, activities, tactics, goals, and obstacles was compiled from data contained in Freudenberg's (1984a) study, the other anti-toxics case studies, information from regional anti-toxics organizations,

and the theoretical literature on grassroots activism. The information was classified to show common grassroots characteristics, potentially effective grassroots behavior, goals, and common obstacles to goal attainment. The characteristics included demographic information and previous activist history. The motivations for involvement included concern for health and safety, concern for toxics and air pollution, quality of the community, frustration, anger, and feelings of injustice. The common activities included the categories of investigation and knowledge by consulting experts and gathering information. Organization and mobilization included organizing in the local community, forming coalitions, creating public awareness, developing political support, developing financial resources, and threatening or filing lawsuits. The goals included eliminating or mitigating the hazard, spreading awareness, influencing authorities and government officials to act, and receiving monetary compensation. The common obstacles included disruption in the community, lack of resources, opposition of others, and lack of support by government and politicians. The Crockett/Rodeo activists' data were compared to the standard characteristics. For each case study, a time line was developed to determine if specific events, such as releases, accidents, and spills motivate and mobilize activists. The activists' activities and goals were compared to the actual outcomes in a process and outcome matrix to assess the potential linkage between the citizens' activities and the outcomes.

### Limitations and Bias

The primary purpose of documents in a case study is to expand evidence from other sources. Documents are often incomplete and inaccurate in content and should not be accepted as absolute fact. They provide one perspective on the situation or research question being investigated. Sometimes documents are written for a unique purpose for an individual audience with a specific objective and therefore may be biased. Awareness of the conditions motivating the communication can assist the researcher in a critical analysis of the information (Yin 1984).

Guided interview questions help the researcher classify the respondents' answers for comparison, but significant factors may be omitted. When the technique is combined with the use of standardized, open-ended questions, each interviewee is asked the same basic questions in a similar order with the ability to probe any areas that appear appropriate during the course of the discussion (Patton 1987).

As discussed in the methodology research, recall bias, inability to interview key players, and distorted answers are additional problems in the interview process. The author conducted 30 in-depth interviews by various methods: face-to-face, telephone, and written responses, depending upon the interviewee's choice. Problems were encountered during the interview process. Many former activists had moved out of the area. Several interviewees responded by written or telephone interviews, but the author was unable to locate some key players. A small number of the former activists declined to participate.

The participant-observation method has several potential problems. The researcher can lose the ability to be an impartial observer and become a supporter of the

group. In this study, the majority of the research is historical and the observational evidence has provided information on recent activities only. The observations have contributed to the “inside” perspective and the development of a rapport with the current activists.

The interview results could be potentially biased because ten participants in the Unocal case study were previously involved in the other cases. Five Rodeo participants were involved in the PRC issue, and the other five were Crockett residents formerly active in the Crockett cogeneration case.

The author has attempted to analyze all of the data as impartially as possible. As a Crockett resident, the author has experienced several toxic releases. On three occasions she has experienced a “shelter in place” both at home and in the classroom with John Swett students. (During a “shelter in place,” residents must remain inside because of a potentially serious toxic release.) These personal experiences helped her understand the feelings of residents who have lived and worked in this area for years under the continual threat of toxic pollution. The author is the regional volunteer air monitoring coordinator with Shoreline Environmental Alliance (SEA), a local anti-toxics group that formed as a result of Unocal’s Catacarb release. Also, she has been elected to serve on the Tosco Community Advisory Panel, a group that works with refinery personnel to collaborate on community issues and concerns.

## CHAPTER 4

### BACKGROUND

#### Introduction

This chapter, providing background on the industries, people, and government in the Crockett/Rodeo area, is presented to detail the present industrial and environmental scene and the factors that make these communities unique. In the past, the odors, accidents, and problems associated with these industries were overlooked because of the well-paying jobs. Since the 1960s, when “an environmental ethic swept the state and country,” a tension has developed between these companies and their surrounding neighbors (Bruggers 26 January 1997, 4 [A]). Consequently, residents have an ambivalent relationship, characterized as a “rocky marriage” with “a thin line between love and hate,” with the heavy industries located in their communities (Bruggers 26 January 1997, 1 [A]).

Entrepreneurs and industrialists began to develop the western Carquinez Strait region more than 100 years ago. The abundance of natural resources and the navigable waterway were key factors in the industrial expansion. Job opportunities brought the people. Although under different ownership, several of the original facilities are still operating today including: C&H, WOC, and Tosco. PRC is presently being dismantled.



California Powder Works and American Smelting and Refining Company closed, but past operations left marks on the landscape.

The situation is further complicated because of the unincorporated status of the two towns and the related lack of direct control over siting, zoning, safety ordinances, and tax revenue. These details set the scene for the three case studies outlined in this thesis. Citizens and government have responded to the problems associated with these industries in different ways over the years.

### Industry

Pioneers and immigrants opened the American West hoping to find opportunities in a land full of natural resources. During the mid-nineteenth century, California rapidly developed, fueled by the discovery of gold in 1849. Miners also sought silver, copper, lead, zinc, and oil in the race to strike it rich. But mining deforested the Sierra Nevada and polluted rivers. Miners and people who serviced the industry started towns, particularly along rivers. Towns located by rivers were important for industries that used the power, transportation, cooling, and waste disposal applications of the waterways (Schnaiberg and Gould 1994, 27). During the middle to late 1800s, entrepreneurs began to found a string of towns along the shores of the Carquinez Strait. The navigable waters there connected towns to ocean harbors, which promoted shipping and attracted businesses and immigrants (Cohen 1996, 29). Local growth was part of the nationwide trend of urbanization and industrialization that accompanied the closing of the American frontier in 1890 (Cable and Cable 1995, 55; Gottlieb 1993, 7).

Railroads were built to transport grain from the Central Valley to ports along the Strait for delivery worldwide. The Northern Railway, later part of the Southern Pacific, established the town of Crockett on the southern side of the Strait in 1881 (Billeci 1981, 9; Emanuels 1989, 17). Various entrepreneurs soon constructed a foundry, machine shop, lumber yards, and a flour mill along the waterfront. Although all of these enterprises eventually closed, the flour mill was converted into a beet sugar factory and cane refinery. This plant shut down in 1903 because beet sugar ventures failed and beet farmers were unable to secure sufficient water supplies for their crops. The plant was refurbished and reopened under the name of California and Hawaiian Sugar Refining Company in 1906, when management established agreements with Hawaiian plantation owners to provide a stable supply of cane (Billeci 1981, 173; Emanuels 1989, 177). Since then, C&H has refined raw sugar shipped in from Hawaii and packed it out by rail and truck.

According to Gottlieb (1993), water quality was a critical issue for cities and factories. Throughout the nation cities and businesses needed to import water because local sources, during the period of early industrialization, were insufficient or contaminated. The Crockett area was no exception. For many years, C&H found it difficult to obtain adequate, clean, local supplies. At first, workers towed a barge up the Sacramento River to obtain fresh water upstream. Later, they obtained water from Marin County and Napa County sources. Finally in 1935, East Bay Municipal Utility District built a pipeline to the plant (Billeci 1981, 179).

Other factories and businesses near Crockett opened during the end of the nineteenth century. A mile west of Crockett, the towns of Torney and Selby grew up around a smelting plant that processed gold and silver. American Smelting and Refining Company bought the smelter in 1886 and began to process lead and zinc (Tatam 1993, 161). The Selby plant became the largest smelter in the world (Emanuel 1989, 173). From the beginning, residents on the Strait complained that fumes from the smelter killed crops and livestock. The company reacted to complaints by buying lands from the protesting farmers located downwind of the facility. In 1937, the smelter built the world's tallest smokestack to release exhaust at greater heights. Management added a zinc fuming plant to the facility in 1953 to produce zinc oxide, creating sulphuric acid and liquid sulphur dioxide as byproducts (Emanuel 1989, 173; Tatam 1993, 161). The plant also processed lead ores and lead from depleted batteries. A slag heap on the site leached poisonous lead and arsenic into the San Pablo Bay for 85 years (Tatam 1993, 160). The plant was closed in 1971 and the site purchased by Wickland Oil Company for a terminal, which still receives and stores petroleum products. The stack was dynamited in 1973, leaving a Superfund Site adjacent to the terminal that remains covered with asphalt today (Cohen 1996, 33; Emanuel 1989, 173).

In February 1896, Union Oil Company opened a refinery in Rodeo, approximately three miles west of Crockett. Union selected this site on San Pablo Bay so that it could receive tankers and barges carrying crude oil. At first, the refinery processed about 1,500 barrels of crude a day and occupied only 22 acres on the shoreline (Refinery has expanded over the years 28 February 1987). Over the years, the company has responded

to changes in products and consumer demands by constantly enlarging and re-equipping the plant (Welty and Taylor 1966, 116). In 1899 and 1905 the company decided to double and then treble the plant's capacity to meet the booming demand for oil (Welty and Taylor 1966, 142). Union added a \$2 million lubricating-oil unit in 1934 (Welty and Taylor 1966, 204) and an alkylation plant that produced 100-octane aviation gasoline in 1940 (Pederson 1990, 90). After the war, the population explosion in the western states created further demand for oil products. In response, Union built a new \$12 million lubricating-oil unit (Welty and Taylor 1966, 229) and a 225-mile pipeline to transport oil from San Joaquin Valley oil fields to the refinery (Welty and Taylor 1966, 247).

During the mid-1950s, the company developed a process of catalytic hydrodesulfurization called "unicracking" or hydrocracking that reduced the amount of non-marketable residual materials and increased plant efficiency. This new technology drastically reduced production costs and created royalties for the company as other refineries bought the process (Welty and Taylor 1966, 230). Since uncracking was extremely profitable for the company, an upgrade increased that capacity in the early 1970s. In 1971, tower D-409 was added to the Unicracker complex. In August 1994, tower D-409 failed and released tons of Catacarb, a chemical compound containing potassium, diethanolamine, boron, and vanadium/metavanadate, on the surrounding communities.

By 1994, the refinery sprawled 1,100 acres of shoreline and inland hills. It had a capacity of 100,000 barrels a day and averaged 77,000 barrels a day in crude oil production. It employed more than 500 people and operated 24 hours per day (Chambers

Group, Inc. 1994, 2-1). In April 1997, Unocal sold its entire West Coast refining operations. Tosco Corporation, which operates a refinery in Martinez, purchased the San Francisco refinery and changed the name to Tosco Oil Refinery.

California Powder Works of San Francisco owned a dynamite manufacturing facility located on the sand dunes of Golden Gate Park. In 1879 the company was forced to seek a new location due to population growth in San Francisco and it selected a site adjacent to Rodeo. The plant name was changed to Hercules Powder Company (HPC). Production began in 1881 and the company immediately built a town for its employees (Emanuel 1989, 162; Tatum 1993, 160). As an unincorporated community, the company and the town were under the control of the Contra Costa County Board of Supervisors. Company officials wanted the ability to make their own laws. Therefore, they incorporated the town of 100 employees, and Hercules was founded in 1900 (Ojala and McGrath 1987, 4). Conditions in the plant were very dangerous, especially on the nitroglycerin lines. Explosions killed and injured many workers until public opinion and safety issues closed the plant in 1964. It was converted to a fertilizer production facility and began operation as Hercules, Inc. in 1966 (Tatum 1993, 160). The plant created air and water pollution problems and was repeatedly cited by various environmental agencies. Specific violations related to water contamination and emissions from the nitric acid stack “which emitted a heavy cloud of toxic red smoke” (Ojala and McGrath 1987, 23). The plant was eventually closed in 1977 (Tatum 1993, 160).

A small oil refinery, named Sequoia Refining Co., was built on 144 acres of the waterfront area on the western side of Hercules in 1966. In 1976, the Coastal Oil Corp.

purchased the facility and changed the name to Pacific Refining Co. The refinery closed in 1981 and the facility operated as a gasoline supply and distribution center for two years. Refinery operations were resumed in 1983. The ownership changed in 1988 when China National Chemical Corp., owned by the People's Republic of China, purchased a 60 percent interest in Coastal Oil. During its 12 years of refinery operations, from 1983 through 1995, the plant created air pollution problems for local residents in the downwind Rodeo area. PRC ceased refining in mid-1995, rather than invest \$500 million in modifications that were required to produce the cleaner-burning gasoline mandated by California (Morris 8 June 1995, 1[A]).

### The People

People migrated to the Crockett/Rodeo area for the employment opportunities available on the Carquinez Strait. Residents worked at the various businesses in the immediate area and outside access was primarily by rail and ferry. By 1910 the Crockett area, which included Tormey, Selby and Port Costa, had 2,402 inhabitants (U.S. Bureau of the Census 1910). C&H was the dominant employer in Crockett. Management adapted a paternalistic role and developed the town's infrastructure. The company built many homes to attract dependable employees to live in the isolated community (Billeci 1981, 165). Crockett was called "Sugar City" and the residents benefited from the company's generosity. C&H bestowed many amenities to the community that were unavailable to an unincorporated community with no direct tax basis (Billeci 1981, 180).

Access to the area improved when the Carquinez Bridge opened in 1927, which spanned the Strait and connected Crockett and Vallejo (Billeci 1981, 37). The population grew steadily over the next several decades to a height of 4,496 people in 1950 (U.S. Bureau of the Census 1950). A second span was added to the Carquinez Bridge in 1958 and highways to the area improved. With the removal of geographic barriers, C&H employees commuted from other communities, and by the 1960s a majority of the workers lived outside the area. At that time, management began to assume “the more proper role in the community” and began to disengage itself from the generosity of the first 50 years (Billeci 1981, 165). The population declined to 3,314 by 1970 (U.S. Bureau of the Census 1970) and remained relatively stable at 3,228 in 1990 (U.S. Bureau of the Census 1990). C&H’s Crockett location employed a maximum of 1,900 in the late 1940s and early 1950s which corresponds to the town’s highest population level. Over the years automation reduced the number of production employees. At present the total employment is 533, with only a small number living in Crockett, according to Bonnie Butler (telephone 15 October 1998), C&H’s Human Resource Manager.

An undated article produced by the Rodeo Townsite and Improvement Co. around 1910 estimated Rodeo’s population at 500. (U.S. Bureau of the Census data was not available.) The article described the area as “surrounded by large manufacturing establishments, which employ many hundreds of men,” and recited the many employment opportunities at the industrial facilities nearby. The town was described as comfortable and progressive with large sized affordable building lots.

Rodeo has grown steadily with the greatest period from 1940 until 1950 when an increase from 2,124 (U.S. Bureau of the Census 1940) to 6,215 (U.S. Bureau of the Census 1950) occurred. Many people settled in the area because of accessibility to job opportunities at the nearby shipyards in Richmond and the expansion of Unocal during the war years. New housing tracts were developed in the 1960s and 1980s, when the number of housing units in the area doubled (United States Attorney and Housing Authority of Contra Costa County, 1997, 21). By 1990, the population was estimated at 8,362 (U.S. Bureau of the Census 1990).

The two communities are similar in housing characteristics. Fifty-eight percent of the homes in Crockett were owner-occupied with a median value of \$185,036 in 1990. In Rodeo, the median value was \$181,692 with 63 percent owner-occupied. Median rent for both area was \$459 per month. Median household incomes were \$38,750 and \$38,919, respectively (U.S. Bureau of the Census 1990). The major economic difference between the two communities is the percent of population below the poverty level, which was 4.9 percent for Crockett and 9.3 percent for Rodeo. Rodeo is home to the Bayo Vista, the county's largest public housing project, where 65 percent of the population rely on public assistance and 79 percent of the households are headed by single females (United States Attorney and Housing Authority of Contra Costa County 1997, 23). The project is located between the downtown area and the Tosco refinery.

The population of Hercules was 279 in 1910 and remained relatively unchanged through the 1970 census. Owners and employees of HPC lived and worked in the city. Many employees were Chinese immigrants, who worked on the powder lines. The



population increased to 5,789 by 1980 (U.S. Bureau of the Census 1980) and 16,829 by 1990 (U.S. Bureau of the Census 1990). The dramatic increase over the ten year period from the mid 1970s to the mid 1980s resulted from the sale and development of property to Hercules Properties, Ltd., when the buffer zone surrounding the dynamite plant was no longer needed.

Crockett and Rodeo are characterized as working-class towns with affordable housing. The Rodeo downtown area looks neglected and run down because some businesses are vacant. Crockett can be characterized as charming, quaint, and a little stagnant. Although many residents commute to other areas to work and shop, a strong level of community spirit exists in both towns. The towns are inter-related by the boundaries of the John Swett Unified School District. The district elementary school is located on Tosco's fenceline in Rodeo (figure 4). The middle school and high school are located in Crockett.

### Politics and Government

The political setting in Crockett and Rodeo is significant for understanding the circumstances surrounding the three cases. Because both towns are unincorporated, Contra Costa County (the "County") is the principal local government for the area. A five-member board of supervisors (the "Board") heads the county government. One supervisor represents the district, which includes the Crockett/Rodeo area. Because a majority vote of the Board is required to pass ordinances and approve land use permits, it can be difficult for residents to influence local decisions.

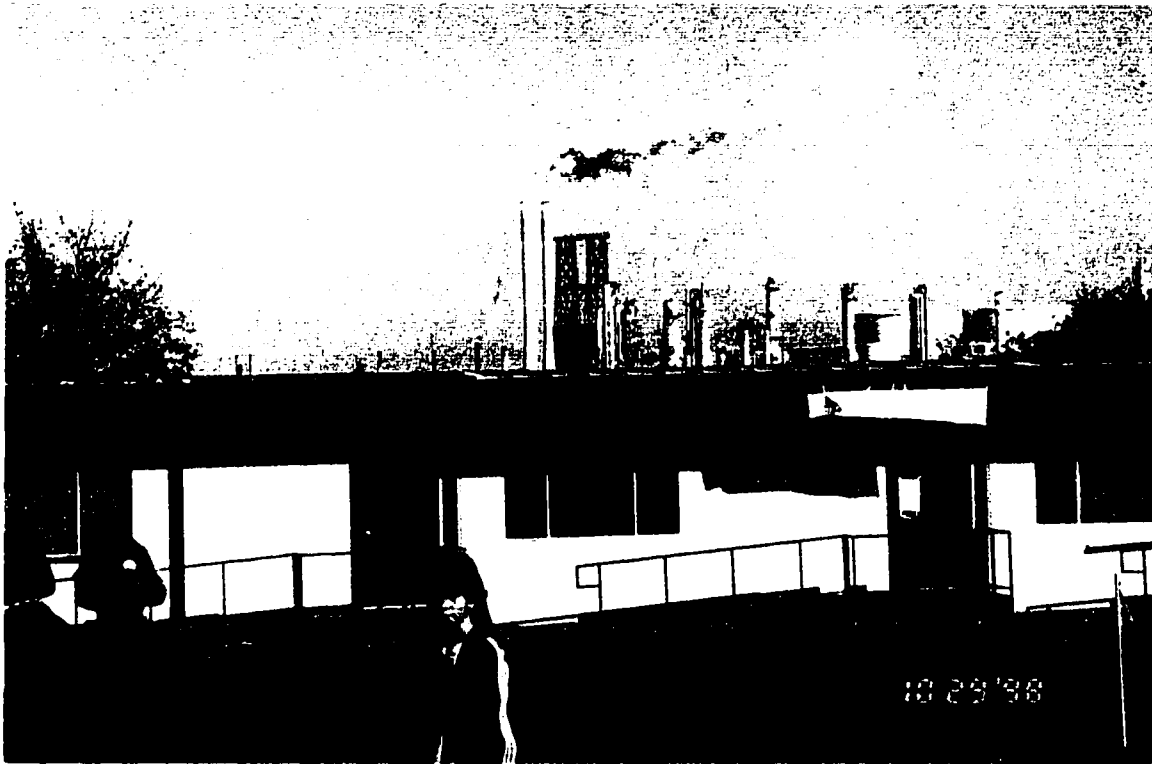


Fig. 4. Top. View of Hillcrest Elementary buildings facing NE, with Tosco in the background. Bottom. View of Hillcrest Elementary playground facing NE, with Tosco in the background. (Courtesy of Don Brown 29 October 1998)

Local and state governments are responsible for the consideration of the potential environmental effects of a project before issuance of land-use permits according to the California Environmental Quality Act (CEQA). The planning department, as permitting agency, is usually the “lead agency” in local planning matters (Governor’s Office of Planning and Research 1990, 14). The Contra Costa County Planning Commission is responsible for land-use permits in unincorporated areas of the County, including Crockett and Rodeo.

Although the towns have no formal government, Crockett residents formed a volunteer group in the early 1970s, the Crockett Improvement Association (CIA), that meets on a monthly basis to discuss local issues, develop volunteer committees, and lobby government officials. Rodeo residents formed a similar group, the Rodeo Citizens Association (RCA), in the mid-1980s. These groups provide a meeting place where local citizens can express their views and present concerns to government agencies, primarily the county supervisors. Over the years, both organizations played a part in the refinery and cogeneration debates.

Local industrial facilities are subject to federal, state, and Bay Area Air Quality Management District (BAAQMD) rules, regulations, laws, and plans. California’s air pollution control program was established in 1969 under provision of the Mulford-Carrell Act. BAAQMD directly regulates the air quality in the San Francisco Bay Area. BAAQMD’s efforts are focused on reducing the quantity of pollutants emitted to the atmosphere to attain or maintain National Ambient Air Quality Standards and California Ambient Air Quality Standards (Chambers Group, Inc. 1994, 3.5-2). Odorous emissions

that cause annoyance to the public, endangerment of health or property damage are regulated by public health and nuisance provisions, Health and Safety Code 41700. BAAQMD has permit jurisdiction for any construction or alteration that may cause the emission of air contamination.

Over the years, residents have complained that BAAQMD has been lax on the control of the refineries' air pollution violations. In a 1998 audit, the California Air Resources Board recommended that the district increase fines and hire more inspectors to deter industries from emission-related violations. The state audit reinforced a 1997 Environmental Protection Agency report that also criticized district fines as too low (Cuff 16 May 1998, 3 [A]). Both reports reflect the conclusions of the San Francisco Examiner's reviews of the air board's practices in the late 1980s and early 1990s. The Examiner reported that district fines paid during 1989, 1990, and 1991 averaged \$600 a violation. An air district spokesman defended the practice, stating that the purpose of the penalty policy was "not to collect money, but to get people into compliance" (Kay 8 March 1992). Since then, there has been no reduction in the yearly number of violations, nor were the fines increased. During the period from 1990 through 1996, the air board imposed \$720,000 in penalties for 666 violations, a median fine of \$625. Refinery officials contend that bigger penalties will not result in cleaner air and safer conditions. Residents and environmentalists disagree with industry and the BAAQMD. They argue that it's cheaper for the refineries to pay the small penalties than to fix equipment problems (Kay and Rogers 9 February 1997, 1 [A]). The relationship between BAAQMD

and local residents has often been contentious because the people insist that the board places industry needs before safety.

### Summary

People originally settled in the two communities because of the job opportunities. In the past, the area's population fluctuated with the demands of the local industries. During the 1940s and 1950s, both C&H and Unocal experienced high levels of employment and the populations of the towns expanded dramatically. During the 1960s, Crockett's population declined due to C&H's increased automation and the employment of workers from other communities. In contrast, Rodeo's population increased because of new housing tracts that were built during the 1960s and 1980s. The two communities now house approximately 11,500 people with lower middle-class and middle-class incomes. C&H and Tosco employ approximately 1,100 workers, primarily commuters from other areas. Thus, the past "company-town" aura has faded, and local residents have mixed feelings regarding these heavy industries.

The county government's control of local decisions and taxes has created additional strife in these communities. The residents also have been generally unhappy with BAAQMD because of the perceived lax control of the refineries' violations. These conditions are the backdrop for the three case studies involving the two towns.

CHAPTER 5  
CASE STUDIES

These three cases, Pacific Refining Company, Crockett Cogeneration Plant, and the Unocal, are presented in case study format, combining information from archival documents and records and activists' interviews. The narratives are recorded in chronological order from the point when residents became aware of the environmental problem through the eventual outcome of their efforts. Each case includes a time line which summarizes the data by date, refinery events, and the response, if any, of government or the communities. Table 3 illustrates the various groups involved.

TABLE 3.--GROUPS INVOLVED IN CASE STUDIES

<u>CROCKETT/RODEO GROUPS</u>			
	<u>Pacific Refining</u>	<u>Crockett Cogen</u>	<u>Unocal</u>
<u>Grassroots Environmental</u>			
Citizens for Cleaner Air	X		
Crockett Power Plant Committee		X	
Shoreline Environmental Alliance			X
<u>Community Groups/Quasi-Political</u>			
Crockett Improvement Association		X	X
Crockett/Rodeo Coalition			X
Rodeo Citizens Association	X		X

TABLE 3.--CONTINUED

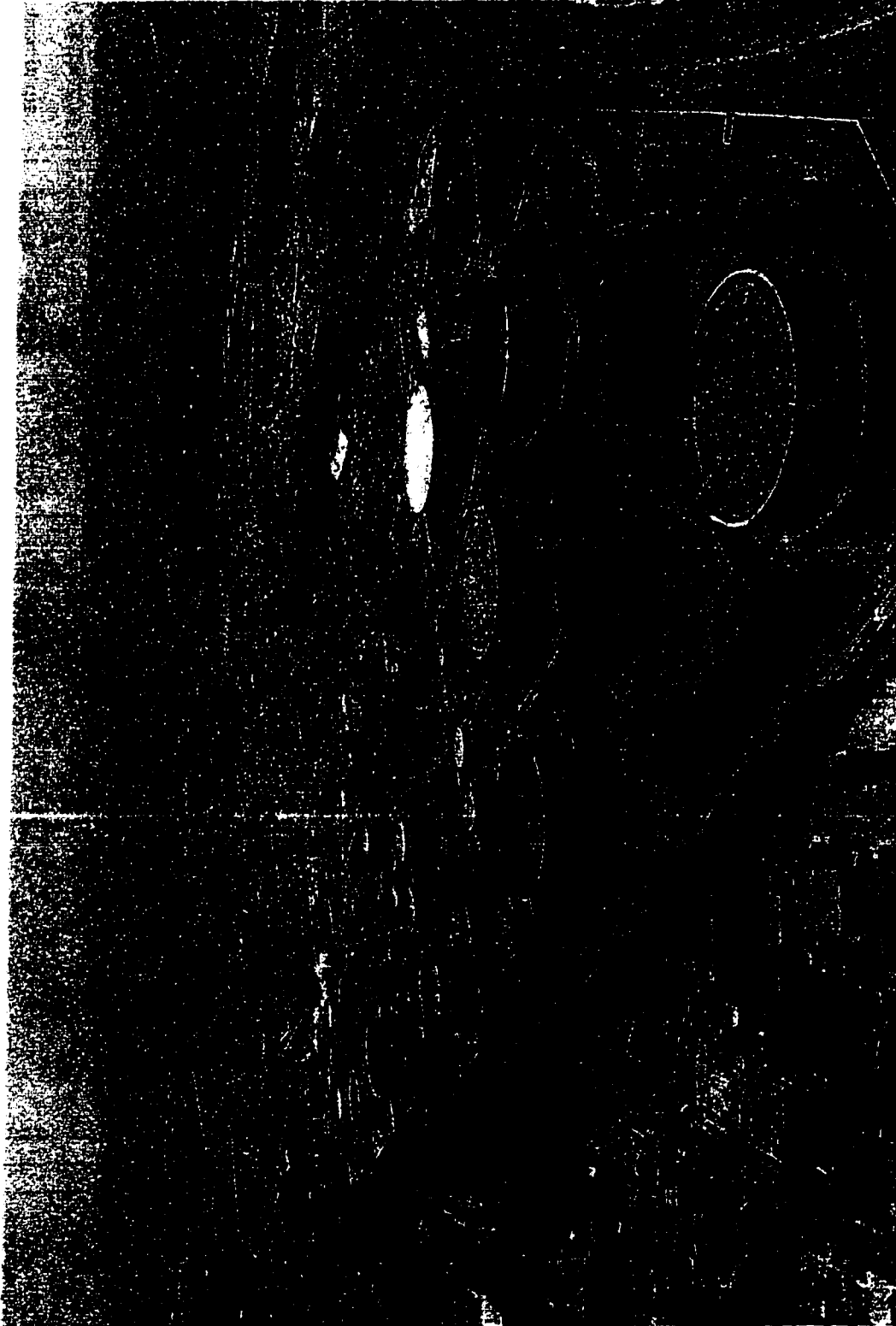
	<u>Pacific Refining</u>	<u>Crockett Cogen</u>	<u>Unocal</u>
<u>Regional and National Environmental Communities for a Better Environmental Response Team for the Chemically Injured</u>	X		X

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Pacific Refining Company

The city of Hercules' primary industry, HPC, closed in 1964. Less than 300 people lived in Hercules at the time, mainly HPC owners, management, and employees. Seeking a new source of revenue, the city council approved the construction of Sequoia Refining Company, subsequently PRC, which began operating in 1966. HPC's board of directors controlled the city council and local government (Cherry 1998). They located the refinery on the northwest corner of HPC's land, as far away as possible from the residential area of Hercules. The refinery bordered San Pablo Bay to the west and was immediately adjacent to one of Rodeo's oldest residential neighborhoods and two schools to the northeast (see figure 5).

