

Port Stakeholders Summit: Advancing More Sustainable Ports

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Meeting Summary

Introduction

On April 8, 2014, major stakeholders with interest in port facility operations and impacts convened for an EPA summit that focused on the process, technologies, and importance of making ports more environmentally sustainable. Acknowledging the breadth of issues faced by ports and the communities they affect — especially environmental justice populations, regulators, and carriers — organizers limited the scope of the summit to air quality and climate issues. The port stakeholder summit built on outcomes from three theme-based listening sessions conducted in prior months and collaboratively explored challenges and opportunities facing ports and neighboring communities.

Key goals of the Summit were to:

- Identify actions EPA can take to protect community air quality while reducing climate risk and supporting economic growth.
- Launch inaugural elements of the EPA Ports Initiative.
- Promote engagement with other professionals, experts, and stakeholders to share expertise, ideas, and actions that address the many opportunities and challenges faced by our nation's ports and neighboring communities.

Opening Remarks

Welcome

Karl Simon, EPA, Office of Transportation and Air Quality (OTAQ)

Mr. Simon opened the summit by welcoming those in attendance and explaining the summit's goal of exchanging ideas among all attendees. He also emphasized the variety of roles and perspectives that the different stakeholders offer regarding sustainable ports. He then introduced the first speaker, Kathy Broadwater, Deputy Executive Director of the Maryland Port Administration (MPA).

Introduction to the Summit

Kathy Broadwater, Maryland Port Administration

Ms. Broadwater began by welcoming participants to her home port city of Baltimore, acknowledging EPA Deputy Administrator Bob Perciasepe and Robert Summers, Secretary, Maryland Department of the Environment (MDE), in particular. She praised the partnership that has developed between MDE and the Port of Baltimore in emissions reductions efforts at the port. Of particular importance is the MDE and EPA funding that has supported clean technologies for port vehicles, such as drayage trucks, harbor crafts, and cargo handling equipment. Ms. Broadwater also acknowledged private partners in attendance, including the American Association of Port Authorities, the Port of Long Beach, and the Port of Virginia.

A central purpose for the day's summit was to build and strengthen collaboration among the stakeholders. Ms. Broadwater stressed the enormous role that ports play in transportation of the goods that represent American prosperity. International trade imports enter the United States largely via ports. At the same time, ports represent an industry that stands at the nexus of numerous environmental issues: water quality, dredge management, diesel emissions. Thus, they represent an opportunity for collaboration between government, private organizations, and communities. The Baltimore Masonville project stands as an example of that type of cooperation.

Introduction of Bob Perciasepe

Shawn Garvin, EPA

As the Regional Administrator for EPA Region 3, hosting the summit, Mr. Garvin presented his perspective on the importance of the meeting. He asserted that ports represent a priority for EPA because of the economic implications of reducing emissions at ports. Building on three Web-based meetings with stakeholders, the port summit serves as a capstone of the national conversation.

New initiatives at ports can have a multitude of positive impacts: they can improve health, address climate risks, engage stakeholders, stimulate economic growth, and promote energy efficiency. Furthermore, local and regional efforts at ports can help inform a larger national dialogue on reducing marine emissions. Mr. Garvin identified specific activities that ports are already undertaking, including diesel oxidation catalysts retrofits, engine repowers, and the replacement of trucks or other port equipment. He also cited EPA's desire to collaborate, across all levels of government, to offer tailored help to ports.

Mr. Garvin concluded by introducing Bob Perciasepe, Deputy Administrator at EPA.

Keynote

Bob Perciasepe, EPA

In addition to acknowledging EPA senior management, Mr. Perciasepe acknowledged Dr. Robert Bullard — an iconic figure in environmental justice studies — and noted his key role in formulating community engagement principles.

Mr. Perciasepe began his comments by recalling the experiential value of the 12 years he lived in Baltimore and that there is no greater preparation for a federal official than working at the community

level. He acknowledged the summit's Steering Committee and its composition of diverse stakeholders and views. Administrator McCarthy, he continued, has stressed EPA's priority of "making people's lives better." The summit represented an attempt to focus this goal with respect to ports. Numerous environmental concerns coincide at ports, but air quality issues stand as a first opportunity to address these concerns. Mr. Perciasepe emphasized that keeping ports healthy has both environmental and economic implications, as ports support the commerce and jobs that help local communities.

