Statutes and Stopping Points

Building a Better Bubble at EPA

Michael H. Levin

In July 1981 General Electric discovered it could not install a new plastic-parts line at its Louisville, Kentucky, appliance plant in time to meet the state's October deadline for air emissions control. GE could shut the plant down and suffer large production losses, or risk noncompliance and substantial penalties, or buy a $1.5 million emissions incinerator that would be worthless when the old line was replaced. Instead, GE paid $60,000 to lease several hundred tons of emissions reductions that International Harvester had previously "deposited" in the Louisville "emissions bank," and used the reductions to satisfy state requirements on the old line a month ahead of schedule. The transaction saved GE about $1.5 million in capital and $300,000 in operating costs.

At about the same time, DuPont's Chambers Works in southern New Jersey faced state mandates for 85 percent reductions in emissions from each of 119 stacks, vents, and valves. Plant engineers proposed instead to reduce emissions at only 7 large stacks—but by over 99 percent. This proposal secured faster compliance and 2,300 tons a year more reductions than New Jersey had required. DuPont saved $12 million in capital and $3 million a year in operating costs.

These emissions trades and others like them were made possible by four incentive-based reforms that were first allowed, then actively encouraged, by the Environmental Protection Agency (EPA):

- the *bubble*, which lets emitters treat their *existing* sources of air pollution as if enclosed by a giant dome, trading reduced control on some stacks for extra, compensating reductions at others;
- *offsets*, which allow *new* plants or factory additions to begin operating in dirty air areas, if they secure more reductions from existing sources than the new source will add;
- *netting*, which exempts factory modernizations from burdensome preconstruction review, as long as other reductions ensure that "net" plant-wide emissions do not increase; and
- *emissions banking*, which gives firms legally protected credit for "surplus" reductions that can be stored for future use or sale.

These four developments—all variants of the "bubble concept"—have not been uncontroversial. Indeed, they have forced regulators, in-

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dustry, and environmental groups to confront both the benefits and the possible disadvantages of grafting incentive-based approaches onto the gnarled stock of the Clean Air Act. In that process, they have challenged—and, as recent events indicate, ultimately changed—some fundamental tenets of environmental regulation. A little background will help explain why.

Bubble Benefits

The Clean Air Act directs *EPA* to set nationwide *ambient* concentration standards for ozone (hydrocarbons) and other "criteria" pollutants, as well as uniform nationwide *technology-based* emissions limits for major new sources or modifications (the new source performance standards, NSPS), and still more stringent case-by-case emissions limits for processes subject to preconstruction new source review (NSR). The act also directs individual *states* to develop and enforce EPA-approved state implementation plans (SIPs) —states must inventory and control *existing* sources under an integrated scheme that will bring the state's air into compliance with the national ambient standards. State control of existing sources is thus the primary means for attaining healthy air; NSPS and NSR ensure that attainment will not be undermined as new plants add emissions.

This tiered approach accommodates both state pollution control efforts and Congress's desire to prevent the flight of new industry to lax "pollution havens." Over the act's first twelve years, it produced large reductions in total annual emissions of particulates and sulfur oxides (58 percent and 25 percent, respectively), despite substantial growth in coal-fired electricity and in America's industrial base (*EPA Journal*, September 1984). But the approach relies on standardized, end-of-pipe control technology to ease rulemaking and enforcement. It requires ever more stringent control measures when initial state steps prove insufficient. Moreover, it imposes uniform state- or nation-wide emissions limits for discrete industrial processes—no more than 0.3 pounds of hydrocarbon emissions per gallon of wire-coating applicator, and so on.

Yet removing a pound of hydrocarbon emissions from one coating line often costs 100 times more than removing that pound from an adjacent process. If the firm can remove that pound for $1 instead of $100, society saves $99 while the air realizes equal benefits. The problem is even more dramatic when emissions have already been reduced 80 percent and an additional 10 percent improvement is sought. Removing the last 10 percent usually is much more difficult and expensive than removing an equivalent amount from another process not subject to control.

