Testimony of Dr. J. Winston Porter Subcommittee on Superfund, Toxics and Environmental Health Senate Committee on Environment and Public Works June 22, 2010

Mr. Chairman, my name is J. Winston Porter, and I am president of the Waste Policy Center in Leesburg, Virginia. The WPC is an independent research and consulting organization which deals with management, policy, and technical issues in the areas of solid and hazardous waste management, as well as other environmental matters. From 1985 to 1989, I was the EPA's Assistant Administrator for Solid Wastes and Emergency Response.

It is a pleasure to be here today to provide testimony on EPA's progress in the cleaning up of Superfund sites. Specifically, I will make a number of recommendations to improve the pace of these remedial activities.

In my testimony I will draw on over 20 years of Superfund experience, including management of the EPA program as well as consulting activities with various federal agencies, states and private parties. My professional background also includes the fields of chemical engineering and project management. I will start with a brief background statement and key recommendations, and then provide more detail on Superfund's study, remedy selection, and remedy construction phases in relation to improving the pace of the cleanup program.

Background and Recommendations

Briefly, the current status of EPA's Superfund program is that about two-thirds of the 1,500 national priority list sites have reached the construction completion (remedy installed) phase, about 370 sites are in the remedy design or construction phases, and approximately 120 sites are in the study phase.

In addition, many thousands of "emergency removals" have been conducted at Superfund sites in order to directly and cost effectively deal with obvious problem areas. This program has been perhaps Superfund's biggest success story.

In addition to the EPA, both the Departments of Energy and Defense have major Superfund-related programs underway. The DOE work primarily involves a few dozen very large facilities, most of which have been components of the nuclear weapons program. The DOD sites are much more numerous, although usually less complex, and include both Superfund and base closure activities. So, a large amount of work is underway or has been completed by dedicated federal and state personnel as well as potentially responsible parties (PRPs) and various private contractors. For the remaining work it is important to improve program efficiency, as site study and remedial activities often take too long and cost too much.

In order to complete the remaining Superfund sites, the following **recommendations** are made to improve program efficiencies:

- 1. The focus of the Superfund program should increasingly be on the completion of existing sites. The various administrative and support services should be reduced as sites are completed in order to provide more funding for site completion work.
- 2. Consideration should be given to designation of a senior member of the assistant administrator's office to oversee and promote site completions.
- 3. Completion dates should be set for all current study and cleanup work. A "culture of completion" should replace the current "culture of deliverables." Program reports and other paperwork should be streamlined.
- 4. Some Superfund sites have been completed in a timely and cost effective manner. It is suggested that a sampling of such sites be identified and used to inform the timely completion of other sites.

Perhaps the most dramatic use of target setting has been the DOE Rocky Flats Closure Project, near Denver. For this site the "completion contractor," Kaiser-Hill, and the DOE agreed upon a 2005 target date for all study and remedy implementation work to be completed. If successful, the contractor was to receive a completion bonus. Not only was the project completed on time, but billions of dollars and many decades of time were saved. This work, of course, required good cooperation among the DOE, EPA, the State of Colorado, local stakeholders, and the contractor. The firm completion target date greatly focused this cooperation.

I will now provide more detailed comments or recommendations on the three major Superfund components, study, remedy selection, and construction phases.

The Study Phase

While the study projects related to Superfund sites are a decreasing part of the overall program, such activities are still very important to overall program success. Superfund projects usually begin with a "remedial investigation/feasibility study" (RI/FS). This complex study process is described in some detail in Superfund's primary regulation – the National Contingency Plan.

Very briefly, the RI portion calls for characterization of the site in terms of its natural features, as well as the amount and location of contamination and likely risks of such contamination to public health and the environment. The FS part involves identification of alternative remedial actions, and then comparison of such alternatives against a set of nine remedy selection criteria.

Based on the RI/FS process, as well as substantial stakeholder input, EPA then selects a remedy for the site through a "record of decision" (ROD) process.

In general, the RI/FS process has become steadily more complex and lengthy over the years, for almost all types of sites. My recommendations for conducting faster, less costly, and more technically sound RI/FSs are as follows:

1. Most importantly, timeframes for completing the study phase should be agreed to by the EPA and other key participants, such as States and PRPs.

Unfortunately, at many sites the study work simply meanders around for many years without much focus on alternative remedies, leading to wasted time and money, and, in some cases, an unimaginative or non-cost-effective remedy selection. Frankly, part of this lengthy process has to do with the fact that Superfund has become a lucrative source of work for various consultants, lawyers, and other participants. All of these specialists are needed, but their work needs to be more directed toward the timely selection of a sound site remedy rather than complex and lengthy work processes and paperwork.