Engagement through the summit and previous Web meetings, said Mr. Perciasepe, would help bring out ideas, expertise, and experience. This collaboration would help refine how EPA can complement other efforts at ports, including the contributions of communities and local groups. Mr. Perciasepe pointed out that ports support 13 million people, including \$50 billion in personal income. Ports carry goods and commerce, but also involve impacts from growing issues: larger vessels, more cargo, local traffic, and multimodal relief. He contended that infrastructure improvements can streamline operations, help communities, and improve air quality, all while preserving the equally important function of getting goods to market.

Due to air quality impacts and greenhouse gas emissions, said Mr. Perciasepe, diesel combustion is a particular concern at ports. A recent study indicated that 41 million people may be exposed to higher concentrations of air pollutants; this population is disproportionately lower-income and minority. He asserted that these health impacts represent their own economic drags. As ports look to address environmental issues, their challenge is to balance the port's economic development with protection of communities. This balancing act can be informed by deliberate engagement among stakeholders — including EPA, all levels of government, and all private entities. Mr. Perciasepe suggested that recent successes in Seattle and Baltimore can serve as models for collaboration with positive environmental outcomes.

Mr. Perciasepe also indicated EPA's interest in starting a recognition program for ports using best practices. He encouraged participants to voice their recommendations for the best performance metrics on port operations, as building the program would occur collaboratively with stakeholders. Although the potential recognition program would consider numerous criteria, including material handling and water quality, the summit's focus on air quality issues offered a first step in defining how ports would be recognized.

National Conversation on Ports: Insights from Three National Listening Sessions

Introductory Comments

Chris Grundler, EPA, OTAQ

Dennis McLerran, EPA, Region 10

Mr. Grundler introduced the session by noting trends in goods movement worldwide and the implications for U.S. ports. He related that, while visiting a port community in southern California, community leaders characterized the extensive impact of port-related activities on nearby residents with very limited resources, power, and information. Those issues made a very significant impact on Mr. Grundler and he expressed his commitment to do what he can to bring forward the community perspective. He also invoked his past experience with successful collaboration on ports initiatives.

Mr. Grundler acknowledged that national standards have not reached everywhere as needed, so he has instructed his team to bring a place-based focus to the work with a focus on areas that have disproportionate impacts. He stressed that EPA can play a role in development at ports by leveraging its own local experience. Because each port is unique, local leadership defines where and how progress is made. Some ports have not met emissions standards, presenting an opportunity for future progress. Mr. Grundler stated that the conversations with stakeholders indicated that ports desire both increased prosperity and improved health. Stakeholders also expressed a desire for active participation, rather than lecturing. Mr. Grundler acknowledged that the summit aims to tap into this desire for engagement as part of an ongoing process and the case study workshop scheduled for the afternoon presented an opportunity to practice how people are grappling with these issues at the ground level. Despite differing viewpoints, stakeholders with lots of passion present an opportunity for developing data-driven, local approaches.

Many of Mr. McLerran's comments echoed Mr. Grundler's own reflections on the uniqueness of each port. Mr. McLerran described one particular initiative, the National Air Toxics Assessment, where air quality modeling examined the health risks near individual ports. Results indicated that neighborhoods closest to ports suffered greater environmental and health risks. However, he noted that ports had been surprised and troubled by the findings; accordingly, they had helped fund further studies to determine how emissions were affecting local air quality.

The speakers' continued dialogue included key questions addressing a host of issues faced by ports and answers reflecting their respective experiences with ports and related transportation matters. Mr. McLerran described a trio of competing ports that collectively pursued environmental goals so that no single port would be at a competitive disadvantage. The program targeted emissions affecting local communities most, even if they were not the overall greatest emissions. Mr. McLerran emphasized that the three ports, the Port of Tacoma, the Port of Seattle, and the Port of Vancouver, were eased into the emissions reduction process, rather than being subjected to a heavy-handed approach. Furthermore, the data-driven goals were tailored to the most significant local emissions concerns — in this case, particulate matter — rather than targeting emissions not shown by the data to be the major drivers of local pollution. Mr. McLerran noted that the following elements are key for successful port/community strategies: equitability, a data-driven approach, use of the best technology available, and community engagement. He noted that fuel/cost savings are very important drivers and that there is value in examining solutions and strategies employed at other U.S. ports and throughout the world.

On the issue of how EPA can help empower ports, Mr. Grundler explained that EPA has access to information that ports do not always have. Deploying data-driven tools for a given port, such as emissions inventories or environmental assessments, can refine the best strategies for that particular site. He also stressed EPA's role as a facilitator of discussion among port stakeholders. As a federal entity, EPA can help coordinate across agencies to better integrate the federal government's voice.

