The Reauthorization of Superfund: The Public Works Alternative

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The demise of efforts by a broadly based coalition of stakeholders to reauthorize Superfund in the 103d Congress leaves the legislative field open for reconsidering all the key assumptions underlying the "consensus" bill that dominated last year's debate. Unless the coalition remains unified, and the Administration supports it aggressively, the substance will begin to unravel, the process will become chaotic, and Congress could easily miss the December 1995 deadline to reauthorize the statute.

It is clearly the fond hope of some that from the ashes of this dissension, a phoenix will rise, taking the form of a repeal of retroactive liability in exchange for an expansion of the federal trust fund. Although the so-called public works alternative was rejected by key committees during the 1993-1994 reauthorization debate, the Republican-led Congress is sufficiently volatile, the Administration sufficiently weak, and opposition to the consensus legislation sufficiently mobilized that its resurrection is a distinct possibility.

Because the public works alternative has never achieved enough political momentum to be seen as a real alternative to more moderate reforms, few have analyzed its implications critically. As the reauthorization debate continues, such an analysis is long overdue.

Proposals to repeal retroactive liability under Superfund and accomplish cleanup through an expanded public works program can be fairly challenged on four major grounds. First, these proposals suggest extreme and destructive changes to Superfund's remedy selection and implementation process that would produce interim, unstable cleanups that do not protect public health and the environment. At the same time, the proposals fail to address the profound implications of removing industry's incentive to develop effective cleanup technologies by repealing retroactive liability. All of these problems are at the heart of the paralysis that grips the current program, and a public works approach would not only fail to solve them but could make them much worse. Second, the repeal of retroactive liability will not eliminate either litigation or lawyers, and could result in legal wrangling worse than the maneuvering that plagues the current system. Third, such proposals offer increased funding levels to replace the cleanup dollars lost when liability is repealed, but deny that major new taxes are necessary to support the new public works approach. As a result, the proposals are likely either to cost much more than public works advocates will admit or to result in severe underfunding of the cleanup program. Fourth and finally, the proposals do not deal with the important issue of solving the U.S. Environmental Protection Agency's (EPA's) chronic and severe inability to get its contractors under sound fiscal control.

This Dialogue begins with an examination of the political dynamics that determine the viability of the public works alternative. It turns next to an analysis of the cleanup standard and liability reforms contained in the two most serious versions of the alternative considered in the 103d Congress. The Dialogue discusses the funding levels and funding mechanisms put forth in each proposal. It concludes with a review of how the proposals would solve the contractor management problems that plague Superfund.

The Politics of Public Works

The concept of converting Superfund into a public works program is not new; elements of the insurance industry have advocated variations on this theme since 1985. But until 1994, insurers were unable to overcome the resistance of other Superfund constituencies and build a broader coalition for their proposals.
Environmentalists have never wavered in abhorring the public works alternative since it was first floated during the last reauthorization debate. Despite the insurance industry's protestations that a much larger fund is a crucial element of its public works proposal, the environmentalists are convinced that raising taxes is not a politically realistic quid pro quo for the abandonment of retroactive liability. They believe that in the end they will end up with the worst of both worlds — no significant increase in the fund and no strong liability to force private-sector cleanup.

Ironically, the best indication that this paranoia is justified is the equivalent paranoia of industry that once it agrees to higher taxes, liberal legislators will use the expanded Superfund to finance social engineering on a grand scale. Many of the bigger, more visible companies also resent the possibility that latecomer defendants in Superfund cases would get a sudden reprieve from strict, joint, and several liability when their more responsible competitors have spent millions to settle their liability over the last decade.

Despite these potential tensions, in the winter of 1993-1994, as consensus legislation picked up momentum and began to move through the House and Senate, a broader coalition suddenly materialized in opposition to the consensus bill and in support of the public works alternative. A more startling group of political bedfellows has rarely been assembled. Known as the Alliance for a Superfund Action Partnership (ASAP), the coalition included the National Association for the Advancement of Colored People (NAACP), several large insurance companies, several manufacturing sector companies, large and small business trade associations, local governments, leaders of community groups, and a public health professional. Founders of the group — Dr. Benjamin Chavis, former executive director of the NAACP; John Johnstone, chief executive officer of the Olin Corporation; and Joseph Brown, chief executive officer of Talegen Holdings, Inc. — explained ASAP's raison d'etre in a Los Angeles Times op-ed piece in February 1994:

American businesses are the most powerful force for economic equality in this country. Too often, though, they have viewed the concept of economic justice as an adversarial battle between business and minority groups. It need not be so . . . .

As a civil rights leader and two business executives, we think the Denny's experience offers some intriguing lessons and possibilities for creating cleaner communities and local jobs. But first, the contentious, balky Superfund law will have to be overhauled. . . .

Incredibly, about 1,000 of the EPA's 3,000-plus Superfund staff are lawyers or provide support for lawyers. Today, it seems, lawyers are there first, last, and always. With a larger Superfund financed primarily by business taxes, along with fundamental reform of the current liability system, regulators can put public-health hats on first and keep them on; jobs can be created and businesses can become the partners rather than the adversaries of communities.6

Nowhere do the two business leaders disclose their self-interested — as opposed to their public-spirited — motivation for forming the coalition: Both head companies plagued by Superfund liability, Olin in the traditional "potentially responsible party" (PRP) role and Talegen Holdings as an insurer.

ASAP's diverse constituencies were united by the simple quid pro quo so distrusted by the environmentalists: The repeal of retroactive liability would relieve the financial burden of its business members, and new industry taxes would create a much larger Superfund that could be used to establish new programs for waste site minority communities.8 ASAP estimates that between $3.6 and $4.6 billion annually would be needed, a two- to three-fold increase over current funding levels.9

Taken as a whole, perhaps the most notable characteristic of the ASAP proposal is its lack of specificity on such central issues as cleanup standards and remedy selection, the cutoff date for the repeal of retroactive liability, the funding levels needed for new program initiatives, and the precise taxing mechanisms to be used to raise more money. ASAP's vagueness about how it would resolve such issues is probably designed to attract as many supporters as possible for its proposal. If, for example, the proposal specified a cutoff date for the repeal of retroactive liability, companies [25 ELR 10080] with liability problems that fell outside the trigger might be reluctant to join the group. It is also possible that ASAP's diverse members could not agree among themselves on the appropriate resolution of the issues that the proposal leaves open, choosing instead to opt for vagueness in order to keep the coalition together. If the latter speculation is correct, then the coalition is politically unstable and would have great difficulty maintaining itself as a unified lobbying force if a bill repealing retroactive liability in exchange for an expanded public works program ever started to move through the legislative process.

