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Chairman Shimkus, Ranking Member Tonko, and members of the subcommittee, I am Mathy Stanislaus, Assistant Administrator for EPA's Office of Land and Emergency Management. Thank you for the opportunity to appear today to discuss EPA's Superfund program's accomplishments and challenges.

THE SUPERFUND PROGRAM

The Superfund program uses a variety of tools to help protect human health and the environment. These tools include shorter-term removal actions to mitigate immediate threats to human health and the environment, and remedial actions, which address more complex and longer-term cleanup of hazardous waste sites.

State partnership is critical to Superfund cleanup efforts. The EPA responds to requests from states, tribes and communities to propose to add a site to the National Priorities List (or NPL). The NPL is EPA's list of priority sites with known or threatened releases of hazardous substances, pollutants or contaminants. Only NPL sites are eligible for remediation financed by the Superfund Trust Fund. The EPA requests state support to list sites on the NPL and coordinates with them to conduct early site assessments. In some cases, states may lead the

remedial action work with EPA oversight. The EPA uses congressionally appropriated resources to fund states through cooperative agreements to participate meaningfully in the Superfund process. For example, states are often funded to conduct site assessment work.

Removal/Emergency Response

Each year, approximately 30,000 emergencies involving the release or threatened release of oil and hazardous substances are reported in the United States. These emergencies range from small-scale spills to large events requiring prompt action and evacuation of nearby populations. The EPA coordinates and implements a wide range of activities to ensure that adequate and timely response measures are taken in communities affected by hazardous substances and oil releases, where state and local first responder capabilities have been exceeded, or where additional support is needed.

The EPA conducts time-critical and non-time-critical removal actions when necessary to protect human health and the environment by funding response actions directly or overseeing and enforcing actions conducted by potentially responsible parties (PRPs). Through shorter-term actions, the Superfund program controls exposure to hazardous substances so that human health is protected while long-term cleanup is underway. For example, where the EPA determines that existing water supplies are unsafe due to releases from contaminated sites, we provide alternative sources of drinking water. The EPA has provided more than 2.1 million people near or on Superfund NPL sites with alternative sources of drinking water.

In FY 2015, EPA's Superfund Removal and Emergency Response programs conducted or provided oversight for 278 emergency response and removal actions. To date, more than 11,000 emergency response and removal actions have been completed at both NPL sites and non-NPL sites to protect communities and reduce the immediate threat to human health and the environment.

Remedial Program

The Superfund Remedial program continues to address complex, high-priority, longer-term cleanups. These cleanups have positive impacts on the lives of millions of Americans in thousands of communities across the country. EPA analysis of the latest census data found that approximately 53 million people live within 3 miles of a Superfund NPL site or a Superfund alternative approach site; roughly 17 percent of the U.S. population, including 18 percent of all children in the U.S. under the age of five. This population is predominately minority and low income, and is less likely to have a high school education than the U.S. population as a whole. As a result, these communities often lack sufficient resources to address health and environmental concerns.

Sites that the EPA adds to the NPL represent the nation's most serious uncontrolled or abandoned hazardous waste sites. Contaminated sites reflect both legacy practices and more recent activity. The sites on the NPL vary in size, complexity and contamination. Sites on the NPL commonly include manufacturing facilities, landfills, processing facilities and mining sites. The EPA analysis of NPL site listings from FY 2010 to FY 2016 (112 sites) indicate that nearly 50 percent of those sites are related to manufacturing activities which include metal fabrication,

lumber and wood product preservation/treatment and metals and mineral processing. Through FY 2015, the EPA and its state and tribal partners completed final assessments at more than 42,000 contaminated sites. In addition, through FY 2015, the EPA has added 1,714 sites to the NPL.

At 68 percent (1,177) of the more than 1,700 NPL sites, construction of the cleanup remedy has been completed. All response actions have been completed at 391 sites (approximately 22 percent of the sites on the NPL), resulting in deletion from the NPL. The Superfund program continues its focus on controlling potential human exposure at NPL sites. In FY 2015, human exposure was brought under control at an additional 10 sites resulting in a cumulative total of 1,439 NPL sites where human exposure is under control. And groundwater migration was brought under control at an additional 15 sites resulting in a cumulative total of 1,138 NPL sites where contaminated groundwater migration is under control.

