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SUPERFUND AND ENVIRONMENTAL HEALTH
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Good morning Madame Chairman and Members of the Subcommittee. I am Susan Parker Bodine, Assistant Administrator of the U.S. Environmental Protection Agency's Office of Solid Waste and Emergency Response. Thank you for the opportunity to appear today to discuss the Superfund program: the significant progress that has been made, the challenges that remain, and what EPA is doing to address those challenges.

THE SUPERFUND PROGRAM

SUPERFUND PROGRESS

The Superfund program was established under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), which Congress passed in December 1980 to respond to concerns over Love Canal and other hazardous waste sites.

As it approaches its 27th anniversary, the Superfund program has evolved into a program that is very successful in protecting human health and the environment. Through FY 2007, remedy construction was complete at 1,030 sites. In other words, two-thirds of all sites listed on the National Priorities List (NPL) have had cleanup construction completed and of the remaining sites not yet completed, the majority of sites

have cleanup work underway. In addition, EPA has conducted more than 9,400 removals at more than 6,900 sites to address immediate threats to human health and the environment. Further, EPA's long-term site management and post-construction efforts in FY 2007 resulted in an additional 64 sites being made ready for anticipated use. My testimony will discuss both the process by which the Superfund program protects human health and the environment, as well as how the Superfund program has evolved over the years.

Site Discovery, Screening, and Assessment

The Superfund cleanup process begins with site discovery or notification to EPA of possible releases of hazardous substances. Sites are discovered by various parties, including citizens, but the majority of sites are referred to EPA by State agencies. Once discovered, sites are pre-screened. A majority of sites are screened out at this point because they pose little or no potential threat to human health or the environment. The remaining sites are entered into the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS). Following preliminary assessment by EPA or its State, Tribal or other federal partners, more sites are screened out. After the site assessment process, only approximately 2% of sites remain to be considered for potential listing on the NPL. Through FY 2007, more than 47,000 sites have been assessed (both removal and remedial program assessments), including final remedial assessment decisions at 39,766 sites (395 in 2007, exceeding our goal of 350). In addition to site assessment conducted under the Superfund program, more than 1000 sites are assessed each year under EPA's Brownfields program. EPA assessed 2,139 sites

under the Brownfields program in 2006, the most recent year for which data are available.

Selection of Cleanup Program

At its inception, the Superfund program was often the only program available to clean up a toxic waste site. That is no longer true. Accordingly, following site assessment, EPA and its State and Tribal partners identify the most appropriate program to address sites that require cleanup. This may be a State voluntary or enforcement program; it may be the RCRA corrective action program; it may be the Superfund removal program; it may be the Superfund remedial program either as a Superfund Alternative Site, or by listing on the NPL. Moreover, sites that meet certain statutory criteria are eligible for Federal Brownfields assistance.

At sites that are addressed under the Superfund remedial program, the data developed from site assessment are used to evaluate a site under the Hazard Ranking System (HRS). Sites that score above 28.5 under this system are eligible for listing on the NPL. If listed on the NPL, a site becomes eligible for remedial funding. To date, EPA has listed 1,569 sites on the NPL. The vast majority of NPL sites (1,211) were listed before 1991. Fewer sites are considered by EPA for listing on the NPL than in the early days of the program. However, that result is not surprising given the development in the 1990s of other programs, particularly State programs, to address site cleanup and shows the success of environmental programs nationwide.

Currently, EPA proposes and finalizes sites on the NPL twice a year, generally in March and in September. In 2007, EPA finalized 12 sites on the NPL and proposed 17 sites.

Remedy Selection at NPL Sites

After listing, EPA or responsible parties (including other federal agencies) usually need to conduct further investigation to determine the most appropriate remedy for the site (called the remedial investigation/feasibility study). Once a remedy has been selected, EPA or responsible parties with EPA oversight then design the remedial action.

