

# NOTES

## The Emissions Trading Policy: Smoke on the Horizon for Takings Clause Claimants

### Introduction

Before the Clean Air Act<sup>1</sup> (the Act) was amended in 1977, Congress chose to enforce pollution regulations through a command-and-control structure.<sup>2</sup> This system placed heavy fines on polluters who exceeded their licensed emission levels. It soon became clear, however, that the command-and-control system was not working. By 1975, a substantial number of air quality control regions throughout the nation continued to violate national primary air quality standards for various pollutants.<sup>3</sup> Part of the failure of the command-and-control system was that it did not reward companies for reducing their emission levels below federal standards. In 1977, Congress replaced the command-and-control system with a marketplace approach. The reform was an effort to reduce administrative and enforcement costs, improve compliance, and reduce the time needed to comply with congressionally mandated air quality standards.<sup>4</sup>

The keystone to the reform plan was the Emissions Offset Policy.<sup>5</sup> This policy stated that no applicant would be granted a permit to construct a new plant in nonattainment areas<sup>6</sup> unless the applicant obtained

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1. 42 U.S.C. §§ 7401-7642 (1988).

2. See Dudek & Palmisano, *Emissions Trading: Why is This Thoroughbred Hobbled?*, 13 COLUM. J. ENVTL. L. 217, 220 (1988).

3. Landau, *Who Owns the Air? The Emission Offset Concept and Its Implications*, 9 ENVTL. L. 575, 578 (1979).

Of the 247 air quality control regions in the nation, 60 are projected not to meet standards by statutory deadlines for TSP and 42 for sulfur dioxides. For oxidants, 74 air quality control regions have reported levels in excess of the national ambient air quality standards. . . . A similar situation exists for nitrogen dioxide and carbon monoxide.

H.R. REP. NO. 1175, 94th Cong., 2d Sess. 177-78 (1976).

4. Emissions Trading Policy Statement, 51 Fed. Reg. 43,814, 43,830 (1986).

5. 41 Fed. Reg. 55,526 (1976).

6. Nonattainment areas are those regions that have not met congressionally mandated air quality standards. See *infra* notes 39-44 and accompanying text.

sufficient emission reductions from other plants in the region to more than offset their proposed emissions.<sup>7</sup> To facilitate the offset plan, the Environmental Protection Agency (EPA) created the Emissions Trading Policy.<sup>8</sup> This policy rewards businesses that reduce their pollution emissions below allowable levels with Emission Reduction Credits (ERCs), which are transferrable. An ERC represents pounds of emissions that have been permanently reduced by a plant. Before a plant is allowed to locate in a nonattainment area, the owner must obtain sufficient ERCs to more than offset the future emissions from the proposed plant. The ERCs can be "banked,"<sup>9</sup> or saved, to offset future excess pollution created by plant modifications or the construction of a new plant. Additionally, ERCs can be sold to companies that seek to construct new plants in nonattainment areas.<sup>10</sup> Because businesses are allowed to buy and sell ERCs on the open market, ERCs have become the currency of the Emissions Trading Policy.<sup>11</sup> The market system has provided positive economic incentives for businesses to operate below their licensed emission levels.

An early example of the practical effect of the 1977 amendments is found in Oklahoma City. The city violated standards for both particulates<sup>12</sup> and photochemical oxidants.<sup>13</sup> General Motors (GM) sought to construct a new assembly plant that would emit more than 3,000 tons of hydrocarbons per year. In 1977, GM was able to obtain throughout the city ERCs that represented a reduction of 5,000 tons of hydrocarbon emissions each year. Thus, GM's new plant resulted in 3,000 tons of offset plus a 2,000 ton per year net benefit to the air quality.<sup>14</sup>

The Emissions Trading Policy creates an area of potential conflict,

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7. *Id.*

8. 47 Fed. Reg. 15,076 (1982).

9. 44 Fed. Reg. 3,274, 3,280 (1979).

10. A result of the Emissions Trading Policy has been the rise of companies that buy and sell ERCs. AER\*X is a Washington, D.C.-based firm that acts as a broker exclusively trading in ERCs. The firm has a lucrative business: revenues in excess of \$1 million a year and business growth of 30% per year. In 1988, for example, one of the company's clients, a fiberglass manufacturer from Southern California, sought to sell its ERCs representing hydrocarbon emission reductions of 1,000 pounds per day. AER\*X brokers then searched lists of firms seeking to expand or enter the market in the South Coast Basin. The company approached real estate developers, engineers, and lawyers who represent clients interested in expansion. The credits were sold to a sewage treatment plant for \$1,250 per pound per day. *L.A. Times*, Dec. 26, 1989, at 2, col. 3.

11. 47 Fed. Reg. 15,076, 15,077 (1982).

12. Particulates are any finely divided airborne solid or liquid material other than uncombined water. 40 C.F.R. § 60.2 (1990).

13. Photochemical oxidant pollutants include ozone, nitrogen dioxide, peroxyacyl, aldehydes, and acrolein. These oxidants, together with solid and liquid particles, constitute "smog." 14 THE NEW ENCYCLOPEDIA BRITANNICA 750 (1974).

14. Bass, *Cities Can Use the Clean Air Act Amendments as a Tool to Stimulate Economic Development*, *City Weekly*, Sept. 4, 1978, at 7, col 2.

however, because it provides that local air quality management districts<sup>15</sup> (AQMDs) may adjust the value of ERCs to achieve changing goals in their region's air quality needs.<sup>16</sup> The adjustment can take several forms: a discount to reduce the value of all ERCs, an adjustment to increase the use ratio of ERCs,<sup>17</sup> a confiscation of banked ERCs, or a moratorium restricting the use of ERCs for a limited time.<sup>18</sup>

On June 28, 1990, The South Coast Air Quality Management District<sup>19</sup> (SCAQMD) Board exercised the first adjustment option under the Emissions Trading Policy plan. The Board's adoption of amendments to Regulation XIII reduced, by eighty percent, the value of all ERCs that resulted from plant shutdowns.<sup>20</sup> As a result of this action, an ERC owner previously holding 100 ERCs acquired from a plant shutdown now holds 20 ERCs. The SCAQMD Board declared that the prior regulations did not lower overall emissions in the South Coast Basin and thus new emission reductions were necessary to achieve federally mandated air quality standards.<sup>21</sup> The regulation is an attempt to address the fact that "[t]he South Coast Air Basin has one of the worst air quality problems in the nation. Monitored ozone<sup>22</sup> levels are nearly three times the national standard . . . and the Basin is the only area in the nation that

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15. The Clean Air Act requires that states divide their geographic territory into air quality control regions in order to facilitate localized monitoring of air quality standards and licensing of new emission plants. 42 U.S.C. § 7407(c) (1988).

16. 51 Fed. Reg. 43,814, 43,835 (1986).

17. A use ratio is also known as an offset factor. Under a current plan in the Los Angeles area, the offset factor varies from 1.0 to 1.5 based on the proposed plant's potential to emit pollutants. For instance, when a plant's potential to emit is one hundred tons per year or greater, the owner must obtain enough ERCs to offset the plant's emissions by a factor of 1.5. South Coast Air Quality Management District, Proposed Amended Regulation XIII, Rule 1303(b)(2) (Oct. 3, 1989).

18. 47 Fed. Reg. 15,076, 15,084 (1982).

19. The SCAQMD is the agency that oversees the South Coast Basin. See *infra* notes 87-88 and accompanying text.

20. South Coast Air Quality Management District, Regulation XIII, Rule 1309(a)(2) (June 18, 1990). The regulation only reduces ERCs that were the result of plant shutdowns and leaves unchanged ERCs that were obtained through process changes or installation of pollution control equipment.

21. The South Coast Basin has been established as a "sensitive zone." CAL. HEALTH & SAFETY CODE § 40410.5 (Deering Supp. 1990). A sensitive zone is an area that has high concentrations of pollution resulting in air quality which is highly sensitive to changes that may affect air quality, such as atmospheric changes or emission level fluctuations.