The dismissal of Dr. Chavis as executive director of the NAACP may result in the withdrawal of the organization from active participation in the ASAP coalition.10 Further, the American International Group (AIG), a reinsurer that was a driving force behind ASAP, switched its position and endorsed the consensus bill in the waning days of the 103d Congress, and it is unclear how the company will position itself, and its considerable financial resources, when the 104th Congress reconvenes.11 What can be predicted with reasonable certainty is that if the public works approach resurfaces as a serious alternative to the consensus legislation, the original ASAP coalition will reemerge in some form to support it.
Although ASAP never succeeded in persuading a member of Congress to introduce legislation embodying its proposal, two New Hampshire Republicans — Sen. Robert Smith (R-N.H.) and Rep. William Zeliff (R-N.H.) — introduced less ambitious public works bills in the 103d Congress, and the two legislators are the most likely leaders of a renewed effort in the 104th Congress to pursue the public works alternative. Their "Comprehensive Superfund Improvement Act of 1994" would eliminate liability for parties who owned, operated, or sent wastes to Superfund sites before December 11, 1980, in exchange for a doubling of the broad-based corporate tax that supports the current Superfund. The ascendency of Republicans to the leadership of both houses means that Senator Smith and Representative Zeliff are in the position to force serious consideration of any legislation they develop, and, as this Dialogue goes to press, the Washington lobbying community fully expects them to introduce new bills early in the 104th Congress.

It is hard to imagine that such legislation could ever garner the support of the environmental community or EPA Administrator Carol M. Browner and her career staff. On the other hand, some members of the insurance, oil, and chemical industries will strongly support the public works alternative, especially if the Republican leadership in Congress begins to move such legislation rapidly through the process. Still other members of the manufacturing sector will renew their strenuous opposition to the proposal, joining forces with the environmentalists and the Administration to subject all aspects of it to a minute and critical substantive examination.

The most likely result is legislative gridlock that will persist until and unless one of three things happens. The Republican leadership could manage to roll over its opposition, presenting the President with a bill that he will find difficult to sign. Congressional leaders could conclude that the only way to break gridlock is to return to the framework of the consensus legislation. Or the legislative process could sufficiently scale back the public works alternative to make its passage palatable to opposing constituencies. No area illustrates the problems of gridlock more clearly than the approaches to cleanup standards taken in the ASAP and Smith/Zeliff proposals.

Cleanup Standards and Implementation

The cleanup standards provisions in the ASAP and Smith/Zeliff proposals abandon any effort to derive national, uniform, health-based standards for determining when a Superfund site is clean enough. Instead, they substitute a cost-benefit test that especially under the Smith/Zeliff legislation, would require that immediate, quantifiable benefits clearly outweigh the costs of the remedy selected. The proposals represent the fulfillment of the fondest dreams of the most conservative industry participants in the reauthorization debate and the violation of virtually every important principle and goal articulated by environmentalists and citizens' groups. Unless these proposals are substantially modified, their progress through the legislative process will provoke a series of draining confrontations between the two groups and their allies in Congress.

ASAP

ASAP's proposal to reform Superfund's cleanup standards covers less than a page, and has all the earmarks of a summary written in haste by people who have far more important ground to cover. Thus, "effective protection of public health and the environment must be the overall standard," but "factors such as land use and available technology must be taken into account." In selecting a remedial action, EPA should first execute a "removal or stabilization action" and then "re-evaluate the site." If the site still poses problems, the Agency should "select a remedial action based on the current actual or likely future risk," or it should "defer the site for re-evaluation at a time certain, not to exceed five years," although "deferral would not be permitted if the delay would result in any appreciable increase in risk to public health."

The proposal adds, in a thoroughly ingenuous tone:

Since the plan would include all the key stakeholders in the decision-making process, there is no need to impose external and arbitrary statutory preferences for any specific decision among the options above, nor would there need to be arbitrary preferences for remedial actions such as ARARs or treatment or permanence (although remedies will have to make permanent reductions of risk). In a little-noticed provision that could provoke a political firestorm in Congress and the media, ASAP advocates "requir[ing] that sites in disadvantaged communities receive priority over other sites of equivalent public health risk located elsewhere in order to spur economic redevelopment." While it is both obvious and unacceptable that a Superfund site located in a minority community can have a far more devastating impact on the quality of life and economic development than a site located in an affluent community, this proposal takes matters one crucial step further, implying that nonminority communities should endure equivalent health risks for longer than minority communities in order to redress economic damage.

Beyond these radical changes to Superfund's existing cleanup standards and site prioritization procedures, ASAP would increase public participation in remedy decisions, providing the community with an opportunity to comment on "each major decision in the process," as well as the overall prioritization of site cleanups, although it is never explained how a group in one community can make judgments about priorities that affect other communities. The proposal would also create site-specific community working groups (CWGs) at each site and would expand the current process for giving such groups technical assistance funding. The precise amounts that would be spent on these initiatives is never specified.

ASAP also proposes several new initiatives. It would fund grants for "underprivileged and minority communities" to develop site inventories and characterizations and to undertake training in environmental remediation skills. The group further proposes that "scientifically sound toxic substance chemical screening within affected populations" should be undertaken, and would expand funding for the Agency for Toxic Substances and Disease Registry and other research institutions.
ASAP calls for the development and application of different criteria for both the evaluation and ranking of national priorities list (NPL) sites. Thus, the proposal would require EPA to consider all of the sources of exposure for a community, not simply the Superfund site, and prioritize those sites that are located in areas that are heavily polluted by such other sources.\footnote{21}

Finally, ASAP proposes to use a "modest" (never specified) amount to set up a program of "coordination" between all federal agencies that can help toxic waste site communities recover "economically and socially."\footnote{22} Departments mentioned include the U.S. Departments of Agriculture, Commerce, Education, Housing and Urban Development, and Labor. This new program would also make grants to local communities for economic redevelopment.

Obviously, given the 1,100 private sites now on the NPL, to make much of a dent, funding for the above programs could run into hundreds of millions, if not billions, of dollars. Yet ASAP's total budget for all of these initiatives, including EPA overhead, is estimated in the range of $570 million to $1 billion annually. This budget suggests either that these programs will be severely underfunded or that ASAP's cost estimates are far too low.