Enter trading. It now seems settled that bubbles can elicit not merely large amounts of regulatory activity, but also significant economic and environmental benefits. By October 1984, EPA had approved or proposed to approve about fifty bubbles and was following over a hundred others. It had also approved or proposed to approve eleven "generic rules" authorizing states to accept individual bubbles without federal review, and a dozen more of these state rules were being drafted. Under accepted generic rules, states were reviewing about thirty bubbles and had approved twenty-five others, including the DuPont bubble. EPA had approved "banking" rules for Oregon, Missouri, and Rhode Island, and twenty-one more were being developed. Seven emissions banks were operating. An estimated 2,500 offset transactions had occurred, along with hundreds of "nets." These figures probably underestimate bubble-related activity, since EPA often does not learn of trades until states have approved them.

Even so, the benefits are large. By October 1984 the bubbles already approved by EPA had saved applicants an estimated $300 million over the costs of meeting traditional air pollution regulations, with state-approved bubbles saving millions more. Many of these bubbles were producing substantially more emission reductions than required by the original prescriptions; the rest were yielding equivalent reductions. Average savings on the hundred other bubbles being followed by EPA were estimated at $3 million apiece. As last autumn's leaves began to fall, estimated total savings from known existing-source bubbles alone approached $800 million.

Few other regulatory innovations had won so much support. Both Democratic and Republican administrations had hailed trading's focus on ends rather than means. Carter EPA chief

Douglas Costle repeatedly declared that "the bubble means less expensive pollution control, not less pollution control." And Reagan regulatory czar Christopher DeMuth said:

> By harnessing rather than resisting natural market incentives, emissions trading will provide a more dynamic force for innovation in pollution abatement than the most ingenious "technology forcing standard" anyone could write down in the *Federal Register*. . . . [With trading] the prospect is we will spend less time at argument and more time at accomplishment in protecting our precious natural resources.

Congress's General Accounting Office had called for expanded emissions trading, while countries as diverse as West Germany, the Netherlands, Japan, and Mainland China were exploring the idea. Trading, in short, was widely seen in international circles as a model for constructive reform.

Bubble Blues

Yet trading's hold on regulatory practice remained tenuous. The banked emission reductions that GE used in Louisville, for example, had been deposited when Harvester shut down a plant. But that shutdown "might have happened anyway," it was argued, so no bubble "credit" should be given for the reductions. DuPont's bubble was open to similar objections. Perhaps the control equipment normally used on the plant's seven large stacks would have reduced their emissions by 99 percent anyway. If so, failure to control the smaller vents and valves might undermine rather than advance environmental "progress." Moreover, at the time of these trades, neither Kentucky nor New Jersey had in effect an EPA-approved state implementation plan showing how the state would meet national air quality standards. Without such a plan no reduction could be "surplus," since EPA could not know the amount of reductions needed for attainment or the factories from which those reductions would come.

Beneath such arguments lies the view that more emissions reduction is always better, that each possible increment of progress must be seized because there is no "stopping point" at which individual or cumulative reductions are truly sufficient. This view implies a goal of zero emissions. It is potentially fatal to any incentive-based approach that seeks to encourage performance better than required minima, since it threatens to convert each extra reduction into a new minimum requirement.

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And beneath this view lies the gulf between an idealized Clean Air Act and the way the act operates in practice. In the ideal world of the statute books, the states have complete inventories of pollution sources. SIP requirements are based on these inventories; firms' prompt compliance with these requirements will produce clean air by fixed national deadlines; and SIPs contain clear guidelines that citizens' groups can enforce. But in the real world, inventories are grossly inadequate; firms have reason to conceal emission sources or better ways of controlling them, so as to avoid becoming regulatory targets; and a "SIP limit" is only the starting-point for lengthy negotiation. Agencies do not know feasible ways to control many emission points; states merely impose requirements on industries thought able to bear the cost—or on future plants whose owners are not present to object. Compliance is routinely determined through self-certification by regulated businesses, and the air quality effects of genuine compliance are often uncertain. Moreover, a SIP can occupy ten file cabinets that no one has fully reviewed.

By the late 1970s, concerned parties had embraced emissions trading because it offered ways to begin bridging this gap between law and reality on an incremental basis, as bubble applications quantifying actual emissions and the effects of alternate control approaches were submitted. But in light of the act's detail and the literalism with which courts had interpreted it, there were serious legal questions regarding EPA's ability even to acknowledge the gap, much less develop innovations to cross it.