22. Ozone is the result of a photochemical process. It is produced by the action of light on oxygen that recombines the atoms resulting in three oxygen atoms to the molecule (O<sub>3</sub>). Ozone is used commercially "as a chemical reagent, as a disinfectant, in sewage treatment, water purification, and bleaching textiles." 13 THE NEW ENCYCLOPEDIA BRITANNICA 813 (1974). Ozone is an oxidizing agent that converts hydrocarbons from automotive exhaust gases into aldehydes and acids. These aldehydes and acids contribute to the irritating nature of smog. *Id.*

still exceeds the nitrogen dioxide standard.”<sup>23</sup> The goal of the regulation is “to achieve annual emission reductions that are at least five percent greater than the total annual emission increases from new or modified equipment.”<sup>24</sup>

The implementation of the SCAQMD plan or any of the EPA adjustment proposals will interfere with ownership interests in the ERCs. This interference may be grounds for a takings claim.<sup>25</sup> This Note explores the constitutional implications of the reduction plan in the context of the Takings Clause of the Fifth Amendment. Part I discusses the use of market incentives as an approach to pollution control. Part II gives a general overview of the Clean Air Act and its development since it first appeared in 1963. Part III examines whether the ERCs constitute “property” within the meaning of the Takings Clause and concludes that they do not. Part IV assumes that the ERCs are property and analyzes whether the ERC reduction under the SCAQMD plan is a legitimate use of the state’s police power. Part V addresses whether this reduction in the value of ERCs constitutes a taking. Finally, Part VI examines the issue of just compensation if a court concludes that a taking has occurred. Specifically, I argue that even if a court finds that the ERCs constitute property, their reduction will not give rise to a takings claim. Pollution control is a legitimate exercise of the state’s police power and ERC reduction is a reasonable means to achieve this legislative goal. The regulation’s purpose is to promote the public welfare. A court should not find a taking because the reduction does not interfere with reasonable investment-backed expectations and the diminution in value is not sufficient to result in a takings. Moreover, any reduction in the value of ERCs held by a company is uncertain and insignificant because a reduction in the number of ERCs may be accompanied by an increase in their monetary value due to scarcity. Thus, a court should find that the eighty percent reduction in the value of ERCs is not a taking.

## I. Pollution Control Through Market Incentives

The use of market incentives has proved to be an effective method of pollution control. The flexibility of the Emissions Trading Policy makes

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23. South Coast Air Quality Management District, Draft Environmental Assessment and Socio-Economic Impact Assessment, Introduction to Proposed Amendments to Regulation XIII, ch. 1, at 1 (May 1990) (footnote added).

24. South Coast Air Quality Management District, Regulation XIII, Rule 1301(a) (1990).

25. Indeed, when the first draft of the proposed amendments to Regulation XIII were circulated among industries in the South Coast Basin, one pollution-emitting facility owner wrote in, “We believe that a reduction of 80 percent of past valid ERCs amounts to confiscation of property and is legally suspect. This creates disincentives to continue reducing emissions, and if attainment is not achieved, the ERCs will be discounted again. This is similar to condemnation of property.” South Coast Air Quality Management District, Staff Report, Proposed Amended Regulation XIII, at 25 (May 11, 1990).

it easier for companies to comply with federal pollution control regulations. An AQMD sets emission standards for a plant but allows the company to tailor its own emission reduction program to meet the specific needs of the plant.<sup>26</sup> A plant manager, for example, may decide to install pollution controls, improve maintenance, alter production practices, or redesign equipment to meet his or her emission reduction requirements.<sup>27</sup> This flexibility allows companies to comply more quickly and efficiently with emissions standards.

The goal of the market-based approach is to encourage compliance with pollution regulations through positive economic incentives rather than through fines that act as disincentives.<sup>28</sup> Thus, companies that reduce their emissions below their allowable levels are rewarded with ERCs that can be sold for profit. Under the former command-and-control system, compliance was carried out through fines for violations with no incentives to reduce emissions below permitted maximum levels.

ERCs respond to forces of supply and demand as any commodity does in a market system. The limited capacity of a parcel of air to accept pollution creates a scarce resource in air.<sup>29</sup> Thus, in areas that have not attained the standard air quality required by the Clean Air Act, the cost of adding additional pollution burdens to the airshed is very high. This high price reflects the limited capacity of the airshed to accept more pollutants.<sup>30</sup> The market approach also encourages companies to seek alternative plant locations because the cost of locating in an area with scarce ERCs is higher than locating in an area with many ERCs. The result is

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26. Dudek & Palmisano, *supra* note 2, at 220-21.

27. *Id.* at 234. A good example of a company tailoring its own pollution control program is Minnesota Mining and Manufacturing (3M). The company initiated a comprehensive environmental plan 15 years ago called "3P" for Pollution Prevention Pays. The plan includes a program of revamping products, changing production processes, redesigning equipment, and reusing materials. By modifying a manufacturing process, for example, 3M was able to cut back on excess resin emissions from a particular process and save the company \$125,000 per year. Through the 3P plan, 3M reduced its emissions in New Jersey by 1,000 tons per year and by 1,050 per day in Los Angeles. McKee, *Environmental Activists Inc.; U.S. Companies With Positive Environmental Commitment*, NATION'S BUSINESS, Aug. 1990, at 28.

28. Increasing numbers of companies are responding favorably to the Emissions Trading Policy and increasing their use of emissions trading. In Los Angeles, for example, the number of offset trades grew from three in 1983, to five in 1984, to forty-two in 1985. Hahn & Hester, *Where Did All the Markets Go? An Analysis of EPA's Emissions Trading Program*, 6 YALE J. ON REG. 109, 121 (1989). The success of the Emissions Trading Policy also can be gauged by the amount of money saved by industry each year. The EPA Emissions Trading Status report states that bubble transactions alone have resulted in total cost savings of approximately \$800 million. U.S. E.P.A. REGULATORY REFORM STAFF, EMISSIONS TRADING STATUS REPORT (1985).

29. See Dudek & Palmisano, *supra* note 2, at 222-23. John Stuart Mill had economic foresight when he stated, "[I]f from any revolution in nature the atmosphere becomes too scanty for consumption . . . air might acquire a very high marketable value." *Quoted in Yandle, The Emerging Market in Air Pollution Rights*, REGULATION, July/Aug. 1978, at 21.

30. *Id.*

to reduce the burden of additional pollution on nonattainment airsheds and to allocate the pollution to airsheds more able to absorb the new pollutants. Further, it encourages companies to cut back on emissions to create ERCs and thus to preserve this scarce resource because it has a high value in the marketplace.

Under this marketplace approach, an important result of the SCAQMD's plan to reduce the value of ERCs may be an increase in the value of each remaining ERC. The SCAQMD has stated that the amendment's

net effect on supply is uncertain, but it would probably reduce the total supply of emission reduction credits because the volume of existing shutdown credits exceeds the volume of emission reduction credit trades. Overall, the Proposed Amendment should have an upward effect on emission reduction credit prices, although the magnitude of that increase is uncertain.<sup>31</sup>

Thus, the reduction in the value of ERCs should result in increased scarcity because there has been a reduction in the number of ERCs available in the South Coast Basin. This scarcity should increase the price of ERCs.<sup>32</sup> Estimates of the scarcity in ERCs that may result once the ERC reductions take effect is seen in the 1991-92 supply versus demand forecasts for Retrograde Organic Gases (ROG).<sup>33</sup> The allowable supply of ROG after the ERC reduction has taken effect has been estimated at 31,000 pounds per day. The estimated demand, based on 1988-89 data, has been estimated at 47,000 pounds per day. Thus, the demand exceeds the supply by 16,000 pounds per day as a result of the ERC reduction.<sup>34</sup> Increased scarcity accompanied by high demand should result in a corresponding increase in the price that a firm is willing to pay for the ERC. Therefore, any decrease in the number of ERCs held by a company will be offset by an increase in the monetary value of the remaining ERCs.

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31. South Coast Air Quality Management District, Draft Environmental Assessment and Socio-Economic Impact Assessment, Proposed Amendments to Regulation XIII, ch. 2, at 16 (May 1990).

32. For example, Santa Barbara and San Luis Obispo counties have very few available ERCs; thus, it is very expensive to obtain ERCs in these counties. The price is much lower where there is a glut of ERCs on the market. Dudek & Palmisano, *supra* note 2, at 235-36.

33. Retrograde Organic Gas is any gaseous chemical compound that "contains the element of carbon; excluding carbon monoxide, carbon dioxide, carbonic acid, carbonates and metallic carbides; and excluding methane, 1,1,1-trichloroethane, methylene chloride, trifluoromethane (CFC-23), trichlorotrifluoroethane (CFC-113), dichlorodifluoromethane (CFC-12), trichlorofluoromethane (CFC-11), chlorodifluoromethane (HCFC-22), dichlorotetrafluoroethane (CFC-114), chloropentafluoroethane (CFC-115), dichlorotrifluoroethane (HCFC-123), tetrafluoroethane (HCFC-134a), dichlorofluoroethane (HCFC-141b), and chlorodifluoroethane (HCFC-142b)." South Coast Air Quality Management District, Regulation XIII, Rule 1302(u) (June 28, 1990).

34. South Coast Air Quality Management District, Staff Report, Proposed Amended Regulation XIII, at 4 (May 11, 1990).

The failure of the command-and-control method of pollution regulation became apparent in the mid-1970s. Although the Clean Air Act set a goal to achieve primary national air quality standards by 1975, by 1977 all but six of the nation's urbanized areas with a population of over 200,000 was nonattainment for at least one pollutant.<sup>35</sup> The EPA's response in the form of the Emissions Trading Policy was an innovative approach to the problem of pollution compliance. The thrust of the reform was to replace fines with economic incentives. The flexibility of the Emissions Trading Policy has proved effective in improving companies' ability to comply with federal emissions standards. The Policy has also encouraged companies to go beyond the minimal levels of pollution control required by law. Finally, market forces of supply and demand effectively allocate new emissions sources to areas best able to accept additional emissions and reward companies most handsomely in regions where additional emission reductions are most needed.

