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Regulation of Leaky Underground Fuel Tanks¹: An Anatomy of Regulatory Failure

*Christen Carlson White**

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1. The Regional Boards in California are under a regulatory mandate to protect the waters of the state. Established by the Dickey Act in 1949, the Boards' powers were expanded under the Porter-Cologne Act in 1970. There are nine regional boards in the state. This article focuses exclusively on the regulatory environment of the San Francisco Regional Water Quality Control Board, Alameda, Toxic Tank Division. The SFRWQCB established the South Bay Toxics Cleanup Division in 1985 due to the substantial number of serious contamination cases concentrated in the South Bay portion of the San Francisco Region. This division deals principally with *solvent* tank sites. The Toxic Tank Division, on the other hand, regulates underground *fuel* tank sites for the entire San Francisco region. It is the Toxic Tank Division, Alameda County which is the exclusive focus of this article.

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"We need dead bodies to take enforcement action on a tank case."

Staff comment, SFRWQCB.

"[P]ublic management is not an arena in which to find big answers; it is a world of settled institutions designed to allow imperfect people to use flawed procedures to cope with insoluble problems."

James Q. Wilson, Bureaucracy

I.

INTRODUCTION

In October 1980, International Business Machines (IBM) reported a leak in one of their underground solvent tanks (USTs) to the San Francisco Regional Water Quality Control Board (SFRWQCB). Contaminated soil was removed from the site and IBM implemented a groundwater extraction program.² This incident did not raise many serious concerns amongst the regulators at the SFRWQCB.³ As a regional staff report aptly noted, the incident "was treated rather lightly by our office."⁴ Considering that there are an estimated 2 million underground storage tanks nationwide at 750,000 different facilities, the future of such "incidents" should not have been hard to predict.⁵ One year after IBM's discovery, Fairchild Camera and Instrument Company was excavating a foundation for a water tank when it discovered visibly contaminated soil. Subsequent tests verified that the soil and nearby drinking water wells contained solvents such as trichloroethane (TCA) at 5800 parts per billion (ppb).⁶ The recommended TCA level in drinking water at that time was 200 ppb.⁷ The future had arrived.

Since the early 1980's, there has been a substantial increase in the number of reported releases from UFTs.⁸ These releases,

2. Susan Pantell, A Comparative Study of the San Francisco and Los Angeles Regional Water Quality Control Boards: Regulation of Underground Storage Tanks 36-37 (1992) (unpublished Ph.D. dissertation, University of California, (Berkeley)) (on file with the author).

3. *Id.*

4. *Id.*

5. HAZARDOUS AND SOLID WASTE AMENDMENTS OF 1984, H.R. CONF. REP. NO. 1133, 98th Cong., 2d Sess. 128 (1984) [Hereinafter HSWA CONF. REP.].

6. Pantell, *supra* note 2, at 36.

7. *Id.* The California Department of Health Services has determined that the appropriate action level for response to TCA contamination is currently 200 ppb. Maximum Contaminant Level Regulatory Thresholds, CAL. CODE REGS., tit. 22, § 6444 (1989).

8. Nanette Asimov, *Thousands of Tanks Leaking Fuel Into Bay Area Water Supplies*, S.F. CHRON., Feb. 12, 1990, at A1. Leaks from UFTs have risen from 700 to

containing petroleum products such as gasoline and crude oils, originate not only from fuel stations, but also from fire departments, post offices, airports, construction companies, rental car agencies, and taxi companies.⁹ In May 1986, the EPA's Office of Underground Storage Tanks released the results of a two-year study which investigated 433 tanks at 213 establishments.¹⁰ The study found that thirty-five percent of the storage tanks tested were leaking and that the causes of the leaks were several ranging from leaks in piping, to improper installation of tanks, to corrosion, overfills, and spills.¹¹

Similarly, in 1991 EPA concluded that thirty-three percent of the existing UFTs were over twenty years old and that eighty percent of the tanks were constructed of uncoated steel making them vulnerable to corrosion and perforation.¹² These findings are particularly disturbing considering that fifty-five percent of the leaks discovered in the 1986 survey involved leakage of motor fuel (containing Benzene, a carcinogen and Xylene, a toxic chemical) into the groundwater and seventy-five percent involved leakage into the surrounding soil.¹³

California is not immune from the potentially severe health threat posed by the vast number of leaky underground fuel tanks. In 1984 the California Legislature found:

- (1) Substances hazardous to the public health and safety and to the environment are stored prior to use or disposal in thousands of underground locations in the state.

more than 4000 during the past three years posing a serious threat to the Bay Area's drinking water supply. *Id.*; see also Interview with LUFT Regulatory Staff, Underground Storage Tank Cleanup Staff San Francisco Regional Water Quality Control Board, in Oakland, CA (March 18, 1994) (on file with the author).

9. UNDERGROUND STORAGE TANK PROGRAM, 1991: HEARINGS ON SUBTITLE I OF THE SOLID WASTE DISPOSAL ACT BEFORE THE SUBCOMM. ON TRANSP. AND HAZARDOUS MATERIALS OF THE HOUSE COMM. ON ENERGY AND COMMERCE, 102d Cong., 1st Sess. 2 (1991) (statement of Rep. Al Swift, Chairman, Subcomm. on Transp. and Hazardous Materials) [hereinafter UNDERGROUND STORAGE TANK CLEANUP HEARINGS].

10. See Candace C. Gauthier, *The Enforcement of Federal Underground Storage Tank Regulations*, 20 ENVTL. L. 261, 262 (1990) (for a description of the EPA study); EPA, Press Release No. 1703, at 1 (June 24, 1986) (describing a two year study entitled Underground Motor Fuel Storage Tanks: A National Survey) [hereinafter EPA Press Release].

11. Gauthier, *supra* note 10, at 262.

12. *Id.*; EPA Press Release, *supra* note 10, at 2; UNDERGROUND STORAGE TANK PROGRAM HEARINGS, *supra* note 9, at 3-6.

13. EPA Press Release, *supra* note 10, at 7.

(2) Underground tanks used for the storage of hazardous substances and wastes are potential sources of contamination of the groundwater and may pose other threats to public health and the environment.

(3) In several known cases, underground storage tanks resulted in undetected and uncontrolled releases of hazardous substances into the groundwater. These releases have contaminated public drinking water supplies and have created a potential threat to the public health and to the waters of the state.¹⁴

The damage to human health and the environment from these ubiquitous releases is often long-term, costly to remediate, and beyond the financial resources of most dischargers.¹⁵ LUFTs, therefore, present a substantial regulatory challenge to those agencies responsible for groundwater protection.¹⁶

Accordingly, increased public concern over the impact of releases from LUFTs has raised questions concerning the adequacy of government response to this problem.¹⁷ Socio-legal scholars have widely recognized that the enforcement process is a crucial link in explaining the failure or success of social regulation.¹⁸ While new UFT laws may laudably seek to prevent harm to both human health and the environment, transforming those laws into effective groundwater protection programs through the enforcement process is a daunting task.¹⁹

To evaluate this enforcement dilemma, socio-legal scholars have examined regulatory agencies both through the agency's decision-making processes or enforcement methods and through the technical, economic, and legal problems the agency encounters.²⁰ The enforcement behavior of the agency as well as

14. CAL. HEALTH & SAFETY CODE § 25280(a)(3) (West Supp. 1993).

15. For an analysis of the cleanup cost issue and its effect on compliance see *infra* section III.B.

16. Approximately fifty percent of the United States population obtains drinking water from underground wells. EVAN NYER, *GROUNDWATER TREATMENT TECHNOLOGY* 1 (1985).

17. Asimov, *supra* note 8, at A1. The State Water Board, in response to this public concern, is in the process of drafting an overall strategic plan that assesses the productivity and effectiveness of all of the agency's water programs. *External Review of State Water Board, CAL/EPA Recommendations Sent To Wilson*, CAL. ENV'T. DAILY (BNA), Dec. 20, 1994, at 1.

18. See e.g., Neil Gunningham, *Negotiated Non-Compliance: A Case Study of Regulatory Failure*, 9 LAW & POL'Y 69 (1987); Keith Hawkins, *Bargain & Bluff*, 5 LAW & POL'Y 35 (1983).

19. Robert A. Kagan, *Understanding Regulatory Enforcement*, 11 LAW & POL'Y 89, 90-94 (1989) [hereinafter Kagan, *Understanding Regulatory Enforcement*].

20. See, e.g., *id.*; Gunningham, *supra* note 18, at 69; Neil Shover et al., *Regional Variation in Regulatory Law Enforcement: The Surface Mining Control and Recla-*

the factors that influence that behavior reflect the important relationship between regulatory enforcement styles and regulatory outcomes.²¹ Effective enforcement regimes and decision-making processes require more than simply recognizing proscribed conduct and applying a defined penalty.²² Depending on the applicable circumstances, a given action by a regulated entity may involve different levels of risk, potential damage, and responsive behavior by the actor. Thus, one pre-ordained enforcement response may not always result in the best compliance strategy.²³ Rather, socio-legal researchers have concluded that an effective regulatory regime reflects an understanding that regulated entities vary in their willingness and capacity to comply with regulations.²⁴ Some entities may be "good apples" who make good-faith efforts to comply and some may be "bad apples" who resist regulatory requirements wholly on the basis of cost or inconvenience.²⁵ Regulatory agencies, in order to encourage cooperation and compliance, must recognize these institutional variations and adjust their enforcement style to effectively respond to this diversity of circumstances.²⁶

mation Act of 1977, in *ENFORCING REGULATION*, 122-30 (K.Hawkins & J.Thomas eds., 1984) (finding that the Office of Surface and Mining Reclamation and Enforcement responded to its legal, political, and task environment in developing its regulatory enforcement strategy).

21. See e.g., John T. Scholz, *Voluntary Compliance and Regulatory Enforcement*, 6 *LAW & POL'Y* 385, 386-91 (1984); Winston Harrington, *Enforcement Leverage When Penalties Are Restricted*, *J. PUB. ECON.*, Oct. 1988, at 29, 29-31 reprinted in *THE ECONOMICS OF THE ENVIRONMENT* 543, 543-545 (Wallace E. Oates, ed., 1992).

22. Raoul Stewardson, *From Elephants to Mice: The Development of EBMUD'S Program to Control Small Source Wastewater Dischargers*, 20 *ECOLOGY L.Q.* 441, 487 (1993).

23. See EUGENE BARDACH & ROBERT A. KAGAN, *GOING BY THE BOOK: THE PROBLEM OF REGULATORY UNREASONABLENESS* 58 (1982). The authors suggest that a "programmed application of uniform protective standards obviously runs a risk of underestimating the diversity of ways in which [regulatory infractions can occur]." *Id.* This may result in overregulation of a given entity who is willing, but not able, to comply with a regulatory mandate that does not take into consideration the unique working environment of the individual enterprise.

24. *Id.* at 64-65.

25. See *id.* "The distribution of good and bad apples with respect to any particular regulatory standard obviously has implications for appropriate enforcement strategy. For analytic purposes, assume that bad apples make up about 20% of the average population of regulated enterprises in most regulatory programs. The other 80% would be arrayed over a spectrum of borderline to moderate to really good apples." *Id.* at 65.

26. Robert A. Kagan, *Regulatory Enforcement*, in *HANDBOOK OF REGULATION AND ADMINISTRATIVE LAW* 383, 394-98 (David H. Rosenbloom & Richard D. Schwartz, eds., 1994) [hereinafter Kagan, *Regulatory Enforcement*].

What follows is a case study of how one regulatory agency, the SFRWQCB, has responded to the challenge of regulating leaky underground fuel tanks in Alameda County between 1985 and 1990.²⁷ Section II of this comment offers a review of the SFRWQCB's LUFT enforcement program through the use of statistical enforcement data, detailing the number of active tank sites in Alameda County, the number of unauthorized releases from those sites, the seriousness of the releases, and the level of enforcement action taken by the SFRWQCB in a variety of cases. The data will indicate that the SFRWQCB developed a lax enforcement style between 1985 and 1990 in the face of serious noncompliance by tank owners and operators with California's LUFT laws. Section II also demonstrates, through the use of interview and questionnaire data, that in response to substantial regulatory infractions, the SFRWQCB LUFT regulators nevertheless favored an educative and conciliatory approach to their administrative obligations and denied that a more aggressive enforcement policy would achieve greater site remediation.

Using this data as a fingerprint of the SFRWQCB's LUFT enforcement program, Section III identifies and addresses the reasons why, in light of the risk posed by LUFTs, the SFRWQCB adopted a conciliatory enforcement approach, ignoring violations of the LUFT laws and failing to pursue enforcement actions. This Section will also identify the social consequences of adopting these identified enforcement practices.

The regulatory response of the SFRWQCB will be analyzed through the lens of the SFRWQCB's (1) legal environment, including the federal and state legislation governing UFTs; (2) task environment; and (3) political environment of the UFT program, including an examination of the political preferences of LUFT officials and the effect of interest group pressure on the SFRWQCB's regulatory actions.

27. I employed a variety of research methodologies in my investigation of the SFRWQCB's UFT program and drew upon three principle sources of data. First, extended interviews with the regulatory personnel were conducted to examine the various attitudes and enforcement behaviors at the SFRWQCB. Additionally, primary data were used including SFRWQCB site files, UFT databases, SFRWQCB enforcement guidelines, and internal memos to examine the formal enforcement program and its operation in Alameda County. Finally, a questionnaire was issued to field-level regulators which enabled me to evaluate the relationships between the formal enforcement program and the case-by-case discretion exercised by regulatory personnel.

Lastly, Section IV discusses the policy implications of the SFRWQCB's enforcement behavior and suggests reforms in regulatory methodology which will more likely facilitate compliance with California's UFT laws.

There are, of course, limits to the insights which a study of a single regulatory agency and its role in a single geographical and task environment can provide. Nevertheless, this study will facilitate understanding of the SFRWQCB's regulatory mission and enforcement behavior while augmenting an understanding of the enforcement dilemmas of other agencies operating in similar regulatory environments.

II.

A REVIEW OF THE SFRWQCB'S STATISTICAL ENFORCEMENT DATA

A. *Empirical Evidence of Regulatory Violations*

California's Underground Fuel Tank laws provide for a discretionary system of enforcement for the SFRWQCB and its regulatory personnel. When confronted with a regulatory infraction, LUFT inspectors can issue (1) a cease and desist order and/or a cleanup and abatement order,²⁸ (2) seek injunctive relief,²⁹ (3) pursue administrative civil liability,³⁰ or, in a limited number of cases, (4) pursue criminal charges.³¹ Using SFRWQCB records, I was able to determine the number of enforcement actions taken by the SFRWQCB in the period beginning January 1, 1985 and ending December 31, 1990.³²

According to SFRWQCB records there were approximately 1600 active underground tank sites located in Alameda County between 1985 and 1990.³³ Of these 1600 sites, 1043 sites—nearly

28. CAL. WATER CODE §§ 13301, 13304 (West 1992 & Supp. 1995) (cleanup and abatement orders and cease and desist orders).

29. *Id.* § 13361 (West 1992) (injunctive relief).

30. *Id.* §§ 13350, 13385 (West 1992) (civil penalties).

31. *Id.* §§ 13261, 13265, 13268 (West 1992) (criminal misdemeanor provisions).

32. December 31, 1990 is used as a parameter for enforcement activity because shortly after this date a local oversight program was created to act as lead agency on many of the SFRWQCB's tank sites, relieving some of the Agency's enforcement obligations. Interview with LUFT Staff, Alameda County Health Department (ACHD), in Oakland, CA (Mar. 29, 1994) [hereinafter *Interview with ACHD LUFT Staff*] (on file with the author).

33. Leaky Underground Storage Tank Information System (LUSTIS) Database, California Water Quality Control Board, Region II (SFRWQCB) (March 7, 1994)[hereinafter LUSTIS Database]. The raw data that form the basis of this note were collected from the LUSTIS Database which was provided to the author by the

65%—reported unauthorized releases.³⁴ Given this high percentage of regulatory violations, the SFRWQCB would be expected to respond with some level of enforcement action to either deter future non-compliance or influence tank owners to remediate their past releases. However, in 834 of the 1043 cases the SFRWQCB records indicate that LUFT regulators failed to take any enforcement action.³⁵ Moreover, of these 834 sites subject to no enforcement action, 726 sites had not taken any action to remediate the release four to nine years after its occurrence.³⁶

The seriousness of these unauthorized releases further highlights the seeming inadequacy of the SFRWQCB's regulatory response. In 512 of the 726 unremediated releases, the SFRWQCB determined that the spill had affected or threatened the groundwater introducing cancer-causing agents like benzene, toluene and xylene—the major components of gasoline—to potential drinking water sources.³⁷ As Steve Ritchie, Executive Officer of the State Water Quality Control Board, observes in reference to

SFRWQCB. The LUSTIS database was initially created to provide each regional board with a means of tracking local agency UST cases and managing Regional Board cases. Currently LUSTIS is used to create uniformity in enforcement efforts and increase the potential for integration of the UST program with the Geographic Information System. SWRCB, *LEAKY UNDERGROUND STORAGE TANK INFORMATION SYSTEMS GUIDE 2* (1990). Thus, the Database is the SFRWQCB's central repository for data regarding site status and enforcement activities. Because the LUSTIS Database is continually updated, it promises to provide critical insight into the Agency's enforcement behaviors. While an individual site record may not be current due to the failure to record changes in a site's status, the LUSTIS database nonetheless indicates overall trends in enforcement behavior and thus provides valuable insight into the SFRWQCB's regulatory environment.

34. LUSTIS Database, *supra* note 33.

35. *Id.* The SFRWQCB defines enforcement action in the LUSTIS Database in four categories.

0-no action taken

1-A cleanup and abatement order or technical report request issued to an uncooperative responsible party.

2-A cleanup and abatement order or technical report request issued to a cooperative party.

3-Administrative civil liability or court injunction.

If no enforcement action is reflected in the LUSTIS Database one can safely presume that while an unauthorized release has been reported, the SFRWQCB has not requested any action by the responsible party aside from reporting the initial leak. In all fairness there may be informal enforcement action occurring that is not reflected in the records. This explanation for the lack of enforcement actions is partially supported by SFRWQCB inspectors who declare that much of what they do occurs through informal telephone conversations. *See infra* part III.C for a detailed discussion of the impact of "telephone enforcement."

36. LUSTIS Database, *supra* note 33.

37. *Id.*; Asimov, *supra* note 8, at A1.

similar leaks in the South Bay: "So far we have been pretty lucky. You'd think that gasoline would show up a lot more in the drinking water. Everybody can hold their breath and thank goodness that it hasn't."³⁸

The regulatory response of the LUFT owners did little to arrest the potential danger to area drinking water sources. Even where the SFRWQCB determined that the risk was sufficiently serious that abatement action was required, 319 of the 604 tank release sites took no further corrective action beyond the initial report of the release.³⁹ According to SFRWQCB records, 111 of these 319 cases involved the presence of benzene in the groundwater in concentrations ranging from 1 ppb to 750,000 ppb with most of the sites containing concentrations of 250 ppb or greater.⁴⁰ The California Department of Health Services has determined that the action level for benzene in cases of groundwater contamination is .7 ppb.⁴¹ As a result of this regulatory failure, 53 of the Bay Area's approximately 500 public drinking water wells have been shut down due to contamination from UFTs.⁴²

This initial review of the enforcement data indicates tank owners exhibited substantial noncompliance with California LUFT regulations and that SFRWQCB failed to exercise its enforcement powers to prevent and abate the serious health risks posed by these sub-surface releases from UFTs.

B. *Interview and Questionnaire Data: The SFRWQCB's Perspective*

Confronted with this kind of empirical data, socio-legal scholars have developed classifications of regulatory styles which characterize the potentially disparate responses of a regulatory agency to its diverse working environment.⁴³ At one end of the continuum is a "legalistic enforcer" who cites every noticed viola-

38. Asimov, *supra* note 8, at A1 (quoting Steve Ritchie, Executive Officer, SWRCB).

39. LUSTIS Database, *supra* note 33.

40. *Id.*; James T. Hamilton & W. Kip Viscusi, *Human Health Risk Assessments For Superfund*, 21 *ECOLOGY L.Q.* 573, 632 (1994) (listing Benzene as one of the top 25 carcinogens).