Remedy selection also has evolved over the years. In 1995, EPA issued a policy on how the Agency considers reasonably anticipated uses of the land when selecting a remedy. In implementing this policy, EPA works with the community, property owners, and local governments to identify what the reasonably anticipated use of the property may be. EPA also may provide funds for community involvement in the remedy selection process through Technical Assistance Grants.

EPA's community involvement programs help make the community valuable participants in the remedy selection process. By listening to the community's needs and concerns, EPA often is able to tailor remedies to address them. For example, at the MacAlloy Superfund site in North Charleston, South Carolina, a residential community was located next to the industrial facilities that were being remediated. A developer was interested in redeveloping the site. To help preserve the community, EPA worked with the responsible party and the developer on an additional parcel of property that was not adjacent to the community, relocating industry away from an existing neighborhood.

Involvement in the remedy selection process also helps the community understand the trade-offs associated with different remedy options and the basis for remedy decisions. For example, at the Department of Energy's Feed Materials Production Center in Fernald, Ohio, the community was originally reluctant to support any remedy that allowed waste to be left in place. However, by creating a Fernald Citizens Advisory Board that was fully engaged in the remedy decision process, the community came to accept and strongly support the selected remedy, which pursued a "balanced approach," allowing low-concentration materials to be contained in an on-site disposal facility, thereby reducing both the time and cost of cleanup.

To ensure that remedies are cost-effective and are employing the most recent technologies, in 1996, EPA assembled a group of experts from both Headquarters and Regional offices to review the technical merits of high cost remedies. Currently, the Remedy Review Board reviews all remedies expected to have costs above $25 million. This review normally takes place before a remedy is proposed. After a remedy is proposed and public comment is solicited, the remedy is documented in a Record of Decision (ROD).

EPA has learned a great deal about how to clean up contaminated sites over the last 27 years. Beginning in 1996, EPA established a policy to improve cleanup effectiveness by reviewing earlier remedies. Through 2006, EPA has updated more than 700 remedies, improving both remedy effectiveness and reducing cost.

In particular, EPA has learned a great deal about how to address groundwater contamination. Originally, EPA installed groundwater pumping and treatment operations

at nearly every groundwater contamination site. However, over time, the Agency learned that pumping and treating was not always needed and that monitored natural attenuation also could achieve groundwater restoration goals. EPA clarified its policy on monitored natural attenuation in 1999. This policy clarification resolved remedy issues at a number of sites and allowed 42 sites to be considered construction complete between 1999 and 2000. EPA also realized that already installed groundwater pumping and treating operations were not always operating as expected. Beginning in 2000, EPA began focusing on optimizing groundwater remedies. In some cases, optimization involves adding or moving extraction wells to more effectively capture the contaminated plume. In other cases, optimization involves turning off a pumping and treatment operation because the contamination is naturally attenuating. EPA has optimized more than 50 Superfund-financed groundwater remedies and anticipates optimizing at least four more in 2008.

Remedy Construction

Once a remedy design is complete, EPA or the responsible parties with EPA oversight construct the remedy. In 1993, to measure interim progress of the Superfund program, EPA began tracking the number of sites where all remedy construction was complete. Currently, remedy construction has been completed at 1030 sites (66 percent of the NPL), and is underway at an additional 318 sites (20 percent of the NPL). A site generally is considered construction complete when all the remedies at the site are operational and functional.

At some sites, remedy construction has been underway for a great deal of time. In fact, of the 535 sites on the NPL where remedy construction is not complete (an additional four sites were differed to other programs), 284 have been on the NPL since before 1991. This does not mean that EPA had been neglecting these sites. It simply means that some sites present a greater cleanup challenge than others, often due to the size or complexity of the sites.