But the problems raised by the ASAP proposal go far beyond the credibility gap in its funding level. If the ASAP proposal were enacted, industrial PRPs would be removed from the process at a majority of sites, leaving behind as participants an EPA without any statutory or regulatory framework for making remedial decisions, cleanup contractors with mixed motivations regarding remedy selection and cost control, and community residents who may or may not be able to participate meaningfully in the process. Decisions would be made on an ad hoc, site-specific basis, with all the participants left to their own devices in navigating the shoals of when, how, and how much to clean up. At the least, the result will be gross inconsistencies between sites and, at the most, either pathetically inadequate cleanups or excessively expensive ones, depending on the mindsets of the government officials and the advocacy skills of the community activists involved with the site.

Even militant community activists often have a hard time maintaining their position in the highly technical debate over remedies, especially because there are only a handful of technical consultants across the country who specialize in working with such groups.\footnote{23} Certain technologies, such as incineration, are anathema to citizen activists and would, therefore, be virtually eliminated from the Superfund arsenal in a system that have them veto power over remedial decisions. Such groups typically push hard for permanent — as opposed to temporary — remedies, and technology gaps could lead to the suspension of cleanup at many sites if industrial PRPs are able to persuade citizens to accept the indefinite promise of a future, permanent remedy as opposed to temporary but effective containment now.

In short, the ASAP approach to cleanup standards substitutes process — i.e., the collaboration of all those affected by the decision — for substance — i.e., the establishment of uniform national standards — without taking any steps to ensure that the process places citizen activists on an equal footing with industry and leads to technically sound results. Given the findings of a recent study that cleanup in minority [25 ELR 10082] communities is frequently slower than cleanup in predominantly Caucasian areas,\footnote{24} it is particularly surprising that the NAACP would lend its support to such a poorly conceived alternative.

The final issue raised by the ASAP proposal is the impact of repealing retroactive liability on the development of cleanup technology. There is a widespread consensus among all those involved with Superfund that the absence of cost-effective technologies is a major impediment to lasting cleanup. One of the crucial breakthroughs that enabled the emergence of a consensus bill was the recognition by environmentalists that it will take years, even decades, to develop effective technologies and that in the meantime, the best remedy available is interim containment.

But recognizing this reality and accepting it as a permanent state of affairs are two very different things. The Superfund liability system creates the most powerful incentive possible for companies identified as PRPs to find and implement technologies that will clean up the sites as well and as permanently as possible. If cleanups are not successful, EPA can require PRPs to do them again, and even if EPA overlooks the remedial failure, private toxic-tort liability is always a risk. Once retroactive liability is eliminated, either the government will have to subsidize such research, or it will lag far behind the nation's cleanup needs.

Smith/Zeliff

The Smith/Zeliff legislation contains a more elaborate proposal for rewriting Superfund standards, which would divide cleanup into two distinct phases. In the first phase, EPA or the states would implement "immediate risk reduction measures" (or IRRMs), including such steps as removing waste from barrels, tanks, or lagoons, providing alternative water supplies, preventing discharges to surface waters or groundwaters, installing fencing, or "instituting other institutional controls."\footnote{25} Scoring the site to determine if it belongs on the NPL would occur only after these steps were taken and would consider only the conditions then present at the site.\footnote{26} Because the current scoring system\footnote{27} evaluates conditions at a site before any cleanup has occurred and emphasizes immediate exposure in determining a site's ultimate score, this change could mean that many sites will fall below the current cutoff score of 28.5 unless the scoring system is rewritten to place more emphasis on long-term health and environmental risks. The legislation does not provide for rewriting the system except as necessary to reflect the new rule that sites are scored only after short-term cleanup is implemented.\footnote{28}
For sites that survive the new scoring process, the next step is to develop a "Long-Term Response Plan" (or LTRP), to be completed within 12 months after the site is listed. The centerpiece of the LTRP is a site-specific risk assessment, which would replace the uniform national cleanup standards that determine the protectiveness of remedial actions under current law and the performance of a cost-benefit analysis of all "response action options" identified by the government. The substitution of site-specific assessments for national standards virtually guarantees that uniform levels of cleanup would not occur at sites posing similar risks across the country and increases the vulnerability of the remedy selection process to inappropriate manipulation by PRPs. The requirement that the government weigh costs against benefits and further consider the economic impact on PRPs is another radical departure from the current statutory system, which permits the consideration of costs only after an overall level of protection of human health and the environment is assured. Both changes are anathema to environmentalists and citizen groups, who fought harder to maintain uniform national health-based standards than they fought for any other principle during the 1983-1986 and the current reauthorization debates. To compound these problems the Smith/Zeliff legislation requires EPA to allow PRPs to conduct the risk assessment in lieu of doing the assessment itself unless it concludes that PRPs will not do the assessment "promptly" or "properly." This aspect of the legislation is also opposed vigorously by environmental and citizens' groups, who understandably fear that allowing those who must pay for cleanup to determine the public health and environmental protection baselines against which cleanup will be measured will result in the inappropriately low risk estimates and inadequate remedial actions.

As for the actual content of risk assessments, the legislation establishes a liberal — as opposed to a conservative — standard for predicting risk; that is, data gaps and other scientific uncertainties would be interpreted to suggest the absence — as opposed to the likelihood — of a problem. Thus, risk assessments must "rel[y] to the maximum extent practical on actual data rather than on assumptions" and shall provide the "most plausible estimate" of risk. When evaluating the effects of the exposure of people to contaminated media such as soil or water, only "average" conditions may be considered, thereby potentially omitting from consideration the effect of exposure on particularly sensitive populations, e.g., very young children, the elderly, or asthmatics.

In a sharp departure from decades of federal environmental policy, the Smith/Zeliff legislation instructs the federal government to write regulations for conducting risk assessments that "do not conflict with regional or State guidance on risk assessments." Taken literally, this provision means that if the states believe EPA is too demanding in the level of human health and environmental protection it requires, they can nullify the federal standards simply by issuing a risk assessment guidance setting a lower threshold for protection. Because the states are frequently PRPs at Superfund sites, and state legislatures and regulatory agencies are often more vulnerable to pressure from industry PRPs than the federal government, this "state and local preemption" provision could effectively undercut any effort to maintain a minimal level of protection.