## II. The Clean Air Act

### A. The Early Versions of the Clean Air Act

The Air Pollution Control Act of 1955 was the first federal clean air legislation.<sup>36</sup> The act was weak and primarily concerned research by the federal government. In an effort to improve the nation's air quality, Congress introduced the first version of the Clean Air Act in 1963.<sup>37</sup> Since that time, the Act has gone through a series of amendments by Congress and enactments by the EPA that have drastically changed its character.<sup>38</sup>

The Clean Air Act Amendments of 1970 require that the EPA set nationwide ambient air quality standards (NAAQS),<sup>39</sup> which determine the maximum limits on the concentration of six criteria pollutants allowed in the atmosphere at any given time.<sup>40</sup> The Act provides for each state to be divided into air quality control regions.<sup>41</sup> The state has to then identify which regions within the state have attained national pri-

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35. *EPA Guidance Memo*, ENV'T REP. (BNA) No. 8, at 902 (Oct. 14, 1977).

36. Pub. L. No. 84-159, 69 Stat. 322 (1955).

37. Pub. L. No. 88-206, 77 Stat. 392 (1963).

38. The Clean Air Act has evolved from a statute concerned with federal research programs and technical assistance for state and local governments to a comprehensive tool for improving air quality. For a general discussion of the development of the Clean Air Act, see generally Miller, *Federal Air Pollution Control Legislation: A Selective Description*, 1 ENVTL. L. 105 (1970).

39. Clean Air Act Amendments of 1970, Pub. L. No. 91-604, 84 Stat. 1676 (1970) (codified as amended at 42 U.S.C. § 7409(a)(1) (1988)).

40. *Id.* at Pub. L. No. 91-604, 84 Stat. 1676 (1970) (current version at 42 U.S.C. § 7412(b)(1)(A) (1988)). The list has been increased since the 1970 version of the Act. Pollutants currently on the EPA's list include asbestos, benzene, beryllium, coke oven emissions, inorganic arsenic, mercury, radionuclides, and vinyl chloride. 40 C.F.R. § 61.01(a) (1990).

41. 42 U.S.C. § 7407(c) (1988).

mary and secondary ambient air quality standards and which have not.<sup>42</sup> The latter are classified as nonattainment areas. Primary ambient air standards are those required to protect public health.<sup>43</sup> Secondary ambient air quality standards are those necessary to protect the public welfare.<sup>44</sup> The Act then requires each state to set up its own state implementation plan (SIP) for achieving primary and secondary NAAQS. The 1970 version of the Act requires that each SIP be designed to achieve primary NAAQS by 1975<sup>45</sup> and secondary NAAQS within a reasonable time.<sup>46</sup> These plans are then to be submitted to the EPA for approval.<sup>47</sup> The Act requires that each proposed SIP contain specific emission limitation schedules and timetables,<sup>48</sup> establish methods of monitoring and collecting data on air quality,<sup>49</sup> and assure adequate funding and personnel to implement the plan.<sup>50</sup>

The Act also directs that AQMDs set up a system of review for applicants seeking to construct a new plant (a new source) or modify an existing plant within a region.<sup>51</sup> This process is known as a new source review (NSR). The NSR is a permit process by which AQMDs ensure that issuing a construction permit complies with the Act's requirements to "prevent the construction or modification of any new source . . . which the State determines will prevent the attainment or maintenance . . . of a national ambient air quality primary or secondary standard."<sup>52</sup> Thus, no new source would be permitted that would further deteriorate, below federally-mandated air quality standards, the air quality of a region.

There were, therefore, no provisions for the approval of any new plants in nonattainment areas in the 1970 version of the Act because any new plant would add emissions to an already overloaded system.<sup>53</sup> This prevented construction of new plants and expansion of pre-existing plants in most urban areas.<sup>54</sup> In spite of the outcry from industry, the EPA maintained its position preventing industrial growth in nonattainment areas. The EPA stated,

Some have argued that a new source should be allowed to worsen existing NAAQS violations if a 'cost-benefit' analysis indicates that the economic costs of necessary emission controls or off-

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42. *Id.* § 7407(d)(1).

43. *Id.* § 7409(b)(1).

44. *Id.* § 7409(b)(2).

45. *Id.* § 7410(a)(2)(A)(i).

46. *Id.* § 7410(a)(2)(A)(ii).

47. *Id.* § 7410(a)(1), (2).

48. *Id.* § 7410(a)(2)(B).

49. *Id.* § 7410(a)(2)(C)(i).

50. *Id.* § 7410(a)(2)(F)(i).

51. *Id.* § 7410(a)(2)(D)(ii).

52. *Id.* § 7410(a)(4).

53. Landau, *supra* note 3, at 577.

54. *Id.*



sets are excessive in relation to the resulting air quality benefits. . . . Congress and the Courts have made clear that economic considerations must be subordinated to NAAQS achievement and maintenance.<sup>55</sup>

The EPA's first attempts at using market incentives in pollution control came in 1975 in the form of the "bubble" policy<sup>56</sup> and the "netting" policy. The bubble policy<sup>57</sup> treats each plant as if it were surrounded by an imaginary bubble. The plant does not suffer an emission violation unless there is an increase in the net emissions from the entire plant.<sup>58</sup> Thus, emissions from one smokestack may increase so long as there is a corresponding decrease from another stack. Bubbling thus creates a mini-offset program within the plant itself. The main attraction of the bubble policy is that a company may modify its plant and avoid being subject to an NSR by cutting back on another area of emissions within the plant. The netting policy<sup>59</sup> allows a facility to use its own credits from surplus emission reductions from that facility to compensate for increases due to permanent modifications within the same facility.<sup>60</sup> The bubbling and netting policies were the first signs that the EPA would relax its no-growth stance in nonattainment areas.

#### B. The 1976 Interpretive Ruling and the Clean Air Act Amendments

The EPA finally reconsidered its no-growth policy in 1976 with an interpretive ruling<sup>61</sup> that was later adopted in the 1977 Clean Air Act as the Emissions Offset Policy.<sup>62</sup> The Offset Policy allows for economic development in nonattainment areas through a system of offsetting future new source emissions with present reductions. The Act provides that in nonattainment areas

permits to construct and operate may be issued if the permitting agency determines that by the time the source is to commence operation, total allowable emissions from existing sources in the region . . . and from the proposed source will be sufficiently less than

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55. Emission Offset Interpretive Ruling, 41 Fed. Reg. 55,524, 55,527 (1976).

56. Standards of Performance for New Stationary Sources, 40 Fed. Reg. 58,416-58,417 (1975). See generally R. LIROFF, *THE BUBBLE CONCEPT* (1981); Butler, *New Source Netting in Nonattainment Areas Under the Clean Air Act*, 11 *ECOLOGY L.Q.* 343 (1984); Landau, *Chevron, USA v. NRDC: The Supreme Court Declines to Burst EPA's Bubble Concept*, 15 *ENVTL. L.* 285 (1985); Landau, *Economic Dream or Environmental Nightmare? The Legality of the "Bubble Concept" in Air and Water Pollution Control*, 8 *B.C. ENVTL. AFF. L. REV.* 741 (1980); Landau, *Emissions Trading and Banking Under the Clean Air Act After NRDC v. Gorsuch*, 34 *SYRACUSE L. REV.* 803 (1983); Note, *An Overview of the Bubble Concept*, 8 *COLUM. J. ENVTL. L.* 137 (1982).

57. 51 Fed. Reg. 43,814, 43,830 (1986).

58. *Id.*

59. *Id.*

60. *Id.*

61. 41 Fed. Reg. 55,524 (1976).

62. 42 U.S.C. § 7503 (1988).

total emissions from existing sources . . . prior to the application for such permit to construct or modify . . . .<sup>63</sup>

In other words, no application to construct will be granted unless the operation will result in an overall decrease in emission levels in the region. Therefore, applicants seeking to construct a new plant or modify an existing plant in a nonattainment area can do so only if they can obtain sufficient surplus emission reductions from existing sources to more than offset their future emissions.<sup>64</sup>

Approval to use emission offsets are granted only if the applicant meets four requirements. First, the applicant must obtain sufficient emissions reductions to *more* than offset the emissions of the proposed source in nonattainment areas.<sup>65</sup> This requires that the offset be more than a one-to-one exchange<sup>66</sup> and that the ERCs be of the same pollutant type.<sup>67</sup> Thus, an increase in hydrocarbon emissions can only be offset by a corresponding reduction in hydrocarbon emissions from another plant. The offsets must be such that they result in reasonable progress toward attaining NAAQS.<sup>68</sup> Second, the new sources of emissions must meet an emission limitation that requires compliance with the lowest achievable emission rate for the type of industry involved.<sup>69</sup> Third, the plan requires that all existing emission sources owned by the applicant be in compliance with applicable emission limitations.<sup>70</sup> Finally, the proposed offsets must provide a positive net benefit to the air quality of the affected region.<sup>71</sup>

In 1979 the EPA issued an interpretive ruling that further modified the 1976 regulations and allowed for "banking" of emission reductions.<sup>72</sup> Banking allows the owner of a plant that reduces the plant's emissions to save those reductions for use in future new source permits.<sup>73</sup> The banking provision has proved invaluable to a company's ability to comply with the requirements of the Clean Air Act. The provision increases flexibility in the use of emission reductions and allows a company to reap the

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63. *Id.* § 7503(1)(A).