41. SWRCB, LUFT FIELD MANUAL 8 (1989).

42. Asimov, *supra* note 8, at A1.

43. The following classifications are offered as an initial characterization of the SFRWQCB's regulatory behavior. The differences between these enforcement styles and the factors that led the SFRWQCB to adopt one style over another are discussed later in detail. *See infra* sections III, IV, and V.

tion irrespective of its substantive seriousness.⁴⁴ At the other end of the spectrum is the “accommodator” who is sympathetic to violators and may risk non-compliance in favor of a more lax enforcement regime.⁴⁵ Officials operating under an accommodator-enforcement style typically grant second (and third) opportunities to a regulated enterprise to “come into compliance” and give advice about how to comply, rather than imposing across-the-board sanctions whose costs may exceed the social benefits of the regulation.⁴⁶ The “welfare-maximizer” occupies the middle of the spectrum and responds to the seriousness of the violation by attempting to facilitate cooperation while using legal coercion when necessary.⁴⁷

Interview and questionnaire data gathered from the SFRWQCB LUFT regulators reinforces the enforcement statistics and suggests that the SFRWQCB, while aware of the magnitude of these regulatory violations, has declined to deal with these infractions aggressively or legalistically.⁴⁸ Rather, the agency adopted a conciliatory or accommodator enforcement style toward regulated enterprises. Consistent with this conclusion, one LUFT regulator noted: “It’s only when the regulated parties refuse to do the minimum that we take it to enforcement. In the five years that I have been working here [SFRWQCB, Alameda division] I have never fined anyone or issued an injunction.”⁴⁹ Other SFRWQCB regulators also confirmed that they perceived their role as advisors and educators rather than strict enforcers, indicating that between 1985 and 1990, the SFRWQCB enforcement program developed an accommodator-regulatory style.⁵⁰ All nine UFT regulators at the SFRWQCB believed that compliance with the regulations was easiest to ob-

44. Kagan, *Understanding Regulatory Enforcement*, *supra* note 19, at 92-94. The legalistic to conciliatory continuum is jurisprudential in nature. *Id.* It focuses on legal behavior like the strictness with which officials interpret legal standards and apply legal sanctions. It does not speak to the regulatory consequences of enforcement behavior.

45. *Id.* at 93.

46. Kagan, *Regulatory Enforcement*, *supra* note 26, at 387.

47. *Id.*; Scholz, *supra* note 21, at 388-89.

48. The questionnaire data represents the responses of all nine LUFT regulators in the SFRWQCB office, Alameda division. The responses are thus representative of the Agency’s enforcement behavior as these nine regulators are responsible for the Region’s enforcement efforts.

49. Interview with LUFT Regulatory Staff, *supra* note 8.

50. The questionnaire issued to all SFRWQCB UFT regulators asked “In my work I have generally tried to educate and consult with operators.” The regulators had the following choice of responses: (4) Strongly agree; (3) Agree; (2) Undecided;

tain if they advised and worked to educate UFT operators.⁵¹ Furthermore, all nine regulators believed that such consultation and education is the best way for them to pursue their job and that issuing an enforcement order or a fine was both ineffective and unnecessary to achieve compliance.⁵²

SFRWQCB officials also took the view that most UFT users were generally compliant and trustworthy parties who could be relied on to carry out their regulatory mandate. One LUFT Regulator expressed the prevailing attitude that “[o]nce we tell a regulated entity to clean up their mess, they do it. We do not need to implement heavy-handed enforcement. They comply . . . we can issue threats of a fine to aid in the process if we need to but it is often not necessary.”⁵³

While this commentary generally represents the SFRWQCB’s perception of firms’ compliance once SFRWQCB contact is initiated, regulators seem to have arrived at different conclusions regarding firms’ internal management and independent willingness to comply with the UFT laws. When asked whether UFT owners and operators effectively set management plans to abate leaks or promptly remedy releases, six of the nine SFRWQCB UFT regulators responded negatively, stating that most UFT owners/operators have only vague intentions of avoiding and remedying unauthorized releases. Five regulators responded that UFT operators have little regard for the environmental effects of their storage practices.⁵⁴ These responses reveal a SFRWQCB perception that while regulated entities are compliant and trustwor-

(1) Disagree and; (0) Disagree. Four of the nine regulators agreed with the statement and five regulators strongly agreed with the statement.

51. The questionnaire posed the following inquiry: “Compliance with the [LUFT] regulations is easiest to obtain if the regulator advises and works to educate the operator.”

52. The questions read (1) “Generally it is not an effective enforcement regulatory strategy for regulators to issue an enforcement order or mandate a cleanup and monitoring strategy each time they encounter a leaky underground storage tank”; (2) “It is necessary to issue an enforcement order or a fine to effect compliance with the applicable regulations”; and (3) “The best way for regulators to do their job is to consult with and try to educate operators”.

53. Interview with LUFT Regulatory Staff, SFRWQCB LUFT Program, in Oakland, CA (Mar. 17, 1994). This rationale for adopting a non-legalistic enforcement strategy based on the regulators’ perceptions of the regulated entities as compliant parties is open to question since the compliance data suggests that UFT owners and operators rarely pursue remediation of their releases.

54. The questionnaire posed the following inquiries: “Storage tank owners have little regard for the environmental effects of their storage practices”; and “Most storage tank owners effectively set management plans to maximize detection and promptly remedy any leaks.”

thy once they have been approached by the Regional Board, left to their own devices they would likely choose not to comply with the UFT laws.

In sum, the questionnaire data strongly suggests that despite substantial noncompliance with the LUFT laws, the SFRWQCB favored a conciliatory or accommodator-enforcement style. An initial review of the empirical data, however, reveals that this enforcement strategy has failed to prevent or abate the serious risks posed by leaking underground fuel tanks. The next section attempts to explain this regulatory phenomenon.

III.

AN EXPLANATION OF REGULATORY FAILURE

What lead the SFRWQCB to adopt a conciliatory enforcement style over another, potentially more effective enforcement strategy? Why, in light of the seriousness of the regulatory violations, did the SFRWQCB fail to issue more cleanup and abatement orders or levy more fines against noncompliant parties? The answers are complicated and provide valuable insight into the creation and implementation of an effective LUFT regulatory program. The search for explanations can be organized around two basic explanatory devices.

First, regulatory responses are shaped by the technical, economic, and legal problems a given agency encounters.⁵⁵ Pursuant to this explanation of an agency's enforcement behavior, regulatory officials are akin to "public-spirited carpenters."⁵⁶ The Agency's regulatory mandate provides the "blueprint that sets forth [the agency] mission and define[s] the tools" that the agency is given to achieve their administrative objectives.⁵⁷ Working within these legal parameters, the regulators presumably adapt the "blueprint" to the task environment in which they work.⁵⁸ This task environment includes the hazards to be abated; the attitudes, capabilities, and economic resilience of regulated entities; the problems of detecting and preventing noncompliance; and the unexpected conflicts between the predetermined design and what appears feasible in a given situation—all of

55. Kagan, *Regulatory Enforcement*, *supra* note 26, at 390; John T. Scholz, *Cooperative Regulatory Enforcement and the Politics of Administrative Effectiveness*, 85 *AM. POL. SCI. REV.* 115-136 (1991).

56. Kagan, *Regulatory Enforcement*, *supra* note 26, at 390.

57. *Id.*

58. *Id.*

which shape agency enforcement.⁵⁹ Socio-legal scholars contend that to explain enforcement style, one must initially look to the "legal design of the regulatory program: its substantive goals and standards, the powers it gives the agency and the constraints it imposes on agency discretion."⁶⁰

Similarly, this explanatory theory also requires one to consider the task environment in which the agency is required to work. The nature of the violations, the seriousness of noncompliance, the characteristics of the regulated entities, and the detectability of violations are all features of the agency's task environment which social scientists believe shape and define the regulatory response of an administrative agency.⁶¹

The second explanatory theory in this socio-legal model of Agency behavior emphasizes the regulatory agency's political environment. Aside from the legal design and the raw material of an agency's working environment, it is assumed that regulators work within a political atmosphere that attempts to control the climate of regulatory response.⁶² While interest groups attempt to control the agency's response to an identified problem, political officials who are otherwise not fond of the regulatory program may seek budgetary cutbacks or the replacement of nonconforming regulatory officials to control an agency's behavior. Social scientists argue, therefore, that understanding enforcement style requires a focus on the intensity and predominant direction of the political pressures brought to bear on regulatory officials by political leaders, industry, and interest groups.⁶³

In theory, these explanatory factors—the legal, task and political environments—can simultaneously influence agency action.

59. *Id.*; John T. Scholz & Feng Heng Wei, *Regulatory Enforcement in a Federalist System*, 80 AM. POL. SCI. REV. 1249-70 (1986).

60. Kagan, *Regulatory Enforcement*, *supra* note 26, at 390.

61. Scholz, *supra* note 21, at 386-91; Kagan, *Regulatory Enforcement*, *supra* note 26, at 390.

62. Kagan, *Regulatory Enforcement*, *supra* note 26, at 391; Stewardson, *supra* note 22, at 501. In a study of the East Bay Municipal Utility District's (EBMUD) enforcement policy towards small source wastewater dischargers, Stewardson found that the Agency was most influenced in its enforcement strategy by environmental groups who threatened suit over lax regulatory policies. *Id.*

63. See e.g., Shover, *supra* note 20, at 39-59 (finding that the disparate political environment of the eastern and western regions of the United States significantly impacted the different enforcement styles adopted by coal mining inspectors); Kagan, *Regulatory Enforcement*, *supra* note 26, at 391; see generally B. Dan Wood, *The Dynamics of Political Control of the Bureaucracy*, 85 AM. POL. SCI. REV. 801, 811 (1991).

The challenge is to analyze the relative weight of each of these factors in order to determine what forces most influence an agency's enforcement style and whether the forces can be re-aligned to create more effective enforcement practices. This section addresses each of these factors as possible explanations for the SFRWQCB's lax enforcement of California's UFT laws between 1985 and 1990 in Alameda County. In attempting to explain the SFRWQCB's regulatory behavior we can learn new methods of confronting the regulatory challenge posed by LUFTs and institute alternative enforcement techniques more likely to result in compliance with California's LUFT laws.

A. *Legal Environment*

The choices that regulatory agencies are forced to make are largely shaped by the laws they are expected to implement.⁶⁴ The aspects of the law which influence and determine agency enforcement style include: (A) the legal rights and powers which the authorizing legislation grants regulators and regulated parties; (B) the specificity with which the law sets forth standards, procedures and remedies to be employed in any case-by-case determination; and (C) the substantive stringency of the authorizing legislation and the primary regulations.⁶⁵

For example, review of the socio-legal literature demonstrates that the stringency of legally defined regulatory standards influence—if not control—an implementing agency's day-to-day enforcement decisions. Hypothetically, if Agency A has a more stringent regulatory mandate demanding large and costly changes in behavior, it may expect more resistance from the regulated entities and thus feel compelled to develop a more legalistic, deterrence-oriented enforcement style. On the other hand, if Agency B is operating under a less stringent statute which allows for a balancing of values, Agency B is more likely to elicit a conciliatory enforcement style, issuing less formal enforcement orders and opting for an educational approach to its duties.⁶⁶ Along with the stringency of the regulatory mandate, the specificity of the legal design and the strength of the legal powers granted through the regulatory mandate also influence the type of enforcement style adopted. Using this model as a theoretical base, this section addresses the legal design of SFRWQCB's UFT

64. Kagan, *Understanding Regulatory Enforcement*, *supra* note 19, at 95.

65. *Id.*

66. *Id.* at 96; Shover, *supra* note 20, at 126-27.

program as a potential explanation for the SFRWQCB's regulatory behavior and enforcement style.

1. The Legal Framework of LUFT Regulation

a. Federal Legislation

Regulation of UFTs is based upon Subchapter IX of the Resource Conservation and Recovery Act of 1976 (RCRA). This subchapter, added to RCRA as part of the Hazardous and Solid Waste Amendments of 1984,⁶⁷ mandates the development and implementation of an underground storage tank program.⁶⁸ Pursuant to these statutes, the EPA has promulgated rules regulating underground storage tanks (USTs). These regulations establish standards for the construction, installation, and performance of UST systems and outline release, response, and corrective action requirements for UST systems containing hazardous substances.⁶⁹ The regulations also specify requirements for spill and overflow control, corrosion protection and release detection.⁷⁰

Further, they require procedures for reporting, investigating, confirming, and recording release incidents and set forth requirements for abatement measures, free product removal, corrective action, and closure for out-of service tank systems.⁷¹ Finally, the regulations require proof of financial responsibility of UFT owners to ensure that they maintain financial assurance of specified monetary amounts per release occurrence.⁷² These financial responsibility requirements are designed to cover the cost of corrective action and to compensate third parties affected by a release.⁷³

As amended, RCRA mandates that EPA establish a federal program which allows state programs to operate in lieu of the federal program if the state programs are no less stringent than the federal requirements and can be adequately enforced.⁷⁴ If

67. The Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §§ 6901-6987 (1987 & Supp. V 1993) (amending Solid Waste Disposal Act, 42 U.S.C. §§ 3251-3254f (1970)).

68. 42 U.S.C. §§ 6991-6991i (1987 & Supp. V 1993).

69. 40 C.F.R. §§ 280.20-.22, 280.30-.34, 280.50-.53, 280.60-.67 (1994).

70. *Id.* §§ 280.30-.31, 280.40-45.

71. *Id.* §§ 280.45, 280.50-.53, 280.60-.67, 280.70-.74.

72. Amount and Scope of Required Financial Responsibility, 40 C.F.R. § 280.93 (1990).

73. *Id.*

74. 42 U.S.C. § 6991c (1987 & Supp. V 1993).

the state program is approved by the EPA, the state, rather than the EPA, has the primary enforcement responsibility.⁷⁵ The EPA has approved the UST program for California.⁷⁶ Therefore, the SFRWQCB has primary enforcement responsibility over all of its active tank sites and California LUFT laws provide the primary regulatory mandate enforced by the Agency. A full understanding of the SFRWQCB's legal environment therefore requires an understanding of the California statutes governing unauthorized releases from underground fuel tanks.

b. California's UFT Program: Sources of Authority

The principal sources of authority for the regulation of UFTs in California are the Porter-Cologne Water Quality Control Act,⁷⁷ the California Health and Safety Code,⁷⁸ and the Basin Plans prepared by each Regional Board under the mandate of the Porter-Cologne Act⁷⁹.

The Porter-Cologne Act, adopted prior to the Federal Clean Water Act, provides a comprehensive scheme for regulating waste discharges into the waters of the California. In contrast to the Federal Clean Water Act, the Porter-Cologne Act governs discharges to groundwater as well as surface waters.⁸⁰ Furthermore, the Act gives the State Water Resources Control Board (SWRCB) and the RWQCBs substantial flexibility in dealing with discharges of waste which may affect water quality.⁸¹ While the provisions of the Porter-Cologne Act contain a great degree of authority to protect groundwater from UFTs, certain statutory provisions in the California Health and Safety Code and the California Code of Regulations supplement the Act and provide a comprehensive scheme for California UFT regulation. Thus, the

75. Katherine S. Yagerman, *Underground Storage Tanks: The Federal Program Matures*, 21 ENVTL. L. REP. 10, 138 (Mar. 1991).

76. *Water Quality Board Approves Basin Plan*, (BNA) CAL. ENVT. DAILY, June 15, 1993, at 5; Telephone Interview with Jim Radoe, Information Staff, U.S. E.P.A., Region IX, in S.F., Cal. (Mar. 31, 1994).

77. CAL. WATER CODE §§ 13000-13999.10 (West 1992 & Supp. 1995).

78. CAL. HEALTH & SAFETY CODE §§ 25280-25299.7 (West 1992 & Supp. 1995) (underground storage of hazardous substances).

79. SAN FRANCISCO WATER QUALITY CONTROL BOARD, 1992 BASIN PLAN (1986 & Supp. 1992)[hereinafter *BASIN PLAN*]. While the *BASIN PLAN* serves as the central guiding document for the Regional Water Quality Control Boards in considering their enforcement options and cleanup standards, groundwater management was not included or adopted in the Plan until October 21, 1992.

80. CAL. WATER CODE § 13050(e) (West 1992).

81. Theodore A. Cobb, *Enforcement Options for State and Regional Boards 2* (1992) (unpublished manuscript, on file with the author).

analysis of SFRWQCB's legal environment will contain conjunctive citations to these three sources of authority.

2. Legal Powers, Legal Rights

The SFRWQB operates under both an *ex ante* and *ex post* regulatory regime. Under the typical *ex ante* regulatory regime an agency is empowered to screen a regulated enterprise's proposed activities before they begin operation.⁸² The primary sanction for failure to meet regulatory standards in *ex ante* review is quick and direct: the denial of an initial application for a permit or license to operate. Conversely, an *ex post* regulatory program prescribes protective standards for ongoing activity enforced by the threat of *ex post* detection and sanctioning of violations.⁸³ The threat of *ex post* legal sanctions for detected violations is designed to encourage regulated entities to pursue *ex ante* compliance measures.

a. Preventative Regulations

The California UFT laws call for *ex ante* screening of a regulated enterprise's proposed UFT activities before the tanks go into operation. This *ex ante* regulatory review requires assurance that the UFT owner is in compliance with construction, monitoring, permitting, and financial responsibility requirements.⁸⁴ New underground motor vehicle fuel tanks installed after January 1, 1994 must be designed and constructed to provide a primary containment system impervious to the fuel and a secondary system that prevents structural weakening and can also safely store any leakages until they may be recovered.⁸⁵ The new tanks must also have monitoring devices capable of detecting leaks from the primary containment system into the secondary containment system.⁸⁶ New tanks not meeting these construction and monitoring requirements are prohibited from operating.⁸⁷

In addition, regulations for tanks installed prior to January 1, 1984, are subject to a quasi-*ex ante*⁸⁸ monitoring requirement.

82. Kagan, *Understanding Regulatory Enforcement*, *supra* note 19, at 96-97.

83. *Id.*; Donald Wittman, *Prior Regulation Versus Ex Post Liability: The Choice Between Input and Output Monitoring*, 6 J. LEGAL STUDIES 193-211 (1977).

84. CAL. CODE REGS. tit. 23, §§ 2641, 2712 (1995).

85. *Id.* § 2631.

86. *Id.* § 2632.

87. *Id.*

88. Since existing tanks are already in operation, any new regulation, including monitoring and permitting requirements, will necessarily affect an ongoing opera-

Owners of these USTs must "implement a [leak detection] program which is capable of detecting any unauthorized release from any portion of the underground storage tank system."⁸⁹ Such a monitoring program must be promptly instituted and approved by the SFRWQCB.⁹⁰ If the program is not approved, the California regulations require that the UFT owner immediately revise the monitoring program to meet the SFRWQCB standards or, in the alternative, begin site closure proceedings.⁹¹ Moreover, all owners of steel motor vehicle fuel tanks must retrofit such tanks with secondary containment systems or provide interior lining and external protection before December 22, 1998.⁹² These tank owners must also inspect their upgraded tanks every five years to ensure that the tank is in sound operational condition.⁹³ For example, if the mandatory inspections reveal that the tank walls are less than 75% of their original thickness before retrofitting the tank must be closed.⁹⁴

While new and existing tank owners are subject to different monitoring and construction requirements, both are subject to the same financial responsibility provision. Financial responsibility provisions applicable to owners and operators of UFTs became effective in January of 1989 and require all owners or operators of commercial petroleum UFTs with a throughput of more than 10,000 gallons a month to maintain financial assurance of \$1 million per release occurrence.⁹⁵ Owners or operators of non-commercial UFTs must maintain financial assurance of \$500,000 per release occurrence.⁹⁶ The SFRWQCB allows tank owners and operators to comply with the federal \$1 million financial responsibility requirement by establishing the ability to finance only \$5,000 of cleanup activities or third party damage claims through proof of insurance, a surety bond, letter of credit,

tion and thus regulations pertaining to existing tanks are more appropriately termed quasi-ex ante.

89. CAL. CODE REGS. tit. 23, § 2641(a) (1995); CAL. HEALTH & SAFETY CODE § 25292 (West 1985 & Supp. 1991).

90. CAL. CODE REGS. tit. 23, § 2641 (1995).

91. *Id.* Site closure proceedings include emptying the UFT of any remaining petroleum product and removing the tank from its sub-surface location. *Id.*

92. CAL. CODE REGS. tit. 23, § 2662 (West 1992 & Supp. 1995).

93. *Id.*

94. *Id.* § 2662(e).

