Rule Enforcement by the Los Angeles County Air Pollution Control District†

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While the Clean Air Act is now the subject of heated congressional debate, and relaxation of some of its provisions appears likely, regulation of air pollution sources undoubtedly will continue. Although public pressure to date has focused largely upon formulating proper regulations and structures to enforce those regulations, the future of air pollution control will be determined in large part by the effectiveness with which applicable rules are enforced. In this Article, the authors present an empirical study which may provide a model for citizen groups to use in monitoring air pollution control in the coming years.

Although there has been much discussion of the need for pollution control and of legal procedures for achieving this goal, very little is known about the manner in which government has actually used available legal techniques to control pollution. This Article explores this neglected topic through an empirical study of enforcement practices of the Los Angeles County Air Pollution Control District (hereinafter APCD or District), an agency involved in air pollution control for a quarter of a century.†

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1. The District's reputation and importance are well described by one of its publicity releases which says:

The County of Los Angeles ... is recognized internationally as the pioneer in the field of air pollution control, [and] began as early as 1947 to organize the most vigorous and massive assault ever launched against this dangerous phenomenon.
Criminal misdemeanor prosecutions have formed a major part of APCD control efforts to date. Consequently, such actions taken against violators of District rules and regulations are emphasized in this study. Rather than depicting the entire range of APCD criminal prosecutions, this Article focuses on the enforcement of APCD Rules 62, 62.1, and 62.2, which regulate the sulfur content of fuel burned within the Los Angeles Basin. These rules were selected for study both because they deal with sulfur dioxide, a significant threat to public health, and because extensive public records document their enforcement by the APCD.

The key issue investigated is the extent to which the APCD vigorously discovers and prosecutes violators of Rules 62, 62.1 or 62.2. The most important result of this study is the finding that the APCD does not always seek misdemeanor prosecutions for discovered violations by oil refineries. Rather, the District seems to prefer a hearing mechanism which often grants refineries temporary variances to operate in violation of APCD rules on condition that they make diligent attempts to correct the causes of their violations. This Article dis-

Public Information and Education Division, Los Angeles County Air Pollution Control District, Smog and Its Effects 10 (undated). The APCD was established in 1947 under state legislation which authorized the Board of Supervisors of any county in California to commence operation of a county-wide air pollution control district. Cal. Health & Safety Code §§ 24200-05 (West 1967).

2. The District is governed by an Air Pollution Control Board, which is the Los Angeles County Board of Supervisors. Cal. Health & Safety Code § 24220 (West 1967). The Air Pollution Control Board may make and enforce rules and regulations for the APCD. Id. §§ 24250, 24260, 24262; id. § 24260.1 (West Supp. 1973). A violator of any rule or regulation of the APCD is guilty of a separate criminal misdemeanor for each day that he violates the rule or regulation. Id. § 24281 (West 1967). For the rationale behind the District's reliance on misdemeanor prosecutions to gain compliance with its rules and regulation, see Mix, The Misdemeanor Approach to Pollution Control, 10 Ariz. L. Rev. 90 (1968) [hereinafter cited as Mix]. Mr. Mix is a Los Angeles Deputy County Counsel and a legal advisor to the APCD.

3. The Los Angeles Basin, as defined in District rules, encompasses a portion of Los Angeles County containing almost all of the county's human population. See Los Angeles County Air Pollution Control District, Rules and Regulations, R. 2(g)(1) (1971) [hereinafter cited as Rules]; U.S. Dep't of Health, Education, and Welfare, Air Pollution Control Field Operations Manual 24 (1962) [hereinafter cited as Field Operations Manual].

4. See text accompanying notes 31-35 infra.

5. Empirical studies of other enforcement agencies have shown that they are not always vigorous in seeking the application of available criminal sanctions. See M. Clinard, The Black Market (1952); A. Reiss, Jr., The Police and the Public (1971); E. Sutherland, White Collar Crime (1949); Black, The Social Organization of Arrest, 23 Stan. L. Rev. 1087 (1971); Carson, White-Collar Crime and the Enforcement of Factory Legislation, 10 Br'tl. J. Criminology 383 (1970).

6. See Table 3 and accompanying text infra.

7. See Section VI infra.
cusses the factors which account for this enforcement pattern and presents evidence which casts doubt upon the efficacy of this strategy.

I

APCD ENFORCEMENT POWERS

Any study of APCD rule enforcement must begin with a description of applicable legal enforcement powers, since these define the District's ability to fulfill its primary responsibility of regulating stationary source pollution in Los Angeles County. The Los Angeles County Board of Supervisors meets in an ex officio capacity as the Air Pollution Control Board and has the responsibility of governing the APCD, including enactment of District rules and regulations. In addition to enforcing its own rules and regulations, the District is empowered to enforce two state statutes governing the opacity of emissions and nuisances created by the emission of air contaminants.

Much of the District's stationary source control program is based on the requirement that permits be obtained to build and operate certain equipment which may emit atmospheric contaminants. The issuance and continued validity of these permits are conditioned upon compliance with the state statutes governing nuisance and opacity of emissions and with District rules and regulations. The APCD has the power to suspend a permit where there is an intentional failure

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8. See Sections VI and VII infra.
9. See Table 7 and accompanying text infra.
10. For more extensive descriptions of the legal framework under which the APCD operates see: Chass & Feldman, Tears for John Doe, 27 S. CAL. L. REV. 349 (1954); Comment, California Legislation on Air Contaminant Emissions from Stationary Sources, 58 CALIF. L. REV. 1474 (1970); Kennedy, The Legal Aspects of Air Pollution Control with Particular Reference to the County of Los Angeles, 27 S. CAL. L. REV. 373 (1954); Walker, The Air Pollution Control Hearing Board—Functions and Jurisdictions, 27 S. CAL. L. REV. 399 (1954).
11. The Los Angeles County Board of Supervisors consists of five supervisors each of whom is popularly elected from a different geographic district of Los Angeles County. CAL. GOV'T CODE §§ 25000, 25040 (West 1968).
15. Id. § 24263; id. §§ 24264-82 (West Supp. 1973); RULES, supra note 3, R. 10-25.
16. See note 14 supra.
17. RULES, supra note 3, R. 20, 21.
to provide requested information regarding the emissions of a source under a permit.\textsuperscript{18}

Although the District's enforcement effort has been described by an APCD legal advisor as primarily one of criminal prosecution for violation of applicable state laws and District regulations,\textsuperscript{19} the District may also invoke civil remedies.\textsuperscript{20} While the APCD always has been able to seek civil injunctions against violators,\textsuperscript{21} state legislation adopted in 1970 expanded available civil options. Under the current scheme anyone either intentionally or negligently violating District rules or regulations or applicable state statutes\textsuperscript{22} may be subject to a civil fine of up to $500 for each day of violation.\textsuperscript{23} The Air Pollution Control Board also may serve upon violators an order of abatement\textsuperscript{4} involving possible civil fines up to $6000 per day of violation.\textsuperscript{25}

The potentially punitive aspects of APCD enforcement activities are somewhat mitigated by the District Hearing Board.\textsuperscript{26} Upon peti-

\textsuperscript{18} \textsc{Cal. Health & Safety Code} §§ 24269, 24270 (West 1967). However, current District policy is not to suspend permits. See notes 124-26 \textit{infra}.

\textsuperscript{19} See Mix, \textit{supra} note 2. \textsc{Cal. Health & Safety Code} § 24253 (West 1967) applies the misdemeanor sanction to violations of these state statutes. Misdemeanor prosecutions for the violation of District rules and regulations are authorized by \textit{id.} §§ 24277-82 (West 1967).

Enforcement includes issuance of a Notice of Violation to a violator. For a description of a Notice of Violation see \textsc{Field Operations Manual}, \textit{supra} note 3, at 104, 105, 220. The District's authority to arrest violators is found in \textsc{Rules}, \textit{supra} note 3, R. 4 and \textsc{Cal. Pen. Code} § 836.5 (West Supp. 1973). A violator may be subjected to a fine of up to $500 and imprisonment for up to six months. \textit{Id.} § 19 (West 1970).