As for the actual selection of response actions, the Smith/Zeliff legislation requires EPA to identify options that would then be subject to a standard methodology for evaluating costs and benefits. Acceptable costs include the costs of implementing and maintaining the cleanup, including capital and debt service costs, while benefits include increased property values and reduced public health and ecological risks, thus establishing a circular system that is heavily dependent on the initial assessment — and quantification — of risk. In the final analysis, the Smith/Zeliff system directs EPA to select a response action based on a subjective, judicially nonreviewable evaluation of the risk assessment, the cost-benefit analysis, other "site-specific factors" such as future land use, and "the economic impact of the action on PRPs." In an especially insidious twist reflecting the heavy influence of conservative New Hampshire municipal officials during the development of the legislation, the bills would require EPA to consider the "funding priorities" of local governments at any site where a county, city, or town is a PRP. If taken to its logical extreme, this provision means that the level of cleanup of municipal landfill Superfund sites will be diminished because the municipal PRPs prefer to fund schools, recreational programs, or other initiatives.

If the Smith/Zeliff proposal were enacted, many — if not most — sites would fall off the NPL following the implementation of the so-called IRRM. Such actions as providing the public with alternative water and restricting access to the contaminated area through deed and zoning limitations and site security would ostensibly eliminate the basis for proceeding with a full cleanup of the site, even though expensive site contamination remained. Permanent treatment remedies would be an exotic and endangered species, aquifers would remain unusable, and communities would be routinely pressured either to sacrifice the land to industrial uses or to eliminate future use altogether. Massive discrepancies between the levels of cleanup achieved in various communities would be the norm, with the most passive, least affluent, and politically weak achieving mere surface cleanups of obviously visible problems.

The Repeal of Retroactive Liability
A primary advantage of the public works alternative is that it would replace a system of financing cleanup through the imposition of strict, joint, and several liability with a system of funding that does not waste resources on attributing blame. Under this new regime, industry would pay increased yearly taxes in predictable amounts and could, in theory, dismiss the squadrons of attorneys and technical experts that are now necessary for any "deep pocket" PRP seeking to navigate the shoals of the current liability system. To the extent that a public works approach only succeeds in substituting one complex system for determining liability and allocating costs with another, equally complex system for determining who is entitled to a liability exemption, industry could easily find itself retaining the squadrons and paying significantly higher taxes — the worst of both worlds. Both the ASAP and Smith/Zeliff proposals are vulnerable to the criticism that the new system will give the same level of employment to attorneys as the old; because it tries to provide refunds to those who paid costs in the past decade and a half, Smith/Zeliff may even represent a more litigious alternative than the current system.

**ASAP**

ASAP would eliminate retroactive liability under Superfund for behavior that occurred before a date certain — that is, a cutoff date — at multiparty and so-called orphan sites, with orphan defined to mean that there is no viable PRP present. Canceled liability would include responsibility for natural resource damages as well as cleanup costs. Parties whose past behavior violated laws in effect at the time would not get the benefits of the retroactive cutoff, and the issue of whether they had in fact committed such illegal acts would presumably be litigated. ASAP would also retain strict, joint, and several liability for single-party sites, no matter what their vintage, and for behavior that occurred after the cutoff date.

ASAP frankly admits that "no cut-off date has been chosen yet," although it assumes a date in 1986 for the purposes of the cost and revenue projections contained in its proposal. According to ASAP, such factors as "the quality of waste records, waste management regulations, and available disposal facilities" should be considered. Thus, a cutoff date could be selected on the basis of when a party sent waste to a site, when a party transported waste to a site, when a party owned or operated a site, whether a party's conduct was legal at the time, when the site itself closed, or some combination of all of these factors. Depending on the number of factors considered, litigation over the cutoff date could proliferate very quickly, eliminating much of the savings in transaction costs that ASAP purports to achieve.

Consider a system that attempted to employ all of the above factors. To take advantage of the repeal of retroactive liability, a PRP accused of sending or transporting waste to a Superfund site would be compelled to muster evidence on the following issues:

- What was the precise nature of the waste that it sent or transported to the Superfund site and what were the precise dates and quantities of the materials that were involved?
- What were the waste management requirements that applied to these activities and materials at the federal, state, and local levels?
- Did the party comply with these requirements?
- If no clear requirements existed at the time, what was the prevailing standard of care exercised by similarly situated industry members?
- In a multiacre landfill, with areas that closed at different times, where was the party's waste ultimately disposed?
- A PRP owner or operator would be compelled to muster convincing evidence on the following points:
  - What kinds of waste did it accept for disposal at the time it owned or operated the site?
  - What kinds of waste were accepted for disposal by its predecessor and successor owners and/or operators?
- When did the site close and what was its legal relationship to the site at that time?
- What legal requirements applied to its conduct at the federal, state, and local levels?

As a practical matter, many of the issues listed above are relevant to the allocation of costs among PRPs under the current Superfund scheme. But by raising the stakes from payment of a larger share to an absolute exemption from liability, the ASAP proposal creates a much stronger incentive for pitched legal battles. Especially in the first decade after liability is repealed, these battles will take place in court and the proposal could have the counterproductive effect of increasing, not decreasing, litigation. The complications of offering proof on such a complex web of factors with respect to conduct that occurred 10, 20, or 30 years ago cannot be overestimated. In some cases, the expense of finding the proof could easily exceed the benefits that liability repeal was intended to bestow. In other cases, amassing such proof would be impossible.