Hercules residents were not disturbed by PRC because over a mile of hilly open space buffered their homes from the refinery. The location was completely out of sight and downwind from the city's residential area to the south; many who lived there didn't even know that the plant existed (Pijoan and Horning 1993). A narrow street and cyclone fence separated Rodeo's Garretson Street homes from the refinery. Petroleum tanks with hazardous materials and a high-pressure pipelines were 20 to 50 feet from the houses and



**Fig. 5. Aerial view of Pacific Refining, facing S. Rodeo residences immediately adjacent to the refinery. Hercules residences beyond buffer zone to the SE. (West County Times 28 April 1993)**



a school. Because of prevailing wind directions, impact from the emissions annoyed and sickened Rodeo residents with noxious fumes for years. The school was evacuated on several occasions because of PRC's accidents and releases (Pijoan and Horning 1993).

In 1981, PRC shut down for two years and operated as a distribution center. When the plant reopened in 1983, it plagued the residents with odorous releases, sometimes on a daily basis. In a report filed by BAAQMD, the odor problem was linked to two factors--a switch to high-sulfur crude from Alaska and the installation of a visbreaker. The visbreaker unit increased the production of gasoline and diesel fuel from crude oil, but the process concentrated smelly sulfur compounds that leaked into the air from wastewater (Morris 26 May 1992, 1[A]).

According to several Rodeo residents, the rotten-egg smell would gag guests at backyard barbecues and force people to stay indoors (Callaghan 1998, Lukas 1998). Their initial response was to file odor complaints with BAAQMD. During 1983, 118 complaints were filed (McCormack 8 June 1995, 1 [A]). At first the residents thought that BAAQMD would correct the problem and force PRC to control the odors. Months passed with no improvement and the odor complaints continued into 1984. In May, BAAQMD's hearing board issued an order that required PRC to take 22 steps to end noxious odors. Although BAAQMD did not declare the odors a public nuisance, its attorney stated that "there is considerable evidence that a public nuisance occurred." Jim Fowler, attorney for PRC responded, "We disagree, all you heard is one side - a parade of people who were upset and angry," (Cuff 1 June 1984). PRC's attorneys were concerned because the wording of the legal findings bordered on saying the odors were a public

nuisance that could be problematic in the event of a lawsuit. This attitude of denial and delay by PRC officials continued throughout the years. Although PRC agreed to the 22 equipment changes, the smelly releases continued. Confirmed odor complaints for 1984 totaled an unprecedented 881 (McCormack 8 June 1995, 1 [A]).

Residents were unhappy with the results and began taking other measures. According to Callaghan (1998), “People felt violated” and BAAQMD was not doing enough. Citizens groups formed, including the Rodeo Citizens Association (RCA) and Citizens for Cleaner Air (CCA). The RCA’s agenda addressed overall issues of local concern related to protecting Rodeo’s character and environment, which included the PRC problem. CCA was a single-issue group that included a Catholic School and 68 people tired of the chronic odors from PRC (Callaghan 1998, Weston 3 February 1986).

In June 1984, BAAQMD formed an air quality task force, called the Pacific Refining Enforcement Task Force (the “Task Force”), which included county officials and one representative each from PRC and CCA. The Task Force studied the odor problems. During this period, CCA and RCA tried various measures to force government officials to require that PRC end the odor problems. They attended BAAQMD meetings, wrote letters, circulated petitions, called the EPA, and lobbied government officials (Anonymous 1998, Baca 1998, Callaghan 1998, Hoffman 1998, Jasper, 1998). Residents filed 298 odor complaints with BAAQMD during 1985 (McCormack 8 June 1995).

During 1985, officials responded. The county district attorney and BAAQMD filed a civil suit against the refinery, which continued into 1986. The numerous odor complaints prompted Assemblyman Bob Campbell to introduce legislation, AB1276,

which increased the penalties the air district could levy on chronic polluters from \$6,000 to \$25,000 (Cole and Reed 19 December 1989).

Relations with residents were dismal during that period. “Everyone in Rodeo hated Pacific with a purple passion,” explained Pijoan (1998) a leading Rodeo activist. PRC tried public relations to improve its image. In June 1985, PRC placed a full page newspaper add, announcing an odor complaint hotline to “our good neighbors in Rodeo and Hercules” (Cole 7 March 1988). The company implemented an odor patrol and a community newsletter. Residents were not appeased; they wanted the odors stopped. To stop the odors, PRC needed to invest in new equipment or change to lower sulfur crude. Either choice would be costly to implement, and PRC did not respond.

In December 1985, the Task Force recommended 40 changes to control odors, especially the installation of a \$1 million flare recovery system. PRC requested a delay in responding until February 1986 while it considered the changes. According to a company spokesperson, “The flare gas recovery system is the item we’re struggling with the most.” (Refinery given recommendations to control odors 21 December 1985). The system was the most contentious item for the citizens, too. They wanted it installed as soon as possible. The delay until February 1986 angered CCA members, who sued PRC for \$20 million in damages, citing their “headaches, sinus irritation, and vomiting because of the sulfur stench” (Weston 3 February 1986). The suit asked that the refinery stop damaging their health and property and interfering with their use of property. The citizens initially thought that by filing the suit they could force the refinery to stop violations, but found all they could do was sue for damages (Callaghan 1998).

In April 1986, PRC agreed to pay a fine to BAAQMD and install \$5 million of odor abatement equipment to settle the suit by the county district attorney and BAAQMD. An official for BAAQMD stated that over \$250,000 had been spent investigating the refinery's odor problems, but they charged the refinery only \$100,000. It was the largest settlement ever reached by the district at that time (Weston 6 April 1986). A refinery spokesman insisted that the settlement did not represent an admission of guilt. The order required installation of 25 odor abatement measures, including the "much debated flare recovery system" within two years (Weston 6 April 1986). Once again, PRC negotiated a delay in correcting the problem.

Despite the lawsuit and penalties, problems at the refinery continued. In 1986, after 11 violations for excessive smoke from the refinery's flare, a BAAQMD inspector wrote in his report that, "Pacific has admitted it's cheaper to cause violations than to effect repairs on the flare" (Cole and Reed 19 December 1989). The accidents and releases continued at a steady pace. During the year, citizens filed 468 odor complaints (McCormack 8 June 1995), the state attorney general levied fines of \$240,000 for wastewater discharge violations, and a fire forced the evacuation of Garretson Middle School (Halstuk 21 May 1991). In 1987, 237 odor complaints were filed (McCormack 9 June 1995).

PRC launched another public relations program; it "adopted" Garretson School through a \$20,000 donation. A PRC official said the adoption program "probably would have been set up regardless of the odor problems and the refinery's effort to improve its image" (Cole 7 March 1988).

During 1988, when China National Chemical Corp. bought a 60 percent interest in the refinery, the new partners vowed to modernize the plant and switch to Chinese crude, which contains less sulfur than the Alaskan crude being processed. As the odor abatement measures required in 1986 by BAAQMD came online, the odor complaints declined in 1988 to a low of 151. Nevertheless, PRC still processed Alaskan crude and a modernization program was not being pursued by the company. PRC's spokesman said that the Chinese crude was more expensive and the refinery would need an expansion to process it (Khanna 20 September 1989).

The citizens were unhappy with BAAQMD's minimal efforts to control the problems. According Irene Pijoan (10 February 1990),

We are told by BAAQMD to call their toll-free number to report air pollution. We have called and called over the years to report sulphur, diesel oil, and cooked cabbage smells that interrupt our activities or awaken us at night. Others call too, yet years have gone by, and our many calls for help have no noticeable effect on air pollution. When there is a violation, the average fine - slightly over \$500 - is no deterrent in stopping refineries from polluting. Apparently, most refineries do not care to comply with the law. Why does BAAQMD continue the practice of levying insignificant fines that do not stop the problem? I can only conclude it is not interested in clean air.

The citizens resorted to legal remedies, again. After the CCA's lawyer advised the group that it could not win the 1986 lawsuit, they settled out of court with PRC for an undisclosed amount (Callaghan 1998). They decided that money was the only way to get PRC's attention. Once settled, the group filed another suit in October 1988, asking \$40 million to compensate for damages. The families claimed PRC intentionally caused odor, noise, and air pollution that sickened residents and inflicted damage to property (Pacific Refining fights odor problems 27 February 1989). They sued again because they

felt that “the oil company valued profit over human living conditions and health” (Jasper 1998). “The company was looking at this issue as means of profit and we just wanted a safe town” (Hoffman 1998). In November 1989, their attorney advised them to settle for \$730,000 or about \$10,000 per family (Khanna 10 March 1990). The settlement terms included a gag order on the participants not to complain about PRC for several years (Callaghan 1998, Pijoan 1998).

In September 1989, BAAQMD finally negotiated a \$95,000 settlement with the company on 71 violations of air standards that occurred in 1987, 1988, and 1989. The violations included excessive smoke emissions, leaky valves, and failure to install best available equipment. Although AB1276 was passed in 1986 and allowed up to \$25,000 per violation, PRC’s fines averaged only \$1,300 per violation. The board also ordered PRC to install more abatement equipment. A BAAQMD spokesman said that the violation level was very high for the small size of the refinery and the operation was a nuisance to the surrounding neighborhood. The refinery manager retorted that the company was doing its best to control odors (Khanna 20 September 1989).

The citizens did not agree. Because of their complaints, the air district held a meeting in Rodeo. Eighty residents testified that “foul smells and air pollution are still unbearable” (Khanna 10 March 1990). They were frustrated because the thousands of calls to BAAQMD over the years seemed futile. Inspectors investigated the complaints, but nothing happened after they came out. Although they sympathized with the residents, they “were held back from doing their job by the elected bureaucrats” on the air board (Pijoan 1998).

The public protests moved the air board to sit down with PRC, again to resolve the problems. In May 1990, PRC and BAAQMD reached an accord that was expected “to end a chronic odor problem that has irritated residents in neighboring Rodeo for years” (Cuff 3 May 1990). The plan required PRC to install a sulfur recovery unit, a new gas flare, and enclose the wastewater treatment system, the three items that residents had demanded to help abate odors. Supervisor Nancy Fahden attributed the agreement “to pressure from Rodeo residents, the County’s District Attorney’s Office and Department of Health Services” (Cuff 3 May 1990). Although BAAQMD was responsible for air quality, the citizens and the County had to pressure the board to act. By July 1990, residents realized that PRC had negotiated another delay with BAAQMD. The mandatory pollution controls were linked to a “refinery modification,” which was years away. The agreement allowed PRC 2 ½ years from the date BAAQMD and Hercules approved the project to add the new pollution equipment. The permit process and environmental review had no determinable length. The county district attorney asserted that a time table for installation of the “Big 3” equipment was necessary (Khanna 17 July 1990). PRC officials countered that the company could not “start containing smelly gases until it gets approval for the expansion” (Kay 8 March 1992). In effect, PRC said, “we’ll fix our plant, if you let us expand” (Pijoan and Horning 1993).

The required pollution control equipment was expected to cost \$20 million, and the “modification plan” was projected at \$100 to \$150 million and included equipment additions to produce cleaner gasoline and diesel fuel (Morris 24 April 1991). (Later cost estimates of the proposed upgrade were as high as \$600 million [Morris 26 May 1992]).

The proposed plan called for doubling the plant's physical size, doubling the output of gasoline, and increasing diesel fuel production by 26 percent (Morris 24 April 1991). Nevertheless, BAAQMD and PRC officials insisted that the project was not an expansion (Kay 8 March 1992). BAAQMD's permit director admitted that the draft plan included some equipment that exceeded requirements to solve existing pollution problems. In response to complaints by county officials and residents, Peter Hess, deputy district pollution control officer defended the agreement; "It's everything we want," he said (Khanna 17 July 1990). Maybe it was everything BAAQMD wanted, but it wasn't what the people wanted. The agency's stance reinforced the opponents' opinion that BAAQMD existed to protect the rights of business, not the quality of the air (Pijoan and Horning 1993). The residents wanted PRC to operate a clean, safe refinery before any expansion plans proceeded.

Refinery operators rebutted that they were operating more safely. The RCA circulated petitions and flyers encouraging residents to attend an up-coming air board meeting and voice complaints (Pijoan 1998). In April 1991, BAAQMD came to Rodeo to give residents a progress report on efforts to end odor problems. RCA President Lynn Cherry presented officials with a six-page letter outlining the group's concerns. BAAQMD defended its handling of PRC, citing the decline in odor complaints to 99 in 1990 from the high of 881 in 1984. Residents retorted that the decline was related to other factors: apathy among residents who feel their calls are ignored and releases occurring in the middle of the night (Morris 10 April 1991; Schwartz 1998). According to one resident (Lukas 1998),



I awoke one night choking and unable to breathe. The air outside had a foul chemical smell. I recognized it as a petrochemical. When I went outside, many of my neighbors had also come outside and we agreed that the smell was coming from Pacific Refining Company. A few weeks before the incident I was visited by my neighbor Leonard Miglio who at the time was doing an outreach for the Rodeo Citizens Association. On that occasion, I informed Leonard that I was very busy and could not participate. I changed my mind on the night of the incident. I realized that I must make time to participate or suffer the consequences of non-participation. The first action I took was to call the Bay Air Quality Management District. I soon discovered that BAAQMD was all talk and no action.

Other citizens voiced similar opinions. They felt that BAAQMD had sided with the refinery instead of the citizens. While they had long felt ignored; they now felt betrayed and angry. The RCA began a concerted effort to fight the refinery expansion. "RCA went after Pacific Refinery," according to one activist (Pygeorge 1998). "We decided that we would not give up. We became like dogs, hanging on and fighting" (Pijoan 1998). The member's goals varied from closing down the existing operation, forcing compliance of regulations with no modification, to modification after a period of safe and clean operations. But they all agreed on one thing, they wanted the smells and explosions to stop. They developed a campaign strategy that targeted BAAQMD, the city of Hercules, and the permit process. "RCA lobbied everyone" (Miglio 1998).

"We began to review the success of the BAAQMD enforcement complaint system," according to Miglio (1998). The RCA encouraged residents to call the air board because at least three complaints were required to send out an inspector who needed to smell the odor for qualification as a registered complaint. The intermittent nature of the odors were problematic, so they encouraged people to get acquainted with inspectors, invited them to talk to other neighbors, and linger until odors returned. They determined

that, “The inspectors of this facility wanted them to clean up. The politicians at BAAQMD had been holding them back” (Miglio 1998). At least two to four RCA representatives attended all monthly BAAQMD meetings and reviewed odor reports for the month. They lobbied the elected members “to force them to listen to the refinery inspectors” (Miglio 1998). Activists reported that some inspectors became their allies and guided them in this campaign (Cherry 1998, Hoffman 1998, Miglio 1998).

The group implored Hercules city officials to reject PRC’s permit application, citing deficiencies in the environmental impact report (EIR). They presented a six-page letter to Hercules officials, outlining their concerns: toxic air contamination, odors, increased production of hazardous wastes, noise, impact on water use, scenic views, and the local economy. PRC officials said residents’ concerns were based on faulty information and misunderstandings (Morris 24 April 1991; 30 April 1991). According to members who studied the report, information was deficient and misleading (Cherry 1998, Miglio 1998, Wall-Romana 1998). They planned an attack on the EIR. Members divided up the list of regulatory agencies and contacted each one for questioning. They found that some agencies had not even read the report. Without a response to the lead agency, the findings would have been construed as agreement. They attended meetings and challenged findings (Miglio 1998). One activist commented that, “It became clear, very fast, that the process (EIR) was such as to gloss over objections and concerns of residents and that money talked” (Wall-Romana 1998).

Meanwhile, Hercules attempted to convince Rodeo that the project was necessary for the local economy, jobs, and improved health conditions. After a meeting with

Hercules officials, Cherry commented, "It sounded like they were cheerleading for Pacific Refining" (Shea 27 March 1992). In a draft summary, officials concluded that the project would make life safer and healthier for Rodeo, not more dangerous. They cited the only significant negative impact would be extra truck traffic on local roads (Shea 27 March 1992). They sent "the good cops" to an RCA meeting to determine "what the people of Rodeo would live with," according to Miglio (1998). The group responded, "The RCA and the majority of Rodeo citizens wanted the refinery closed" (Miglio 1998).

Hercules officials denied that economic considerations would outweigh quality of life and safety because people lived on the refinery's fenceline (Shea 26 May 1992). The activists did not believe them, Pijoan (1998) could not fathom the "corruption of the decision to put a refinery next to a neighborhood" and questioned how they could possibly consider expanding it. The refinery pipelines were within 25 feet of homes in Rodeo (Miglio 1998) and people were "not affected in Hercules, so they didn't care" (Pygeorge 1998). Although city officials insisted that tax dollars were not the bottom line, Hercules' annual tax revenues would increase by an estimated \$1.8 million, a significant contribution to the \$6.5 million operating budget. They also thought the County was swayed by the \$1.5 million in property taxes that would be placed in the general fund. This belief angered Rodeo residents who were convinced that the money would be spent in the more politically connected and affluent districts. One activist, Wall-Romana (1998), recalled an incident where a "grant of \$25,000 by PRC to the (Rodeo) library was stolen by the County for its general expenses." Others felt the same,

it “enraged me because the County used Rodeo and Crockett for dumping grounds, allowing the area to go downhill” while property taxes were diverted to more financially influential areas (Cherry 1998).

PRC’s environmental manager characterized the Rodeo residents’ criticisms as emotional and not based on reason. He complained that opponents judged the refinery on past odor problems and did not consider the improvements of the past two years. He said, “Unfortunately, if people would stop and say, ‘Are you going to operate five years from now like you do today?’ Then I don’t think there would be any problem” (Morris 26 May 1992). The residents were the only stakeholders in the process motivated by health concerns rather than money. Doris Reese, a Garretson Street resident testified at a Hercules City Council meeting,

You’re fortunate in Hercules because (the smell) doesn’t come over your heads . . . In Rodeo it shifts down right over our houses and our children . . . All I can say is please, please, please, don’t consider finances. Consider what it means for our lives (Morris 24 January 1992).

Wall-Romano (1998) described the assistance of the various government agencies, “The help of each government is inversely proportional to the money they would receive from the project. Hercules was least useful, . . . then the County, . . . then BAAQMD, (teeny-tiny fines).” Even the building trades turned on the community when jobs were dangled in exchange for support. The unions provided technical advisors who found design flaws and data that showed how Rodeo would be destroyed in the event of a major explosion. They agreed to present the evidence at an EIR hearing, but after union

leaders negotiated an all-union building project, they declined to make the presentation (Miglio 1998).

As the permit process continued through the spring of 1992, the RCA sent representatives to every meeting, challenging the integrity of the EIR. Other group members gathered signatures on petitions, wrote letters, and protested. A key tactic was to publicize the project's problems using the media, primarily the newspapers (Wall-Romana 1998). The group hired an environmental law firm, Shute, Mihaly and Weinberger, to review the EIR and assist with legal aspects of the process (Morris 26 March 1993). Mark Weinberger was known to community members because he had assisted them in saving "Lone Tree Park" on the Rodeo shoreline. He was sympathetic to their plight and worked for a fraction of the going rate (Pijoan and Horning 1993). The firm's urban planner, Laurel Impett, aided with technical details during the process. "Impett really cared about us. She didn't help us for money or glory. She thought the refinery project was wrong," described Pijoan (1998).

Denny Larson, Julia May, and Richard Rosendin from CBE contributed technical assistance, attended meetings, and circulated press releases. To raise money for the campaign, contributions were solicited, tee-shirts were sold, and the Rodeo's artists' community donated pieces valued up to \$10,000 each (Cherry 1998, Pijoan and Horning 1993). RCA received monthly legal bills from Weinberger's firm that mounted into the tens of thousands. He told the group not to worry. He would carry them through. Pijoan (1998) mailed him \$100 a month from her own pocket to show appreciation for his support.

Meanwhile, the accidents continued. An oil fire broke out on 27 March and an explosion dropped charred aluminum flakes on residents on 31 March. Refinery officials reported that the residue posed no health risks for the community (Morris 30 May 1992). The most serious incident occurred on 29 May, a fire broke out at the refinery in one of the hydrocracker units. Rodeo residents described a thundering sound that preceded a mushroom cloud of soot and smoke that blackened the sky (see figure 6). They described the noxious odor as a kerosene-like smell that caused nausea, burning eyes and throats (Morris 30 May 1992). Although the county's Community Alert Network was activated, Health Department officials assured the public that the emissions posed no long-term health risks. Dr. Wendall Brunner, the county public health director, commented, "It's not particularly toxic, but we would recommend that people avoid contact with it and wash it off their skin if they come in contact with it" (Morris 30 May 1992). The community was irate because of the health department's cavalier attitude. "The County and its Health Department was the biggest letdown" (Wall-Romana 1998).

Many people experienced health problems after the series of accidents. Finally, BAAQMD responded to their complaints and conducted a health survey of the refinery neighbors. Air board officials questioned the respondents, under penalty of perjury. Dr. Walker, Director of Health Services, reviewed the material and found evidence that the health problems were caused by the refinery pollution. He stated,

There is a striking consistency among the types of acute health effects complained of by the declarants. Many of the declarants complain of headaches, sore throats, coughing and nausea resulting from the odors and emissions from Pacific Refining Company. Some, who have pre-existing asthma conditions,

complain of exacerbation of those symptoms due to the refinery's emissions. result from significant odor emission releases from an oil refinery.

Even though the group of declarants constitutes a self-selected group, there is a remarkable specificity, consistency, and time-relatedness in the declarations taken as a whole. For this reason, I believe that these declarations provide credible and reliable evidence that the periodic odor and emission releases from Pacific Refining Company are causing acute health effects in the Rodeo community. People do not generally present in these large numbers in a single community this specific range of health complaints unless there is a common inciting factor, which in this case I believe is environmental (Communities for a Better Environment 1996, 34).

PRC's senior environmental engineer reported that the flaring released hydrogen, methane, ethylene, naphtha, jet fuel, diesel, and a sooty carbon material. The company offered to send crews out to clean soot from cars and houses. According to Miglio (1998),

The refinery would offer to wash your vehicles and send out a representative who would determine how much money you wanted. Their reaction was money would resolve the problem. When I told them I want to eat my vegetables and fruits and I want them to stop dumping on me and my family. They did not know what to say.

The series of accidents failed to convince refinery officials that the refinery posed a safety risk for residents. According to the environmental manager, "We still maintain and operate a well-run refinery, as well as any refinery in the Bay Area" (Morris 30 May 1992). He held the opinion that, since the release of fuel prevented a more serious accident, this was actually "a confirmation of a safe system" (Morris 30 May 1992).

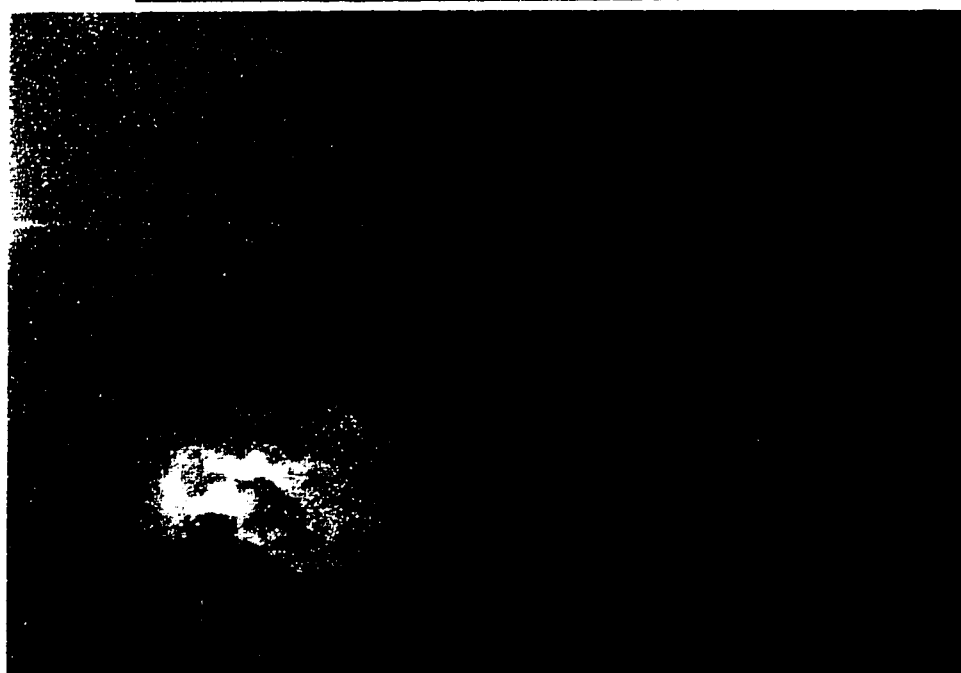


Fig. 6. Both photos are flarings and releases at Pacific Refining Company.  
(Courtesy of Craig Nagasawa May 1992)



At the permit hearing, a resident asked the Hercules' mayor if the accident would influence the city's permit decision. She answered, "such accidents are already taken into consideration in the environmental report" (Morris 30 May 1992). The EIR estimated that the probability of an accident that would produce off-site property damage was 1 in 300 years, and the chance of an off-site injury was 1 in 7,000 years. Residents felt that the release qualified on both counts because three people received hospital treatment and both cars and homes were damaged. PRC's environmental manager told them that soot damage didn't qualify in the definition of property damage and the physical symptoms needed more clarification. According to one account, refinery officials "downplay the health risks of the refinery and the modification" (Morris 26 May 1992).

In the weeks that followed, people complained about the handling of the incident.

The RCA asked Weinberger to represent the community before the air district.

BAAQMD and the county Health Department began an investigation into the circumstances. Reports had surfaced that trouble with the hydrocracker started at least 22 minutes before refinery officials notified the county Health Department, based on calls from citizens to county health officials. Residents were angry because they informed county officials before PRC (Morris 10 June 1992). According to activists, "It is not uncommon for residents of Rodeo to know that there has been an 'event' at the refinery before workers at the refinery know it themselves simply because the wind will blow any release toward the town first" (Pijoan and Horning 1993).