There is precedent that an employer may be held criminally liable for the acts of his employee even though the employee acted in violation of the employer's instructions. Mix, \textit{supra} note 2, at 90, 93 n.29, citing as authority for this point, People v. West, CR. A. 2900 (App. Dept', Super. Ct., County of Los Angeles, Feb. 15, 1952); \textit{Ex parte Marley}, 29 Cal. 2d 525, 175 P.2d 832 (1946); \textit{In re Casperson}, 69 Cal. App. 2d 441, 159 P.2d 88 (1945); People v. Schwartz, 28 Cal. App. 2d 775, 70 P.2d 1017 (1937).


20. In practice civil remedies are rarely sought by the District. See text accompanying notes 119-23 \textit{infra}.


\textsuperscript{22} See note 14 \textit{supra}.

\textsuperscript{23} \textsc{Cal. Health & Safety Code} § 39261 (West Supp. 1973). Violations of \textit{id.} § 39430 are also covered.

\textsuperscript{24} \textit{Id.} § 24260.5.

\textsuperscript{25} \textit{Id.} § 39260.

\textsuperscript{26} Hearing Board members are appointed by the Air Pollution Control Board.
tion the Hearing Board may reverse District action suspending or denying an equipment permit. It may also grant petitions for variances to operate equipment in violation of APCD rules and regulations or in violation of state statutes governing emission opacity. These variances may extend for up to one year and are renewable after another hearing.

II

THE RULE 62 COMPLEX

APCD Rules 62, 62.1, and 62.2 prohibit the burning of gaseous, liquid, or solid fuels having a high sulfur content. Sulfur dioxide is the main air pollutant which the Rule 62 complex is designed to control. This contaminant has been associated with increased illness and mortality during air pollution crises. The APCD has estimated that in 1970 an average of 250 tons of sulfur dioxide were emitted each day in Los Angeles County. During the same year California's air quality standard for sulfur dioxide, intended to limit adverse effects on health, was exceeded on 95 days in the Los Angeles Basin.

Rule 62, which became effective in 1959, bans the burning of high-sulfur fuel between May 1 and September 30 of each year.

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27. Id. §§ 24271-76 (West 1967); id. § 24291 (West Supp. 1973).
29. Id. § 24301.
30. Hereinafter Rules 62, 62.1, and 62.2 will be referred to collectively as the Rule 62 complex.
31. The District has also justified the Rule 62 complex as a measure to reduce emissions of oxides of nitrogen and particulates. Interview with John S. Nevitt, Senior Air Pollution Analyst, Los Angeles County Air Pollution Control District, in Los Angeles, Dec. 22, 1971.
33. 210 of the 250 tons of sulfur dioxide come from stationary sources of air pollution. LOS ANGELES COUNTY AIR POLLUTION CONTROL DISTRICT, PROFILE OF AIR POLLUTION CONTROL 9 (1971) [hereinafter cited as PROFILE OF AIR POLLUTION CONTROL]. A "stationary source" is defined as "a nonmobile source of air pollution associated with industrial, commercial and residential activities." Id. at 17.
34. An average of 0.04 parts per million per day. Id. at 79.
35. Id. at 66.
36. Id. at 79.
37. Rule 62 states:
A person shall not burn within the Los Angeles Basin at any time between May 1 and September 30, both dates inclusive, during the calendar year...
The rule was adopted because of increased availability of natural gas as a substitute for fuel oil with high sulfur content. Because of the greater abundance of natural gas in the years following the adoption of Rule 62, Rule 62.1 was enacted in 1964. Together these two rules impose a year-round ban on the combustion of high-sulfur fuels. Both Rules 62 and 62.1, however, would allow the burning of high-sulfur fuel oil should the supplier of natural gas interrupt delivery. In 1968 increased availability of low-sulfur fuel oil meeting Rule 62 specifications led to modification of this exception by Rule 62.2, which provides that high-sulfur fuel can be burned under emergency circumstances but only for three days, or, if an application is promptly

1959, and each year thereafter between April 15 and November 15, both inclusive, of the same calendar year, any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions, or any liquid fuel or solid fuel having a sulfur content in excess of 0.5 per cent by weight.

The provisions of this rule shall not apply to:

a. The burning of sulfur, hydrogen sulfide, acid sludge or other sulfur compounds in the manufacturing of sulfur or sulfur compounds.

b. The incinerating of waste gases provided that the gross heating value of such gases is less than 300 British thermal units per cubic foot at standard conditions and the fuel used to incinerate such waste gases does not contain sulfur or sulfur compounds in excess of the amount specified in this rule.

c. The use of solid fuels in any metallurgical process.

d. The use of fuels where the gaseous products of combustion are used as raw materials for other processes.

e. The use of liquid or solid fuel to propel or test any vehicle, aircraft, missile, locomotive, boat or ship.

f. The use of liquid fuel whenever the supply of gaseous fuel, the burning of which is permitted by this rule, is not physically available to the user due to accident, act of God, act of war, act of the public enemy, or failure of the supplier.


38. PROFILE OF AIR POLLUTION CONTROL, supra note 33, at 33.

39. Id.

40. Rule 62.1 states:

a. A person shall not burn within the Los Angeles Basin at any time between the days of November 16 of any year and April 14 of the next succeeding calendar year, both dates inclusive, any fuel described in the first paragraph of Rule 62 of these Rules and Regulations.

b. The provisions of this Rule do not apply to:

1. Any use of fuel described in Subsections a, b, c, d, e, and f of said Rule 62 under conditions and for the uses set forth in said Subsections.

2. The use of liquid fuel during a period for which the supplier of gaseous fuel, the burning of which is not prohibited by this Rule, interrupts the delivery of gaseous fuel to the user.

c. Every holder of, and every applicant for a permit to operate fuel-burning equipment under these Rules and Regulations shall notify the Air Pollution Control Officer in the manner and form prescribed by him, of each interruption in and resumption of delivery of gaseous fuel to his equipment.

41. RULES, supra note 3, R. 62(f), 62.1(b).

42. PROFILE OF AIR POLLUTION CONTROL, supra note 33, at 33, 34.
filed, until a variance is granted by the Hearing Board.\(^{48}\)

**III**

**REGULATED INDUSTRIES**

For the purposes of this analysis it is convenient to distinguish three types of industry regulated by the Rule 62 complex: oil refineries, power plants, and a residual category which will be called “other users.” In addition to emitting different amounts of sulfur dioxide into the atmosphere, these categories present varying enforcement problems.

**A. Refineries**

Approximately 19 oil refineries are located in Los Angeles County, and thus comprise one of the area's major industries.\(^{44}\) These refineries emit an average of seven tons of sulfur dioxide each day\(^{45}\) and are located predominantly in the southern part of Los Angeles County, which reports the highest ambient levels of sulfur dioxide.\(^{46}\)

Refinery violations of the Rule 62 complex may occur when “make gas,” a high-sulfur-content gaseous fuel, is burned without treatment to remove the sulfur.\(^{47}\) “Make gas” is a high-sulfur by-product of the refining process and is normally sent through hydrogen sulfide recovery facilities where its sulfur content is reduced.\(^{48}\) The sulfur content of the gas after treatment satisfies the requirements of the Rule 62 complex. The treated gas is burned in the refinery fuel system while the hydrogen sulfide, removed from the “make gas” during treatment, is piped to a sulfur recovery plant. Since refineries usually operate on an around-the-clock basis, any malfunction\(^{40}\) either in the hydrogen

\(^{43}\) Rule 62.2 states:

Notwithstanding the provisions of Section (f) of Rule 62 or any provision of said section as incorporated into Rule 62.1, a person shall not burn within the Los Angeles Basin any liquid fuel or solid fuel having a sulfur content in excess of 0.5 per cent by weight.

It shall not be a violation of this rule to burn such fuel for a period of not to exceed three calendar days (and in addition for that period of time necessary for the hearing board to render a decision [sic], provided that an application for a variance is promptly filed) when other fuel which complies with this Rule is not used due to accident, strike, sabotage, or act of God.

\(^{44}\) *Field Operations Manual*, supra note 3, at 24, 95.