64. In addition, the SCAQMD amendments expand this requirement to reach small firms that were previously unaffected by the offset requirement. The proposal sets up a community bank to assist the small firms and essential public service organizations in obtaining ERCs. The proposal also increases the offset ratio based on the potential total emissions of the proposed plant. South Coast Air Quality Management District, Regulation XIII, Rule 1309.1 (June 28, 1990).

65. 41 Fed. Reg. 55,524, 55,529 (1976).

66. *Id.*

67. *Id.* at 55,528, 55,529.

68. *Id.*

69. *Id.* at 55,524, 55,528.

70. *Id.* at 55,524, 55,529.

71. *Id.*

72. 44 Fed. Reg. 3,274, 3,280 (1979).

73. *Id.*

benefits of its own emission cutbacks by using them to offset future modifications, bubbling, or netting. Banking assists growing companies to plan pollution control more rationally. The EPA stated that banking also allows states and communities to reap benefits because it encourages companies to create reductions earlier and to disclose this information to the state to help in emission control planning.<sup>74</sup> Finally, companies may trade their ERCs for money that can later be used to pay for pollution control devices or to modify their plants later using their own banked ERCs.

### C. The 1982 Interpretive Ruling: The Creation of the Emission Reduction Credit

In 1982 the EPA developed a comprehensive program to implement the previously created Emissions Offset Policy of the Clean Air Act. The regulation is called the Emissions Trading Policy.<sup>75</sup> The Trading Policy includes all aspects of the EPA's marketplace approaches: banking, bubbling, netting, and offsetting. The most important aspect of the ruling is the creation of the ERC. The ERC has become a unit, much like currency, that represents an emission reduction by a plant.<sup>76</sup> The regulation sets forth legal requirements for the creation, storage, and use of ERCs in order to further facilitate the use of emissions trading to achieve NAAQS.<sup>77</sup>

Emission decreases must meet four requirements before they will be considered an ERC. First, the reduction must be surplus. Only emission reductions that are not already required by law will be considered surplus reductions.<sup>78</sup> Second, the emission reduction must be enforceable under the state rules creating the ERC.<sup>79</sup> Third, the reductions must be permanent.<sup>80</sup> Finally, the reduction must be quantifiable, both in terms of the amount of reduction and the description of its chemical characteristics.<sup>81</sup>

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74. 51 Fed. Reg. 43,814, 43,825 (1986). The previous no-banking rule was deemed to have had an adverse impact on pollution control by discouraging early cleanup of sources. Owners would often delay retiring an obsolete plant until he or she needed the emission offsets for immediate use. 44 Fed. Reg. 3,274, 3,280 (1979).

75. Emissions Trading Policy Statement, 47 Fed. Reg. 15,076 (1982).

76. *Id.* at 15,076, 15,077.

77. *Id.* at 15,078.

78. *Id.* at 15,076, 15,077.

79. *Id.* at 15,076. Each state has been granted authority under the Clean Air Act to set its own rules regarding the creation, registration, and transfer of ERCs. *Id.*

80. *Id.*

81. *Id.* at 15,076-15,078.

#### D. California's Implementation of the Clean Air Act and the SCAQMD

An important aspect of the Clean Air Act is its policy to reserve power in the states to tailor their own pollution control policies to meet their individual and particularized needs.<sup>82</sup> This was accomplished by setting air quality standards, or NAAQS, at the federal level and delegating to the states the task of creating their own implementation plans, or SIPs.<sup>83</sup>

California effectuated the Clean Air Act through the Air Resources Act (ARA).<sup>84</sup> The ARA adopts the Offset Policy<sup>85</sup> and outlines procedures for registration and transfer of ERCs.<sup>86</sup> The ARA also divides the state into air quality control regions and designates an AQMD to oversee each of these regions.<sup>87</sup> The South Coast Air Quality Management District (SCAQMD) is the regional agency that oversees Los Angeles, Orange, Riverside, and San Bernardino Counties.<sup>88</sup>

The SCAQMD has responsibility for preparing and analyzing portions of the SIP relating to current air quality, emissions data, and results of air quality modeling within their air quality control region.<sup>89</sup> The SCAQMD is also responsible for performing NSRs and issuing permits to construct new sources.

### III. Do the ERCs Constitute Property?

An analysis of whether a taking has occurred must begin by deciding whether the ERCs constitute property within the meaning of the Fifth and Fourteenth Amendments.<sup>90</sup> If the ERCs are not property under the law, there is no compensable taking. It is well settled that intangible ownership interests are property under the Constitution: "[T]hat intangible property rights protected by state law are deserving of the protection of the Taking Clause has long been implicit in the thinking

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82. The Clean Air Act provides that "the prevention and control of air pollution at its source is the primary responsibility of States and local governments." 42 U.S.C. § 7401(a)(3) (1988).

83. 42 U.S.C. § 7410 (1988).

84. CAL. HEALTH & SAFETY CODE §§ 39000-44071 (Deering 1986).

85. *Id.* § 40709.

86. *Id.* § 40711.

87. *Id.* § 39002.

88. *Id.* §§ 40400-40540.

89. *Id.* § 40460(c).

90. Jack Landau describes the difficulty of conceptualizing air as property:

If anything cannot be privately 'owned', as the concept is traditionally viewed, it is the air. It cannot be partitioned. There is no way to fence it in or parcel it out. Its nature does not lend itself to being exclusively held by anyone, much less bought, sold or traded in a market place.

Landau, *supra* note 3, at 575.

of this Court.”<sup>91</sup> In *Ruckelshaus v. Monsanto Co.*,<sup>92</sup> the Supreme Court found that intangible “trade secrets” create a property right under the Takings Clause. Additionally, the Court has held that real estate liens are property under the Constitution and subject to the Takings Clause.<sup>93</sup> Similarly, valid contracts constitute property within the meaning of the Takings Clause.<sup>94</sup>

Although ERCs are an intangible interest, however, they are created through regulation rather than by private agreement, as real estate liens or contracts are created. The Supreme Court has held that “[p]roperty interests . . . are not created by the Constitution. Rather, they are created and their dimensions are defined by existing rules or understandings that stem from an independent source such as state law . . . .”<sup>95</sup> Thus, property interests are defined by the state law that creates them. Because ERCs are created under a regulatory scheme, the Court will look to the statute that creates ERCs to determine their character.

The case of *Ruckelshaus v. Monsanto Co.*,<sup>96</sup> which deals with interests in intangible trade secrets, presents facts similar to those created by the ERCs. In *Ruckelshaus*, a pesticide producer brought suit against the EPA, claiming that the disclosure provision in the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) constituted a taking under the Constitution. The provision made the company’s ingredients, formulas, and tests available to the public, thus destroying its trade secret. The Court first looked to Missouri law, which recognizes trade secrets as property.<sup>97</sup> The Court also used FIFRA’s legislative history to support its finding that trade secrets were property. The Court stated that “the manner in which Congress referred to trade secrets in the legislative history of FIFRA supports the general perception of their property-like nature. . . . Congress recognized that data developers like Monsanto have a ‘proprietary interest’ in their data.”<sup>98</sup> The Court further pointed to language in the Act indicating that companies are “‘entitled’ to ‘compensation’ because they ‘have legal ownership of the data.’”<sup>99</sup> In its final analysis, the Court stated, “We therefore hold that to the extent that Monsanto has an interest . . . cognizable as a trade-secret property right under Missouri law, that property right is protected by the Takings Clause of the Fifth Amendment.”<sup>100</sup>

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91. *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1003 (1984).

92. *Id.*

93. *Louisville Joint Stock Land Bank v. Radford*, 295 U.S. 555, 596-602 (1935).

94. *Lynch v. United States*, 292 U.S. 571, 579 (1934).

95. *Board of Regents v. Roth*, 408 U.S. 564, 577 (1972).

96. 467 U.S. 986 (1984).

97. *Id.* at 1001.

98. *Id.* at 1002.

99. *Id.* (quoting H.R. CONF. REP. NO. 95-1560, 95th Cong., 2d Sess. 29 (1978)).

100. *Id.* at 1003-04.