At the prompting of Mr. McLerran, Mr. Grundler delved further into the range of issues faced by ports and why air emissions issues are highlighted at the summit. While he acknowledged that environmental initiatives at ports cannot focus on a single medium, air emissions are particularly meaningful to neighboring communities. Mr. Grundler also explained how these efforts fit into the definition of a "sustainable port." A sustainable port, he said, must account for the economic and environmental health of people today, but also well into the future. This vision is reinforced by Administrator McCarthy's goal to make a visible difference in communities through constructive collaboration.

Discussion

Carleen Lyden-Kluss, of the North American Marine Environment Protection Association, led off questions from the floor by stressing the need for harmonization across the global maritime industry. She cited the need for some vessels to switch between three and four fuels, which presents a risk at sea. Mr. McLerran acknowledged that others have expressed similar sentiments and that EPA has taken steps to promote harmonization between U.S. states. He added that harmonization would have the added benefit of creating a level playing field among shippers. Mr. Grundler responded that EPA would continue being active in the International Maritime Organization. EPA has worked to have international adoption of some practices already used in the United States.

Mildred McClain of Citizens for Environmental Justice stated that coordinating with national environmental advocacy groups does not constitute engagement with environmental justice communities. She asked the panelists how EPA could better engage with affected communities themselves, adding that even relying on local data could be insufficient without speaking to the affected people. The panelists responded that concern was part of the motivation for the summit. Mr. McLerran emphasized that environmental justice is a primary motivator for work on sustainable ports.

Leo Petrelli, a municipal Canadian representative, related the sharp increase of truck-based freight movement through his border town. He pressed the panelists on why rail is not being considered for more freight movement. Mr. Grundler replied that a major challenge to changing transportation modes is the long time it takes for legacy fleets to turn over. Mr. McLerran explained that the United States is already stressed on rail capacity, but that certain programs (such not allowing old trucks at ports) can help alleviate the impacts of truck traffic.

Amy Goldsmith of the New Jersey Environmental Federation asked how EPA could best ensure that data that inform decisions in port development projects and related federal actions are truly accurate. Specifically, she wanted to know how EPA could elevate its role and strength in the decision-making process. Both panelists responded by stressing the need for transparency and open access to data. Mr. Grundler added that EPA could use its role as a facilitator to help provide greater access to data.

Community Engagement: Historical Perspectives and the Path Forward

Robert Bullard, Texas Southern University

Dr. Bullard began his speech by describing his professional background in development, including facility siting and permitting, but quickly turned to environmental justice. Since President Clinton's 1994 executive order on environmental justice, a resident's location (i.e., zip code) still determines his or her health and quality of life outcomes. Communities adjacent to ports and other industrial sites, which Dr. Bullard termed "fenceline communities," experience certain impacts that communities 50 miles away do not. He reassured the audience that engaging with these fenceline communities does not translate into preferential treatment, but rather acknowledges that special impacts accrue to those living in close proximity to ports.

Finding the best strategies for ports depends on using the best metrics. However, identifying which metrics define and determine success has remained elusive. Dr. Bullard said this is partly because there has been insufficient investment in developing such tools. Those tools that do exist, such as the Toxics

Release Inventory (TRI), indicate that fenceline communities are among the most environmentally impacted for given regions. Metrics to determine optimal community engagement must also be established.

In the past, EPA helped develop a model for participatory planning. However, Dr. Bullard said, EPA Regions differ in how extensively they apply this model for projects involving them. In some cases, ports facing strong market competition will only pay lip service to community participation. The engagement model ensures that all voices are heard without just arbitrarily checking boxes. Dr. Bullard pointed out that using such a model would help community participation at other industrial facilities beside ports. Recently, the National Environmental Justice Advisory Council updated the public participation planning document, which highlights common themes and principles.

Looking to the future, Dr. Bullard concluded by offering suggestions for how to weigh environmental justice concerns with economic development. He suggested that it would be very helpful to assemble more information so that communities get an understanding of what has been successful elsewhere. Community/university partnerships can fill data gaps and support information access leading to more effective community engagement.

Discussion

Margaret Gordon of the West Oakland Environmental Indicators Project contended that federal agencies may often be the greatest barrier to a collaborative process. At the Port of Oakland, the Department of Transportation (DOT) and U.S. Customs have been unresponsive. Dr. Bullard responded by referencing DOT's Community Impacts Assessment "purple book," which provides guidance on community engagement. He suggested that many of these established methods might deserve to be dusted off.

