Department of Mines, Minerals and Energy

Agency Mission, Vision, and Values

Mission Statement:

It is the mission of the Department of Mines, Minerals and Energy (DMME) to enhance the development and conservation of energy and mineral resources in a safe and environmentally sound manner to support a more productive economy.

Agency Vision:

We envision DMME as a nationally recognized energy, geology, and mineral extraction customer service agency that showcases worker and public safety and environmental protection; is highly regarded as a model agency known for the quality leadership of our people; uses strategic planning and management to provide the highest quality, innovative, one stop service and information that adds value in the eyes of our customers and the public; is trusted to exhibit the highest standard of competency and fairness in all aspects of our work and relationships; and empowers and trains our employees and treats them with fairness and respect creating the workplace of choice in our communities.

Agency Values:

- . Operating with a high sense of ethics, honesty, and integrity
- Demonstrating fairness, respect, responsiveness, straightforwardness, and deliberateness in our actions and communications.
- Functioning in a competent and knowledgeable manner
 - Functioning in a competent and knowledgeable manner, which emphasizes such principles as: consistency in service provision; attentiveness to customer's needs and their organizational and operational requirements; and being firm, yet flexible, in delivering services which focus on safety, energy, the environment, and economic development.
- Operating in a seamless manner to deliver quality customer services.
- Setting priorities to ensure that critical/essential services are delivered with quality by staff who are properly supported and equipped with adequate resources.
- Meeting the requirements of the law and externally driven policies, but always being innovative where flexibility
 exists.
- Innovation and creativity, Acknowledging that mistakes will be made from which we can learn.
- Trust and mutual respect.
- Doing the right things, ethically and honestly.
- Developing and training ourselves.
- Going beyond normal duties to help others and to seek and provide accurate and helpful advice.
- Assuming accountability for work quality, while at the same time, accepting responsibility for working seamlessly.
- Dealing with tough situations by keeping a sense of humor and being "good sports."

Department of Mines, Minerals and Energy

Agency Executive Progress Report

Current Service Performance

DMME measures its service performance through performance measures tied to our strategic goals and objectives.

DMME's first goal is to provide for safe and environmentally sound mineral resource extraction.

• The agency's first objective under this goal is to eliminate accidents, injuries, and fatalities at mineral extraction sites.

DMME measures the five-year rolling incident rate of serious personal injuries and fatalities at these sites to assess its current service performance. The incident rate for calendar year 2004 was 0.03 incidents per 200,000 work hours. This compares to the five-year rolling average of 0.38. The incident rate has shown a decrease since 1997.

DMME also is measuring the percent of safety violations issued to mineral extraction operators that have been successfully eliminated by the violations' abatement due dates. DMME does not have five years of data for this performance measure. The agency has data for four semi-annual periods of data. For the second half of FY 2004, mineral extraction operators successfully abated 98.3% of safety violations by their due dates. This compares to an average of 97.0% over the last four quarters.

• A second objective under this goal is to eliminate adverse environmental conditions and public safety hazards resulting from mineral and fossil fuel extraction.

DMME measures the five-year rolling average of mineral extraction sites with no adverse off-site environmental damage or public safety hazards. The FY 2004 rate was 97.5%. This compares to the five-year rolling average of 97.26%.

DMME also is measuring the percent of environmental protection violations issued to mineral extraction operators that have been successfully eliminated by the violations' abatement due dates. DMME does not have five years of data for this performance measure. The agency has four semi-annual periods of data. For the second half of FY 2004, mineral extraction operators successfully mitigated 85.6% of environmental violations by their due dates. This compares to an average of 81.0% over the last four quarters.

• A third objective under this goal is to improve the health, safety, and environmental knowledge and skills of mineral and fossil fuel workers.

DMME measures the percent of miners who rate DMME provided mine safety training as very helpful or very effective in helping them work more safely. DMME does not have five years of data to establish a five-year trend. The rate for the second half of FY 2004 was 72.3%. The average of this measure over the last four quarters for which data is available is 70.2% of miners rating the training as very helpful or very effective.

DMME's second goal is to encourage economic development through our customers' management of Virginia's energy, mineral, land, and water resources.

• DMME's first objective under this goal is to improve our customers' ability to establish and maintain efficient, viable operations.

