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**RESEARCH AND SPECIAL
PROGRAMS ADMINISTRATION**

STRATEGIC PLAN

August, 1998

U.S. Department of Transportation
Washington, DC 20590

**A leader in
innovative,
collaborative
solutions in
transportation
safety,
research,
education
and
emergency
management**

RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION (RSPA)

STRATEGIC PLAN

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I. INTRODUCTION

The Research and Special Programs Administration's (RSPA) Strategic Plan defines the ways in which we will implement the Secretary of Transportation's Strategic Plan, and sets out our vision and mission. These two purposes require that we align our goals with the Secretary's, shape our activities to support those goals, responsibly manage the things we do, commit resources and measure our performance.

RSPA acts as the Department's focal point for transportation R&D strategic planning and system assessment, and coordinates and facilitates intermodal research, education and safety training. RSPA's programs involve multiple modes of transportation. By legislation and through Secretarial delegations, RSPA is charged to protect the public from the risks to life and property that hazardous materials in transportation may pose, and define minimum safety standards for pipeline transportation and facilities. We are responsible for coordinating emergency preparedness and response relating to transportation, including those matters affecting national defense and involving national or regional emergencies. Finally, RSPA's Administrator is vested with duties and powers with respect to activities of the Volpe National Transportation Systems Center.

This plan is RSPA's commitment to the American people to make their lives better. We will do this by targeting safety and environmental dangers through risk-based management and by building incentive programs to promote compliance with our regulations. When our rules are violated and the public's safety is jeopardized, we will tackle the tough enforcement jobs. We will advance a strategy to ensure that science and technology support the achievement of the nation's transportation goals. With the Volpe National Transportation Systems Center's distinct system-wide perspective, we will address and resolve the many national transportation challenges. To prepare for the 21st Century, we will build and continuously develop a highly-skilled transportation workforce. We will increase our readiness to respond to transportation emergencies that disrupt communities and affect Americans nationwide.

Our strategic plan is the result of the hard work of many of RSPA's employees and partners who are dedicated to leading the way to transportation excellence in the 21st Century. The plan is best seen as a process, awaiting your reading, use and suggestions for future improvement.

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II. THE RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION

RSPA is responsible for a variety of programs that are cross-cutting and tied to major DOT functions. We support each of the Department's Strategic Goals for Safety, Mobility, Economic Growth and Trade, Human and Natural Environment and National Security.

SAFETY

- RSPA administers a comprehensive hazardous materials safety program to protect the American people from the risks to life, health, property and the environment when these goods are

transported by water, air, highway and rail. Through our Office of Hazardous Materials Safety, we develop safety regulations and standards for the transportation of hazardous materials (classifying, handling and packaging); maintain the nation's largest database of hazardous materials information and incidents; conduct compliance inspections; provide technical assistance to businesses and individuals; issue rulemaking exemptions and approvals; conduct hazardous materials research; and provide training, technical and grant assistance for states, territories and Indian tribes to improve hazardous materials emergency preparedness.

- RSPA also strives to ensure the safe, reliable, and environmentally sound operation of the Nation's pipeline transportation system. Through our Office of Pipeline Safety, we continue to build and apply a risk-based framework for regulations and compliance activities to prioritize safety issues and offer approaches that motivate operators to provide the best protection possible in high risk areas. The cornerstone of our pipeline safety program is to encourage our state agency partners to more fully use risk-based factors in the oversight of intrastate pipelines and with interstate pipelines for which States serve as our agent. We also pilot-test non-regulatory approaches to improve pipeline integrity and work with industry and the states to demonstrate the value of risk management as an alternative to traditional industry regulation to achieve superior safety and environmental protection.

MOBILITY

- RSPA coordinates Federal efforts with the Federal Emergency Management Agency to restore transportation systems after emergencies--natural and man-made disasters--providing damage assessment, procurement of services, and establishment of alternative means of transportation to provide for the nation's mobility. This is accomplished through a response network comprised of DOT Regional Emergency Transportation Coordinators and Regional Emergency Transportation Representatives. Through DOT's Crisis Management Center, RSPA also staffs the Secretary of Transportation with critical disaster and national security information.

ECONOMIC GROWTH AND TRADE

- RSPA is ensuring that today's generation is prepared for transportation careers in the 21st Century by contributing to the Secretary's Garrett A. Morgan Technology and Transportation Futures Program by leveraging resources through partnerships with the academic community, industry, labor and other government agencies.
- RSPA also oversees the University Grants program which provides funding grants across the nation for transportation-related studies. RSPA also contributes to DOT's and RSPA's education and training, and safety goals through the Transportation Safety Institute which provides safety, health, security and environmental training, technical assistance, studies and learning research for elements within the Department, other governmental agencies and industry.

HUMAN AND NATURAL ENVIRONMENT

- RSPA promotes the safe transport of hazardous materials, including pipelines, by all modes: air, water, rail and highway. These and other activities, such as risk-based management, lay the foundation for preventing incidents and their unintentional consequences to the environment.
- RSPA is actively developing a national mapping system to identify the likelihood and consequence of pipeline accidents that may harm the environment and is building an environmental index of the most important areas to protect.
- We are developing a national public education campaign on pipeline damage prevention to reduce harm to the environment.
- RSPA is promoting the effective use of emergency preparedness grant funds to states, territories and Indian tribes to reduce the impacts of hazardous materials incidents.

NATIONAL SECURITY

- RSPA is continuing to improve our overall readiness and ability to quickly implement crisis management tools, restore essential transportation services, and support the goal of national security through military mobilization to meet international crisis as they arise.