The Supreme Court also examined the nature of the property interest involved in *Ruckelshaus*. According to the Court, "This general perception of trade secrets as property is consonant with a notion of 'property' that extends beyond land and tangible goods and includes the products of an individual's 'labour and invention.'"<sup>101</sup> In the case of pesticide formulas, the Monsanto Company spent millions of dollars on research and development to arrive at a formula with which to produce pesticides. Although the formula is intangible, it is a concept that has been created by the efforts of researchers and can be written down and drawn upon to create a tangible object, a pesticide.

Many characteristics of ERCs, however, distinguish them from the trade secrets held to be property in *Ruckelshaus*. In California, the ARA provides that "[c]ertificates evidencing ownership of approved reductions issued by a district shall not constitute instruments, securities, or any other form of property."<sup>102</sup> Thus, unlike the Missouri law that recognizes trade secrets as property, ERCs are not considered property under California law. As stated previously, intangible interests that are created by state law are defined and limited by the laws that create them.<sup>103</sup> Nor is an emission reduction an intangible "product" like a formula. Rather, it is an absence of emissions. Under the Court's reasoning in *Ruckelshaus*, the emission reduction is not a "product" created by "labour and invention." It is a result of installing pollution control mechanisms—a house-keeping function.

The ERC owners may argue that although the ARA has stated that the ERCs are not property, both the EPA's Emissions Trading Policy Statement and the ARA itself establish an interest in the ERCs that includes all of the traditional characteristics of property. The term property "denote[s] the group of rights inhering in the citizen's relation to the physical thing, as the right to possess, use, and dispose of it."<sup>104</sup> ERCs constitute property under this analysis because they retain all of the traditional characteristics of property. The EPA's Emissions Trading Policy Statement declares that SIPs should establish ownership rights to the ERCs to prevent two entities from attempting to use the same ERC.<sup>105</sup> The Policy Statement also provides that "[t]he owner or owners of such approved reductions have the exclusive right to use them and authorize their use."<sup>106</sup> ERCs may be transferred or assigned to a third party, they may be banked for future use, and they are under the exclu-

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101. *Id.* at 1002-03 (citing 2 W. BLACKSTONE, COMMENTARIES \*405).

102. CAL. HEALTH & SAFETY CODE § 40710 (Deering 1986) (emphasis added).

103. Board of Regents v. Roth, 408 U.S. 564, 577 (1972); see *supra* note 95 and accompanying text.

104. United States v. General Motors, 323 U.S. 37, 37-38 (1945). See also R. EPSTEIN, TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN 58-59 (1985).

105. 51 Fed. Reg. 43,814, 43,849 (1986).

106. CAL. HEALTH & SAFETY CODE § 40710 (Deering 1986).

sive control of the registered ERC owner.<sup>107</sup> Thus, the company is able to hold its “bundle of rights” pertaining to the control of a quantity of emissions. Under the traditional definition of the term “property,” the holder of an ERC becomes the “owner” of title to a parcel of air into which it may pollute or allow another to pollute to the exclusion of others.<sup>108</sup> Thus, ERCs fit the traditional definition of the term “property.”

The Supreme Court has held that when property rights are created through regulation, no property interest exists unless the regulatory scheme has created a vested right.<sup>109</sup> In *Bowen v. Public Agencies Opposed to Social Security Entrapment*,<sup>110</sup> the law was changed so states could no longer withdraw from the Social Security system, which had previously been conducted through voluntary participation. California brought suit, claiming that the amended statute had deprived it of its “contractual rights” without just compensation.<sup>111</sup> The Court held that the contractual rights did not equal property because the rights had not vested and therefore there was no fifth amendment violation. The Court stated that

the “contractual right” at issue in this case bears little, if any, resemblance to the rights held to constitute “property” within the meaning of the Fifth Amendment . . . . [T]he provision was simply part of a regulatory program over which Congress retained authority to amend in the exercise of its power to provide for the general welfare. . . . [Thus, it] did not rise to the level of “property.”<sup>112</sup>

The Court pointed out that Congress had expressly reserved the power to amend or repeal any provisions of the law to respond to changing conditions.<sup>113</sup>

The Emissions Trading Policy Statement requires the states to reserve the right to adjust state banking rules to achieve NAAQS. The Statement provides that the “existence of banked ERCs must not interfere with states’ ability to obtain [] additional reductions. For this reason state banking rules should specifically address how ERCs will be treated if additional reductions are required.”<sup>114</sup> The Statement suggests several methods: discounting adjustment, confiscation, or a moratorium on use.<sup>115</sup> The ARA provides that each AQMD must create a plan for achieving NAAQS in its region. The ARA states that “[u]pon adoption

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107. 47 Fed. Reg. 15,076, 15,077 (1982).

108. Landau, *supra* note 3, at 597.

109. *Bowen v. Public Agencies Opposed to Social Security Entrapment*, 477 U.S. 41, 55 (1986); *Flemming v. Nestor*, 363 U.S. 603, 608-11 (1960).

110. 477 U.S. 41 (1986).

111. *Id.* at 49.

112. *Id.* at 55.

113. *Id.* at 51.

114. 47 Fed. Reg. 15,076, 15,084 (1982).

115. *Id.*

and approval of the plan, such rules and regulation shall be amended, if necessary, to conform to the plan.”<sup>116</sup> The rules and regulations “shall remain in effect and shall be enforced by the south coast district, until superseded or amended by the south coast district board.”<sup>117</sup> The ARA thus expressly reserves the right to amend any of its rules and regulations, including those pertaining to the banking of ERCs. As a result of this reservation, the ownership interests created in the ERCs are not vested and therefore are not a property interest.

California law does not characterize ERCs as property. Further, the interest in the ERCs created under the ARA is not a vested interest. The statute retains the right to modify the ownership interest in ERCs in order to achieve additional emission reductions within an air quality control region. The EPA has also provided that state plans should allow for future reductions in ERCs to meet the changing air quality needs in the area. In light of these factors, it is unlikely that a court will find that the ERCs are property. For the purpose of the following takings analysis, however, I will assume that the ERCs are property.

#### IV. Legitimate Use of Police Power

The Fifth Amendment states that no private property may be taken for public use without providing “just compensation” to the property owner.<sup>118</sup> The Fifth Amendment is made applicable to the states through the Fourteenth Amendment, which provides “nor shall any state deprive any person of life, liberty or property without due process of law.”<sup>119</sup> The takings clause analysis must begin by questioning whether the act was a legitimate exercise of the state’s police power. The court would then have to determine whether there was a “taking” and if so, whether the taking deserves compensation.

The takings clause cases require that the act in question be a legitimate exercise of a government’s police power. The Supreme Court has described the “public use” requirement as “coterminous with the scope of a sovereign’s police powers.”<sup>120</sup> Therefore, once a legislature declares that an act is for a public purpose, “the right to realize it through the exercise of eminent domain is clear. For the power of eminent domain is merely the means to the end.”<sup>121</sup> The Court described the test, stating that “[w]hen the legislature’s purpose is legitimate and its means are not irrational, our cases make clear that empirical debates over the wisdom of takings—no less than debates over the wisdom of other kinds of socio-

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116. CAL. HEALTH & SAFETY CODE § 40440(a) (Deering 1986).

117. *Id.* § 40440(b).

118. U.S. CONST. amend. V.

119. U.S. CONST. amend. XIV.

120. *Hawaii Housing Auth. v. Midkiff*, 467 U.S. 229, 240 (1983).

121. *Id.* (quoting *Berman v. Parker*, 348 U.S. 26, 33 (1954)).



economic legislation—are not to be carried out in the federal courts.”<sup>122</sup>

The Court applied this test in *Hawaii Housing Authority v. Midkiff*.<sup>123</sup> The Court upheld legislation that required large landowners in Hawaii to break up their holdings and sell these smaller parcels to the current tenants leasing the property. The Court found that the legislation served a legitimate public purpose because the concentrated land ownership was responsible for inflating land prices, adversely affecting the state’s fee simple market, and injuring the public’s tranquility and welfare.<sup>124</sup> The Court held that “[r]egulating oligopoly and the evils associated with it is a classic exercise of a State’s police powers.”<sup>125</sup>

The Court also explained that it was unable to “condemn as irrational the Act’s approach to correcting the land oligopoly problem.”<sup>126</sup> Redistribution of land to correct deficiencies in the market was held to be a rational exercise of police power. The Court reasoned that

when a sufficiently large number of persons declare that they are willing but unable to buy lots at fair prices the land market is malfunctioning. When such a malfunction is signalled, the Act authorizes HHA to condemn lots in the relevant tract. . . . This is a comprehensive and rational approach to identifying and correcting market failure.<sup>127</sup>

In the case of the SCAQMD’s regulation, an eighty percent reduction in ERCs is a legitimate use of police power. Congress expressly gave the power to the states to regulate pollution emissions.<sup>128</sup> California has given the SCAQMD the power to create rules regulating emissions in the South Coast Basin.<sup>129</sup> The ARA further provides that it is within the SCAQMD’s power to amend or repeal any existing rules.<sup>130</sup> Therefore, it is within the SCAQMD’s power to effectuate changes in the emissions trading plan for the South Coast Basin.