Superfund cleanups reduce adverse human health impacts, including those affecting infants. A National Bureau of Economic Research study entitled "Superfund Cleanups and Infant Health," shows that Superfund cleanups reduce congenital abnormalities in infants by as much as 25 percent for those living within 5,000 meters of a site.[1] Additionally, cleanups involving lead-contaminated soil have contributed to documented reductions in blood-lead levels in children. If left unaddressed, elevated blood-lead levels may result in irreversible neurological deficits, such as lowered intelligence and attention-related behavioral problems.

[1] Currie, Janet, Michael Greenstone, and Enrico Moretti. 2012. "Superfund Cleanups and Infant Health". *American Economic Review*, 101(3): 435-441

Cleanups also have significant economic benefits. A study by researchers at Duke University and the University of Pittsburgh analyzed census tract data and found that deletion of sites from the NPL after cleanup raises the value of owner-occupied housing within three miles of the site by 18.6 - 24.5 percent.[2] Property values also increased at the site listing and construction completion program milestones. Cleanups increase tax revenue for local communities and state governments, and help create jobs during and after cleanup. At more than 850 Superfund sites, EPA's engagement has enabled productive reuse. The EPA has data for 454 of these sites. At these 454 sites, 2015 data show approximately 3,900 businesses generating $29 billion in sales. These businesses employed more than 108,000 people who earned a combined income of $7.8 billion.[3]

The Universal Oil Products Chemical Division Superfund site located in East Rutherford, New Jersey is an example of how cleanup can lead to beneficial use of a Superfund site. Once home to a chemical and solvent recovery facility, the site now supports several shopping areas and a rail line extension. The rail extension, known as the Sports Line, connects the commuter rail line on site with nearby MetLife Stadium, home of the New York Giants and New York Jets, and the site of the 2014 Super Bowl. Public transportation ridership on the Sports Line saves about 170,000 vehicle miles traveled for each football game. Businesses on site support about 254 jobs and contribute more than $8 million in annual employment income to the local community.

[2] Gamper-Rabindran, Shanti and Christopher Timmons. 2013. "Does cleanup of hazardous waste sites raise housing values? Evidence of spatially localized benefits," Journal of Environmental Economics and Management 65(3): 345-360

[3] For more information on Redevelopment Economics and in depth case studies please use the link below. https://www.epa.gov/superfund-redevelopment-initiative/redevelopment-economics

There are many other examples of Superfund sites being returned to beneficial uses. The Plainwell Paper Mill is part of the regional Allied Paper Inc./Portage Creek/Kalamazoo River Superfund site in southwestern Michigan. Wastewater from paper mill operations, including operations at the 36-acre Plainwell Paper Mill property, resulted in the contamination of area soil and river sediments. By turning the mill property into a productive asset once again, the City of Plainwell hoped to revitalize the city's downtown, support local jobs and economic development, and increase property values and tax revenues. The city kicked off the project with a community-based reuse planning process that EPA sponsored. The City of Plainwell has created new interest in the city's downtown, supported local jobs and economic development, and increased area property values and tax revenues. Today, a private business and the City of Plainwell Public Safety Department employ 121 people on the site and contribute an estimated $6.3 million in annual employment income to the local community.

The NL Industries/Taracorp Lead Smelter Superfund site in Granite City, Illinois was a battery reclamation facility and secondary lead smelter. Lead contamination from the site moved throughout 100 square blocks in three cities and affected about 1,600 residences, including areas where contaminated battery chips were used to fill in low-lying areas. The EPA funded the cleanup of more than 700 properties. The site's potentially responsible parties cleaned up an additional 800 residences and dozens of driveways, alleys and parking lots. Today, seven businesses continue to occupy the main industrial portion of the site, employing 96 people and accounting for more than $17 million in sales revenues. An intermodal transportation terminal occupies a portion of the area affected by the site in Venice, Illinois.