The BAAQMD publicly criticized the refinery and its maintenance practices. As discussions regarding a forced plant closure surfaced, refinery officials immediately responded with the threat of a vigorous battle "to the last breath" (Morris 2 July 1992). PRC's operating permit was up for renewal in September. Based on a new state law, BAAQMD could consider the operating history of a facility to deny renewal (Morris 2 July 1992).

Two hundred Rodeo residents attended the DEIR meeting in protest. Opponents pointed out flaws in the report and the EIR was rejected as inadequate (RCA flyer September 1993). BAAQMD began a series of meetings to discuss options for disciplinary or legal action against the company. On 17 August 1992, BAAQMD and the county District Attorney filed a civil suit for not less than \$150,000 against PRC for six odor nuisance incidents dating from 15 May through 26 October 1991. PRC previously settled 63 violations for \$75,000, but refused to settle the remaining six major notices. In a press release (BAAQMD 17 August 1992) an official of BAAQMD stated,

These violations are extremely serious. In every case, the cause of the incidents can be clearly tied to intentional or negligent procedures at the refinery. Moreover, they fit a pattern of operational problems that call into question the willingness or ability of Pacific's management to prevent such public health dangers from being repeated.

One refinery neighbor pointed to the pipes a few feet from his back yard and predicted, "If these break, then we're going to have the whole damn neighborhood go up. They're like the Keystone cops over there. They don't know what they're doing. It's going to take a major conflagration where people die before they clean it up" (Morris 30 May 1992). In November, BAAQMD decided that Rodeo citizens would have a voice in negotiations aimed at reducing odors. BAAQMD issued a temporary operating permit while the discussions continued. Finally, PRC agreed to install the three systems, subject to the 1990 consent decree, that they had been delaying until the environmental review process was completed. A PRC official said the gesture was to show good faith to BAAQMD and the refinery neighbors. RCA's attorney, Weinberger, warned that unless the odor abatement measures were completely decoupled from the expansion, the

“community was prepared to fight the expansion at any place, at any time, as it goes through the regulatory process” (Morris 17 November 1992). The activists felt that Weinberger was the clout they needed, “without a lawyer we were just spouting hot air and could not get anywhere” (Pijoan 1998). By February, PRC and BAAQMD reached an agreement on 33 odor abatement measures in exchange for renewal of the operating permit (Reed 28 April 1993).

In April 1993, PRC announced that it would discontinue crude oil processing by 30 June 1993. Officials linked the closure to “the slumping economy and new state and federal clean fuel regulations - not the years of community protest” (Reed 28 April 1993). Company officials said that some of the odor modifications would not be implemented because of the pending closure, but that they still planned to pursue the modification permit process (Reed 28 April 1993).

The announcement proved to be another delay tactic and PRC postponed closure until October 1993. A public meeting was scheduled to review the DEIR on 27 September 1993. The RCA vigorously campaigned against the project by distributing flyers door to door, putting up signs on the highways, and driving sound trucks through town urging residents to come to the meeting. CBE issued media press releases detailing problem issues contained in the report, including PRC’s plan to build three dangerous processing units: a sulfuric acid recycling plant, a Fluid Catalytic Cracker, and an Alkylation plant (CBE Media Release 27 September 1993). The attorneys for CBE and RCA issued detailed comments to the city of Hercules on the draft EIR, outlining

deficiencies and violations of compliance. The city delayed the approval, but PRC continued to operate.

In January 1994, Hercules approved PRC's plans to build asphalt storage tanks. Finally in March 1994, the city approved the controversial expansion project to meet the federal clean-fuel standards. A month later, the RCA filed a suit to protest the city's failure to scrutinize the project's risks to the citizens of Rodeo (McCormack 8 June 1995, 1[A]).

Negotiations continued throughout the year between RCA, PRC, and Hercules. Approval was held up long enough to interfere with PRC's construction time table, making it difficult for the company to meet the reformulated fuels deadline of 1 March 1996. The delay created a stronger negotiating position for RCA. According to Pijoian (1998), "Our strategy was to use technical jabs, one after another that added up to bigger checks on the expansion, so many that they could not afford it." In December 1994, the lawsuit was settled out of court and RCA dropped its opposition to the permit based on a Good Neighbor Agreement (GNA) between RCA, PRC, and Hercules. CBE helped negotiate the agreement based on similar GNAs it had completed with other Bay Area refineries, such as Chevron and Shell (May 1998). The agreement focused on provisions for the control of odors that included limits on the sulfur content of crude oil, provided fence-line monitors, fugitive emissions controls, monthly tank inspections, and a valve retrofit program (Weinberger 18 September 1996). The GNA involved neighbors in safety issues, provided for cash contributions to the community of Rodeo, and created the Rodeo Community Organization (RCO) to oversee the distribution of funds and

compliance with the terms of the GNA. According to one activist (Miglio 1998), the agreement created three construction phases with the odor equipment installation first. A clean performance record was required before phase two and three continued. The agreement created the “strictest V.O.C.s leak detection program in California . . . what we did was make it so expensive” that it was economically prohibitive to conform to the standards (Miglio 1998).

In the spring of 1995, PRC applied to the state Air Resources Board for an extension of the deadline for reformulated fuels production because they were unable to meet the schedule. On 7 June, PRC requested that the variance be placed “in abeyance,” but not withdrawn. On the same date, company officials also announced, for the second time in two years, that they would cease oil-refining operations (Morris 8 June 1995, 1[A]).

This time the announcement was carried out. The facility operated as a terminal until the summer of 1996, when asphalt production began. Odor complaints by Rodeo citizens resumed, too. When PRC requested a variance from the 1.2 percent sulfur content limit, the RCO filed an application for intervention, citing the potential increase in exposure to Rodeo residents (Weinberger 18 September 1996).

Finally in 1997, after years of strife, the refinery was sold to developers for residences and commercial buildings. In December 1997, the new owners issued a newsletter outlining their plans to dismantle the refinery and clean the site. They emphasized a commitment to safety and “dealing openly and cooperatively with federal, state, and local authorities” (New Pacific Properties Newsletter December 1997). The

mayor of Hercules said, "It's the most exciting time in Hercules in recent times" (Shea 2 November 1997).

For the activists in Rodeo, it was the best news they had heard about the refinery in thirteen years. Lynn Cherry (1998) summed it up, "We won, because we persisted. Persistence is the key."

### Crockett Cogeneration Plant

The men came smiling from Oklahoma one day,  
showed us a picture of a power plant  
built somewhere down in Texas, they say  
they sure hope to be good neighbors,  
soft and slow, million-dollar draws,  
just like they were planning to live here  
with us after they build their power plant.

But everyone was against it, that first night,  
the auditorium filled and everybody took turns  
at the microphone, everybody has his say, all  
but the oldest sugar plant men, they sat quietly,  
watching it all, but later they said, it's Progress  
and you can't stop that, and later the young men that  
like to hang around cafes said, It's Big Money, and  
you can't stop that, and the seniors said, So many friends  
have been taken by cancer, and one smart young man  
talked about Nox and ozone and particulate matter and  
everyone said, How brilliant, I can't understand half of  
what he said but does he live here, who are his folks?

That was just in the beginning, before the years of  
sitting at the tables and the talks; the Oklahoma people  
finally disappeared and left their attorneys for the talks,  
left their experts to talk to us all. We heard it cost  
millions for these talks and the funny thing was, they were  
all just people, people like us, people who lived somewhere  
and who had homes and children and old people around them.  
It was like everyone was lost in some long dream, unable to  
just be people. The attorneys couldn't be people - that  
wasn't what they were hired to do. The Staff couldn't be  
people, they had civil servant responsibilities. The  
commissioners couldn't be people, the law and political  
pressures kept them from it. Yet, over and over, they were  
just people, we lived with them, knew them, were even loved  
by them, loved them. Years and years of talks, everyone  
caught in a long, horrible dream, unable to speak or act with

the power of a single human being. Dream-machine, moving to build a power plant, when most of the human beings never wanted it, hoped someone else would stop it.

Once the Commissioner's face was in the West County Times, head gravely bent above our heads. We wondered does he admonish, bless, or curse with that enigmatic hand?

a freighter looms in the window, two tugs nudging it through the dark, for just a moment the huge, silent ship is there, outlined by running lights, then gone

Ruth Blakeney, Meditation on a Power Plant

During late July 1984, Mary Moutinho, a Crockett resident for 50 years, was chatting on the phone with a friend in Sacramento. During their conversation, Moutinho's friend said, "Well, what do you think about the power plant going up across the street from you?" (Moutinho 1998, Pereira 19 September 1984, 1 [A]). "What power plant?" a surprised Moutinho asked (Moutinho 1998, Pereira 19 September 1984, 1 [A]). Her friend, who worked for the California Energy Commission (CEC), told her that an application was filed to build a power plant on the Crockett shoreline. The friend explained that "they were working on the quiet side because they didn't want people in Crockett to know" (Moutinho 1998). Moutinho immediately began calling neighbors. An electrician with an eighteen month-old child walked the streets to alert residents and the outraged neighborhood immediately organized (Tubb 1998).

At the first gathering of neighbors, they decided to form a protest committee that was later named the Crockett Power Plant Committee (CPPC). None present could have



predicted that the meeting would begin a nine-year ordeal that would alter all of their lives. As one resident predicted, “This is going to be the case of the mouse that roared” (Pereira 19 September 1984, 1 [A]). Local residents characterized the long battles that followed as the Power Plant Wars (Tubb 1998).

How could a proposal for a 220 megawatt \$100 million plant get approved without the input of affected neighbors? Technically, it couldn't, but in reality, by the time a CEC proposal reaches the public review stage, “it's too late to say no to the project,” according to Ernesto Perez, CEC's Public Advisor (Pereira 19 September 1984, 2 [A]). He explained that the CEC certification process is begun after a developer submits an application for review. If the project is described in sufficient detail, the application is accepted. During the next six months, the proposal is reviewed by the CEC, air and water pollution controllers, the Fish and Game Department, and county planners. After approval by these agencies, the project is subject to public review. Community disapproval is weighed against overall good to the larger community, in this case the 150,000 PG&E users. “Essentially the public is given a chance to specify a few modifications” (Pereira 19 September 1984, 2 [A]). Without the chance alert, Crockett residents would have been placed in that position.

When the application is received a Notice of Receipt of the Application for Certification is filed in “local” newspapers. On 1 August 1984, the CEC placed public notices regarding the Crockett Cogeneration application in seven newspapers: the Martinez News Gazette, the Fairfield Daily Republic, the Sacramento Bee, the Vallejo Times Herald, the Vacaville Reporter, the Pittsburg Post, and the Daily Ledger (Antioch),

according to CEC records. These newspapers are not commonly received in Crockett. The West County Times or the San Francisco Chronicle are carried in local newsstands and delivered to homes.

Residents were especially angry when they learned that C&H was “was involved in planning for this project as early as 1979” (Crockett Power Plant Committee letter to C&H 9 February 1985). In July 1983, a Crockett General Plan was approved by Contra Costa County. The plan was prepared by the County with the assistance of a “sixteen member citizens committee of Crockett residents” (Dehaisus 22 February 1985). C&H property east of the Carquinez Bridge and North of Loring Avenue was designated as Heavy Industry, except a small section on the east end that was zoned residential. That piece was the proposed site of the cogeneration plant. In November 1983, the Planning Department staff amended the General Plan was to designate the piece as a candidate for rezoning to Heavy Industrial, which gave the County complete discretion in hearing a petition to rezone. Residents felt C&H misled the committee by concealing its intentions to build the plant at that time. During the year and a half of the hearing process prior to the July approval, “C&H was represented, but never once mentioned this power plant even though actively involved in its development” wrote one resident in a letter to the CEC (Vallencia 8 November 1984). “We felt that C&H had betrayed the town” by negotiating behind the scenes (Denton, Barbara 1998).

C&H had negotiated with Pacific Thermonetics, Inc. (PTI), an Oklahoma-based company for more than a year before the parties reached agreement. C&H and PTI signed The Long-Term Energy and Capacity Power Purchase Agreement on 12

December 1983. The CIA sent a letter to C&H questioning why it took so long to inform the community and why the proposed plant siting was not introduced in the General Plan.

C&H responded to the CIA

The final agreements for the current PTI project, similar in concept to that previously considered with PG and E, were completed in August of this year. While earlier understandings had been arrived at, on the basis of which PTI was able to accomplish substantial preparatory work on the project, any earlier general publication of information about the project would have been premature. . . . At the time the discussions were held leading to the adoption of the General Plan, there were no specific plans for the cogeneration plant which could have been included in the General Plan discussions. Nonetheless, county planning officials had been informed and were generally aware of the proposed project at the time the General Plan was adopted (Pennington 28 September 1984).

After making some initial inquiries, the CPPC arranged for a small informal gathering with PTI. After hearing of the “town’s fury,” PTI canceled the meeting. Apparently, neither C&H nor PTI had anticipated many objections to the project. As of 1984, no community had ever waged organized opposition to a power plant application. C&H had informally run the town for nearly 100 years. “We thought Crockett was used to being a company town. To be honest with you, we weren’t prepared for an uproar,” said a PTI employee (Pereira 19 September 1984, 2 [A]). “The cogeneration project was a turning point for C&H and Crockett. C&H lost its perceived power and could no longer run the town,” said one activist, who had grown up in Crockett (Denton, Barbara 1998). The media reported a similar observation, “The lengthy battle against the power plant . . . [was] the first open rebellion by townspeople against the giant Hawaiian-based sugar company that once held paternalistic sway over the town” (McCormick 24 February 1989, 10 [A]).

The CPPC's goal was to stop the project's construction. "At this point, given the size of the project and the blight it will bring to Crockett, there simply isn't room for compromise. We don't want their business here," said Gunkelman (Pereira 19 September 1984, 2 [A]).

On 19 September 1984, the CEC held a meeting attended by 500 residents at John Swett High School. Perez (1998) described the scene as he drove into town, "I couldn't believe my eyes, people were walking down the hills surrounding the town, coming from all directions. I said to myself, 'I wonder where everyone is going?' To my amazement, they were coming to attend the [CEC] meeting. Our staff had never seen anything like it before." CEC officials, a C&H official, and PTI spokesmen answered questions (Pereira 19 September 1984, 2 [A]). The protest committee prepared for the meeting by poring through the project manual to prepare questions. The forum moderator complimented the protest committee saying, "They'd done a phenomenal amount of work. Those people [Pacific Thermonetics] weren't anywhere near prepared for some of those questions" (Johnston 21 September 1984).

After listening to PTI's president, Jim Samis, the protest group was even more resolved to fight. Barbara Denton (1998) said, "they were like carpetbaggers coming to our town." Listening to PTI's arrogant and obnoxious attitude, combined with the unprofessional presentation encouraged even more residents to join the crusade. During the slide display, it was evident that PTI had never built a plant larger than 30 megawatts and people expressed strong concerns about their competence (Denton, Edward 1998; Gunkelman 1998; Tubb 1998). The final comment by a local resident received a

standing ovation from the crowd, “I’d like to point out, Mr. Samis, C&H does not own Crockett” (Johnston 20 September 1984).

The group successfully challenged the original application because of significant data omissions. The CEC staff returned it to PTI with a list of questions for resubmission in December. As one member explained, “We knew we couldn’t cancel the project at once, but we began to consciously eat away at little pieces” (Denton, Barbara 1998). Group members explained that the CPPC strength was based on the varied technical expertise of the individuals. The original group included engineers, an attorney, an architect, a chemist, an environmental scientist, real estate agents, and a local history and politics teacher (Denton, Edward 1998; Tubb 1998). From the onset, they divided tasks according to skills. Four members, who met frequently on technical issues, developed a strong sense of camaraderie and jokingly called themselves the “Four Horsemen of the Apocalypse” (Denton, Edward 1998).

They recruited other community members by walking door to door with petitions, requesting residents to write letters of opposition. By year end, the CPPC grew to approximately 50 members. They became the first citizen group in a CEC process to gain “formal intervention” status. The status afforded them the rights and responsibilities equivalent to the applicant, including the right to submit evidence, give testimony, question witnesses, and participate in every hearing with no restrictions (Perez 1998). They filed a “Financial Hardship Petition” to gain “pauper intervenor status,” which entitled participation in the permit process at minimal cost to the members. (Gunkelman 1988, Perez 1998, Tubb 1998). Members lobbied county officials and sought support

from other Crockett organizations. The CIA and the local chamber of commerce went on record to oppose the plant. They encouraged other community groups and citizens to join the intervention process. Tubb (1998) spoke at Benicia and Vallejo city council meetings to rouse dissent across the Carquinez Strait. He explained that the plant would negatively impact the air quality and waterfront views.

When PTI resubmitted its application in December 1984, the group thoroughly reviewed the information. They split the application into sections and, based on technical background. Then, they analyzed the categories and outlined the data inadequacies in a nine page letter to the CEC. A CEC staff member said that the inadequacies underlined by the Crockett residents were being “looked over very carefully” (Hamill 16 January 1985). The CEC and PTI were surprised and unaccustomed to informed opposition. Former CPPC members believe that they won the respect of the CEC staff because of their technical ability and diligence. This staff support was a key ingredient in the CPPC’s battle to defeat the PTI proposal (Denton Barbara 1998, Gunkelman 1998, Tubb 1998). Perez (1998) said that it was very important to the staff that the community cared about the project. Normally, a well-funded applicant faced minimal opposition. He felt that the “vocal and active community” gave government the opportunity to “balance the process,” and this factor improved the “quality of the process” (Perez 1998).

Residents felt that the plant was a power plant in disguise--not a cogeneration plant, based on PTI’s proposal which stated that “the majority of plant revenues would be derived from the sale of electrical power, and the purchaser would be Pacific Gas and

Electric Company” (Pacific Thermonetics, Inc. 1984, 8-1). Dissenters felt that the cogeneration designation was a ploy to allow the project relaxation of certain environmental restrictions, according to Vallencia (letter to the CEC 8 November 1984). Initially C&H would not confirm its power usage, but opponents estimated that it was close to 30 megawatts (letter to the CEC 8 November Vallencia 1984). According to PTI’s application, “The project would produce an average of 197.9 MW (net) which would be sold to PG&E” (Pacific Thermonetics, Inc. 1984, 5-1). (According to Perez [1998], the project met the minimum legal definition of cogeneration, 5 percent cogeneration and 95 percent power production. He characterized it as “the tail wagging the dog.”) Neighbors objected to the location, directly across the street from residences. Opponents objected to the physical size of the plant, which was to span two blocks and drastically obstruct shoreline views (see figure 7). A 200 foot smoke stack and four cooling towers would emit plumes more than 400 feet high. They were concerned about the chemical emissions, including lead, beryllium, and mercury. Other concerns included seismic vulnerability, the impact of transmission lines, and noise (Hamill 16 January 1985).

The project generated community participation and debate. Initially, the Contra Costa Board of Supervisors were undecided about the siting, but agreed with the residents that more local input was necessary. An unprecedented 250 residents phoned the CEC to request that the meeting on 23 January be held locally. After the CPPC lobbied Supervisor Nancy Fahden, she encouraged the Board of Supervisors to request that the CEC meet in Crockett to answer local issues. CEC Chairman Charles Imbrecht

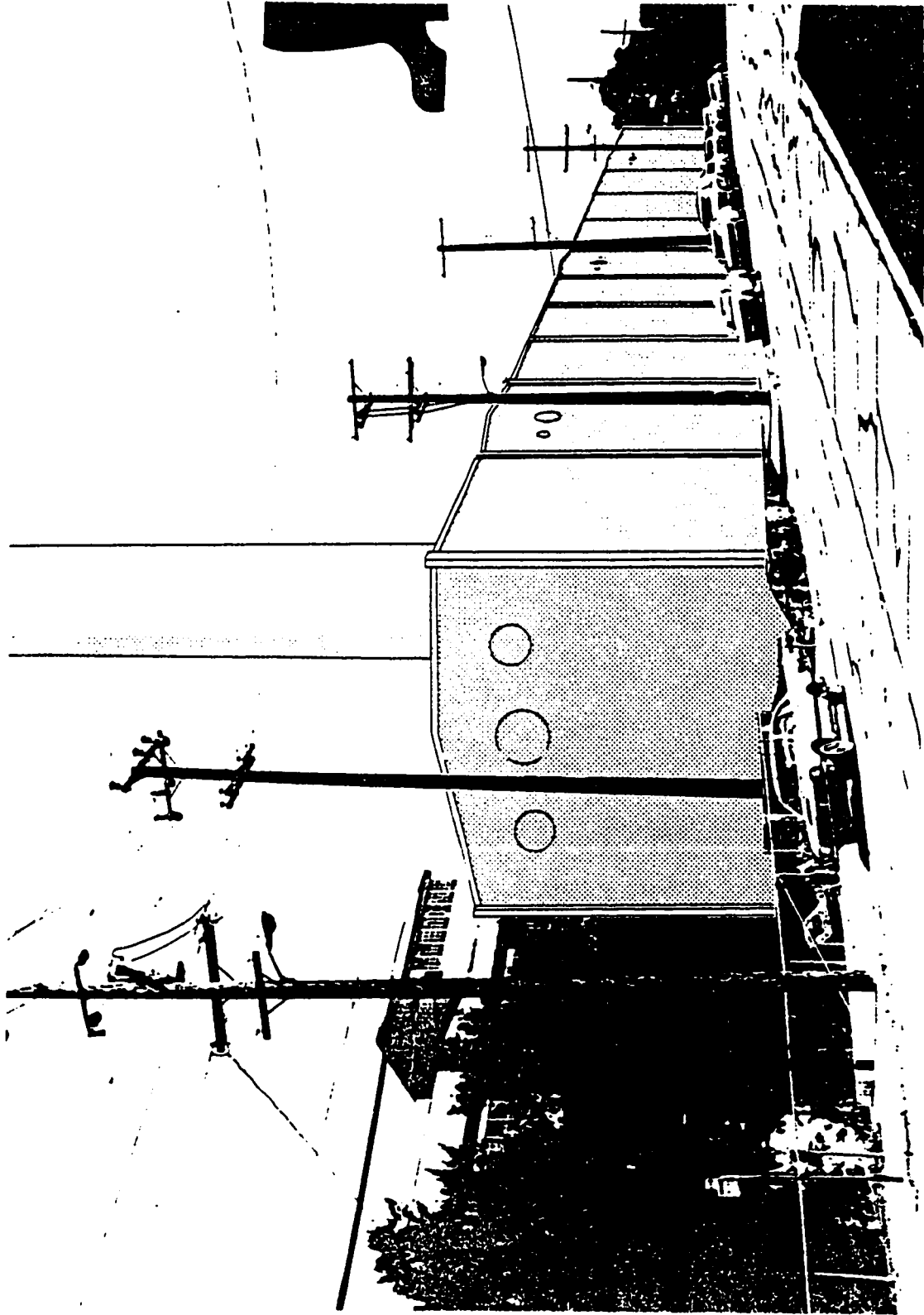


Fig. 7. Original design and location of the Crockett Cogeneration Plant on Loring Avenue facing E. Residential area is directly across the street to the S. (Pacific Thermionics, Inc. 1984, Figure 10.2.7-4)



responded that the hearing was not about local issues, only whether sufficient data had been presented to justify the application, thus “local opposition should not have to attend” (Hamill 16 January 1985). Although Imbrecht didn’t see the need for the presence of local opposition, the CPPC members disagreed. From that point forward, members juggled their work and personal schedules to attend every meeting. They used vacation time and carpoled to Sacramento to present detailed questions and objections (Blakeney 1998, Gunkelman 1998, Tubb 1998).

Because of their valid questions and continued requests for more information, the application was not accepted until 12 March 1985. Then the quasi-judicial or discovery phase of the process began, when the applicant and the commission staff exchanged information pertinent to the evaluation of the project (Weston 11 November 1985). Meanwhile, other group members were busy raising community support against the project, urging dozens of concerned residents to send letters opposing the project, while not one letter of support was received by the CEC as of that date (examination of CEC files by Author 1998).

In March 1985, CPPC published a newsletter that informed the community about the project’s progress and requested donations and volunteer support. The group sold a “Plant Buster” tee shirt, designed by Ed Denton to raise money (Crockett Power Plant Committee newsletter March 1985; Denton, Edward 1998).

In May, PTI circulated a “Community Update” (1985) newsletter to influence residents. It included a statement by C&H Operations vice-president, “This project is our best option to stay competitive. We considered other alternatives but they may have hurt

Crockett. Cogeneration will not.” The newsletter said that the plant would actually improve air quality while saving \$4.4 million a year in energy costs for C&H. PTI went on to list various benefits to the community, such as a willingness to “help Crockett’s civic organizations meet their goals,” providing \$1 million per year in taxes to Contra Costa County, and “protecting the environment while preserving jobs.” It explained that PTI had made many design changes in response to community concerns and was willing to make more. (The CPPC had demanded that the structure be relocated to a site behind the existing C&H sugar bins.)

Although the tone of the newsletter was conciliatory, the attitude of the outfit from Oklahoma was “vulgar, dirty, and sinister,” recalled Barbara Denton (1998). The community resented the outsiders and their style. PTI was accustomed “to getting what they wanted by going to the back door of politicians in Texas and Oklahoma” (Tubb 1998). PTI’s poor public relations contributed to negative local feelings. As Kent Peterson (1998) explained, he attended a meeting to evaluate what he had been reading in the paper and the rumors around town. He had no interest in becoming involved, but after listening to incomplete and evasive answers, he felt a need to protect the community. “I wouldn’t have become involved, if I didn’t feel harm coming our way. If the plan had been harmless, I wouldn’t have participated,” said Peterson (1998).

In June 1985, the board of supervisors voted against the project, saying it was too big, too noisy, and in the wrong spot (Bernstein 18 December 1985). Residents were strongly divided on the proposal. As the controversy continued into mid-year, some residents sent letters supporting the project to the CEC, but most support was from C&H

employees and retirees (examination of CEC records by Author, 1998). C&H and the Sugar Workers Union Local One circulated literature that encouraged employees to back the project to remain competitive, save jobs, and continue operations in the community. The company also sent letters to its retirees indicating that their pensions and health care benefits were in danger, if the plant did not proceed. The proposal had created a rift between residents and C&H employees and retirees (Denton, Barbara 1998; Litynsky 1998).

In September 1985, PTI submitted additional concessions in design to appease the supervisors and project opponents. By October, the CEC's Perez indicated that the next step was to determine what need test would be required for the project. Every two years, the CEC established energy needs projections to insure that enough energy was available to utility customers and to avoid unnecessary environmental effects of overproduction of energy. When power facilities greater than 50 megawatts are proposed, the CEC must determine if a need exists in the service area, based on the two year projections. The CEC and PTI differed on which need test was required for the Crockett plant. The need test for a cogeneration project was given a less vigorous environmental review, but that favorable treatment only applied to the first 650 megawatts of new cogeneration power. Because of the delays in processing PTI's project, the CEC had already approved 615 megawatts in the service area, thus severely limiting the preferential treatment for the project. Because of differences in interpretation of the service area, PTI contended that the cogeneration treatment applied. The CPPC insisted that the more rigorous need test was appropriate. In addition, the determination of the "Crockett utility service area" was

a dispute between PTI and the CPPC (Gunkelman 1998, Weston 29 October 1985). Several CPPC members spent countless hours working on calculations for the need test. It was their contention that PTI's figures were grossly inaccurate.