The first prong of the Court’s test in *Hawaii Housing* requires that “the exercise of the eminent domain power [be] rationally related to a conceivable public purpose.”<sup>131</sup> The public purpose behind the SCAQMD plan is to reduce emissions in the interest of the public welfare. The SCAQMD Board has stated that “[t]he Proposed Amendments to Regulation XIII are expected to reduce emissions of methylene chloride, 1,1,1-trichloroethane, and the affected CFCs, which should re-

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122. *Id.* at 242-43.

123. 467 U.S. 229 (1983).

124. *Id.* at 242.

125. *Id.*

126. *Id.*

127. *Id.*

128. 42 U.S.C. § 7401(a)(3) (1988).

129. CAL. HEALTH & SAFETY CODE § 40460(a), (b) (Deering 1986).

130. *Id.* § 40440(b).

131. *Hawaii Housing Auth. v. Midkiff*, 467 U.S. 229, 241 (1983).

duce public exposure to these potentially hazardous compounds.”<sup>132</sup> Reduction of these chemical compounds will result in a benefit to the public health including reduction of “anesthesia and cardiac sensitization resulting from inhalation of high concentrations of these chemical compounds.”<sup>133</sup> The SCAQMD’s purpose behind the plan to reduce ERCs is therefore legitimate because it seeks to reduce public health risks caused by air pollution.

The second prong of the *Hawaii Housing* test is also met because reduction of ERCs is a reasonable way to achieve the legislative end, reduction of emissions in the Basin. The Clean Air Act requires that a company wishing to construct a new plant or modify an existing plant in a nonattainment area obtain a greater number of ERCs than necessary to offset their emissions.<sup>134</sup> This policy allows for a net decrease in emissions in nonattainment areas, thus furthering the congressional goals of the Clean Air Act.<sup>135</sup> The new regulation reduces emissions even further. By reducing the value of the ERCs acquired from plant shutdowns by eighty percent, those ERCs that are erased from bank records become permanent emission reductions in the region, never to be exchanged for emissions from a new source. The result of the regulation is to allow only twenty percent of shutdown emission reductions to be transformed into future emissions. The SCAQMD has stated,

Devaluing old shutdown emission reduction credits contributes to improving air quality in the Basin by eliminating at least a portion of the potential air contaminant emissions. The remaining 20 percent of the old shutdown emission reduction credits will be funnelled back into the system and will be used primarily for third party trades.<sup>136</sup>

Thus, a company’s permanent quantifiable reduction in emissions that results in an ERC will be replaced with a considerably smaller increase by a new source. This will lower the pollution levels in nonattainment areas, bringing them closer to achieving congressionally mandated NAAQS. The SCAQMD has estimated that “the Proposed Amendments are expected to reduce future allowable emission increases by approximately 12,300 pounds of ROG per day . . . [and] it is anticipated that the District will comply with the California Clean Air Act requirements of demonstrating a five-percent annual emissions reduction.”<sup>137</sup>

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132. South Coast Air Quality Management District, Draft Environmental Assessment and Socio-Economic Impact Assessment, Proposed Amendments to Regulation XIII, ch. 3, at 23 (May 1990).

133. *Id.*

134. 42 U.S.C. § 7503(1)(A) (1988).

135. *Id.*

136. South Coast Air Quality Management District, Draft Environmental Assessment and Socio-Economic Impact Assessment, Proposed Amendments to Regulation XIII, ch. 2, at 14 (May 1990).

137. *Id.* ch. 3, at 4.

The SCAQMD plan can further be seen as a rational means to achieve the legislative goal because it is reasonable to require a reduction in the value of the ERCs as an alternative to a Basin-wide plan that would reduce every facility's emission ceiling. The devaluation of ERCs imposes the expense of reducing pollution upon the companies that place the added emission burdens on the system rather than placing the cost burden on *all* companies. Although the regulation will make it more difficult and costly for companies to obtain the requisite ERCs to build a new plant, this burden should be placed on the company introducing the increased emissions to the system.<sup>138</sup>

Reducing pollution emissions is often costly, requiring expensive pollution control mechanisms, reductions in plant use, and switching to cleaner burning and more expensive fuels. A company with the resources to build or modify a plant often has more ability to bear this economic burden than companies that have made all possible reductions and are successfully operating within their allowable emission levels.

As a policy consideration, the first reductions in an effort to control pollution should be ERC reductions. Further, existing companies have no alternatives because they are already established in the area, but the incoming company can choose a different site location if the cost of obtaining ERCs is prohibitive.<sup>139</sup> Emissions offsets are an expense that must be figured into the cost of building a plant in a nonattainment area. It seems inequitable to require companies operating within their allowable levels to reduce their emissions even further before seeking the reductions from companies attempting to introduce new emissions sources into an already overloaded system.

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138. The SCAQMD prepared a report to assess the socio-economic impact of the amendments on industry in the Basin. The report states,

Across all industries offsets have, and will continue, to represent a very small part of the life-cycle costs of most new sources or modifications. For a local company with a major investment in plant and equipment the costs associated with securing offsets for an expansion would be far less than those associated with shutting down and moving its facility. For firms that choose to move out of the Basin, it is unlikely that offset costs will be the primary factor motivating their relocation. The desire of new firms to locate in the four county area clearly indicates that factors other than air pollution control regulations play the major role in their decision. The fact that companies want to settle here rather than in an area where they would not have to obtain offsets is a clear indication that the economic value of locations in the Basin outweighs the economic cost of obtaining offsets.

*Id.* ch. 4, at 31 (citation omitted).

139. Dudek & Palmisano, *supra* note 2, at 223. It is also important to note that firms already located in an area do not have the same difficulty locating ERCs because bubbling and netting offer them increased flexibility. See *supra* notes 72-74 and accompanying text.

## V. Was There a Taking?

Assuming a court finds that the SCAQMD action is a legitimate use of police power, the next issue that must be addressed is whether there has been a taking. The difficulty of formulating a takings clause analysis when there has been a regulatory taking has "plagued the Court for over six decades."<sup>140</sup> As the Supreme Court has admitted, the takings analyses are "essentially ad hoc, factual inquiries."<sup>141</sup> The Court has relied heavily on the specific facts of each case for its takings analysis.<sup>142</sup> The Court's decisions have balanced several factors to determine when "justice and fairness" ultimately require the Court to find that a taking has occurred.<sup>143</sup> This analysis becomes especially difficult when regulating intangible property interests.<sup>144</sup> The leading approach the Court follows in cases in which regulations affect property interests is the three-factor test announced in *Penn Central Transportation Co. v. New York City*.<sup>145</sup> Under the *Penn Central* test, the Court examines (1) the extent to which the governmental action interferes with reasonable investment-backed expectations, (2) the economic impact of the governmental action on the claimant, and (3) the character of the governmental action.<sup>146</sup>

### A. Interference with Reasonable Investment-backed Expectations

As part of its takings clause analysis, the Supreme Court has considered the extent to which the government action interferes with the reasonable investment-backed expectations of the property owner. In *Ruckelshaus v. Monsanto Co.*,<sup>147</sup> the Court held that despite the fact that pesticide formulas are a property interest,<sup>148</sup> no taking had occurred

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140. L. TRIBE, *AMERICAN CONSTITUTIONAL LAW* 595 (2d ed. 1988). In the case of a physical taking, the Court has provided a bright-line rule that any permanent, physical invasion of an owner's property authorized by the government constitutes a taking requiring just compensation. *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 434-35 (1982).

141. *Penn Cent. Transp. Co. v. New York City*, 438 U.S. 104, 124 (1978).

142. *United States v. Eureka Mining Co.*, 357 U.S. 155, 168 (1958).

143. *Penn Cent. Transp.*, 438 U.S. at 124.

144. In order to prevent unnecessary takings, in 1988 President Reagan issued Executive Order 12630, which required all governmental agencies to carefully consider the takings issue when creating regulations. Exec. Order No. 12,630, 53 Fed. Reg. 8859 (1988). In the Executive Order, the Presidential Task Force attempted to provide guidelines based on recent Supreme Court decisions that agencies could follow when creating regulations. The Executive Order reflects the difficulty in formulating any general rule for determining when a regulatory taking has occurred or how to avoid one. Takings claims worth one billion dollars are currently pending in the Land and Natural Resources Division alone. Marzulla, *The New "Takings" Executive Order and Environmental Regulation—Collision or Cooperation?*, 18 ENVTL. L. REP. 10,254, 10,255 (1988).

145. 438 U.S. 104 (1978).

146. *Id.* at 124-25.

147. 467 U.S. 986 (1984).

148. See *supra* notes 92-101 and accompanying text.

under FIFRA's disclosure provision. The Court stated that

Monsanto could not have had a reasonable, investment-backed expectation that EPA would keep the data confidential beyond the limits prescribed in the amended statute itself. Monsanto was on notice of the manner in which EPA was authorized to use and disclose any data turned over to it by an applicant for registration.<sup>149</sup>

The Court further held that the company should have been on notice because a field of such high public concern is subject to extensive regulation.<sup>150</sup> Thus, the EPA did not interfere with any reasonable investment-backed expectations because the governmental action was foreseeable.