95. Technical Standards of Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (UST)-Financial Responsibility Requirements. 40 C.F.R. §§ 280.90-.116 (1994).

96. Amount and Scope of Required Financial Responsibility 40 C.F.R. § 280.93(a)(1) (1994).

or other guarantees.⁹⁷ The tank owner or operator is then eligible to receive reimbursement payments of up to \$995,000 from the Underground Storage Tank Cleanup Fund⁹⁸ for either cleanup costs or judgments received by third parties injured by leaks.⁹⁹

b. Remedial Regulations

Beyond *ex ante* regulations, the SFRWQB retains regulatory power to prescribe standards for *ongoing* UFT activities enforced by the threat of *ex post* detection and sanctions. The Porter-Cologne Act and the California Health and Safety Code require owners and operators to report any unauthorized release of contained substances from a UFT to the SFRWQCB within 24 hours of the release.¹⁰⁰ Concomitantly, the owner or operator must investigate the condition, take immediate measures to stop the release and, if necessary, remove the UFT's remaining contents.¹⁰¹ Additionally, within five working days of detecting an unauthorized release, the owner or operator must submit a full written report to the SFRWQCB describing the nature of the release, measures taken to control and contain it, corrective or remedial action and, if necessary, a site characterization. The characterization must include, but is not limited to, subsurface soil conditions and locations of wells potentially affected by the release.¹⁰²

If the SFRWQCB determines on the basis of such a report that further corrective action must be taken to remediate the release, it may order the cleanup in four phases.¹⁰³ The Preliminary Site Assessment Phase calls for, at a minimum, initial site investigation, abatement actions and site characterization.¹⁰⁴ Subsequently, the owner or operator of the UFT must proceed with a

97. CAL. HEALTH & SAFETY CODE § 25299.32(a) (West Supp. 1995).

98. The Underground Tank Cleanup Fund was created by the Underground Storage Tank Cleanup Trust Fund Act of 1989 and enables any UFT owner or operator who is otherwise in compliance with UFT rules and regulations to seek reimbursement of cleanup costs after an initial individual expenditure of \$10,000. CAL. HEALTH & SAFETY CODE § 25299.10 (West Supp. 1995); *see also* part IV.B.2 for a discussion of the Fund and its impact on enforcement activities.

99. CAL. HEALTH & SAFETY CODE § 25299.32(a) (West Supp. 1995).

100. CAL. WATER CODE §§ 13260, 13271 (West 1992 & Supp. 1995); CAL. HEALTH & SAFETY CODE § 25295 (West 1992 & Supp. 1995); CAL. CODE REGS. tit. 23, § 2652(b) (1995).

101. CAL. CODE REGS. tit. 23, § 2652(b) (1995).

102. *Id.* §§ 2652(c), 654(b)(2).

103. *Id.* § 2722(a).

104. *Id.* § 2723.

Soil and Groundwater Investigation Phase if there is evidence that any of the surface or groundwater has been impacted.¹⁰⁵ This investigation must ascertain the lateral and vertical extent of the contamination and develop a corrective action plan to remediate any harm caused by the release.¹⁰⁶ The corrective action plan must evaluate feasible and effective remediation and abatement plans and develop preferred alternatives.¹⁰⁷

The next phase calls for implementation of the corrective action plan and its subsequent periodic monitoring for effectiveness with the results forwarded to the Agency upon request.¹⁰⁸ Finally, the Verification Monitoring Phase is designed to confirm short- and long-term effectiveness of cleanup and abatement.¹⁰⁹ All monitoring data compiled during the Verification Phase must be available to the Agency in the form of quarterly progress reports.¹¹⁰ In addition to these regulations for ongoing UFT activities in the event of a release, the ex post regulations require tank closure proceedings that ensure no release occurs during tank removal. Any release revealed through tank closure testing procedures must be reported to the Agency and promptly remediated.¹¹¹

3. *An Analysis of the Legal Framework*

The “legal powers and legal rights” of California UFT law provide for both an ex ante and an ex post regulatory regime. Regulated entities denied a permit to operate due to non-compliance with ex ante provisions may appeal the SFRWQCB denial to the SWRCB. However, the burden of delay occasioned by permit denial rests with the regulated entity and not with the SFRWQCB or the intended beneficiaries of the UFT regulations—the public.¹¹² Therefore, theoretically, the SFRWQCB’s ex ante regulatory decisions on monitoring, permitting or construction requirements are less likely to trigger legal resistance

105. *Id.* § 2724.

106. *Id.* § 2725(a), (b).

107. *Id.* § 2725(c).

108. *Id.* § 2726(b).

109. *Id.* at § 2727.

110. *Id.*

111. *Id.* § 2672.

112. Comparatively in the ex post regulation of LUFTs, if the SFRWQCB adopts a stringent cleanup program any delay occasioned by such an agency decision will likely result in a lengthy or incomplete cleanup. Unlike ex ante regulations, therefore, the burden of an ex post delay rests with the intended beneficiaries of the UFT laws, the public.

and harmful non-compliance if they are strictly interpreted.¹¹³ The SFRWQCB can impose strict ex ante permit and monitoring requirements more easily because they are not disrupting an ongoing operation, but merely postponing possible future benefits derived from an UFT operation.¹¹⁴

While ex ante provisions make it more feasible for the SFRWQCB to pursue strict, legalistic enforcement of regulations, the provisions do not dictate that conclusion. According to the SFRWQCB records for Alameda County, it appears that the Agency has not used the ex ante provisions to justify or pursue a strict or legalistic regulatory style. Of the 1043 Alameda County sites currently listed in the SFRWQCB database which reported an unauthorized release between January 1, 1985 and January 1, 1990, only 9 of these sites discovered the release through ex ante monitoring data.¹¹⁵ The remaining 1034 sites, 829 of which were not subject to enforcement action for noncompliance with the ex ante monitoring requirements, discovered their leaks only upon tank closure.¹¹⁶

The question raised by this data is whether alternative aspects of the SFRWQCB's ex ante legal environment, help explain the Agency's lack of enforcement action and its demonstrated dedication to a conciliatory enforcement style. Agency records reveal that four aspects of the SFRWQCB's ex ante legal environment contributed significantly to the low level of enforcement by LUFT regulators.

a. Severity of the Enforcement Burden

An existing tank operator who fails to comply with the monitoring requirement through permit approval is subject to stringent regulatory requirements which can potentially deprive the tank owner of the benefits of their ongoing UFT operations.¹¹⁷ The monitoring and permitting requirements contained in the 1985 UFT law apply to tanks which are already in existence as well as tanks "to be constructed."¹¹⁸ Under the California Code of Regulations, owners of existing tanks "*shall* . . . close any [ex-

113. Kagan, *Understanding Regulatory Enforcement*, *supra* note 19, at 97-98.

114. *See id.*

115. LUSTIS Database, *supra* note 33.

116. *Id.*

117. CAL. HEALTH & SAFETY CODE § 25299 (West 1992).

118. *See* CAL. CODE REGS. tit. 23, §§ 2630, 2640 (1995).

isting] underground storage tank for which an approved monitoring program is not promptly obtained.”¹¹⁹

Thus, although the permit requirement for an adequate monitoring system appears to constitute an *ex ante* provision, it operates as a quasi-*ex post* provision as it applies to existing tank owners. Owners of existing UFTs, therefore, will be more likely to mount legal resistance to a regulatory regime which threatens their ongoing business operations. In this regulatory climate, the SFRWQCB regulators may have felt less justified in adopting a strict legalistic approach to regulatory violations and may have become more prone to adopting a flexible or conciliatory enforcement style which deemphasizes formal enforcement orders as an effective compliance tool.¹²⁰

b. The Influence of Regulatory Oversight Costs

Second, interviews with LUFT regulators strongly suggest that regulatory administrative costs for permit approval have seriously compromised the SFRWQCB's ability to respond to violations of the *ex ante* provisions by both *new* and *existing* tank owners. Recall that in the 1985 LUFT legislation *existing* tank owners were required to install a leak detection monitoring system at the earliest possible opportunity.¹²¹ Alternatively, *new* tank owners could not commence UFT operations without an approved permit and monitoring program.¹²²

As of March 1994, however, nine years after the UFT legislation went into effect, only one half of the currently active tank sites in Alameda County were operating under approved permits.¹²³ While most of these sites have applied for a permit, the intense resource demand to process such applications has backlogged the agency.¹²⁴ Before the Agency issues a permit to a new UFT or to continue operation of an existing UFT, the SFRWQCB must inspect the UFT and determine if the tank

119. CAL. CODE REGS. tit. 23, § 2641 (1995). Under section 25299(a)(1) of the California Health and Safety Code, operating an underground storage tank system which has not been issued a permit is a violation of the UFT law and subjects an UFT owner or operator to civil penalties ranging from \$500 to \$5000 dollars for each day of violation.

120. *See e.g.*, Interview with LUFT Regulatory Staff, *supra* note 53; Interview with ACHD LUFT Staff, *supra* note 32; Interview with LUFT Regulatory Staff, *supra* note 8.

121. CAL. CODE REGS. tit. 23, § 2641(a) (1995).

122. *Id.*

123. Interview with ACHD LUFT Staff, *supra* note 32.

124. *See id.*

complies with the monitoring provisions of the UFT regulations.¹²⁵ With two regulators responsible for 1600 sites county-wide,¹²⁶ this site-visit requirement demands more agency resources than the SFRWQCB currently has to implement it. Because permit approval is conditioned on an adequate monitoring program, lack of permit review results in tank owners operating either with an improperly approved monitoring program or without a monitoring program at all.

Faced with their own inability to meet regulatory obligations, the Agency could not justify shifting the burden of this delay to the tank owners and operators by requiring them to cease operation of their tanks, thereby significantly impacting the viability of ongoing business operations.¹²⁷ When denial of a permit, as here, would cause existing businesses to close down, socio-legal scholars predict that even agencies vested with strong legal powers may interpret permit conditions flexibly or grant variances to avoid the very visible, negative impacts of stringent enforcement.¹²⁸ The enforcement result of this regulatory dilemma is that at least half of the existing tanks in Alameda county are operating without the permitting safeguards or pre-operational regulatory review contained in California's *ex ante* UFT provisions. As SFRWQCB's records indicate, this noncompliance with the *ex ante* provisions of California's LUFT laws—caused at least in part by the Agency's own regulatory inaction—has compromised the monitoring capabilities of the SFRWQCB and may have contributed to the continuing unsanctioned release of petroleum products into the soil and groundwater.

c. Failure to Report Unauthorized Releases

Failure to report unauthorized releases as revealed by monitoring tests is a third cause of the *ex ante* program's inadequacy between 1985 and 1990. Because SFRWQCB regulators only go

125. CAL. CODE REGS. tit. 23, § 2712(c) (Supp. 1995).

126. Interview with LUFT Regulatory Staff, *supra* note 8. This statistic reflects the regulator-to-tank site ratio before the introduction of a local oversight program which has now substantially alleviated this inspection burden. As is later discussed however, the increase in regulatory staff will not, without other fundamental changes, necessarily result in a more effective regulatory program. *See infra* part IV.

127. *See* Interview with LUFT Regulatory Staff, *supra* note 8; Interview with ACHD LUFT Staff, *supra* note 32.

128. Kagan, *Regulatory Enforcement*, *supra* note 26, at 393-94.

on site during tank closure operations,¹²⁹ tank closure may be the only means of determining whether there has been a reportable release. Agency records reveal that 99% or 1034 out of 1043 unauthorized releases recorded in the SFRWQCB records were discovered through tank closure proceedings.¹³⁰ This seriously undermines the ability to utilize ex ante regulations as powerful enforcement and leak prevention tools.¹³¹ The District Attorney for Alameda County, Consumer Affairs Division agrees that the implementation of the ex ante monitoring provisions in the UFT laws has been wholly ineffective with leak detection and reporting at existing tank sites in Alameda County.¹³²

d. The Regulators' Perspectives

Lastly, the apparent failure of the ex ante monitoring and permitting provisions may be due to the regulators' perspective of the regulated entities and SFRWQCB'S related enforcement posture. Of the nine UFT staff members polled at SFRWQCB, eight believed that UFT owners and operators can frequently or very frequently be trusted to comply with the applicable regulations and conduct themselves in an environmentally sound manner.¹³³ Only one of the nine regulators thought that UFT owners or operators frequently violate the applicable regulations. However, the perception of UFT owners and operators as compliant, trustworthy parties¹³⁴ who report unauthorized releases, and conduct adequate monitoring does not appear to be justified by SFRWQCB's records. In fact, this perspective may contribute to the lax permit review and approval process in Alameda County. Thus, where the SFRWQCB has the opportunity to adopt strict

129. Interview with LUFT Regulatory Staff, *supra* note 8. In addition, local agencies such as the Alameda County Health Department, which took over primary enforcement responsibility in Alameda County in 1991 estimate that only 10% of their time is spent on site. See Interview with ACHD LUFT Staff, *supra* note 32.

130. LUSTIS Database, *supra* note 33.

131. For a full discussion of SFRWQCB's regulatory behavior in light of this legal environment, see *supra* part III.

132. Interview with Gil Jensen, Alameda County District Attorney, Consumer Affairs Division, in Oakland, Cal. (Mar. 27, 1994).

133. The question posed to regulators read "(2) Greater than 75% of the UFT owners and operators can be trusted to do the right thing and to conduct themselves in an environmentally sound manner." The regulators chose from the following responses: (3) Very frequently; (2) Frequently; (1) Rarely; and (0) Almost never.

134. This perception of UFT owners and operators by SFRWQCB regulators may be a function of the Boards' definition of compliance. As will be discussed in Section III, SFRWQCB may define compliance as merely studying and monitoring an unauthorized release rather than pursuing remediation procedures.

regulatory requirements without engendering substantial legal resistance or harmful delay, the lack of resources needed to review permits and the perception of regulated entities as compliant partners has undermined this ability. Though the Agency could have required tank owners to remove their tanks while the agency was processing permit applications, this measure would have been a harsh and costly regulatory requirement that would have incited serious legal resistance. Consequently, the SFRWQCB has adopted a de facto flexible enforcement approach to what could otherwise operate as an effective and relatively inexpensive strict compliance measure for existing tanks.

The apparent ineffectiveness of the ex ante provisions has led SFRWQCB to concentrate its enforcement efforts on ex post detection of unauthorized releases and possible sanctioning of violations. However, the ex post program's effectiveness is limited by the difficulty of monitoring thousands of violators and detecting ubiquitous subsurface releases which, as discussed above, go unreported or undetected by the regulated entities. As discussed below in Section III, given its task environment, SFRWQCB's de facto reliance on an ex post system of enforcement runs the risk of severely compromising both compliance with California's UFT laws and remediation of subsurface releases.

4. LUFT Cleanup Standards: Specificity and Stringency

Socio-legal scholars have long looked to the specificity and stringency of regulatory standards as explanations for the particular enforcement behavior exhibited by a regulatory agency.¹³⁵ In some regulatory programs, statutes thoroughly describe the permits to be filed, the reports to be completed, and the records to be kept. The U.S. Mine Safety and Health Program regulations, for example, specify the precise frequency with which mines must be inspected, as well as the legal penalties that must be imposed on varying degrees of noncompliance.¹³⁶ Con-

135. See e.g., BARDACH & KAGAN, *supra* note 23, at 152-83; David Hedge et al., *Regulatory Attitudes and Behavior: The Case of Surface Mining Regulation*, 41 W. POL'Y Q. 323-40 (1988); Colin Diver, *A Theory of Regulatory Enforcement*, 28 PUB. POL'Y 257-99 (1980).

136. Shover, *supra* note 20, at 126-27 (describing provisions of the Surface Mining Control and Reclamation Act of 1977 which require "inspectors to write a notice of violation for every regulatory infraction they observe on a mine site. Further, [the Act] requires them to issue a cessation order (and order to cease all mining) under two conditions: (1) when they observe a violation that causes or creates the threat of

versely, alternative regulatory regimes assume that pre-determined rules and regulations cannot anticipate the variety of regulatory violations an enforcement official will face.¹³⁷ From this perspective, the logical strategy is to draft broadly worded regulations enabling regulatory officials to shape regulatory requirements and legal sanctions to particular individuals.

Presumably, the level of specificity and stringency contained in a regulatory program affects the enforcement behavior of the regulatory personnel.¹³⁸ Case studies have demonstrated that agencies which are subject to legally prescribed standards with specific thresholds may be more "vulnerable to criticism for lack of fidelity to law."¹³⁹ This is so because complainants and advocacy groups can more easily detect violations of an objective, articulated standard and exert pressure on the agency to bring the regulated entities into compliance with the law.¹⁴⁰ Thus, because it is relatively easy to detect and define regulatory inaction, legalistic enforcement and excessive stringency are more likely in such an agency.¹⁴¹

Where the regulatory standards are not carefully specified, conciliatory methods are more legitimate, legalistic enforcement is unlikely, and the risk of excessive leniency is somewhat larger.¹⁴² Unspecified standards allow a regulator to shape the enforcement response to a particular and potentially unforeseen

imminent danger to the health or safety of the public, or significant environmental harm, or (2) when an operator fails to abate, within a specified time period, a condition for which he has previously received a notice of violation."); see also Hedge et al., *supra* note 135, at 325.

137. Kagan, *Regulatory Enforcement*, *supra* note 26, at 395 (describing British Nursing Home regulations which include, unlike SMCRA, discretionary enforcement standards such as "reasonable" and "so far as feasible"); Ellen Baar, *Redesigning Regulation: Insights from Down Under*, Presentation to the Second Annual Meeting Canadian Law and Society Association (June 5, 1986); Patricia Day & Rudolf Klein, *The Regulation of Nursing Homes: A Comparative Perspective*, 65 *MILLBANK Q.* 303-47 (1987).

138. Kagan, *Regulatory Enforcement*, *supra* note 26, at 395.

139. Kagan, *Understanding Regulatory Enforcement*, *supra* note 19, at 100.

140. Stewardson, *supra* note 22, at 502.

141. *Id.*; Day & Klein, *supra* note 137, at 347. Specific rules and remedies, however, do not necessarily lead to substantively stringent regulatory programs. As Day and Klein discovered in a study of British nursing home regulations, enforcement officials faced with a stringent and specific enforcement mandate sometimes bend detailed rules to fit their own vision of good regulation, adopting a flexible enforcement style. In such a case stringency and specificity vary independently. Day & Klein, *supra* note 137, at 303-47.

142. See, e.g., Hedge et al., *supra* note 135, at 324; Kagan, *Understanding Regulatory Enforcement*, *supra* note 19, at 100.

set of circumstances, determining the proper level of enforcement on a case-by-case basis. Unlike a specific regulatory standard, discretionary standards couched in flexible terms leave the individual enforcement decision to the discretion of a field-level regulator, thus, making it more difficult for the public to detect and define instances of regulatory inaction. Under flexible discretion standards, socio-legal scholars contend that an agency is more likely to develop a conciliatory and flexible enforcement style.¹⁴³

It is from this perspective that this section addresses the low level of specificity of cleanup standards in California's UFT law as a possible explanation for both the conciliatory enforcement style adopted by the SFRWQCB and the low level of compliance existing among the regulated LUFT owners.

a. The Standards

According to Regional Board Resolution No. 89-39, almost all of the San Francisco Region's groundwater is considered an existing or potential source of drinking water.¹⁴⁴ Because the overall cleanup level established for a water body is based upon the most sensitive beneficial use identified, it follows that all of the San Francisco Bay Area (Region II) groundwater must be cleaned up to drinking water standards.¹⁴⁵ The Water Quality Control Plan for Region II further declares that groundwater cleanup levels are established based on beneficial uses of the water body and water quality objectives for the region.¹⁴⁶ The concentration range for cleanup levels is high quality "background" or between "background" and the more restrictive of Maximum or Secondary Maximum Contaminant Levels (MCL or SMCL) for groundwater with a beneficial use of municipal and domestic supply.¹⁴⁷ These MCLs or SMCLs consist primarily of narrative objectives combined with a limited number of numerical objectives.