For example, the act as then interpreted required states to attain ambient air quality

standards "as expeditiously as practicable" but in no event later than short prescribed deadlines—generally 1982. How could this leave room for any "surplus" reductions, since attainment would always be *more* "expeditious" if extra reductions were confiscated? The act appeared to require trades to produce equivalent ambient effects, to require EPA to ban industrial growth in areas not covered by approved SIPs, and to require any change in emission limits to be made through a formal "SIP revision" involving notice, public comment, and lengthy review before the state and EPA. How could these mandates admit trades that *shifted* (though they reduced) ambient pollutant concentrations, or that highlighted (though they improved upon) the inadequacies of previously approved plans, or that were sought by firms facing imminent compliance deadlines?

More important than these statutory questions were institutional ones. Trading would decentralize compliance decisions by transferring them to thousands of plant managers whose circumstances could not be anticipated by broad uniform rules. It would offer large savings to firms that came forward with better solutions. It would encourage plant engineers to talk to government engineers about how to solve problems, rather than spur lawyers to litigate responsibility for them. It could improve regulatory results *without changing regulatory mechanisms*—could accept the whole apparatus of ambient standards, state plans and emission limits, and simply invite firms to produce equivalent reductions less expensively.

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But these very virtues were, and to some extent still are, perceived as vices by regulatory staff and environmental groups. With trading, compliance and enforcement would no longer be automatic determinations that standard end-of-pipe control equipment had been installed. Permit writers would have to estimate the effects of such equipment and the effects of proposed alternatives, in order to decide whether equivalent reductions would ensue. Such determinations would be made far from Washington, in ways difficult to limit through public rulemaking or the broad-brush regulations it produced.

Perhaps worst of all, trading might expose what one observer has called "the dirty linen of the Clean Air Act." All the deals cut in good faith to make the act work down in the trenches—the slipped deadlines, the convenient assumptions, the acceptance of less-than-ideal emission limits for the sake of significant reductions, the approvals of questionable state plans to avoid collisions between environmental and economic progress—would be dragged into the harsh light used to judge new departures.

Such deals are not of course unique to trading. They are endemic to pollution control, a necessary part of the discretion inherent in any regulatory system. With traditional regulation, however, it generally makes little difference if EPA approves, say, a rule demanding a 75 percent rather than 85 percent reduction in emissions from appliance coating lines. Meeting the looser limit still requires standard controls on each coating line covered by the rule. Nor does it make much difference whether a firm installing this equipment actually realizes a 75 percent or 95 percent reduction. In either case, "progress" is being achieved. But with trading, such differences become critical. Once firms are allowed to comply with emission limits in the *aggregate*, actual overall emissions may *increase* if regulators give one source credit for reductions that traditional compliance "may have produced anyway," since that credit could then be used to avoid control elsewhere. No matter that where prescriptive controls are costly enough to prompt bubble proposals, the likely alternative to the bubble is years of litigation and pollution as usual. No matter that in the absence of trades, many sources subject to traditional regulation will "comply" through variances that simply hike their emission limits. The "perfect" Clean Air Act remained the legal yardstick: "imperfect" trading was seen to undermine the maximum "progress" Congress had required. Indeed, Congress had piled statutory detail upon detail to *eliminate* regulatory

discretion, to make the act as automatic as possible in order to hold the feet of EPA, state agencies, and regulated firms alike to the fire.

Stopping Points: A New Vision of the Clean Air Act

These considerations guaranteed that the trading initiatives would become lightning rods for much larger issues. Do midwestern states have power-plant emission limits that allow use of local high-sulfur coal, but are looser than the emission limits imposed by seaboard states whose utilities burn low-sulfur oil? Has EPA "failed to regulate" large numbers of toxic air pollutants because the act demands too much too soon? Is a statewide regulation for auto spray-painting not quite so stringent as *post hoc* control results suggest it could have been? By challenging individual bubble proposals, environmental groups could raise such issues under the banner of "progress," in ways that might tighten requirements for many sources at once. Indeed, the more EPA and firms came to value trades, the more environmental groups would see them as powerful regulatory levers.