Similarly, the companies that own ERCs cannot have reasonable investment-backed expectations that the ERCs will not be reduced. In the Emissions Trading Policy Statement, the EPA allows states to guarantee ERCs "so long as that guarantee does not undermine . . . or interfere with progress and attainment should ambient standards change or additional emission reductions be required."<sup>151</sup> Further, as discussed earlier, the ARA provides that SCAQMD retains the right to amend or repeal any rules or regulations.<sup>152</sup> Both the Emissions Trading Policy Statement and the ARA that created the ERCs in California clearly state that a district is authorized to adjust ERCs to attain NAAQS and to suggest possible methods of adjustment.<sup>153</sup> The same law that creates and defines ERCs also declares that they may possibly be devalued in the future; therefore, ERC owners cannot have a reasonable investment-backed expectation that they will never be reduced. Further, because air quality is an area that has been extensively regulated by the government, the companies should be on notice that their ownership rights are severely circumscribed by regulation.

The Supreme Court in *Ruckelshaus* found the investment-backed expectation factor to be dispositive on the takings issue. The Court stated that "the force of this factor is so overwhelming . . . that it disposes of the taking question."<sup>154</sup> Thus, the strong indication that reduction of ERCs does not interfere with reasonable investment-backed expectations may be sufficient on its own to dispose of the takings claim without reaching the other two factors.

## B. Economic Impact of the Governmental Action

In its takings clause analysis, the Court has also considered the economic impact of the governmental action on the property owner. In the

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149. *Ruckelshaus*, 467 U.S. at 1006.

150. *Id.* at 1007.

151. 51 Fed. Reg. 43,814, 43,835 (1986).

152. CAL. HEALTH & SAFETY CODE § 40440(b) (Deering 1986).

153. 51 Fed. Reg. 43,814, 43,849-43,850 (1986).

154. *Ruckelshaus*, 467 U.S. at 1005.

Court's view, "Government hardly could go on if to some extent values incident to property could not be diminished without paying for every such change in the general law . . . ." <sup>155</sup> Yet the Court recognized "that while property may be regulated to a certain extent, if regulation goes too far it will be recognized as a taking." <sup>156</sup> The regulatory taking cases, therefore, are an attempt to strike a balance between regulation that is a reasonable infringement and regulation that has gone "too far."

The test the Court has developed is to inquire whether the regulation allows the owner to retain some economically viable use for the property. <sup>157</sup> The test requires something more than a "mere diminution in value" <sup>158</sup> to constitute a taking. Rather, the Court's application of the test requires that the owner suffer a nearly complete loss in the use of his or her property to have gone "too far" under the Takings Clause.

In *Penn Central Transportation Co. v. New York City*, <sup>159</sup> the owner of the Grand Central Terminal in New York City claimed the city had taken his property without just compensation when a historic landmark ordinance prohibited the company from constructing a fifty-five-story office building onto the Terminal. The Court found that no taking had occurred, relying heavily on the fact that the ordinance did not interfere with owner's ability to earn a fair rate of return on the property. <sup>160</sup> The Court reasoned that because the claimant continued to derive economic benefit from the property, there was no taking.

The same reasoning was applied in *Agins v. City of Tiburon* <sup>161</sup> in which a property owner's prime real estate was zoned for single family dwellings, which limited construction to a maximum of five dwellings. The property owner, who had hoped to build condominiums, argued that this massive reduction in value equalled a taking. <sup>162</sup> The Court held that despite the diminution in the value of the owner's land, the owner still had use of the property, although in a restricted manner. <sup>163</sup> A mere diminution in value will not automatically constitute a taking. <sup>164</sup> Rather, when the property owner continues to derive some economic benefit from the property, the Court is reluctant to find a taking.

The Court's decision in *Andrus v. Allard* <sup>165</sup> is an example of the severity of a diminution in value the Court will allow without finding a

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155. *Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393, 413 (1922).

156. *Id.* at 415.

157. *Agins v. City of Tiburon*, 447 U.S. 255, 260 (1980); *Andrus v. Allard*, 444 U.S. 51, 66 (1979).

158. *Agins*, 447 U.S. at 261.

159. 438 U.S. 104 (1978).

160. *Id.* at 136.

161. 447 U.S. 255 (1980).

162. *Id.* at 257.

163. *Id.* at 262.

164. *Id.* at 261.

165. 444 U.S. 51 (1979).

taking. In *Andrus* the Court upheld a statute prohibiting the sale of eagle feathers against a takings claim. The Court found that a prohibition on the sale of artifacts was not a taking because the Act did not completely destroy the value of the property.<sup>166</sup> The Court recognized that the most important value the owner could derive from the property was through sale of the artifacts. The Court found that no taking had occurred, however, because the owners could still derive some economically viable use from the property, for example, by showing the property for an admission charge.<sup>167</sup> The Court stated that “[w]hen we review [a] regulation, a reduction in the value of property is not necessarily equated with a taking.”<sup>168</sup> In *Andrus*, the law has not only drastically decreased the value of the property interest, but also deprived the owner of an essential attribute of property ownership—the right to dispose of property. The Court’s failure to find a taking in this case indicates that the Court will apply a low threshold of economic viability to avoid finding a taking.

In *Ruckelshaus v. Monsanto Co.*, the Court found that there was no taking even though there was a *complete* loss in the value of the property. The Court recognized that

[w]ith respect to a trade secret, the right to exclude others is central to the very definition of the property interest. Once the data that constitute a trade secret are disclosed to others, or others are allowed to use those data, the holder of the trade secret has lost his property interest in the data.<sup>169</sup>

Thus, if FIFRA requires disclosure, the very nature of the property right is extinguished. The Court found that protecting the public welfare from possibly harmful chemicals sufficiently outweighed the owner’s property interest to justify extinguishing the property right.

An eighty percent reduction in ERCs is not as severe an infringement on an owner’s property interest as the total loss of property in the *Ruckelshaus* case. Further, it is not even clear whether the decrease in the value of ERCs will result in a corresponding decrease in their monetary value. As discussed earlier,<sup>170</sup> the reduction of ERCs may result in heightened scarcity, which will increase their price. Thus, the SCAQMD’s plan may have no adverse effect on the economic viability of the ERC owner’s property.

In light of *Andrus*, it seems unlikely that a court will find that an eighty percent diminution in the value of the ERCs constitutes a taking. The Court in *Andrus* pointed out that “loss of future profits—unaccompanied by any physical property restriction—provides a slender reed

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166. *Id.* at 66.

167. *Id.*

168. *Id.*

169. *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1011 (1984).

170. *See supra* notes 31-34 and accompanying text.

upon which to rest a takings claim.”<sup>171</sup> In *Andrus*, the Court placed a prohibition on the *sale* of the artifacts, thus eliminating the most important value to be derived from the property. To prohibit the method of disposal of property is a fundamental infringement upon the owner’s “bundle” of property rights. SCAQMD’s regulation is a mere reduction in the *value* of ERCs. The basic property rights remain intact.

Furthermore, it is questionable whether the reduction in the value of the ERCs that result from plant shutdowns constitute an eighty percent reduction. The percentage may be much smaller if a court considers the reduction in terms of all ERCs owned by a party rather than in terms of ERCs only due to plant shutdowns. The Supreme Court has held that when determining the extent of the government’s interference with a property interest, it looks to the extent of the interference on the property interest as a whole, rather than on one specific portion of the property interest. In *Penn Central*, the Court stated that “‘[t]aking’ jurisprudence does not divide a single parcel into discrete segments and attempt to determine whether rights in a particular segment have been entirely abrogated.”<sup>172</sup> Rather, the Court focuses on “the interference with rights in the parcel as a whole.”<sup>173</sup> Thus, in *Penn Central*, the Court considered whether the entire landmark site had been taken, here the entire city block, and refused to focus its analysis on whether the airspace alone had been taken under the Landmarks Preservation Law.<sup>174</sup>

The same argument can be made for the ERCs. Although the value of the ERCs will be reduced, the ERCs are not a bundle of property rights in themselves, but rather are one “strand in the bundle of rights” granted by the Clean Air Act. Not all ERCs are being reduced—only those ERCs that result from plant shutdowns. ERCs that result from pollution control devices or process changes retain their full value. When seen in this larger context, a reduction in shutdown ERC values is a small reduction in the overall value of the owner’s right to pollute. When coupled with the fact that this reduction is for the legitimate and compelling state interest of protecting the public health and welfare, the balance weighs heavily in favor of allowing the legislation without finding a taking.

### C. The Character of the Governmental Action

When deciding takings clause cases, the Supreme Court also has considered the character of the governmental action. One aspect of this test is whether there has been a physical invasion of property. For cases involving a physical invasion, the Court has announced a *per se* rule that

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171. *Andrus v. Allard*, 444 U.S. 51, 60 (1979).