Furthermore, the State Board per Resolution No. 68-16 declares that groundwater shall be cleaned up in a manner that pro-

143. See, e.g., BRIDGET HUTTER, *THE REASONABLE ARM OF THE LAW? THE LAW ENFORCEMENT PROCEDURES OF ENVIRONMENTAL HEALTH OFFICIALS* 1 (1988) (study of British health inspectors concluded that a flexible enforcement regime led to a conciliatory enforcement style).

144. State Water Resources Control Board Resolution No. 89-39 (1988).

145. *BASIN PLAN*, *supra* note 79, at IV-5.

146. *Id.* at IV-12.

147. *Id.*

motes attainment of background water quality, or the highest water quality which is reasonable if background levels cannot be restored.¹⁴⁸ The determination of what is reasonable must include all demands made on the water and all the values involved, beneficial and detrimental, economic and social, tangible and intangible.¹⁴⁹ Any alternative cleanup level less stringent than background must be consistent with the maximum benefit to the people of the state, not unreasonably affect present and anticipated beneficial uses of such water, and not result in water quality less than that prescribed in the Water Quality Control Plans and Policies adopted by the State and Regional Boards.¹⁵⁰

While these ground water cleanup levels seem to be stringent and uniform, the Regional Board may consider establishment of cleanup levels above background and at or below MCLs or SMCLs for groundwater with beneficial uses as domestic or municipal supply.¹⁵¹ Furthermore, the Basin Plan authorizes groundwater cleanup levels to be determined on a case-by-case basis by the RWQCB, with proposed final cleanup levels based on a discharger's feasibility study of cleanup alternatives comparing effectiveness, cost, time to achieve cleanup standards, and a risk assessment of impact on beneficial uses, human health and the environment.¹⁵² Thus, it seems apparent from the Basin Plan that while all groundwater is initially categorized as a potential source of drinking water and subject to stringent and specific cleanup levels, the Basin Plan allows for alternative clean up levels based on a site specific risk assessment.

In contrast, the initial remediation goal for soil contamination is set at "background". However, if it is unreasonable to remediate soils to background concentration levels, the SFRWQCB may allow residual pollutants to remain in the soil at concentrations such that any leachate generated would not cause groundwater to exceed groundwater quality objectives and health risk guidelines.¹⁵³ Because each site may be hydrologically diverse, levels protective of groundwater are not uniform. Thus, generic cleanup levels for soil contamination have been rejected.¹⁵⁴

148. State Water Resources Control Board Resolution No. 68-16 (1973) [hereinafter Resolution No. 68-16].

149. *Id.*

150. BASIN PLAN, *supra* note 79, at IV-18 (quoting Resolution No. 68-16).

151. *Id.*

152. *Id.*

153. *Id.*

154. *Id.* at IV-19.

The SFRWQCB has also developed a remediation policy that prescribes cleanup activities for only those sites which, during the initial investigation, reveal a concentration of petroleum hydrocarbon in the soil greater than 100 ppm.¹⁵⁵ While this standard is not a generic cleanup level, but rather a guideline for prioritization of site cleanups, it does set a level of acceptable contamination.¹⁵⁶

Overall, it appears that the soil and groundwater cleanup levels required under the UFT program are best characterized as moderately flexible and based on site specific, discretionary choices made by individual Regional Boards, rather than legally prescribed standards with specific thresholds. Precisely worded numerical or technical objectives are substituted for more accommodating statutory terms defining acceptable groundwater cleanup standards such as those that are "consistent with the maximum benefit to the people of the state [and which do not] unreasonably affect present and anticipated beneficial uses of such water."¹⁵⁷

Referring to cleanup levels, one SFRWQCB regulator commented, "I look at the constituents and the water table and I make a decision."¹⁵⁸ Regulators at the SFRWQCB conceded that they may allow a limited amount of pollution to remain at a site as long as that pollution is not migrating.¹⁵⁹ Most staff members favored a more moderate approach to cleanup levels based on the risks and costs specific to each cleanup site. Some staff members believed that UFT regulators must consider the sensitivity of the groundwater case-by-case and determine a cleanup regime with attention to how close the contamination is to the water table.¹⁶⁰ One staff member summarized the cleanup level decisionmaking process in the following manner: "Once the leak [is discovered] there is a lot of discretion and latitude to pursue varying regulatory responses" ¹⁶¹ As socio-legal models predict, vested with the discretion to determine cleanup levels within

155. SFRWQCB, TRI-REGIONAL GUIDELINES FOR PRELIMINARY SITE ASSESSMENT, EVALUATION, AND INVESTIGATION OF UNDERGROUND STORAGE TANKS 7 (1990).

156. BASIN PLAN, *supra* note 79, at 19.

157. Resolution No. 68-16, *supra* note 148, at 30.

158. Interview with UFT Staff, SFRWQCB, in Oakland, CA (March 18, 1994) (on file with the author).

159. *See, e.g.*, Interview with LUFT Regulatory Staff, *supra* note 53.

160. *See, e.g., id.*

161. Interview with LUFT Regulatory Staff, *supra* note 8.

a specified range, the SFRWQCB may be more likely to adopt a conciliatory approach than legalistic approach to enforcement. In this regard, the SFRWQCB has been given a broad grant of discretion that allows them to order tank owners to do whatever seems necessary and prudent under the particular circumstances, as well as to relax the rules and tailor their enforcement procedures to a given enforcement scenario.

Because there are no obvious standards by which to judge the SFRWQCB's regulatory behavior, the SFRWQCB's enforcement decisions are relatively insulated from public review. This lack of specificity may have been one factor influencing the lax enforcement style adopted by the SFRWQCB between 1985 and 1990.

b. The Effects of Discretionary Standards on the SFRWQCB's Enforcement Program

Along with contributing to the SFRWQCB's conciliatory enforcement style, the SFRWQCB's use of discretionary cleanup standards may have also diminished both tank owners' willingness to comply with the LUFT regulations and, consequently, the success of the Agency's enforcement practices.

First, enforcement decisions based on these discretionary standards cannot be made mechanically by SFRWQCB regulators and require more Agency resources than a decision based on a simple numerical objective.¹⁶² The effect of this resource intensive process is that the SFRWQCB regulators have minimal remaining resources available to conduct on-site inspections of the regulated entities.¹⁶³ As will be discussed below, this lack of on-site inspection capability has reduced the leak detection and enforcement proficiency of the SFRWQCB LUFT regulators.¹⁶⁴

Second, because the enforcement decisionmaking process is discretionary and left in the hands of individual regulators, the UFT regulations are more likely to be enforced in a piecemeal fashion, with each regulator making their own, potentially inconsistent, decision with regards to the enforcement requirements at a particular site.¹⁶⁵ As one LUFT regulator aptly noted: "The

162. Interview with UFT Staff, *supra* note 158.

163. See Interview with LUFT Regulatory Staff, *supra* note 8.

164. See *supra* section III.B.1 for a discussion of the Boards' task environment.

165. Interview with UFT Staff, *supra* note 158; Interview with LUFT Regulatory Staff, *supra* note 53 (In determining cleanup levels "I take into consideration the sensitivity of the groundwater on a case-by-case basis and determine how close the contamination is to the water table."); Interview with LUFT Regulatory Staff, *supra*

local agencies and the SFRWQCB are not consistent in their requirements. Local agencies still think we can get the groundwater and soil pristine. So the standards are different"¹⁶⁶

This level of individual discretion can potentially invite chaos. Socio-legal scholars hypothesize that lack of regular and consistent enforcement will erode the deterrent effect of a regulatory regime, resulting in unpredictability, unequal treatment, and perhaps most importantly, recalcitrance on the part of regulated entities who do not trust the SFRWQCB to treat them "fairly."¹⁶⁷ Steve Ritchie, Executive Officer of the SWRCB suggests that this phenomenon is occurring in the UFT program. Addressing the disparate enforcement behavior towards cooperative and uncooperative tank owners, Ritchie stated that "[we] could levy heavy fines right and left, but we've got enough reports (from cooperative tank owners) to work on."¹⁶⁸ Discretionary standards in this regulatory context have enabled the SFRWQCB regulators to adopt inconsistent remediation criteria for similar sites based not on the risk posed by the unauthorized release, but rather on the willingness of the regulated entity to comply with SFRWQCB enforcement efforts.

This regulatory practice has resulted in many otherwise cooperative tank owners feeling that their "good" behavior brings them no favor with the agency while the "bad apples" continue to avoid regulatory enforcement through mere recalcitrance.¹⁶⁹ "The agency must separate the good apples from the bad apples and obviously treat the bad apples harshly. But the good apples are facing a ubiquitous problem and a societal problem . . . and the agency treats us as criminals."¹⁷⁰ A recent audit of California's LUFT program concurred with this conclusion. The EPA's Inspector General concluded that California officials were

note 8 ("There is a lot of discretion and latitude to pursue varying regulatory responses").

166. Interview with LUFT Regulatory Staff, *supra* note 8.

167. Kagan, *Regulatory Enforcement*, *supra* note 26, at 389-95; DAVID VOGEL, NATIONAL STYLES OF REGULATION 1 (1986); James M. Strock, Cal. Secretary for Env'tl. Enforcement, Presentation to the State Bar of California, Env'tl. Law Section at Yosemite, CA (Oct. 21-24, 1993) (describing the importance of fair and predictable enforcement as a "top priority for many in the Legislature, the general public, and the business community as well.")

168. Asimov, *supra* note 8, at A1 (quoting Steven Ritchie, Executive Officer, SWRCB).

169. Telephone interview with Mark Borsub, Attorney and UFT Owner, in S.F., Cal. (Mar. 25, 1994) (on file with the author).

170. *Id.*

neglecting the most harmful leaks in favor of smaller leaks that are easier to cleanup.¹⁷¹ LUFT regulators themselves support this proposition stating that more enforcement resources are “spent . . . on low-priority sites to capitalize on the willingness of cooperative tank owners” to comply with the law.¹⁷² Because responsible parties often refuse to remediate their releases, LUFT regulators believe it is “more efficient to move on to cases with cooperative tank owners rather than spend time with belligerent ones.”¹⁷³ This enforcement practice is facilitated by discretionary cleanup standards which can be applied by the field-level regulators on a case-by-case basis without regard for the impact of such “front-line” decisions on overall enforcement success. It is precisely because of this disparate treatment that many UFT owners and operators cite SFRWQCB regulatory inconsistencies as one reason for their unwillingness to cooperate with the SFRWQCB.¹⁷⁴

Although selective and discretionary enforcement may be recognized as advantageous by some who believe that this approach achieves maximum compliance on limited agency resources, tank owners regulated by the SFRWQCB do not view this unequal treatment so favorably. Consequently, implementation of the California UFT law’s discretionary cleanup standards resulted in an unclear and inequitable enforcement policy which the data indicates bred resistance by LUFT owners to regulatory compliance.

The legal environment of the SFRWQCB, Alameda Division, appears to have contributed, in part, to the adoption of a conciliatory enforcement style. Armed with significant discretion to determine remediation standards, the SFRWQCB LUFT regulators were insulated from public scrutiny by the very vagueness of the regulations. The case-by-case enforcement approach reduced compliance rates by requiring that valuable Agency resources be dedicated to decision-making rather than on-site inspection and by inciting recalcitrance on the part of the regulated entities who believed that they were not being treated fairly by the LUFT regulators. In the end, the lack of specific regulatory standards or,

171. EPA, *AUDIT OF THE SWRCB LUFT REGULATORY PROGRAM 5* (1992); Jim Mayer, *Cleanup of Leaky Tanks Criticized in EPA Audit*, SAC. BEE, June 17, 1993, at A1 [hereinafter Mayer, *Cleanup of Leaky Tanks*].

172. *Cleanup of Leaky Tanks*, *supra* note 171 at A1 (quoting Mike McDonald, Chief of the SWRCB LUFT Program).

173. Asimov, *supra* note 8, at A1.

174. See interview with Mark Borsub, *supra* note 169.

alternatively, a consistent enforcement policy, impaired the ability of the SFRWQCB to pursue their regulatory mandate.

5. Enforcement Mechanisms for Maintaining Water Quality

The Porter-Cologne Act gives the Regional Boards substantial flexibility in enforcement actions for discharges of waste which may affect groundwater quality. Rather than dictating a mandatory enforcement regime, the enforcement process is purely discretionary. The enforcement mechanisms include administrative orders as well as civil and criminal penalties.

If a Regional Board finds that a discharge of waste is taking place or threatens to take place which will affect the waters of the state, the Board *may* take action by issuing cease and desist orders,¹⁷⁵ cleanup and abatement orders¹⁷⁶ or an injunction through the Attorney General requiring prompt compliance with the Porter-Cologne Act.¹⁷⁷ Civil penalties *may* be imposed administratively by the Regional Board for failure to file a report of waste discharge,¹⁷⁸ discharging waste without an appropriate permit,¹⁷⁹ failure to provide a technical/monitoring report detailing any unauthorized release,¹⁸⁰ or intentional or negligent violation of a cease and desist order or cleanup and abatement order.¹⁸¹ In determining the amount of civil liability the SFRWQCB must, among other factors, consider the nature, circumstances and gravity of the violation, whether the discharge is susceptible to cleanup, whether the violator has the ability to pay, whether there are any prior violations, and the degree of the violator's culpability.¹⁸² The administrative civil liability (ACL) provisions

175. CAL. WATER CODE § 13302 (West 1992).

176. *Id.* § 13304(1)(a).

177. CAL. WATER CODE §§ 13304, 13361 (West 1992 & Supp. 1995).

178. CAL. WATER CODE § 13261(b)(1) (West 1992).

179. *Id.* § 13265(b)(1).

180. *Id.* § 13268(b)(1).

181. *Id.* § 13350. This section was amended January 1, 1990 to require the assessment of minimum liabilities of \$100 or \$500 per day depending on the circumstances. The Regional Board may assess less than the minimum if it makes express findings setting forth the reasons for its action. This minimum assessment is required only when an administrative civil penalty is issued pursuant to Section 13350.

182. CAL. WATER CODE §§ 13327, 13385 (West 1991). The administrative penalties can range from \$10 per gallon to \$10,000 dollars per day depending on the violation. Since the median motor fuel outlet—a major source of UFT's in Alameda County—made in 1987 only \$14,000 in after tax profits these penalties, if used, would operate as an effective deterrent. Kevin R. Duncan & B. Todd Bailey, *Innocence Amid LUST: The Innocent Buyer and Leaking Underground Storage Tanks Containing Petroleum*, 7 B.Y.U. J. PUB. L. 245, 245-47 (1993).

were enacted in 1984 to serve as an expedited enforcement alternative to litigation with each regional board having broad discretion to set the amount of liability and determine the procedural and substantive obligations of the violator.¹⁸³ Even if no civil penalties are assessed, any costs incurred by the SFRWQCB in response or remediation of a release may be recovered.¹⁸⁴

Lastly, the Porter-Cologne Act provides certain misdemeanor enforcement provisions for the SFRWQCB and its regulatory personnel. The SFRWQCB may pursue a misdemeanor violation for failure to furnish a report, for knowingly furnishing a false report, for willfully withholding material information regarding a discharge,¹⁸⁵ for discharging waste which harms or threatens to harm the waters of the state,¹⁸⁶ or for failure to furnish and comply with the monitoring program.¹⁸⁷ Because these misdemeanor provisions are part of the Porter-Cologne Act their implementation is dependent on an actual or threatened release which may immediately harm the waters of the state. Additionally, the criminal misdemeanor provision is only available for procedural violations such as the *failure to report* an unauthorized release or non-compliance with the *monitoring provisions*. Consequently, the SFRWQCB cannot use the criminal misdemeanor to motivate recalcitrant UFT owners to pursue effective *remediation* of an unauthorized release which does not immediately affect the groundwater. The Alameda County District Attorney opines that the misdemeanor provisions in the Porter-Cologne Act do not address the dilemma of motivating recalcitrant parties to pursue adequate remediation programs. They apply only where the party has not furnished a report or falsifies a report. We need misdemeanor provisions that apply directly to and can be used to force dischargers to pursue cleanups. It is insane to think these people will cleanup their releases without a significant amount of cajoling.¹⁸⁸

Furthermore, the only criminal misdemeanor provision in the Health and Safety Code is limited to prosecution based on falsifying monitoring records or knowingly failing to report an unauthorized release.¹⁸⁹ Thus any number of the few LUFT owners

183. Interview with Gil Jensen, *supra* note 132.

184. CAL. WATER CODE § 13304 (West 1992).

185. *Id.* § 13261(a), (c).

186. *Id.* § 13265(a).

187. *Id.* § 13268.

188. Interview with Gil Jensen, *supra* note 132.

189. CAL. HEALTH & SAFETY CODE § 25299(d) (West 1992 & Supp. 1995).

or operators who receive civil penalties or cleanup and abatement orders are well aware that their noncompliance with those orders will not lead to any higher sanction. As a result, any deterrence function that would otherwise be served by the imposition of civil penalties is seriously weakened. Because the SFRWQCB's enforcement powers do not include a credible escalating range of sanctions for violations of the UFT laws, the agency's incentive to enforce these laws strictly has been undermined.

While the misdemeanor provisions are also limited in scope, the California UFT law, like the Porter-Cologne Act, provides a variety of civil and injunctive remedies for failure to acquire and operate under an appropriate permit,¹⁹⁰ failure to comply with monitoring and enforcement orders¹⁹¹ or falsifying monitoring records.¹⁹² Where a discharger engages in any act which, in the SFRWQCB's judgment violates the Health and Safety Code and applicable UFT regulations, they may bring an action to enjoin those acts and to seek an order mandating compliance.¹⁹³

These enforcement tools provide SFRWQCB broad with discretionary authority to pursue compliance with UFT laws. In addition to the enforcement tools mentioned above many of the regulators at the SFRWQCB do much of their enforcement work through telephone conversations and informal meetings with the regulated entities.¹⁹⁴ As a result, there is no pre-ordained enforcement mechanism which must be applied in a particular situation. Hypothetically, SFRWQCB regulators are free to pursue administrative civil penalties for failure to file a report of a release or they may choose to telephone an UFT owner and grant them a one month extension to file, for example, a monitoring report.¹⁹⁵ One SFRWQCB regulator noted that "[i]t is only when the parties fail to do the minimum that I take it to enforcement."¹⁹⁶ Because the enforcement tools are discretionary, the SFRWQCB may be prone to leniency in its enforcement behav-

190. *Id.* § 25299(a)(1), (b)(1).

191. *Id.* § 25299(a)(7), (b)(7).

192. *Id.* § 25299(d).

193. *Id.* § 25299.01.

194. *See, e.g.*, Interview with LUFT Regulatory Staff, *supra* note 8; Interview with UFT Staff, *supra* note 158.

195. *See* Interview with LUFT Regulatory Staff, *supra* note 8.

196. *Id.*

ior and may develop a conciliatory approach to violations.¹⁹⁷ The data indicates that this enforcement phenomenon influenced the regulatory behavior of LUFT regulators between 1985 and 1990.

Although the regulators at the SFRWQCB welcome the discretion granted them in their enforcement endeavors, an analysis of the agency's task environment demonstrates how this discretionary enforcement regime operates within an agency which has minimal resources available for monitoring regulated entities.

B. *SFRWQCB's Task Environment*

Socio-legal scholars point to the task environment of the agency as an additional explanation for conciliatory enforcement behavior. A study of the U.S. Office of Surface Mining which enforced stringent strip mining regulation¹⁹⁸ provides support for this proposition. While SMCRA is specific about penalties and requires inspectors to issue citations for every violation observed, officials in OSM's Western office adopted a conciliatory, cooperation-oriented enforcement style, while the Eastern office defined themselves as "deterrence-oriented cops," issuing substantially more citations and cessation orders per inspector than their western counterparts.¹⁹⁹ If the stringency of the legal regime was the only force which affected enforcement style both regions would most likely issue similar or at least comparable quantities of enforcement orders.

Shover found that these differences in enforcement style were a rational response to differences between the task environments in the two offices.²⁰⁰ The visibility of the violations, the ability of the officials to detect violations and the capacity and willingness of the regulated entities to comply were all elements of the task environment that directly affected the agency's enforcement.²⁰¹ Kagan accurately predicts this relationship by hypothesizing that when violations are more visible and enterprises are more willing to comply, regulators can more sensibly adopt a cooperation-

197. Kagan, *Understanding Regulatory Enforcement*, *supra* note 19, at 96-98; see also Shover, *supra* note 20, at 123-25.