DMME measures the percent of timely permit decisions made on initial permit applications for mineral mines, coal mines, and gas and oil operations. In FY 2004, DMME made 99% of its permit decisions within established deadlines. DMME's five-year average is 97.8% of permit decisions made within the deadlines.

Department of Mines, Minerals and Energy

• DMME's objective under its second goal is to improve our customers' capabilities in the development and wise use of rock, mineral, land, and water resources, and energy technologies.

DMME measures the availability of geologic and mineral resource information through the Virginia Geospatial Data Index. This is a measure of the availability of geologic and mineral resource information from DMME. It is based on the level of detail and degree of completion of geologic datasets, adjusted by a relevance weight related to the population growth in the county covered by the data. DMME has a target of 4% annual growth of the index. The index has grown by an average of 8% per year over the last 5 fiscal years.

DMME also measures the percentage of forms submitted electronically by our customers. DMME customers electronically submitted 60% of total forms in the second half of FY 2004. This compares to an average of 50.6% over FY 2003 and FY 2004.

DMME's third goal is to provide for the effective performance of DMME personnel. DMME strives to do "the right things well".

• Internal DMME performance objectives include enabling all employees to meet or exceed their annual employee objectives and for the agency to remain in compliance with external administrative mandates, achieve a rating of meets or exceeds expectations from 90 percent of customers surveyed regarding the delivery of DMME services, provide for the most efficient and effective application of DMME resources, and enable DMME employees to effectively utilize available technology.

DMME measures the performance of its administrative functions through a wide variety of performance measures. These include measures such as percent of employees at contributor or higher level in performance evaluations (0% does not contribute, 25% at contributor, 65% at exceeds, 10% at extraordinary in 2004 cycle), prompt pay compliance (98.8% of dollars paid within 30 days in FY 2004; target is at least 95%), payroll accuracy (99.8% accuracy on the first entry for FY 2004; target is at least 98%), proportion of vehicle service hours on direct repair services (73.1% of time for FY 2004; target is at least 70%), proportion of purchases made within 24 hours of requisition (97.8% in FY 2004, target is at least 95%); proportion of DMME staff rating administrative services as meeting or exceeding expectations (100% in FY 2004; target is at least 90%), and average hours of training per DMME employee (23.45 hours/employee for the first two quarters of FY 2005; annual target is 40 hours/employee).

Department of Mines, Minerals and Energy

Productivity

DMME productivity has increased markedly over time. As discussed below, DMME has provided an increasing larger set of services to a greater number of customers over the years. DMME has increased services in areas such as providing special services to small coal mines, providing special mine safety services such as onsite job safety analysis, and registering and providing services to over 1500 independent contractors on mineral extraction sites. DMME also created its gas and oil regulatory program out of what was a small part of its mine safety division. Today, the gas and oil program has 5694 sites under permit, and Virginia's gas industry produces as much natural gas as is used by all residences in the state.

- The agency has provided the increased services with fewer employees and resources than in past years, reflecting increased productivity.
- DMME currently has 235 FTE (full time equivalent) positions. DMME's FTE number has ranged from a high of 298 to today's low of 235 FTEs. DMME has averaged 243 FTEs over the last five years.
- DMME's FY 2005 budget is approximately \$27 million. This is the same in actual dollars as our FY 1986 budget, the agency's first full fiscal year of operation. Adjusted for inflation, this 1986 budget is equivalent to \$47.5 million today. DMME is today providing an increased level of customer services with only 57% of the inflation-adjusted budget from the agency's first full fiscal year.

Without an increase in its budget, DMME will face a budget shortfall in the coming biennium and will no longer be able to maintain its current level of services. DMME is supported by general funds, federal funds, and license and permit fees. The department budgets its license and permit fee funds over a multi-year period to account for annual variations in revenue and the fact that greater amounts of permit fees are collected when initial permits are issued than are collected in later years of a permit's life. DMME has used these funds to help ameliorate the effects of past budget cuts. The agency will deplete these funds in the coming biennium and will be unable to maintain its current service and personnel level without additional funds. DMME therefore is requesting an increase in general funds in the new biennium to maintain its level of service to customers.

Department of Mines, Minerals and Energy

Major Initiatives and Related Progress

DMME has initiatives underway to increase the safety and business capability of its customers.