Consultant Galen Hon asked how technical issues could be communicated more easily to broad audiences. In his experience, Dr. Bullard said lay audiences easily understand technical material when it is presented in a way that is user friendly for the target audience. However, the central message should not be compromised, regardless of the format.

As a community advocate, Erica Holloman of the Greater Southeast Development Corporation asked Dr. Bullard how small communities could be better informed about opportunities to be involved in the decision making process. Dr. Bullard suggested that communities focus on being proactive rather than reactive. Fenceline communities should organize and leverage existing assets in the area, such as local universities. Ms. Holloman also suggested that organizers consider holding forums of this type in every region so that interested community stakeholders who could not attend the summit could benefit as well.

Strategies for Improving the Environmental Profile of Ports

The morning session ended with a panel discussion moderated by Susan Monteverde of the American Association of Port Authorities that touched on some of the port industry's best practices. Representing the Mid-Atlantic Regional Air Management Association (MARAMA), Susan Wierman presented results from a Maryland-based and EPA-funded drayage truck replacement program. Although this program was not fully planned when EPA funding was announced in 2009, MARAMA worked closely with port stakeholders, financing lenders, and truck carriers to structure it to succeed. With a goal of replacing

pre-MY2003 trucks with trucks meeting the 2007 standard or better, the group developed a grant program to help offset the cost of new vehicles. Effective buy-in from the trucking community, along with strategic partnerships with banks and truck retailers, helped MARAMA succeed in replacing 212 trucks through 2014 — nearly double the original goal.

Next, Rick Cameron of the Port of Long Beach spoke about infrastructure enhancements at his home port. Mr. Cameron expressed the importance of thinking of the port as a system. A 2010 Climate Action Plan helped refine the critical environmental areas of focus. Since then, the Port of Long Beach has been working with communities and commercial partners alike in determining the most successful programs. Specifically, Mr. Cameron mentioned discussions with truckers, who had asked for explicit targets. Working together, the truckers and port replaced 11,000 vehicles. Looking ahead, he indicated the port's newest aspiration is for a zero-emissions port, which would include greater use of shore power hookups for boats. Mr. Cameron concluded by stressing the importance of flexibility, collaboration, and technical and economic viability.

As a supply chain specialist, Michael Derby presented how his company, Wallenius Wilhelmsen Logistics (WWL), viewed the best ways to streamline and standardize the shipping process. One upcoming challenge he identified is the more stringent sulfur emissions standard for ships in U.S. waters. This standard is driving shippers to consider handling new fuels or applying retrofit devices. Ultimately, the degree of enforcement will determine whether ships will take meaningful steps to remain in compliance.

Mr. Derby also presented a conceptual design of a WWL shipping terminal, which would incorporate as many sustainable elements as possible. Such a port would optimize vehicle movement at the facility, use electric port vehicles, and draw on onsite alternative energy sources. Some ports, such as Baltimore, are already adopting some of these methods by turning over old port vehicles and converting to programmable LED lighting. As a result, emissions decreased by 50 percent or more for carbon monoxide, nitrogen oxides, volatile organic compounds, and sulfur oxides, while exchange at the port increased.

Representing the Port Authority of New York and New Jersey, Bill Nurthen detailed the steps his port has taken in accommodating growth while pursuing sustainable targets. The trifold effort involved creating an emissions inventory, instituting a sustainable development policy, and implementing an environmental management system for logistics that the Port Authority directly controls. Together, these actions fed into a 2008 clean air strategy, which not only integrates input from public, private, and community voices, but is also tracked each year for progress. Mr. Nurthen explained that a key component of the strategy has been to offer incentives to shippers that adopt cleaner practices. In the first year of the strategy, over 500 clean ships took advantage of rebates offered for fuel switches or use of Tier 2 or Tier 3 engines. Ongoing efforts are now tackling other port logistics, such as modernizing handling equipment, incentivizing gen-sets for port-based locomotives, and retrofitting higher-emitting drayage trucks.

Discussion

A journalist from *American Shipper* magazine requested clarification about a comment that Ms. Wierman had made regarding phasing out grants toward the purchase of 2007 truck engines, which are not as clean as 2010 engines. Ms. Wierman explained that although the engines are not as clean, her grant program still funded vehicle replacements. As MARAMA has exhausted EPA's initial funding, the

organization is looking for additional financial support to keep the program alive. No decision has been made on whether a future round of funding would also help fund 2007 engines.