RESEARCH AND TECHNOLOGY MANAGEMENT STRATEGY

- RSPA fosters innovation through science and technology to support the achievement of national transportation goals: safety; mobility; economic growth and trade; human and natural environment and national security. We do this through strategic planning and system assessment, building world-class transportation R&D capabilities, improving transportation science and technology information networks, promoting private-public partnerships and enabling research, and supporting education and training.
- RSPA has taken on additional responsibilities in the areas of transportation research policy and programs. As Executive Secretary of the National Science and Technology Council Committee on Technology and Executive Director of its Subcommittee on Transportation R&D, RSPA coordinates and facilitates applied research and technology activities of Federal agencies. RSPA also chairs the Department's Research and Technology Coordinating Council (RTCC). Similar to its role in the NSTC, as Chair of the RTCC, RSPA ensures cross modal collaboration on the Department's research and technology programs.
- RSPA integrates system analysis and conducts research and technology through the Volpe National Transportation Systems Center. The Volpe Center provides research solutions critical to all modes of transportation--air, rail, water, highway, pipeline and public transit. It continues to

foster innovation and technology transfer by promoting communication and cooperation between the technology and transportation communities. The Volpe Center represents the majority share of RSPA's employees and supports over 300 projects at any one time. It is unlike most other Federal organizations since it is market-driven by client agencies that pay it to address specific challenges. More than two-thirds of the Volpe Center's work is sponsored by DOT with the remainder coming from other Federal, state and private-sector clients.

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III. SUMMARY OF OUR VISION, MISSION AND STRATEGIC GOALS

RSPA's Vision

A leader in innovative, collaborative solutions in transportation safety, research, education and emergency management.

RSPA's Mission

To protect people and the environment from risks of hazardous materials transportation; foster transportation innovations through research, technology, education and training; and promote transportation emergency management.

RSPA's Strategic Goals

RSPA Strategic Goal--Safety: *Protect the public by reducing transportation related deaths, injuries, and property damage.*

RSPA Strategic Goal--Environment: *Protect our natural environment and national heritage from harmful transportation related consequences.*

RSPA Strategic Goal--Research and Technology: *Foster innovation through science and technology to support the achievement of national transportation goals including safety, mobility, economic growth and trade, human and natural environment and national security.*

RSPA Strategic Goal--Education and Training: *Build and continuously develop a highly-skilled transportation workforce.*

RSPA Strategic Goal--Emergency Management: *Minimize the impact on people, property, and the environment following emergencies affecting transportation and ensure transportation readiness during civilian and national security crises.*

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IV. RSPA's STRATEGIC GOALS

RSPA STRATEGIC GOAL--SAFETY: *Protect the public by reducing transportation related deaths, injuries, and property damage.*

Outcome Goals:

1. Reduce the number of hazardous materials transportation incidents.
2. Reduce the consequences of hazardous materials transportation incidents.
3. Improve the integrity of transportation systems and packages.

Relationship Between Strategic Goals and the Outcome Goals:

RSPA's Strategic Goal--Safety--directly supports DOT's Strategic Goal--Safety. Outcome goals one and two measure success toward meeting the Department and RSPA's number one priority, safety. Outcome goal three recognizes that aggressively assessing risk can help prevent incidents before they occur. These outcome goals also promote DOT Strategic Goals--Economic Growth and Trade, Mobility, and Human and Natural Environment.

How We Will Achieve the Strategic Goal for Safety:

1. Provide targeted technical and related assistance to the regulated hazardous materials industry to ensure they understand how to comply with Federal safety requirements, and work with Federal, state and local agencies to enforce the rules when violators threaten the public's safety.
2. Promote public and private partnerships to educate and train our stakeholders to ensure that safety principles and concepts are understood and that skill levels are raised and incorporated into day-to-day transportation activities.
3. Work with industry, states, local governments, and others to develop and share precursor and other information to improve transportation system safety performance.
4. Develop standards, including regulations on performance-based consensus standards, which will prevent incidents in transportation involving hazardous material shipments, including pipelines.
5. Develop, with private and public partners, capabilities to continuously monitor systems operations and maintenance.

6. Encourage best practices to further industry performance above minimum regulatory requirements.
7. Develop and implement a national public education campaign on damage prevention.
8. Participate in meetings of international organizations to promote consistency between national and international hazardous materials requirements to improve the safe and efficient transportation of hazardous materials.

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RSPA STRATEGIC GOAL--ENVIRONMENT: *Protect our natural environment and national heritage from harmful transportation related consequences.*

Outcome Goals:

1. Reduce the number of hazardous materials released in transportation.
2. Reduce the average quantity of hazardous materials released by all modes per serious transportation incident. (Note: Includes the transportation of hazardous materials by air, highway, rail, water and pipeline. Excludes bulk marine transport of hazardous materials because this area is not within our jurisdiction, but it is addressed by DOT through the United States Coast Guard.)
3. Reduce the environmental impact of hazardous materials released in transportation, especially in those areas where the environment is unusually sensitive to environmental damage (e.g., reservoirs for drinking water, national parks, and other fragile areas).

Relationship Between Strategic Goals and the Outcome Goals:

RSPA's Strategic Goal--Environment--directly supports DOT's Strategic Goal--Human and Natural Environment. Outcome goal one searches for new practices and technologies to protect the environment. It promotes DOT's Strategic Goals--Human and Natural Environment, and Safety--by ensuring that future transportation systems are environmentally friendly and are accepted by the communities they serve. Outcome goal two is a key measure of industry and government efforts to minimize the release of harmful pollutants to the environment. Outcome goal three recognizes that, in spite of our best efforts, releases will occur and it seeks to improve our capacity to respond and to minimize environmental damage. Outcome goals two and three also support DOT's Strategic Goals--Human and Natural Environment and Safety.