- DMME is scanning and digitally placing maps of underground coal mines into a comprehensive mapping and data system. To date, DMME has scanned 21,000 underground mine maps into its records. DMME estimates there are an additional 11,000 maps available to be scanned. DMME is then geo-referencing these mines into a geographic information system and recording data on each mine into a searchable database. This will allow underground coal mine operators, gas well operators, consultants, economic development officials, the public, and DMME staff to find the locations of abandoned coal mines near their properties. Coal mines will be able to be operated with reduced risk of mining into adjacent active or abandoned workings or gas wells. Mining into abandoned workings exposes miners to dangers from water, carbon monoxide or methane inundation. Economic development officials can find new sources of water for projects or avoid areas with mine subsidence risk. The mine mapping system also is being used to identify new blocks of coal available for mining.
- Virginia experienced a horrible mining accident in August 2004 that resulted in the death of a three-year boy in his sleep from a rock dislodged by mining activity located upslope from his home. As a result of the investigation into the accident, Virginia enacted, as emergency legislation, amendments to the Virginia Coal Mine Safety Act and the Virginia Coal Surface Mining and Reclamation Act. These amendments, among other changes, require coal mine operators to submit, for DMME approval, ground control plans that will address control of mining operations located above residences or other occupied buildings. Additionally, civil penalties for incidents resulting in personal injury or fatality to persons are being raised from up to \$5,000 per incident to up to \$70,000 per incident. DMME also worked with Virginia's coal mining industry to develop needed amendments to the Virginia Coal Mine Safety Act. These changes also were included in the emergency legislation. DMME is working with Virginia's coal mining industry to implement these changes.
- Virginia enacted provisions in 1992 to enable development of coalbed methane resources. Prior to 1992, these natural gas resources were wasted by venting into the atmosphere during mining operations. The coalbed methane resources were undeveloped due to conflicts over ownership of the gas. The measure enacted in 1992 provide for escrowing funds when the ownership of the coalbed methane was in conflict. This allowed an exponential growth in Virginia's coalbed methane industry. A 2004 Virginia Supreme Court decision resolved the conflict for some of these conflicting claimants, opening the door for payments out of the escrow account to the rightful owners. DMME and the Virginia Gas and Oil Board are working to facilitate the processing of the escrow payments.
- Executive Order 54 (2003) directed state agencies to reduce energy use by 10% by 2006 compared to 2002. Agencies were directed to use energy savings performance contracting as a primary method to achieve these savings. DMME, working with the Departments of General Services, Treasury, and Planning and Budget, is assisting agencies implement energy savings performance contracts. DMME estimates approximately \$180 million in performance contracts will be in place by the end of FY 2005. DMME estimates that these energy savings performance contracts should save the Commonwealth \$13 million in energy costs per year.
- DMME is developing an electronic-business to government system for its mineral mining customers. This three-phase project is scheduled to be on line by July 2005. The system will provide mineral mine operators with the ability to electronically submit permit/license applications, make annual reports of tonnage mined and employee hours, and otherwise conduce their business with DMME online. DMME will work with mineral mine operators to expand the use of this e-government system through the next fiscal year. DMME also plans to use the computer systems developed for the mineral mining program to develop similar e-government systems for its gas and oil and coal mine safety programs.

Department of Mines, Minerals and Energy

Virginia Ranking and Trends

DMME has used the United States Senate and Productivity and Quality Award (SPQA) process to evaluate the effectiveness and efficiency of its services against the SPQA criteria. The SPQA criteria are based on the Malcolm Baldridge Award criteria. The criteria address leadership, strategic planning, customer and market focus, information and analysis, human resources, process management, and business results. DMME received the Medallion of Quality in 1997, and the Award for Continuing Excellence (ACE Award) in 2002. DMME was the first Virginia state executive agency to receive the Medallion and remains the only state agency or institution to receive the ACE Award.

DMME activities are regularly benchmarked against other states' activities in a number of areas. For example, other states and the federal Office of Surface Mining and Mine Safety and Health Administration have used DMME's underground mine mapping initiative as a national example of how to make information available about locations of abandoned underground coal mines. Based on DMME's experience with performance measurement, the Office of Surface Mining has used DMME as a key partner in developing its national performance measurement system. DMME's coal mining electronic permitting process has been benchmarked by numerous other states.