The controversy was not resolved in the November meetings and workshops. The CEC was willing to grant the cogeneration treatment to 43 megawatts of power, but PTI insisted that the full 200 megawatts were required to make the plant economically feasible. The CPPC convinced the CEC staff to request the 30-year energy agreement between C&H and PTI, based on the contention that if 200 megawatts were required for economic feasibility, then they needed to understand the economics to recommend the full request. PTI strongly disagreed because the contract was between two private parties and the request for this information was unprecedented. Tubb, president of the CPPC, disagreed. "I think its crucial because the commission has to know how much steam is actually needed and how much profit is going to be made" (Weston 11 November 1985). The dispute caused "friction and ill-feelings" between PTI and the CEC staff; they were "locking horns" on the issue. Perez threatened, "The ultimate sanction is to deny the application because of the failure of the applicant to provide information" (Weston 11 November 1985).

The need test issue was the paramount question between the two sides. Tubb said, "We're fighting PTI all the way. We think the need test is a crucial factor. We're getting down to the nitty gritty" (Weston 25 November 1985). Samis of PTI countered, "I can't conceive of how an efficient project like this, benefiting C&H, supplying low-cost power to the utility grid, would not pass any need test" (Weston 25 November 1985).

He continued by relating how the project would be a “gold mine for C&H and Crockett,” by saving \$4 million annually in fuel costs and bringing in \$1 million annually in property taxes (Weston 25 November 1985). In reality, the community would receive little or no benefits because few local residents worked at C&H and the property taxes would go into the county’s general fund with no likelihood of local use.

But the talk of money perked up ears in the board of supervisors, and another vote on the project was called in mid-December. About 150 Crockett residents attended the meeting, opponents wearing buttons that said “Plantbusters” sat on the opposite side of the room from supporters. PTI chartered buses to transport a large group of C&H retirees and three buses of union workers that PTI paid to attend (Tubb 1998). The vote was four to one. Only Nancy Fahden voted against the project and remained loyal to her constituents. According to Tubb (1998), the Board’s change of heart had some behind the scenes influence from the Chairman of the Central Democratic Committee Bert Coffey, hired by PTI for \$50,000 to lobby politicians. Coffey was a former mentor and election manager for Congressman George Miller, who supported the project. He persuaded Supervisor Tom Powers to plead PTI’s case at the meeting (Tubb 1998). After the vote, Fahden brought out a list of projects that Crockett needed and called PTI’s Sampis to the podium to question why he refused to fund them. He then donated \$200,000 to the County with an explanation, “I wouldn’t have pulled the money out until after the vote because before the vote it’s extortion. We resisted the pressure. We refused to give a dime until they voted” (Bernstein 18 December 1985).

Meanwhile the plant passed several other hurdles. The CEC commissioner ruled that PTI did not have to disclose its contract with C&H, unless the staff proposed a scaled-down version and proved it was a feasible alternative. If that happened, PTI would need to produce the Steam Sales Agreement to prove that 200 megawatts were required (Weston 27 November 1985). In December, the CEC produced a preliminary report, indicating that the project could meet most air and water quality standards and not jeopardize public safety. But it would produce noise levels that surpassed EPA standards. The report also addressed the plant size, indicating that a 92.4 megawatt plant could meet project projections (Tessler 21 December 1985).

By mid-January 1986, the need test dominated the debate. The commission staff concluded that “the planning area does not need additional baseload energy resources at any time during the 12-year planning period” based on the criteria that PTI chose for its project (Tessler 15 January 1986). PTI responded that the staff “used the wrong model to assess need” (Tessler 15 January 1986). Because of the staff’s finding, it was PTI’s responsibility to convince the commissioners that its need calculations were accurate. In the hearings that followed, CPPC members testified in detail regarding the “abundance of supply resources which are potentially available to meet forecast of demand,” quoting from the 1985 California Electricity Report that PTI had previously endorsed for use (Pagni 2 February 1986).

By March 1986, the commissioners had listened to over 50 hours of testimony from both sides. The staff found that the project could displace cheaper hydroelectric power from the Pacific Northwest and that Northern California had energy resources in

excess of need when these sources were included. PTI insisted that the hydroelectric alternatives were beyond “the Crockett utility service area” regardless of their availability to PG&E’s users. A CEC spokesman said that until now, “the CEC encouraged all and any alternative energy projects . . . But demand for energy has declined recently and we have an unanticipated number of energy contracts” (Fenton 6 March 1986).

The CPPC filed a fourteen page brief (Crockett Power Plant Committee 14 April 1986) summarizing its concerns and conclusions, including the following:

- The plant is not needed. The applicant’s need test excluded hydroelectric power readily available to PG&E.
- The applicant failed to show any demonstrable economic benefit to Crockett. The tax revenues would benefit Contra Costa County only.
- The application failed to adequately address potential earthquake damage.
- The residential area surrounding the plant would be in danger of potential caustic liquid spills from concentrated acids.
- The viability of C&H for the term of the 30 year contract is questionable. Without C&H the project ceases to be cogeneration and becomes a full-scale power plant.
- The proposed plant is twice the size needed to provide C&H with thermal energy.
- The noise model was incomplete and inadequate.
- The stack plume would impact visuals of the Strait.

- The applicant was unable to supply working drawings of the project.
- The plant would have a negative impact on the quality of life in Crockett and surrounding communities.
- Over 600 Crockett residents oppose the construction of the plant, based on a petition circulated and filed by CPPC.

PTI also submitted a summary brief with its lists of conclusions (Weston 14 April 1986) which included the following:

- The project would save ratepayers \$148 million.
- The CEC staff was combative and failed to meet deadlines.
- If the project was denied for any reason, PTI had grounds for a lawsuit because the 12-month statutory deadline for review expired on 15 February 1986 and the need test used by the staff was defective.
- The project would improve air quality and reduce thermal discharges.
- Local benefits would include 12 new jobs, \$1.3 million annually in property tax revenues, and a \$4 million annual savings for C&H.

After receipt of the two briefs, the CEC staff prepared its report for the commissioners' review based on over 100,000 pages of technical documents and listening to several weeks of testimony from both sides. The report said that the proposed \$150 million plant would "make local communities suffer irretrievable environmental harm" if a license were granted in July (California Energy Commission 16 April 1986; Weston 21 April 1986). The report concluded that the project would force



200 megawatts of electricity “on a utility already awash in excess energy supplies at costs that would require utility ratepayers to subsidize the project sponsors” (Weston 21 April 1986). The staff completely discounted PTI’s contention that the project would save ratepayers \$148 million. The contract with PG&E, known as Standard Offer No. 4, required the utility to purchase PTI’s electricity at a fixed rate for the first ten years of operation, around the clock regardless of need. This fixed rate was substantially higher than other sources available to PG&E. The staff further concluded that PTI’s claim that this was the most exhaustive application in commission history was untrue, that the facility was oversized by 100 percent, and that the cost savings to C&H was irrelevant to approval (Weston 21 April 1986).

PTI reviewed the committee recommendations and realized that a new contract with PG&E was required to proceed. PTI hired a law firm for representation in Sacramento which included John Knox, former Democratic Speaker of the Assembly and William Bagley, Republican and former Public Utilities Commissioner. Also, Bagley negotiated and lobbied for PTI on energy matters, including the PG&E contract (Tubb 1998) PTI asked PG&E for a dispatchable contract, one that would provide power to PG&E on an as needed basis that would satisfy the CEC. PG&E agreed to renegotiate the contract, but only if PTI’s energy price was reduced (Weston 19 June 1986), but PTI wanted a 6 percent rate hike (Weston 29 June 1986). The parties did not reach an agreement by the committee deadline. The committee recommended a denial of certification. Presiding Member Noteware indicated that if a contract to purchase power on an as needed basis was finalized, the future possibility of a recommendation existed

(Weston 25 June 1986). It was the first time the commission staff had ever recommended denying certification of a project over the objections of a company that wanted to build a power plant (Taylor 3 July 1986). Tubb spoke for the CPPC, "This is basically two years of hard work paying off. . . . We're ecstatic" (Weston 25 June 1986).

On 7 August, the CEC held a hearing in Crockett. Commissioner Noteware ordered a 8 September deadline for PTI to revise its PG&E contract or the CEC would freeze its application until 1987. Meanwhile, PTI ignored CEC policy regarding contacts with commissioners outside public hearings. On 3 September, Bagley contacted Commission Chairman Imbrecht by telephone to discuss licensing procedure (Weston 1 October 1986). Subsequently, Noteware extended the deadline until 24 September. On 23 September, Bagley contacted Noteware directly. Bagley denied any impropriety in the conversation, "Nowhere did I ever discuss the project as being good, bad or indifferent" (Weston 1 October 1986). These incidents prompted Noteware to take steps preventing any contacts by lobbyist with him outside of the committee hearings. According to former CPPC member Tubb (1998), the incident represented more "back door politics" by PTI.

On 25 September, PTI and PG&E reached an agreement. Noteware reopened the hearings, contingent upon PTI's release of its steam sales agreement with C&H. He said an examination of the contract was necessary to determine whether the project still conformed to the definition of cogeneration (Weston 21 November 1986). The CPPC wanted clarification regarding C&H's steam boilers. They pointed out that if the power plant operated on an as needed basis, the project would no longer qualify as cogeneration

if C&H continued to use its boilers during downtime (Sawyer 1998). In a CEC filing, the CPPC stated,

We are convinced that in this case, a dispatchable power plant is simply a baseload power plant waiting for recertification. It would be unfortunate to have a 245MW power plant in our town. It would be equally be unfortunate to have a 245MW dispatchable power plant. It would be frustrating and ironic to have it sitting there with all its concomitant socioeconomic and environmental impacts, and never be used by PG&E (Crockett Power Plant Committee 13 October 1986).

Workshops on the proposal continued through the spring of 1987. Because of the PG&E contract, new hearing were scheduled to begin in May and continue throughout the summer in Sacramento and Crockett (Chambers 27 May 1987).

Meanwhile, PTI lobbied state politicians, in a letter to Senator Don Rogers, Samis complained that at the current pace the process would not conclude until May 1988. He explained that although other projects under CEC review had also revised contracts, these applicants were not required to go through the entire process again. He pointed out that if the "May 1988 decision date is accurate, then it will have taken the CEC 47 months to process this application. This is nearly 4 times as long as the statute calls for, and nearly 3 times longer than any other project" (Samis 2 July 1987). Apparently, the CPPC's strategy to pick the proposal apart piece by piece was working.

C&H was anxious to expedite the process. Executive Vice President Somerset wrote to Noteware,

C&H and PTI have attempted to respond to every legitimate concern brought up by the citizens of Crockett during the years of the hearings and workshops. Major changes have been made from the original plans to accommodate those concerns. We have resisted the temptation to respond to many negative and spurious comments because we felt that such exchanges would not be of benefit in your

deliberations. We do urge the Commission to approve certification of this project (Somerset letter to Noteware 31 August 1987).

Despite the pleas of C&H and PTI, the process continued its slow pace. In December 1987, BAAQMD gave preliminary approval for the project's construction. Although the air district disputed PTI's claims that the project would make the air cleaner, it would not make it much worse. The plant was expected to produce 4,409 pounds of nitrogen dioxide a day, which is the main component in the formation of smog (Hytha 11 December 1987).

Later that month, PTI submitted several design changes to cut the pollution. The proposed pollution control equipment included scrubbers to clean the cooling tower emissions. The process required ammonia and PTI proposed to build a 58,000 gallon storage tank next to the railroad track. The CPPC objected to the ammonia tank and the issue became extremely controversial (Denton, Edward 1998; Gunkelman 1998). The plan required retiring C&H boilers. The changes reduced the nitrogen dioxide emissions to 1,715 pounds a day. The changes also called for a reduction of the stack from 280 to 230 feet (Hytha 21 December 1987).

CPPC Chairman Tubb worked to win additional opposition support and create more community awareness. He invited State Senator Boatwright and Supervisor Sunne McPeak, who was running against Boatwright, to speak at a community meeting in Crockett. McPeak, a proponent of the plant, declined. When Boatwright spoke to the residents, he echoed the concerns of the CPPC members regarding the ammonia tank for the cooling towers. He also objected to placing a plant of this size on the shoreline. He

agreed with residents that a smaller plant would handle C&H's energy needs without jeopardizing the community's safety (Wurst 19 May 1988).

Bi-weekly hearings continued throughout the spring and summer of 1988. By August, PG&E and PTI had another contract dispute. Their contract was to commence on 9 August 1989, but the lengthy permit process made the deadline impossible. PTI wanted PG&E to extend the start date at the existing rates and threatened to sue PG&E. PTI contended that the extension was warranted because the permit delay was caused by "unforeseeable delays beyond the company's control" (Bodovitz 17 September 1988). PG&E, on the other hand, wanted a delay in plant construction until 1994, because of lower demand and cheaper available power sources. The PUC approved a settlement between them that required that PG&E pay PTI \$20.1 million to delay construction. Ratepayers would absorb \$12.7 million up front whether or not the plant was built. Stockholders would absorb \$7.4 million and ratepayers would repay that amount, if and when the plant was built. The CPPC objected to the agreement on the basis that no agreement should be reached until the plant was approved. But PTI's lawyer, Bagley said, "Everybody wins." Ratepayers would save up to \$100 million by moving back the operating date of the plant; a lawsuit would be averted, and his client would accept a lower settlement while the status of the plant was uncertain than it would demand once a construction permit was approved (Associated Press 15 September 1988).

Finally, the hearings ended after hundreds of hours of testimony and the CEC staff recommended denial. The staff turned over boxes of documents to two of the

commissioners for review and recommendation to the full five-member panel. A decision was expected in early 1989 (Beaver 27 August 1988).

While the commission was deliberating, the political battle went on. During October 1988, Supervisors Fahden and McPeak feuded over a proposal put to the Board by McPeak to return cogeneration taxes to the community of Crockett. For approval, the project needed some direct socioeconomic benefit to the immediate community. Fahden claimed that McPeak's proposal was a political payoff to Bert Coffey for his support in her unsuccessful run against Boatwright. At the board meeting, Fahden questioned the value of any benefit to the community in siting a 58,000 gallon tank of ammonia next to the railroad tracks. A spill could result in concentrations of up to 10,000 parts per million of ammonia in areas only 500 feet from residences. According to CEC staff reports, 2,400 parts per million are life-threatening (Hytha 18 October 1988). In a letter to the West County Times, CPPC member, Blakeney, asked,

Why has Sunne McPeak taken time away from her own constituents in District IV to invade Nancy Fahden's District II? . . . Sunne didn't consult our community leaders, she sat down with PTI and cut a proposal. It makes no mention of the ammonia. It has no purpose except to try to influence the CEC decision, only weeks away now. Why would she do this, a woman who likes to be known as a great environmentalist and liberal?

Maybe McPeak is piqued at Crockett for choosing Senator Boatwright instead of her in the last election. He stood up in our town meeting and said, "Ammonia kills!" Maybe it's because Bert Coffey, Jack Knox, and Bill Bagley are all employees of PTI. . . . I say to Sunne: pay your sleazy political dues somewhere else and stay out of our town (Blakeney 12 October 1988)!

The PUC's decision approve the PG&E contract was under fire. Boatwright and State Senator Herschel Rosenthal, Chairman of the Senate Energy and Public Utilities

Commission, harshly criticized the PTI payment because it was not contingent upon project approval. Rosenthal sent several letters to Stanley Hulett, PUC President, questioning the decision. Hulett responded to Rosenthal in defense of the payment to PTI

A number of aspects of the Crockett plant, such as its proximity to a growing load center, its dispatchability agreement with PG&E and the efforts of the developers to accommodate regulatory concerns, led the CPUC to conclude that the settlement was beneficial. . . . Second, your letter questions the Commission's unwillingness to wait for CEC action on the Crockett certification or, at a minimum, to solicit a CEC opinion on the likely decision in its proceeding. It should be noted that the settlement was not an open-ended offer by the Crockett developers or PG&E. . . . In essence, waiting for final CEC approval might have been more costly for ratepayers, either in terms of the settlement or overpayments. . . . Further, this paid deferral is clearly not a buyout. A buyout occurs when a payment is purposely made in order to cancel a project or contract. . . . The efforts currently being made by PTI at the CEC to obtain a CEC permit are a clear indication to this developer's commitment to completing this project. No one who has spoken to the representatives of PTI can question this commitment (Hulett letter to Rosenthal 9 December 1988).

His letter covers the issue of the ammonia tank, claiming that PTI is modifying the project to mitigate the safety hazard. He closes by "re-emphasizing" the PUC's commitment to "fair and rational regulation." He writes, "we believe that our decision in the Crockett matter . . . is an example of this commitment" (Hulett letter to Rosenthal 9 December 1988). Senator Boatwright was not to be left out of this debate. In his letter to Senator Rosenthal he writes, "I've read your correspondence to the Public Utilities Commission on the Crockett cogeneration plant and the spurious answer of Mr. Hulett. The arrogance of the Public Utilities Commission is unbelievable."

On 9 January 1989, the CEC committee recommended that the project be rejected because it was too dangerous and not needed. CPPC's Tubb said, "Basically I think

we've killed it. We're just waiting for the funeral" (Hytha 10 January 1989). But PTI was not dead, just yet. On 12 January, it filed a motion to reopen the record for additional consideration based on modifications of the ammonia system. The CPPC objected to the request. According to Tubb (letter to the CEC 19 January 1989), PTI should not be allowed a third chance to present its proposal. Commissioner Noteware agreed. He had concerns that BAAQMD's approval that was scheduled to expire before the new construction date would not be renewed. Fellow Commission member, Richard Bilas filed a dissent stating that, "The fact that the air district might place additional requirements on this project merely insures that the facility will comply with all air quality rules which are in place at the time it is constructed" (Bilas 16 February 1989).

BAAQMD reacted favorably to Crockett residents in a letter to the CEC, Milton Feldstein suggested that it might be more appropriate for PTI to file a new application with the CEC in several years (Feldstein 1 February 1988). Air district regulations required that construction begin within two years of approval to guaranty that the most up-to-date pollution controls are used (Hytha 9 September 1988).

Senator Rosenthal strongly agreed with BAAQMD's recommendation to resubmit the application in the future. He pointed out several key issues in a letter to Noteware (23 February 1989). His main argument against the project was PTI's choice of need test, which he argued was no longer valid because of the project deferral until 1994. He soundly criticized the PUC's "unorthodox deferral decision." He supported BAAQMD's decision to resubmit due to uncertain future air quality regulations, "I am concerned that the Commission is grappling with an ammonia measure that may no longer be in force at



the time this project is scheduled to be built” (Rosenthal 23 February 1989). His final punch was to inform the Commission that he would be “pleased” to receive testimony regarding regulatory issues associated with “deferred” projects in the up-coming session. Boatwright was drafting legislation to disallow payments for power plants that were not built (Tubb 1998).

While the CEC debated re-opening, PTI circulated “An Open Letter to the Crockett Community” that opened with these statements,

Members of the Power Plant Committee may think that if they can kill the cogeneration project, C&H will be forced to shut down, and Crockett can magically be transformed into Sausalito, with boutiques, endless traffic, and unaffordable housing.

The reality is that Crockett is and will remain a diverse community, where industry, small business, and affordable housing coexist (Pacific Thermonetics, Inc. 1 February 1989).

Again, PTI insinuated that C&H would go out of business if the cogeneration project failed. Considering the long and symbiotic relationship of the community and C&H, this threat intimidated many residents, especially the elderly. Further, the letter mentioned that PTI planned to move its ammonia tank further from the tracks and “build special safety equipment including a barrier wall that can stop a rail car” (Pacific Thermonetics, Inc. 1 February 1989).

On 24 February, the Commission panel voted in a split decision to reject PTI’s request to reopen the hearings. The CPPC expressed cautious satisfaction, “It isn’t the war, but it’s a small battle and we are heartened” (McCormick 24 February 1989). PTI, “surprised” by the decision, vowed to appeal to the full CEC board within 30 days.

Perhaps PTI's "surprise" resulted because "William Bagley bragged in December that the members of the CEC were in his pocket," related an activist in a letter to Commissioner Imbrecht (McKay 6 March 1989). In her letter, she asked Imbrecht if he had ever wondered why people in Crockett had spent years of their lives and hundreds of hours opposing the project, "If you had been in the hundreds of sessions in the past five years, you would know" (McKay letter to Commissioner Imbrecht 6 March 1989). She appealed to Imbrecht to come to Crockett, walk the streets, and talk to residents so he could understand their opposition and why \$250,000 per year had not changed minds.

PTI still thought that dangling money would transform their opposition. CPPC's Blakeney reported a conversation to Noteware. PTI's Francisco called Blakeney to discuss "what's to be done with the \$250,000." She responded, "we did not want the money as an exchange for siting a 245 megawatt power plant in the community." Francisco pursued the subject on a "what if" the plant gets certified basis. When she said she hoped the plant was never certified, he said, "Well, Ruth, don't blame us later for this, we tried to work with the community" and hung up the phone (Blakeney 1 March 1989).

Other interested parties implored Imbrecht to approve the plant based on its benefit to the community and its residents. Of special interest was C&H's letter to the CEC stating that it had been working on the project for eight years and it was "the best option for us, for the state, and for the community" (Knecht letter to Commissioner Imbrecht 10 March 1989). McPeak's supported the project for "its overall environmental and economic benefits to Contra Costa County, its "substantial increase in annual

property tax revenues for public agencies in Contra Costa County, and PTI's "offer to provide an additional \$250,000" per year to Crockett (McPeak letter to Commissioner Imbrecht 27 March 1989).

On 29 March, the CEC panel, in a 3-2 vote, recommended against the project, again. Although PTI resolved to continue the appeal, on 30 May 1989, it withdrew its application without prejudice, as follows:

PTI has undertaken this action in light of the view of the Presiding Member and others that it is premature for the Commission to evaluate impact of the project given its on-line date and that new technology may develop and become available that would be appropriate for the project (Grueneich letter to CEC 30 May 1989).

The CPPC won the first Power Plant war, but PTI's Samis refused to admit defeat. He said that the decision to withdraw the project was not based on community pressure, but on possible technology changes. He insisted that they would be applying again (McCormick 1 June 1989).

Boatwright (December 1989, 15) announced the passage of a bill "to stop payments to private energy producers for plants which will never be built. . . . The legislation was motivated by the recent fiasco over the proposed Crockett Cogeneration plant."

The CPPC took a well deserved breather. Late in 1990, C&H hired a public relations firm to survey residents regarding cogeneration. Referring to the previous resentment, C&H's Knecht explained, "We are certainly cognizant of the black eye, and the cloud left over the community from the last cogeneration discussions" (Robertson September 1990, 15). Opponent Pat Vargen summed up local feelings

No one objects to C&H generating enough power for their own needs, but plenty of people object to C&H going into the power making business for profit when it means a huge, ugly and dangerous plant on our waterfront. As it is, C&H consumes the center of our town and does little or nothing for the community. The old days when C&H was seen as some sort of benevolent grandfather are long gone (Robertson September 1990, 36).

Residents perceived PTI as the villain in the past battle and C&H was quick to distance itself, assuring that PTI would have no active role in design or management, only a minor contractual relationship. The company expressed a desire to meet with community groups. "Our intent is not to present a fait accompli and say 'Here it is' to the community" (Robertson September 1990, 37).

In an "effort to reduce community antagonisms to cogeneration," C&H scheduled a town meeting in March 1991 (Robertson March 1991, 3). One hundred residents assembled in the community center and saw a slide show. After the presentation, C&H's Somerset told the group that the project died because of economics only days earlier. The cost of building the plant was estimated at \$250 million and C&H determined that the return on investment was unacceptable (Robertson April 1991, 3). Round number two ended without a skirmish.

By the end of 1991, the third Power Plant War was on the horizon. The plant would be built and operated by Energy National, Inc. (ENI) of Portland, Oregon. ENI's Vice President John Miller held a joint meeting in Crockett with C&H's Somerset. They highlighted the design changes and addressed previous concerns. From the onset, the mood in town was skeptical, but open (Robertson January 1991, 3). After listening to the design changes and gaining confidence in the expertise of the company, several of the

original CPPC determined that it was not worth the disruption to their personal lives to fight the project this time. They felt that ENI had done its homework and would have a high probability of building the plant (Denton, Barbara 1998; Denton Edward 1998; Sawyer 1998). Even Mary Moutinho (1998) conceded, “John Miller was honest, he did not lie to us.”

Although some of the major objections to the original proposal were mitigated, core members of the CPPC were resolute about stopping the plant because of its size and location. (Figure 8 depicts the project during construction.). The CEC scheduled a workshop in Crockett for residents to learn more about the project, express their concerns, and explore intervenor status. ENI’s Miller knew that the CPPC would be a formidable force. He commented,

There is a very high level of education about cogeneration issues in Crockett. This is really a unique community in that respect. In other areas where we’ve built plants, we usually find the residents treat us with benign neglect, or they focus strictly on what we can do for the community. In Crockett, we know we must be prepared to answer questions about everything (Robertson January 1992, 3).

The new proposal called for sales to PG&E on an “as needed” basis for about seven years after which the plant would go to “full base load” status, 24 hours a day year round. ENI stressed the financial benefits that the company could bring to Crockett and scheduled a meeting with Nancy Fahden (Robertson January 1992, 32). The project would generate about \$2 million per year in annual county taxes. Fahden stressed that there would be problems with allocating money directly to Crockett, “The county is broke and it gets more broke every day. I feel there would be little sympathy on the Board of Supervisors for allocating special funds to Crockett” (Robertson February 1992,

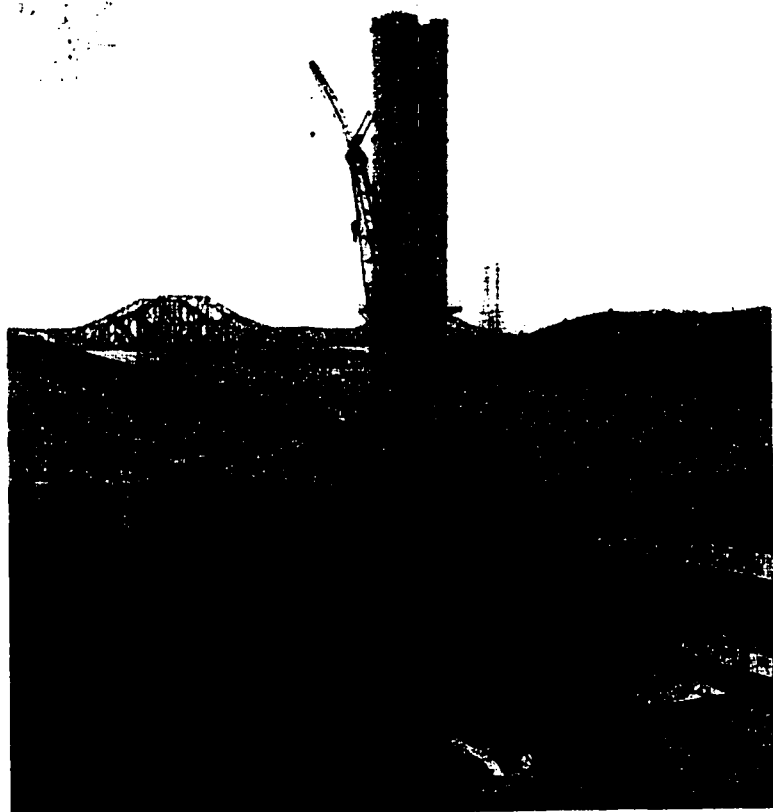


Fig. 8. Top. View of Crockett Cogeneration Plant construction, facing W. Lower. View of Crockett residences from Crockett Cogeneration Plant, facing S. (Courtesy of Robert Booth October 1994)

3). She felt that the present board would vote immediately to approve the project because of the county's need to add money to the General Fund.