How We Will Achieve the Strategic Goal for Environment:

1. Work with other agencies, the regulated industry and communities to promote the use of environmentally friendly technologies and the most appropriate practices.
2. Collect and analyze information on the causes of incidents and impact of transportation on the environment to target and address pollution problems.
3. Encourage risk assessment to focus RSPA and other Federal agencies efforts on achieving the greatest systemic improvements.
4. Ensure compliance through training, education and inspection programs. When compliance fails, enforce regulations through strict penalty and remedial actions.
5. Provide training and guidance material to assist communities in mitigating environmental consequences of releases.
6. Invest in research and technology for environmentally friendly and sustainable transportation systems.
7. Build an environmental index of the most important areas to protect, identifying accident causes and consequences, monitoring major spills and remediations, and studying oil pipeline company integrity management operations, to target and address pollution problems.
8. Develop, through domestic and international fora, criteria based requirements for substances that are hazardous to the environment for adoption in domestic and international regulations.

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RSPA STRATEGIC GOAL--RESEARCH AND TECHNOLOGY: *Foster innovation through science and technology to support the achievement of national transportation goals including safety, mobility, economic growth and trade, human and natural environment and national security.*

Outcome Goals:

1. Help achieve a departmental and federal consensus on transportation science and technology strategy and plans.
2. Develop and deploy system-level solutions to transportation challenges.
3. Sponsor research to identify and develop multi-disciplinary, cross-cutting transportation solutions, such as human factors research.

4. Develop and demonstrate commercially viable medium and heavy-duty low emission vehicles in partnership with the Department of Energy (DOE)

Relationship Between Strategic Goal and Outcome Goals:

RSPA's Strategic Goal--Research and Technology--directly supports DOT's Corporate Management Strategy--Research and Technology (R&T) and each of DOT's Strategic Goals. Outcome goal one advances RSPA's R&T strategic goal by better articulating the Department's and the Federal Government's transportation R&D agenda and priorities. Outcome goal two ensures the application of research and technology to foster continuous improvement, innovation, and sound business practices in transportation organizations. Outcome goal three fosters innovation through near- and long-term research and the promotion of public/private partnerships. Outcome goal four advances our strategic goal by increasing mobility and reducing harmful emissions. All of RSPA's outcome goals support DOT's Corporate Management Strategy--Research and Technology--and together support each of DOT's Strategic Goals.

How We Will Achieve the Strategic Goal for Research and Technology:

1. Improve transportation system performance and economic competitiveness by supporting the development of new technologies and applying new and existing technologies to transportation applications. (Includes: fostering technology-based public-private partnerships; coordinating research to avoid duplication; leveraging to optimize resources; reducing regulatory and institutional barriers; employing creative financing; bench marking activities; and creating and deploying a R&D tracking system to share DOT R&D program and budget information.)
2. Jointly manage a program with the Department of Energy to develop, demonstrate and deploy advanced vehicle technologies, with an emphasis on medium and heavy-duty vehicles. (Includes: partnering with all levels of government, industry and academia.)
3. Support enabling research in areas, such as human factors and energy and environment. Human factors research will focus on two safety initiatives--Advanced Instructional Technology, including lifetime driver learning, and Alertness Enhancement and Fatigue Detection. Energy and Environment will focus on demonstrating commercially viable, energy-efficient, and environmentally friendly next generation vehicles, particularly marine vessels.
4. Decrease the time and cost required to apply innovative technologies and concepts to transportation-related products, systems and services.
5. Collaborate with industry on R&D efforts, with potential work in stress corrosion cracking, improved leak detection, damage prevention techniques, mapping technologies and other information management systems, and assessing the impact of natural disasters.

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RSPA STRATEGIC GOAL--EDUCATION AND TRAINING: *Build and continuously develop a highly-skilled transportation workforce.*

Outcome Goals:

1. Increase student awareness and preparation for transportation careers through the Garrett A. Morgan Technology and Transportation Futures Program.
2. Establish university research and education centers to prepare future transportation professionals.
3. Enhance the skills of current transportation professionals.

Relationship Between Strategic Goal and Outcome Goals:

RSPA's Strategic Goal--Education and Training--directly supports DOT's Strategic Goal--Economic Growth and Trade and Safety, and indirectly supports DOT's Corporate Management Strategy--Research and Technology (Education and Training). RSPA believes that it has a unique role to play in shaping and guiding the organizational, institutional, and human components that lead to transportation excellence. The three outcome goals address the relationship among people, organizations, and institutions in achieving the ideal transportation system of the future. The goals address needs for enhanced partnerships, better education, work force proficiency, and management innovation required to advance transportation. RSPA's first two outcome goals support DOT's Strategic Goal--Economic Growth and Trade and indirectly support DOT's Corporate Management Strategy--Research and Technology (Education and Training). The third outcome goal directly supports DOT's Strategic Goal--Safety and indirectly supports DOT's Corporate Management Strategy--Research and Technology (Education and Training).

How We Will Achieve the Strategic Goal for Education and Training:

1. Make nationwide students aware of transportation career opportunities and ensure that they have the skills and knowledge required for specific transportation jobs.
2. Develop transportation curricula for use by secondary and university-level institutions.
3. Identify or create models for management and education programs and best practices that improve transportation industry performance.
4. Inventory existing RSPA delivery systems capable of disseminating management and education models to customers.

5. Define and implement measurement systems to monitor and report on the performance of organizations.
6. Create incentives and recognition for high performance in all transportation entities.
7. Increase opportunities for the workforce to acquire the knowledge and skills necessary for creative transportation solutions.
8. Standardize across the modal incident information systems the definition of human error as a cause of incidents.

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RSPA STRATEGIC GOAL--EMERGENCY MANAGEMENT: *Minimize the impact on people, property, and the environment following emergencies affecting transportation and ensure transportation readiness during civilian and national security crises.*

Outcome Goals:

1. Guarantee critical and timely transportation services during natural and man-made disasters and national security crises.
2. Minimize fatalities, injuries, and property and environmental damage that result from hazardous materials and pipeline transportation incidents.
3. Reduce the economic impact of emergencies affecting transportation.