DMME has received awards in a number of other areas. For example, the DMME Division of Mines has received the federal Mine Safety and Health Administration's (MSHA) Annual Training Materials Competition first place and grand prize awards in 2003 and 2004 for its mine emergency and remote control miner training materials. The DMME Division of Mineral Mining's trucker safety training program, "Drive Home Safely" received MSHA's first place award in the 2002 State Metal/Nonmetal division competition.

Department of Mines, Minerals and Energy

Customer Trends and Coverage

- Mineral extraction workers: 8,846 served out of a potential 8,846.
- Public affected by mineral extraction operations: 120,000 served out of a potential 120,000.
- Affiliated mineral extraction business interests: 1,500 out of a total 3,000.
- Other governmental agencies: 170 served out of a potential 250.

(All Virginia residents are potentially served through DMME's mineral resource and energy efficiency programs. DMME does not track actual numbers of individual people served. DMME did respond to over 75,000 requests for information from customers in FY 2004.)

ANTICIPATED CHANGES IN CUSTOMER BASE

Mineral extraction operations:

- Recently there has been a sharp increase in energy costs, which has caused an increase in the number of new gas and oil wells permitted in Virginia to approximately 450 new wells per year. This trend is expected to continue as long as the price of natural gas remains above \$3-4/thousand cubic feet.
- DMME expects the number of coal mines to remain relatively stable and the tonnage produced to be stable or slightly increase as long as the price of coal remains above \$40/ton. There were xxx licensed coal mines in 2004. While the numbers of mines is expected to be stable, DMME expects to see an increase in regulatory activity as mine operators enlarge the size of existing mines or restart those that have been in temporary cessation.
- Coal mines must remain under permit and bond for a minimum time to guarantee that the land has been successfully reclaimed. There were 562 inspectable coal mining units (active mines, mines in temporary cessation, and mines in reclamation status) in 2004. DMME expects this number to remain stable over the next three years.
- In 2004, 106,308,288 tons of non-fuel minerals were produced from 472 mines. DMME expects that there will be a similar number of permitted mineral mines and an increase in mineral production as long as Virginia's economy remains strong and interest rates remain relatively low. Any offset in residential or commercial construction due to rising interest rates may be offset by additional funds available for transportation projects.

Mineral extraction workers:

- DMME expects the total number of coal miners to remain stable or increase slightly if coal prices remain high. However, a large percentage of working coal miners will be reaching retirement age over the next five years. Mining companies already are facing difficulties replacing these miners with new employees. This need for new miners is causing an increasing demand for coal miner certification training and other new miner services.
- DMME expects the total number of mineral miners to remain relatively stable. However, approximately onethird of mineral miners and one-half of mineral mine supervisors are replaced every five years, causing an ongoing demand for new mineral miner training and certification.
- As the number of permitted wells, gathering pipelines, and associated facilities increases in Virginia, the number of workers drilling the wells, constructing the pipelines and associated facilities, and maintaining the facilities will continue to increase. Virginia expects this trend to continue over the next three or more years.

Public affected by mineral extraction operations:

• DMME expects there will be additional people affected by mineral extraction operations in the coming years due to the following:

Department of Mines, Minerals and Energy

- Surface coal mining operations are locating closer to built-up areas as the available remotely located coal reserves suitable for surface mining dwindle.
- Natural gas producers have indicated that they may need to drill wells more closely together than is currently practiced. This will result in a denser population of well drilling locations and additional gathering pipeline locations
- As suburban and exurban sprawl moves farther out from cities, residential and commercial development overtakes the mineral mine locations.
- The increasing proximity between mineral extraction operations and the public is expected to result in increased opposition to the locations of new operations.

Affiliated mineral extraction business interests:

• Mining companies are increasingly outsourcing work on mines to independent contractors. The General Assembly gave DMME expanded responsibility for regulation of activities of these independent contractors on coal and mineral mines. As a result, DMME served over 2600 independent mineral mining contractors in 2004. The department expects the number of independent contractor customers to continue to grow.

General public and businesses:

• DMME expects the general public and business customer base to increase over the next few years. As development moves into new areas, there is increasing need for geology and mineral resource information to properly plan for and support new development. As energy costs increase, there is increased interest in energy efficiency and alternative energy information. DMME also is expanding the information available across the Internet. As information is more readily available in electronic form, additional customers will become aware of its availability, thereby increasing DMME's customer base.