**Smith/Zeliff**
The Smith/Zeliff legislation eliminates liability for response costs and natural resource damages arising out of actions taken before December 11, 1980, unless such actions were "contrary to law" when they occurred. The scope of the liability repeal is coextensive with the scope of liability under current law, with one very significant exception: The federal government is defined out of the universe of persons covered and, therefore, would continue to be liable for pre-1980 acts. The legislation eliminates liability altogether for several categories of parties, including (1) "innocent landowners" who conduct environmental assessments and take appropriate action to limit releases, (2) lenders and fiduciaries, (3) site redevelopers who are not otherwise PRPs, (4) grantors of conservation easements, and (5) nonnegligent response action contractors. As for the liability remaining after repeal, the Smith/Zeliff legislation would establish a site-specific process for determining liability and allocating costs, which would be run by a panel of three administrative law judges appointed by the EPA Administrator. The process is similar in most respects to the process proposed by last year's consensus legislation, although — in contrast to the consensus bill — it does not give the government discretion to reject an allocation and the results of the allocation would be binding on all PRPs. In an effort to address the inequities that arise when liability is eliminated after PRPs have already contributed large sums to cleanup, the legislation allows reimbursement from the Superfund under certain circumstances, which are defined by an elaborate system of transition rules. For example, at sites where all actions that could trigger liability occurred before December 11, 1980, but where construction of a response action was completed by January 1, 1994, no reimbursement would be provided; if construction at such a site is ongoing, reimbursement could be made but only after construction is completed. For so-called straddle sites where actions triggering liability occurred both before and after the magic date of December 11, 1980, no reimbursement could be made if construction was completed by January 1, 1994, but PRPs could apply for reimbursement of operation and maintenance costs. When PRPs applied for reimbursement, a determination would be made which portion of the costs at issue are attributable to actions occurring before December 11, 1980, and which portion to actions occurring after that date, with compensation provided only for the former category. The Smith/Zeliff legislation would, therefore, establish a very complex system where the payment and distribution of billions of dollars would turn on documenting not only when certain activities occurred, but also the actual costs of remediating the consequences of those precise activities, as opposed to activities that may have occurred a week, month, or year later. Consider the relatively straightforward example of a hauler who trucked loads of liquid industrial waste to a site for three years that straddle the cutoff date. The production of 15-year-old invoices documenting the content and amount of such shipments would be the first — and relatively easy — hurdle for such a party. Once such evidence was somehow located, the hauler would need to show that precise amounts of money spent on remedial actions were directly attributable to its older — as opposed to its newer — shipments. Allocation disputes in this context could give a whole new meaning to the criticism that Superfund is a dream for lawyers and a benefit for almost no one else.

In 1992, Resources for the Future (RFF) issued a report analyzing the implications of various approaches to the reform of Superfund liability. Among other options, RFF analyzed the possibility of eliminating liability for conduct that occurred before January 1, 1981, concluding:

Arguably, a cut-off date based on when individual PRPs last sent hazardous substances to a site would be the fairest method of defining which PRPs would retain liability. (The logic is that the passage of Superfund in December 1980 signaled a new era in waste management to which all responsible parties should have been sensitive, and thus substances sent before that time should escape liability.) However, we are concerned that this definition would be difficult to implement administratively because it would require establishing definitively who sent which substances to a site and when. This could perhaps be addressed by fixing the burden of proof firmly on the PRP to demonstrate that it had 'beat' the deadline, although EPA would still have to evaluate the legitimacy of this proof. We believe that the administrative costs of making such determinations could rival those of the current program.

Funding Levels and Funding Mechanisms

Precise estimates of the funding levels necessary to support cleanup under the ASAP or Smith/Zeliff proposals are very difficult to develop. Both proposals would create complex and litigious systems for determining whether liability is repealed, making it hard to project how much money the Superfund program would lose in foregone PRP settlements. The proposals may or may not save significant transaction costs for the government but, even if they do, cleanups performed exclusively by government contractors are likely to be significantly more expensive than those handled by private-sector PRPs. Finally, while there is a track record for estimating the costs of site cleanup, there is little reliable information regarding the future natural resource damages, which would be federally funded under both alternatives.
The ASAP proposal explains in some detail the assumptions on which it bases its proposed annual funding level of $3.6 to $4.6 billion. In contrast, the Smith/Zeliff legislation does not contain an overall funding level and does not specify all of the new taxes it would impose to replace money lost by the repeal of liability. But a critical examination of ASAP's assumptions indicates that the coalition is wildly optimistic in its projections of future costs and that the real price tag for its program could run several billion dollars above the funding levels it has projected. Similarly, a critical analysis of the Smith/Zeliff proposal indicates that the trust fund must double and broad-based taxes quadruple to cover the revenue lost from a repeal of pre-1981 liability.

Apart from the question of funding levels is the very sensitive, even explosive, issue of who will be taxed to pay for the public works alternative. The favorite candidates of both ASAP and the Smith/Zeliff proposals are the companies that pay the current Superfund broad-based corporate tax. Relatively small increases in that tax rate can raise billions of dollars, although the imposition of such an increase remains very controversial. While it is speculative at best to psychoanalyze the aversion of industry to either tax increases or new taxes in this context, the intensity of the opposition is undoubtedly due more to the precedent such an increase would establish as to the actual financial pain it would inflict. Until and unless these fears are assuaged, the public works alternative will have rough going in Congress.

ASAP

Assuming a 1986 cutoff date for the repeal of retroactive liability, ASAP proposes a funding level of between $3.6 to $4.6 billion annually. The wide range reflects uncertainty about how much revenue from private-party settlements will be lost as a result of the repeal, and also reflects ASAP's decision to remain vague about the amounts that should be spent on new initiatives. On an annual basis, ASAP asserts that between $2.2 and $2.77 billion would be needed to fund the cleanup of site-action and orphan sites; $550 million would be needed for single-party sites; $250 million would be needed for removal actions; and somewhere between $570 million and $1 billion would be divided between EPA overhead and research, and the various new programs mentioned above, including natural resource restoration.

ASAP's funding mechanism assumes that between $2.4 and $3 billion will be raised by the imposition of broad-based business taxes and so-called line item contributions, by which it means the current Superfund-specific taxes on chemical and petroleum feedstocks, new taxes on small business, and new taxes on the insurance industry. Between $300 and $600 million would be raised by continuing the current 10 percent matching share requirement for the states. Annual appropriations from general taxpayer revenues would increase to between $300 and $400 million. Settlements at single-party sites, settlements for illegal or post-1986 disposal at multiparty sites and settlements for removal actions at non-NPL sites would contribute an additional $620 million, for a grand total of $3.62 to $4.62 billion.

The ASAP tax scheme would not increase the current Superfund taxes on oil or chemical feedstocks, raising a total of $800 million from these sources. The broad-based business tax component would contribute $1.35 billion annually, which, according to ASAP, means doubling the current tax rate. Small businesses would be subject to a "waste end" tax on hazardous wastes generated, to raise a total of $100 million. Insurers would contribute the relatively modest sum of $300 million annually, through an unspecified taxing mechanism.