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So firms began to call these proposals "variances," "SIP revisions," "plantwide permits"—anything but bubbles. The label itself attracted too much attention; the rose by other names smelled more sweet.

An EPA serious about bubbles eventually had to confront these institutional barriers, admit that discretion was being exercised, concede that some bubble reductions "might have happened anyway," and yet convince skeptics that further attempts to identify such reductions were just not worth the effort in light of the benefits that this use of incentives achieved. In short, it was necessary to develop "stopping points" for traditional regulation that defined "equivalence" to standard controls and that refused to look beyond such equivalence, though some (unknowable) emitters would always achieve "more than standard" reductions by installing standard controls. Only such stopping points would make the prospect of credit reliable enough to alter regulated firms' behavior.

Thus, stopping points were crucial for emissions trading. However, the underlying issue was not merely bubbles, but use of incentive-based approaches to pollution control. For *any* significant shift from the prescriptive status quo would have raised the same questions about "equivalent" effects and the definition of "extra" reductions. At stake was the possibility of change itself, a new vision of the Clean Air Act—one which acknowledged that EPA could not predict each firm's emission-control performance, but also acknowledged that the last bit of pollution should not be wrung from each regulatory transaction because the quest for such perfection was ultimately self-defeating.

Under this new vision EPA would place dynamism above perfection, admitting—as one staffer remarked—that "the Act is a car with two wheels and three cylinders, and we're trying to make it go. It shouldn't have to be a Maserati before it can move at all." Instead the agency would seek continual movement toward attainment, discarding the fiction that each round of required reductions was the absolute, last, final one. The agency would make the inevitable next rounds easier to achieve, through incentives that encouraged companies to reveal rather than conceal necessary information. It would increase flexibility *and* certainty, by defining "equivalence" in ways that firms seeking to use bubbles could rely on and understand.

Stopping Points Enter the *Federal Register*

EPA's 1979 Bubble Policy was the agency's first major response to these opportunities for more efficient regulation (44 *Federal Register* 71780). The policy set two crucial stopping points.

States with EPA-approved SIPs could grant firms credit for any emissions reductions below SIP limits. Even states without fully approved SIPs could grant firms credit for any emission reductions below the individual SIP limits that EPA had approved, and those credits could be used in trades with similar sources of pollution. In neither case would EPA attempt to play "gotcha" by questioning whether reductions below approved limits were "extra."

Unfortunately, under the new policy every bubble had to be treated as a "SIP revision" and therefore be processed through two or more levels of government—an eighteen-month procedure, on average. Bubbles generally could not be used where they promised the largest savings and environmental gains—in urban nonattainment areas. Applicants had to prove that their bubble proposals were "equivalent" to SIP limits through complex and costly mathematical modelling of pollutant dispersion from all emitters in their locale. Applicants also had to comply or promise prompt compliance with the stack-by-stack SIP limits their bubbles would replace. These requirements burst many bubbles even before they could be formed. But the savings made possible—25 percent of the parent firm's aftertax profits at one steel company, for example—ensured that bubble applications continued to arrive. Indeed, a string of early bubbles yielded more than "equivalent" reductions—they allowed some states to better their SIPs and achieve full attainment.

In 1981 EPA authorized states to approve certain classes of bubbles without advance federal review, declaring that SIP-equivalent trades under state "generic rules" approved by EPA were not "SIP revisions" (46 *Federal Register* 20551). This step cut a knot of procedural issues, and gave permit writers staggering under massive SIP-revision backlogs a substantial stake in the bubble's success. Equally important, it allowed EPA to reinterpret a "technology-based requirement" so as to focus on emission results rather than prescribed methods of control. The Clean Air Act directs states without fully approved SIPs to issue regulations requiring that existing sources use "reasonably available control technology" (RACT). The 1981 initiative declared that EPA, once it approved a state's RACT regulations, would cease to scrutinize the technology actually installed or the emissions reduction actually produced by emitters, provided reductions equivalent to these "RACT limits" were achieved. Different firms—a can maker and a coil maker on opposite sides of a city, for example—could thus use better-than-RACT emission reductions in bubble arrangements. In the jargon of the trade, such firms could "bubble RACT."