Other governmental agencies:

• DMME expects the other governmental agency customer group to grow in the next few years. For example, economic development organizations and localities will increasingly need more information from DMME as the coalfield expressway is developed across Southwest Virginia. As electric utility restructuring further develops, DMME will be increasingly asked to assist the Commonwealth with purchasing from new electric suppliers. As energy prices continue to run high, additional state agencies will need assistance with energy efficiency projects.

Department of Mines, Minerals and Energy

Future Direction, Expectations, and Priorities

With the increasing number of new employees needed in the coal industry to replace retiring workers (average age over 50) and in the mineral mining industry to account for worker turnover (approximately 1/3 of mineral miners and $\frac{1}{2}$ of supervisors every 5 years), DMME will be asked to provide additional training. This will require DMME to expand partnerships with community colleges, develop standard training curriculum for use by company trainers, and implement other initiatives to meet the demand. Additional challenges in training will be due to the increase in non-English speaking workers entering the mineral mining industry.

TMDL, regulation of mining activities near and in ephemeral and intermittent streams and wetlands, increased emphasis on protection of endangered and threatened species, and settlement of court cases challenging national regulatory standards will make it more difficult to permit new coal mining operations. Coal mining customers will expect coordination among multiple regulatory agencies, using methods such as a consolidated mining permit application and consolidated agency review, to streamline the permitting process. DMME will be expected to take a lead in developing and managing such a consolidated permitting process in the face of increasing federal involvement in all aspects of mining regulation.

State agencies and institutions, as other consumers are facing higher energy costs. They will increase their demands for DMME services to help them minimize energy expenditures, reserving their funds for direct service delivery.

Development of the Coalfields Expressway (CFX) will require DMME to coordinate its coal mining regulatory programs with the construction activities to minimize disruption of the highway construction. DMME also will be asked to facilitate surface coal mining operations to provide new, flat sites for economic development along the CFX route.

With high energy prices, there is an expanding interest in developing offshore hydrocarbon deposits. DMME will be expected to provide technical support to state policy decision-making processes as the Commonwealth faces issues raised by the offshore activities.

Increasing development of mineral extraction sites near built-up areas will result in increased conflicts between the mineral extraction and other land uses. This will increase citizen opposition to new mines or gas or oil operations. There may be a growth of NIMBY groups and of environmental activist willing to use civil disobedience to stop development. DMME will be increasingly asked to referee these conflicts through its permitting process and handle increased numbers of formal and informal hearings about permitting activities.

Department of Mines, Minerals and Energy

Impediments

DMME is facing the need to replace a significant proportion of its workforce in the next five years. The average DMME employee is 52 years old and has 17.5 years of state service. As of May 1, 2005, 14 are eligible for to retire immediately, and 44 will be eligible to retire within the next five years (26% of DMME's workforce). This change in workforce will eliminate a significant amount of the institutional knowledge that helps DMME understand and face the challenges of providing high quality customer service in the worker safety, environmental protection, geology, and energy conservation arenas. DMME recruitment and retention will be made more difficult as the industry offers higher wages to deal with its labor shortage.

The authorization to collect fees to fund the federal Abandoned Mined Land (AML) program will expire on June 30, 2005 without renewal by the federal government. DMME receives approximately \$6 million per year to fund reclamation of abandoned coal mine lands causing public safety and environmental harm, to replace drinking water supplies damaged by historic coal mining practices, to respond to public health and safety emergencies (landslides, mine fires, land subsidence, mine blow-outs) from abandoned coal mine lands, and efforts to clean up streams damaged from acid mine drainage. The AML program also provides a significant portion of DMME's budget, both direct program costs and indirect costs supporting the agency's administrative services. Future unavailability of the AML funds would require a significant restructuring of DMME services.

There are a number of efforts underway to centralize state government activities, including leases in some geographic areas, information technology services, and enterprise applications. DMME maintains low-cost, efficient systems providing many of these functions to the agency. A move to use of centralized systems will cause at least a temporary loss in efficiency as the new systems are put in place, requiring transfer of information from agency legacy systems to the new systems, slower processing of the activities during retraining of agency employees, and increased agency costs to cover any new fees.

Agency Background Information

Statutory Authority

DMME's authority is found at Title 45.1 of the Code of Virginia.