In 1999, as part of a Resources for the Future study of the Superfund program, EPA characterized non-federal facility Superfund sites as either "mega-sites" or non-mega-sites. A mega-site is a site that is expected to cost over $50 million to remediate. EPA has added this term to its Superfund database, to help track the number of mega-sites. To date, 154 non-federal facility sites have been identified as actual or potential non-Federal facility "mega-sites." Of these, 26 achieved construction completion in the 1990s, 30 have achieved construction completion since 2000.

Sites owned by the Department of Defense or the Department of Energy also frequently present significant cleanup challenges. To date, there are 172 Federal Facility sites on the NPL. Of these, 22 achieved construction completion in the 1990s and 37 achieved construction completion since 2000.

Given the challenges posed by "mega-sites" and federal facilities, it is not surprising that remedy construction work remains at many of these sites. To date, of the sites that have all remedy construction completed, only 11% were "mega-sites" or federal facilities. However, of the 535 NPL sites with construction work remaining, 39% are either "mega-sites" or Federal Facilities.

Addressing Immediate Risks

Although completing remedy construction at large, complex, sites may take many years, the first step at each site is to address immediate risks. This is done through the EPA Removal program. For example, EPA has provided alternative water supplies to more than 2 million people so they are not drinking or using contaminated water. To date, the Removal program has conducted more than 9,400 removals at more than 6,900 sites (including 413 removals in FY 2007). Of these, more than 2,400 have occurred at NPL sites. In fact, EPA has carried out removal actions at 56% of the sites on the NPL, including 142 removals at NPL sites not yet in the long-term construction phase. This means that 95 percent of NPL sites have had either removal or remedial cleanup work. For example, EPA did not wait to list the Omaha Lead site in Nebraska on the NPL before taking action to reduce the risk posed to residential communities. EPA started cleanup work in 1999 using Superfund Removal authorities. The site was listed on the NPL in 2003, and using an expedited interim remedy process, EPA has completed cleanups of more than 3,500 residential yards through the end of FY 2007. Similarly, in 1999, EPA began removal actions in Libby, Montana. The Libby site was listed in 2002, and a final remedy has not yet been selected. However, EPA has been and continues to be actively working in Libby to reduce asbestos exposure. To date, EPA has carried out removal activities at 951 properties in and around Libby and has removed more than 500,000 cubic yards of contaminated soil.

Post-Construction Completion Strategy

With so many sites now at the construction completion stage, the Superfund program also must focus attention and resources to address post-construction activities to

ensure that remedies remain protective over the long term and sites can be returned to productive use.

In October 2005, EPA published its Post Construction Completion Strategy. The strategy was developed to improve site operations and maintenance, remedy performance tracking, institutional control (IC) implementation and tracking, and reducing barriers to beneficial site reuse. Under this strategy, EPA is ensuring that 5-year reviews are completed and any discrepancies identified in the reviews are acted upon. EPA also is developing an Institutional Control Tracking System to document and make public the institutional controls that are needed to ensure long-term protectiveness. Site-specific information on ICs will be available on the EPA web site, including contacts to obtain additional information and a link to the IC instrument.

In FY 2007, the Superfund program adopted a new measure to capture site progress beyond the construction completion milestone: Site-Wide Ready for Anticipated Use. This measure tracks the number of NPL sites where the remedy is constructed (construction complete), cleanup goals for anticipated uses of the land have been met, and any necessary institutional controls are in place. EPA exceeded its FY 2007 goal of making 30 Superfund sites ready for anticipated use by achieving this milestone at 64 sites.

Enforcement

EPA also has been very successful in leveraging federal dollars to secure private party cleanups. EPA conducts searches for responsible parties throughout the response process and takes action to ensure cleanup work is conducted or paid for by those

responsible parties, rather than by EPA using appropriated dollars. Potentially responsible parties (PRPs) have performed work at approximately 70 percent of Superfund site cleanups.