The best objective analysis of the ASAP numbers was performed by Katherine Probst, a Senior Fellow at RFF. In testimony delivered before House Energy and Commerce Committee's Subcommittee on Transportation and Hazardous Materials in February 1994, Probst projected the costs of the ASAP proposal, using a cutoff date of 1987. (At the time that Probst testified, ASAP had not yet released any financial projections using the 1986 cutoff date.) According to Probst, a 1987 cutoff means that 83 percent of Superfund sites would have PRP liability extinguished because they closed prior to 1987, and 50 percent of the costs at the remaining 17 percent of the sites are attributable to wastes disposed of before 1987. Probst calculated that Superfund would need a total of $4.86 billion to cover its additional costs on an annual basis. It is important to note that Probst's figure includes an estimated $350 million annually for natural resource damages, a figure which she characterizes as extremely conservative, explaining that "the costs of natural resource damages alone could be substantially higher than we have indicated, and, in fact, could end up costing billions of dollars."

Natural resource damages would be exclusively fund-financed under the ASAP proposal. If we use Probst's conservative estimate that $350 million is the minimum amount needed for natural resource restoration, and we subtract this figure from the $570 million to $1 billion ASAP would provide for new program elements, we are left with a range of $220 to $650 million for all of ASAP's new initiatives and for the overhead supporting EPA headquarters personnel who oversee the program. It is probably safe to assume that EPA overhead costs will increase under the ASAP approach and that in any event, the community leaders active in ASAP would not be satisfied with a mere $220 million in additional spending for new programs. It is, therefore, likely that the true costs of the ASAP proposal would approach the highest range of its own estimates. Consequently, Probst's $4.86 billion figure for the costs of repealing pre-1987 liability (which does not include the cost of the new programs proposed by ASAP) must be increased by $650 million for a grand total of $5.51 billion annually. If a 1986 cutoff date is used instead of a 1987 date, this amount might be somewhat less, but nevertheless is substantially higher than ASAP's most favorable cost estimates.
The tax system that supports Superfund raised approximately $1.46 billion in 1993. Approximately $560 million of this amount was derived from the tax on crude oil, $260 million was derived from the taxes on chemical feedstocks and derivatives, and $630 million was derived from the broad-based corporate tax. So ASAP is correct to project $800 million in revenues from the continuation of oil and chemical taxes — in fact, available figures indicate that approximately $30 million more will be raised from such sources. The ASAP projection that a doubling of the broad-based corporate tax will yield $1.35 billion is also accurate; available figures indicate only a minor potential shortfall from ASAP's projections if the tax was increased in that fashion.

The Smith/Zeliff legislation eliminates liability for response costs and natural resource damages arising out of actions taken before December 11, 1980, unless such actions were "contrary to law" when they occurred. This formulation is very similar to the ASAP proposal, although the cutoff date used is six years earlier. According to a fact sheet prepared by Smith and Zeliff and issued with their legislation, the adoption of a 1980 cutoff date for the repeal of liability results in relatively modest changes to the current liability system because it covers only 176 of approximately 1,100 private NPL sites. This assertion is based on "EPA reports that there are 176 sites which have waste that was dumped prior to 1980." As discussed further below, information compiled from EPA files by RFF belies this assertion and indicates that a far higher number of sites are potentially affected by the Smith/Zeliff approach to liability repeal.

The Smith/Zeliff legislation would fund the program for five more years by extending oil and chemical feedstock taxes at current levels, continuing the $250 million authorization for expenditures from general revenues, and increasing Superfund's broad-based corporate tax to 0.24 percent, thus doubling that tax. The legislation would impose a new "fee" on insurance companies, but the amount and type of assessment is not specified. The legislation does not contain an estimate of the revenues that it plans to collect from either source, and the written description of the legislation provided by Senator Smith and Representative Zeliff does not contain either intended funding-level figures or estimates of the price tag of a December 11, 1980, cutoff date.

Once again, the best independent analysis of the potential cost of the Smith/Zeliff proposal is Probst's House subcommittee testimony, which estimated that a 1981
The Reauthorization of Superfund: The Public Works Alternative

cutoff date would necessitate doubling trust fund revenues to an annual total of approximately $3.8 billion. Probst's analysis disputes the Smith/Zeliff projections that only 176 sites of some 1,100 nonfederal sites would be affected by a 1981 cutoff date:

According to our database, 55% of sites for which information was provided, ceased their waste disposal operations before 1981. According to EPA, at the remaining sites, approximately 50% of the wastes were deposited before 1981. Thus, we assign 77.5% of site costs to the 'pre-1981' category.

If we take the Smith/Zeliff proposal at its word that the primary method for financing the necessary increase in federal funding should be a broad-based corporate tax, and we use Probst's figures for the total funding level that would be necessary — $3.8 billion — and we assume that all other tax and general revenue contributions would remain the same — these sources produced a little over $1 billion in 1993 — then a total of $2.8 billion must be raised from the broad-based corporate tax. Accordingly, the Smith/Zeliff proposal would require a four and a half-fold increase in the current broad-based tax rate.

Given the current climate in Washington, it is virtually unthinkable that a broad coalition of American industry, much less a majority of members of Congress, would endorse tax increases of the magnitude suggested by the above analysis, especially given the uncertain benefits that a repeal of retroactive liability would confer under either proposal. The collapse of health care reform legislation in the 103d Congress was due in no small measure to the conviction of Congress that new taxes were a political impossibility, and this conviction has turned into irrefutable dogma in the wake of the 1994 mid-term election. The profound political problems with this aspect of the two proposals suggests that their proponents fully expect the funding levels they have proposed to be slashed if and when the proposals begin to move through Congress, a result that could cause a drastic scaling back of both the pace and quality of the cleanup program.

Contractor Waste, Fraud, and Abuse

Apart from the issue of what the ASAP and Smith/Zeliff proposals will really cost is the equally compelling question of how much money will be wasted. Both proposals would magnify EPA's chronic inability to keep a rein on its contractors, and their proponents have yet to develop a credible mechanism for controlling this significant weakness of a public works approach.

A number of independent audits have condemned EPA's administration of Superfund contracts on the grounds that costs are not controlled, contracts are
not bid competitively, and cleanup ends up orders of magnitude more expensive than it should.66 A major reason these problems are so severe is the high rate of turnover in the staff responsible for contractor oversight, which results from EPA's inability to compete with private-sector salaries.67

Perhaps the greatest source of cost overruns is the Agency's use of "cost reimbursable" contracts, which compensate the contractor for whatever it spends on the work and are, therefore, especially vulnerable to abuse in the absence of rigorous oversight. In 1991, the General Accounting Office (GAO) concluded that EPA used independent cost estimates — the main method for checking the reasonableness of a contractor's claimed costs — in only a minority of cases.68 EPA has also had great difficulties in controlling contractor demands for open-ended indemnification from the federal government, which are ostensibly justified by the hazardous nature of cleanup work, and in eliminating blatant contractor conflicts of interests, which arise because cleanup firms typically work for private-sector PRPs at the same time that they are working for the government.69

[25 ELR 10088]

ASAP

ASAP suggests three potential solutions to these admittedly serious problems, without giving the specifics of how any would be implemented.70 The first solution is to maintain EPA's authority under current law to order PRPs to assume responsibility for doing the cleanup, placing the burden on them to hire and oversee contractors, but promising to reimburse them for their costs under the Superfund. Staying enmeshed with the sites would obviously eliminate many of the advantages that a repeal of retroactive liability has for such entities. Even if this solution could be forced on the PRP community, however, it is questionable how much incentive PRPs would have to keep down costs they are not paying, except in the relatively attenuated context of paying taxes to support the program as a whole.