Relationship Between Strategic Goal and Outcome Goals:

RSPA's Strategic Goal--Emergency Management--directly supports DOT's Strategic Goal--Mobility--and indirectly supports DOT's Strategic Goal--National Security. Emergencies affecting transportation include incidents involving hazardous materials transported by all modes, including pipeline, as well as natural disasters such as earthquakes or hurricanes, terrorist incidents or acts of sabotage and economic disruptions, including strikes by transportation workers. Outcome goal two is a direct measure of how well we are mitigating the safety and environmental consequences of hazardous materials spills, including pipelines. It is also a measure to capture our progress towards improved emergency preparedness and response. Outcome goal three recognizes that additional consequences of transportation emergencies need to be addressed that disrupt the economic well-being of communities and the nation. These three outcome goals directly support DOT's Strategic Goal--Mobility--and indirectly support DOT's Strategic Goal--National Security.

How We Will Achieve the Strategic Goal for Emergency Management:

1. Develop creative, innovative methods to address data needs for emergency preparedness and response based on a system-wide assessment.
2. Encourage emergency responders to utilize innovative data tools [e.g., the Global Positioning System (GPS) or the Geographic Information System (GIS)] to improve response.
3. Improve communication and collaboration among federal, state, and local government agencies with responsibilities for emergency preparedness and response.
4. Partner with federal/state/local government agencies to conduct training exercises and further develop regional emergency response structures.
5. Improve the development and delivery of training, education, and information materials related to emergency preparedness and response through better communication with our customers.
6. Collaborate with government and private sector organizations to move people, goods, and services into and out of areas affected by natural or man-made disasters.
7. Support and expand efforts under the Project Impact program to establish partnerships among Federal, state, local government, and private interests to mitigate the effects of natural disasters by making communities disaster resistant through increased preparation, planning and training.
8. Maximize the cross-cutting nature of disaster response through the increased involvement of the modal administrations within DOT, other Federal agencies, state and local governments, and private entities to improve the rapid delivery of relief supplies and equipment and the restoration of any damaged segments of the Nation's transportation infrastructure.
9. Increase inter-agency planning and coordination to position DOT for rapid response to national security emergencies domestically or abroad in order to bolster the security of the United States.

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V. RSPA'S CORPORATE MANAGEMENT STRATEGIES

Research and Technology:

RSPA supports the Department in advancing research and technology to help shape a fast safe, efficient, accessible and convenient transportation system for the 21st Century. Through its role facilitating Departmental priority setting, RSPA is well positioned to recognize opportunities to apply innovations

developed in one area and transfer them in another. This is true inside the national transportation system, within DOT, or between RSPA programs themselves. The University Transportation Centers (UTCs) and the Volpe Center are leading international institutions which sponsor and conduct research in numerous areas. Their findings will be used to focus multimodal programs, such as advanced vehicles, and contribute to the Department's strategic goals for Economic Growth and Trade, and Natural and Human Environment. Targeted research will also be used to support safety; examples of areas that may benefit include hazardous materials compliance and enforcement through the application of state-of-the-art technology, and RSPA's work in emergency management through the application of innovative data tools.

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One DOT/One RSPA

In support of DOT's strategic plan, RSPA will perform various functions for the Department. The Volpe Center and the Transportation Safety Institute (TSI) also support the operations of other modal administrations. Because neither the Volpe Center nor TSI are funded by congressional appropriations, each must seek out contracts and be responsive to their customers in a competitive environment. This activity-based funding helps ensure that each remains entrepreneurial and innovative but does not guarantee it. To truly achieve One DOT/ONE RSPA as a management strategy, the Volpe Center and TSI will need to provide continuous improvements in resource, financial, capital and budget management and planning to ensure that internal business practices are streamlined, innovative and equitable. As part of this process, RSPA's Administrator will monitor each organization to further continuous improvements in all business practices.

RSPA will also support DOT leadership in government-wide transportation and technology programs through its support to the National Science and Technology Council and its strategic planning for departmental research programs. These roles will promote the efficient use of taxpayer dollars, align public and private sector research efforts, and keep a systems perspective of transportation before key decision-makers.

A visionary, new DOT initiative is the Garrett A. Morgan Technology and Transportation Futures Program. RSPA, with its strategic goals of promoting education, research, and opportunities in transportation, is charged with pulling together the diverse elements of DOT in an effort to guarantee that the nation has the transportation workforce it will need for the 21st Century. Distinct among federal programs, this initiative will apply innovative partnerships with industry, labor and other government agencies to leverage minimal federal support into a powerful community effort.

RSPA, through the Office of Emergency Transportation, is a key departmental resource during national emergencies. By coordinating and executing crisis management on those occasions when a disaster effects more than one mode, RSPA's Administrator provides the Secretary with a "one-stop shop" for emergencies. RSPA will develop improved response plans to better assure a well coordinated response

when emergencies occur.

Since safety is the North Star guiding DOT's work, RSPA's Office of Hazardous Materials and Office of Pipeline Safety will continue to play an important role in writing and enforcing regulations that govern the movement of hazardous materials across land, sea and air. RSPA works with the other modal agencies to promote a sound regulatory regime and compliance program.

As an organization with a variety of responsibilities, RSPA must work toward operating as a single unit, not a collection of distinct programs. In that sense, RSPA thinks of itself as the embodiment of One DOT. Toward this end, RSPA will create several functional councils which cut across the different programs encompassing the organization. These councils: Risk Assessment, Research and Technology, Environment, and Enforcement represent key activities that benefit from the synergy of sharing knowledge, whether the innovation or best practice originates in the Office of Pipeline Safety, the Office of Hazardous Materials Safety, the Volpe Center, or another unit.