\(^{45}\) *Profile of Air Pollution Control*, supra note 33, at 31.

\(^{46}\) *Id.* at 69, 70.

\(^{47}\) See *Field Operations Manual*, supra note 3, at 190. Refineries may also violate the Rule 62 complex by burning liquid high-sulfur fuel, but this occurs less frequently than violations due to “make gas.” See note 97 infra.

\(^{48}\) For a description of oil refinery operations see *Engineering Manual*, supra note 32, at 561-606.

\(^{49}\) Malfunctions may occur during unforeseen equipment breakdowns or during foreseeable periods when equipment is not in use because of necessary routine maintenance. Interview with Robert G. Lunche, Chief Deputy Air Pollution Control
sulfide recovery facilities or in the sulfur recovery plant forces a refinery to choose between burning illegal high-sulfur fuel and shutting down refining operations.60

Refinery violations of the Rule 62 complex may also occur when waste gases with a gross heating value of more than 300 BTU's are incinerated or when fuel with a nonconforming sulfur content is used to incinerate waste gas.61 Waste gases are a by-product of refinery operations and arise either in the normal course of operations or from an emergency imbalance in refinery fuel systems. Waste gas is usually incinerated by burning it in a flare.64

B. Power Plants

A second industry affected by the Rule 62 complex is the production of electrical power. During the period under study there were about eleven fuel-oil-burning power plants in Los Angeles County.65

If the hydrogen sulfide recovery facilities malfunction but the refinery keeps operating, untreated "make gas" with a high sulfur content will be burned in refining operations. Similarly, if the sulfur recovery plant shuts down and the refinery continues to operate, either hydrogen sulfide produced by the hydrogen sulfide recovery facilities or untreated "make gas" will be burned (flared) in violation of the Rule 62 complex.

A superficial reading of Rule 62 might lead one to conclude that waste gas disposal is not prohibited, since the rule provides that "a person shall not burn . . . any . . . fuel" with an excess sulfur content. To reach such a conclusion this phrase would have to be construed as prohibiting only the burning of waste gas as fuel. However, several factors rebut such an interpretation. First, waste gas is clearly "fuel" within the meaning of Rule 62. If this were not so, there would be no need for excluding the incineration of waste gas, under certain conditions, from the general prohibition. Thus, burning waste gas either as fuel or to dispose of it is prohibited unless falling within the exception of Rule 62(b). Second, the APCD FIELD OPERATIONS MANUAL (supra note 3, at 189-91) in describing proper sampling procedures to discover if the burning of waste gas violates Rule 62, does not admonish inspectors only to draw samples from lines where waste gas is being burned as fuel rather than from lines where waste gas is being disposed of by burning. Third, oil refineries have sought variances from the Rule 62 complex to dispose of high sulfur content waste gas in flares. See Hearing Board Case Nos. 1087-5, 1087-4, 1087-3, 1068-3, 1011. This indicates that they interpret the Rule 62 complex as covering the disposal of waste gas. Finally, an interview with a petroleum engineer conversant in oil refinery operations and air pollution control indicated that his reading of Rule 62 was that, apart from the exception in 62(b), all burning of waste gas with excess sulfur content is prohibited. Interview with Richard Perrine, Professor of Engineering and Applied Science, U.C.L.A., in Los Angeles, Apr. 4, 1973.

Waste gas is constantly generated by H2S absorption, waste water stripping, and coker blowdown operations. See FIELD OPERATIONS MANUAL, supra note 3, at 190; ENGINEERING MANUAL, supra note 32, at 565-66.

For a description of combustion processes associated with the generation of electricity see id. at 526-28.
Six of these eleven power plants are located in southern Los Angeles County, the area of the county already noted to have the worst sulfur dioxide problem. The APCD estimates that power plants emit practically no sulfur dioxide during the summer, but during the winter months they emit more than ten times as much sulfur dioxide as do the refineries. Besides being a significant source of pollution, power plants present a unique enforcement problem for the District. Four of the five concerns operating power plants in Los Angeles County are immune from criminal prosecution because they are governmental agencies. However, this does not bar the application of civil sanctions to any of the power companies.

Developing shortages of natural gas coupled with an increased demand for electricity mean that sulfur dioxide emissions from power plants in Los Angeles County can be expected to increase in the future as power plants are forced to depend more heavily on fuel oil. The reason for this may be better understood by examining how power plants operate. Power plants use steam generators, which are essentially large boilers, to generate electricity. In principle, the steam generators can operate on any type of fuel. Both the power companies and the APCD would prefer the use of natural gas, since it is the least expensive and the least polluting of the available fuels. However, because the power companies cannot contract for enough natural gas to meet their fuel needs, they also must contract for supplies of low-sulfur fuel oil, which is the least expensive readily available fuel meet-

57. See text accompanying note 46 supra.
58. As already noted, refineries emit an average of seven tons of sulfur dioxide per day. See note 45 and accompanying text supra. Because refineries use liquid fuel and their own byproduct gas, this level of emissions is constant throughout the year. However, power plants operate on an interruptible supply of natural gas, and that supply is most often interrupted during the winter, at which time liquid fuels must be used. See notes 60-63 and accompanying text infra. Consequently, power plants emit an average of 75 tons of sulfur dioxide per day during the winter months (November 16 to April 14) but practically none during the summer (April 15 to November 15). Profile of Air Pollution Control, supra note 33, at 31.
59. Four power companies are run by the municipalities of Los Angeles, Pasadena, Glendale, and Burbank. The fifth power company, Southern California Edison, is a private corporation. Cal. Health & Safety Code § 24254 (West Supp. 1973) bars the criminal prosecution of governmental agencies for air pollution violations. However, it does not bar a suit for an injunction. Id. § 39500. Civil penalties may be sought against the power companies under id. § 39262.
60. Nevitt Interview, note 31 supra.
61. Id. Most natural gas used by power plants is piped in from out of state at a price regulated by the Federal Power Commission. Due to the nationwide shortage of natural gas, the Federal Power Commission is considering allowing higher prices to be charged for natural gas shipped interstate in order to stimulate the discovery of new gas fields. Id.
ing the requirements of the Rule 62 complex. Low-sulfur fuel oil is used after the natural gas supply has been exhausted. Power plants also may have to switch to low-sulfur fuel oil when their deliveries of natural gas are halted because other higher priority users of natural gas are consuming all the available supplies. These higher priority users are on a continuous schedule of natural gas delivery while industrial and commercial users, such as the power companies, which have alternative fuel sources, may have delivery interrupted. It is during such interruptions that power plants are most likely to violate the Rule 62 complex. Violations may occur when the power companies have not purchased adequate standby supplies of low-sulfur fuel oil and are then compelled to use illegal high-sulfur fuel oil. Other power plant violations may occur because of an improper mixing of fuel oil.

C. Other Users

The third group regulated by the Rule 62 complex is a general residual category. These other users are industrial and commercial establishments which normally use low-sulfur fuel oil or natural gas. Like power plants, other users dependent upon natural gas may have their deliveries interrupted in times of high demand, and therefore need standby fuel supplies. Violations of the Rule 62 complex will occur when other users burn high-sulfur fuel at times when natural gas and low-sulfur fuel oil are unavailable. As a group, other users emit far less sulfur dioxide than do power plans or oil refineries and are not concentrated in any single area of Los Angeles County.

62. Diesel fuel also meets the requirements of the Rule 62 complex and is less polluting than low-sulfur fuel oil. However, diesel fuel costs more than low-sulfur fuel oil and is, therefore, not normally used. High-sulfur fuel oil is lower in cost and more highly polluting than low-sulfur fuel oil. Id.

63. It is usually during the winter that higher priority users of natural gas (primarily residences) without alternative sources of fuel increase their demand for natural gas.

64. When low-sulfur fuel oil first became available to power plants in sizable quantities in the late 1960's, they often received shipments of oil with a sulfur content which was so low that high-sulfur fuel oil could be mixed in, with the mixed fuel still being able to meet the requirements of the Rule 62 complex. More recently, however, the suppliers have been delivering low-sulfur fuel oil which is so close to the Rule 62 complex requirement that mixing is impossible without violating the Rules. Nevitt Interview, note 31 supra. This may leave power companies with the problem of disposing of residual stocks of high-sulfur fuel oil which they had hoped to mix with low-sulfur fuel oil.