198. See Shover, *supra* note 20.

199. See *id.* at 127. For example, during July 1979 through June 1980 the Region East inspectors issued 17.22 notices of violation and 4.77 compliance orders per million tons of coal produced while the Region West inspectors issued only .44 notices of violation and .03 compliance orders per million tons of coal produced.

200. See *id.* at 133-37.

201. See *id.*

seeking enforcement style.²⁰² Existing studies point to three task-environment features which may contribute to the visibility of violations and the willingness of regulated entities to comply: (1) the frequency of interaction between the regulator and the regulated entities; (2) the size and sophistication of the regulated enterprises; and (3) the cost of compliance viewed in terms of the economic resilience of the regulated enterprises.²⁰³ Against this backdrop, I investigated the task environment of the SFRWQCB. This analysis applies Kagan's and Shover's hypotheses and identifies additional characteristics of the SFRWQCB's task environment that may have affected the Agency's regulatory response.

1. Frequency of Interaction

Scholz's game-theory analysis suggests why frequency of interaction between a regulator and a regulated enterprise may have a profound effect on the regulator's enforcement style.²⁰⁴ For example, if a regulator is able to make frequent site visits then the regulator may apply requirements flexibly provided the regulated enterprise cooperates. If a regulated enterprise attempts to exploit this cooperative stance, the regulator can impose strong legal sanctions. This quid pro quo strategy depends on immediate sanctions for any breach of the cooperative agreement. Thus, the regulator and the regulated must have frequent interaction for this to be a feasible enforcement style.²⁰⁵ The regulated party must perceive that any violation of the de facto agreement will be detected so that the likelihood of legal sanction will deter their non-compliant behavior.

However, if the inspector performs infrequent site visits the regulated entity may perceive a low risk of enforcement and detection. In this situation a cooperative stance is more risky and the regulator will likely adopt a more legalistic enforcement style.²⁰⁶ This game-theory depends, therefore, on timely punishment of any breach of trust when the regulator and the regulated firm interact frequently. If the inspector conducts infrequent site visits, he will presumably have less knowledge of the circumstances and the entities he is policing. In response, the regulated

202. Kagan, *Understanding Regulatory Enforcement*, *supra* note 19, at 100.

203. *Id.* at 101.

204. *See* Scholz, *supra* note 21, at 6, 386-86.

205. *Id.*

206. Kagan, *Understanding Regulatory Enforcement*, *supra* note 19, at 92.

entities can reasonably assume that violations will escape detection and that, at the very least, compliance costs can be delayed.

An application of Scholz's and Kagan's theory to the task environment of the SFRWQCB indicates a distinct enforcement phenomenon. Between 1985 and 1990, the SFRWQCB had one full time and one part time inspector to police 1600 active tank sites in Alameda County.²⁰⁷ With each inspector responsible for approximately 800 sites, actual site visits were virtually non-existent or at best highly infrequent. As one staff member notes, "[I am] so inundated with paperwork . . . it cuts down on my field time. I relish any time I can get out of this office."²⁰⁸ Interviews with other LUFT regulators indicate that a substantial amount of the regulator's time is spent on the telephone with responsible parties acting as consultants, instructing tank owners about how to remediate their sites. "I do most of my regulating over the phone. I get 10-15 phone calls a day [from tank owners]."²⁰⁹

Other inspectors familiar with the LUFT regulatory process confirm that the sheer number of tank cases precludes on-site investigation. "The source of the problems is the overwhelming number of cases."²¹⁰ Given the rarity of site visits, it would be expected under a game-theory analysis that adopting a cooperative enforcement style would likely undermine compliance with UFT regulations. The adoption of a legalistic approach, defined by a high number of formal enforcement actions, would be the rational regulatory response. However, in the face of this prediction, the SFRWQCB maintained a conciliatory enforcement style in response to their task environment.

According to the SFRWQCB's records, of the 928 sites which experienced unauthorized releases from UFTS and were subject to enforcement action on or before October 1, 1991,²¹¹ only one site was subject to administrative or civil liability or court injunction.²¹² Twenty-nine sites received cleanup and abatement or-

207. Interview with LUFT Regulatory Staff, *supra* note 8; see Interview with LUFT Regulatory Staff, *supra* note 158; LUSTIS Database, *supra* note 33.

208. Interview with LUFT Regulatory Staff, *supra* note 8.

209. Interview with UFT Staff, *supra* note 158.

210. Mayer, *Cleanup of Leaky Tanks*, *supra* note 171, at A1.

211. LUSTIS Database, *supra* note 33.

212. *Id.* Again, the SFRWQCB defines enforcement action in four categories.

0-no action taken

1-A cleanup and abatement order or technical report request issued to an uncooperative responsible party.

2-A cleanup and abatement order or technical report request issued to a cooperative party.

ders or requests for technical reports to define the nature and the extent of the release and the remaining 898 sites had no enforcement action taken.²¹³ Although the SFRWQCB's regulatory style contradicts the predictions of the socio-legal literature, other unique characteristics of the SFRWQCB's task environment may explain SFRWQCB's enforcement approach.

2. Behavior of the Regulated Enterprises

One such suggested characteristic is that the regulated entities within Alameda County are compliant and do not need strong enforcement as an incentive to comply with UFT regulations. Using SFRWQCB records I was able to test this hypothesis. Of the 834 sites which reported unauthorized releases between 1985 and 1990 and were not subject to any enforcement action, 512 of these sites experienced leaks which affected or threatened the groundwater.²¹⁴ The inquiry then is whether these 512 sites not subject to any SFRWQCB enforcement action complied with UFT regulations on their own without regulatory action.

SFRWQCB records demonstrate that 69 of these 512 sites have taken no further action in response to the release aside from initial report of the leak.²¹⁵ Additionally, a significant number of these 69 releases have resulted in free petroleum floating in the groundwater.²¹⁶ Apparently, lack of enforcement is unrelated to the seriousness of the release or the extent of the contamination. While 69 sites have taken no further action on their own accord, 355 sites have responded to their leaks by assessing the contamination and implementing a workplan for further *investigation* of the release.²¹⁷ An additional 30 sites have taken the next step and proposed a remediation plan for short- and long-term cleanup of the release, while 56 sites have undergone remediation and are either continuing that phase or are through post-remediation tank closure proceedings.²¹⁸ This data

3-Administrative civil liability or court injunction.

Water Quality Control Board, Region II, A Shortcut Guide To LUSTIS & LUSTIS Protocol 22 (1994).

213. LUSTIS Database, *supra* note 33.

214. I chose sites where unauthorized releases affected the groundwater to analytically isolate those sites which would be a cleanup priority for the SFRWQCB.

215. LUSTIS Database, *supra* note 33.

216. *Id.* In 59 of these 69 releases, free petroleum product was found in the groundwater.

217. *Id.*

218. *Id.*

suggests that there remains a significant majority of the 512 sites did not respond at all to the unauthorized release or engaged in a "study and wait" process.²¹⁹ Even though the SFRWQCB determined that these releases affected or threatened the groundwater, actual remediation of the releases did not occur.²²⁰

From this data it does not appear that the non-compliant behavior of the regulated entities justifies the conciliatory approach of the SFRWQCB toward owners or operators of LUFTs. In fact, the data suggests that the regulated entities may have exhibited non-compliant behavior in response to the behavioral posture of the SFRWQCB toward its task environment. Tank owners have good reason to conclude that it is highly unlikely non-compliant behavior will be detected and subject to legal sanction. Even if a release is detected, a rational UFT owner or operator will make only token efforts to comply. They have no incentive to pursue costly remediation knowing that the most a SFRWQCB regulator will do is issue a formal letter requesting a preferred course of action (most likely limited to monitoring the release), with no follow-up or substantial likelihood of further enforcement action.

Recognizing the effect of this enforcement behavior statewide, the EPA's Inspector General concluded that the reluctance "to crack down on leaking tank owners . . . [has] created an incentive for polluters to put off cleanup for years."²²¹ This perception on the part of the regulated enterprise is exactly what Kagan's hypothesis might predict and is the reason why agencies, faced with infrequent site visits, might adopt a legalistic enforcement style to deter non-compliance.

Why, despite evidence that the groundwater had been affected or threatened, did the SFRWQCB fail to conduct more frequent inspections? Why, having discovered contaminated sites, did the SFRWQCB not use its legal powers to reduce or eliminate the

219. Moreover, according to SFRWQCB records, of the 512 sites which experienced a release that affected or threatened groundwater, 285 of these sites did not take even initial abatement actions. See CAL. CODE REGS. tit. 23, § 2653 (1995).

220. It is possible, though not verified through any of my interviews, that the SFRWQCB, Alameda Division considered studying the release compliant behavior even though no remediation of the release occurred. Under this definition of compliance the SFRWQCB may be justified in perceiving UFT owners and operators as trustworthy compliant parties even though they have not remediated their releases. See *supra* part III.C.

221. Mayer, *Cleanup of Leaky Tanks*, *supra* note 171, at A1.

contamination? Additional aspects of the SFRWQCB's task environment point to an explanation.

3. Regulatory Consequences of Past Enforcement Successes or Failures

Theoretically, the enforcement behavior of a regulatory agency may be due to its success or failure in using formal enforcement orders to achieve its regulatory mandate. Most studies of environmental law enforcement, however, have not been able to utilize outcome measures with which one might assess the effectiveness of varying enforcement styles.²²² Efforts to analyze and adequately explain regulatory style as a function of effectiveness from aggregate data have for the most part been unavailing because of this deficiency. Using detailed data on formal enforcement orders and remediation rates obtained from the SFRWQCB records, I was able to analyze the SFRWQCB's regulatory style as a function of enforcement effectiveness. The data indicates that 1) the ineffectiveness of past formal enforcement orders partially explains the SFRWQCB's conciliatory enforcement style and 2) the SFRWQCB's regulatory response is a rational reaction to the remediation rate of unauthorized releases in the absence of formal enforcement orders.

SFRWQCB records indicate that of the 1043 unauthorized releases reported to the SFRWQCB between 1985 and 1990 with an enforcement date prior to October 31, 1991, only 29 sites received formal enforcement orders with 23 of the orders attributable to sites where a release had threatened or affected the groundwater.²²³ Although the SFRWQCB issued a cleanup and abatement order in each instance, only nine sites responded by initiating remediation of their releases. The remaining fourteen sites took no further action to either abate the release or remediate the contamination. This represents a thirty-nine percent compliance rate in response to a SFRWQCB formal enforcement order.²²⁴ However, in order to assess the success or failure of the

222. See, e.g., Kagan, *Regulatory Enforcement*, *supra* note 26, at 390.

223. The following discussion of the effectiveness of formal enforcement orders in achieving greater compliance rates is based on information available in the LUSTIS Database, *supra* note 33.

224. The LUSTIS Database and SFRWQCB records do not distinguish between uncooperative and cooperative parties in the context of enforcement action. If such a distinction could be drawn it could potentially explain the ineffectiveness of formal enforcement orders in achieving compliance as presumably the parties subject to formal enforcement are likely to be less compliance-oriented than those who are not

SFRWQCB's formal enforcement program, these statistics must be compared to the remediation status of sites which also experienced similarly serious releases, but were not subject to formal enforcement by the SFRWQCB.

SFRWQCB records indicate that in the period between 1985 and 1990, 512 sites reported unauthorized releases which affected or threatened the groundwater. None of these sites were subject to formal enforcement action. To date 77 of the 512 sites have remediated their releases. The remaining 441 sites have not to date remediated their releases but rather have undergone only site assessment or submitted a corrective action plan. This represents a fifteen percent remediation rate where the SFRWQCB has taken no formal enforcement action.

It appears that the rational LUFT regulator, possessed of these comparative remediation rates and facing the decision to issue a formal enforcement order, may logically conclude that it is inefficient and relatively ineffective to pursue formal enforcement. Rather, a flexible enforcement approach has proved roughly as effective as a legalistic stance. Moreover, this data indicates that as a function of cost, adopting a regulatory behavior that deemphasizes formal enforcement orders was the most economically efficient means with which to pursue remediation of unauthorized releases.

Accordingly, SFRWQCB's regulators confirm that dedication to a conciliatory and educative approach in the face of non-compliance is motivated by a concern for the efficient allocation of scarce agency resources. Formal enforcement efforts are very rare primarily because they are resource intensive. SFRWQCB regulators agree with this analysis. "[The UFT program] does not issue many fines because this takes a lot of time. We would rather prioritize and do cleanup with large volumes of people than chase a couple of fines. [Fines] are only used with very egregious cases."²²⁵ "Besides this socio-economic concern that it is just impossible to clean up and it is too expensive, orders are very laborious. Everything has to shut down for two weeks while the order is presented to the Board. Unless the RP [responsible party] is a big problem we do not go after orders."²²⁶

subject to formal enforcement orders. Thus, the remediation rates of those entities will likely be lower even after formal enforcement.

225. Interview with LUFT Regulatory Staff, *supra* note 53.

226. Interview with LUFT Regulatory Staff, *supra* note 8.

As these regulators' statements make clear, a legalistic enforcement style is not only regarded within the Agency as an ineffective means of deterrence or compelling remediation, but is also considered infeasible due to resource scarcities. SFRWQCB records indicate that the conciliatory enforcement approach exhibited by Agency regulators was due in part to the relative failure of formal enforcement orders to achieve remediation of unauthorized releases. As the interview data illustrates, this non-compliance element of the SFRWQCB's task environment appears to have strongly influenced decisions by LUFT regulators to reject formal enforcement, resulting in a conciliatory enforcement style in favor of a conciliatory approach.

4. Size and Sophistication of the Regulated Enterprises: The Cost of Compliance

In addition to the failure of formal enforcement orders, SFRWQCB records reveal that the size and sophistication of the tank owners and operators had a direct effect on the enforcement behavior of the Agency.

Put simply, "regulating elephants is different from regulating foxes."²²⁷ Socio-legal scholars predict that agencies will be hesitant to dedicate many enforcement resources to the regulation of smaller enterprises due to the inherent difficulties encountered in small source regulation and the relatively small compliance benefits compared to large source regulation.²²⁸ Kagan asserts that this difference in enforcement style is partly attributable to the frequently cooperative stance of large enterprises. Such enterprises are generally more concerned with public image and are more likely to maintain a staff of experts to deal with environmental problems.²²⁹ As a result, the regulatory agency is unlikely to respond with legalistic enforcement to the cooperation-seeking strategy of the large corporation.²³⁰

Conversely, smaller unsophisticated firms which maintain low public profiles may not be as concerned with regulatory compli-

227. Kagan, *Regulatory Enforcement*, *supra* note 26, at 397.

228. *Id.* at 397-98; Stewardson, *supra* note 22, at 452.

229. Kagan, *Understanding Regulatory Enforcement*, *supra* note 19, at 103; Stewardson, *supra* note 22, at 452.

230. Christopher Stone, *Controlling Corporate Misconduct*, PUB. INTEREST, Summer 1977, at 58-61; John C. Coffee, *No Soul to Damn, No Body to Kick: An Unscandalized Inquiry Into the Problem of Corporate Punishment*, 79 MICH. L. REV. 386, 424-25 (1981) (recognizing that public stigmatization can lead large businesses or corporations to adopt cooperation-seeking regulatory policies).

ance, may be more interested in protecting their "bottom line," and in fact may be ignorant of both the existence of regulations and their underlying rationale.²³¹ Thus, less cooperation from these entities is expected and, in response, a regulatory agency may adopt a legalistic enforcement stance to ensure compliance.²³²

Studies testing this theoretical distinction in regulatory practice lend support to this proposition. For example, Shover's study of the Office of Surface Mining revealed that Region West inspectors who dealt with large sophisticated enterprises adopted a cooperative enforcement strategy while Region East inspectors who dealt with much smaller, unsophisticated mining firms adopted a legalistic stance towards enforcement.²³³ Shover attributed this dichotomy in regulatory behavior to both the ability of the regulated entity to finance compliance costs and the relative sophistication of the entities.²³⁴ Consistent with this hypothesis, Shover found that the specialized personnel of the larger firms were much more likely to be civil and reasonable towards inspectors. Conversely, the less knowledgeable, unspecialized personnel were more defiant towards their regulatory obligations requiring a more aggressive, determined enforcement style.²³⁵

*a. Size and Sophistication's Impact on SFRWQCB
Enforcement*

According to the SFRWQCB records, the behavior of the major oil companies and SFRWQCB's response contrasts sharply with the behavior of smaller, less sophisticated enterprises and SFRWQCB's response. Of the 1017 sites reporting an unauthorized release between January 1, 1985 and January 1, 1990, 173 of the site owners were major oil producers such as Arco, Exxon, Shell, and Chevron. 870 of the site owners were relatively

231. Stewardson, *supra* note 22, at 452-53.

232. See Kagan, *Understanding Regulatory Enforcement*, *supra* note 19, at 103.

233. Shover, *supra* note 20 at 130-33.

234. *Id.*; Likewise, Bridget Hutter's study of British health inspectors found that inspectors working in urban regions with severe crowding and sanitation problems resort to formal prosecution more often than their counterparts in other regions. Hutter concluded that this disparate enforcement response was due in part to the degree of noncompliance as well as the cost of remediating the violations and the ignorance of the regulated entities of their compliance obligations. See Hutter, *supra* note 143, at 1.

235. Shover, *supra* note 20, at 140.

smaller, less sophisticated enterprises.²³⁶ Of the 173 sites owned or operated by a major oil company, 142 of the sites had no enforcement action taken against them. More significantly, of the 142 sites subject to no enforcement action, only 11 had not taken self-directed action towards remediating the release.²³⁷ The remaining 29 sites were issued clean up and abatement orders and responded to those orders by conducting further investigations of the release.

Comparatively, 870 sites were owned or operated by smaller enterprises of which 659 had no enforcement action taken against them. However, unlike the major oil company sites, 300 of these 659 sites owned by smaller entities took no further independent action to remediate the release. Thus, the data illustrates that the oil companies responded relatively cooperatively, that is, independent of SFRWQCB enforcement action, ninety-two percent of the time (131 of 142 sites) while the smaller entities responded cooperatively only forty-five percent of the time (300 of 659 sites).

These findings support the theory that larger regulated enterprises are more likely to respond positively to administrative orders than are the smaller firms. However, in the context of the SFRWQCB LUFT program, the explanation for this positive response differs slightly from the theoretical model and reveals new information on the incentives behind large firm cooperation with regulatory mandates. The model, which suggests that small and large firms will respond differently to an agency's enforcement actions, is based in large part on the frequency of regulatory inspections.²³⁸ The model assumes that larger regulated enterprises expect more frequent contact with regulatory personnel because of their prominence and their capacity to pollute. Thus, a large firm's statutory violations will presumably be more visible and hurt the firm's public image as a "good" corporate

236. Because of the large number of establishments operating UFTs in Alameda County between 1985 and 1990 I chose to pursue this hypothesis by investigating the differences in enforcement and compliance behavior between major oil producers as representative of the larger sophisticated enterprises and the remainder of tank owners and operators who range from small operations to medium size operations as representative of smaller, less sophisticated companies. LUTIS Database, *supra* note 33.

237. *Id.*; The remainder of this discussion is based on conclusions drawn from the LUSTIS Database, *supra* note 33.

238. Stewardson, *supra* note 22, at 495-96; JOSEPH F. DiMENTO, ENVIRONMENTAL LAW AND AMERICAN BUSINESS: DILEMMAS OF COMPLIANCE 5 (1986).

citizen.²³⁹ To avoid this image, the larger firms will tend to be more cooperative with the regulatory agencies.²⁴⁰

The regulatory environment of the SFRWQCB LUFT program, however, does not fit this pattern. In both the large and small firm regulatory context, the SFRWQCB task environment precludes the possibility of frequent site visits.²⁴¹ Thus, while the larger firms are insulated from public exposure as "bad apples," they still remediate unauthorized releases independent of enforcement action by SFRWQCB regulators. While the size of the firm and its propensity for experiencing frequent site visits may affect its propensity for compliance, other task environment features, such as the cost of compliance, appear to be more important in influencing both the level of LUFT remediation and the SFRWQCB's enforcement style.

b. Cost of Compliance

The cost of remediation appears to have been the single most important factor influencing both the regulators and the regulated in the SFRWQCB LUFT program between 1985 and 1990. When regulated enterprises view compliance as very costly, putting them at a disadvantage with their competitors, regulators are likely to encounter more recalcitrance towards regulatory obligations.²⁴² Case studies indicate that regulators often respond by pulling back from strict enforcement where economically marginal employers cannot absorb the cost of compliance and remain profitable.²⁴³ A review of the literature suggests that the economic resilience of noncompliant regulated enterprises, coupled with the social costs of closing down an ongoing operation, are crucial features of the task environment which affect and explain the stringency of an agency's enforcement style.²⁴⁴

239. Kagan, *Regulatory Enforcement*, *supra* note 26, at 397-98. Kagan asserts that the primary basis for the disparate treatment of large firms by regulatory agencies is the inability of these firms to "hide" their regulatory violations. *Id.* at 197.