To better unite our employees together we will encourage internal communication by setting up

Internet-based "chat rooms" and supporting electronic mail programs that allow regional and headquarters staff, members of the RSPA councils, as well as the different programs to communicate with each other.

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Human Resources:

An organization is only as good as the employees who constitute it. RSPA will work toward several programs to collectively promote a vibrant, innovative, and culturally diverse workforce.

- *Awards and Recognition:* RSPA will use its recently implemented awards and recognition policy to reward excellence and promote the achievement of our strategic goals by individuals and teams. The awards and recognition program will be aligned with the Department's effort to steer individuals to organizational goals.
- *Worklife Policies:* We will continue to practice policies, such as telecommuting, which provide a balance between employees' professional and personal goals with organizational needs. We also support the Employee Quality Council (EQC), RSPA's employee-based advocacy group.
- *Learning and Development Policy:* RSPA will use Individual Development Plans (IDPs) to ensure opportunities for individuals to continuously build skills which support the achievement of RSPA's outcomes goals. As part of our overall approach to employee development and in support of One RSPA, we will also emphasize Organizational Assessments to consider broad, cross-cutting, cross-functional issues, new directions, or opportunities to make changes or

improvements necessary to achieve one or more of RSPA's strategic goals.

- *Workforce Composition and Human Resources Redesign:* Through our recruiting and development practices we will promote DOT's and RSPA's diversity policy to ensure that our employees reflect the national workforce. As part of our policy, we will equip our staff to provide a positive climate for people of many different cultures, backgrounds and experiences. We will also continue to evaluate and improve our Human Resource Management programs to identify, share and adopt best practices throughout DOT.
- *Performance Management:* We will link RSPA's employee performance evaluations to RSPA's strategic plan outcome goals and provide continuous feedback to employees about performance to improve individual and organizational performance.

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Customer Service:

All parts of RSPA strive to stay linked to the various communities it serves. Whether it is the regulated industries of pipeline and hazardous materials, organizations conducting research and development based in the public and private sectors, or the emergency management community at the national, state and local levels, there are a variety of means RSPA will employ to stay responsive.

- *Internet Accessibility:* The easy availability and low-cost of electronic transmission offers RSPA with a revolutionary opportunity to provide citizens and stakeholders with information on nearly everything RSPA undertakes will be instantly available to those with a computer and modem. This will include: improved information through electronic Freedom-Of-Information-Requests (FOIA); a comprehensive listing of regulations, applications and forms; grant opportunities; descriptions of innovative public-private partnerships; and the state-of-the-art Hazardous Information Management System (HMIS).
- *Public-Private Partnerships:* While RSPA issues and enforces regulations, much of the new wave of work involves reaching out to the communities we serve. With the pipeline safety programs this means working with individual companies to tailor a regulatory regime appropriate to its record of pipeline safety. This risk-assessment strategy will establish a symbiotic relationship whereby companies share information with government and the public and, in return, receive increased operating flexibility. We also work closely with our State agency partners to more fully use risk-based factors in oversight of intrastate pipelines in different regions of the country and those interstate pipelines for which States serve as our agent. In the research and development area, expanded partnerships with industry, universities, and independent researchers will better ensure technological solutions to enrich the transportation system for years to come.

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Information Technology:

RSPA is committed to deploy information systems which are secure, reliable, compatible and cost effective to better accomplish RSPA's mission. This will be achieved by providing superior data and architecture management, enhanced telecommunications capabilities, improved information and data sharing, more efficient data collection and retention procedures, and security process improvements. We will do this through implementation and adherence to our "Information Resource Management Five Year Plan", our "Year 2000 Management Plan", and by following our "Information Technology Architecture" guide. To ensure that we are successful, RSPA has begun an in-depth study of its information resource management and information technology program to provide adequate planning for the future and to guarantee that sufficient resources are identified and systems are in place to maximize their productive use. RSPA will expand the use of in-house video-conferencing to help support program needs with a focus on emergency transportation and communications with RSPA field offices and industry partners. RSPA also plans to expand its use of electronic commerce to meet agency needs through posting contract solicitations on the Internet and is planning to partner within the Department on an Electronic Grants project.

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Resource and Business Process:

As part of our strategic direction, RSPA will take actions to foster innovative and sound business practices to help us achieve our strategic goals. We intend to use the budget process to ensure that fiscal resources are aligned with each of our strategic goals and support decision making. In a related area, we will establish a process to evaluate our current financial policies, procedures and internal controls to identify any weaknesses to ensure that we receive a "clean" audit opinion in DOT's Consolidated Financial Statements by FY 2000.

Through the Volpe Center, RSPA will take steps to provide for continuous improvements in resource, financial, capital and budget management and planning to ensure that internal business processes are streamlined, innovative and equitable. The Volpe Center will also contribute to the Department's benchmarking and best practices initiatives using recognized quality programs, such as the President's Quality Award Criteria--a set of standards based on Malcom Baldrige Criteria for the corporate sector, by which Federal agencies can measure improvements in performance. For example, the Volpe Center, together with the FAA, FHWA and the US Coast Guard, recently conducted a pilot benchmarking study to compare their performance with Malcom Baldrige award winners. In support of rulemaking activities, we will build on efforts to provide the public with opportunities to participate in the notice and comment procedures using electronic means and expect to expand operation of Internet accessibility to the dockets management system.

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VI. IMPLEMENTATION OF RSPA'S LONG-TERM STRATEGIC GOALS WITHIN THE DEPARTMENT AND THEIR RELATIONSHIP TO THE ANNUAL PERFORMANCE PLAN

RSPA's Strategic Goals are aligned with DOT's to better overall performance. We are committed to implementing our strategic plan by infusing it into the budget process, supporting it through day-to-day activities within the operating offices, and reinforcing the strategic goals and outcomes through the actions of our political and senior career officials.