Since 2001, EPA secured commitments (through FY 2006) from responsible parties to carry out cleanups and reimburse EPA for past costs worth nearly $6 billion. The cumulative value of private party cleanup commitments and cost recovery settlements (through FY 2006) is more than $25 billion. EPA's enforcement efforts have allowed the Agency to focus the Agency's appropriated funds on sites where responsible parties cannot be identified or are unable to pay for or conduct the cleanup.

Superfund enforcement also has evolved over the years. In the early years of the program, most cleanup work was carried out by EPA, using appropriated funding and then seeking cost recovery. To leverage federal funding and increase the number of sites being cleaned up, EPA adopted an "enforcement first" policy in 1991 to require PRPs to perform cleanups. As a result, more work is being done with responsible party resources up front, and EPA therefore needs to recover a smaller proportion of cleanup costs. PRP resources represent a greater proportion of cleanup than in the early years of the program. This includes work carried out by EPA using responsible party dollars, as well as work carried out by responsible parties themselves.

In the 1986 amendments to CERCLA, Congress added a provision which allows EPA to retain and use funds received in settlement with responsible parties in site-specific accounts. The principal and any interest earned by these "special accounts" may be used to fund response actions at the site where the settlement dollars were received.

When the Agency uses funds from a special account it allows the Agency to use its appropriated funding for cleanup at other sites were there are no viable or liable parties. To date, EPA has spent more than $1 billion from special accounts to fund cleanup actions and anticipates spending millions more to clean up sites where responsible parties have deposited funds for site-specific cleanups.

EPA's enforcement tools also have evolved into significant tools to advance revitalization of Superfund sites, including encouraging private sector cleanup and development. At the Many Diversified Interests ("MDI") site, a 36 acre former foundry facility listed on the NPL, EPA, working with the site's Bankruptcy Trustee, developed a proposed administrative settlement document which the Trustee published along with a request for bids to purchase the property. The effort to solicit bids for acquisition was successful, with the understanding that the winning bidder would undertake the cleanup remedy selected in EPA's Record of Decision (ROD), and, in return receive covenants not to sue for existing contamination. The site was purchased by a developer who agreed to perform the selected remedy. Today, the site is being cleaned up and its ultimate use will be development of a town house community.

Financial Management

EPA is undertaking a number of actions to ensure that Superfund resources are not expended on unnecessary activities and are available to carry out site cleanup work. For example, EPA has:

- Initiated a workforce analysis to determine if staff resources should be reallocated;
- Started benchmarking studies of EPA performance;

- Shared best practices among the EPA regions;
- Aggressively deobligated funds from old contracts, grants, cooperative agreements and interagency agreements, resulting in approximately $740 million in additional resources for the program through FY 2006;
- Utilized special account resources from PRP settlement agreements.

These efforts are, in part, a result of several studies, including an internal review of the Superfund program, known as the 120-Day Study, which identified opportunities for the Agency to put its resources to better use.

In addition, to help EPA manage its funding decisions in a risk-based manner, sites that are ready to begin construction and will be paid for using EPA's resources are subject to a rigorous prioritization process. EPA's National Risk-Based Priority Panel reviews new cleanup construction projects as they become ready for EPA funding. The panel prioritizes the projects based on three factors: protection of human health, protection from significant environmental threats, and potential threats based upon site conditions at the time of review. A number of factors are then used to weigh funding priorities among the sites including: human exposure risk, contaminant characteristics and stability, significant environmental risk, and program management considerations. The panel is composed of national EPA Superfund program experts from both regional and Headquarters offices. In FY 2007, EPA funded all new cleanup construction projects that were ready for construction funding.

Public Information

Over the last several years, EPA has greatly expanded the amount of information available to the general public regarding Superfund sites. For example, beginning in 2002, to more accurately reflect the environmental outcomes of the Superfund program, EPA began tracking the sites where a complete human exposure pathway to contaminants above levels of concern has been eliminated, as well as sites where migration of groundwater contamination has been controlled.