240. *See* DiMENTO, *supra* note 238, at 5; Kagan, *Regulatory Enforcement*, *supra* note 26, at 398-99.

241. *See supra* part III.B.1.

242. *See* David Yellen & Carl J. Mayer, *Coordinating Sanctions for Corporate Misconduct: Civil or Criminal Punishment*, 29 AM. CRIM. L. REV. 961-1024 (1992); John T. Scholz, *Cooperative Regulatory Enforcement and the Politics of Administrative Effectiveness*, 85 AM. POL. SCI. REV. 115-30 (1991).

243. *See, e.g.*, Kagan, *Regulatory Enforcement*, *supra* note 26, at 398-99.

244. *See, e.g., id.*; ROBERT LEONE, WHO PROFITS? WINNERS, LOSERS, AND GOVERNMENT REGULATION 53 (1986) (suggesting that when regulated enterprises view

In the context of the SFRWQCB's regulatory program, UFT cleanup costs for a single site range from \$20,000 to \$1 million with the average cost rising from \$85,000 in 1989 to 135,000 in 1990.²⁴⁵ However, in 1987 the median motor fuel outlet—a major source of UFTs in Alameda County—had only \$90,000 in net worth, \$210,000 in assets, and \$14,000 in annual after-tax profits.²⁴⁶ Thus, the smaller enterprises more concerned with protecting their bottom line may not be able to engage in fuel leak remediation even if they were otherwise so inclined.²⁴⁷ Even in cases where there has been a small amount of contaminated soil, cleanup bills can reach \$25,000—\$11,000 more than an average fuel station makes in annual profits.²⁴⁸ Interviews with LUFT owners and operators highlight the impact of remediation costs on compliance and cleanup rates, noting that “[c]ompliance is too difficult and what [the SFRWQCB] is asking PRP's [potentially responsible parties] to do is too expensive . . . so they get no compliance.”²⁴⁹ Accordingly, SFRWQCB records demonstrate that smaller entities exhibited more recalcitrance towards compliance. This resistance was ineffectively countered by the Agency's conciliatory enforcement behaviors. Recalcitrance, as well as Agency enforcement behavior, became a function of cost.

Faced with this unwillingness to comply, the SFRWQCB LUFT regulators were confronted with a difficult enforcement dilemma. They could order these smaller, noncompliant firms to empty their tanks, cease operation of an ongoing business operation and invest any remaining profits in remediation efforts or commence bankruptcy proceedings. SFRWQCB regulators were faced with the question of whether the imposition of additional compliance costs served the greater social good.

These determinations were made on a case-by-case basis by field level regulators, who were forced to balance a \$20,000 remediation order, which they knew the UFT owner or operator

compliance as very costly, regulators will encounter more noncompliance); *see also* HUTTER, *supra* note 143, at 1; Gunningham, *supra* note 18, at 70-79.

245. *Underground Storage Tank Cleanup Hearings*, *supra* note 9, at 2.

246. Duncan & Bailey, *supra* note 182, at 247, *citing* 52 Fed. Reg. at 12671.

247. Large sources, on the other hand, are able to expeditiously respond to the SFRWQCB's cleanup orders due to their relative financial stability. This conclusion focuses the rationale for large firm cooperation on the ability to finance remediation rather than the likelihood that the enterprise will be subject to frequent site visits or experience highly visible releases.

248. Jim Mayer, *Buried Fuel Tanks Prove Toxic to Economic Hopes*, SAC. BEE, May 15, 1994, at A1.

249. Telephone interview with Mark Borsub, *supra* note 169.

could not afford, against the danger posed by contaminated soil that was not in close proximity to a source of drinking water.²⁵⁰ SFRWQCB records indicate that in an overwhelming majority of instances, this balance was struck in favor of the regulated entity.²⁵¹ In cases where the balance favors remediation, the predicted recalcitrance among smaller entities surfaced due to lack of cleanup funds.²⁵² The SFRWQCB seems to be aware of this enforcement phenomenon. Two LUFT regulators emphasized that "very few cases escalate to a high level and when they do they involve similar individuals . . . usually small enterprises [who] do not think that the cleanup burden is fair."²⁵³ "When an action is referred to the AG it is usually a small firm [that] believes the regulations are unfair and that the money they are reluctantly spending is going down the drain."²⁵⁴ Considering these enforcement and compliance patterns at the SFRWQCB, the Alameda County District Attorney in the Consumer Affairs Division noted that during this period (1985-1990) "the Regional Board was an enemy to enforcement . . . [We] must cajole these parties [tank owners] to get anything done. It is ridiculous to have a detailed [regulatory] scheme without legal support."²⁵⁵

SFRWQCB records between 1985 and 1990 suggest that the regulation of both small and large source UFT owners or operators was, at the very least, ineffective in achieving compliance or eliciting compliance-oriented behavior from the regulated entities. At most, the Agency's enforcement policies advance toward total collapse. In the end, cost of compliance, rather than the frequency of site visits, seems to have functioned as the single most contributive factor to low remediation rates amongst LUFT owners and operators in Alameda County.²⁵⁶

250. See Interview with LUFT Regulatory Staff, *supra* note 8; Interview with UFT Staff, *supra* note 158.

251. See *supra* notes 224-27 and accompanying text.

252. See *infra* notes 301-26 and accompanying text.

253. Interview with LUFT Regulatory Staff, *supra* note 53.

254. Interview with UFT Staff, *supra* note 158.

255. Interview with Gil Jensen, *supra* note 132.

256. It is difficult to determine based on this data alone, and without interviewing the small source enterprises, whether a more legalistic approach would have achieved greater compliance. The low profit level of most fuel stations suggests that they might be inclined to mount fierce legal defenses to costly cleanup orders or prosecutions. However, it is clear from the SFRWQCB data that with infrequent site visits and costly remediation, small UFT sources were less willing to independently engage in compliance-oriented behavior. As small sources appear to make up the large majority of UFT owners in Alameda County, such an enforcement re-

5. Visibility of Violations

High visibility of regulatory infractions creates public accountability which may mitigate the non-compliance associated with conciliatory enforcement, high costs, and infrequent site visits.²⁵⁷ Public complainants act as substitutes for frequent site visits by the agency. For example, when workers can spot violations of workplace safety regulations, regulators can adopt a more flexible enforcement style knowing that the workers will notify the agency if a serious violation is not abated.²⁵⁸ On the other hand, where violations are less visible to complainants—as in ground-water contamination cases—it is more difficult to detect violations and a flexible enforcement style can degenerate, unchecked into excessive leniency.²⁵⁹

As seen in the discussion of *ex ante* controls, SFRWQCB data suggests that violations of the UFT regulations were virtually invisible and citizen complaints did not serve as an effective substitute for infrequent regulatory visits.²⁶⁰ At most, nine of the 1043 sites which reported a leak from an UFT between 1985 and 1990 discovered their leaks through nuisance conditions or other means which may have been discoverable by the public.²⁶¹ The unauthorized releases from the remaining tanks were only discovered once the tanks were excavated and removed during tank closure proceedings.²⁶² This combination of infrequent regulatory presence on tank sites and the invisibility of noncompliance to the greater public may have contributed to UFT owners and operators failing to comply with the applicable regulations.²⁶³

gime cannot continue without risking serious threats to human health and the environment from undetected and leaking UFTs.

257. See Kagan, *Understanding Regulatory Enforcement*, *supra* note 19, at 102.

258. Kagan, *Regulatory Enforcement*, *supra* note 26, at 397, citing LAWRENCE S. BACOW, *BARGAINING FOR JOB SAFETY AND HEALTH* 1 (1980); JOSEPH REES, *REFORMING THE WORKPLACE: A STUDY OF SELF-REGULATION IN OCCUPATIONAL SAFETY* 1 (1988).

259. Kagan, *Regulatory Enforcement*, *supra* note 26, at 397.

260. For a full discussion of the invisibility of UFT violations to citizen complainants and SFRWQCB officials see *supra* part III.B.5.

261. LUSTIS Database, *supra* note 33. Of the 1043 sites mentioned 984 discovered the release upon tank closure, 0 through inventory control, 1 through tank testing and the remainder through other means. It is also important to recognize that unlike other pollution problems, sub-surface releases of fuel which do not mobilize well are unlikely to be detected through normal citizen observations.

262. *Id.*

263. A more vexing problem and an alternative explanation for the lack of regulatory enforcement at the SFRWQCB may not be the invisibility of unauthorized releases or the infrequency of site visits, but rather the scientific uncertainty associated

In summary, while past studies indicate that most regulators faced with infrequent site visits and low visibility violations adopt a legalistic approach to enforcement, the SFRWQCB has instead adopted a conciliatory approach to enforcement in response to its task environment. The data suggest that the SFRWQCB enforcement program was fatalistic to at least leak detection and possibly remediation of sub-surface releases. This enforcement response appears to have directly resulted from both the economic disposition of the regulated entities and the SFRWQCB perception that the regulatory burden was an inequitable one. As Kagan would predict, adopting such an enforcement behavior severely diminished compliance even further in Alameda County between 1985 and 1990 as regulated entities became aware that detection and subsequent legal sanction by the SFRWQCB of UFT regulatory violations would be rare.

C. *The SFRWQCB's Political Environment*

While both the SFRWQCB's legal and task environments partially explain the Agency's lax enforcement practices, the SFRWQCB's enforcement style may also be a product of its unique political environment. Although the "legal design" of California's UFT laws presumably reflects the political will at the time at which the laws were adopted, ongoing political influences continue to shape the SFRWQCB's LUFT enforcement response.²⁶⁴ These influences, unlike the agency's task and legal environments, are not based on assumptions of maximizing enforcement efforts or economic efficiency, but rather on the avoidance of political criticism and the protection of agency jobs and agency budgets.²⁶⁵ The literature suggests that among the variables that affect the influence of the political environment on en-

with subsurface investigations. However, this hypothesis is seriously undermined by SFRWQCB data which illustrates that the lack of enforcement action was not limited to those sites which presented technical detection or remediation challenges but also on sites where the extent and nature of the contaminated plume was well defined and relatively simple to access. LUSTIS Database, *supra* note 33.

264. Studies have documented several factors. See e.g., Alfred Marcus, *Environmental Protection Agency*, in *THE POLITICS OF REGULATION* 267-303 (James Q. Wilson ed., 1980) (the importance of the media in an agency's political environment); Paul J. Quirk, *The Food and Drug Administration*, in *THE POLITICS OF REGULATION* 191-235 (James Q. Wilson ed., 1980) (pressure by politicians); SCHOLZ & WEI, *supra* note 59, at 1249-70 (labor union pressure).

265. Kagan, *Regulatory Enforcement*, *supra* note 26, at 399-403.

forcement style are (1) the regulatory preferences of political authorities and (2) the organization of interest groups.²⁶⁶

1. Preferences of Political Authorities

The internal organizational structure allows the State Board significant influence over the UFT regulators at the regional level. Primary responsibility for administering the Porter-Cologne Act is divided between the SWRCB and nine regional water quality control boards of which the San Francisco Board is one.²⁶⁷ While the Regional Boards have primary responsibility for permit issuance, monitoring, and enforcement, the SWRCB has review authority over the actions of the Regional Boards.²⁶⁸ Consequently, the SWRCB has decision-making power and can ultimately exercise considerable authority in the enforcement of California's UFT laws. In addition, the State Board prepares the regional budgets which allocate funds for particular programs and adopts state policies for water quality control which may address cleanup levels as well as enforcement policies.²⁶⁹

According to many involved in the UFT program, the State Board has exercised this power to weaken SFRWQCB UFT regulation. Even in light of the low level of compliance among the regulated entities, the Board has lowered cleanup levels and blocked the use of the criminal misdemeanor to motivate remediation.²⁷⁰ The State Board's unsupportive response to the SFRWQCB's task environment and compliance level may be attributable to local political pressure and the Regional and State Boards' conciliatory attitudes towards the regulated entities.

The State Board's political position on the regulation of UFTs materialized early in the program when the State Board openly criticized the SFRWQCB for dedicating resources to the development of an UFT policy.²⁷¹ The State Board had not recognized the need for such a program in the budget and was inclined to ignore the problem altogether.²⁷² In addition, a member of the State Board requested the removal of the SFRWQCB's Ex-

266. See Coffee, *supra* note 230, at 424-27; Stewardson, *supra* note 22, at 501-02.

267. CAL. WATER CODE §§ 13140-13176, 13200 (West 1992).

268. *Id.*

269. *Id.* §§ 13140-13147.

270. See Interview with Gil Jensen, *supra* note 132 (discussing criminal misdemeanor provisions); Pantell, *supra* note 2, at 105-13.

271. Pantell, *supra* note 2, at 133.

272. See *id.* at 133.

ecutive Officer for working with an assemblyman to generate data regarding the UFT problem.²⁷³

These incidents reveal that the State Board used its decision-making powers to contract agency resources through the budget process, and on occasion, instructed agency officials on how they would like particular regulatory matters to be handled. The State Boards' budgetary priorities also left the SFRWQCB LUFT program with higher inspector-to-site ratios (2 inspectors per approximately 1600 sites) which, as discussed above, affected frequency of inspection and, ultimately, enforcement style. As a consequence, the political preferences exercised by the State Board impeded the development of UFT regulations and restricted agency resources for the development of enforcement behaviors more likely to have led to greater compliance with California's LUFT laws.²⁷⁴

2. Political Perceptions

The most important political factor which seemed to have influenced the SFRWQCB in choosing an enforcement strategy was the Regional Board's belief that UFT owners and operators were not the cause of the UFT problem. Both the State and Regional Boards had a great deal of sympathy for property owners whom they believed were saddled with an unfair regulatory burden.²⁷⁵ This sympathy deterred the Board from adopting a legalistic regulatory style and pre-disposed the SFRWQCB to adopt a conciliatory, compliance-oriented attitude. Generally, the regulators viewed the UFT owners and operators as law-abiding citizens who were stuck with a ubiquitous and expensive problem that they did not necessarily cause.

273. *Id.*

274. Another factor which influenced the State Board's position on the regulation of LUFTs is the manner in which the Board is appointed. Both the State and Regional Board members are appointed by the Governor. Unlike the Regional Board members who receive \$100 a day for their service, however, State Board members receive approximately \$80,000 per year. Pantel, *supra* note 2 at 132. [As a result State Board members may be more politically responsive to the interests of the Governor and likely to seek reappointment based on this financial reward.] In this regard the present Governor of California, Pete Wilson, has not been an advocate of the LUFT program and has recently rejected reform proposals which promised to strengthen the SFRWQCB's enforcement process. See *External Review of the State Water Board, Recommendation Sent To Wilson*, CAL. ENVT. DAILY (BNA), Dec. 20, 1994, at 1.

275. See Interview with LUFT Regulatory Staff, *supra* note 8; Interview with UFT Staff, *supra* note 158.

"[T]he cleanup fund [exists] because there is no fault generally [with regards to this contamination]."²⁷⁶

"It's not negligence or intentional conduct that these leaks result but inadvertent spillage or corrosion."²⁷⁷ Other staff regulators at the SFRWQCB echoed this attitude toward the regulated entities not only in reference to the cause of unauthorized releases, but also in their concerns regarding the cost of remediation. "[There is a] socio-economic concern that [the contamination] is just impossible to cleanup and it is too expensive."²⁷⁸

Legalistic enforcement is more likely where agency personnel believe that the regulated entities are morally culpable, or at least in some degree, responsible for the regulatory violation.²⁷⁹ As evidenced through their statements, the SFRWQCB regulators, for the most part, do not believe that the regulated entities have committed a moral wrong, much less a regulatory violation. Moreover, even if there had been a violation of the UFT law, the SFRWQCB's conciliatory approach, drawn from this sympathy for tank owners and operators, would have allowed regulated entities substantial flexibility in pursuing compliance efforts.²⁸⁰ In fact, it seems that the SFRWQCB's perception of the UFT problem has transformed the agency's definition of compliance from remediation of releases in the early 1980's²⁸¹ to a "study and wait" policy beginning in the mid 1980's.²⁸² In light of this political environment it is not surprising that tank owners' scant displays of attempted compliance satisfied the SFRWQCB regulators.

In addition to the SFRWQCB's statements and the previously analyzed enforcement data, other staff actions characterized the political relationship between industry and the SFRWQCB and its subsequent enforcement style. The state-wide UFT law was

276. Interview with LUFT Regulatory Staff, *supra* note 53.

277. *Id.*

278. Interview with LUFT Regulatory Staff, *supra* note 8.

279. See Christopher H. Schroeder, *Cool Analysis Versus Moral Outrage in the Development of Federal Environmental Law*, 35 W. & MARY L. REV. 251, 256-59 (1990); Kagan, *Understanding Regulatory Enforcement*, *supra* note 19, at 399-400; Hedge et al., *supra* note 135, at 324-27.

280. See notes 230-35 and accompanying text.

281. For an explanation of SFRWQCB's changing cleanup requirements see notes 210-221 and accompanying text.

282. As previously discussed many of the UFT owners and operators between 1985 and 1990 merely studied and monitored their releases without pursuing remediation efforts. See *supra* part III.A.

modeled on ordinances which originated in the South Bay from a joint effort between the regulated companies and the local regulatory agencies.²⁸³ Because the companies participated in writing the model ordinances, a cooperative relationship was established early in the regulatory program. Had the SFRWQCB regulators adopted a more vigorous enforcement policy, with escalating sanctions and the ultimate threat of prosecution, they could have expected a political counterattack from industry.²⁸⁴ Instead SFRWQCB's conciliatory approach allowed them to avoid extreme conflict with powerful companies, such as the major oil producers and the semi-conductor industry. The Regional Board's desire to avoid this conflict also materialized in their adoption of an alternative enforcement order entitled Site Cleanup Requirements (SCRs).²⁸⁵ The staff at the SFRWQCB adopted SCRs in response to industry and State Board pressure that the formal enforcement orders were too heavy-handed and stigmatized industry's public image. The new enforcement tool was not considered or issued as a formal enforcement order and was not characterized in Board hearings as an enforcement action.²⁸⁶ The Board's reaction to industry demands in this context partially explains the otherwise irrational response to their task environment.

Additionally, the companies and SFRWQCB regulators held day-to-day meetings and informal telephone conversations about cleanups and compliance.²⁸⁷ Since the staff had demonstrated their dedication to reaching agreement and appearing fair to the companies, these informal, one to one enforcement discussions were more likely to lead to unsound regulatory compromises. Without any opposing public pressure, the influence from the UFT owners and operators went virtually unchecked in the mid-to late 1980's and had a seemingly significant effect on the enforcement style of the Agency.

By consciously attempting to control regulatory enforcement patterns through changes in budgetary allocations, personnel, and enforcement policy, the State Board exerted considerable influence on the regulatory style developed by the field-level regu-

283. Pantell, *supra* note 2, at 185-86. Industry participation in designing California's LUFT law was a relatively atypical occurrence. See D. TRUMAN, *THE GOVERNMENT PROCESS* 45 (1953).

284. Pantell, *supra* note 2, at 19.

285. *Id.*

286. *Id.* at 190-93.

287. *Id.* at 191; see also Interview with UFT Staff, *supra* note 158.

lators at the SFRWQCB, resulting in a conciliatory enforcement stance and low levels of compliance.

3. The Organization of Interest Groups

Repeated contact with representatives of a single industry, such as here, can draw regulatory officials toward an "industry orientation" in which the regulators' view of the administrative mandate becomes "consistent with that of the regulated industry."²⁸⁸ A basic feature of industry-oriented regulatory programs is the absence of political or interest group pressure to effectively counteract industry influence.²⁸⁹ Accordingly, conciliatory enforcement regimes often involve programs or situations in which there are no politically organized advocates of strict regulation to detect the laxity and protest.²⁹⁰ Although outside interest groups played an important role initially in influencing the development of the LUFT regulatory program, such influence has subsequently waned, leaving the perspective of LUFT owners and operators uncountered in the day-to-day decisionmaking process of the SFRWQCB.