65. Hereinafter this residual category will be referred to as "other users."

66. Typically, these establishments use the natural gas or standby fuels to heat boilers. The boilers are then used in a variety of ways, ranging from heating materials as part of an industrial production process to heating the air in a building.

67. The APCD estimates that other users emit 1 ton of sulfur dioxide per day
IV

DISCOVERING THE VIOLATOR

Effective regulation depends in part upon the ability of an enforcement agency to discover violators. The District identifies violations of the Rule 62 complex by chemically analyzing samples of suspect fuel. Since it is APCD policy to sample fuel only when a violation of the Rule 62 complex is otherwise suspected, conditions which may trigger fuel sampling must be examined.

Visual observation of smoke plumes is the major method by which the District learns of possible Rule 62 violations. The plume characteristic of high sulfur fuel alerts APCD enforcement officers, who will often enter the plant in question and take a fuel sample. Enforcement officers usually observe such plumes under three types of circumstances: 1) Inspectors may be assigned to check specific plants periodically to monitor compliance with APCD rules and regulations. In the course of such inspections, these officers watch for visible plumes. 2) An enforcement officer assigned to patrol specific geographical areas may observe a plume. 3) During a "saturation raid," enforcement officers may sight a plume and take a fuel sample. These unannounced "saturation raids" involve blanketing a portion of Los Angeles County with APCD enforcement personnel who search for visible emissions.

Aside from its own inspections, the District may be alerted to possible violations of the Rule 62 complex by petitions presented to the Hearing Board requesting variances from District rules and regulations. Variance petitioners must show why they will be unable to comply

See also note 58 supra. 69. Interview with Thomas Wilkes, Assistant Director, Enforcement Division, Los Angeles County Air Pollution Control District, in Los Angeles, Dec. 28, 1971. 70. APCD authority to enter and take fuel samples is granted by CAL. HEALTH & SAFETY CODE § 24246 (West 1967).

See text accompanying notes 26-28 supra.
with District rules and regulations, and may be issued a Rule 62 notice of violation by the District if they are caught burning nonconforming fuel while their petition is pending or after it has been denied.

Public complaints are a third source through which the District learns of possible violations. When the District receives a complaint regarding emissions by a specific source, it dispatches an enforcement officer to observe the source and decide whether or not to take a fuel sample.

While plume observation, Hearing Board petitions, and public complaints alert the District to possible violations by all three types of Rule 62 industries, other methods of discovery are more effective for certain industries. For example, gas companies report to the APCD when they must interrupt service to low-priority users, such as power plants and other users, thus alerting the APCD that particular users will consume fuels other than natural gas. Stricter surveillance may then be imposed upon those users. Power companies also report directly to the District the amount and types of fuels burned by their generating stations, thus indicating when the potential for power plant violations is greatest. Chart 1 summarizes the above discussion and indicates that, of the three types of Rule 62 users, the APCD has the greatest number of information channels regarding power plant fuel use and the fewest regarding refinery fuel use. Given that refineries are a major source of emissions subject to the Rule 62 complex, developing alternative sources of information about their fuel use practices may well be an important step in the enforcement process.

75. RULES, supra note 3, R. 77, 78.

76. The only parties immune from criminal prosecution for burning nonconforming fuel are governmental agencies (see note 59 supra), those under a Hearing Board variance to burn nonconforming fuel (see note 28 supra), and those who burn nonconforming liquid or solid fuel under the exemption contained in Rule 62.2 (see note 43 supra). Note that the burning of nonconforming gaseous fuel is not included in the exception contained in Rule 62.2.

77. The handling of public complaints is described in FIELD OPERATIONS MANUAL, supra note 3, at 135-39.

78. Id.

79. Interview with Robert G. Lunche, Chief Deputy Air Pollution Control Officer, Los Angeles County Air Pollution Control District, in Los Angeles, Dec. 22, 1971.

80. The reports come in monthly and indicate daily fuel usage at each power plant. Nevitt Interview, note 31 supra.

81. Gas company reports of fuel interruptions and power company reports of all their fuel usage are not mandatory under any statute or regulation. These reports are used by the APCD in lieu of the Rule 62 complex requirement that every holder of a permit to operate fuel-burning equipment must notify the District of each interruption in and resumption of delivery of gaseous fuel to his equipment. RULES, supra note 3, R. 62.1(c).

82. See text accompanying notes 44-46 supra.
CHART 1: SOURCES OF INFORMATION ABOUT FUEL USE

<table>
<thead>
<tr>
<th>Source of Information</th>
<th>Type of Observation</th>
<th>Public Complaints</th>
<th>Hearing Board Petitions</th>
<th>Gas Company Reports of Interruption of Service</th>
<th>Monthly Fuel Use Reports</th>
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<td>Refineries</td>
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<td>X</td>
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<tr>
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<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Because of information gathered through the channels described above, the APCD Enforcement Division took 88 fuel samples between July 1, 1967, and June 30, 1971. Table 1 indicates that APCD fuel sampling activity has been on the increase, from only four in fiscal 1968 to 66 in fiscal 1971. While this increase appears to reflect an increasingly aggressive enforcement policy, questions remain as to whether fuel sampling has occurred where it is most needed.

TABLE 1: FUEL SAMPLES TAKEN BY THE APCD ENFORCEMENT DIVISION TO DETERMINE SULFUR CONTENT

<table>
<thead>
<tr>
<th>Yeara</th>
<th>Number of Samples</th>
<th>Type of Unit Sampled</th>
<th>Number of Samples</th>
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<tbody>
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<td>1970-71</td>
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<td>Refinery</td>
<td>36</td>
</tr>
<tr>
<td>1969-70</td>
<td>11</td>
<td>Power plant</td>
<td>13</td>
</tr>
<tr>
<td>1968-69</td>
<td>7</td>
<td>Other users</td>
<td>39</td>
</tr>
<tr>
<td>1967-68</td>
<td>4</td>
<td>Total</td>
<td>88</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reason Given for Sampleb</th>
<th>Number of Samples</th>
<th>Result of Sample</th>
<th>Number of Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suspected violation</td>
<td>77</td>
<td>Nonconforming fuel</td>
<td>39</td>
</tr>
<tr>
<td>Hearing Board action</td>
<td>5</td>
<td>Conforming fuel</td>
<td>48</td>
</tr>
<tr>
<td>Information, or other reason</td>
<td>6</td>
<td>No result reported</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>88</td>
<td>Total</td>
<td>88</td>
</tr>
</tbody>
</table>

a The District operates on a July 1-June 30 fiscal year basis, and all of its statistics are reported for this period.
b Reason stated on the APCD sample request form.

Of the three types of Rule 62 industries, power plants and oil refineries pose the greatest sulfur dioxide air pollution problem both because they emit the largest amounts of sulfur dioxide and because they are centered in that portion of Los Angeles County having the

83. Table 1 is based upon an inspection of the requests for chemical analysis of samples made by the APCD Enforcement Division. For an example of the form used see FIELD OPERATIONS MANUAL, supra note 3, at 176, Figure XI-9.
highest levels of sulfur dioxide emissions. During the period under study, the APCD drew its greatest number of fuel samples (39) from the other users category which emits the least sulfur dioxide, and drew fewer samples from power plants (13) and from refineries (36), which pose the greatest Rule 62 compliance problem (see Table 1). This does not necessarily mean, however, that the District is taking too few samples from power plants or oil refineries. For instance, few samples may have been taken from power plants because the APCD has very complete information about power plant fuel usage and will use this information to take fuel samples only during periods when violations are probable. On the other hand, the APCD has relatively few sources of information regarding fuel use by oil refineries. More samples were drawn from refineries than from power plants, and this may indicate that the APCD is making up for fewer sources of information about refinery fuel usage by increasing surveillance for visible plumes followed by fuel sampling when appropriate.