The list of sites where human exposure is not under control is dynamic. Over time, sites are removed and new sites are added, depending on changed site conditions or new information. The Superfund program has made it a priority to improve the quality of the data supporting this environmental indicator so that it can be used to prioritize and manage the program. EPA has posted a description of the exposure scenario on the Superfund Site Profiles web site, along with actions that are planned or underway to address the situation. This has been done to ensure that the public has access to current information regarding the human exposure status at each Superfund site that is listed as human exposure not under control. For each site where the Agency is still gathering data to make a human exposure decision (i.e., insufficient information to make a human exposure determination), EPA has posted on that site the reasons for the insufficient data determination, along with the actions planned or underway to gather the necessary data.

In addition to the exposure information described above, EPA has enhanced the availability of information regarding Superfund sites in the following ways:

- Extensive information about all Superfund sites is available in site profiles which are typically updated each month on EPA's web site;
- EPA's community involvement coordinators regularly communicate site information to community members who live near Superfund sites through public meetings, mailings, and published notices;
- On its Superfund web site, EPA posts Records of Decision (RODs) and other key decision documents [ROD Amendments, Explanation of Significant Differences (ESD)] for NPL sites. More than 3,300 Superfund program documents are currently available on the web site;
- EPA has added information from its Institutional Control Tracking System to Superfund site profiles. This information provides the public with the status of a site's institutional controls (IC), including whether an IC is needed and what (legal) mechanism(s) will be used to implement the IC;
- To reach an even broader audience, EPA has been working with data providers such as Microsoft, Environmental Systems Research Institute (ESRI), and Google to develop the necessary links to allow these companies to access EPA site information and overlay it on maps and other geospatial displays (such as Google Earth).

LAND REVITALIZATION

The land revitalization initiative, launched in April 2003, includes all of EPA's cleanup programs as well as partners at all levels of government and in the private and non-profit sectors. The goal of land revitalization is to restore our nation's contaminated land resources and enable America's communities to safely return these properties to

beneficial economic, ecological, and societal uses. EPA is ensuring that cleanup programs protect public health, welfare, and the environment and also that the anticipated future uses of these lands are fully considered in cleanup decisions.

EPA helps facilitate opportunities for integrating cleanup and reuse. Promoting community-driven site reuse planning and reuse is another way EPA can help to ensure protective and sustainable cleanups. EPA has supported privatization efforts recently undertaken at two Federal facilities on the NPL. At Department of Defense (DoD) Base Realignment and Closure (BRAC) sites, EPA recognizes that the privatization of the cleanup, where a developer or other organization rather than the military conducts the cleanup, can present an opportunity to integrate redevelopment planning with cleanup. The first such privatization occurred on August 27, 2007 at the McClellan Air Force Base, California. The second is expected to occur later this fall at Ft. Ord, California. Privatizing cleanups at closing military Superfund sites provides another option to Federal and state agencies and local communities to help maximize cleanup and redevelopment resources to help move properties back into productive reuse more quickly.

EMERGENCY RESPONSE

EPA's emergency response activities are another facet of the Superfund program. The Emergency Response program provides national leadership to prevent, prepare for, and respond to human health and environmental emergencies, including terrorist events. Through FEMA funding, EPA's Emergency Response program was actively involved in the response to the events of 9/11 and in the response to Hurricanes Katrina and Rita.

Although EPA was not involved in incidents of that magnitude this year, EPA's Emergency Response program was actively involved in responses and cleanups throughout the country, such as the tornado disaster in Greensburg, Kansas, and the Synthron Chemical plant explosion and fire in Morganton, North Carolina.

CONCLUSION

The Bush Administration is fully committed to Superfund's mission, protecting human health and the environment by cleaning up our Nation's worst toxic waste sites. The Superfund program has produced significant accomplishments and EPA is continuing its efforts to manage the program efficiently and effectively in order to protect human health and the environment, and provide opportunities for reuse and redevelopment to communities across the country.