Gary Magnuson from the U.S. Committee on the Marine Transportation System asked the panel whether the tax code could be used to incentivize sustainability at ports. He cited deductions for electric cars, noting that no comparable program exists for marine vehicles. Mr. Cameron and Mr. Nurthen both agreed that a tax incentive program would be a compelling tool for shippers. Mr. Nurthen pointed out that transitioning from diesel to liquefied natural gas is the most likely next sustainable transition for vessels themselves.

Jesse Marquez, representing the Coalition for a Safe Environment, expressed concern about the safety of ships in emergency scenarios. Specifically, he asked how well large ships can withstand tsunamis while docked. Three panelists explained that ships tend to do well at sea, but their resilience could be reduced when they are at berth. Mr. Cameron indicated that his port has investigated what climate adaptation approaches can be used to address potential natural disasters, including tsunamis caused by landslides.

Concurrent Workgroups

Workgroup Session 1: Measuring Port Environmental Performance

Haifeng Wang, International Council on Clean Transportation

Mr. Wang started by saying that numerous maritime recognition programs already exist — for example, a new port recognition program has been created under the Asia-Pacific Economic Cooperation. Detailed inventories could represent a metric for environmental performance, but they are not available from all ports.

Stephanie Jones Stebbins, Port of Seattle

Three environmental justice neighborhoods lie near the Port of Seattle. Ms. Stebbins explained that these areas already conduct emissions inventories. Emissions tracking from 2005 to 2011 has shown a 5 percent decrease in carbon dioxide and 30 percent decrease in carbon monoxide. In addition, the emissions profile is well understood: diesel particulate matter is the most significant pollutant in the Pacific Northwest. Regarding specific sources, nearly 78 percent of 2011 emissions are from ocean-going vessels. Ms. Stebbins predicated that the supply-chain carbon footprint for products will gain importance with consumers.

Lee Kindberg, Maersk

Speaking on behalf of shippers, Dr. Kindberg agreed that ports and terminals affect the environmental impacts of vessels. She acknowledged the immense scale of any reforms in the industry, especially the challenge of harmonizing across the shipping industry. Infrastructure improvements offer real benefits toward smooth port operations. In addition, transitioning to rail movement has real benefits for communities suffering from truck travel. Dr. Kindberg then mentioned a number of emissions reduction strategies that ports could undertake, which have varying degrees of success: vessel fuel options, reduced pilot time, triple-sized vessels, and shore power.

Fran Inman, Majestic Realty

Ms. Inman provided background on Majestic Realty and discussed suggestions for improvements to the decision-making process itself. She stressed the importance of inviting conversations and respect for opposing views. But decisions must be informed by robust data, she said, and no single port scenario should define how another port attempts something similar.

Discussion

One commenter mentioned the need to develop baseline health assessment, perhaps in the form of a survey. Without baseline data, the commenter questioned whether it would be possible to know if a port's environmental performance is improving. A second commenter asked whether the prevailing mindset is that if an area avoids "nonattainment" designation, it no longer needs action or attention. Another commenter asked why EPA is considering a port recognition program when air quality improvements are not a pressing issue everywhere.

Workgroup Session 2: Incentivizing Environmental Improvements

Rick Gabrielson, Target Corporation

Mr. Gabrielson began by commenting on the ongoing trend toward more commercial engagement. A shipping industry association has begun supporting a clean ports program at the Port of Long Beach by covering 80 percent of truck replacement cost. Additionally, retailers could play a role in improving environmental impact of ports by committing to transport 75 percent of cargo from SmartWay carriers. Yet the shipping industry still has room to improve. Mr. Gabrielson identified three specific actions that could aide such improvement: increased financial incentives, encouragement and support of technological development, and full utilization of port capacity.

Ken Kellaway, RoadONE Intermodal Logistics

As CEO for a 1,000-truck company, Mr. Kellaway offered insights on the major challenges currently facing the trucking industry. Rate stagnation, changes in hours of service, and a shrinking pool of available drivers have all stressed the trucking business. These challenges have been exacerbated by a shift toward home delivery, where more goods are being shipped to consumers by lower-weight vehicles. Mr. Kellaway cited a handful of tangible actions that could stimulate environmental improvements, including streamlining chassis configurations, providing grants and loans for truck replacements, enhanced driver training, and providing tax relief for alternate fuel vehicles.