The second alternative identified by ASAP is for EPA to turn the job of supervising contracts over to another, unnamed federal agency with more contracting, but no cleanup, expertise. ASAP does not explain how responsibilities would be divided between the two federal entities, nor does it explain how efficiencies and cost savings would derive from overlaying two federal bureaucracies, one to audit numbers and the other to ensure the quality of the work. The possibility for contractors not only to become confused, but to confuse the bureaucrats under such a system are obvious.
The third alternative suggested by ASAP is delegation of the program to "competent" states, which allegedly would do the job far better than EPA. Again, no specific states are mentioned, and no criteria for their selection are specified. It is, therefore, impossible to evaluate how many states would receive such authority or what rules they would be required to meet to avoid duplicating the wasteful aspects of the current system at the state level.

**Smith/Zeliff**

The Smith/Zeliff legislation also provides for delegation of authority to implement the Superfund program to qualified states, with the specific criteria for delegation to be spelled out in EPA regulations, but with the operating assumption that a state shall be considered eligible for authorization if the Administrator determines that the State possesses the legal authority, technical capability, and resources necessary to conduct response actions and enforcement activities in a manner that is substantially consistent with this Act and the National Contingency Plan.71

States qualifying for delegation would be eligible to receive funding from the federal Superfund.72 The legislation would retain the 10 percent state matching share requirement for cleanup at privately owned sites, but would lower the matching share from 50 to 10 percent at sites owned or operated by a state or its political subdivision.73

The Smith/Zeliff legislation suffers from the same problems as the ASAP proposal. Without more information about what criteria will be used to select states, it is far from clear that the contractor problems in the current program would not be exacerbated by establishing potentially dozens of additional or alternative administrators of such projects.

Conclusion

Whatever its substantive merits, a public works approach to Superfund defies the widespread political conviction that Congress will not impose new taxes to pay for federal programs, especially given the political revolution wrought by the last election. Of course, if a critical mass of Superfund's stakeholders united in supporting new taxes, this political calculus could conceivably change. Given the other controversial attributes of the two most serious proposals advanced to date, it is difficult to discern how such a critical mass could develop, or even how the proposals could achieve anything but divided support from industry and vehement opposition from the environmental community.
As they search for ways to make the public works alternative more broadly acceptable, proponents will be caught in several, cross-cutting, and difficult dilemmas. If they scale back the repeal of retroactive liability, they will not need to raise taxes significantly, thus overcoming a major impediment to the political viability of the proposal. But if they scale back the scope of the liability repeal, industrial and other PRPs have far less to gain from the proposal.

Proponents could respond to this new problem by including very weak cleanup standards, but they would then risk all-out warfare with the environmental community, as well as the serious substantive problem that cleanups would fail to eliminate the long-term health and environmental risks posed by the sites. Alternatively, proponents could attempt to placate industry by broadening the repeal of liability but keeping funding levels low, using claimed savings in transaction costs and other accounting gimmicks to justify the shortfalls. But they would then risk the criticism that they were starving the fund and abandoning the program. And there are Superfund sites in virtually every congressional district.

The advent of the 104th Congress will mark the most profound changes in the Washington political structure in close to half a century. Perhaps this fundamental realignment will resurrect the public works alternative despite the firm rejection of such proposals throughout the last Congress. If it does, the irony will not be lost on anyone now active in the debate: The Congress that ostensibly stands for the principle of less government, no new taxes, and private responsibility will have made a major exception for the cleanup of toxic waste.

2. See H.R. 4916, 103d Cong., 2d Sess. (1994); S. 1834, 103d Cong., 2d Sess. (1994). The legislation, which was supported by a broad spectrum of Superfund stakeholders, as well as the Clinton Administration, was approved by wide margins by the three key committees in the House (Energy and Commerce, Public Works and Transportation, and Ways and Means) and the two key committees in the Senate (Environment and Public Works, and Finance), but never made it to the floor of either body. For a description of how the consensus was formulated and the key compromises contained in the legislation, see Rena I. Steinzor, The Reauthorization of Superfund: Can the Deal of the Century Be Saved?, 25 ELR 10016 (Jan. 1995).
4. The House Energy and Commerce Committee never considered an amendment to repeal retroactive liability and adopt a public works approach, and reported the bill by a unanimous vote of 44 to 0. See *Momentum for Reforming Law Continues; House Committee Unanimously Approves Bill*, 25 Env't Rep. (BNA) 117 (May 20, 1994). The Senate Environment and Public Works Committee and the House Public Works and Transportation Committee considered amendments to eliminate retroactive liability; the Senate Committee rejected the amendment by a margin of 12 to 5 and the House Committee rejected it by a margin of 42 to 20. See also Senate Committee Approves Reform Bill; National Risk Level Set in Legislation, 25 Env't Rep. (BNA) 619 (Aug. 5, 1994); Second House Committee Approves Legislation; Only Ways and Means Left Before Floor Action, 25 Env't Rep. (BNA) 620 (Aug. 5, 1994).

5. The forerunner of the ASAP approach was a proposal circulated by the insurance industry midway through the 1983-1986 reauthorization debate and called the "Spruce Goose" by congressional staff because, like Howard Hughes' plane of the same name, it would not fly. (Drafts of this proposal are on file with the author.) The immediate predecessor of the ASAP proposal is a very similar, although more general, plan known as the "National Environmental Trust Fund," developed by several insurance companies, including the American International Group, from about 1990 onward. See *The Administration of the Federal Superfund Program: Hearings Before the Subcomm. on Investigations and Oversight of the House Comm. on Public Works and Transportation*, 102d Cong., 1st Sess. (1991) (statement of Jan Edelstein, Special Assistant to the Chairman, AIG).