The EPA also supports the cleanup and beneficial use of federal facility sites through its Superfund program oversight role. The Curtis Bay Coast Guard Yard in Baltimore, Maryland achieved the Construction Completion milestone in 2013. The EPA partnered with the Coast Guard and the State of Maryland to conduct an 11-year cleanup project which included excavating thousands of tons of contaminated soil and sediment while making use of innovative green practices. The cleanup contributes to the Chesapeake Bay restoration efforts and incorporates many sustainable manufacturing practices including creation of its own electricity from landfill gas at an on-site co-generation plant.

Throughout Superfund cleanup efforts, there is a commitment to involve communities and follow through on making a visible difference in communities. Transparency, access and public involvement are essential to meaningful and deliberate decision-making. The EPA helps communities effectively participate in EPA decision-making by providing technical assistance through our Technical Assistance Grants and Technical Assistance Services for Communities contract. Bringing together diverse groups of community members through forums such as the Community Advisory Group better informs our decisions and actions to protect Americans where they live, work, play, and learn.

We are paying particular attention to how the agency can improve its technical assistance processes. We recognize there are organizations outside of the EPA that provide independent technical assistance, and we are looking to expand opportunities for cooperation between the

EPA and colleges, universities, and nonprofits with the shared goal of assessing and addressing the unmet technical assistance needs of impacted communities.

As the Superfund program has evolved, the agency has looked for additional ways to assess remedial program progress and keep the public informed. To better measure long-term progress, the program adopted a Sitewide Ready for Anticipated Use measure. This measure tracks the number of NPL sites where construction is complete and all engineering and institutional controls are in place to ensure the remedy is protective for reasonably anticipated uses over the long-term. Those anticipated uses and needed controls are outlined in the site Record of Decision. Through FY 2015, the EPA determined 752 sites to be Sitewide Ready for Anticipated Use.

Leveraging Funds

The EPA is continuing its efforts to efficiently utilize every dollar and resource available to clean up contaminated sites and protect human health. In FY 2015, EPA's Superfund program obligated more than $443 million in appropriated funds, state cost-share contributions, and potentially responsible party settlement resources, to conduct cleanup construction, and post-construction work at Superfund sites.

The EPA has been very successful in leveraging federal enforcement dollars to secure private party cleanups. In FY 2015, the EPA secured commitments from potentially responsible parties (or PRPs) of approximately $2 billion to perform cleanups. In addition, PRPs committed to reimburse $512 million of EPA's past costs from Superfund site cleanup work, the largest cost

recovery amount in Superfund program history. The cumulative value of private party cleanup commitments and cost recovery settlements is more than $40 billion. The EPA's enforcement efforts have allowed the program to focus EPA's appropriated funds on sites where PRPs cannot be identified or are unable to pay for or perform the cleanup.

Further, a $5.1 billion settlement addressing fraudulent conveyance claims against Anadarko Petroleum Corporation and Kerr McGee associated with the Tronox bankruptcy resulted in the largest bankruptcy-related award EPA has secured for environmental claims and liabilities. Of the $5.1 billion, EPA was provided $1.6 billion to help address specifically identified contaminated sites around the country, with an additional $400 million provided for a multi-state response trust for cleanup work at EPA-led sites. In addition, approximately $985 million of the settlement funding was designated to cleanup roughly 50 mine sites on or near the Navajo Reservation in Arizona and New Mexico.

The EPA has also been particularly effective in leveraging its appropriated funding through the use of potentially responsible party settlements to establish site-specific special accounts. Through the end of FY 2015, the EPA has collected approximately $6.3 billion from potentially responsible parties and earned about $445 million in interest. Of this amount, the EPA has obligated or disbursed $3.3 billion for site-specific response actions. The EPA has multi-year plans to spend the $3.5 billion remaining for site-specific response actions consistent with the settlement agreements negotiated with the PRPs for those sites. By using these funds to conduct response work at contaminated sites with viable PRPs, the EPA can focus appropriated resources on sites where PRPs cannot be identified or are unable to pay for or perform the cleanup.