Andy Dillon, Clean Energy Fuels

Having formerly been involved with the Port of Long Beach, Mr. Dillon now helps promote adoption of natural gas-powered refuse haulers. Heavy-duty natural gas vehicles are anticipated to climb to 35 heavy-duty vehicles by 2017. Mr. Dillon agreed with the previous speakers that truckers need incentives to purchase new trucks. To help pay for these grants, he recommended levying a fee on containers. He also suggested implementing priority lanes, in the vein of "TSA pre-check" lanes, that would favor cleaner vehicles.

Antonio Santos, Manufacturers of Emission Controls Association

Mr. Santos briefly touched on his recommendations for incentivizing environmental improvements. First, he recommended increasing and sustaining funding through the Diesel Emissions Reduction Act, as

well as expanding EPA's SmartWay program. Ports looking to implement these changes could also write contractual obligations into agreements they enter with carriers. Finally, Mr. Santos recommended tax incentives as an effective way to encourage fleet owners.

Discussion

A commenter on behalf of terminal operators observed that his community was not well represented at the summit. He inquired how terminal operators could be incentivized, noting that port operators could lose business with importers if terminal operators are not efficient. Shippers are in a good position to apply pressure, he continued. Should they mention trucks equipped with GPS technology, terminal operators might feel compelled to improve operations. One way to streamline operations would be to use existing technology to improve efficiency and product movement; the commenter cited www.loadmatch.com as an example.

Workgroup Session 3: Port Expansion — Illustrative Case Study

Workgroup 3 featured a panel of eight stakeholders, representing a diverse set of viewpoints, who took turns analyzing a development scenario for the fictional Port of Arbor. Moderator Jerry Boese introduced the parameters of the case study, which gave the panelists a choice of 23 possible emissions reduction strategies, a \$15 million budget, and specific emissions targets. The Port was seeking to dredge the current channel and increase its trade, while simultaneously keeping air emissions flat through 2030.

Peg Hanna, New Jersey Department of Environmental Protection

Ms. Hanna described her approach as involving a more explicit collaborative process that would determine what strategies are pursued. She pointed out that the study omitted any risk assessment for local residents. Integrating a health component would help refine the cost-effectiveness calculations. These could be further improved by integrating the potential benefits from non-port activities, such as streamlined operations that enable truckers to make more calls.

Frank Esposito, U.S. Coast Guard

Speaking as a federal official, Mr. Esposito explained that agencies often have competing roles. While the Army Corps of Engineers might advocate dredging the port to increase capacity, they will not consider the impacts this has on ship traffic. From a regulatory perspective, federal agencies cannot guarantee that all stakeholders get what they want, only that they are afforded a just and fair process. The best role for the government is that of a moderator, where competing voices are incorporated into decision-making and opposing views are given fair consideration.

Sacoby Wilson, University of Maryland-College Park

Dr. Wilson contended that community views were largely missing from the case study. He stressed the need for an analysis of the cumulative impacts of the port development: truck traffic, pollution, resident health, and economic health. Reframing the discussion, he asked how the local community can avoid becoming a "sink" for port-derived pollution. He also noted that reductions of NO_x and PM are not enough to address community concerns, which include environmental, ecological, economic, and social concerns. Dr. Wilson cited the Port of Charleston as an example for cross-cutting involvement that ensured that the port was a good actor for the local community. (The Mitigation Plan Agreement under NEPA, developed by the Low Country Alliance for Model Communities, serves as a model approach in

balancing economic and community health priorities.) Building an interagency workgroup across agencies (e.g., EPA, DOT, U.S. Department of Housing and Urban Development) could help ensure a fair process for the Port of Arbor.

Amy Goldsmith, New Jersey Environmental Federation

Ms. Goldsmith found fault with both the goals and the list of the strategies presented in the case study. She observed that the emissions reductions it described do not constitute true emissions reductions because total emissions actually increase — emissions only decrease relative to the increased amount of trade passing through the port. As well, the majority of funding came from public funds; the port should bear a greater share of the financial responsibility. In addition, Ms. Goldsmith said that certain practices — shore-side power, truck modernization, electrifying port equipment — should be adopted regardless of emissions targets. Diesel reductions must benefit high-impact neighborhoods, and port policy practices toward a mandated national zero emissions policy should be the goal. Ms. Goldsmith noted that equitable distribution of costs and the pool of funds should be established. She finished by saying that self-identified community members should be consulted for buy-in in order to guarantee long-lasting solutions and that plans should be codified as Community Benefits Agreements.