In the initial years of the SFRWQCB's UFT program there was substantial involvement by members of the public due to the widely publicized discovery of severely contaminated drinking water wells at the IBM and Fairchild sites in Santa Clara County.²⁹¹ The discovery of the initial IBM and Fairchild sites was actively and consistently covered by a local newspaper, *The San Jose Mercury News*. Public interest groups such as Citizens for a Better Environment (CBE) became involved in the remediation and LUFT discovery process and pressured the SFRWQCB to take stringent action on a number of sites.²⁹² Be-

288. MARQUER BERNSTEIN, REGULATORY BUSINESS BY INDEPENDENT COMMISSION 1 (1955); Quirk, *supra* note 264, at 191; Kagan, *Regulatory Enforcement*, *supra* note 26, at 400. Because regulators have close and frequent contact with regulated companies that they may desire employment opportunities with, the regulators' views may tend to favor the interests of industry. *Id.*

289. DOUGLAS ANDERSEN, REGULATORY POLITICS AND ELECTRIC UTILITIES 1 (1981); Kagan, *Regulatory Enforcement*, *supra* note 26, at 400.

290. Gunningham, *supra* note 18, at 69-91; Kagan, *Regulatory Enforcement*, *supra* note 26, at 400.

291. Pantell, *supra* note 2, at 163-67; see e.g., *IBM To Begin Groundwater Extraction Program*, S.J. MERCURY NEWS, Nov. 7, 1985, at A1.

292. Pantell, *supra* note 2, at 163-65; CBE, ON-SITE HAZARDOUS WASTE MANAGEMENT 1 (1982); CBE, THE NEED FOR AN INVESTIGATION OF THE NATURE AND EXTENT OF GROUNDWATER CONTAMINATION DUE TO LEAKS FROM UNDERGROUND MATERIAL STORAGE FACILITIES (1982).

ginning in 1983 the public made consistent appearances at the Board's meetings.²⁹³ Perhaps most significantly, women in the South Bay during 1981 and 1982 gave birth to children with defects which they believed were caused by the contamination recently discovered in their drinking water wells.²⁹⁴ In response Santa Clara County initiated studies on the link between contaminated groundwater and the birth defects. While the study concluded that no correlation existed between the two phenomena, the study did notify the public that LUFTs posed a serious health threat. Information from the study was used to pressure agencies to take action at numerous sites with reported releases.²⁹⁵

The staff members at the SFRWQCB during the early 1980's responded favorably to the public pressure: "I think it was overwhelming. A major driver. There was extensive coverage in the *Mercury News*. There was extensive public concern about the problem."²⁹⁶ Another staff member commented:

I think that the public attention has an influence in making priorities. In other words, there may have been other water quality problems that didn't get as much attention because they didn't have as much public pressure. It was a major [influence on the Board's initial response.] There was a lot of testimony on how clean is clean; how to perceive these problems. People had direct lines to politicians.²⁹⁷

Since the mid-1980's the public interest groups' interest in the LUFT issue has diminished. It seems that public interest group involvement was more important in eliciting a response from the SFRWQCB to a crisis situation—an unregulated problem with potential health effects—and less of a priority for the public once the UFT regulatory program was established in 1985. CBE and other public interest groups, once active in the UFT issue, have reallocated their resources to other issues.²⁹⁸ The decline in public pressure could be related to the increase in citizen suits made feasible through newly enacted citizen suit provisions in other environmental legislation.²⁹⁹

293. Pantell, *supra* note 2, at 163-65.

294. *Id.*

295. CAL. DEP'T OF HEALTH SERVS. ET AL., GROUNDWATER AND DRINKING WATER IN THE SANTA CLARA VALLEY: A WHITE PAPER 5 (Oct. 1984).

296. Pantell, *supra* note 2, at 173.

297. *Id.* at 174.

298. *Id.* at 172.

299. By comparison, there are no citizen suit provisions in California UFT law.

Nevertheless, the early public pressure coincided with a period when the SFRWQCB used formal enforcement orders and stringent cleanup levels more frequently.³⁰⁰ The lack of current public pressure on the SFRWQCB appears to be a partial explanation for the conciliatory enforcement approach adopted by the Agency.

These political influences may provide a partial explanation for the SFRWQCB's response to their legal mission and task environment. Given the Agency's limited resources, entrenched conciliatory enforcement tradition, and the absence of any significant external public pressure challenging the regulatory results, the SFRWQCB's lax enforcement policy between 1985 and 1990 was inevitable.

IV.

SUGGESTIONS FOR REFORM

The preceding study of the legal, task, and political environments of the SFRWQCB, Alameda Division demonstrates that the Agency is faced with a serious regulatory challenge. With at least 50 new leaks reported throughout California each week,³⁰¹ the SFRWQCB's enforcement dilemma promises to be a continuing one. However, the challenge is not only to identify the factors of the Agency's legal, task, and political environments which have adversely influenced enforcement policy and compliance rates, but to refashion these influences to create a more effective LUFT regulatory program. This section addresses the factors most influential in shaping the Agency's enforcement response and suggests ways to redirect those influences with alternative enforcement methodologies hopefully resulting in greater compliance with California's UFT laws.

A. *Triage: A Solution to the Task Environment Challenges of the SFRWQCB*

1. Economic Resilience

As the discussion in section III.B.2 indicates, the inability of UFT owners and operators to shoulder the burden of remediation costs once an unauthorized release occurs had a severe impact on the compliance rate of the regulated entities and the

300. See Interview with LUFT Regulatory Staff, *supra* note 8.

301. Asimov, *supra* note 8, at A1 (quoting Sandra Salazar, SWRCB LUFT Regulatory Staff).

related enforcement style of the SFRWQCB. This economic dilemma has been further exacerbated in recent years by the inability of UFT owners and operators to obtain affordable environmental liability insurance coverage to pay for corrective action.³⁰² Even where adequate insurance is obtainable, such insurance coverage is beyond the financial means of most UFT owners and operators.³⁰³ Recognizing the impact of tank owners' low economic resilience and cost prohibitive insurance premiums on LUFT compliance, the California legislature established the Underground Storage Tank Cleanup Trust Fund Act of 1989 ("the Fund").³⁰⁴ Every owner required to obtain a permit to operate a UFT must pay a storage fee of .6 cents for each gallon of petroleum placed in the UFT.³⁰⁵ The revenue generated for the Fund can be spent to help tank owners and operators with the cost of complying with the state regulations.³⁰⁶

Specifically, the monies in the Fund are available (1) to reimburse eligible tank owners and operators for their costs of remediating LUFTs, (2) to provide low-cost loans for corrective action requirements, and (3) to reimburse the State's costs in administering the program. While initially the collection and subsequent allocation of a remediation fund may seem to enhance the economic resilience of smaller enterprises and thereby increase compliance rates, access restrictions, unwise management, and the manner in which claims made on the Fund are paid, have seriously weakened the Fund's potential ability to increase compliance rates.

a. Access to the Fund

First, access to the Fund is only available to those LUFT owners or operators who can demonstrate that they are in compliance with the financial responsibility requirements of section

302. CAL. HEALTH & SAFETY CODE § 25299.10(b)(4) (West Supp. 1995).

303. Ethel S. Hornbeck, 1191 Joint Survey of Gasoline Market Underground Storage Tank Activity 2 (1990). "Private insurance has become increasingly expensive, placing it out of reach for the average marketer. . . . Only 17 percent of marketers report carrying pollution liability insurance, down dramatically from the 40 percent that had policies in 1989." *Id.*

304. CAL. HEALTH & SAFETY CODE §§ 25299.10-25299.83 (West 1992 & Supp. 1995).

305. *Hearings on Underground Petroleum Storage Tanks: Hazardous Substance Removal*, Before the Senate Committee on Toxics & Public Safety Management, Comm. Rep. AB 3188, at 1 (1992) [hereinafter *UFT Hearings*]; CAL. HEALTH & SAFETY CODE § 25299.41 (West 1992).

306. CAL. HEALTH & SAFETY CODE § 25299.51 ((West 1992 & Supp. 1995).

25299.32 of the California Health and Safety Code.³⁰⁷ This provision requires that LUFT owners and operators who can be classified as either (1) a small business under section 14837 of the Government Code or (2) a business which employs fewer than 500 full-time and part-time employees, is independently owned and operated, and has its principal office in California, can obtain at least \$ 5,000 of insurance for each release occurrence and at least \$ 5,000 annual aggregate coverage for taking corrective action.³⁰⁸

In turn, the Board administering the Fund may only reimburse the cost of corrective actions which exceed the level of financial responsibility required of enterprises under the statute.³⁰⁹ If the LUFT owner cannot afford the level of insurance required under the statute or the coverage does not insure against the type of events that caused the release,³¹⁰ a LUFT owner or operator will

307. *Id.* § 25299.31(a).

308. CAL. HEALTH & SAFETY CODE §§ 25299.32(a)(2), 25299.52(b)(2),(3) (West Supp. 1995). Since the focus of our inquiry is improving the economic resilience of the regulated entities in an effort to achieve greater compliance, the financial responsibility requirements for larger, more resilient firms are not examined in detail. *See id.* §§ 25299.32(a)(3), 25299.52(b)(4). The statutory regime, however, distinguishes between large and smaller firms not only in the financial responsibility requirements but in the order of priority for disbursement of monies from the Fund. Claims made on the Fund are satisfied in the following order: (1) homeowners with residential fuel tanks; (2) small businesses as defined by Section 14837 of the Government Code; (3) medium-size businesses, owned by Californians, of fewer than 500 employees; and (4) all other tank owners or operators including larger businesses, municipalities, and out-of-state companies. *Id.* § 25299.52(b). This priority system clearly recognizes the compliance benefits of funding smaller entities who otherwise will not pursue remediation because of cost-prohibitive cleanup requirements.

309. CAL. HEALTH & SAFETY CODE § 25299.57(a) (West Supp. 1995).

310. Under California Health and Safety Code section 25299.32(d), the Board may periodically increase the level of insurance required of LUFT owners and operators upon its determination that private insurance is available and affordable. However, the question of whether a given insurance policy will be available is a complex inquiry which may in most instances depend on the pollution event that led to the release. For example, many insurance policies contain pollution exclusions which exclude coverage for releases of hazardous substances, except in those instances when a release is sudden and accidental. *Morton Int'l, Inc. v. General Accident Ins. Co. of America*, 629 A.2d 831 (N.J. 1993), *cert. denied*, 114 S.Ct. 2764 (1994); Nancer Ballard & Peter M. Manus, *Clearing Muddy Waters: Anatomy of the Comprehensive General Liability Pollution Exclusion*, 75 CORNELL L. REV. 610, 622-27 (1990); Robert D. Chester et al., *Patterns of Judicial Interpretation of Insurance Coverage for Hazardous Waste Site Liability*, 18 RUTGERS L.J. 9, 31-38 (1986). As the SFRWQCB records indicate, most of the unauthorized releases between 1985 and 1990 were caused by corrosion of the tank, an event that can be fairly characterized as slow and gradual, rather than sudden and accidental. Yet under the current regulatory regime, if such corrosion is not characterized as sudden and accidental,

receive no financial assistance from the government for remediation costs.

The current administration of the Fund, therefore, does not effectively remove the obstacles to remediation of cost-prohibitive insurance and low economic resilience. To achieve the Fund's laudable objectives, the distribution of proceeds cannot be made contingent on whether a UFT owner ultimately receives payment for his claim from the private insurance company. Rather, Fund disbursement should be conditioned on whether the LUFT owner obtained an insurance policy that meets the requirements of Section 25299.32(a)(2). While a given insurance company may subsequently contend that a pollution occurrence or unauthorized release is not covered under the policy, monies from the Fund can be disbursed in the interim to facilitate the expeditious remediation of the release. Not only will the LUFT owner still be required to carry insurance against unauthorized releases, the Fund will only reimburse the insured LUFT owner for remediation costs which exceed that which would have been covered by the insurer. This policy will temporarily remove the insurance companies from the remediation equation and allow the SFRWQCB to pursue releases which they otherwise would not pursue because of their justified belief that the money was not available to conduct a proper site cleanup.

The Fund reimbursement policy, together with the lack of SFRWQCB guidance regarding which expenses will be ultimately covered by the Fund, precludes remediation by otherwise underfunded LUFT owners and operators.

The fines and access to the Fund are such that if you do not comply you will not get financial help to clean up your site but you need the monetary help to comply in the first case. Once you cleanup you apply to the Fund and [your] bills are checked. If the Fund decides not to reimburse for a particular cleanup activity then you

the LUFT owner will be out of compliance with the financial responsibility requirements and therefore receive no assistance from the Fund. The determination of whether an unauthorized release was sudden and accidental will also likely subject the regulated enterprise to protracted judicial challenges to coverage by the well-financed insurance industry, further delaying any hope for remediation of the site. *See, e.g., Aetna Casualty & Sur. Co. v. Pintlar Corp.*, 948 F.2d 1507, 1513 (9th Cir. 1991); *Certain Underwriters at Lloyds, London v. Independent Petrochem. Corp.*, 112 S. Ct. 1777 (1992). While the pollution exclusion plays an important role in financing remediation, a full discussion of the exclusion is beyond the scope of this note.

are out of luck, yet they will not tell you prior to cleaning up what will be reimbursable.³¹¹

This commentary identifies two potential weaknesses in the compliance seeking policy behind the Fund. First, if a LUFT owner is not in compliance with the LUFT regulations, including all monitoring requirements, he or she is ineligible for reimbursement of remediation expenses.³¹² As we have seen, however, noncompliance is a function of economic resilience such that a tank owner who is not able to afford corrective action will usually not comply with the LUFT regulations.³¹³ As a result, unauthorized releases will continue to go unremediated, threatening the groundwater of the State.

Alternatively, the present reimbursement policy serves as an incentive for compliance. Ideally, if a tank owner realizes that they will be ineligible for financial assistance of up to \$1,000,000 if they violate the LUFT regulations, they may reassess their willingness to comply. Of course, as mentioned previously, willingness to comply also depends on the frequency of site visits. The goal then is to preserve this incentive structure while ensuring that dangerous releases posing risks to human health and the environment are remediated regardless of the compliance record of the regulated entity.

This goal can be achieved in several ways. First, a noncompliant tank owner can be subject to more stringent Fund access requirements than otherwise complaint parties. For example, while a compliant party must pay the first \$5,000 of remediation costs as a condition of Fund access, the noncompliant party could be required to pay a higher access fee.³¹⁴ To protect the incentive structure, this fee must be set at such a level that compliance with the LUFT regulations, *e.g.*, monitoring requirements, will cost the noncompliant tank owner less than merely paying the higher Fund access fee.

In addition, violations of the *ex ante* regulations can be distinguished from the *ex post* provisions for purposes of Fund access. Because the *ex ante* provisions, including monitoring and permit requirements, carry an average compliance cost of \$5,000 and the *ex post* provisions for investigation and remediation carry an av-

311. Telephone interview with Mark Borsub, *supra* note 169.

312. CAL. HEALTH & SAFETY CODE § 25299.54(b)-(d) (West Supp. 1995).

313. See *supra* notes 260-65 and accompanying text.

314. CAL. HEALTH & SAFETY CODE § 25299.57(a) (West Supp. 1995).

erage cost of \$ 135,000,³¹⁵ Fund access could be made contingent on compliance with the ex ante regulations. This would somewhat ensure that any future operation of the LUFT would comply with the preventative measures, such as monitoring, that ideally preclude a serious release that requires costly remediation measures. Either of these two suggestions for reform will preserve the incentive structure of access restrictions to the Fund, but will also facilitate the prompt remediation of releases from LUFTs that pose serious environmental and health threats.

Second, because tank owners have virtually no guidance on whether the cleanup costs they incur will be ultimately covered by the Fund, they have been reluctant to commence remediation of their unauthorized releases.³¹⁶ This enforcement dilemma can be mitigated by requiring the SFRWQCB to develop guidelines which recommend acceptable site cleanup measures and their respective costs. The SFRWQCB has already authored a similar set of standards which recommend steps for the preliminary evaluation and investigation of underground tank sites.³¹⁷ The primary objective of this document was to provide uniform procedures for performing tank investigation.³¹⁸ Due to this guidance, tank owners and operators were aware of their regulatory obligations in site investigation and were able to limit their resource expenditures to corrective action procedures they knew would be deemed acceptable to SFRWQCB LUFT regulators.³¹⁹

This same cost-effective strategy can be implemented through remediation guidance that includes acceptable cleanup methodologies and standards based on the extent and location of the contamination. In this manner, LUFT owners can be assured they will be reimbursed for cleanup efforts. In turn, this security will likely result in more timely remediation of contaminated sites—the paramount objective of the current LUFT program.

Third, to qualify for financial assistance, a LUFT owner or operator must be in compliance with all of the permit requirements

315. Asimov, *supra* note 8, at A1 (fixing the cost of a leak-monitoring system at about \$ 5,000); Duncan & Bailey, *supra* note 182, at 247 (fixing the average tank remediation cost at \$135,000 in 1990).

316. Interview with Mark Borsub, *supra* note 169.

317. SFRWQCB, TRI-REGIONAL BOARD STAFF RECOMMENDATIONS FOR PRELIMINARY EVALUATION AND INVESTIGATION OF UNDERGROUND TANK SITES (Aug. 10, 1990).

318. *Id.* at 1.

319. *See id.*

imposed by California's LUFT laws.³²⁰ Recognizing that this bar to financial assistance would leave many high risk sites unremediated, Senator David Kelley introduced a bill (SB 108) before the California Senate Toxics Committee which would have allowed tank owners and operators who had not obtained a permit to be eligible for reimbursement provided they pay the first \$ 20,000 of cleanup costs rather than the \$10,000 required at the time.³²¹ However, this provision was removed from the bill in an amendment prior to the hearing. According to David Deaner, Chief of the SWRCB's Underground Storage Tank Cleanup Fund section, Senator Kelley pulled the unlicensed operators' provision at the urging of larger oil and trucking companies who were concerned that because smaller firms have a higher priority for reimbursement than larger LUFT owners, large numbers of claims from smaller unpermitted entities could preempt the larger enterprises,³²² rendering larger LUFT owners less likely to receive reimbursement for remediation from the Fund.

While larger LUFT owners are generally more compliant than smaller owners due to their economic resilience and, therefore, in less need of financial assistance for remediation, concerns over illegitimate claims are justified. Roughly 2,500 reimbursement appeals by unlicensed operators are currently "gridlocking the system" affecting both the amount of money available to other regulated entities and the timeliness of the reimbursement process.³²³ Under the present system officials familiar with the process attest that it could take several years before any of the lower priority claims are satisfied.³²⁴ Nevertheless, the smaller, less resilient LUFT owners and operators who are not in compliance with the permit requirements pose the greatest obstacles to site remediation.³²⁵ Instead of preemption of lower priority claims from Fund access, other less drastic measures can be taken which would ensure access to Fund resources for large enterprises and for smaller firms who are unable to finance site remediation.

320. CAL. HEALTH & SAFETY CODE § 25299.57(d) (West 1992 & Supp. 1995).

321. *Underground Storage Tanks: Bill to Expand UST Fund Payments Passes Senate Toxics Committee*, CAL. ENVT. DAILY (BNA) 2 (Apr. 16, 1993) [hereinafter *Bill to Expand*]; CAL. HEALTH & SAFETY CODE § 25299.57(a) (West 1992 & Supp. 1995)

322. *Bill to Expand*, *supra* note 321, at 2; *see supra* note 310 and accompanying text.

323. *Bill to Expand*, *supra* note 321, at 2.

324. *Id.*

325. *See* notes 260-65 and accompanying text.