Blakeney raised several points about the situation,

Applicants for cogeneration plants are invariably multimillion dollar entities. They hire classy law firms and experts in every scientific and cultural field to do their work. . . . This new applicant has hired a firm with a major partner who is a former CEC commissioner. All of this is quite legal, and, we're sure, innocent, but nevertheless leaves working class, non-professional residents of a small town at a serious disadvantage as to time, money and working knowledge to defend their right to a clean, safe and good quality environment. And it is a right. It is the right of every California citizen, mandated by the California Environmental Quality Act (CEQA). It's a right, but if someone is planning a power plant in your front yard, you have to get busy and defend that right. Otherwise, CEQA is just a dream (Blakeney June 1992, 3).

She explained that although the new plant was supposed to be safe, only the applicant had made that determination. The one thing that the CPPC learned from the first war was to trust the CEC staff. "The staff of 300 are all experts in their fields and while the commissioners are political . . . the staff is not" (Blakeney June 1992, 3). (Every member of the CPPC who was interviewed had the opinion that the CEC staff members were helpful and genuinely concerned with safety and the environment, during the PTI process.)

Blakeney pointed out that none of the financial benefits being discussed with the County would directly add more dollars to the community or cost C&H and ENI a single penny. "We've had a lot of glad hands and cozy meetings and absolutely no offers to share the wealth of this proposed super-industrialized town of the future" (Blakeney June 1992, 33). By mid-summer money discussions dominated the agenda. The supervisor appointed a panel of residents, the Crockett Advisory Committee (CAC) to discuss

mitigation measures. The CAC included several members of the CPPC: Blakeney, Gunkelman, Kessler, Dahl, and James. Some community members were critical of CPPC's representation on the committee because of its opposition to the plant. Blakeney pointed out that it was important for opponents to be represented on the committee because one of the main benefits the committee should consider was no power plant. Blakeney convinced the CAC to reject the county's initial offer of \$200,000 in taxes and \$200,000 from ENI. She insisted that it was not up to the County to determine the amount of mitigation to the community, but the residents of Crockett (Robertson July 1992, 3).

By September, the County made it clear that it did not intend to part with any of the annual tax revenues. A county representative stated bluntly,

I am going to fight to preserve the county's share against any attempts to diminish it. I am not in a negotiating mind to give up more money. Crockett would benefit from property taxes paid to the county, just as other unincorporated areas do. We use that money for county services. Whether you like it or not, county services are now suffering (Robertson September 1992, 8).

But in November, the County and ENI resolved to negotiate with the CAC rather than hold up the process. The County would allocate to Crockett \$200,000 per year and an \$250,000 per year for additional police protection. ENI would pay \$300,000 annually for thirty years and C&H would pay \$15,000 annually for fifteen years (Morris 28 December 1992).

Meanwhile at the CEC, this war was being waged on a much different battlefield than the previous proposal. ENI mitigated many of the safety issues that plagued the previous project, such as the ammonia tanks and the overhead power transmission lines.



In addition, the staff at the CEC was operating under different marching orders than previously. According to Tubb (1998) and Perez (1998), the CEC wanted this project approved and staff was advised to move the application expeditiously. By the end of the year, the CEC had nearly completed its recommendation. Richard Bilas, the advocate of PTI's proposal, was the presiding member of the CEC committee, which did not bode well for the CPPC. As pointed out by CPPC member Adams, the plant will use one of the biggest gas turbine engines in the world, PG&E doesn't need the power for decades, and unnecessary emissions will be generated; but "we're up against an Energy Commission in 1992 that is totally unsympathetic to public participation, and greasing its wheels to certify cogeneration projects, not to deny them" (Adams December 1992, 16). In addition, he pointed out that while the city of Benicia paid \$10,000 for a health study of the effects, "Our Supes are just rubbing their hands in anticipation of the money."

In the previous round, the CEC held dozens of meetings and workshops in Crockett. This round only one hearing was held there and Presiding Member Bilas spent precious time congratulating himself for being there because the law only required meetings in Sacramento. He said, "the commissioners stuck their necks out to have any hearings here" (Robertson January 1993, 32). He allowed each speaker three minutes to make a point. Denny Larson from CBE drew applause when he said, "The CEO for PG&E has stated there is a glut of energy in California. This plant is not needed" (Robertson January 1993, 32).

Project supporters argued that if you opposed the plant, then you were trying to run C&H out of town. Those in favor were generally union representatives and C&H

employees and retirees. As one opponent stated, “C&H is using union members as pawns. C&H’s loyalty is not to union members, but to its stockholders.” At that point most of the union members left together, and a member of the audience speculated that “they probably got paid for two hours to come here and time is up” (Robertson January 1993, 33). Activist Joanna Casesse addressed the committee,

You have succeed in splitting this community. Our hearts and souls are in this community, no matter how long we’ve lived here. . . . I think this is a terrible, terrible injustice that C&H is trying to convince its employees that they’ll lose their jobs if the plant is not built. Please take into consideration the soul of this community (Robertson January 1993, 33).

The CPPC realized that the cards were stacked against them this time. For example, when a petition of 665 Crockett opponents was presented to the CEC, a research scientist for ENI testified in the hearing that the petition was invalid because the CEC staff failed to prove that the petition was representative of Crockett’s population or that “Crockett is even an appropriate universe to analyze” (Robertson March 1993, 36).

In April, the CEC committee voted 5-0 in favor of plant certification. The hearing lasted over eight hours and testimony from both sides was heard. A group of Vallejo residents joined with the CPPC to unsuccessfully appeal the decision. Ernesto Perez, attorney for the CPPC and former CEC employee, planned to appeal the case to the Supreme Court, based on procedural violations, not the merits of the plant. Perez stated that a delay strategy included challenging all the agencies involved in the permit process. Blakeney had hoped to hold up construction to prevent the 26 April 1996 mandated start date (Robertson July 1993, 39).

In July the CPPC met with Perez to discuss strategy. They weighed the odds of winning an appeal against the amount of money and volunteer time necessary to continue. A majority voted to abandon the appeal, but Blakeney decided to negotiate directly with C&H regarding additional concessions for the community. With Perez at her side, she spent two hours on the phone with C&H's Somerset discussing the groups' demands. The next day he flew to Hawaii to confer with corporate headquarters. For the next several days, Blakeney worked long hours and reached a settlement of nearly \$1 million in benefit packages for the community. Perez complimented Blakeney saying, "I learned from a professional" (Robertson August 1993, 40).

According to Somerset, "There's been a long history of cooperation between Crockett and C&H, but then we drifted apart. When the cogeneration discussions started there was a whole lot of hostility. . . . I think there will be a whole new era of cooperation between Crockett and C&H" (Robertson August 1993, 40).

After nine years, and countless volunteer hours the wars were over. Crockett had a "vastly improved" version of the plant and a "precedent-setting monetary compensation" (Kessler 15 August 1993, 41). Three members, Mary Moutinho, Ruth Blakeney, and Douglas Tubb, who organized the very first CPPC meeting were present at the final meeting in 1993. Kessler summed it up, "This could never have been accomplished without a united and dedicated grassroots protest group and the majority of townspeople behind them" (Kessler 15 August 1993, 41).

## Unocal

The Unocal refinery (presently Tosco) is situated on 1.7 miles of waterfront property on 1,100 acres in unincorporated Rodeo. The facility spans Interstate 80 and San Pablo Avenue. Hillcrest Elementary School (965 students), Bayo Vista public housing development (250 units), and numerous residences are located on the refinery's fence line (United States Attorney and Housing Authority of Contra Costa County 1997, 23).

From 1989 through 1993, the refinery reported 147 incidents involving spills, toxic gas releases, flares, or fires (Contra Costa Building Trades Council and others 1996, 3). During that period, Unocal was considered one of the safer plants in the area with fewer public complaints than any of the other six Bay Area oil refineries (Slater 22 September 1995, 10). The rate of incidents increased dramatically in 1994, when 107 incidents were reported, including two major industrial accidents in August and September (Contra Costa Building Trades and others 1996, 3).

The August incident occurred in the Unicracker complex, where heavy gas oil molecules are broken down and flushed with hydrogen. Unocal produced the hydrogen by combining methane and steam and used a chemical solution called Catacarb to remove the unwanted carbon dioxide. Unicrackers, the refinery's primary gas producing units, were pivotal to production "upstream and downstream and profitwise," explained a refinery worker (Morris 8 September 1995).

About 6:50 A.M. on 22 August 1994, workers noticed a small steam leak about 150 feet off the ground on tower D-409. The refinery's air whistle sounded to warn

workers that there was an on-site emergency. The warning signal alerted the incident commander who inspected the unit and determined to shut it down for safety reasons. Workers immediately began the shutdown operation. Later that day, top refinery officials ordered full production to resume because they decided there was no danger of a catastrophic accident and that Catacarb was relatively harmless (Morris 8 September 1995). Despite this decision, a state of emergency remained in effect and health and safety personnel monitored the leak. On the morning of 23 August, refinery manager, Steve Plesh, called the emergency operations supervisor to ask why the “all clear” had not been sounded. At 12:30 P.M. on 23 August, Plesh ordered the “all-clear” whistle and the PA system announced that everything was fine (Morris 8 September 1995; Slater 22 September 1995, 11). The government investigations confirmed that Unocal kept the equipment running despite worker warnings and contrary to company policies regarding accident response and notification (Contra Costa Building Trades Council and others 1996, 17).

Also on 23 August, the unit engineer requested a management-of-change-review on the damaged tower. She felt the leak warranted review because it represented a significant change in operations. The examination could have taken about three days. Engineering supervisors rejected her request. So, in spite of the recommendation of the safety official and the unit supervisor, production proceeded without repair or analysis. Management directed unit operators to monitor the leak every four hours and log their observations, but no procedure was established in the event the leak worsened (Morris 8 September 1995).

Don Brown (1998), a Unicracker operator on tower D-409, recalled the event. He was off duty on a six-day long change until 25 August. As he approached the refinery from I-80, he could tell that something was wrong from about a mile away because he noticed a mist of “strange emissions” coming from the unit. Upon arriving, his co-workers explained the circumstances surrounding the leak. Morgan Clark, the operations manager, decided to overrule the shutdown decision and continue production because the plant was on a record run and they were “going after a reformulated fuel royalty” (Brown 1998). In a 12 September company memo, Plesh acknowledged the impact of the Catacarb incident, but congratulated the employees, “The really good news is that we have completed a run six months longer than was originally planned and have broken all production records” (Morris 8 September 1995). The six month figure was in reference to the fact that the unit had been scheduled for a maintenance turnaround in February 1994, which was postponed until October 1994 (Morris 8 September 1995; Slater 22 September 1995, 11).

Why did management officials keep running instead of fixing the hole immediately? Workers and others presume that management continued operations because a production bonus of six to twelve percent of annual pay was at stake, the Pay for Performance program (Morris 8 September 1995; Slater 22 September 1995, 11). This reasoning is the subject of speculation because the three responsible managers refused interviews by investigators unless granted immunity from criminal prosecution. But facts gathered in the investigation indicate that the unit was on a record breaking run that management wanted to continue without a break until October. The leak could have

been stopped at the outset, if management had halted the run and made the repair, but the shut down and repair would have required seven to nine days (Brown 1998, Morris 8 September 1995).

Refinery officials notified county Hazardous Materials in the Health Services Department, as required by policy, on 22 August, but indicated that the leak was not a health or safety risk and operations could continue (Slater 22 September 1995, 10; Morioka 1998). County officials understood that the situation was under control and did not immediately investigate (Morioka 1998).

None of the employees reported to outside agencies, although they were “really pissed off that they weren’t able to shut the unit down,” according to Brown (Slater 22 September 1995, 11). Workers who ran the damaged unit said they feared reprisals. One worker told investigators, “When somebody like Morgan Clark calls me and tells me that the unit’s going to continue to run, I understand that he’s given it some thought and he’s going to want it to run and there’s nothing I’m going to be able to say about it” (Morris 8 September 1995). In the December issue of the Oil Slick, the newsletter of the Oil, Chemical and Atomic Worker Union, fifteen workers issued a statement, “We were not willing to jeopardize our jobs by individually insisting on the shut down of a unit making a quarter million dollars daily when the company and all their experts said it was safe to keep going” (Morris 8 September 1995).

By Monday 29 August, the substance leaking from the hole had changed from looking like steam to “sticky brown Catacarb” (Slater 22 September 1995, 11). By 2 September, Catacarb streaks covered refinery tanks and the surrounding ground. The

small hole in the unit had increased to the size of a man's fist. Some workers were nauseous and tired, but they attributed it to working long shifts. They felt the chemical was harmless based on Clark's memo to the employees assuring that the Catacarb solution was no more dangerous than "liquid clothes washing detergent" (Slater 22 September 1995, 11).

The release was odorless and the community was unaware of the problem until Sunday, 4 September, when a Crockett resident complained to Unocal of a strange film on his truck windshield that he attributed to the refinery. Although they doubted that the substance had traveled that far, refinery managers asked workers to spray the tower with fire hoses to contain the release within the gates of the plant. None of the workers wore safety equipment and the substance splashed down on the workers (Brown 1998). Brown, one of the employees assigned to the task, decided to video the leaking for use in his safety training series. The video depicts a powerful jet of steam gushing out of the tower and thick brown sludge running down the sides (Slater 22 September 1995, 12).

The spraying ended about 8:00 A.M. on 5 September (Labor Day) because Unocal's workers complained of the contaminated water falling on them. On the same day, workers noticed a buildup of brown residue on WOC's tanks immediately downwind. The safety official in charge that day called his boss to recommend a shutdown. He warned his boss, "I explained that no matter how hard we tried to prove that this material was harmless, we would look like the bad guys all the way around" (Morris 8 September 1995). He was told it was an operations problem that management would handle.



At 9:00 A.M. on Tuesday morning, 6 September, WOC's manager phoned Unocal's Plesh to complain of the substance that was sickening its workers and had covered its white tanks with a brown residue. By this time, WOC's workers were sheltered indoors to avoid exposure (Brown 1998; Morris 8 September 1995; Slater 22 September 1995, 12). At that time, the hole was about one foot long and Catacarb was spewing profusely, according to Brown (1998). Unocal did not notify county officials until three hours later. They reported that they were unaware of a problem until the Wickland phone call and delay was necessary to determine the source of the release. Finally, the decision was made to stop operating the tower and shut down was completed late that night (Morris 8 September 1994, 1 [A]; Slater 22 September 1995, 12). As Brown (1998) explained, "this was not an accident, but a failure to do proper maintenance."

On 8 September, a West County Times article stated eight people had been treated as a result of a Unocal "chemical accident" that had deposited potassium bicarbonate in the Tormey and Crockett area. In the article, residents with symptoms were advised to consult a doctor and call Unocal for auto and home detailing. BAAQMD reported 12 confirmed related complaints and an intention to cite the company for public nuisance (Morris 8 September 1994, 1 [A]). Overall media coverage was limited. Many residents were unaware of the incident until days or weeks later, as word spread through the two communities (Bray 1998, Young 1998).

One Crockett resident, activist Kasha Kessler (1998), told why she posted warnings on the community bulletin boards. Over the Labor Day weekend, she noticed

that her house was covered with a sticky brown substance. After talking to several other neighbors, she called the county Hazardous Materials Department on Tuesday, 6 September. She spoke to several officials who had no knowledge of any incident. She finally reached someone who told her an inspector would be sent to investigate. No one was home when he arrived, but upon returning, she found a card in her door that led her to believe that a sample was taken. She was unable to confirm that a sample was taken in her subsequent calls to the County. Then, she began to call other public agencies and eventually BAAQMD told her that the substance could be linked to a Unocal release. She immediately posted warnings on the community bulletin boards and local businesses cautioning people not to eat vegetables from their garden because of a Unocal spill (Kessler 1998). Some residents recall that the handwritten notice was their first notification of the incident (Mechling 1998, Kessler 1998, Young 1998). Mechling (1998) recalled the reading the note,

After the Catacarb incident, the first indication I had that there might be a problem was a handwritten note posted on the community bulletin board downtown. It said there had been a release, and that we shouldn't eat any vegetables from our gardens. I remember very clearly thinking that the person who posted this note was probably some wacko, and that if there really had been a major release that threatened our produce, that we would have heard about this either through the media (I didn't get the West County Times, I was a Chronicle reader, the Chronicle writers had been on strike throughout this period.) or through some other channel. I put the thing out of my mind completely. Turns out later that this was Kasha's note.

On 13 September, Unocal officials attended a CIA meeting of about 70 Crockett residents to explain why they allowed the leak to continue for two weeks. Morgan Clark said that although they were aware of the leak, "Our experts at the refinery felt there was

no chance of a catastrophic incident occurring.” (Reynolds 14 September 1994, 3 [A]). A Unocal physician assured the group that the components of the chemical could cause flu-like symptoms with no long-term effects. Angry residents heckled and interrupted Clark’s speech (Reynolds 14 September 1994, 3 [A]).

Two days later on Thursday morning, the refinery leaked toxic hydrogen sulfide gas for 90 minutes without warning the community. Schoolchildren at Hillcrest Elementary were sickened by the fumes and kept indoors all day because the odors were so intense. Then at 8 P.M. that evening about 60 Crockett residents called BAAQMD to report a smell of burning oil that caused headaches and nausea . BAAQMD cited Unocal for public nuisance on the morning release (Morris 17 September 1994, 1 [A]).

About two weeks after the Catacarb release, Unocal gave written notification to local residents that the Catacarb release had occurred. The letter indicated that Catacarb was not a threat to health, but if people had ill effects they should talk to a Unocal representative. Since the information regarding the chemical components “seemed very sketchy,” Mechling (1998) called for more details. When he asked why the refinery had not informed the public about the spill sooner, he was told, “well, the county knew about the release all along, it’s their responsibility to warn the community if they think there is a problem” (Mechling 1998). During this time, the county Health Services Department “seemed to be ignoring the whole situation” (Slater 22 September 1995, 13) and Mechling wanted to know why. He called Randy Sawyer, an official at county Health Services. Sawyer said that on 6 September, when the County was alerted about the problem, the Catacarb was no longer airborne and county officials decided that “it wasn’t

enough of a risk to sound an alert in the community.” He told Mechling that a community information meeting was scheduled for 22 September. Mechling decided to attend, hoping to get further information on the chemical contents and potential risks (Mechling 1998).

On the day of the meeting, attorneys, representing residents, filed a \$1 billion class-action lawsuit against Unocal, citing negligence in the Catacarb and hydrogen sulfide releases. The suit claimed that the exposures were likely to cause long-term health problems for Crockett and Rodeo residents. One attorney said, “What is most outrageous is that there was no warning to the community about this for at least two weeks” (Burnson and Morris 23 September 1994, 1 [A]). The suit claimed the company exhibited a “blatant disregard of the health and welfare of residents” (Burnson and Morris 23 September 1994, 1 [A]). The 120 people who attended the meeting were angry and critical of Unocal’s behavior. A company doctor and toxicologist hired by Unocal told the people that there was no evidence that the chemicals would cause long-term health effects. The toxicologist explained that no danger existed from exposure to the residue that remained on plants and property because the chemical was in solid form and could not be inhaled (Burnson and Morris 23 September 1994, 1 [A]). But she cautioned residents not to clean their homes and vehicles, advising that Unocal’s trained crews should handle the task. When asked about eating produce, she said it was safe. Mechling (1998) asked her to explain why it was dangerous to wash his house or car himself, but safe to eat his vegetables. Her response was that there was “no evidence that the Catacarb ever reached the ground.” She said she had eaten and tested vegetables

from Crockett gardens and that her testing failed to show any evidence of fallout (Burnson and Morris 23 September 1994, 1 [A]; Mechling 1998).

Subsequently, he spent hours on the phone with her requesting more information and lab tests. She volunteered a great deal of information and sent Mechling “reams of paperwork.” Based on advice from a friend who worked in toxic remediation, he submitted a written request for the results of the Total Threshold Limit Concentration, a heavy metal test. The results indicated traces of several heavy metals, but it could not be proven that the Catacarb tested was the same Catacarb released on the community. Mechling insisted that she test his vegetables and the “results came back positive for Vanadium and Boron” on all of his vegetables. He eventually received several reports that “later proved to be very damaging to Unocal” (Mechling 1998).

By October, the anxiety level of the citizens was intense and hundreds of people were sick with various symptoms (Slater 22 September 1995, 13). During the 16-day release, tons of Catacarb had escaped from the hole, blowing northeast towards Crockett. The sticky brown residue fell on vehicles, homes, lawns, and gardens in the surrounding area (Contra Costa Building Trades Council and others 1996, 17).

On 4 October, the county Planning Commission held a public hearing at Hillcrest School regarding the permit for Unocal’s \$100 million clean-fuels project. According to Planning Commission Chairman Richard Clark (1998), a community meeting was held because the commissioners wanted local input due to recent refinery problems. About 200 people attended; many voiced strong opposition to permit approval. In his opinion, Unocal officials were “less than forthright,” arrogant, and uninterested in the opinions of

their neighbors (Clark 1998). Clark was amazed that Unocal officials could not understand the local rancor. He said, “they just didn’t get it.” Many locals wanted the project held up until Unocal could prove that a warning system was in place. The commissioners delayed action until 18 October to consider additional conditions prior to approval. Activists wanted a chemical monitoring system that would detect airborne chemicals while crossing the fence line. Refinery officials strongly rejected this proposal (Clark 1998).

By then, “[e]ven the County Health Department eventually got around to noticing that something had occurred here that required some kind of official attention” (Robertson November 1994, 6). On 5 and 6 October, the County held its first community meetings in Crockett and Rodeo. More than 100 angry Crockett residents attended. They criticized the county’s inaction for failure to notify residents at the time and waiting so long to provide information on the health effects. “I’m pissed at the county for not doing anything,” said Kasha Kessler (Morris 6 October 1994, 3 [A]). Public health director, Dr. Wendel Brunner told the audience “I think it probably would have been appropriate for the Health Department to have held this meeting several weeks ago” (Morris 6 October 1994, 3 [A]). The county officials placed most of the blame on Unocal’s failure of timely notification. Brunner and state Health Department doctors provided essentially the same information as Unocal had. “They basically parroted what the Unocal officials told us” (Anderson 1998). Brunner did concede that animal studies have shown that large quantities of boron can cause birth defects. He also stated that diethanolamine (DEA) could break down to produce nitrosamines (NDEA), a probable

carcinogen. But, he stressed that the amount of exposure was not likely to cause any long-term health effects. He announced that a study of the health effects was in process and a fact sheet would be mailed to residents shortly (Morris 6 October 1994, 3 [A]).

On 12 October, the Health Services Department sent residents its first written notification, "a detailed fact sheet" indicating that 100 tons of Catacarb had been released. The letter (Contra Costa County 12 October 1994) described the mixture: "about half was water, a quarter was potassium carbonate and potassium bicarbonate combined, diethanolamine (DEA) at 12-15 percent, boron compounds at 5-7 percent, vanadium/metavanadate at 0.25 - .33 percent, and a small amount of polyhydroxylated alcohol." It assured parents that their children could safely play outside because "these chemicals remain in the environment only a few days to weeks, and are washed away with water." People were instructed to seek the services of their private physician if they had any ongoing health problems, unlike the General Chemical release in 1993, when the County opened clinics and held community meetings within days of the spill (Slater 22 September 1995, 13).

A more detailed "Fact Sheet," prepared by California State Health Services Department (October 1994), reported that the State Health Department and Cal-EPA would monitor and review the work of the scientific consulting firm hired by Unocal to investigate the environmental and health effects of the release. Although they did not announce any plans for independent studies, the report indicated that county and state health departments were reviewing known data on the chemicals to find any additional information regarding cancer risks and health effects on unborn babies. The report

revealed that NDEA, “known to cause cancer in laboratory animals and probably in people” was found in a Tormey soil sample, but the low level suggested no significant risk.

The report specifically addressed the safety of garden produce, stating that “sampling of fruits and vegetables from neighborhood gardens downwind from the refinery have shown no increase in levels of vanadium or borates when compared to the same types of fruits and vegetables purchased at a supermarket” (California State Health Services Department 1994, 4). This information was contrary to the tests performed on Mechling’s vegetables (Mechling 1998).

Although the state and county reports and all the officials indicated that any effects would be short-term, more and more people were feeling sick. Many people were unaware that their symptoms were related to the toxic release until weeks afterwards. They did not make the connection until attending community meetings, talking to other residents, and comparing symptoms.

Two Crockett residents recalled the point when they realized that their illnesses of four to six weeks were possibly linked to the release. Virginia Bray (1998) was ill for weeks with an upper respiratory illness which was not responding to a third round of antibiotics. Upon attending a community meeting in early October, she met other residents with similar stories. Until that time she did not link her problems to the release. When she found out that Unocal had knowingly exposed the community to potentially toxic chemicals, “she felt raped” and became very angry. Bray recalled that she had driven through the refinery on San Pablo Avenue on Labor Day weekend. A brown



substance covered her car and she has since questioned whether her exposure caused her persistent cough (Bray 1998). During subsequent meetings she met Pattie Young, whose daughter and husband were also ill since early September. Young felt no satisfaction from the information she received from the county Health Department. She eventually contacted a doctor with experience in chemical exposure who was affiliated with the Response Team for the Chemically Injured (the "Response Team"). He tested her for various chemicals and when the results showed high levels of vanadium, she became "angry and afraid" (Young 1998). She invited the Response Team to Crockett for a November meeting. Residents were read a list of symptoms and asked to raise their hands if the any of the symptoms applied to them. Many hands were raised and people began to realize that others shared similar health problems since the release (Bray 1998, Slater 22 September 1995, 13).

Unocal opened a clinic in early November at the request of residents. People questioned the doctors' objectivity because patients were told that their symptoms couldn't possibly be related to the leak because the effects of Catacarb were only short-term (Morris 11 November 1994, 3 [A]; Slater 22 September 1995, 13). Based on her research, Young felt that independent information was needed. As patients entered the clinic, Young requested that patients fill out medical surveys and release copies of their medical records for further study. She also advised them to request boron and vanadium testing (Morris 11 November 1994, 3 [A]). About 70 to 80 people visited the clinic after referrals by Unocal and its doctors. Other people visited their private physicians. By November, 300 residents had sought medical treatment. A common complaint was

recurring infections which didn't respond to antibiotics: bronchitis, ear infections, sinus infections, and bladder infections. Others had gastro-intestinal problems, migraines, asthma, and fatigue (Slater 22 September 1995, 13).

During that period, Unocal crews washed 800 homes, tenants gave moving notices to landlords, insurance adjusters assessed damages, eight different lawsuits were filed (Robertson October 1994), and the local veterinarian treated 50 animals for skin, eye, and respiratory problems (Slater 22 September 1995, 13). According to the Crockett Signal (Robertson November 1994, 6), almost everyone was busy as a result of the spill except Crockett's County Supervisor Dr. Jeff Smith. Residents criticized Smith for avoiding the community meetings and his failure to show "leadership in the crisis" (Robertson November 1994, 6). Some citizens met with the county officials and complained that Smith would not come to town. State Assemblyman Bob Campbell eventually organized a meeting with county personnel, BAAQMD, Dr. Smith, and a "handful of activists" to focus on health complaints and the County's lack of response. Dr. Smith took the stance that there were no health problems in Crockett (Peterson 1998). According to one activist (Adams 1998), Dr. Smith did not want to address the Catacarb issue because he supported the construction of 100 homes adjacent to WOC. Local activist objected to building more houses in close proximity to the refineries.