It is difficult to evaluate APCD fuel sampling policies. Table 2 shows that half of the fuel samples taken from refineries were nonconforming, while less than one third of the samples from power plants indication nonconforming fuels. This seems paradoxical given that the District has more sources of information about power plant fuel usage than it does about refinery fuel usage. One would expect that more sources of information would lead to sampling when there is a higher probability of violation, so that a given sample would be more likely to turn up a violation. On the other hand, the APCD may require more evidence of a violation at a refinery than at a power plant before entering to draw a sample. Such an approach would mean that a refinery sample would be more likely than a power plant sample to show nonconforming fuel. Alternatively, in order to compensate for fewer sources of information about refinery fuel use, the District may have intensified surveillance and sampling of refineries. Sampling at power plants might be infrequent and not necessarily for the purpose of discovering violations because the APCD is able to keep close track of power plant fuel use by other means and because the power plants are less likely to use nonconforming fuel.

84. See text accompanying notes 55-58, 67 supra.
85. See text accompanying notes 71-82 supra.
86. Id.
87. See text accompanying notes 80-82 supra.
88. For instance, the sample might be taken to keep track of the sulfur content of fuel oil being used by power plants so that the APCD can estimate sulfur dioxide emissions from such sources.
89. See notes 80-82 supra, and accompanying text.
TABLE 2: CONFORMING AND NONCONFORMING FUEL SAMPLES BY SAMPLE SOURCE
July 1, 1967 to June 30, 1971

<table>
<thead>
<tr>
<th>Result of Sample Analysis</th>
<th>Refineries</th>
<th>Sample Source</th>
<th>Other Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonconforming</td>
<td>50.0% (18)</td>
<td>30.8% (4)</td>
<td>43.6% (17)</td>
</tr>
<tr>
<td>Conforming</td>
<td>50.0% (18)</td>
<td>69.2% (9)</td>
<td>56.4% (22)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0% (36)</td>
<td>100.0% (13)</td>
<td>100.0% (39)</td>
</tr>
</tbody>
</table>

* The one sample where no result was reported is classified as a conforming sample for the purposes of this table.

The preceding considerations raise significant questions as to the District's ability to discover a substantial proportion of all violations of the Rule 62 complex. One is compelled to ask whether there is adequate surveillance of the various industries involved and whether the District should change its policy to sample systematically even when a violation is not suspected. Information necessary to answer such questions merits a study of its own; the present effort focuses on the processing and disposition of those fuel samples that were taken to discover violations of the Rule 62 complex.

V
ISSUING A NOTICE OF VIOLATION AND PROSECUTING THE VIOLATOR

Upon discovery that nonconforming fuel has been burned in violation of the Rule 62 complex, the APCD does not automatically issue a notice of violation. Similarly, every notice of violation issued does not automatically result in a misdemeanor prosecution. Relying on an extensive examination of public records, this study evaluates APCD practices in issuing notices of violation and in filing misdemeanor complaints.

90. See text accompanying note 69 *supra*.

91. Typically those who are immune from misdemeanor prosecution are not issued a notice of violation. The classes of immune fuel users are listed in note 76 *supra*.

92. First, every request for a chemical analysis of the sulfur content of fuel samples made by the APCD Enforcement Division from July 1, 1967, through June 30, 1971, was examined. See Table 1 and note 83 *supra*.

Secondly, information on every notice of violation of the Rule 62 complex issued by the APCD from May 1, 1959, (the date when Rule 62 first went into effect) to June 30, 1971, was gathered from the District's Master Control Log. The Master Control Log was also a source of information on the filing and disposition of Rule 62 misdemeanor complaints. For a description of the Master Control Log see FIELD OPERATIONS MANUAL, *supra* note 3, at 107, Figure VI-9.
A. Fuel Sample Data

Table 3 examines nonconforming fuel samples taken from various refineries; none of those refineries reporting nonconforming samples was immune from prosecution. In each of the 18 instances where an APCD enforcement officer found a nonconforming sample, the "Reason For Request" listed on the fuel sample request form was a "suspected violation" of Rule 62 or 62.1. Yet only three notices of violation were issued out of these 18 fuel samples.

TABLE 3: REFINERY FUEL SAMPLES IN EXCESS OF RULE 62 COMPLEX REQUIREMENTS
July 1, 1967 to June 30, 1971

<table>
<thead>
<tr>
<th>Status of Refinery</th>
<th>No Variance</th>
<th>Petition for Variance Pending</th>
</tr>
</thead>
<tbody>
<tr>
<td>APCD Action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No notice of violation issued</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Notice of violation issued</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>5</td>
</tr>
</tbody>
</table>

Thirdly, a list of petitions for variance from the Rule 62 complex was compiled, based on monthly summaries of variance petitions prepared by the APCD for the period July 31, 1962, to July 1, 1971. Finally, the Hearing Board records describing the disposition of each of those petitions were examined and relevant information abstracted.

93. See note 76 supra.
94. See note 83 supra.
95. It must be assumed that the enforcement officer in these 18 instances was following APCD policy by drawing a sample only when a violation was suspected (see text accompanying note 69 supra) and that the sample was drawn from a fuel line leading to an active combustion unit (see note 68 supra).
96. Master Control Log Nos. 44429, 44578, 44600. Interestingly, two of the three notices of violation were issued to one refinery within a period of two days (July 31-August 1, 1970) while it had an application for a variance pending before the Hearing Board. Hearing Board Case No. 831-27. During the first nine months of 1970, the APCD had received more than 125 citizen complaints against this refinery, and the Air Pollution Control Board ultimately authorized a suit for injunction. Los Angeles County Board of Supervisors, Records, Oct. 1, 1970. In fact, this was the only instance where the District sought an injunction against violation of the Rule 62 complex.
97. Not included in 18 nonconforming fuel samples reported in Table 3 is one nonconforming sample (Laboratory No. 73370-7) taken for informational purposes for a flare study. It is possible that this nonconforming fuel was burned at the request of the APCD.
98. Fuel samples in excess where the operator was not immune from prosecution and where no notice of violation was issued.
Table 4 (next page) indicates that of the 13 fuel samples taken from power plants, only four were nonconforming. All of these nonconforming samples were drawn from municipally operated power plants which are immune from misdemeanor prosecution. One of them came from a power plant which had a variance to burn high-sulfur fuel gas to furnaces.

<table>
<thead>
<tr>
<th>Laboratory Number</th>
<th>Date Requested</th>
<th>Reason for Sample Request</th>
<th>Grains of H₂S per 100 cu. ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>71401-1</td>
<td>5/20/71</td>
<td>suspected violation</td>
<td>84 (fuel gas to furnace)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1300 (fuel gas to isomax complex from drum)</td>
</tr>
<tr>
<td>73480-1</td>
<td>12/14/70</td>
<td>suspected violation</td>
<td>300-1530 (samples of coker blowdown effluent)</td>
</tr>
<tr>
<td>73280-3</td>
<td>11/24/70</td>
<td>suspected violation</td>
<td>772 (coker drum exit gas line)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>84 (coker drum exit gas line)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>767 (coker drum blowout accumulative)</td>
</tr>
<tr>
<td>72960-1</td>
<td>10/23/70</td>
<td>suspected violation</td>
<td>1140-1280 (samples of coker blowdown gas)</td>
</tr>
<tr>
<td>72820-1</td>
<td>10/8/70</td>
<td>suspected violation</td>
<td>883-1300 (samples of coker blowdown effluent)</td>
</tr>
<tr>
<td>72300-1</td>
<td>8/18/70</td>
<td>suspected violation</td>
<td>3080 (coker blowdown effluent)</td>
</tr>
<tr>
<td>73200-2</td>
<td>8/19/70</td>
<td>suspected violation</td>
<td>262 (coker blowdown effluent)</td>
</tr>
<tr>
<td>71390-2*</td>
<td>5/19/70</td>
<td>Hearing Board action suspected violation</td>
<td>88 (lease return gas)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(petition for variance pending)</td>
</tr>
<tr>
<td>71410-1*</td>
<td>5/18/70</td>
<td>Hearing Board action suspected violation</td>
<td>68 (lease return gas)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(petition for variance pending)</td>
</tr>
<tr>
<td>62549-1</td>
<td>9/11/69</td>
<td>suspected violation</td>
<td>.98 (weight % sulfur)</td>
</tr>
<tr>
<td>61889-1</td>
<td>7/7/69</td>
<td>suspected violation</td>
<td>468 (fuel gas to furnaces)</td>
</tr>
<tr>
<td>61689-1</td>
<td>6/17/69</td>
<td>suspected violation</td>
<td>823 (main gas header to boilers)</td>
</tr>
<tr>
<td>61749-1</td>
<td>6/23/69</td>
<td>suspected violation</td>
<td>2071 (fuel gas to thermal cracking div. furnaces)</td>
</tr>
<tr>
<td>60769-1</td>
<td>3/17/69</td>
<td>suspected violation</td>
<td>1204 (drum on line to thermal cracking unit furnaces)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(petition for variance pending)</td>
</tr>
<tr>
<td>61028-1</td>
<td>4/11/68</td>
<td>suspected violation</td>
<td>90.8 (fuel gas to medium heater)</td>
</tr>
</tbody>
</table>