These developments were confirmed in the 1982 Emissions Trading Policy that replaced the 1979 bubble document and defined clear principles for approving any trade (47 *Federal Register* 15076). This policy established the emission reduction credit (ERC)—a reduction that is surplus, permanent, quantifiable, and enforceable—as the common currency firms could spend for bubbles, offsets, and nets, or could save in emission banks. (Trades without banks are "like canvassing your neighborhood for a home improvement loan instead of going" to the S&L, the Republican senator from New Mexico, Pete Dominici, had growled.) The policy also established a host of new stopping points. States could guarantee that banked reductions would never be seized to fulfill the act's "progress" requirements. States were authorized to adopt generic bubble rules covering large classes of pollutants and trades. Emitters were no longer required to model pollutant dispersion where models were likely to prove useless, and modeling requirements were restructured to protect air quality without penalizing firms whose bubble proposals identified and reduced deficiencies in existing SIPs. Finally, urban nonattainment areas were fully empowered to adopt bubble approaches, using RACT limits to define "surplus" reductions. Though "more than RACT" might someday be required, such limits were deemed sufficient until that day arrived. For the moment, dynamism had triumphed.

The Bubble in Ascent

The collective impact of these changes was profound. Industry now had economic incentives to *favor* pollution control—to reduce and bank emissions as early as possible, to ask that previously uncontrolled sources be regulated through bubbles, to develop and share new control strategies. And regulators saw that beneficial results could be achieved *voluntarily*, without the trouble of attempting to mandate

further reductions across the board. After a decade of trench warfare, both parties might now be able to act together as good environmental consumers, substituting cheap surplus emission reductions for costly required ones, moving to expensive controls only after other options had been fully explored.

By 1984 emissions trading had begun to convert EPA from a policeman involved in each permit change at every regulated plant to a manager auditing state programs. Trading had also begun to change corporate behavior by increasing the importance of pollution control decisions, shifting them from cost centers concerned with minimizing damage to influential profit centers that decide where to invest company funds. And trading had shown what can happen when a good idea gets loose. Several acid-rain bills in Congress provided for trades across large regions to reduce the costs of enormous sulfur-oxide reduction programs. EPA authorized steel makers to meet Clean Water Act limits on a plant-wide basis instead of at each outfall, and national environmental groups promised to defend that bubble (49 *Federal Register* 21024). EPA also began to explore attainment of water-quality standards through bubbles covering industrial point sources, wastewater treatment plants, and nonpoint sources like farms.

Finally, the agency decided to authorize air bubbles covering new facilities subject to stringent new source performance standards (NSPS). This was a bold new "stopping-point" initiative. Emission limits set to attain ambient standards had always contained their own natural stopping point—regulatory flexibility was generally acceptable so long as progress toward target ambient conditions stayed on track. But NSPS applied to new facilities, *regardless of ambient conditions or effects.* They admitted no natural stopping point in regulatory demands because they were meant to minimize emissions by "forcing" the installation of standard advanced control technologies at such facilities. While many firms that installed these technologies might routinely perform better than NSPS emissions limits, granting them bubble credit seemed to contradict this emissions-minimizing goal.

Yet some claimed, and some evidence suggested, that NSPS *worsened* air quality by discouraging the steady replacement of old, high-polluting facilities with new, cleaner ones. Despite the uniformity of NSPS, the costs of meeting them often varied by a factor of 1,000 for adjacent new facilities. Indeed, one petition to EPA sought to meet NSPS requirements at two new facilities through a bubble that would yield 3,000 tons a year fewer emissions and $500 million lower control costs than separately imposed NSPS. Allowing such "compliance bubbles" might turn problems into environmental opportunities, if "equivalence" to NSPS could be satisfactorily defined.