Stated differently, there is often little sense of urgency in completing the study phase due, in part, to the lack of a senior "champion(s)" to complete the work. This is, or course, very frustrating to the communities involved. I would like to see such "completion champions" developed in both the governmental and private sectors at Superfund sites.

Some very complex federal and private sites will require longer study periods, but for most sites about 2-3 years should be adequate to produce a sound RI/FS.

To improve matters, early in the RI/FS process the EPA, PRPs, and other relevant organizations, should work together to set a clear goal to complete the study activities. This end date can be modified if necessary, but it is important for all to understand that, like almost every other type of engineering project, schedule (and budget) are key factors and should be adhered to.

2. When the RI/FS process begins one of the first orders of business should be to use experienced staff and key stakeholders to quickly identify about 4-7 major remedial action alternatives.

During this phase use should be made of EPA's list of "presumptive remedies" for many types of problems, as well as experience gained at similar Superfund sites.

The selected set of alternatives can always be modified during the study phase, but the current process which often involves "taking data" for many years before detailed focus on remedial options often leads to overly costly information, much of which may not be needed. Also, since the data collection is often not focused on comparing alternative remedies, the key information to compare such alternatives is sometimes missing.

An iterative approach should be used where information collection and analysis of remedial alternatives work cooperatively to achieve sound comparisons of options, leading to good remedy selections.

Even more importantly, the identification of key options early in the study process allows the decision-makers and stakeholders to begin their dialogue on non-technical factors which are contained in the remedy selection criteria. These include such items as costeffectiveness, implementability, and state and community acceptance. Many times these types of factors are at least as important as the strictly technical matters, such as very precise measurement of numerous contaminants, many of which are present at near-zero levels.

3. Significantly streamline the process for developing the myriad of deliverables at Superfund sites.

While certain documents are clearly needed to guide the RI/FS activities, the long, tedious process of developing complex draft and final work plans, for example, should be expedited. This is also true of dozens of other "deliverables" which take so much time at Superfund sites, many of which should be quite standard by now. It might be helpful to revisit the need, or at least the complexity, of such deliverables.

There are several perverse effects which have led to such lengthy periods for document development and review. One has to do with the fact that Superfund is about the only federal environmental program where responsible parties have to pay for additional oversight beyond that which salaried regulators normally provide. Thus, if a group of PRPs are forced to give EPA, say, \$ 3-5 million for oversight, then EPA can retain contractors to provide hundreds of pages of "comments" on such items as the aforementioned work plans. So, we now have dueling contractors battling over many pages of detailed text, before work can even begin.

One near term answer would be for review periods and oversight dollars to be reduced substantially, so participants can focus more on results than elaborate processes. PRPs should usually be encouraged to conduct the RI/FSs themselves with their own contractors and under EPA's overall supervision.

While this concept has been largely accepted and successfully promoted by the EPA, more could be done to encourage PRPs to do the study work, particularly where PRPs would commit to shorter timeframes than EPA often takes for its own studies.

A key aspect of PRP-conducted studies has to do with selection of appropriate consulting firms to conduct the necessary RI/FS activities. Such contractors have a difficult role in that they need to be responsive to their client, the PRPs, but must also provide the objective and professional work needed by EPA to allow selection of a sound and cost-effective remedy for the site in question.

The key is for the EPA, the relevant State, and the PRPs and their consultants to develop a cooperative and results-oriented relationship for the site work.

The Selection of Remedy Phase

The RI/FS process discussed above presents the decision-maker with detailed comparisons of alternative remedial actions, from which this person must select a remedy, present it to the public for comment and make a final determination. The selection of protective, cost-effective remedies is, of course, a key to the overall success of the Superfund program. My suggestions in this area are as follows:

1. The decision-maker should be a very senior EPA official who can oversee all of the considerations which go into remedy selection. As noted earlier, technical factors are very important in this process, but non-technical factors are also key. For example, if there is very strong community opposition to a particular remedial action, or if a remedial option is not cost-effective, such factors must be considered by the decision-maker.

During my tenure as an EPA assistant administrator I made a number of ROD decisions, mainly at "nationally significant sites." Most decisions I delegated to the ten EPA regional administrators (RAs). However, over the years the ROD decision responsibility has, in most cases, been delegated further down the line in the EPA regions.