* In Laboratory Nos. 71390-2, 71410-1 the gas sampled was fuel being returned from a sulfur recovery plant for use by two facilities engaged in oil extraction and processing, both of which used heaters and treaters powered by the returned fuel gas to dehydrate crude oil, a preliminary step in the oil refining process. Each facility had a petition for a variance from Rule 62 pending before the Hearing Board (Hearing Board Nos. 1569, 1570). Each variance was sought because the fuel gas being provided by the sulfur recovery plant was in violation of Rule 62 standards.

98. See note 59 supra.
Two others were only minimally above Rule 62 complex levels and possibly resulted from accidents in the mixing of fuels, and might thereby have come within the exception contained in Rule 62.2.101

**TABLE 4: FUEL SAMPLES FROM POWER PLANTS**

<table>
<thead>
<tr>
<th>Immune—Government Operated</th>
<th>Not Immune—Privately Operated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under Variance</td>
<td>No Variance</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>No violation102</td>
<td>1</td>
</tr>
<tr>
<td>Excess sulfur content103</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
</tr>
</tbody>
</table>

Finally, Table 5 indicates that where the APCD sampled fuel from other users covered by the Rule 62 complex, it found 15 non-conforming samples taken from users not immune from prosecution.104 In only eight of these 15 instances was a notice of violation issued.105 Those who did not receive notices appear to have been in violation of the Rule 62 complex, and it is difficult to distinguish those non-

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99. Laboratory No. 70701-1; Hearing Board Case No. 1284-2.  
100. Laboratory Nos. 73301-1, 63268-5.  
101. See note 43 *supra*.  
102. APCD laboratory numbers of the fuel samples where no violation occurred: 70951-2, 70951-3, 70921-1, 70921-2, 70851-7, 70691-2, 70691-1, 73030-1, 72940-5.  
103. APCD laboratory numbers of the fuel samples with excess sulfur content:  

<table>
<thead>
<tr>
<th>Laboratory Number</th>
<th>Date Requested</th>
<th>Reason for Sample Request</th>
<th>Weight % Sulfur</th>
</tr>
</thead>
<tbody>
<tr>
<td>70701-1 (under variance)</td>
<td>3/10/71</td>
<td>Hearing Board action</td>
<td>.62</td>
</tr>
<tr>
<td>70671-2</td>
<td>3/5/71</td>
<td>Court or Hearing Board action, suspected violation</td>
<td>1.39 (fuel supply line to boilers)</td>
</tr>
<tr>
<td>73301-1</td>
<td>11/27/70</td>
<td>suspected violation</td>
<td>.58 (fuel supply line to boiler)</td>
</tr>
<tr>
<td>63268-5</td>
<td>11/20/68</td>
<td>suspected violation</td>
<td>.51 (service tank to burner)</td>
</tr>
</tbody>
</table>

104. See note 76 *supra*.  
105. In six of these seven instances the reason which the APCD inspector listed for requesting a sample analysis was that a violation of the Rule 62 complex was suspected. It is assumed that the enforcement officer properly drew the sample from a fuel line leading to an operating combustion unit. See note 95 *supra*. The seventh sample (Laboratory No. 70491-3) was taken while a petition for a variance was pending. This sample was taken from the fuel supply line to a boiler dryer, which would indicate either that the boiler was in operation using a violating fuel or that the last time it was in operation it had used a violating fuel.
immune user-violators who did receive notices from those who did not.106

**TABLE 5: FUEL SAMPLES FROM OTHER USERS IN EXCESS OF RULE 62 COMPLEX REQUIREMENTS**107

<table>
<thead>
<tr>
<th>APCD Action</th>
<th>Immune from Prosecution</th>
<th>Not Immune from Prosecution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No notice of violation issued</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Notice of violation issued</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

The data presented above show relatively few recorded violations of the Rule 62 complex by power plants and more numerous recorded violations by refineries and other users. The most striking finding is that the refineries appear to receive favored treatment in contrast to other fuel consumers. Of the 18 discovered refinery violations, only three notices were issued, while eight notices were issued for the 15 violations by other users.108 The APCD's more lenient treatment of re-

106. The sample request forms in those instances where no notice of violation was issued do not note any legally valid extenuating circumstances and also show fuel which violates Rule 62 complex standards. Three of the seven samples show extenuating circumstances which do not amount to legal excuses: In Laboratory No. 70491-3 a petition for a variance was pending when the sample was taken; in Laboratory No. 70271-1 the fuel sample was slightly nonconforming with weight per cent sulfur reading of .65; in Laboratory Nos. 70051-5 and 70061-1, a user who was using nonconforming fuel evidently switched to conforming fuel.

107. Fuel samples in excess where the operator was not immune from prosecution and where no notice of violation was issued:

<table>
<thead>
<tr>
<th>Laboratory Number</th>
<th>Date Requested</th>
<th>Reason for Sample Request</th>
<th>Weight % Sulfur</th>
</tr>
</thead>
<tbody>
<tr>
<td>70491-3</td>
<td>2/18/71</td>
<td>Court or Hearing Board action; permit pending</td>
<td>1.65</td>
</tr>
<tr>
<td>70271-1</td>
<td>1/27/71</td>
<td>suspected violation</td>
<td>.65</td>
</tr>
<tr>
<td>70081-2</td>
<td>1/18/71</td>
<td>Court or Hearing Board action; suspected violation</td>
<td>.86</td>
</tr>
<tr>
<td>70071-8</td>
<td>1/7/71</td>
<td>suspected violation</td>
<td>.81</td>
</tr>
<tr>
<td>70051-5</td>
<td>1/5/71</td>
<td>suspected violation</td>
<td>.87</td>
</tr>
<tr>
<td>70061-1</td>
<td>1/5/71</td>
<td>suspected violation</td>
<td>.20</td>
</tr>
<tr>
<td>72880-1</td>
<td>10/15/70</td>
<td>suspected violation</td>
<td>1.64</td>
</tr>
<tr>
<td>72680-2</td>
<td>9/25/70</td>
<td>suspected violation</td>
<td>1.56</td>
</tr>
</tbody>
</table>

108. See text accompanying notes 93-96 supra.
fineries is even less understandable considering that the refineries emit substantial quantities of sulfur dioxide and are concentrated in the area with the highest sulfur dioxide emission levels, while other users emit less sulfur dioxide and are scattered through Los Angeles County. Also, other users may qualify under the Rule 62.2 exception, while refineries (as violators using gaseous fuel) cannot.

B. Processing Notices of Violation

Once a notice of violation of the Rule 62 complex has been issued, the APCD usually seeks to institute a misdemeanor prosecution. After issuance, the notice is referred to a prosecuting agency for the formal filing of a complaint in municipal court. The District normally refers such notices to the city attorney of those municipalities within Los Angeles County that have expressed interest in handling alleged violations within their boundaries. In all other cases, the notice is referred to the Los Angeles County District Attorney. While there is no evidence that the various prosecuting agencies to which the District refers such notices coordinate their prosecutorial policies, it appears that they usually file criminal misdemeanor complaints.