The Bubble Descends

Unfortunately, the trading initiatives created regulatory uncertainty for regulators as well as industry. Comments raising several hundred issues were filed in response to the 1982 Emissions Trading Policy. The inevitable horrible examples appeared, including one bubble that purported to yield more reductions than participating facilities had ever emitted, and others in which firms sought credit for routine compliance that happened to produce ten times more reductions than required. In August 1982 the U.S. Court of Appeals for the District of Columbia invalidated nonattainment-area netting, declaring that "a bubble concept" could not be used in nonattainment regions, which were supposed to strive for maximum air-quality improvement. This decision addressed only a sliver of trading. But it appeared to adopt the "no stopping point" philosophy for all types of trades in these areas. Shortly afterward, the

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Clean Air Act's 1982 deadlines for achieving ambient standards expired. The standards had not, of course, been met nationwide; they had not even been met in many areas with previously approved SIPs.

These events revived numerous questions about the acceptability of trading. In particu-

lar, they revived questions about what rate of "progress" was acceptable in nonattainment areas. Requiring each bubble to produce overall emissions *reductions*, rather than "equivalence" to inadequate SIP requirements, represented the only real chance of environmental improvement for state agencies unable to identify uncontrolled sources or issue further regulations opposed by governors, unions, and local industries. But admitting this fact would require EPA to acknowledge that direct regulation was insufficient to yield attainment. And this admission would in turn collide with the view that "extra" control in nonattainment areas should never "count" because it was needed—hence required—anyway. The "ideal" Clean Air Act was being reasserted.

EPA eventually divided into three camps on this bubble issue. One argued that bubbles should be banned in any nonattainment region until a new approved SIP defined what reductions were truly "surplus." A second camp argued that bubbles should be approved only after scrutiny of the *motives* behind emission reductions, to make sure those reductions would not "have happened anyway." Under this approach, a series of rebuttable presumptions would be used to ensure that reductions given bubble credit resulted *solely* from a desire to trade. Thus no credit would be given for reductions that occurred long before a bubble proposal was filed, or that resulted from "standard industry practice," or that seemed motivated largely by "other economic reasons" (insolvency, for example), or that were an inadvertent effect of normal compliance actions. The third EPA camp argued that bubbles should simply be asked to produce a "substantial air quality improvement" (a 20 percent reduction in remaining emissions) over what regulation-as-usual could have required.

The first camp reflected the traditional view that attainment is the regulator's sole business: economic advantages are not to be considered until attainment is guaranteed. But this position went too far. Restricting "surplus" reductions to those in excess of a complete SIP that guaranteed attainment would have banned not only existing-source bubbles, but also offsets, nets, and all economic growth in nonattainment areas—a result Congress had plainly sought to avoid in the 1977 Clean Air Act. Moreover, the position assumed that EPA could not approve any slice of a state's program until the whole SIP pie had been assembled. It would therefore have barred EPA from approving *any* additional state requirements that were not yet part of a complete plan, even though they would produce further emission reductions.

The second camp sought to maximize environmental benefits and legal defensibility by requiring general, 20 percent emissions progress *and* scrutiny of the reasons for each bubble emission reduction. But several factors argued against this subjective approach. Most obvious was the difficulty of formulating any objective test for "standard industry practice" or "other economic reasons." How many firms within the same or similar industries would have to use an emissions-control practice before it became "standard"? If part of an industry used emissions-free processes in California, would zero emissions become the universal "standard"? If a firm accelerated closure of an unprofitable facility in order to sell resulting credits, or installed extra controls partly to recapture valuable raw materials, should bubble credit be granted or denied? These questions promised to thrust EPA into unfamiliar arenas, to reward companies that took care to generate "proper" paper trails, but to penalize those that acted with unlawyerly common sense. They threatened the worst of both worlds —endless bubble reviews to establish corporate motives, with few bubbles actually approved. They also threatened to erase previous stopping points. If the question was no longer whether reductions below required levels would occur, but whether they would occur *solely for disinterested pollution-control motives*, few bubbles would be developed or proposed. Too many environmentally beneficial trades have ancillary economic benefits—increased productivity, better feedstock management, and so on. Under the subjective test, these benefits would all become reasons for rejecting bubbles.

The third EPA camp on bubbles argued that subjective inquiry would discard too much genuine progress in an attempt to isolate suspect motivation. A subjective test, it held, was fundamentally inconsistent with *any* use of incentive schemes. Such schemes recognize that real-world actions occur for many motives and seek to tip that calculus in favorable directions *on the actor's own terms*—to match private interests with public ones. Subjective tests would

dissolve that match and impose a calculus that had little to do with reasons for which corporate managers act. Though some proposed bubble reductions might still "have happened anyway," this camp continued, a 20-percent-per-trade margin was more than enough to compensate for such cases. Indeed, the reductions required were sufficient to produce virtual nationwide attainment, had states been able to include them in general regulations.