Under the Government Performance and Results Act of 1993, annual performance plans are required by Federal agencies, including DOT. The Department's first annual performance plan was prepared for FY 1999 and is intended to link DOT's Strategic Plan, through performance goals, to DOT's budget. To contribute to DOT's overall performance, RSPA's long-term Strategic and Outcome Goals directly support DOT's Annual Performance Plan through RSPA Performance Goals. These goals form the basis by which we will measure our near-term achievements toward our long-term strategic goals, given RSPA's level of budgeted resources. Our success, or failure, in each of these areas will be our gauge--and a scorecard for the American public--to communicate RSPA's and, ultimately, DOT's near-term progress toward meeting the intended strategic goals.

Individual linkages to DOT's FY 1999 Performance Plan, by RSPA Strategic Goal, RSPA Performance Goal(s) and DOT's Strategic Goal(s) are summarized below:

RSPA Strategic Goal--Safety

[Links to DOT's Annual Performance Plan for DOT's Strategic Goal--Safety:](#)

Pipeline and Hazardous Materials Performance Goals for FY 1999

- Reduce the number of natural gas transmission and hazardous liquid pipeline failures.
- Reduce the number of incidents in all pipelines caused by outside force damage.
- Reduce the number of serious reportable hazardous materials transportation incidents.

RSPA Strategic Goal--Environment

[Links to DOT's Annual Performance Plans for DOT's Strategic Goal--Human and Natural Environment:](#)

Pipeline and Hazardous Materials Performance Goals for FY 1999

- Beginning in 1999, reduce by 2%, the average quantity of liquid hazardous materials released by pipeline to the environment per serious transportation incident. By 2008, reduce these releases by 20%.

- Beginning in 1999, reduce by 4%, the average quantity of liquid hazardous materials released by all modes to the environment per serious transportation incident. By 2008, reduce these releases by 40%. Note: This performance goal does not include releases by pipeline nor bulk marine transport.

RSPA Strategic Goal--Research and Technology

[Links to DOT's Annual Performance Plan for DOT's Corporate Management Strategy--Research and Technology and each of DOT's Strategic Goals:](#)

Research and Technology Performance Goals for FY 1999

- Supports accomplishment of all DOT Strategic Goals through integration of transportation R&D plans, programs and budgets within DOT.
- Advance DOT's Research and Technology Management Strategy.
- Continue support of DOT's role in the National Science and Technology Council (NSTC).

RSPA Strategic Goal--Education and Training

[Links to DOT's Annual Performance Plan for DOT's Strategic Goal--Economic Growth and Trade:](#)

DOT-Wide Performance Goals for FY 1999

- By the end of CY 2000, reach one million students through the Garrett A. Morgan Technology and Transportation Futures Program (reach at least an additional 300,000 students by the end of CY 1999).
- By 2002, increase by 5% the number of graduate degrees awarded by university programs receiving DOT funding to advance transportation education (annually take incremental steps to reach this longer-term goal).

RSPA Strategic Goal--Emergency Management

[Link to DOT's Annual Performance Plan for DOT's Strategic Goal--Mobility:](#)

Emergency Response Performance Goals for FY 1999

- Collaborating with FHWA and FEMA, ensure that relief supplies move quickly into disaster areas (ensure that 80% of relief supplies arrive within established time criteria during 1999).

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VII. PROGRAM EVALUATIONS

RSPA's strategic and outcome goals describe how we will carry out our mission and identify our intended results. To determine how effective we are in achieving these results, RSPA has expressed measurable objectives--performance goals and indicators--linked to each of our major programs and related activities. In preparation of the Department's, and our strategic plan, we have committed to undertake two Program Evaluations to conduct an assessment of how well we are doing in our hazardous materials and pipeline safety programs. Program Evaluation represents a formal methodology for assessing program impact, complements performance measurement and uses analytical techniques to assess the extent to which a program meets intended outcomes or results.

Program Evaluations that we plan to undertake are summarized in the table below in terms of their linkage to DOT and RSPA Strategic Goals, RSPA programs, methodology, scope and estimated completion date:

Program Evaluation	DOT/RSPA Strategic Goal(s)	Methodology*	Scope	Estimated Completion Date
DOT-wide Hazardous Materials Compliance and Enforcement Program (Multi-modal)	DOT--Safety and Human and Natural Environment RSPA-- Safety and Environment	Combination	Evaluation of DOT's approach to compliance and enforcement to determine if it optimizes hazardous materials safety.	2000
Pipeline Risk Management Project (RSPA)	DOT--Safety and Human and Natural Environment RSPA-- Safety and Environment	Longitudinal	Evaluation of whether pipeline operations based on risk management result in greater safety and service reliability.	2001

*Methodology Definitions:

Combination--Use of two or more complementary analytical techniques. In the instance of the DOT-wide Compliance and Enforcement program shown above, process and efficiency evaluations methodologies could be employed. Process evaluations typically assess the extent to which a program has been implemented as intended while an efficiency evaluation would assess the costs (inputs) of programs in comparison to either their benefits (monetary) or to their effectiveness (desired output).

Longitudinal--An evaluation that looks at measurements made over a span of time. For example, Before-After, or Time Series studies that examine data on both side of the date a program was implemented.

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VIII. UNDERSTANDING OUR OPERATING ENVIRONMENT AND THE EXTERNAL FACTORS AFFECTING THE ACHIEVEMENT OF RSPA'S STRATEGIC GOALS

Achieving RSPA's Strategic Goals--Safety, Environment, Research and Technology, Education and Training, and Emergency Management--can be influenced by a number of factors outside of our control.