Meanwhile, local activists and concerned citizens began to take action on several fronts. Groups mobilized to address health, safety, public awareness, and mitigation measures. The timing of the clean-fuels permit process gave the citizens the opportunity and power for negotiations with the refinery. A timely approval of the land-use permit

was necessary for Unocal to complete the \$100 million project by the 1 April 1996 deadline. On 18 October, the Planning Commission met for a second time to consider Unocal's permit application. After hearing the people's concerns, Chairman Richard Clark told refinery officials, "From the testimony I've heard over the last two hearings, it seems like there's more work that needs to be done before I'm willing to entrust you with increased responsibilities" (Morris 20 October 1994, 1 [A]). Unocal officials expressed that the two incidents were irrelevant to the land use permit, but Clark said that the leaks represent there may be problems in the way the refinery operates. He suggested that Unocal meet with citizens and environmental groups to develop a GNA, similar to PRC in Hercules, Chevron in Richmond, and Shell in Martinez. CBE's Director Denny Larson expressed elation and surprise at the commission's decision "which basically bolstered our position that there needs to be a good neighbor agreement before the project can move forward" (Morris 20 October 1994, 1 [A]). Refinery officials, on the other hand, were unhappy with the decision. A refinery spokesman complained that the Planning Commission wanted Unocal "to go back and talk to these folks . . . I guess that's what we're going to do. We really don't have any choice." (Morris 20 October 1994, 1 [A]). Thus, several months of intense negotiations started between the groups; some sessions lasting into the early morning hours (Cherry 1998, Gunkelman 1998, Kessler 1998, Pygeorge 1998).

Leaders and activists from the two towns met to determine who would represent the communities in the talks. Neither town had elected officials, but various civic and community groups had been around for years. Also, many local activists had years of

experience from their struggles with PRC and the Crockett cogeneration project. Others came forward from the CIA, the RCA, the school board, and the chamber of commerce, as well as citizens who had recently become active because of the release.

Interested parties held a hasty meeting at the community center. CBE's Larson and Crockett resident Kessler "took the stage" and attempted to develop a "wish list," based on group input (Mechling 1998). The meeting was basically a "free-for-all" (Kessler 1998). Not only were the two communities frequently at odds over the years regarding regional and school district issues, but the various interest groups had conflicting agendas. Several meetings were held "to insure that all interested parties [were] involved" (Crockett/Rodeo Coalition 1994). Before meeting with Unocal, the group met separately to develop a "list of specific actions to address [their] important concerns" (Crockett/Rodeo Coalition 1994). They decided to ban attorneys from the bargaining table, knowing that they could not afford the kind of legal advice that Unocal could retain. The decision surprised Unocal officials, who had flown in their attorney from Los Angeles for the first meeting (Anderson 1998). The group also elected representatives from local groups, mainly CIA, RCA, chamber of commerce, and local activists, to speak at the negotiations. Because CBE's Larson had negotiated GNAs with other refineries, the community members all agreed upon his position at the table (Kessler 1998). Supervisor Smith declined attendance and sent his representative Pam Pagni-Sawyer, a Crockett resident and former CPPC activist (Anderson 1998, Sawyer 1998).

Unocal opened the negotiations by offering \$100,000 per year to split between the two communities and some representatives showed willingness to accept. Opponents felt the offer was “hardly enough” (Kessler 1998). After two sessions, the group determined that elected negotiators would do the talking at subsequent meetings. The decision proved to further divide the interest groups. During the negotiations, new people showed up and demanded a voice at the table. Various factions formed (Kessler 1998, Mechling 1998).

Kessler and Blakeney, former CPPC activists, were joined by Mechling, a recent “grassroots activist” convert. They were outspoken about health and safety issues, particularly a desire to have Unocal pay to relocate Hillcrest Elementary. The group was very divided on the school relocation issue, which was Mechling’s primary goal. Mechling (1998) recalled that after a contentious meeting, the CIA president told him that the “CIA represented Crockett” and he should refrain from speaking at future meetings. Mechling (1998) retorted that the “CIA was no more than a private club” and did not represent his interests.

This rift created a splinter in the group. All along Blakeney had been convinced that the various community groups needed an umbrella organization with legal representation and a hierarchical structure. Kessler and Mechling agreed, but the others declined to join. The three formed Shoreline Environmental Alliance (SEA), and Blakeney privately contacted the refinery management and convinced them to recognize SEA as a separate entity with signatory status. Besides the release, this concession “represent[ed] Unocal’s biggest blunder” and the environmental activists’ major gain

because it gave CBE and SEA each a vote and signatory status on the GNA (Mechling 1998).

This maneuver gave CBE's Larson the votes required to include many safety issues: community safety audit, community warning system, VOC emissions reductions, and fence-line monitors (Kessler 1998, Mechling 1998). The remaining interest groups united to form a historic link, the Rodeo/Crockett Coalition (the "Coalition"). The Coalition was granted two votes, together with signatory status. At this point, the interest groups held a strategy meeting at which they decided that when major differences surfaced, they would confer without Unocal and the county representative to work out their differences privately (Kessler 1998).

Unocal brought in a new "Acting General Manager," who sat at the bargaining table. The community groups found that he changed his mind on issues from one meeting to the next. By 7 November, they requested a written confirmation from Unocal regarding its intentions to develop a GNA, "an agreement to come to an agreement" (Crockett/Rodeo Coalition 1994). Although he verbally agreed to draft the agreement, he later revoked the decision. At that point some members wanted to walk away from the negotiation until the group received a written statement from Unocal. Other members disagreed. The Coalition sent a written request to the Planning Commission requesting a 28 day delay on the 14 November permit hearing (Crockett/Rodeo Coalition 1994). The extension was denied, but meetings continued. The situation was extremely complex, fluid, and volatile because of the time constraints and conflicting agendas.

Meanwhile, volunteer committees formed to address various aspects of the agreement that included health, school issues, transportation, vegetation and parks, and the financial distribution process (Good Neighbor Agreement April 1995). Committee members spent months developing mitigation plans on the various issues.

Bray and Young became SEA members and volunteered for the Health Committee. While the GNA negotiations continued they concentrated on the health issues in the communities. They asked Unocal for an epidemiological study of the health effects and an independent health clinic to treat victims (Slater 22 September 1995, 14). Young went door to door with health surveys and petitions (Young 1998). As part of the GNA, the refinery agreed to fund the clinic that was opened by Response Team members in February 1995 (Slater 22 September 1995, 14). More than 1500 residents of Tormey, Crockett, and Rodeo eventually sought treatment for diarrhea, vomiting, headaches, allergies, brain damage, memory loss, and cognitive disorder (Contra Costa Building Trades Council and others 1996, 17). In December 1994, Unocal began a health-risk assessment to determine more accurately the short and long-term health problems residents might expect. Initially the refinery and the Health Department had insisted that problems would last only several days, but a Unocal medical director said that the early pronouncements were based on incomplete information. The toxicity of the chemicals involved was uncertain and safe exposure levels had not been established (Morris 12 December 1994).

Uncertainty could be attributed to several factors. Unocal initially estimated that 100 tons of Catacarb were released in the 16-day leak. Based on subsequent reports, the

amount was estimated at 116 tons by BAAQMD (Bowler and others 1996, 5). According to Dr. Howard Adams (Adams 1995, 1), the estimated emission range was as high as 210 tons. Dr. Adams, a chemist and SEA member, has spent 2,000 hours over 3 ½ years researching the Catacarb data. He obtained many documents through the Freedom of Information Act and studied all four of the health assessments related to the issue (Adams 1998).

Various versions of the Material Safety Data Sheet (MSDS), listing the components of the mixture were discovered (Morris 17 December 1994). On 25 August, when Don Brown realized the controversy between workers and managers regarding the leak, he inspected the MSDS. After he saw the danger of some components, mainly vanadium and boron, he kept a copy. According to Brown, after the investigations began management changed the MSDS (Brown 1998).

Attorney Ed Masry stated that Unocal released a data sheet for “Catacarb solution” which downplayed the dangers posed by the material released. The compounds used in the hydrocracker unit were Catacarb 100H and Catacarb 274. The MSDS for Catacarb 100H lists risks to eye tissue, chemical pneumonia, and even death. The MSDS for Catacarb 274 cites the substance can cause irreversible damage to the eyes, vomiting, diarrhea, and irritations to the skin and lungs. Because these two compounds are mixed with a defoaming agent, Unocal officials justified the release of the “Catacarb solution” MSDS to the public. Randy Sawyer of county Health Services said that Unocal submitted data sheets for Catacarb 100 and Catacarb 274 to the County in September, together with its research on the compounds components (Morris 17 December 1994).



On 14 November, during deliberations over the GNA continued, the Planning Commission approved Unocal's permit with several conditions: installation of chemical fence-line monitors, contribution of \$4.5 million to the Cummings Skyway extension, and continuation of the negotiations on the GNA. The Coalition members were disturbed that the permit was approved prior to a final agreement (Morris 17 November 1994, 3 [A]), and some people believed that pressure from county officials to get the \$4.5 million was the deciding factor in the decision to favor Unocal. "We were sold out," said Crockett activist Paul Nolan (Robertson December 1994, 3). The permit required Unocal to assure the county zoning administrators every three months that it was continuing to negotiate in good faith. According to CBE's Larson, the motion didn't give citizens appeal rights equal to Unocal (Robertson December 1994, 3). SEA quickly filed a permit appeal asking the Board of Supervisors to strengthen the requirement for Unocal to reach a GNA with the communities. They also requested tougher standards on the fence-line monitor system that Unocal strongly opposed (Morris 29 November 1994, 3 [A]).

On 20 December, SEA decided not to pursue the appeal because a GNA was reached with Unocal. Important safety measures included a commitment to reduce toxic emissions by 28 percent, phase out the use of toxic anhydrous ammonia and chlorine gas, and install the disputed fence-line monitoring system. The financial settlement required annual contributions over 15 years to the two communities and the John Sweet School District totaling \$3 million and \$1.5 million, respectively. The environmental mitigation required a \$270,000 program to create a buffer zone between the refinery and its

neighbors. The health measures included funding the Good Neighbor Clinic and two health studies, including Dr. Bowler's (1996) epidemiological study. Bray (1998) was pleased that the Health Committee "got all their recommendations approved."

Denny Larson said, "That's one hell of an agreement" (Hallissy 21 December 1994). It was "the most comprehensive pact agreed to by any of the six Bay Area oil refineries," according to Larson (Morris 21 December 1994). He stressed the point that these agreements are especially important for residents in unincorporated areas that must rely on county officials to protect their interests. The financial payments help to mitigate the damage to host communities from pollution, chemical accidents, and traffic.

## CHAPTER 6

### RESULTS

The three case studies were developed from archival documents and interviews with CBE employees, industry employees, government officials, and local activists. The author identified local activists from newspaper articles, membership rolls, and the “reputational method,” used by Bullard (1993b, 26). Thirty-three local activists were contacted and three declined to participate for personal reasons.

Results were generated from the interviews, surveys, and analysis of the three case studies. Data were compared to the list of grassroots characteristics that was developed from the literature. Appendix 1 provides a complete list of the interview guide with the 30 participants’ responses.

#### Survey Results/Characteristics

Twelve respondents had resided in Rodeo, but only five remained in the community. Of the 18 Crockett respondents, five had moved out of the area. All 12 listed refinery-related health concerns as the primary reason for relocation. None cited relocating because of the cogeneration plant. Four relocated respondents have remained active SEA members.

The interviews were conducted in three formats: nineteen in person, two by telephone, and nine by written response. One respondent returned an anonymous reply,

but all other respondents were identified. A summary of the participants' characteristics, motivations and the personal results of their involvement, questions 1 through 9 and 19, is displayed in table 4.

**TABLE 4.--PARTICIPANTS' CHARACTERISTICS AND MOTIVATIONS**

1. <b>Sex</b>	Male: 12	Female: 18		
2. <b>Age</b>	30-40: 17	41-55: 11	Over 56: 2	
3. <b>Education</b>	Hi School: 1	1-3yrs College: 17	College Grad: 7	Grad Degree: 5
4. <b>Occupation at time of participation?</b>	Blue Collar: 2			
	Housewife: 1			
	Professional/Technical: 25			
	Retired: 2			
5. <b>Number and ages of children at time of participation</b>	Children Under 18: 16 Participants			
	No Children or Grown: 14 Participants			
6. <b>Membership in any environmental groups?</b>	Active: 3			
	None: 22			
	Dues Only/Mainstream: 5			
7. <b>Any previous activism or political involvement?</b>	Active: 4			
	None: 21			
	Quasi-Political - CIA: 2			
	RCA: 3			
8. <b>How long had you resided in the area at beginning of your involvement?</b>	2 Years or Less: 7			
	4 to 16 Years: 20			
	35+Years: 3			
9. <b>Why did you get involved in local activism?</b>	<u>Event or Situation</u>			
		<u>Number</u>		
	Health & safety concerns	21		
	Concern for quality of environment	10		
	Air Pollution or odors	9		
	Friend's request	7		
	Property damage & loss of home value	4		
	Petition or sign	1		

**TABLE 4.—CONTINUED****Did a specific event or incident get you involved?**Rodeo Residents

Pacific Refinery Only: 7

Unocal &amp; Pacific Ref: 5

Crockett Residents

Crockett Cogen Only: 5

Unocal &amp; Crockett Cogen: 9

Unocal Only: 4

**19. How did this process of involvement influence or affect your personal life?****Career change, move, increased political involvement, health, etc.?**Empowered Results

Community leadership 8

Grassroots organizing 6

Personal empowerment/  
self/confidence 5

Public involvement 5

Made friends/camaraderie 5

Learning experience 8

Disempowered Results

Left community 7

Lost work or resigned job 5

On-going health problems 3

Process controlled life 4

As indicated by the response to question 9, some activists who were involved in the PRC and cogeneration cases also worked on the Unocal Catacarb dispute. Therefore, they gave responses to questions relating to both issues. Four Crockett respondents were active only in the Catacarb dispute. Question 19 is included in the characteristics section because it is related to personal feelings regarding involvement.

Pacific Refining Company

Major events from the PRC case study are summarized on table 5. When the refinery installed a visbreaker and began processing high sulfur crude oil in 1983, smelly emissions plagued the downwind Rodeo residents. Their initial reaction was filing odor complaints with BAAQMD. The number of "inspector-confirmed" odor complaints are

TABLE 5.--PACIFIC REFINING TIME LINE

<u>Dates</u>	<u>Refinery Events</u>	<u>Government Activity</u>	<u>Community Response</u>
1983	Refinery resumes operation		118 odor complaints.
1984	Refinery installs visbreaker, begins processing high sulphur Alaskan crude oil.	BAAQMD orders odor abatement controls. PRC Task Force formation	881 odor complaints, Citizens for Cleaner Air formed. Citizens join PRC Task Force.
1985	Odorous releases continue. Public relations campaign.	District attorney & BAAQMD file civil suit. AB 1276 increases fines to \$25,000.	296 odor complaints. Task Force recommends 40 changes.
1986	Odorous releases continue. Refinery requests delay in equipment installation.	BAAQMD fines \$100,000. Court order to install equipment within two years	468 odor complaints. Citizens for Cleaner Air files suit Task Force recommends flare recovery.
1987	Odorous releases continue. Fire forces evacuation of Garretson School. PRC donates \$20,000 to school.		237 odor complaints.
1988	China National buys 50% of PRC. Refinery fire.		151 odor complaints. Citizens for Cleaner Air settles 1986 suit and files another for \$40 million.
1989	Fire at refinery	BAAQMD fines \$95,000 for 71 violations.	Citizens for Cleaner Air settles for \$730,000 and gag order.
1990	PRC announces odor recovery will be part of refinery modification program, years away. 2 incidents	BAAQMD files lawsuit to stop odors. Court issues consent order to install Big Three" odor recovery.	99 odor complaints. 80 residents testify at BAAQMD meeting.
1991	3 incidents	Hercules begins CEQA review of modification.	137 odor complaints. RCA begins campaign to halt PRC expansion.

TABLE 5. --CONTINUED

Dates	Refinery Events	Government Activity	Community Response
1992	Three major fires and explosions. 25 incidents. PRC operating permit expires.	CEQA review continues. BAAQMD investigates PRC closure. County health department insists no health consequences. BAAQMD conducts health survey. DEIR report rejected.	132 odor complaints. RCA hires attorney. Requests CBE assistance. 200 protest at Hercules. DEIR meeting.
1993	PRC announces plans to cease refining and operate as terminal. 23 incidents. Defers install odor equipment.	BAAQMD reaches agreement on "Big Three" odor equipment.	51 odor complaints. Protests at DEIR meetings. RCA campaign.
1994	19 incidents.	Hercules approves asphalt tanks. Hercules approves \$500 million modification.	40 odor complaints. RCA files suit to protest Hercules approval. CBE helps activists negotiate GNA.
1995	Announces plans to close. 13 incidents. Naphtha and sulphur release. Disabled school children hospitalized.		
1996	Asphalt production begins.		
1997	Refinery closed and sold.		

listed on table 5. BAAQMD requires at least three complaints from the same source to dispatch an inspector for confirmation. Five separate “inspector-confirmed” complaints from the same source within 24 hours are required for violation purposes (Bay Air Quality Management District 1993, 16).

As the problem persisted into 1984, residents formed two grassroots groups, RCA and CCA, to address the issue. All 12 Rodeo respondents lived immediately adjacent or downwind from PRC. When asked why they became involved in local activism (question 9), their primary responses were as follows: fear for children’s health (7), fear for health and safety (6), tired of air pollution and odors (6), desire to improve the quality of the local environment (4). They indicated the following reactions to the events at PRC:

**10. What were your feelings and reactions in regards to this event/s or incident/s?**

Fear of health & safety	7
Angry at greed over safety	4
Frustrated at govt. not doing job	7
Incidents threatened community	3
Violated/injustice	2

Those questioned gave similar responses to their personal goals compared with their perception of the groups’ goals. The primary goals were cleaner air and government enforcement of regulations.

**11. What were your initial goals?**

Cleaner Air	7
Government enforcement of law	6
Close refinery	2
Compensation & mitigation	3



**Goals of the group?**

Clean the air	5
Force refinery to obey laws	5
Close refinery	3

Respondents used various tactics and pursued the following activities to stop the emissions:

**12. What activities did you engage in to pursue these goals? Lobbying, attend meetings, write letters, demonstrate, legal measures, press coverage, etc.**

Attend public meetings	9
Circulate fliers and petitions	6
Lobby politicians	5
Write letters	5
Complain to BAAQMD	5
Raise media attention	5
Legal measures	5
Lobby BAAQMD inspectors	3
Speak at public meetings	3
Consult experts	3
Consult CBE	3

In February 1986 and October 1988, CCA sued PRC for monetary damages because they realized that they had no legal power to force PRC to stop its odorous emissions (Callaghan 1998, Khanna 10 March 1990, Weston 1 February 1986).

According to Weston (1 February 1986), the 1986 lawsuit represented a change in tactics by the frustrated neighbors. They decided to stop the odor problems themselves “rather than rely solely on action by politicians or environmental agencies such as the county Health Department or the Bay Area Air Quality Management District” (Weston 1 February 1986). The suits were settled out of court and did not stop the odorous emissions. The respondents felt the following activities were more successful:

### **13. Which activities and strategies worked?**

- Amass public support
- Consult lawyer/suit
- Require mitigations/land use permit
- Lobby BAAQMD inspectors
- Negotiate GNA
- Use CBE advice

In September 1989, BAAQMD negotiated a \$95,000 settlement for 71 violations (Khanna 20 September 1989). In March 1990, eighty residents staged a public protest at an air district meeting (Khanna 10 March 1990) to complain about the small fines and continual releases (Pijoan 1998). In response, the district reached an accord with PRC to install the odor-reducing equipment. In July 1990, residents learned that this equipment installation was linked to a “refinery modification,” subject to a land use permit process and environmental review (Khanna 17 July 1990). The activists realized that years could pass before the installation because the BAAQMD agreement allowed PRC an additional 2 ½ years from the permit approval date. This delay angered residents and triggered a major RCA public awareness campaign and a concerted effort to fight the refinery expansion (Cherry 1998, Lukas 1998, Pijoan 1998). They wanted the odor abatement equipment installed immediately, irrespective of the refinery expansion. They developed strategies that targeted BAAQMD, Hercules officials, and the permit process (Miglio 1998, Pijoan 1998, Pijoan and Horning 1993, Pygeorge 1998).

Respondents reported various reasons for discouragement over the years.

### **14. Were you ever discouraged? If so, what was the reason or source of your discouragement?**

- Hercules permit process
- BAAQMD Board

Refinery greed over safety  
 County Health Dept.  
 Lack of financial resources

The activists sought various parties for outside advice and assistance.

**15. Who did you look to for help? Did you get help from outsiders, experts, engineers, national toxics groups, etc.?**

Lawyers  
 CBE  
 Technical experts

They felt that most government officials were a hindrance in their process, with the exception of the BAAQMD inspectors and Supervisor Nancy Fahden. They actively lobbied the local inspectors and reported that many became their allies and guided them in their campaign to document the releases (Cherry 1998, Hoffman 1998, Miglio 1998).

**16. Was government response or help sought? If so, was it helpful or a hindrance? Why and how?**

	<u>Helpful</u>	<u>Hindrance</u>
Hercules City Government		X
County Health Department/ Dr. Wendall Brunner		X
County Hazardous Materials BAAQMD/Board		X
BAAQMD/Inspectors	X	
County Government/ Supervisor N. Fahden	X	X

They began a process of public education in an effort to amass support. They distributed fliers, requested friends and neighbors to join, and obtained media coverage.

**17. How did others get involved?**

Word of mouth  
 Media coverage  
 Fliers/Petitions  
 Request of friends

The activists felt that their efforts had a direct result in the closing of PRC. In December 1994, they negotiated an out of court settlement with PRC. The terms of the agreement required a GNA that provided cash contributions to the community, involved neighbors in refinery safety issues, and focused on provisions for odor controls including the following: limits on the sulfur content of crude oil, fence-line monitors, fugitive emissions controls, monthly tank inspections, and a valve retrofit program (Application for Intervention, 18 September 1996). The agreement created three construction phases for the refinery modification that required the odor equipment installation first and a clean performance record before phase two and three continued. The agreement also created the strictest VOC leak detection program in California (Miglio 1998). The activists felt that their efforts resulted in PRC's June 1995 announcement to close the refinery because it was economically prohibitive to conform to the stringent standards (Miglio 1998, Pijoan 1998).

**18. What changes or results do you see in the community as a result of your efforts?  
Empowerment, cleaner air, financial resources, etc.?**

Pacific Refining closed  
Air cleaner  
Good Neighbor Agreement  
Financial mitigations  
Town more self-sufficient

In 1997, the refinery was sold to developers for residential and commercial development.

### Crockett Cogeneration Plant

A summary of the Crockett Cogeneration dispute is outlined on table 6.

Residents and local activists coined the phrase, the “Power Plant Wars” to describe the three phases from July 1984 until August 1993, when the plant was finally approved. The first “Power Plant War” began in July 1984, and ended in May 1989 with PTI’s withdrawal of its application. The second “Power Plant War” began when C&H announced plans to resubmit the proposal in September 1990, and abruptly ended in March 1991, when C&H announced that the plant was too costly to proceed. The final “Power Plant War” began in December 1991 when C&H announced a resurrection of the project with a new partner, ENI, and proposed design changes. It ended in August 1993, when members of the original CPPC negotiated last minute monetary compensation for Crockett.

Fourteen Crockett respondents were members of the CPPC. When asked why they became involved in local activism (question 9), they responded as follows: to protect the community (7), to protect local health and safety (6), to protect the quality of the local environment (4), to protect property values (4). Eleven of the respondents lived within three blocks of the plant site. They were concerned about the location, safety, noise, and visual impact of a power plant across the street from residences. The respondents (Denton, Barbara 1998; Denton, Edward 1998; Gunkelman 1998; Peterson 1998, Tubb 1998) expressed strong concerns regarding PTI’s competence because it had never built a power plant larger than 30 megawatts and its proposal was unprofessional

TABLE 6.--CROCKETT COGENERATION PLANT TIME LINE

<b>Dates</b>	<b>Crockett Cogen Events</b>	<b>Government Activity</b>	<b>Community Response</b>
Dec. 1983	C&H and PTI sign contract.		
July 1984	PTI submits application to CEC.		Residents accidentally discover.
Aug. 1984	Notice filed in 7 out of area newspapers.		Residents organize.
Fall 1984	C&H and PTI hold meeting in Crockett.	CEC staff amazed at public questions.	500 Crockett residents attend.
Dec. 1984	Application inadequate.	CEC returns PTI application.	Gains support of Chamber & CIA.
Jan. 1985	CEC hearing in Sacramento.	Staff delays acceptance.	CPPC files intervention status.
Spring 1985	PTI resubmits application.	Accepts & begins discovery phase	250 residents phone CEC.
	PTI circulates Community Update.		CPPC publishes newsletter.
June 1985	C&H and its union support.	Supervisors reject project.	Citizens lobby supervisors.
Fall 1985	PTI submits design changes.	CEC staff allow 43 MW cogen.	CPPC begins need test challenge.
Dec. 1985	PTI hires Lobbyist Coffey.	Supervisors approve project.	CPPC demands site moved.
	C&H buses union & retirees to country meeting.	Vote 4-1. Falden opposes.	150 opponents wear Plantbusters buttons to meeting.
April 1986	PTI need test states \$148 million savings for taxpayers.	CEC staff states round-the-clock power not needed.	CPPC brief states power not needed.
June 1986	PTI and PG&E begin new contact talks.	CEC recommends denial.	Gathered 600 opposing signatures.
Sept. 1986	PG&E and PTI sign as-needed contract	CEC extends deadline until 9/24.	CPPC request C&H steam contract.
Winter 1986	Workshops continue.	CEC requests C&H steam contract.	CPPC members attend & contest.
May 1987	PTI lobbies state politicians.		
	New hearings open.		
Dec. 1987	PTI submits design changes	BAAQMD revisions include C&H boiler retirement & shorten stack.	CPPC protest ammonia tank & want C&H boilers retired.
	Ammonia tank added.		Lobby Sen. Boatwright.
Aug. 1988	PTI & PG&E contract dispute	PUC approves \$20.1 million to PTI.	CPPC delay tactics created PG&E contract delay.
	Hearings end.	\$12.7 mil. if not built. CEC staff recommends reject.	CPPC protests PUC agreement.
Feb. 1989		CEC Commission votes reject PTI.	
		BAAQMD recommends delay.	
March 1989	PTI offers \$250,000 to Crockett.	CEC Committee votes 3-2 against.	CPPC rejects PTI money offer.
May 1989	First Power Plant War ends.		CPPC celebrates.
Sept. 1990	C&H announces plans to resubmit power plant proposal.		CPPC starts new protest.