Table 6 examines the judicial disposition of the 25 criminal misdemeanor prosecutions filed from June 1959 to June 1971 for violations of the Rule 62 complex. In no case was a jail sentence imposed, and in only one case was the maximum fine imposed. In four cases the charges were dismissed, while nine cases resulted in a suspended fine or summary probation.

109. See text accompanying note 67 supra.
110. See note 43 supra.
111. Of the total of 29 notices of violation of the Rule 62 complex issued by the APCD from the institution of Rule 62 in 1959 until June 30, 1971, in only two instances did the District cancel the notice of violation. On August 4, 1965, (Master Control Log No. 33164) and in 1959 (Master Control Log No. 16866) notices of violation against refineries were cancelled.
112. The District routinely refers notices of violation to the city attorneys' offices (sometimes called the city prosecutor) of the following municipalities: Los Angeles, Long Beach, Santa Monica, Inglewood, Culver City, Torrance, and Redondo Beach. Interview with Edward Proctor, Enforcement Division, Los Angeles County Air Pollution Control District, in Los Angeles, Dec. 28, 1971.
113. Of the 27 notices of violation referred to prosecutors from the inception of Rule 62 in 1959 to June 30, 1972, complaints were filed in all but two cases. One refusal to prosecute involved a refinery in 1970 (Master Control Log No. 44429), while the second refusal to prosecute involved a department store in 1959 (Master Control Log No. 17692).
114. For the maximum possible dispositions see note 19 supra. Data on judicial disposition was obtained from the Master Control Log. See note 92 supra.
TABLE 6: DISPOSITION OF CRIMINAL MISDEMEANOR PROSECUTIONS FOR VIOLATIONS OF THE RULE 62 COMPLEX OCCURRING BETWEEN JUNE 12, 1959 AND JUNE 30, 1971

<table>
<thead>
<tr>
<th>Disposition</th>
<th>Type of Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Refinery</td>
</tr>
<tr>
<td>Dismissed on motion</td>
<td>1</td>
</tr>
<tr>
<td>of court or prosecutor</td>
<td></td>
</tr>
<tr>
<td>Summary probation&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1</td>
</tr>
<tr>
<td>Suspended fine&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1</td>
</tr>
<tr>
<td>Fine imposed&lt;sup&gt;c&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>Warrant issued</td>
<td>—</td>
</tr>
<tr>
<td>No disposition indicated</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
</tr>
</tbody>
</table>

<sup>a</sup> In all instances, one year summary probation was granted. In one case (Master Control Log No. 45085), the violation of the Rule 62 complex was dismissed, and one year summary probation granted on another count.

<sup>b</sup> In one instance (Master Control Log 29334), there was a $50 fine and 10 day jail sentence, both suspended.

<sup>c</sup> The three fines against refineries were $625, $125, and $52.50. All fines imposed upon other users who were violators were $50 or less.

To summarize, the evidence indicates that, contrary to its statements, the APCD has not vigorously sought the application of criminal misdemeanor sanctions against discovered violators of the Rule 62 complex. Although a chief administrative officer of the District has contended that notices of violation are issued to all discovered violators of District rules and regulations,<sup>115</sup> data on the enforcement of the Rule 62 complex refute this contention. Furthermore, although a law review article by a legal advisor to the District has extolled the virtues of the use of criminal misdemeanor prosecutions to bring about compliance with District rules and regulations,<sup>116</sup> the records show that the criminal sanction was infrequently and leniently applied to known violators of the Rule 62 complex.

VI

FACTORS SHAPING APCD ENFORCEMENT POLICIES

Possible explanations for the APCD's enforcement policies must be

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115. Robert Chass, who until recently was APCD Air Pollution Control Officer (see note 153 infra), has said: "If our inspector in the field finds any company or individual in violation of our regulations, he automatically files against that company or individual—and if he doesn't[,] I jump him." Wilson, Scenario for a Smog Snafu, Los Angeles Times, Jan. 9, 1972, West Magazine, at 10, col. 3. The air pollution control officer is appointed by the air pollution control board. Cal. Health & Safety Code § 24222 (West 1967). His duties are defined in id. §§ 24224, 24224.1 (West Supp. 1973).

116. See Mix, supra note 2.
considered. One obvious reason the District has not issued a notice of violation to every violator of the Rule 62 complex is that it has little control over the policies of the prosecutors' offices which handle court actions against violators. At least eight separate prosecutorial agencies handle criminal misdemeanor prosecutions for the District. Additionally, it has been shown that those prosecutions which are instituted lead to dispositions which are much less severe than the possible maximum penalties.

Although one might suppose that the main thrust of the District's enforcement program lies in the use of civil remedies rather than criminal misdemeanor prosecutions, the APCD has only rarely sought to use civil remedies. Until 1970, the only civil remedy available was the injunction, and this remedy appears to have been invoked only against frequent violators of the pollution control rules. As of 1971, the District had only once sought civil damages against a violator of the Rule 62 complex—in an injunction case against a refinery and an associated sulfur recovery plant. Evidently there were severe problems associated with the operations of the refinery and the sulfur recovery plant. Between March 1969 and October 1970, 13 criminal complaints were filed against the sulfur recovery plant and 10 were filed against the refinery. In the first nine months of 1970, the District received 275 complaints from citizens regarding the sulfur recovery plant and 125 complaints from citizens regarding the refinery. Civil sanctions appear to have been used as an extreme measure only after repeated criminal misdemeanor prosecutions had no effect, rather than as an alternative to criminal prosecutions.

As another enforcement alternative in the administrative arena,
the APCD could revoke a violator's permit to operate.\textsuperscript{124} In no reported instance was this action taken against a violator of the Rule 62 complex,\textsuperscript{125} because District experience has shown that a violator whose permit is revoked will continue to operate in defiance of APCD rules and regulations, necessitating criminal sanctions or civil remedies.\textsuperscript{126}

A final possible explanation for APCD failure to issue a notice for every discovered violation of the Rule 62 complex is that the non-conforming fuel samples were taken as part of an effort by the District to get violators before the Hearing Board and to insure that violators comply with Hearing Board directives. The Chief Deputy Air Pollution Control Officer stated that far more progress in air contaminant reduction can be achieved by using the Hearing Board than can be accomplished by criminal misdemeanor prosecutions.\textsuperscript{127} It may be that the Hearing Board provides a flexible and effective mechanism to control air pollution. It has been the practice of the Hearing Board to grant variance petitions when the petitioner is exercising "due diligence" in bringing his operation into compliance with air pollution control rules\textsuperscript{128} or where the application of those rules would "result in an arbitrary and unreasonable taking of property or in the practical closing and elimination of any lawful business" without any corresponding benefit in the form of reduced air pollution.\textsuperscript{129} The Hearing Board has wide discretion in weighing the equities when it decides whether to grant a variance.\textsuperscript{130}

There is evidence that the District was using its fuel sampling policy under the Rule 62 complex to get violators before the Hearing Board and to monitor their compliance with the conditions upon which their variances were granted. Fuel samples drawn from refineries illustrate this. Table 7 shows that 16 of the 36 fuel samples taken at refineries between July 1, 1967, and June 30, 1971, were associated with Hearing Board petitions.'
**TABLE 7: FUEL SAMPLES FROM REFINERIES ASSOCIATED WITH A PETITION FOR A VARIANCE**

**July 1, 1967 to June 30, 1971**

<table>
<thead>
<tr>
<th>Result</th>
<th>Sample Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One day before petition filed</td>
</tr>
<tr>
<td>Nonconforming fuel</td>
<td>1</td>
</tr>
<tr>
<td>Conforming fuel</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
</tr>
</tbody>
</table>

<sup>a</sup> Notices of violation were issued in two of these instances. (See Table 3 supra.) None of the other fuel samples listed in this Table resulted in the issuance of a notice of violation.