John Esposito, Ports America

As a port operator who spends 60 to 70 hours per week on site, Mr. Esposito said that he too valued air quality at the facility. A central challenge to improving the emissions profile for ports, he claimed, is that most equipment is owned by entities other than the port. He believed the most effective way to stretch the funds available would be to create a “renewable resource,” such as a revolving loan fund, where recouped funds could further fund other emissions reductions projects. He concurred that meeting with the community would help generate local support, pointing out that holding such a meeting at the port itself would be particularly instructive.

Erica Holloman, Greater Southeast Development Corporation

Titling her remarks “One Port, One Voice,” Dr. Holloman focused on how the local community might be impacted and integrated into development at the port. One potential strategy would be to focus emissions projects on trucks because they disproportionately impact the surrounding community. In addition, she concurred with Ms. Hanna that cost-benefit analyses should include health care costs for the neighboring population. Furthermore, she said that establishing a baseline health assessment would be instrumental in determining whether emissions reductions projects ultimately succeeded in improving conditions. Lastly, Dr. Holloman said the port should also consider the economic health of the community by offering job training opportunities for area residents.

Gerry Coyle, Evans Delivery Company

Running a drayage carrier business, Mr. Coyle offered insights on how a truck operator could play a role in reducing emissions. He stressed that the more efficiently goods can move at the port terminal, the lower emissions could be. Ports face competing factors: a restricted window in which to operate, but a need for careful coordination with many modes of transportation. Mr. Coyle suggested developing a technology that could identify when trucks arrive and what equipment they bring. (If truckers bring ill-suited equipment for carrying specific cargo, the port becomes congested.) In addition, ports face other constraints that create bottlenecks in goods movement, such as snow removal, access to highways, and adequate onsite parking. Finally, he said coordinating inbound and outbound shipments could help prevent ships leaving port empty and needlessly contributing to increased emissions.

Heather Wood, Virginia Port Authority

Having helped implement similar emissions reductions projects herself, Ms. Wood likened the Port of Arbor to her home port in Virginia. She described a green truck program that helped characterize the needs of truckers. Improving truckers' turnaround times not only helps reduce emissions at the port, but also determines whether drivers can make a living. She also noted that the best strategies at ports vary greatly, depending on ports' unique qualities. For example, vessel speed reductions could help some ports, but vessels in Virginia already reduce their speeds as a function of geography. In addition, while the case study said that the Port of Arbor's crew resisted using electric cranes, Ms. Wood's employees have been enthusiastically supportive of them.

Discussion

Jesse Marquez expressed his skepticism that the case study was a fair portrayal of what ports could accomplish. He claimed that, with port profits exceeding \$100 million, a heavily subsidized \$15 million initiative seemed to place a false financial constraint on the project. He suggested that whatever financial barriers might actually exist, a \$1.50 premium on each port container would fully fund emissions reductions programs. Dr. Wilson responded by stressing the importance of a community-driven decision process for development at any industrial facility, port or otherwise. If a facility makes decisions on its own, it could likely increase the chances of lawsuits from communities.

Michelle Roberts, Co-director of the Environmental Justice and Health Alliance for Chemical Policy Reform, asked the panel why cumulative impact assessments (CIAs) do not play a larger role in the development process. She further pressed the panel to address what could be done to encourage CIAs, as well as what the ongoing costs might be for not having CIAs performed. For recent development at her port in Virginia, Ms. Wood said she could not obtain a permit without first obtaining a CIA. She also suggested that a CIA must include ongoing operational impacts, such as traffic, in order to be fully comprehensive. Dr. Holloman and Ms. Goldsmith reiterated the need for community involvement. Ms. Goldsmith explained that her organization is pressuring the city of Newark to help establish guidelines for port activity. From a macroscopic view, Dr. Wilson and Frank Esposito described the challenges of the National Environmental Policy Act (NEPA), which does not include explicitly include health aspects. Mr. Esposito explained that many aspects of NEPA, even including the term "cumulative impact," have been defined and refined through progressive lawsuits. Dr. Wilson suggested that regardless of NEPA ambiguities, ports have the opportunity to share and promote best practices or guidelines.

Margaret Gordon of the West Oakland Environmental Indicators Project acknowledged how ports can involve many different players: from a port authority to individual port tenants, shippers, and truckers. However, port directors can obligate their tenants and shippers to abide by certain rules or regulations. In addition, she claimed that a well-executed appointment and truck routing system could alleviate many of the problematic bottlenecks at ports. In general, she questioned why authorities at the various levels, who wield fair amounts of power, could not simply obligate operators to take action. Due to time constraints, no panelists responded.