These objectives can be achieved by reserving a small percentage of the Fund annually for those enterprises that can not be classified as a small or medium size business under the statute.³²⁶ In setting the percentage of reserved claims, though, it is important to remember that the Fund was established to pay for corrective action where coverage or financing is unavailable.³²⁷ Both the priority system for reimbursement of claims and the legislative findings in establishing the Fund recognize the compliance benefits of funding smaller, less economically resilient LUFT owners in the remediation process.

b. Unwise Management of the Fund

Unwise management of the Fund has also resulted in insufficient monies being available for remediation and has further convinced some LUFT owners and operators that their regulatory burden is inequitable. The Fund is not only used for reimbursement of remediation activities, but also for the reimbursement of the SFRWQCB's regulatory oversight costs.³²⁸ The local agencies receive an hourly fee of approximately \$65.00 for site investigation.³²⁹ Tank owners who have paid into the Fund question the propriety of this spending practice. As one UFT owner characterized the problem

The local agency receives a fee per hour that they work on your site. This creates a negative incentive for cleanup. Alameda County Health officials make \$65.00 an hour for working on a particular site like a public consultant but they also hold the bag for determining whether there has been compliance. This is a punitive system that treats PRPs [potentially responsible parties] as criminals.³³⁰

This attitude towards the SFRWQCB can potentially leave LUFT owners and operators with a feeling of distrust that often controls their decisions to cooperate with LUFT regulators in cleanup efforts. Similarly, the EPA recently concluded in an audit of the LUFT program that the use of the Fund to pay the oversight costs of the regulatory agencies has frustrated the

326. CAL. HEALTH & SAFETY CODE §§ 25299.32, 25299.54 (West 1992 & Supp. 1995).

327. *Id.* § 25299.10.

328. *Id.*

329. Interview with LUFT Staff, *supra* note 32; Interview with Mark Borsub, *supra* note 169.

330. Interview with Mark Borsub, *supra* note 169.

Fund's original objective of restricting the use of the monies to remediation of the worst tank cases.³³¹

Of equal importance, no-interest lending has seriously, and in some instances entirely, depleted available Fund resources. In fiscal year 1991-92, the General Fund borrowed approximately \$80 million from the available capital in the Fund, which is equal to the amount which is annually deposited through the mill tax. The effect of this interest-free borrowing is to deprive an already underfunded program of millions of dollars in interest that would otherwise be available to finance the remediation of LUFTs.³³² As the California legislature recently found, "oil companies who pay the mill tax are understandably concerned about uses of the Fund which are not related to the purposes for which they are assessed the mill tax."³³³

This effect is compounded in years when demand for the Fund outstrips the money available. As of January 1992, the State Water Board had received more than \$750 million in claims for Fund reimbursement while only receiving \$80 million per year from the mill tax assessment.³³⁴

Prohibiting no-interest lending from the Fund provides a quick yet partial solution to the SFRWQCB's funding crisis. Another obvious solution to this financing dilemma would be to eliminate funding for regulatory oversight costs. As discussed earlier, however, the SFRWQCB is already experiencing enforcement constraints from inadequate financing. The Regional Water Quality Control Board has commented that its enforcement of the law is already "hampered by bureaucracy and an unwillingness by the State to provide sufficient staff and financing."³³⁵ Taking away another source of funding under these circumstances would likely have disastrous enforcement impacts.

The challenge lies with the State to recognize the impact on enforcement caused by underfunding California's LUFT program and to take corrective action. However, in the likely event that additional funding for the SFRWQCB's enforcement efforts is not forthcoming, other cost saving measures can be imple-

331. Mayer, *Cleanup of Leaky Tanks*, *supra* note 171, at A1 (quoting EPA officials).

332. *UFT Hearings*, *supra* note 305, at 2.

333. *Id.*

334. *Id.*

335. Asimov, *supra* note 8, at A1.

mented that promise to increase the effectiveness and efficiency of SFRWQCB enforcement efforts.³³⁶

2. Curing the Perceptions of Inequity: Towards A Cost-Effective Enforcement Strategy

As the discussion of the SFRWQCB's task environment concluded, the Agency's enforcement style was influenced not only by the cost of compliance, but also by the regulated entities' perceptions of the fairness of the SFRWQCB's enforcement methodology.³³⁷ Failed enforcement efforts, together with escalating compliance costs, led LUFT regulators to adopt a conciliatory enforcement style directed at obtaining the most compliance for the least agency resources.³³⁸

Consequently, otherwise compliant parties became the focus of SFRWQCB's enforcement efforts rather than noncompliant parties or parties whose releases posed the greatest health threat.³³⁹ Faced with what they viewed as an unfair burden, the compliant parties became recalcitrant towards their remediation obligations. Hence, the SFRWQCB's enforcement style had the unfortunate effect of decreasing, rather than increasing, LUFT owners' willingness to comply with California LUFT laws.³⁴⁰

Consistent with this analysis, EPA auditors concluded that the State Board has disregarded the intent of both federal and state LUFT laws by not focussing cleanup efforts on tanks posing the greatest threat to people.³⁴¹ As a result, approximately \$4.5 million was inappropriately spent on low priority sites.³⁴² While the Board predictably responds that it spends time on low priority sites to capitalize on the willingness of cooperative tank owners to remediate their sites, the Board's own Office of Program Evaluation criticized this regulatory practice. "The state [is] not prioritizing cases and [is] spending too much time on tainted soil posing little health risk."³⁴³

This lack of priority setting is also evident in the way the State Board distributes cleanup funds. To avoid controversy, the state randomly selects sites for reimbursement from the Underground

336. See *infra* note 350 and accompanying text.

337. See *supra* part III.A.4.

338. See *supra* notes 210-221 and accompanying text.

339. See *id.*

340. See *supra* part III.B.

341. Mayer, *Cleanup of Leaky Tanks*, *supra* note 171, at A1.

342. *Id.*

343. *Id.*

Storage Tank Cleanup Trust Fund from those that qualify within a particular priority class. "We debated about five minutes and decided that was the easiest way. You could debate on how much was spilled or distance to the next well. To prioritize them based on some degree of risk would be an endless debate."³⁴⁴ This lack of dedication to priority-setting has led many people to believe that the LUFT regulatory program is ineffective in remediating unauthorized releases, especially those posing more serious health risks.

Defining the problem, however, creates an obligation to search for solutions. Both the noncompliant behavior of the regulated entities and the perception that the SFRWQCB is imposing unfair cost burdens can be mitigated by requiring the SFRWQCB to prioritize remediation burdens based on the danger posed by the unauthorized release, rather than by random site selection or selection based on the willingness of the regulated entity to cooperate.

There are currently over 2000 leaking tank sites in Alameda County which can be assessed for cleanup priority based, *inter alia*, on their proximity to a drinking water source, the extent of the contamination, the geology underlying the site, and the size of the release. Discussions with the SFRWQCB revealed that many of the sites which have experienced unauthorized releases have already been mapped to determine the proximity of the release sites to each other.³⁴⁵ In addition, many of these sites, while not commencing remediation efforts, have installed monitoring wells which track both actual and potential releases and have completed technical reports identifying the geological characteristics of the release site and its environs.

Together, these resources can be used to establish a network of information that would reveal the proximity of a drinking water source to a new unauthorized release, the rate at which a new release in a specific geological formation travels, and other relevant data enabling the SFRWQCB LUFT regulators to more expediently assess the relative risk posed by each new release. Using this information, LUFT regulators will be more able to prioritize and concentrate their limited resources on LUFT own-

344. Jim Mayer, *Buried Fuel Tanks Prove Toxic to Economic Hopes*, SAC. BEE, May 15, 1994, at A1.

345. Interview with ACHD LUFT Staff, *supra* note 32; Interview with LUFT Regulatory Staff, *supra* note 8.

ers and operators whose unauthorized releases pose the greatest health threats in order of descending risk.³⁴⁶

The EPA recently endorsed this potential reform measure by urging the states to adopt an "emergency standard" designed by the American Society for Testing and Materials (ASTM).³⁴⁷ The standard provides a procedure that both industry and the state can use to assess risk at contaminated UFT sites.³⁴⁸ According to the EPA, the standard is a fully developed guidance which describes risk-based corrective strategies for prioritizing and remediating sites, using appropriate levels of action and oversight. The guidance was produced by federal and state regulators, consultants in hydrology and toxicology, major oil companies, and insurance and banking representatives.³⁴⁹

With the Agency's workload only promising to increase and funding options decreasing,³⁵⁰ the ASTM guidance offers an alternative approach which considers and attempts to mitigate elements of the agency's legal, task, and political environments that have negatively impacted the SFRWQCB's ability to pursue an effective enforcement policy. In the ASTM manual a three-tiered approach to site characterization is set out, with the first tier involving a generic site assessment.³⁵¹ Discovered contamination levels would be measured against proposed screening criteria.³⁵² If contamination levels exceed the generic standards, the tank owner could choose to remediate the site to within screening levels, or proceed to the second tier. Tier II would require an in-depth site assessment with cleanup tailored to specific

346. The SWRCB has developed a field manual that has the potential to serve this reform objective. The LUFT Field Manual is a product of the LUFT Task Force, a multi-agency working group created to develop practical guidance that field level personnel can use to respond to unauthorized release. SWRCB, LUFT FIELD MANUAL, GUIDELINES FOR SITE ASSESSMENT, CLEANUP, AND UNDERGROUND STORAGE TANK CLOSURE 1 (Oct. 1989). As we have seen however the SFRWQCB regulators have not been utilizing this guidance to make regulatory decisions regarding the priority of site cleanups.

347. *ASTM Standard on Risk-Based Remediation Going to States as Guidance*, Agency Says, CAL. ENVT. DAILY (BNA) at 1 (Sept. 21, 1994).

348. *Id.*

349. See *Underground Storage Tanks: Guide to Evaluate Contaminated Sites and Quantify Risk Debated at Workshop*, CAL. ENVT. DAILY (BNA), Aug. 16, 1994, at 1.

350. *State Water Board Would Bear Brunt of Proposed Budget Cuts for Cal/EPA*, CAL. ENVT. DAILY (BNA), Jan. 24, 1994, at 1. Funding for the Cal/EPA is expected to drop 18% in 1994-95 from the current year. *Id.* The majority of these reductions would hit the SWRCB, primarily in funding for local governments like the SFRWQCB. *Id.*

351. *ASTM Standard Going to the States as Guidance*, *supra* note 347, at 1.

352. *Id.*

site conditions and risks. Tier III would apply to highly contaminated sites and would require additional site-specific data. On its face, the ASTM standard does not include such factors as the future beneficial uses of water or other resource impacts. The framework can, however, be adapted to a particular geographical region operating under a specified regulatory mandate requiring, for example, a LUFT regulatory agency, such as the SFRWQCB, to also consider the future beneficial uses of water in determining cleanup levels.³⁵³

Adopting some form of these guidelines is important for two reasons. First, the data indicates that SFRWQCB regulatory strategy between 1985 and 1990 was actually converting otherwise compliant parties into recalcitrant entities due to the perceived inequity of the regulatory burden.³⁵⁴ If a LUFT owner knew that his or her site was being targeted because of external risk factors, rather than the compliance disposition of the regulated entity, LUFT owners may be more likely to remain cooperative with the agency in remediation efforts.

Secondly, since the paucity of regulatory oversight is due, in large part, to the limited number of inspectors, the potential efficiency of this approach may, allow the inspectors to conduct more on-site investigations, facilitating more face-to-face contact with the regulated entities. Consequently, the SFRWQCB's conciliatory enforcement style will less likely provoke widespread noncompliance as LUFT owners who violate the applicable regulations will be more easily detected and sanctioned accordingly.³⁵⁵ This potential increase in voluntary compliance is particularly important in light of SWRCB Executive Officer Steven Ritchie's, recent assessment of the LUFT program's task environment: "[U]nder the best conditions, it would still take about twenty-five years to cleanup the leaks entirely. The whole gas leak problem is so ubiquitous that we've spent the last five years just trying to catch up. Even if we doubled, tripled, quadrupled our staff, we'd still be behind."³⁵⁶

An enforcement-priority ranking system achieved by mapping the LUFT sites in Alameda County would greatly increase enforcement efficiency, mitigate the perceived inequities of the

353. BASIN PLAN, *supra* note 79, at IV-18.

354. *See supra* part III.B.4.

355. Scholz, *supra* note 21, at 385-91; Kagan, *Understanding Regulatory Enforcement*, *supra* note 19, at 101-02.

356. Asimov, *supra* note 8, at A1.

LUFT program, and lead to more timely remediation of hazardous sites.

B. *Enforcement Mechanisms: the Rise of a Legalistic Approach*

In addition to the challenges posed by both the political and task environments of the SFRWQCB, the lack of a credible enforcement policy has further compromised compliance with the LUFT laws. The SFRWQCB's records reveal a maximum compliance rate of only 39%, to which the SFRWQCB has responded with only 1 formal enforcement action (administrative or civil liability or court injunction) in a period of five years (1985-1990). An EPA audit of the California LUFT enforcement activities confirms the ineffectiveness of the SFRWQCB's enforcement efforts. EPA inspectors examined thirty-eight sites statewide and agreed with the enforcement action in only one instance.³⁵⁷ In nineteen cases, auditors found that the LUFT owner had not complied with state orders, but no penalties were assessed.³⁵⁸ In five cases, \$226,540 in fines were levied when the law allows fines of \$1 million to \$10.4 million.³⁵⁹

In response to this criticism, at least one LUFT regulator asserts that "if the state concentrated on enforcement, all its time and money would be spent fighting a few stubborn tank owners."³⁶⁰ Addressing the rarity of high fines, LUFT regulators noted that sometimes "fines are inappropriate because [LUFT] owners are doing all they can afford."³⁶¹ It is evident though that without "a significant amount of cajoling" many LUFT owners will simply choose not to comply with the LUFT regulations. Reform of both the enforcement mechanisms and the SFRWQCB's willingness to result to formal enforcement is therefore needed.

One way to achieve this objective is to introduce a credible escalating range of sanctions for noncompliance, including the criminal misdemeanor for violations of remediation orders. At present, the most severe sanction for violation of a cleanup and

357. Mayer, *Cleanup of Leaky Tanks*, *supra* note 171, at A1.

358. *Id.*

359. The proceeds of these fines are deposited in the Fund for financing the remediation of other unauthorized releases. Thus higher fines would protect the solvency of the Fund and lead to greater remediation.

360. Mayer, *Cleanup of Leaky Tanks*, *supra* note 171, at A1.

361. Interview with LUFT Regulatory Staff, *supra* note 8.

abatement order are civil penalties. Use, or threat of use, of the criminal sanction will give the SFRWQCB regulators a credible sanction for failure to pay civil penalties already assessed, or to clean up an unauthorized release already determined—through the priority system—to pose a threat to human health and the environment.

Second, the SFRWQCB can build on a recent efforts by the Alameda County District Attorney in developing "Pre-enforcement Review Panels." These panels combine the information-gathering authority of the SFRWQCB and the enforcement powers of the District Attorney's office in monthly hearings on selected tank cases. If called before a panel, the UFT owner or operator must disclose all monitoring data and regulatory violations. If appropriate, the District Attorney will not hesitate to issue cleanup and abatement orders or civil penalties.³⁶² Since the panel's creation in June of 1993 the DA has received seven civil judgments, more than the SFRWQCB collected during the five years of this study.³⁶³ This enforcement technique serves the dual purpose of (1) initiating frequent contact with the tank owners so that they perceive that their violation of the LUFT laws will not go undetected and (2) imposing immediate sanctions for regulatory infractions such that a tank owner with a predisposition for noncompliance may be deterred from future noncompliant behavior.

The application of a more credible, escalating range of sanctions for violation of California's LUFT laws may yield greater enforcement benefits. Both tank owners and the SFRWQCB's regulatory staff must respond to a multi-variable regulatory environment that has strongly influenced their enforcement behavior. While factors of the task, political, and legal environments may militate against the use of civil or criminal sanctions in certain enforcement scenarios, tank owners who have repeatedly ignored their regulatory obligations may be doing so due to the absence of credible sanctions. Ultimately, the more frequent use of formal enforcement orders may deter noncompliant behavior and enable the SFRWQCB regulators to use the threat of formal sanctions more effectively to achieve remediation of contaminated sites.

362. See Interview with Gil Jensen, *supra* note 132.

363. Data submitted by Gil Jensen (April 8, 1994). The number of civil judgments issued since June of 1993 was derived by the author from a database at the Alameda County District Attorney's Office.

V.

CONCLUSION

As this examination of the SFRWQCB's regulatory environment makes clear, transforming new regulatory laws into concrete, effective protective measures is never costless and is rarely easy. The ever-widening gap between the SFRWQCB's regulatory objective of protecting human health and the environment and the declining appropriations for the SFRWQCB enforcement program has severely compromised the SFRWQCB's LUFT regulatory program. Yet, as Philip Selznick notes, "the primary social function of administration is to get the work of society done, to refashion human or other resources so that a particular outcome will be achieved."

This study of the SFRWQCB's enforcement behavior indicates that certain characteristics of the Agency's political, task, and legal environments—such as the cost of compliance—were crucial in influencing regulatory outcomes. It is these influences that must be reshaped and refashioned so that the Agency will be better able to enforce its regulatory mandate. We have learned that with low economic resilience, many tank owners will be unable and unwilling to remediate their unauthorized releases. Curing this financial instability should become one of the primary objectives of the SFRWQCB's regulatory program. Additionally, the discretionary enforcement tools of the Agency should be used in a manner which exemplifies fairness and objectivity. Towards this end, site cleanup orders should be based on the threat posed by a particular site, rather than on the compliance disposition of the individual tank owner. Moreover, the SFRWQCB should strive to maintain and exercise a credible escalating range of sanctions for noncompliant behavior so that the recalcitrant LUFT owners will have some incentive to comply with Agency orders.

All of these reforms will require a reshaping of available resources so that the SFRWQCB regulators are in a better position to prevent and abate the risk posed by the unauthorized releases from LUFTs. In the end, the conciliatory enforcement style exhibited by the SFRWQCB was a reaction to the legal, task, and political environments impacting the Agency's actions. Recognizing these factors is a first step towards meaningful debate and successful reform of California's Underground Fuel Tank Program.

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QUESTIONNAIRE: THE REGULATOR'S PERSPECTIVE

PART ONE

In response to Part One of this questionnaire please use the following scale by placing the appropriate number in the space following each question or statement:

- (0) Strongly Disagree
- (1) Disagree
- (2) Undecided
- (3) Agree
- (4) Strongly Agree

1) Generally, it is an ineffective regulatory strategy for regulators to issue an enforcement order or mandate a clean up and monitoring strategy each time they encounter a leaky underground storage tank. _____.

2) The best way for regulators to do the job is strictly "by the book". _____.

3) I have tried to enforce regulations strictly and uniformly, much as a police officer would do. _____

4) Compliance with the regulations is easiest to obtain if the regulator advises and works to educate the operator _____

5) In my work I have generally tried to educate and consult with operators _____

6) The best way for regulators to do their job is to consult with and try to educate operators _____.

PART TWO

In response to Part Two of this questionnaire please use the following scale to place the appropriate number in the space following the question or statement:

- (0) Almost Never
- (1) Rarely
- (2) Frequently
- (3) Very Frequently

1) Based on your personal experience how often do operators of underground storage tanks willfully and knowingly violate the applicable regulations _____.

2) Greater than 75% of operators can be trusted to do the right thing and to conduct themselves in an environmentally sound manner. _____.

3) Less than 25% of operators can be trusted to do the right thing and to conduct themselves in an environmentally sound manner. _____.

4) Most operators can be trusted to do the right thing once they have been given a clean up and monitoring program or a compliance order _____.

5) It is necessary to issue an enforcement order or a fine to effect compliance with the applicable regulations. _____.

PART THREE

In response to Part Three please choose between one of the two given answers which you believe best describes the attitudes and behavior of most storage tank owners regulated by the Regional Water Quality Control Board. Please circle the letter which reflects your choice.

1) (a) The underground storage tank operators are concerned about their leaky tanks and their adverse effect on the surrounding environment.

(b) Storage tank owners have little regard for the environmental effects of their storage practices.

2) (a) Most storage tank owners are adversarial.

(b) Most storage tank owners are cooperative.

(c) Neither characterization applies.

3) (a) Most storage tank owners are unreasonable.

(b) Most storage tank owners are reasonable.

(c) Neither characterization applies.

4) (a) Most storage tank owners are uncompromising.

(b) Most storage tank owners are compromising.

(c) Neither characterization applies.

5) (a) Most storage tank owners effectively set management plans to maximize detection and promptly remedy any leaks.

(b) Most storage tank owners have only vague intention to avoid leaks and remedy any adverse consequences of such a leak.