The Department identified a number of key economic, political, social, environmental, national defense/security, and technology trends that will affect transportation and DOT. These factors will also affect RSPA as we strive to achieve our strategic goals. For instance, as part of the broader economic and political trends, we expect that the emphasis on smaller, less intrusive government will continue in the future, resulting in increased pressure to reduce public funding in many areas, including transportation. To work better and smarter in the years ahead, RSPA will leverage more of its resources through partnerships within DOT, and work closer with other Federal agencies, State and local governments, and industry to achieve mutual goals. The social trend toward population growth, and consequently more demand for hazardous materials in transportation by all modes including pipelines, will require RSPA to work more productively, increasing the use of non-traditional approaches, such as risk management and innovative industry incentive programs, to achieve regulatory compliance.

To get a better understanding of what factors will likely influence our accomplishments in transportation safety and the environment (hazardous materials and pipeline), research and technology, and emergency management during the life of our strategic plan, RSPA's employees undertook an environmental scan of their programs with an eye toward a longer term horizon--the year 2020. We realize that our ability to achieve our strategic goals can be affected by actions taken in areas that cross-cut our programs and goals.

For instance, as just indicated, we expect that the volume of hazardous materials shipments by highway, rail, air and water will increase in the future. To meet our safety and environmental goals, we will need to take account of the current level of hazardous materials transportation incidents and their consequences. The extent to which we will meet our goals will depend, in large part, on the size and timing of any increases in hazardous materials shipments, upon the level of resources we will have available, and the success of our regulatory, training and compliance solutions. We expect that increasing competition and the growing needs of commerce, national and international in scope, will continue to highlight the urgency for a more efficient transportation system, supported by a consistent set of laws and regulations. We also recognize that individual State actions can assist or detract from the success of our regulatory and compliance solutions.

We expect that large, new markets for energy transporters will develop in the next 20 years, challenging us to maintain or improve upon pipeline safety and our environmental record for liquid hazardous materials and natural gas transmissions. Environmental regulation, with increased public and political support, will add costs to oil companies and limit their ability to expand pipelines to meet new demands; RSPA will need to maintain or improve upon current levels of safety and environmental protection in the wake of increasing economic pressures on industry to save costs which could have the unintended effect of imperiling these two goals. To reach our strategic goals for pipeline safety and the environment, RSPA will need to take steps in an uncertain future through innovative approaches to outreach, training, and risk management. Our success is not guaranteed.

Changing transportation needs typically have been met through innovations in three areas: (1) transportation vehicles; (2) the physical infrastructure that supports their use; and, (3) the people who design, build, operate, and maintain the vehicles and infrastructure, and who plan and manage the transportation enterprise. By the year 2020, we expect that an information infrastructure will be a clear fourth solution. One of RSPA's challenges will be to lead the way through innovations in development and deployment of the information infrastructure.

In another area, the U.S. faces major challenges in meeting the growing demand for transportation goods and services while minimizing adverse energy, environmental and economic impacts. With continuing concern about air quality in U.S. cities and increasing levels of greenhouse gases, technological advances will be critical to ensuring that the Nation's transportation system is energy efficient and imposes minimal adverse environmental and societal impacts. By advancing the use of alternative fuels and/or propulsion systems, RSPA will lead a Department-wide Advanced Vehicle Technologies Program that will yield significant improvements in fuel economy, greenhouse gas emissions, and U.S. global competitiveness.

In the area of emergency management, we presume that improved damage/loss assessment technology will aid DOT's emergency response teams in providing timely and accurate information to assist senior leadership and operational responders. We also expect that visual representation of disaster areas will be readily available, immediate and comprehensive. To the extent that this technology is delayed or unavailable, we will be slowed in reaching our goals. It is also likely that new international threats will challenge RSPA's emergency management operations in the future and foster increased military and civilian contingency planning. In fact, the inherent nature of natural or man-made emergencies complicates disaster response since the timing, frequency and severity of emergencies are uncertain.

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IX. HOW THIS PLAN WAS DEVELOPED IN CONSULTATION WITH OUR EMPLOYEES, OPERATING ADMINISTRATIONS WITHIN THE DEPARTMENT, FEDERAL AGENCIES, OUR CUSTOMERS AND STAKEHOLDERS

At RSPA, we work with many of our customers and stakeholders on a day-to-day basis because of our

cross-cutting responsibilities within the Department and in our desire to serve the American taxpayer as we strive to accomplish our mission.

To develop our strategic plan, we undertook a number of steps to reach out to our employees, operating administrations within the Department, Federal agencies, our customers and stakeholders. From the beginning, RSPA's leadership made a commitment to support the development of not only a strategic plan but to encourage strategic thinking within RSPA as an on-going process.

We engaged in a number of outreach and communication efforts, activities and sessions with our employees, customers and stakeholders, other operating administrations within the Department and other Federal agencies. For instance:

Employees: As a first step, we provided formal training to approximately 40 of our employees in the basics of strategic planning and the Government Performance Results Act. A personnel list was developed under the direction of RSPA's Office of Policy and Program Support with input from each of the operating offices. It reflected, by design, a group of people with a diverse mix of talents, knowledge, skills and abilities compiled from both headquarters and field rosters, including the Volpe Center. This core group, under the facilitation of the same management consultant used to guide the Department's Strategic Plan, met several times, concentrated in a two-week period, to formulate RSPA's strategic direction and develop a draft strategic plan to guide the organization over the next several years. The draft strategic plan was revised to reflect comments from employees, stakeholders and customers who were provided an opportunity to review the draft plan via the Internet, direct mailings and telephone contact. The final RSPA strategic plan was refined by a few key employees, empowered by the larger core group. *Customers, Stakeholders and the Future Search Forum:* On January 21, 1998, before drafting RSPA's Strategic Plan, RSPA's senior political leadership convened a strategic planning session with over 40 of RSPA's stakeholders from industry, government and the academic community.