Juan Parras, representing Texas Environmental Justice Advocacy Services, called attention to the case study's implementation of a \$65 million dredging project. He asserted that a port that can undertake such a costly project could fully fund a \$15 million emissions reduction project within six months. He pointedly asked the panel why residents should wait 15 years for cleaner air simply because decision-makers are reluctant to apply immediate incentives. Leo Petrelli continued the topic by expressing

dismay that biomonitoring had not yet been discussed. As an exposure scientist, Dr. Wilson indicated that sampling residents' blood could serve as an effective baseline assessment. Evidence points to the fact that people's bodies may functionally act as "sinks" for certain kinds of pollution. Ms. Goldsmith recounted a New York port city where truck routes pass by a school with no air conditioning. A recent Rutgers University monitoring project revealed that passing truck traffic impacts air quality when school windows are kept open in spring and summer. Furthermore, her organization conducts truck counts that sometimes top 350 trucks per hour. Dr. Holloman added that monitoring can be challenging, especially when some community-specific environmental information is not available. In some cases, air monitoring stations are 10 or more miles away. Frank Esposito closed the workshop discussion with a note of optimism, stating that new technology may yet help enhance both data collection and air quality issues.

Recap of Workgroup Actions and Discussion

An abbreviated recap session brought representatives from each workgroup to summarize the take-home messages from their meetings.

Elena Craft of the Environmental Defense Fund discussed some of the sought-after attributes for a new port recognition program. Because ports vary in geographic impact, size, and ownership structure, panelists first identified the need to define what constitutes a port. Furthermore, the boundaries of what constitute "port activities" remain unclear. For instance, would port assessment be restricted to the port's fence line, its airshed, or some other range? Secondly, panelists again stressed the need for reliable environmental data at ports. With regard to tangible actions, the workshop had brought out support for a culture of continual improvement, rather than one-and-done emissions reductions projects. Speakers had expressed the need for ports to gradually commit to a constant re-adoption of best practices. Ms. Craft finished by repeating the theme expressed in other sessions that the best methods should be standardized across the industry.

James Jack, executive director of the Coalition for Responsible Transportation, presented the central themes from the discussion on incentivizing environmental improvements. He stressed that incentives must reach across stakeholders. Running a port requires partnership and incentives should reflect that collaborative nature. Discussion also revealed support for alternative vehicle fuels, such as liquefied natural gas, compressed natural gas, and hydrogen; targeting incentives to address the incrementally higher cost of these vehicles would accelerate their adoption by ports. Mr. Jack also listed a number of other strategies that would benefit from incentives, including truck turn-time improvements, load matching coordination, and direct truck-to-terminal communication. He explained that these enhancements would help minimize congestion, reduce the number of drivers needed for cargo, and ultimately result in environmental benefits. Mr. Jack concluded his comments by echoing previous calls for reliable metrics and creditable data.

Peg Hanna first familiarized the audience with a summary of the case study discussed in her session. She then recapped the workshop discussion itself, which revealed the variety of players involved in pursuing an emissions reduction goal. While government agencies may not advocate for particular actions, they can ensure that the interests of ports, operators, and a self-identifying community can be integrated. One panelist had summed up the collaborative concept by stating the decision-making process should result in "one port, one voice." Workgroup discussion also focused on how best to prioritize emissions reduction actions at the port. A number of panelists supported prioritizing those emissions with the

greatest impact on communities, rather than the largest sources overall. Ms. Hanna also touched on the panelist support for a level playing field across ports.

Concluding the recap session, Allen Schaeffer of the Diesel Technology Forum offered some closing observations by highlighting many of the new technologies that his organization has promoted. Clean diesel technologies, such as the engine replacements and repowers have yielded significant benefits at ports and elsewhere. With EPA's strengthened standards for model year 2007 and 2010 engines, he pointed out that turnover of legacy fleets can be especially beneficial. Mr. Schaeffer tempered his comments by emphasizing that not every solution will meet every need, but that the market still offered a wide variety of technology upgrades. He concluded his comments by expressing support for Senate funding directed at upgrading existing diesel engines. He added that the \$4 million funding would help deliver the "visible benefits" that EPA seeks.

Meeting Closing

Karl Simon thanked organizers and participants alike for their thoughtful contributions. Although he admitted that uncomfortable conversations may lie ahead, he expressed appreciation for the trust-building discussions held at the summit. This ongoing dialogue with EPA, he said, informs the concrete actions that can lead to a more sustainable transportation future.