Federal Facilities

For more than 20 years, the EPA's Federal Facilities program has worked collaboratively with other federal departments and agencies to provide oversight specifically for NPL sites located on federally owned property to help ensure that CERCLA is implemented in a protective manner. There are 174 federal NPL sites, which accounts for 10% of all Superfund sites. Due to the size of these sites however, that 10% of total Superfund sites encompasses 42% of the total number of operable units that the Superfund program oversees.

In order to better demonstrate the incremental cleanup construction process that is underway nationally, the Superfund Federal Facilities Response program has begun targeting a percent construction complete measure specifically for federal Superfund NPL sites. This new measure is based on the average of three specific factors: 1) Operable Unit (OU) percent complete; 2) Total cleanup actions percent complete; and 3) Duration of cleanup actions percent complete (national cumulative). As of FY2015, the combined percent complete of federal facilities was 83%. As of FY2015, 372,913 acres of federal NPL land has been returned to beneficial use, which represents 78% of all Superfund site property.

The Federal Facilities office also maintains the Federal Agency Hazardous Waste Compliance Docket (Docket), which acts as an historical record of any federal property that has experienced a hazardous substance, pollutant, or contaminant release or that has been used for treatment, storage, or disposal of hazardous wastes. In the last several years, the Federal Facilities office has completed a review of 514 stalled sites that were on the Docket, and coordinated with its federal partners to identify what assessment work or cleanup work remained to be done at those

facilities. In addition, the office has been working more closely with federal land management agencies to update the Docket and to make sure that all agencies are sharing information about the assessment and cleanup work that is underway at Docket sites.

The Federal Facilities cleanup program has found creative ways to reuse national lands while continuing cleanup on other portions of the properties. In 2015, Congress established a new National Historical Park to highlight the significance of the Manhattan Project, including portions of the Hanford Site in Washington State. At Hanford, a number of historic buildings are included in the new park. Cleanup to support development of the park took 20 years. One of the historic buildings currently serves as a museum documenting the effort to develop a nuclear weapon to help end World War II. Cleanup activities in other areas of the broader Hanford site remain ongoing but this combination of cleanup and historical preservation allows the United States to fulfill its commitment to cleaning up the environment and allow public access to memorialize a significant era in the nation's history.

Since 2010, EPA's Federal Facilities office has had a 34% reduction in appropriated dollars and 27% reduction in FTE. Due to this significant reduction in funds, the Federal Facilities program has developed new approaches for sharing expertise and contract vehicles across the regions to manage the funds as effectively and efficiently as possible but challenges to meeting program responsibilities remain. If funding levels remain at recent appropriations levels, the Federal Facilities office will struggle to keep pace with milestones that have been previously agreed upon with the states and other federal agencies, delaying the restoration and reuse of vital and valuable property and resources.

SUPERFUND PROGRAM CHALLENGES AND ACTIONS TAKEN

While the Superfund program continues to make progress cleaning up hazardous waste sites, we still face numerous challenges. One such challenge is the Superfund Remedial Program's appropriated budget, which has declined from the FY 2011 enacted level of $605 million to $501 million in FY 2016. The decline in EPA's appropriated resources has resulted in a continued backlog of sites with unfunded new projects that are ready to start construction where other alternatives, such as PRPs conducting the work or special account resources, are not available for those projects. To help address some of the impact on new project starts, the FY 2017 President's budget requested an increase of $20 million for the Superfund Remedial Program.

There are still sites where the EPA has not identified a viable potentially responsible party, and there are many EPA-performed activities that are not otherwise reimbursed. For this reason, the FY 2017 budget supports reinstatement of the Superfund tax authority. The Superfund tax on petroleum, chemical feedstock and corporate environmental income expired in 1995. Reinstating the Superfund tax authority would provide a stable, dedicated source of revenue for the Superfund Trust Fund and restore the historic nexus whereby parties benefiting from the manufacture and sale of substances found in hazardous waste sites contribute to the cost of cleanup. The reinstated tax authority is estimated to generate a revenue level of approximately $1.8 billion in 2017 to more than $2.8 billion annually by 2026. Total tax revenue over the period 2017 to 2026 is predicted to be $25.4 billion. The revenues would be placed in the Superfund Trust Fund and would be available for appropriation from Congress to support the assessment and cleanup of the nation's highest risk sites within the Superfund program.