My own view is that the RA should usually be the decision-maker in this important process since he or she is the one who can speak for the region and has the position and stature to consider all aspects of the problem, while "pushing" the staff to provide the necessary information to complete remedy selection expeditiously.

2. The role of expected land use should be an important factor in selecting a remedy.

While all remedies should be protective, it does not make much sense to demand that a cleanup be sufficient for, say, a children's daycare center, when the site is slated for use as a golf course, or a factory, or a wildlife preserve. All of these uses have their own requirements, so we do not need a one-size-fits-all approach to waste sites. The goal should be for a site to always be protective, so the remedial action may need to be modified at a later date if the site use changes significantly.

During Superfund's history one of the better examples of the role of land use in remedy selection had to do with the DOD's Rocky Mountain Arsenal in Colorado. For this site,

the DOD decided ultimately that the land use would be for a wildlife refuge, not residential housing. Once this decision was made the DOD, Shell Oil, EPA, and the state and local stakeholders worked together to select the remedy and move quickly into the implementation phase, and a important wildlife refuge is the result.

Another DOD example may also be instructive with respect to the land use issue. This has to do with the DOD's Superfund-related remediation sites versus those conducted under the base closure program. Simply stated, the base closure cleanups, including the selection of remedy, seem to proceed much faster than those related to Superfund. One of the reasons, I believe, has to do with the fact that local communities and others are usually highly motivated to finish base closure cleanups in order to bring the affected land into productive use. The same time pressure often does not exist with Superfund remedial activities.

The Construction Phase

As noted earlier, the major activity these days has to do with the construction phase at Superfund sites. About 370 sites are in the phase where the selected remedy is being either designed or constructed. Currently, this is also the most controversial phase in that EPA may not have sufficient funds to expeditiously complete all of the construction work now planned.

This is particularly true for so-called fund-financed sites where EPA must install the remedy itself as there are insufficient willing and able PRPs to conduct this work at some sites.

The following are my recommendations on these construction-phase issues:

1. The roughly \$1.2 billion dollars which is annually appropriated to EPA by Congress should be looked at very carefully by EPA senior management to ensure that the highest priority is given to protecting human health and the environment by ensuring that Superfund sites are completed.

2. If Congress is satisfied that EPA has done all it can do to squeeze out funding for as many construction sites as possible, then it might consider a supplemental appropriation to EPA to focus on additional construction activities.

3. The EPA might selectively revisit the ROD decisions made at selected sites to see if some savings can be made based on new information or technology.

4. Although I suspect that this is already being done, that portion of the site which may provide actual, near term risk to the community should receive very high priority for funding.

5. While aiming at the highest risks is always the most important priority, I personally believe that where sites can be finished for modest sums of money, such funding should be considered, as there are usually site "carrying charges" which can then be reduced.

6. The EPA and others should be creative in finding non-federal funds for completing sites. In some cases, local developers or others may be so interested in having access to a completed site that they may be interested in helping financially. This type of financial driver has, of course, been instrumental in dealing with brownfields sites, which can often be very valuable when cleanup measures are completed.

7. Other creative measures should be pursued in the future to minimize costs and to develop more creative financing. A good example is the joint EPA and Army Corps of Engineers eight pilot programs referred to as the "urban rivers restoration initiative." In this program the EPA and the Corps, along with state and other agencies, work together to achieve a better and more cost-effective restoration program than by using Superfund alone.

8. Finally, it was mentioned earlier in this testimony that the emergency removal program has been one of Superfund's major successes. This program can deal with obvious contamination problems anytime during the Superfund process, with much less process costs than the remediation program. Given, this program's success, Congress might consider allowing EPA to spend more than the current limit on individual removal actions.

Implicit in all the above is the fact that I don't believe that the chemical and petroleum feedstock taxes should be renewed on Superfund. These taxes are unfair in that they target only two industries, which together account for much less than half of Superfund's contamination problems. Also, Superfund sites are a broad societal problem which has been created by many types of industries; local, state, and federal agencies; and even individuals.

Therefore, I believe the current process of requiring directly responsible parties at a site to fund the necessary work at that site is the best approach. For those sites, where responsible parties are not available to conduct the work general revenues are the most equitable approach, given the widely varied causes of contamination at such sites. EPA also has strong legal authorities to seek reimbursement from known responsible parties who are able, but not willing, to do the work in question.

Mr. Chairman, I hope my remarks will be helpful to Congress in dealing with this important program, and I will be happy to answer any questions which you might have.