TABLE 6. --CONTINUED

<u>Dates</u>	<u>Crockett Cogen Events</u>	<u>Government Activity</u>	<u>Community Response</u>
March 1991	C&H announces plant too costly. Second Power Plant War ends.		100 residents attend.
Dec. 1991	C&H and ENI announce new design & proposal.		CPPC starts new protest. Several original members drop out.
Jan. 1992	ENI has PG&E as-need contract.	Supervisor Fahden sides with county. New CEC staff & Commissioners.	CPPC members win chairs on panel.
June 1992	Project moving through process.	County appoints Community Advisory Panel to negotiate tax & financial mitigations for Crockett.	CPPC members win chairs on panel.
Sept. 1992	ENI has mitigated design.	County agrees to tax sharing.	CPPC fights to kill project. Fights county for revenues.
Nov. 1992	ENI agrees to \$300,000 annual pmt. C&H agrees to \$15,000 annual pmt.	County agrees to tax sharing.	
Dec. 1992	ENI agrees to design changes on Ammonia tank & underground power lines.		CPPC battles to win mitigations.
Jan. 1993	Hearing held in Crockett. C&H sends union supporters.	Commissioner Bilas favors.	CBE & CPPC speak against.
April 1993	Power plant approved.	CEC vote 5-0.	CPPC & Vallejo appeal decision.
July 1993			CPPC votes to end struggle.
Aug. 1993	Third Power Plant War ends.		Blakeney negotiates \$1 million extra mitigations from C&H.

and inadequate. When questioned about their feelings regarding the proposed plant, they responded as follows:

**10. What were your feelings and reactions in regards to this event/s or incident/s?**

Fear of health & safety	6
Angry at greed over safety issues	8
Frustrated at govt. not doing job	4
Community threatened	7
Violation/injustice	5

The respondents' personal goals and the goals of the group were fairly consistent.

They wanted the siting prevented. If that goal could not be attained, they wanted strong safety mitigations.

**11. What were your initial goals?**

Prevent the construction	12
Mitigation	8
<b>Goals of the group?</b>	
Stop the siting	9
Mitigate	7

They devised the following activities and strategies to achieve their goals:

**12. What activities did you engage in to pursue these goals? Lobbying, attend meetings, write letters, demonstrate, legal measures, press coverage, etc.**

Attend public meetings	9
Circulate fliers and petitions	8
Consult experts	8
Legal advice	6
Write letters	5
Raise money	5
Lobby politicians	4
Demonstrate	4
Raise media attention	4
Speak at public meetings	4



The respondents explained that the strength of the CPPC was based on the varied technical expertise that the individual members contributed. They decided from the outset to divide activities based on their skills which included: engineering, architecture, real estate, chemistry, environmental science, law, local history, and politics (Denton, Edward 1998; Tubb 1998). A major factor in the first approval process was CPPC's achievement of formal intervention status early on. CPPC members attended every hearing to present detailed questions and objections (Blakeney 1998, Tubb 1998).

The group determined that they would be unable to gain an immediate rejection of the project, their major strategy was attacking the proposal incrementally. They targeted the mitigation of various safety and design aspects, hoping to delay construction, increase costs, and eventually cause the project's cancellation (Denton, Barbara 1998, Gunkelman 1998). During the first "Power Plant War," the members developed allies on the CEC staff, who aided them in technical areas of the process (Denton, Edward 1998; Gunkelman 1998; Tubb 1998).

### **13. Which activities and strategies worked?**

- Amass public support
- Gain technical data
- Formal intervention
- Member expertise
- Media coverage
- Use CEC staff's technical advice

The participants related that their spirits went up with each victory and down when they lost on issues. Many members expressed personal stress because of the intense workload , often bi-weekly hearings, that required personal sacrifice (Blakeney

1998; Casesse 1998; Denton, Barbara 1998; Gunkelman 1998). They were disappointed with C&H's "betrayal" of the town and felt that the community was being sold out (Denton, Barbara 1998; Dahl 1998; Kessler 1998). C&H's job and benefit loss threats to its present and retired employees was a very disappointing tactic to CPPC members (Denton, Barbara 1998). Other sources of discouragement were as follows:

**14. Were you ever discouraged? If so, what was the reason or source of your discouragement?**

- CEC Politicos
- Greed of PTI
- C&H betrayal
- Stress/workload

The members solicited support from Vallejo and Benicia, speaking at council meetings regarding the visual and environmental impacts to residents along the Strait (Tubb 1998). Besides CEC's staff and the groups personal expertise, the members sought support and advice from the following:

**15. Who did you look to for help? Did you get help from outsiders, experts, engineers, national toxics groups, etc.?**

- Technical experts
- Vallejo citizens
- Benicia citizens

Committee members felt that the supervisors, with the exception of Nancy Fahden, were a hindrance because the County wanted the tax revenues. In June 1985, the supervisors voted against the project because of its size, location, and noise level, but reversed that decision in December 1985 (Bernstein 18 December 1985).

**16. Was government response or help sought? If so, was it helpful or a hindrance?  
Why and how?**

	<u>Helpful</u>	<u>Hindrance</u>
Congressman Geo. Miller		X
County Supervisors/ Supervisor N. Fahden	X	X
Supervisor McPeak		X
State Sen. Boatwright	X	
CEC/staff	X	
CEC/politicos		X

The group sought community support and recruited members, as follows:

**17. How did others get involved?**

Word of mouth  
Media coverage  
Fliers/Petitions  
Request of friends  
CIA Membership

Although the project was approved and built, participants felt that their efforts were rewarded by many design changes and safety mitigations. They also indicated that the community directly benefited from the “back to source” tax funds (approximately \$450,000/year) negotiated with the County. ENI agreed to financial compensation of \$300,000 annually for 30 years and C&H agreed to pay \$15,000 annually for 15 years to Crockett (Morris 28 December 1992). In addition, CPPC member Blakeney (1998) negotiated an additional \$1 million benefit package for the community.

**18. What changes or results do you see in the community as a result of your efforts?  
Empowerment, cleaner air, financial resources, etc.?**

Air cleaner  
Safety mitigations  
Visual & noise mitigations  
County Taxes to Area  
Financial mitigations  
Town more self-sufficient

## Unocal

The chronicle of Unocal's Catacarb release begins on 22 August 1994, when workers first noticed the leak. Local activism related to the event continues: ten respondents are currently actively involved in grassroots anti-toxics groups, primarily SEA. This case study is limited to the activities that resulted in the signing of the GNA in April 1995. The time line appears on table 7.

Thirteen respondents resided in Crockett and five in Rodeo. They responded that the primary motivations for their involvement in the Crockett/Rodeo Coalition and SEA were concern for health and safety (15) and concern for the quality of the local environment (3). They responded to their feeling regarding the release as follows:

### **10. What were your feelings and reactions in regards to this event/s or incident/s?**

Fear of health & safety	8
Angry at refinery's greed over safety	7
Frustrated at government not doing job	8
Violated/injustice	2

The activists expressed health concerns because either they or their family members experienced health effects after the release. They were angry at refinery officials for knowingly allowing the release to continue for 16 days. They blamed management's failure to shut down the tower on greed related to production incentives (Batchelder 1998, Bray 1998, Brown 1998, Kessler 1998). Unocal sent written notification to the community two weeks after the release occurred and held a public meeting on 22 September. Company officials told residents that there was no evidence that the chemicals would cause long-term health effects. The respondents expressed

TABLE 7.--UNOCAL TIME LINE

<u>Dates</u>	<u>Refinery Events</u>	<u>Government Activity</u>	<u>Community Response</u>
Feb. 1994	D-409 scheduled for shut down and maintenance. Deferred until October 1994		
Aug. 22	6:50 AM Catacarb leak. Emergency declared. Workers begin shutdown. 8:30 AM Managers call off shutdown County hazardous material notified.	Hazardous Material decides no emergency.	
Aug. 23	12:30 PM Managers order all-clear whistle.		
Aug. 27	Refinery workers log accumulation of Catacarb on overhead lines & equip.		
Sept. 4	Catacarb plume over tower. Management orders workers to hose.		Crockett resident calls Unocal to complain.
Sept. 5	8:00 AM worker complain of illness from spray & hosing stopped.		
Sept. 6	9:00 AM Wickland workers ill & sheltered inside. Wickland complains to Unocal & tower shutdown begins.	10:30 AM Haz Mat alerted.	
Sept. 7		Haz Mat sends inspectors.	Residents complain to county. Kessler posts warnings on community bulletin boards. 70 irate residents attend.
Sept. 13	Unocal speaks at CIA meeting. Unocal doctor assures no long term effects.		
Sept. 15	Two hydrogen sulfide releases.	BAAQMD investigates, declares major incident.	Hillcrest students sheltered in place. 60 Crockett residents call BAAQMD.
Sept. 20	Unocal issues written notification to residents.		
Sept. 21	Unocal holds another Crockett meeting.		Citizens file \$1 million lawsuit. 120 residents attend meeting. Residents begin own investigations. 200 residents attend & object.
Oct. 4	Land use permit hearing in Rodeo.	County Planning Commission delays for 2 weeks to consider additional mitigations.	

TABLE 7.--CONTINUED

<u>Dates</u>	<u>Refinery Events</u>	<u>Government Activity</u>	<u>Community Response</u>
Oct. 5 & 6		County Health Department holds first meetings in Crockett & Rodeo.	100 Residents blast county for delaying meeting.
Oct. 12		County issues first written notice. Tells residents see private physicians.	Many residents ill. Residents request Unocal funded clinic.
Oct.	Unocal washes cars & homes.	Supr. Dr. Smith says no health problems in Crockett.	8 lawsuits filed.
Oct. 18	Second land-use permit meeting.	County Planning Commission orders Unocal negotiate GNA.	Residents request county meeting & complain about Sup. Dr. Smith. Citizens attend & protest.
Oct.			Crockett & Rodeo residents meet to form committees for GNA.
Nov.	Unocal opens clinic. Unocal appoints new manager. Unocal offers \$100,000 to each town.		Response Team attends Crockett meeting. Activists conducts health survey. 70-80 residents visit Unocal clinic. GNA meetings begin & residents reject initial offer. SEA formed. CBE requests health & safety issues.
Nov. 18	GNA negotiations continue.	County approves refinery permit.	
Dec. 1994	GNA terms tentatively agreed.		SEA members negotiate for clinic.
April 1995	GNA signed.		

anger at the downplay of the health effects because many were ill (Bray 1998, Kessler 1998, Young 1998). They were angry at the county Health Department's inaction.

The respondent's individual and group goals centered on improving safety standards, compensation and mitigation, and addressing health issues. Three respondents wanted Unocal to pay for the relocation of Hillcrest School from the refinery fenceline.

This issue was not shared by other group members.

#### **11. What were your initial goals?**

Improve safety	10
Compensation & mitigation	5
Solve health issues	4
Unocal pay to relocate Hillcrest School	3

#### **Goals of the group?**

Improve safety	10
Mitigation measures & compensation	7
Unocal pay for community health	2

Most respondents attended all of the community meetings related to the release and Unocal's clean-fuels permit meetings. They spoke publicly against the permit approval and demanded improved safety measures. They also used the following activities to gain support and create public awareness:

#### **12. What activities did you engage in to pursue these goals? Lobbying, attend meetings, write letters, demonstrate, legal measures, press coverage, etc.**

Attend public meetings	7
Lobby politicians	7
Raise media attention	5
Speak at public meetings	5
Negotiate with company	5
Consult CBE	5
Consult experts	3
Write letters	3

The timing of the incident played a part in the outcome because Unocal needed approval of its land use permit to meet the reformulated fuels deadline. The permit process gave the activists a negotiating tool when demanding further safety mitigations.

The respondents indicated that the following activities were the most effective:

**13. Which activities and strategies worked?**

- Amass public support
- Mitigations/land use permit GNA
- Use technical advice
- Use CBE advice
- Use Response Team

The respondents indicated that illness and stress were major sources of discouragement. The GNA meetings were held in the evening and sometimes continued for hours. A major element of the anxiety was the lack of accurate data regarding the content and long-term health effects of Catacarb.

**14. Were you ever discouraged? If so, what was the reason or source of your discouragement?**

- County Health Dept.
- Lack of accurate data
- Illness from release/stress
- Stress/workload

Respondents consulted medical experts including the Response Team. They relied on CBE's expertise in the GNA negotiations. They formed a coalition with local unions to address safety issues.

**15. Who did you look to for help? Did you get help from outsiders, experts, engineers, national toxics groups, etc.?**

- Medical experts
- Unions



### Response Team & CBE

Respondents expressed the greatest disappointment in the county Health Department's response to the incident. They felt that they were given inaccurate data and health department officials downplayed their symptoms and the potential risks. They were angry at their supervisor, Dr. Jeff Smith, for his unwillingness to meet with residents and his contention that there were no health problems in Crockett (Adams 1998, Peterson 1998). They viewed other agencies as follows:

**16. Was government response or help sought? If so, was it helpful or a hindrance? Why and how?**

	<u>Helpful</u>	<u>Hindrance</u>
BAAQMD		X
County Health Dept./ Dr. Wendall Brunner		X
County Supervisors Dr. Jeff Smith		X
State Board of Health	X	
California EPA	X	
County Planning Dept.	X	

Other community members entered the process from various local organizations.

The participants eventually formed the Crockett/Rodeo Coalition and SEA. SEA held one vote and the Coalition two in the GNA negotiations. The two groups were signatories on the final agreement.

**17. How did others get involved?**

Word of mouth  
Media coverage  
Fliers/Petitions  
CIA & RCA Membership

The activists negotiated many safety items including the following: a community safety audit, community warning system, VOC emissions reductions, fenceline monitors, and the phase out of anhydrous ammonia and chlorine gas. The financial mitigations included: annual contributions to the two communities and the John Swett School District totaling \$4.5 million for 15 years. The environmental mitigations created a \$270,000 buffer zone between the refinery and its neighbors. The health measures required Unocal to fund the Good Neighbor Clinic and pay for two health studies.

**18. What changes or results do you see in the community as a result of your efforts? Empowerment, cleaner air, financial resources, etc.?**

- Safety mitigations
- Visual & noise mitigations
- Good Neighbor Agreement
- County Taxes to Area
- Financial mitigations
- Unocal paid for health clinic & survey
- Town more self-sufficient

Activists and unions lobbied the County heavily to pass the a stronger safety ordinance before January, when board membership would change. In December 1995, the county supervisors passed the Good Neighbor Ordinance, which increased county over-site and strengthened safety regulations. That measure has since been repealed and activists, the County, unions, and industry officials are negotiating a new ordinance.

**Characteristics of Grassroots Groups**

The author developed a model of grassroots groups' characteristics, motivations, activities, goals, and obstacles to goal attainment according to the methods outlined in Chapter 3. Similar data were developed on the local grassroots groups based on the 30

respondents' interviews and the case study research. The two sets of data were compared in table 8.

TABLE 8.-- CHARACTERISTICS OF GRASSROOTS ENVIRONMENTAL GROUPS  
AND CROCKETT/RODEO GROUPS

<u>COMMON CHARACTERISTICS</u>	<u>Crockett/Rodeo Activists (3 Case Studies)</u>
<u>Composition of Members</u>	<u>Total 30 respondents</u>
More female participation & leaders	60% females
Age generally between 26-40	57% between 30 and 40
Not highly educated	57% attended 1-3 yrs. College 40% college graduate & above
Predominantly working-class, blue collar, and housewives	83% professional & technical 7% blue collar workers 7% retirees & 1 housewife
Parents with children under 18	53% had children under 18 at time
Resided in community 6-10 year generally not new arrivals or "old timers"	37% resided 6-10 years 67% resided 4-16 years
No previous environmental activism	73% no previous activism
No previous political activism	87% no previous activism
<u>Motivation for Involvement</u>	
Primary concern for health and safety	70% health and safety
Most common issue toxics and air pollution	30% pollution control and odors
Quality of community/local environment	33% felt quality of community threatened
Frustrated by government response	63% frustrated with government response
Angry lack polluter's concern for community	63% angry at greed over safety
Feeling of injustice by treatment	30% feeling of injustice and violation

**TABLE 8 --CONTINUED GRASSROOTS GROUPS - TACTICS AND ACTIVITES**

<b><u>Common Activities</u></b>	<b><u>Pacific Refining</u></b>	<b><u>Crockett Cogen</u></b>	<b><u>Unocal</u></b>
<b><u>Investigation and Knowledge</u></b>			
<b><u>Consulting Experts</u></b>			
Scientific experts	X	X	X
Health professionals			X
Regional and national env. groups.	X		X
Public health officials	X		X
Legal experts	X	X	X
<b><u>Gathering Information</u></b>			
Review government reports	X	X	X
Conduct health surveys			X
Monitor pollutants			X
Conduct tests		X	
<b><u>Organization &amp; Mobilization</u></b>			
<b><u>Local Community</u></b>			
Recruit friends and neighbors	X	X	X
Petition drives	X	X	X
Publish newsletters	X	X	
Community meetings	X	X	X
<b><u>Form Coalitions</u></b>			
Existing community groups	X	X	X
Regional & national env. groups	X		X
Unions			X
<b><u>Create Overall Public Awareness</u></b>			
Demonstrations	X	X	
Testifying at public meetings	X	X	X
Media coverage	X	X	X
<b><u>Developing Political Support</u></b>			
Lobbying politicians	X	X	X
Lobbying agency officials	X	X	X
<b><u>Legal</u></b>			
Lawsuits & litigation	X		X
<b><u>Develop Financial Resources</u></b>			
	X	X	

**TABLE 8.--CONTINUED GRASSROOTS GROUPS - GOALS**

<b><u>Common Goals</u></b>	<b><u>Pacific Refining</u></b>	<b><u>Crockett Cogen</u></b>	<b><u>Unocal</u></b>
Eliminate the hazard:			
Close the existing facility	X		
Block the proposed siting		X	
Reduce/minimize exposure	X	X	X
Spread awareness of problem:			
Raise community consciousness	X	X	X
Alert overall public	X	X	X
Authorities to enforce existing	X		X
Encourage lawmakers to modify legislation or pass stricter laws		X	X
Compensation for pollution	X	X	X
Mitigation	X	X	X

**OBSTACLES TO GOAL ATTAINMENT**

<b><u>Common Obstacles</u></b>	<b><u>Pacific Refining</u></b>	<b><u>Crockett Cogen</u></b>	<b><u>Unocal</u></b>
Disruption in community	X	X	X
Lack of resources	X	X	
Opposition by local industry	X	X	X
Opposition by neighbors		X	X
Lack of support by government	X	X	X
Lack of support by politicians	X	X	X
Opposition by workers & unions	X	X	

## CHAPTER 7

### DISCUSSION

This thesis examined the question of whether the strategies and tactics used by grassroots community groups in Crockett/Rodeo were effective in empowering local citizens and achieving stated activists goals. The question was addressed by collecting data on eight specific research questions relating to characteristics, motivations, leadership, strategies, outcomes, and empowerment.

#### Characteristics of Members and Leaders

A comparison between the respondents and the characteristics presented in the literature suggests similarities with some exceptions. The model indicates that grassroots groups contain more female participants and leaders. Although the respondents were predominantly female (18), the core groups represented both sexes. Interview details and examination of records and documents revealed that leadership roles were divided between the sexes based on areas of interest and expertise.

The literature revealed that a majority of grassroots activists are between the ages of 26 and 40. None of the locals were under 30, 57 percent were between 30 and 40, and 37 percent were between 41 and 55.

According to the research, grassroots members are generally working-class people and housewives. The local groups differed from the model in education and

employment. The respondents included 3 percent with a high school education, 57 percent with some college, and 40 percent with college or graduate degrees. A majority (83 percent) held professional or technical jobs, 7 percent described themselves as blue-collar, and only one respondent (3 percent) was a housewife. In contrast, the overall communities' residents are generally lower-middle class based on the income and housing data presented in Chapter 4.

Respondents with children under 18 at the time of participation were 53 percent in conformance with the literature which shows that a majority have children under 18.

The model predicted that local activists are neither new arrivals or "old timers" in the community. The activists in Crockett/Rodeo fit the model as 50 percent had lived in the area between 4 to 16 years at the time participation began.

The participants were similar to the model in lack of previous active participation in environmental groups (90 percent) or political activism (70 percent). Seventeen percent were previously active in the local quasi-political organizations (CIA and RCA).

Although many researchers focus on the minority aspect of grassroots groups (Bullard 1990, 1992, 1993b, 1994; Commission for Racial Justice 1987; Mohai and Bryant 1992), that question was not addressed here because the cases revealed no evidence of environmental racism. Unocal and C&H were both sited around the turn of the century because of navigable transportation, well before the modern communities developed. When PRC was built in 1966, Hercules was a company town of 300 residents. The refinery was placed on Rodeo's boundary line which provided a buffer zone, upwind and out of sight from the homes in Hercules. Some respondents (30



percent) felt that environmental injustice was an issue because of the income levels of the communities, but most did not express that opinion.

The main differences between locals and the model are gender, age, education, and employment. Participants represented both sexes in membership and leadership roles. They were generally older, better educated, and employed in professional and technical careers.

What characteristics contribute to effective group leaders and members? The tentative answer was that the local activists were successful because they were persistent and determined. Based on the interviews and the case study research, these factors are a basic necessity because of the time commitment required by grassroots activists to perform the activities required to gain support and create public awareness. The members need motivation to undertake time-consuming action that could take years. Some PRC activists were involved from the onset in 1983 until 1995, when the refinery ceased processing. Several CPPC members were active from 1984 until 1989, and again from 1991 until 1993. The cogeneration intervention process often required bi-weekly trips to Sacramento, in addition to research, local organizing, and filing lengthy briefs. Although the Unocal case study documented the process from September through December 1994, the committees worked through April 1995, when the GNA was signed. The GNA meetings were intense and sometimes lasted until after midnight. Today, many activists are still involved in GNA oversight, research on Catacarb, fenceline monitoring, and SEA. CPPC, SEA, and Crockett/Rodeo Coalition members expressed stress related to the workload and time commitment. Of the 12 Rodeo participants, five worked on

PRC and then the Unocal GNA. Seven of the Crockett participants worked on the cogeneration case from 1984 through 1993, and then participated in the Unocal GNA process.

In addition to persistence, members and leaders required the education and ability to understand technical material and legal documents. CPPC members cited the technical competence of its members as a key ingredient to the success in defeating PTI's permit. Active participants also needed planning skills to develop strategies and tactics. Organizational and communication abilities were necessary to recruit participants and create public awareness. The members divided the tasks based on background, capability, and time constraints.

### Motivations

Hamilton's (1985) research indicates that the most common indicator of pollution concern is the proximity to the threat. When the 30 respondents initially became involved, they were all living nearby or downwind from the releases and the cogeneration site. All became involved because they were concerned about events surrounding the three facilities. Consistent with the literature, health and safety concerns (70 percent) were the primary reason for involvement (33 percent specifically mentioned a concern for their children's health), followed by concern for the quality of the local environment (33 percent), and air pollution or odors (30 percent).

Approximately 11,500 people were neighbors of the three facilities during the period of these conflicts. Based on the case study research, many residents were

concerned about the events, as evidenced by newspapers, articles, letters, attendance at meetings, and discussions with locals. What roused the respondents to move from concern to action in response to these conflicts? Research indicates that anger (Garland 1988), moral outrage (Amy 1983), and the intensity of conflicts related to human health (Gould, Schnaiberg, and Weinberg 1996) motivate people to react. When the respondents were asked to describe their feelings regarding the events, the three primary answers were **fear** of health and safety (70 percent), **anger** at the polluter's lack of concern for the community by placing greed above safety (63 percent), and **frustration** over government's lack of response (63 percent). They also felt that the community was threatened (33 percent) and they harbored feelings of violation and injustice as a result. They felt injustice because they thought that government catered to industries' needs rather than the quality of life in the communities. These results were comparable to the model.

The PRC activists were motivated by fear of the long-term health effects of the refinery's continual emissions during its 12 years of operation. They also feared the immediate threats from fires, accidents, and explosions.

They were angry at PRC's concern for profits over community safety. Respondents commented, "The oil company valued profit over human living conditions and health" (Jasper 1998), "The company was looking at this issue as means of profit and we just wanted a safe town" (Hoffman 1998), and "People felt violated" (Callaghan 1998).

During the first several years, their frustration at government's lack of response was primarily directed at BAAQMD. Despite thousands of calls to the agency and hundreds of confirmed complaints, the respondents felt that BAAQMD was not interested in resolving the problem. They complained about the insignificance of the fines, "...slightly over \$500 - is no deterrent in stopping refineries from polluting" (Pijoan 10 February 1990). In 1990, they realized that BAAQMD had negotiated a deferral, linked to the "refinery modification," on the "Big Three Odor" abatement measures. The announced delay motivated the launching of a major campaign against BAAQMD and the city of Hercules to fight the refinery expansion. They systematically reviewed the DEIR and took an active role in the CEQA process by contacting other agencies and participating in public comment sessions. The agencies made the mistake of excluding important stakeholders from the process.

In 1992, after three major fires and accidents and 25 incidents, their frustration began to include the county's Hazardous Materials and Health Department. They demanded that the Health Department address their health problems, which they felt were linked to the accidents and emissions. These feelings are consistent with research regarding adversarial relationships between the public and health officials (Edelstein 1987, Freudenberg 1986). According to Freudenberg (1984a, 447) "Nothing evokes the wrath of citizens more than the belief that their concerns are not being taken seriously." The agencies were unresponsive to the very people they exist to protect. Again, this is a problem with agency mandates and/or structures.

In the CCP siting, the activists were motivated above all by the knowledge that if they did not personally oppose the project by intervening, the project would be approved with “a few modifications” (Pereira 19 September 1984, 2 [A]). They responded because they were alarmed by the plant’s size and location. They feared the health consequences of the chemical emissions, including lead, beryllium, and mercury. They also expressed their desire to protect the sense of community (23 percent), the quality of the local environment (13 percent), and property values (13 percent). The activists located immediately adjacent to the facility were the most active. Besides fear of the plant, the respondents were afraid because they perceived that PTI was incompetent.

They were angry at the greed of PTI, “they were like carpetbaggers coming to our town” (Denton, Barbara 1998). They felt betrayed by C&H because they felt the company placed profits over concern for the community. A PTI official said that the project would be a “gold mine for C&H and Crockett” (Weston 25 November 1985). They were upset with C&H for threatening a reduction in jobs and benefits, if the project was not approved, to gain union and retiree support. These findings coincide with the literature. Residents of company towns are afraid to oppose projects because they fear loss of jobs, tax revenues, and community contributions (Hallman and Wandersman 1992, 112). Employers can intimidate the community because they control the jobs (Cable and Cable 1995, 50). None of the activists had ever worked for C&H.

Some activists who participated in the first “Power Plant War” were not motivated to action when the project was resurrected by ENI. None lived within sight of the plant. They thought it would be a losing battle because of the changes in CEC staff

and elected officials. They also felt that ENI was professional and that many safety issues inherent in the first design had been mitigated.

The CPPC's frustration with government was focused mainly on the County and the CEC politicians. In June 1985, the County rejected the project because it was too big, too noisy, and in the wrong spot. The issue was revisited in December 1985, and although the activists rallied 150 opponents to attend the meeting, it was approved. Respondents felt the supervisors and county officials were influenced by tax revenues for the general fund and behind the scenes political lobbying. Although they were frustrated with the CEC politicians, they were encouraged, motivated, and aided by the CEC staff in the first process. At CEC hearings, their incremental successes in mitigations and design changes gave them incentive to continue.

While PRC's releases were obvious because the emissions were odorous, the 16 day Catacarb release from the Unocal plant surprised and alarmed residents after the fact. In the weeks following, fear about health issues spread in both communities, especially because they lacked information regarding the chemical's content. Safety fears were heightened when two hydrogen sulfide releases took place a week after the Catacarb discovery. They began to doubt the overall refinery safety.

Residents were angry at Unocal officials for knowingly operating the leaking unit despite worker warnings and contrary to company accident response procedure (Contra Costa Building Trades Council and others 1996). Respondents linked the decision to Unocal management's incentive to continue a record breaking production run for bonuses, a greed over safety issue. During the negotiations, they were angry at Unocal's

minimization of the health effects, the initial financial offering (\$100,000) for the two communities, and its refusal to pay for on-going health costs and surveys. These issues prompted the respondents to bargain harder to achieve more community benefits. They felt that Unocal owed the two communities for intentionally releasing potential toxic chemicals and downplaying the health risks to avoid legal obligations.