Assuming that the Hearing Board is properly ruling on variance petitions that come before it,<sup>132</sup> there remains a basic flaw in the District's policy of trying to bring actual and potential violators before the Hearing Board. Poor follow-up enforcement is illustrated by the District's handling of refinery violations of the Rule 62 complex which occurred shortly after a variance had expired or after a variance petition had been withdrawn. Table 7 indicates that the District discovered three violations under these circumstances and did not issue a notice of violation.<sup>133</sup> Similarly, there was one instance where the District discovered a violation the day before a petition was filed, and when that petition was later withdrawn before any Hearing Board proceedings occurred, no notice of violation was issued.<sup>134</sup> Also, two violations were discovered at a refinery which had a petition pending, and when the petition was taken off the Hearing Board calendar no notice of violation was issued.<sup>135</sup> These instances make it appear that the APCD is not adequately pursuing refinery violations through the Hearing Board.

The District might explain the three instances where a violator filed a variance petition, withdrew it,<sup>136</sup> and never received a notice of

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132. This assumption has been vigorously called into question by the report of the Ecology Committee of the 1971 Los Angeles County Grand Jury.

The philosophy of the Hearing Board appears to be that of ultimately obtaining compliance from a company where variances have been granted. Therefore variances are seldom denied in the hope that a company will eventually comply by the end of the variance period. There were 1067 variances granted in the past five years; 62 were denied. One company has had twenty-eight variances since 1960.

133. Laboratory No. 62549-1, Hearing Board Case No. 1011-7; Laboratory No. 61689-1, Hearing Board Case No. 831-13; Laboratory No. 61749-1, Hearing Board Case No. 831-13.

134. Laboratory No. 61889-1, Hearing Board Case No. 831-14.

135. Laboratory Nos. 71390-2, 71410-1, Hearing Board Case Nos. 1569, 1570.

136. See notes 133, 134 supra.
violations by claiming that the violator corrected the problem before the hearing date. It might also argue that had the variance petition been heard in these instances, it would have been granted. This is a plausible explanation, since ten of the eleven refinery variance petitions filed between October 1, 1968, and June 30, 1971, and heard by the Hearing Board, were granted. No such justification can be given for instances where the APCD did not issue notices for violations which occurred shortly after a variance had expired. It should be noted, however, that in the case of one persistent violator the District did issue two notices of violation while a petition for a variance was pending, successfully pursued misdemeanor prosecutions, and later sought an injunction. The result of this general pattern of Hearing Board-APCD decisions is that refineries have had a limited license to pollute in violation of the Rule 62 complex.

At present enforcement of the Rule 62 complex places harsher burdens upon refineries than upon power plants and other users because refineries are sometimes faced with breakdowns or shutdowns for maintenance of sulfur recovery facilities. However, impending shortages of natural gas and shortages of low-sulfur fuel oil will present power plants and other users with an increasing need to burn high-sulfur fuel in violation of the Rule 62 complex.

VII

THE FUTURE COURSE OF APCD ENFORCEMENT OF THE RULE 62 COMPLEX

The dovetailing of APCD and Hearing Board policies that is reflected in the enforcement of the Rule 62 complex is not surprising, since the Air Pollution Control Board controls District policy and app
points the members of the Hearing Board. The enforcement policies discovered by this study were probably the result of a commitment by the Air Pollution Control Board to continued industrial growth in Los Angeles County. Robert Chass, the former Los Angeles County Air Pollution Control Officer, seemed to reflect the Board's attitude when he opposed the imposition of air pollution control regulations which would have limited industrial growth in Los Angeles County. Chass also criticized a proposal of the federal Environmental Protection Agency to limit such industrial growth.

Strict enforcement of the Rule 62 complex has the potential to limit industrial growth in Los Angeles County by imposing added costs on industry. Added costs to the refineries include possible shutdowns to avoid violation of the Rule 62 complex, the purchase of new equipment necessary to comply with the regulations, and the payment of penalties for noncompliance. Similar costs would be imposed on power plants and other users when fuel which complies with the Rule 62 complex is in short supply. Finally, all industries using electrical power would face added costs in the form of increased electrical rates as power plant fuel costs rise due to the enforcement of the Rule 62 complex. Such added costs could put industry already located within the county at a competitive disadvantage and discourage both plant expansion and establishment of new industry in Los Angeles.

While recent changes in the membership of the Air Pollution Control Board make it unclear what future APCD policy regarding the enforcement of the Rule 62 complex will be, there are several factors which will shape that policy. Public pressure is one. In one case large numbers of people complained about air pollution from one specific refinery, and the Air Pollution Control Board, apparently in response to the public clamor, approved a suit for an injunction. This parallels the findings of recent studies that police detection of crimes and arrest of discovered criminals depends greatly on reports of violations and demands for arrest by members of the public.
fortunately, public awareness of specific violations of pollution laws and public pressure for enforcement against known violators has probably decreased with increasing levels of air pollution. Increased air pollution makes it more difficult for members of the public to be aware of or annoyed by the emissions of any single source. On the other hand, increasing air pollution has produced a growing public pressure that something be done. One of the victims of this increased public concern was the member of the Los Angeles County Board of Supervisors who, for more than a decade, had been most responsible for overseeing the operation of the APCD. He was defeated in his October 1972 bid for reelection by a candidate who vigorously attacked APCD enforcement policies. While these comments have focused on public pressure as a force for the strict enforcement of the Rule 62 complex and other air pollution regulations, it should be noted that public ardor for strict enforcement may wane as the cost of such enforcement becomes apparent in the form of higher taxes and higher prices.

Another factor which may affect APCD enforcement policies is pressure from other governmental agencies concerned with air pollution. The states have the responsibility of implementing air pollution control plans to achieve the goals set forth in the federal Clean Air Act Amendments of 1970. In California the state Air Resources Board has the authority to investigate local air pollution control districts and compel the enactment and enforcement of regulations when the local district is not taking reasonable steps to meet state air quality standards. Unfortunately, other governmental agencies may also act to undercut APCD enforcement efforts. The Federal Power Commission held hearings concerning possible cutbacks of out-of-state natural gas imports into the Los Angeles area. The approval of such cutbacks might put a severe strain on APCD enforcement of the Rule 62 complex against power plants. With the long term availability of sup-

151. This point was suggested by Professor James Krier, School of Law, University of California at Los Angeles.
152. The Board of Supervisors also sits as the Air Pollution Control Board. See note 2 supra.
153. As this article was being written, Robert Chass tendered his resignation as Air Pollution Control Officer. It may be speculated that he also was the victim of public discontent over pollution. Los Angeles Times, Feb. 1, 1973, Part I, at 3, col. 6.
plies of low-sulfur fuel oil uncertain, power plants may be forced to burn high-sulfur fuel oil during periods when both natural gas and low-sulfur fuel oil are unavailable.\textsuperscript{157} And, of course, current shortages of fuel oils have only exacerbated matters.

While future APCD policy regarding the enforcement of the Rule 62 complex is unclear, it is certain that the APCD is going to face increasing difficulties in this area.

**CONCLUSION**

In evaluating APCD enforcement of the Rule 62 complex this study has found evidence that most discovered violations were not prosecuted because of APCD's failure to issue notices of violation. This pattern of enforcement was most pronounced for violations committed by oil refineries. The APCD's lack of reliance on criminal misdemeanor sanctions appears to have stemmed from a policy of encouraging compromises based on Hearing Board variances which are granted on a showing of a violator's efforts to abate emissions. However, the efficacy of this strategy is questionable since discovered violators often withdraw their variance petitions before a hearing, or escape sanctions after a variance has expired. Finally, it is suggested that, rather than the policy of vigorous enforcement depicted by District spokesmen,\textsuperscript{158} the APCD in applying the Rule 62 complex has pursued a course which reflects a desire of the county government to encourage industrial growth.

\textsuperscript{157} In fact, during the winter of 1970-71 two municipally-operated power companies were granted variances to burn high-sulfur fuel oil. This was due to the curtailment of natural gas deliveries coupled with their inability to procure adequate supplies of low-sulfur fuel oil. Hearing Board Case No. 1221-4; Hearing Board Case No. 1284-2.

\textsuperscript{158} See notes 2, 115 supra.