In addition to challenges associated with funding new start projects, the Superfund budget for federal facility oversight has been particularly hard hit, with a significant decrease in FY 2014. The enacted budget was 21 percent lower than the FY 2014 president's budget request. The decrease has created a challenge to EPA's NPL oversight activities and may create situations where agency technical approval of NPL site cleanup documents are delayed. A further budget challenge is related to the need to more effectively manage cleanup resources to address the largest and most complex sites that have come to demand an increasing proportion of EPA's Superfund resources.

To address these Superfund program challenges, the EPA is integrating programmatic improvements across all stages of the cleanup process. We are working to integrate and leverage the agency's land cleanup authorities to put previously contaminated sites back into productive use while protecting human health and the environment. The EPA is also improving our cleanup enforcement activities as a means to address the funding challenges that our program faces. By obtaining responsible party participation in conducting and/or financing cleanups, we preserve Superfund monies to address sites where there are no viable responsible parties.

Starting in FY 2011, the EPA began reporting on a Superfund NPL site cleanup performance measure called "remedial action project completions." Projects under this category represent specific discrete actions, such as a particular medium remediated (as in groundwater contamination), areas of a site remediated (as in discrete areas of contamination such as building demolition), or particular technologies employed (as in soil vapor extraction). By highlighting this more focused aspect of the cleanup process as a performance measure, the EPA can monitor

incremental progress and can provide communities with greater opportunity to evaluate and hold the agency accountable for specific work conducted in the field in addition to overall progress toward risk reduction and reuse at Superfund sites.

In FY 2012, EPA completed a comprehensive "National Strategy to Expand Optimization Practices from Site Assessment to Site Completion." This strategy institutes changes to Superfund remedial program business processes to take advantage of newer tools and strategies that promote more effective and efficient cleanups. It lays out several objectives to achieve verifiably protective site cleanups that are faster, cleaner, greener and cheaper using techniques such as site evaluation, construction and operation and maintenance throughout the site cleanup life cycle. The Strategy also capitalizes on the benefits of optimization through multiple processes, including work planning, communicating, training, implementing, measuring and cost accounting. As part of this strategy, the EPA expects its regional offices to systemically apply optimization concepts throughout all remedial pipeline phases as a normal business practice. For example, at the Pemaco Superfund site in Maywood, California, the EPA reduced annual monitoring costs from approximately $443,000 to $230,000 using groundwater remedy optimization strategies.

In FY 2013, the EPA undertook the Superfund Remedial Program Review as a follow on to the earlier Integrated Cleanup Initiative. The EPA also did this recognizing the need to continue to critically evaluate program resources and cleanup processes to minimize impacts brought on by budget constraints and workforce and technology changes. The Review's Action Plan was released in November 2013 outlining short and long-term cleanup and program management

activities. Since that time, the Groundwater Remedy Completion Strategy has been released and work on a new acquisition framework is underway. Most of the activities are already underway, including continued efforts in community engagement.

The EPA has also completed four pilot projects designed to evaluate alternative approaches to achieving site cleanups more efficiently. Under these pilot projects, the EPA explored creative, non-traditional approaches for managing site cleanups with exceptional results. The projects demonstrated business process innovations that are returning property to communities sooner, accelerating the potential for reuse and the creation of new jobs. In several instances, tested approaches accelerated work at sites by roughly 50 percent or more. Lessons learned from these pilots have been shared with EPA Superfund program staff at both EPA headquarters and the regions, as well as with the Superfund remedial action contracting community. In addition, the EPA is using these pilot project results to shape the development of new Superfund contracts, policies, and tools that can be used to increase the pace of cleanup at sites.

CONCLUSION

EPA's Superfund program continues to make progress in the face of a number of challenges and will continue protecting human health and the environment by responding to immediate and long-term threats through the cleanup of releases and hazardous waste sites. The EPA believes its ongoing program efforts will help support continued cleanup progress and address critical aspects of Superfund program challenges.