172. *Id.*

173. *Id.* at 130-31.

174. *Penn Cent. Transp. Co. v. New York City*, 438 U.S. 104, 131 (1978).



any permanent physical occupation of an owner's property, authorized by the government, constitutes a taking.<sup>175</sup> The character of SCAQMD's action is not a physical occupation; therefore, this line of cases may be dismissed in order to focus strictly on cases in which regulation has affected property without resulting in a physical invasion.

When the governmental interest is protection of the public welfare, the Court is less likely to find a taking. The Court has stated that the public welfare issue is the "critical factor" in determining whether a taking had occurred.<sup>176</sup> In *Keystone Bituminous Coal Association v. DeBenedictis*,<sup>177</sup> the Court stated that the "character of the governmental action involved here leans heavily against finding a taking [because the State] has acted to arrest what it perceives to be a significant threat to the common welfare."<sup>178</sup> The Court focused on the character of the governmental action rather than on the extent of the taking.

Similarly, the Court in *Hodel v. Irving*<sup>179</sup> found that a taking had occurred under a federal statute that prohibited the devise or descent of small undivided interests in land held in trust by the United States for Native Americans. The federal statute was implemented in response to the difficulty in administering highly fragmented Native American lands. Through successive generations the land splintered into smaller and smaller parcels. The Court quoted from hearings before the Subcommittee on Indian Affairs:

It is in the case of the inherited allotments, however, that the administrative costs become incredible . . . . On allotted reservations, numerous cases exist where the shares of each individual heir from lease money may be 1 cent a month. Or one heir may own minute fractional shares in 30 or 40 different allotments. The cost of leasing, bookkeeping, and distributing the proceeds in many cases far exceeds the total income.<sup>180</sup>

The statute required that any property interest that represented two percent or less of a tract of land and had earned its owner less than \$100 in the preceding year to escheat to the Tribe upon the death of the owner.<sup>181</sup> Thus, the statute was designed to increase administrative efficiency rather than protect the public welfare.

The most important factor in *Hodel* which distinguishes it from *Keystone* and *Andrus* is that in *Hodel* the governmental action sought to promote administrative efficiency, but in the latter two cases, the regulations were created in the interest of the public welfare. Although the

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175. *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 434-35 (1982).

176. *Id.* at 488.

177. 480 U.S. 470 (1987).

178. *Id.* at 485.

179. 481 U.S. 704 (1987).

180. *Id.* at 708 (quoting 78 CONG. REC. 11,728 (1934)).

181. *Id.* at 709.

Court in *Hodel* seemed to rest its holding on the extent of the property owner's deprivation, the holding is entirely inconsistent with *Andrus* if supported solely on those grounds. In *Hodel*, the Court held that a taking had occurred because the regulation had destroyed one of the most essential sticks in the bundle of property rights, the right to pass property to one's heirs. The Court stated that "the character of the Government regulation here is extraordinary. . . . [T]he right to pass on property—to one's family in particular—has been part of the Anglo-American legal system since feudal times."<sup>182</sup> The property interest in *Hodel* amounted to income of less than one hundred dollars per year and a piece of land that had been devised so many times that the owner's actual share was less than two percent of the original tract.

In *Andrus*, the owner of the artifacts was also denied an "essential stick" in his bundle of property rights—the right to transfer property to a buyer. The regulation resulted in a massive reduction in what was once very valuable property. The difference in the two cases, therefore, is that in *Andrus* the government interest sought to protect an endangered species while the interest in *Hodel* was administrative efficiency.

In the case of ERCs, the SCAQMD's action is to promote the public welfare. The plan is a direct effort by the SCAQMD to reduce the number of harmful pollutants in the South Coast Basin. Further, the regulation calls for a mere reduction in the value of ERCs. The owner retains all of the "essential sticks" in his or her bundle of property rights. The regulation does not affect the owner's ability to retain, use, or dispose of the ERCs. Therefore, although the governmental action may affect the number of ERCs held by the owner, the basic rights inherent in property remain intact. Further, the interest served by the ERC reduction is protection of the public health and welfare rather than administrative efficiency.

In other takings clause cases, the Court has used a nuisance analysis to establish the public welfare issue for governmental action. In *Mugler v. Kansas*,<sup>183</sup> the Supreme Court rejected a takings challenge to a Kansas statute that prohibited the production or sale of alcohol within the state. The suit was brought by beer manufacturers who claimed their property had lost value due to the newly implemented law. The Court held that the state's power to enact legislation protecting the public health and welfare cannot be impaired by the Takings Clause.<sup>184</sup> As Justice Harlan explained:

A prohibition simply upon the use of property for purposes that are declared, by valid legislation, to be injurious to the health, morals, or safety of the community, cannot, in any just sense, be

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182. *Id.* at 716.

183. 123 U.S. 623 (1887).

184. *Id.* at 665.

deemed a taking or an appropriation of property for the public benefit. . . . [T]he prohibition of its use in a particular way, whereby its value becomes depreciated, is very different from taking property for public use . . . . In the one case, a nuisance only is abated; in the other, unoffending property is taken away from an innocent owner.<sup>185</sup>

In the Clean Air Act, Congress has established that air pollution is injurious to public health. The purpose of the Act is "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare."<sup>186</sup> A strong argument can be made that air pollution is a public nuisance and therefore the use of ERCs constitutes noxious use of property. Devaluing the ERCs abates the public nuisance in favor of the public welfare. Thus, the SCAQMD regulation may avoid a takings challenge under both *Keystone* and *Mugler* because the character of the governmental action is to promote the public welfare.

## VI. Just Compensation

If a court were to find a taking had occurred, the issue of just compensation would arise. Just compensation is determined by the fair market value to the owner of the property at the time of the taking rather than the worth of the property to the government.<sup>187</sup> A court therefore will look to the price at which ERCs of the same pollutant type, in the same region, were selling at the time of the deprivation. In regions where there has been little or no "external trading,"<sup>188</sup> this figure may be difficult to determine. If this price is not discernable, a court may establish the value by determining the cost to the company to produce the ERC. This cost may include several factors, such as the cost of pollution control equipment, the increased price of alternative fuels, and the loss of profits due to process changes. Calculating the cost of these variables could become very speculative, however, because a court would be required to divide the cost between the control devices necessary to comply with emission regulations and those used to go beyond mandated emission levels to create ERCs. The speculative nature of the market will make the task of determining the just compensation issue difficult for any court.

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185. *Id.* at 668-69.

186. 42 U.S.C. § 7401(b)(1) (1988).

187. *Almota Farmers Elevator & Warehouse Co. v. United States*, 409 U.S. 470, 473-74 (1973); *United States v. Reynolds*, 397 U.S. 14, 16 (1970).

188. External trading is a term used to refer to trades with third parties rather than intra-plant use of ERCs.

## VII. Conclusion

It is unlikely that a court will find ERCs are property under the law. The statute creating the ERCs states that no property interest is created and does not create a vested interest in the ERCs. Even if a court finds that they are property, however, a reduction in their value should not constitute a taking under the federal constitution. Pollution reduction is a legitimate exercise of the state's police power because it has a direct impact on the health and welfare of the community. The SCAQMD regulation that reduces ERCs in an effort to reduce the aggregate emission is a legitimate means to achieve the legislative end of pollution reduction.

The ERC owners have no investment-backed expectation that the ERCs would retain their full value. Both the EPA and the ARA have provided for ERC adjustments in order to comply with the changing needs of the air quality region. Courts should not find that the economic impact on the owner is sufficient to constitute a taking. The ERC owner may still derive some economic use from the reduced ERCs. A mere diminution in value does not equal a taking. In fact, the credits may increase in value due to the heightened scarcity caused by the reduction. Further, the ERC owner continues to enjoy the rights associated with property ownership. The owner may still possess, use, and transfer the ERCs. The owner's overall bundle of property rights are unimpaired. Finally, courts should be more willing to find no taking because the SCAQMD's interest in the regulation is to protect the public welfare.

The former SCAQMD Regulation XIII only made small inroads on emission reductions in the South Coast Basin. Because the South Coast Basin is still far from reaching tolerable air pollution levels, the SCAQMD enacted the eighty percent ERC reduction. With Los Angeles' air quality ranking among the worst in the nation, such regulatory innovation is desperately needed.

The economic incentives of the Clean Air Act have provided some of the greatest force behind its success. The reduced number of the ERCs only affects the buyer, who has to pay more for each ERC because fewer ERCs are available. Moreover, the ERC owner benefits from the higher price per ERC. Thus, the SCAQMD regulation continues to allow both economic flexibility as well as increased compliance through economic incentives without violating the Takings Clause.

*Yvonne F. Lindgren\**

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\* Member, Third Year Class; B.A., University of California, Los Angeles, 1988. The author dedicates this Note to her father, with thanks for his encouragement and support.