The purpose of the session was to provide a forum for developing a collective vision of the future of transportation and to identify the trends and forces that likely will impact RSPA as we head into the 21st Century. While the session produced some common ground, diverse perspectives were identified and expected. The structure and design of the *Future Search* session was intended to explore differences of opinion. All views were solicited to provide valuable input before RSPA began to align its strategic plan with the Department's recently updated strategic plan.

As part of the *Future Search* process, participants undertook three self-managed, structured tasks which lead to a collective vision of the future. The three tasks were to:

- 1) Develop an Environmental Scan. Through this process, participants identified trends which were recorded on a large wall map resembling a long-legged spider. Each leg represented a macro trend. As participants identified trends or issues, it was recorded as a tributary from one of the macro trends. After participants identified a significant representation of trends, they voted on them. The end result was a snapshot of the major trends and forces that the group felt would impact the transportation system in the

year 2020 and beyond.

The environmental scan revealed that three categories were high on everyone's list: (1) Risk Perception; (2) Enforcement & Regulations; and (3) Overlapping Jurisdictional Regulation. Discussion revealed various reasons why risk perception, enforcement and regulations, and overlapping jurisdictional regulations were so important. The actual theme, however, was safety; particularly public perceptions and attitudes regarding safety. There was broad recognition that the public's *perception* of risk is as important as the actual statistical risk related to transportation. For example, it was recognized that the public is very intolerant of aviation accidents, yet very tolerant of high numbers and rates of highway accidents. Government has an important role to play in communicating risk and assuring the public that transportation systems are safe and secure. Risk management emerged as a topic of discussion as a way for RSPA to move into the future.

Enforcement and regulation, and overlapping jurisdictional regulation received many votes because of their impact on safety. To be effective, government must ensure compliance without unnecessary duplication among Federal agencies or among Federal, state, and local governments. The enforcement and regulation category also reflected some views that RSPA should remain regulatory in nature and stressed the need to reduce unclear regulations, make them equitable and have a longer "shelf life" to provide an equal playing field for industry and commerce to flourish under a smaller, concise set of regulations. The category on overlapping and jurisdictional regulation was identified to recognize the difficulty presented by myriad governmental entities competing to regulate in a global transportation environment, frustrating safety and efficiency in transportation.

2) Create Future Scenarios. Using a process known as "self-managed dialogue," the group continued to work separately at each of eight tables and then as a group to develop the "big picture," or global view of the future trends from two perspectives. First, what would happen if, as a system, we did nothing to respond to the previously identified trends? Second, if we did respond to these trends, depict that preferred future and what it will take to make it happen. Each table produced their own future scenario, and shared it with the group.

The future scenarios session identified several major trends: public perception is an important driver of regulatory policies and government generally; government/private partnerships are valuable and need to be expanded; regulatory reform is necessary and should be based on sound research and analytical approaches; innovations in compliance approaches should be encouraged; advancements in transportation infrastructure and intelligent applications of technology should be fostered; and the need for safety and uniformity of regulation and approaches at all levels of government should be improved.

RSPA's role was highlighted by participants who said we should: assist industry through regulations that balance safety concerns with actual, not perceived, risks; act as a catalyst to improve public/ private partnerships; exercise leadership nationally by developing uniform policies and standards, especially with state and local governments; increase our flexibility and better recognize the needs of different constituencies to reach solutions; and, provide better, more accurate data, research and educational

information.

3) List accomplishments and missed opportunities. The final task was to identify the successes of the transportation system and acknowledge the opportunities missed. Each table team developed its list of what they were most proud of within the transportation system and what they could do differently in the future, especially in light of the forces and trends they previously identified. The segment set a context for the environment in which we operate--how the forces are interacting and where the synergy is for future collaboration and success.

Overlapping themes emerged from the session. Our accomplishments included advances in safety, communications and risk management. Our missed opportunities included government as an obstacle, lack of systemic partnerships, negative media articles, and excessive regulatory burdens.

Participants were generally proud of advancements made in improving the efficiency and safety of our extensive transportation system but felt that more needed to be done. However, government often gets in the way of real advances in technology, energy efficiency, economic and environment gains and needs to partner better at the state and local level. In fact, partnerships need to be addressed systemically.

As a group, most participants were also proud of RSPA's efforts to communicate in an open, direct manner with industry stakeholders. On their list of missed opportunities, however, they included concerns over seeing so many negative or erroneous media articles about the level of transportation safety and perceived risk. One role of the Federal government should be to better communicate actual risks, so that perceived risk is more accurate.

While participants supported RSPA's risk management approach to address safety issues, they were concerned that it was not used more widely and routinely and generally felt that more research and analysis was needed. Also, approaches that were non-regulatory and compliance oriented were noted as accomplishments, while progress still needed to be made to overcome a general sense of regulatory burden.

Additional opportunities were provided for our customers and stakeholders to present their views and react to our draft strategic plan when we published the draft plan and the results of the *Future Search Forum* via the Internet on RSPA's homepage on March 10, 1998, requesting comments.

Interested parties were able to view RSPA's March 10, 1998, Draft Strategic Plan, DOT's Strategic Plan, and our *Future Search Forum* report at <http://www.rspa.dot.gov/draftplan.html> and comment electronically at the following address: Strategic.Plan@rspa.dot.gov.

Other Departmental Administrations and Federal Agencies: RSPA also provided each of the heads of DOT's operating administrations and secretarial officers with an opportunity to review a hard copy of the plan as well as providing comments electronically via the Internet. Comments were received from a number of partner administrations within DOT as well as individual employees. We also identified

programs in other Federal agencies with whom we partner and coordinate activities.

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