The respondents were frustrated with the Health Department for its inaction when they were informed of the leak, and its failure to obtain independent information on the health effects. Similar to the PRC case, the activists felt that public health officials suppressed information and downplayed the risks. The residents' reactions in both cases is consistent with Freudenberg's (1986) research on the interactions of public health officials and the public's perception which leads to adversarial relationships. Outrage and anger towards BAAQMD and the County were also related to the sentiment that the refinery and its managers were given "symbolic" penalties, in their opinion. (BAAQMD fined \$2 million, the County \$1.5 million, and the EPA \$500,000.) The three responsible managers refused interviews by investigators unless granted immunity from criminal prosecution (Morris 8 September 1995). (The respondents felt that the managers should have been criminally prosecuted because of their deliberate and blatant violation of law). According to the literature, when people are frustrated by government inaction, they can resort to the legal system (Cable and Cable 1995, 112). The CCA sued PRC twice and a multitude of residents sued Unocal.

The reaction and behavior of the local grassroots groups was similar to that described in the literature (Cormick 1980; Cable and Cable 1995; Capek 1993;

Freudenberg 1984a, 1986; Garland 1988; Gould, Schnaiberg, and Weinberg 1996; Hallman and Wandersman 1992). In the refinery cases, the residents were afraid and alarmed about the incidents and the effects on their health and safety. They first appealed to local government officials, BAAQMD and the County, for action. When their appeals went unresolved, their fears and anxiety turned to frustration, anger, and moral outrage. According to Amy (1983, 15), businesses and politicians do not understand the moral outrage because these conflicts involve differences in structural choices, safety and health versus economics.

In the cogeneration case, the CPPC members realized that PTI's proposal would be approved if they did not take direct action. Their anger over the project motivated their formal intervention in the process. The ENI & C&H proposal did not result in the level of outrage to sustain a prolonged conflict. Some original CPPC members declined to participate in another struggle because they perceived that ENI was professional, the CEC personnel and politics had changed, and many safety issues had been mitigated. The most motivated activists lived in close proximity to the plant.

In all three cases, the respondents described their anger at profits and greed over health and safety. They felt compelled to act because the government and refineries appeared unwilling or unable to resolve their problems. These motivations for activism also kept the participants involved over the years.



### Strategies and Tactics

According to the literature, grassroots groups must build a power base in the areas of resources, coalitions, and knowledge (Cormick 1980, Crowfoot and Wondolleck 1990, Kriesberg 1982, Mondros 1994) to gain substantive empowerment and achieve stated goals, which are the empowered outcomes (Rich and others 1995, 668). In Crockett and Rodeo, the first step was gaining knowledge and accumulating information. Then, they incorporated organizing and mobilizing to gain resources and coalitions. Throughout the processes, the activists developed these three key elements continually and simultaneously through a variety of activities to achieve organizational empowerment.

To investigate and gain knowledge, all groups used scientific and legal experts and reviewed government records. They used expert advice and research to conduct independent surveys, tests, and reports. The CPPC conducted independent noise level tests and produced a “needs test” to successfully dispute PTI’s projections. The CPPC’s knowledge quickly gained the respect of the CEC staff, and eventually ENI’s manager, John Miller. He commented that the high level of education about cogeneration in the community was unique to Crockett and demanded extra attention to detail by ENI (Robertson, January 1992). After the Catacarb release, the health committee relied on advice from the Response Team, a regional anti-toxics group, to carry out an independent health survey and demanded that Unocal pay for Dr. Bowler’s (1996) epidemiological study.

During the first Power Plant War, the CPPC relied on the CEC staff for advice and assistance. The group expected similar support when they entered the third War, but

they were disappointed to find that the personnel had changed. The new staff was “totally unsympathetic to public participation” and operating under orders to move the application expeditiously (Adams December 1992, 16; Perez 1998; Tubb 1998). Activists need to realize that agency staff changes can affect the disposition of the process.

The RCA developed allies in the BAAQMD’s inspection team. The inspectors helped the group in its campaign to substantiate confirmed odor releases.

The groups used similar mobilization tactics by recruiting neighbors, conducting petition drives, and speaking at community workshops and meetings. The RCA and CPPC published newsletters to convince residents that action was required to defeat PRC and PTI. They formed coalitions with existing community groups and regional environmental groups. CBE was especially helpful in the refinery permit processes and the subsequent GNA negotiations because of its expertise and political clout. Unions were allies in gaining safety measures in the Unocal GNA, but they turned on activists during the PRC struggle when they became fearful of job losses. C&H’s unions and retirees were active opponents throughout the entire process because the company threatened job and benefit cuts if the plant was defeated.

To create overall public awareness, members testified at public meetings and used the media. During BAAQMD meetings, PRC and Unocal protesters gave heated testimony. At one meeting in Rodeo, an activist went to the podium wearing a gas mask to emphasize the odor problems to the Board members and gained front page media coverage (Morris 2 June 1992). Peaceful demonstrations were staged in PRC and the

cogeneration protest. Respondents stated that gaining public awareness and support was a key strategy in all three cases.

The groups lobbied politicians and agency officials, with mixed results. The CPPC faced the proactive empowerment of very formidable political opponents, hired to represent and lobby for PTI, namely John Knox, former Speaker of the Assembly, William Bagley, former PUC commissioner, and Bert Coffey, Congressman George Miller's former campaign manager. They countered by appealing to State Senators Boatwright and Rosenthal for support. Locally, County Supervisor Nancy Fahden was the only supervisor to vote against the cogeneration siting by PTI, but she waffled during the round with ENI, explaining that the County was in dire need of funds (Robertson, January 1992). She was also RCA's ally during the PRC permit process.

State level politicians and agencies, with the exception of the CEC politicians, were perceived to be more helpful than the County in the cogeneration siting and the Catacarb release. Respondents felt that there was an inverse relationship between potential tax revenue and government sympathy of residents' concerns. In the refinery cases, the residents publicly criticized BAAQMD and the Health Department for failing in their responsibilities to promote air quality and community health. Residents testified at hearings, wrote editorials, and used media attention to alert the public regarding the agencies' failures to impose meaningful penalties and downplay health risks.

The literature points out that service donations of members are grassroots groups' primary economic asset (Crowfoot and Wondolleck 1990, 165). Financial stress was a major factor in the lengthy processes with PRC and the cogeneration plant. The primary

resources were the members' labor and expertise. When the RCA determined that legal advice was necessary, several members donated valuable artwork to raise funds. They convinced Shute, Mihaly, and Weinberger, an environmental law firm, to represent the group for several years with only nominal payments. Respondents felt that the firm's services were a vital component in their successful CEQA participation. The CPPC used the CEC's pauper status to defray the expenses associated with the intervention process. Money was not an issue in the Unocal GNA process.

### Outcomes

Grassroots participation may lead to an empowered outcome, which is the achievement of the stated goals, or disempowerment, which arises when the group loses (Brown and Masterson-Allen 1994, Rich and others 1995). Table 9 on the following page summarizes the goals, activities, and results in a process and outcome format. In every case, the groups' primary goal was elimination of the hazard by closing the facility, blocking the siting, or minimizing the exposure.

The Rodeo residents wanted the odors, releases, and accidents stopped. By 1991, two lawsuits and eight years appealing to BAAQMD and the Health Department had failed. Although the activists had developed organizational empowerment, they lacked PRC's instrumental empowerment to influence the agencies. When BAAQMD extended the deadline to install the "Big Three" odor reducing equipment to coincide with the refinery's reformulated fuels retrofit and expansion, they finally had an avenue for formal empowerment via the CEQA process. They re-evaluated their goals and decided to block

TABLE 9.—PROCESS AND OUTCOME MATRIXGRASSROOTS GROUPS - GOALS (Achieved \*)

<u>Pacific Refining</u>	<u>Crockett Cogen</u>	<u>Unocal</u>
*Cleaner air	Stop the siting	*Improve safety at refinery
*Compensation	*Mitigate for safety	*Compensation
*Close refinery	*Mitigate design	Solve health issues
*Mitigation		*Unocal pay for health care
Refinery forced to obey laws		Unocal relocate school

GRASSROOTS GROUPS' STRATEGIES AND TACTICS

<u>Pacific Refining</u>	<u>Crockett Cogen</u>	<u>Unocal</u>
Amass public support	Amass public support	Amass public support
Consult lawyer/suit	Gain technical data	Mitigations/land use permit
Mitigations/land use permit	Formal intervention	Use technical advice
Lobby BAAQMD insp.	Member expertise	Use CBE advice
Negotiate GNA	Media coverage	Use Response Team
Use CBE advice	Use technical advice/ CEC staff	Union coalition
	Gain "formal intervention" status	

OUTCOMES

<u>Pacific Refining</u>	<u>Crockett Cogen</u>	<u>Unocal</u>
Refinery Closed	Visual & noise mitigation	Safety mitigation
Air cleaner	Air cleaner	Unocal pay for health clinic & health survey
Good Neighbor Agreement	Safety mitigations	Good Neighbor Agreement
Financial mitigation	Financial mitigation	Financial mitigation
Town more self-sufficient	Town more self-sufficient	Town more self-sufficient

the refinery's permit and demand financial mitigation. PRC had a deadline to meet California's reformulated fuels retrofit and the RCA initiated delay tactics by threatening a lawsuit. The litigation threat succeeded in bringing PRC to the bargaining table to negotiate a GNA. The GNA process transformed their formal empowerment to instrumental empowerment and they demanded the immediate installation of the odor reducing equipment and other costly safety mitigations, including the following:

- community involvement in safety issues
- limits on sulfur content of crude oil
- fenceline monitors
- fugitive emissions controls
- monthly tank inspections
- valve retrofit program
- VOC leak detection program

The participants believed that this strategy led to their substantive empowerment leading to the company's decision to close. The group's psychological empowerment was described by one activist (Lukas 1998), "everyone involved share[d] a belief that as a group we [could] accomplish much more than our individual efforts." RCA also achieved the financial mitigation goal by securing Rodeo \$5 million of PRC's property taxes over 20 years (Wong 16 April 1995), which the town collected until the property was sold. The RCA generated these empowered outcomes with the assistance of the legal experts and CBE.

The Crockett CPPC activists wanted the siting blocked. Their initial strategy was piecemeal mitigation calculated to improve safety, change the location, and modify the design. They planned to increase construction costs to make the project financially unfeasible, or delay approval until PTI was unable to meet the PG&E contract deadline. CEQA provided the formal empowerment and they gained instrumental empowerment by attaining formal intervention status at the beginning of the process. The crucial factors, attainment of the formal status and the timeliness of the intervention, were vital to the groups success. Ernest Perez, the CEC's public advisor at the time, advised the group that they could essentially write all the letters they wanted, but they had no chance to prevent the project (Dahl 1998). According to the literature, the formal empowerment for citizen participation in governmental decisions is often a required "performance" where only lip service is given to citizen's concerns because the decision has already been made (Christensen 1995, Rich and others 1995). Perez defined the citizens' dilemma by explaining that by the time a CEC proposal reaches the public review stage, it's too late to say no (Pereira 19 September 1984, 2 [A]). He soon realized that the CPPC was a knowledgeable and determined opponent with widespread community support, when he attended the first meeting of 500 citizens in Crockett. When PTI displayed poor performance and apparent incompetence at that meeting and also by its inadequate application, the group's psychological empowerment was bolstered. They believed that their collective expertise would prevent the siting. Their efforts eventually defeated PTI's application, the first time a group of citizens had ever defeated a CEC project in California.

When ENI joined forces with C&H, the group lost members and most of its psychological empowerment. Those remaining realized that they were up against a competent and professional group. ENI had mitigated many major safety and design issues that CPPC had attacked in the PTI project. When the CEC approved the plant, they decided that the odds of winning an appeal on procedural violations were too slim to invest additional time and money. They used the threat of a suit to demand additional financial mitigations for the community.

Although the group did not achieve its primary stated goal, was the process empowering? Former CPPC members are convinced that their efforts produced a safer and quieter plant with less visual impacts than the original PTI design. They also feel that the community has been empowered by the financial mitigations. If the original proposal had passed without opposition, the town would have received no financial benefits. Instead, the town receives approximately \$450,000 annually from the-return-to-source county tax dollars, \$300,000 annually for 30 years from the cogeneration, and \$15,000 annually for 15 years from C&H (Gaura 12 November 1992, Wong 16 April 1995). The group was also credited for the passage of SB 1659, which stopped payments to private energy producers for plants that will never be built. According to Senator Boatwright (Letter in Crockett Signal December 1989, 15), the legislation was “Crockett-inspired” and “Ruth Blakeney was instrumental in helping us get the bill passed out of committee.”

Unocal was very unwilling to negotiate a GNA with the communities, but it was forced to the table by the county Planning Department. The Planning Department’s



decision gave the community groups the formal and instrumental empowerment to engage in an empowered process. The problem from that point was a determination of community representation. Before bargaining with Unocal, the organizational empowerment process proved heated and difficult as various factions struggled for power. Then, the participants decided not include legal representation because they felt the presence of lawyers would disempower the communities. The groups had a strong sense of psychological empowerment because they knew that Unocal was forced to compromise and adhere to a strict time line.

The respondents who participated in Unocal's GNA ranked improving refinery safety as the primary goal. They also wanted financial compensation and a resolution of on-going health issues. In exchange, the SEA, CBE, and other community participants agreed to refrain from opposing Unocal's land use permit. The negotiations resulted in a number of substantive outcomes including the following:

- 28% emission reduction from equipment leaks (over 780 pounds per day)
- Laser air pollution monitors on refinery fenceline
- Independent safety audit
- Community notification and warning system
- Safety mitigations at Hillcrest Elementary School
- Funding two health studies and a neighborhood clinic for six months
- Vegetation program for nine years at \$30,000 annually
- Vocational training at John Swett High School - \$100,000 annually for 15 years

- Funds for Crockett and Rodeo community projects - \$100,000 each for 15 years
- \$4.5 million to Contra Costa County for Cummings Skyway Road project

In addition to the GNA results, activists implemented a community sponsored Bucket Brigade Program with initial funding from Edward Masry, a toxic tort attorney who represented residents in the Catacarb lawsuit. The program uses a simple air monitoring device, housed in a plastic bucket, which enables residents to take independent air samples during refinery releases. SEA and CBE united with other Contra Costa County grassroots groups and formed the Regional Accident Prevention Coalition and lobbied county supervisors, officials, and the EPA for program acceptance and funding. In 1997, the EPA funded the county-wide program with a \$50,000 grant and residents surrounding all the refineries now have buckets. Air sample results are analyzed at an independent laboratory. Activists requested the program because they distrusted BAAQMD and the county Hazardous Material Division because of the handling of the Catacarb incident. They wanted separate oversight which could occur immediately rather than waiting for BAAQMD inspectors' arrival.

The activists, mainly CBE and SEA, lobbied the County for passage of the Good Neighbor Ordinance which increased county oversight and strengthened safety and zoning regulations. Although the measure passed in December 1994, it has since been repealed and negotiations to replace it are currently underway. Participants were discouraged by the circumstances that led to the repeal. The unions sided with the activists in the original passage and because of job threats they have since changed their position to align more closely with industry.

Another discouragement or disempowered result has been the failure to reach agreement on relocating Hillcrest Elementary School from the refinery fenceline to another location. At present, the trustees are considering a site on Rodeo's southwest border. This location is now considered a safe alternative because PRC has closed.

The final empowerment issue was personal psychological empowerment of the participants. Overall, participants listed more empowering than disempowering results from their experience. Members gained organizational and leadership skills which they have transferred to continued public involvement through SEA, CBE, and other community organizations. Although seven respondents left the community for health reasons that resulted from the refinery incidents, the moves were not a result of their participation. Five other respondents either lost or resigned jobs to engage in the heavy workloads required during the processes.

#### Suggestions for Future Research

Additional research into the motivations of grassroots participation would be beneficial to regional anti-toxics groups, anti-toxics grassroots groups, and other communities facing potential environmental threats. Based on the thesis results, fear, anger, and frustration are the principal and most powerful emotional motivators. Considering the sacrifice of valuable personal time, and sometimes even employment, only the most motivated will endure a lengthy struggle with industry and government. Because member recruitment is an on-going problem in grassroots organizing, further understanding of the primary reasons for participation would be valuable in targeting

residents for involvement. This research implies that it is not an effective use of human resources to attempt community mobilization without sufficient fear, anger, or frustration to spur and sustain action.

Although personal psychological empowerment was evidenced as a positive result of participation, the group must have a level of psychological empowerment to support a prolonged effort. Group leaders could benefit from additional research on methods to bolster the participants' belief that grassroots efforts can and do make a difference throughout the process to prevent dropout.

The empowered results included achieving stated health and safety goals by developing GNAs. Research is needed to study the implementation of these agreements, which are meaningless if the terms are not fulfilled. From experience with the Unocal GNA, the signatories have discovered that their negotiations left out a significant component, namely the authority and financial means for enforcement. Similar to the mitigation measures in environmental impact reports, follow up is required and the agreements need stated consequences for violations.

In siting situations, further research is needed to aid communities so that they can attain instrumental empowerment and not merely formal empowerment. Timeliness is a significant component to success in blocking an unwanted facility, therefore communities would benefit from additional study on how to enter the process sooner and more effectively. Grassroots groups could benefit from additional knowledge in methods to gain power during the public review period.

This thesis revealed that technical knowledge was key to challenging safety and design flaws and understanding complex toxics information. Considering that the literature indicates that most grassroots participants are lower middle-class, working-class, housewives, and minorities, research into methods of assisting them in these areas would be worthwhile. This research would be especially helpful for regional anti-toxics groups that promote local grassroots groups.

The research and thesis also pointed out that government officials often withhold and distort information. These agencies could benefit from research into the value of public education versus the consequences of potential community wrath.

Industries and trade organizations could benefit from added research on positive methods to deal with grassroots groups and citizens' concerns. Considering the considerable financial mitigations won by the grassroots groups in these cases, industry could profit from training in conflict prevention and resolution.

Community groups could use research on the use of proactive empowerment in lobbying and public relations to influence government and the greater public. Most grassroots empowerment is reactive and therefore, groups spend time warding off threats that could potentially be prevented.

### Conclusion

Although citizens have a right to participate in the NEPA/CEQA process, it is often merely a performance because the decision has already been made by industry and government agencies to go forward. One key to the empowered results in these cases

was the attainment of instrumental empowerment or negotiating clout, not just an opportunity for public comment. The groups gained this status through different methods, as follows: in PRC, they used threat of a lawsuit to block the expansion; in the cogeneration siting, they filed for formal intervention status immediately; in the Unocal process the Planning Department mandated the GNA negotiations. While a lawsuit often disempowers the community because it moves the negotiations from the stakeholders to attorneys, it may sometimes be the necessary threat for grassroots groups' concerns to be taken seriously.

The respondents all indicated that the strategy to amass public support was a key activity. Public support is required for a variety of reasons, such as acquiring additional human resources, developing political support, and getting the attention of regulatory agencies. When agencies realize that the public is watching their implementation of regulations, they are more responsive to enforcement.

Communities and grassroots groups need tools to independently monitor toxics so that the refineries and agencies know that the public is gathering data. The refineries will be more likely to implement accident prevention and safety plans and the agencies will be more likely to investigate residents' complaints. The fence-line monitoring system at the Tosco Refinery is the only one of its kind in the country. Although other communities could benefit from similar devices, the system was intensely contested by the refinery during the GNA negotiations. Also, it is costly to install and maintain. Community groups require technical experts to analyze the data or the information is meaningless. Community bucket brigades are a cheaper and low tech alternative.

The respondents indicated that government responses to their requests for information and assistance were more likely a hindrance than a help. Although government agencies exist to protect the public, government officials are often unwilling to take actions that might restrain or inhibit economic growth. This inaction produces community frustration and fuels the public's distrust of government, creating adversarial relationships. Public officials could avoid confrontational consequences by addressing and responding to community health and safety issues in a direct and timely manner.

Overall, the respondents expressed greater frustration at the local level than with state and federal government politicians and officials. They felt that there was an inverse relationship between potential tax revenues and sympathy for local residents' concerns. They also criticized agency politicians, particularly BAAQMD and CEC, for siding with industry rather than the affected community. Local inspectors and staff members were perceived to be more helpful and responsive to their complaints. Elected officials need to realize that ignoring the citizens' requests and problems can exacerbate tensions between community groups and regulators.

As more communities are exposed to potential environmental hazards, grassroots anti-toxics groups will develop to empower citizens who demand a role in the decision-making process. Government officials need to re-evaluate and reform their practices regarding the inclusion of these stakeholders.

APPENDIX 1

INTERVIEW RESULTS

1. **Sex** Male: 12 Female: 18
2. **Age** 30-40: 17 41-55: 11 Over 56: 2
3. **Education** Hi School: 1 1-3yrs College: 17 College Grad: 7 Grad Degree: 5
4. **Occupation at time of participation**  
Blue Collar: 2 Housewife: 1 Professional/Technical: 25 Retired: 2
5. **Number and ages of children at time of participation**  
Children Under 18: 16 Participants No Children or Grown: 14 Participants
6. **Membership in any environmental groups?**  
Active: 3 None: 19 Dues Only/Mainstream: 5
7. **Any previous activism or political involvement?**  
Active: 4 None: 21 Quasi-Political - CIA: 2 RCA: 3
8. **How long had you resided in the area at beginning of your involvement?**  
2 Years or Less: 7 4 to 16 Years: 20 35+Years: 3
9. **Why did you get involved in local activism?**

<u>Event or Situation</u>	<u>Number</u>
Health concerns	21
Concern for quality of environment	10
Air Pollution or odors	9
Friend's request	7
Property damage & loss of home value	4
Petition or sign	1

**Did a specific event or incident get you involved?**

<u>Rodeo Residents</u>		<u>Crockett Residents</u>	
Pacific	Unocal &	Unocal &	
Refinery: 7	Pacific Ref: 5	Crockett Cogen: 9	Cogen: 5 Unocal: 4



**10. What were your feelings and reactions in regards to this event/s or incident/s?**

	<u>Total</u>	<u>Pacific Refining</u>	<u>Crockett Cogen</u>	<u>Unocal</u>
Fear of health & safety	21	7	6	8
Angry @ greed over safety	19	4	8	7
Frustrated @ govt. not doing job	19	7	4	8
Threatened/community	10	3	7	
Violated/injustice	9	2	5	2

**11. What were your initial goals?**

Cleaner Air  
Government enforcement of law  
Close refinery  
Compensation & mitigation

Pacific Refining

7

6

2

3

Crockett Cogen

Prevent the construction  
Mitigation

12

8

Unocal

Improve safety  
Compensation & mitigation  
Solve health issues

10

5

4

**Goals of the group?**

Clean the air  
Force refinery to obey laws  
Close refinery

Pacific Refining

5

5

3

Crockett Cogen

Stop the siting  
Mitigate

9

7

Unocal

Improve safety  
Mitigation measures & compensation  
Unocal pay to relocate Hillcrest School  
Unocal pay for community health

10

7

3

2

**12. What activities did you engage in to pursue these goals? Lobbying, attend meetings, write letters, demonstrate, legal measures, press coverage, etc.**

	<u>Pacific Refining</u>
Attend public meetings	9
Circulate fliers and petitions	6
Lobby politicians	5
Write letters	5
Complain to BAAQMD	5
Raise media attention	5
Legal measures	5
Lobby BAAQMD inspectors	3
Speak at public meetings	3
Consult experts	3
Consult CBE	3

	<u>Crockett Cogen</u>
Attend public meetings	9
Circulate fliers and petitions	8
Consult experts	8
Legal advice	6
Write letters	5
Raise money	5
Lobby politicians	4
Demonstrate	4
Raise media attention	4
Speak at public meetings	4

	<u>Unocal</u>
Attend public meetings	7
Lobby politicians	7
Raise media attention	5
Speak at public meetings	5
Negotiate with company	5
Consult CBE	5
Consult experts	3
Write letters	3

### 13. Which activities and strategies worked?

<u>Pacific Refining</u>	<u>Crockett Cogen</u>	<u>Unocal</u>
Amass public support	Amass public support	Amass public support
Consult lawyer/suit	Gain technical data	Mitigate land use permit
Mitigations/land use permit	Formal intervention	Union coalition
Lobby BAAQMD insp.	Member expertise	Use technical advice
Negotiate GNA	Media coverage	Use CBE advice
Use CBE advice	Use CEC staff	Use Response Team

**14. Were you ever discouraged? If so, what was the reason or source of your discouragement?**

<u>Pacific Refining</u>	<u>Crockett Cogen</u>	<u>Unocal</u>
Hercules permit process	CEC Politicos	County Health Dept.
BAAQMD Board	Greed of PTI	Lack of accurate data
Refinery greed over safety	C&H betrayal	Illness from release/stress
County Health Dept.	Stress/workload	Stress/workload
Lack of financial resources		

**15. Who did you look to for help? Did you get help from outsiders, experts, engineers, national toxics groups, etc.?**

<u>Pacific Refining</u>	<u>Crockett Cogen</u>	<u>Unocal</u>
Lawyers	Technical experts	Medical experts
CBE	Vallejo citizens	Unions
Technical experts	Benicia citizens	Response Team & CBE

**16. Was government response or help sought? If so, was it helpful or a hindrance? Why and how?**

	<u>Helpful</u>	<u>Hindrance/Disappoint</u>
<u>Pacific Refining</u>		
Hercules City Government		X
County Health Department/ Dr. Wendall Brunner		X
County Hazardous Materials BAAQMD/Board		X
BAAQMD/Inspectors	X	
County Government/ Supervisor N. Fahden	X	X
<u>Crockett Cogen</u>		
Congressman Geo. Miller		X
County Supervisors/ Supervisor N. Fahden	X	X
Supervisor McPeak		X
State Sen. Boatwright	X	
CEC/staff	X	
CEC/politicos		X
<u>Unocal</u>		
BAAQMD		X
County Health Dept./ Dr. Wendall Brunner		X
County Supervisors		X
Dr. Jeff Smith		X

State Board of Health	X
California EPA	X
County Planning Dept.	X
BAAQMD	X

**17. How did others get involved?**

	<u>Pacific Refining</u>	<u>Crockett Cogen</u>	<u>Unocal</u>
Word of mouth	X	X	X
Media coverage	X	X	X
Fliers/Petitions	X	X	X
Request of friends	X	X	
Membership/CIA		X	X
RCA	X		X

**18. What changes or results do you see in the community as a result of your efforts?  
Empowerment, cleaner air, financial resources, etc.?**

	<u>Pacific Refining</u>	<u>Crockett Cogen</u>	<u>Unocal</u>
Pacific Refining closed	X		
Air cleaner	X	X	
Safety mitigations		X	X
Visual & noise mitigations		X	
Good Neighbor Agreement	X		X
County Taxes to Area		X	X
Financial mitigations	X	X	X
Health/clinic & survey			X
Town more self-sufficient	X	X	X

**19. How did this process of involvement influence or affect your personal life?  
Career change, move, increased political involvement, health, etc.?**

<u>Empowered Results</u>		<u>Disempowered Results</u>	
Community leadership	8	Left community	7
Grassroots organizing	6	Lost work or resigned job	5
Personal empowerment/ self/confidence	5	On-going health problems	3
Public involvement	5	Process controlled life	4
Made friends/camaraderie	5		
Learning experience	8		

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