As this debate within EPA proceeded, the Supreme Court struck a blow for stopping points. In *Chevron U.S.A. Inc.* v. *Natural Resources Defense Council, Inc.* (June 25, 1984), it unanimously reversed the D.C. circuit's 1982 netting decision: EPA, the Court indicated, is not required to insist on every potential reduction in nonattainment areas when the agency reasonably believes such efforts to be counterproductive. Bubbles, said the Court with approval, give "a plant manager flexibility to find the places . . . within a plant that control emissions most cheaply, [allowing] pollution control [to] be achieved more quickly"; even the act's NSPS section "implies a bubble concept of sorts." The decision applied only to bubbles for certain new sources in nonattainment areas. But because these sources are subject to the act's most stringent requirements, the Court's statements appeared to cover existing-source bubbles as well.

Nevertheless, the *Chevron* decision merely confirmed EPA's *discretion* to adopt stopping points; it did not *require* EPA to do so. The agency remained free either to grant bubble credit for many reductions below required emissions limits, or to deny credit by attempting to determine whether those reductions were selfless and simon-pure. Which path would EPA take? In a series of meetings ending in January 1985, the agency made its choice.

The Bubble Floats Free

EPA has now proposed to approve the first NSPS bubble (50 *Federal Register* 3688). Moreover, while details remain to be worked out, the broad outlines of the agency's forthcoming NSPS bubble and final emission trading policies now seem clear. EPA will opt for reliable stopping points that acknowledge the need for interim progress and the bubble's ability to se-

cure it. It will tighten requirements for nonattainment-area bubbles, but in ways that make trades easier to use. The agency will neither psychoanalyze all bubbles in nonattainment areas, nor visit the sins of the past on future bubble applicants. Instead it will generally approve bubbles that meet objective threshold criteria.

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For *existing sources,* a nonattainment-area bubble will generally be approved if it uses a RACT baseline to define aggregate threshold emissions, if it reduces emissions by 20 percent from that baseline, and if it does not rely on "past" reductions effected before the application to trade or bank was filed. This last criterion will generally limit bubble credit to reductions below "actual" emissions—those current when an application is filed. Thus past horror stories involving bubbles that relied on preapplication reductions unrelated to trades will not be repeated. But the criterion will also give full credit for all reductions made in contemplation of trades—an approach that will recognize superior control efforts without attempting to unravel past motives or predict the actual performance of future, yet-to-be-installed controls. A few bubbles that meet these three tests may still be questioned. But strong presumptions will favor approval.

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For *new* sources, bubbles that lump together facilities subject to NSPS will generally be approved if they yield emission reductions as great or greater than those that would flow from source-by-source compliance with NSPS. EPA will defer writing precise definitions of "surplus" NSPS reductions until it has evaluated more NSPS bubbles. But such definitions appear inevitable, for the agency plans to allow bubble credit for reductions resulting not only from better-than-NSPS control equipment, but also from superior operation of standard equipment. Both steps require benchmarks defining what "superior" performance is.

These broad resolutions are important. They indicate that the agency will not debate again whether trades are impermissible because their reductions "might have happened anyway." They make "past" reductions easy to address without such inquiry: because such reductions have *already* happened, we know their precise amounts, which may generally not be used in subsequent bubbles. But bubbles are typically sought by firms attempting to meet *new* control demands less expensively. And since no one can predict whether a firm *proposing* to install specific control equipment will perform above or below target levels, surrogates for "equivalence"—for example, expected average performance for technology-based NSPS requirements—will have to be the measure of valid bubble reductions. Without such measures, EPA's resolutions suggest, plant managers could not be sure that extra reductions would be credited, so few reductions would be sought or disclosed. With such measures, managers will have continuing reasons to come forward with better pollution data and control methods. Though some "ideal" Clean Air Act reductions may be "lost" in the process, more real-world environmental progress will be made. That fact makes all the difference. ■

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