6. Benjamin Chavis et al. *Perspective on the Superfund: Bring Fair Play to Toxic Cleanup*, L.A. TIMES, Feb. 9, 1994, at B7. Denny's, a national restaurant chain, was sued for violating federal civil rights laws but settled the cases against it, pledging to improve its treatment of minority customers. See Howard Kohn, *Service With a Sneer*, N.Y. TIMES, Nov. 6, 1994, § 6 (Magazine), at 43.

7. PRP is the term of art that refers to those held liable under CERCLA §§ 106 or 107. 42 U.S.C. §§ 9606, 9607, ELR STAT. CERCLA §§ 106, 107 (authorizing unilateral cleanup orders and the recovery of response costs).

8. By far the most detailed blueprint for the ASAP proposal was presented in a collection of papers released on May 23, 1994. ASAP's Concerns With the Administration's Superfund Bill (H.R. 3800, S. 1834) (May 23, 1994) (copy on file with the author) [hereinafter ASAP Papers].


10. It is not clear what effect Dr. Chavis' dismissal as the NAACP's executive director will have on the organization's continued involvement in the Superfund debate. See Marianne Lavelle, *Greens and Companies Lose Leader, Did NAACP's Ben Chavis Switch Sides, or Work to Bring Opponents Together?*, NATL L.J., Sept. 5, 1994, at A1.


12. See H.R. 4161, 103d Cong., 2d Sess. (1994); S. 1994, 103d Cong., 2d Sess. (1994). The Smith/Zeliff legislation won cautious praise from Dr. Chavis despite its omission of the affirmative programs supported by the NAACP:

   In many ways the Smith-Zeliff bill is responding to some of the same practical imperatives which I feel. Their bill grapples directly and honestly with Superfund's debilitating and wasteful approach to financing, and dares to address head-on Superfund's Achilles' heel — retroactive liability. . . . Here are two Republicans, supported by many others, who are not afraid to say that increasing business taxes to fund cleanup is a far more efficient way to protect the public than the law we have today — and it is better for business.


14. See Details of the Eight Point Plan, ASAP Papers, supra note 8, at 8-9.

15. See Details of the Eight Point Plan, ASAP Papers, supra note 8, at 8-9. The acronym ARARs refers to the provision in current law that "applicable, relevant, and appropriate" requirements from other environmental laws and programs must be considered in the selection of Superfund remedial actions. 42 U.S.C. § 9622, ELR STAT. CERCLA § 122.

16. ASAP Papers, supra note 8, at 7 (emphasis added).

17. ASAP Papers, supra note 8, at 12.

18. ASAP Papers, supra note 8, at 12, 13.
19. ASAP Papers, supra note 8, at 13.
20. ASAP Papers, supra note 8, at 2, 3.
21. ASAP Papers, supra note 8, at 7.
22. ASAP Papers, supra note 8, at 14, 15.
27. See 40 C.F.R. pt. 300, app. A (setting forth the Hazard Ranking System used by EPA to determine whether sites qualify for inclusion on the NPL).
31. See 42 U.S.C. § 9622(a), ELR STAT. CERCLA § 122(a).
39. ASAP Papers, supra note 8, at 10.
40. Spending Assumptions and Explanation, ASAP Papers, supra note 8.
43. See H.R. 4161, 103d Cong., 2d Sess. §§ 103 (innocent landowners), 106 (lenders, fiduciaries, and grantors of conservation easements), 111 (site redevelopers), and 112 (response action contractors) (1994); S. 1994, 103d Cong., 2d Sess. §§ 103 (innocent landowners), 106 (lenders, fiduciaries, and grantors of conservation easements), 111 (site redevelopers), and 112 (response action contractors) (1994).
47. KATHERINE PROBST & PAUL PORTNEY, ASSIGNING LIABILITY FOR SUPERFUND CLEANUPS: AN ANALYSIS OF POLICY OPTIONS (1992).
48. Id. at 36.
49. Estimates of Superfund NPL Spending: Today and Under the Proposal, ASAP Papers, supra note 8; Spending Assumptions and Explanation, ASAP Papers, supra note 8.
50. Estimates of Where the Money Comes From: Today and Under the Proposal, ASAP Papers, supra note 8, attachment B; Where the Money Comes From: Assumptions and Explanation, ASAP Papers, supra note 8.
Financing Option, ASAP Papers, supra note 8, attachment C (accompanied by the note "The following describes one acceptable approach to financing the Superfund program").


53. Probst Testimony, supra note 52, at 17.

54. Probst Testimony, supra note 52, at 4.

55. Probst Testimony, supra note 52, at 4.


57. Id. The memorandum that David Gibbons prepared quoted Treasury Department figures as projecting the following collection rates in 1994 and 1995:

<table>
<thead>
<tr>
<th></th>
<th>1994</th>
<th>1995</th>
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<tbody>
<tr>
<td>Oil</td>
<td>545</td>
<td>550</td>
</tr>
<tr>
<td>Chemical</td>
<td>270</td>
<td>280</td>
</tr>
<tr>
<td>Chemical Derivatives</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Corp EI Tax</td>
<td>620</td>
<td>660</td>
</tr>
</tbody>
</table>

Id. Because these variations are relatively minor in the context of a multibillion dollar fund, they will not be factored into this Dialogue's discussion of projected tax increases.


59. This fact sheet was distributed in conjunction with the legislation. See The Comprehensive Superfund Improvement Act of 1994, Introduced by Congressman Bill Zeliff and Senator Bob Smith at 1 (undated) (file on copy with the author).

60. Id.

61. See infra note 65 and accompanying text.


64. Probst Testimony, supra note 52, at 4.

65. Probst Testimony, supra note 52, at 16.

67. A 1988 report by GAO found that turnover was as high as 25 percent over the life of their (GAO's) study, and each site had an average of 2.3 remedial project managers assigned over the life of the project. GAO, SUPERFUND CONTRACTS, supra, note 66 at 39.

68. The GAO found that regional staff had developed independent estimates for only 4 of the 30 remedial studies reviewed. Staff said they were not preparing independent government estimates because they lacked experience, knowledge, and adequate cost databases. However, when cost estimates were prepared, they were effective in reducing contractor costs. SUPERFUND: EPA HAS NOT CORRECTED, supra note 66, at 23.


70. Details of the Eight Point Plan, ASAP Papers, supra note 8, at 11.