- Chapter 14.1 provides for the establishment of the department and its divisions, and establishes the authority of the department director.
- Chapters 14.2 through 14.4, known as the Virginia Coal Mine Safety Act, establish the minimum requirements for coal-mine safety in Virginia. The DMME Division of Mines implements the Virginia Coal Mine Safety Act. Virginia's coal-mine safety program is implemented independent of the federal mine safety program. However, the federal Department of Labor, Mine Safety and Health Administration recognizes Virginia's state certifications of persons completing specialized duties on coal mines such as mine foremen and mine electricians.
- Chapters 14.4:1 through 14.6, known as the Virginia Mineral Mine Safety Act, establish the minimum requirements for mineral-mine safety in Virginia. The DMME Division of Mineral Mining implements the Virginia Mineral Mine Safety Act. Virginia's mineral-mine safety program is implemented independent of the federal mine safety program. However, the federal Department of Labor, Mine Safety and Health Administration recognizes Virginia's state certifications of persons completing specialized duties on coal mines such as mine foremen and mine electricians.
- Chapter 15.1, known as the Geothermal Energy Act, establishes requirements for geothermal energy operations in Virginia. There currently are no permitted geothermal operations in Virginia. The DMME Division of Gas and Oil would implement the Geothermal Energy Act if geothermal resources in Virginia were to be developed.
- Chapter 16 establishes environmental protection requirements for operation and reclamation of mineral mines in Virginia. The DMME Division of Mineral Mining implements the mineral mine reclamation act.

Department of Mines, Minerals and Energy

- Chapters 18 and 18.1 establish requirements for construction and operation of refuse piles, water and silt retaining dams on coal and mineral mines in Virginia. The DMME Divisions of Mines and Mineral Mining respectively implement the mine impoundment requirements for coal and mineral mines.
- Chapter 19, known as the Virginia Coal Surface Mining Control and Reclamation Act (SMCRA), establishes environmental protection requirements for operation and reclamation of coal mines in Virginia, and issuance of water discharge permits on coal mines. The DMME Division of Mined Land Reclamation implements the Virginia SMCRA. DMME implements this Act under primacy from the federal Department of Interior, Office of Surface Mining. The federal authority is established through the federal Surface Mining Control and Reclamation Act. Public Law 95-87.
- Chapter 21 establishes requirements for exploration for uranium ore in Virginia. Note that mining of uranium ore is prohibited under current Virginia law. There are currently no uranium exploration activities in Virginia. The DMME Division of Mineral Mining would implement this act were companies wish to permit uranium exploration activities in Virginia.
- Chapter 22.1, known as the Virginia Gas and Oil Act, establishes environmental protection and worker safety requirements for drilling, operation, plugging, and reclamation of gas and oil wells and related facilities, requires replacement of certain water supplies damaged by gas or oil well drilling, and sets rules for protection of the correlative rights of persons owning the gas and oil near producing wells. The DMME Division of Gas and Oil implements the Virginia Gas and Oil Act.
- Chapter 25 establishes the geologic and mineral resource investigation and information responsibilities of the DMME Division of Mineral Resources.
- Chapter 26 establishes the energy efficiency program requirements of the DMME Division of Energy.
- Chapters 20 and 24 establish Virginia's membership in the Interstate Mining Compact Commission and Interstate Oil and Gas Compact Commission.

Customer Base:

Customer Description	Served	Potential	
Mineral extraction operations	6,724	6,724	
Mineral extraction workers	8,846	8,846	
Public affected by mineral extraction operations	120,000	120,000	
Affiliated mineral extraction business interests	1,500	3,000	
Other governmental agencies	170	250	

Department of Mines, Minerals and Energy

Anticipated Changes In Agency Customer Base:

Mineral extraction operations:

- The number of permitted coal mining operations and gas and oil sites historically changes based on the price of energy. As the price per ton of coal, thousand cubic feet of natural gas, or barrel of oil increases, the level of reserves and production generally increases. Recently there has been a sharp increase in energy costs, with benchmark grades of oil selling for over \$50/barrel in March and April 2005. Spot Appalachian natural gas prices have ranged near \$6-7/thousand cubic feet through 2004 and 2005. The price of coal has increased to over \$50/ton for steam grade coal and over \$100/ton for metallurgic coal in March and April 2005.
- -This has caused an increase in the number of new gas and oil wells permitted in Virginia to approximately 450 per year. This has increased the per-inspector load of permitted wells, pipelines, and ancillary sites from 537 in 1999 to 5583 in 2004, or an increase of 173%. This trend is expected to continue as long as the price of natural gas remains above \$3-4/thousand cubic feet.
- -The number of Virginia coal mines and tonnage mined had been generally decreasing since 1990. With the current high prices of coal this trend has stabilized or been reversed. In 2004, 30,564,816 tons of coal were produced from 294 coal mines. DMME expects the number of coal mines to remain relatively stable and the tonnage produced to be stable or slightly increase as long as the price of coal remains above \$40/ton. While the numbers of permits is expected to be stable, DMME expects to see an increase in the number of permit amendments it must process as mine operators enlarge the size of existing permits or restart those that have been in temporary cessation.
- -Coal mines must remain under permit and bond for a minimum time to guarantee that the land has been successfully reclaimed. For most mines, the permits run for five years after final reclamation is established. Therefore, the number of permitted coal mines, active or in reclamation (referred to as inspectable units), has remained higher than the number of producing coal mines. There were 562 inspectable units in 2004. DMME expects this trend to be stable over the next five to seven as the older mines reach final permit and bond release are replaced with new or reopened sites.
- The tonnage of non-fuel minerals produced in Virginia historically changes in relation to the state of Virginia's economy. As the economy is strong, mineral mine production increases. As the economy is weaker, production decreases. The production of construction aggregates is also affected by the amount of highway construction and repair and amount of housing, commercial, industrial, and institutional development.

 o Recently, the aggregate industry has grown based on residential, commercial, and institutional construction. In 2004, 106,308,288 tons of non-fuel minerals were produced from 472 mines. DMME expects that there will be a similar number of permitted mineral mines and an increase in mineral production as long as Virginia's economy remains strong and interest rates remain relatively low. Any offset in residential or commercial construction due to rising interest rates may be offset by additional funds available for transportation projects. Most of the increase in production will come from existing mines. New mineral mines are increasingly hard to open due to population growth and development over the mineral deposit locations.

Mineral extraction workers:

- Coal mine employment in Virginia is related to the amount of coal produced in the state and the mechanization of mining. The number of Virginia coal miners peaked in 1949 at 18,341 coincident with the introduction of continuous mining machines. Since that time, coal mine employment peaked in 1977 at 15,742.
- -The number of coal miners in Virginia has decreased since 1977, with 10,265 miners producing coal in 1989, 8,318 producing coal in 1994, 5,456 production employees in 1999, and 4558 production employees in 2004. DMME expects the total number of miners to remain stable or increase slightly if coal prices remain high.
- -The average age of coal miner in Virginia is over 50. A large percentage of working miners will be reaching retirement age in the next five years. Mining companies are already facing difficulties replacing these miners with new employees. This need for new miners is causing an increasing demand for coal miner certification training and other new miner services.
- -Virginia coal mine workers' productivity has increased over time, so that fewer workers are needed to mine each ton of coal. This has primarily been made possible by the use of new technologies for coal extraction, ventilation

Department of Mines, Minerals and Energy

control, roof control, and other areas. Productivity has increased from 4,430 tons/miner/year in 1989 to 6,707 tons/miner/year in 2004.

- Mineral mine employment in Virginia changes based on the amount of tonnage produced in Virginia's mineral mines and changes in miner productivity. The number of mineral miners also is affected by the use of independent contractors on mineral mine sites. Some operators have shifted parts of operations away from their employees to contractor employees.
- -Virginia had 3,603 production workers in 2004. This compares to 4,816 mineral miners working in 1989, 4,104 mineral miners working in 1994, and 4,258 mineral miners in 1999. DMME anticipates the number of mineral miners to remain relatively stable in the coming years.
- -These factors have caused mineral miner productivity to increase from 18,647 tons/miner/year in 1989 to 29,505 tons/miner/year in 2004.
- As DMME does not have primary jurisdiction for worker safety on gas and oil exploration and production sites, it does not maintain records of the number of persons working on gas and oil exploration and production operations in Virginia. However, as the number of permitted wells, gathering pipelines, and associated facilities increases in Virginia, the number of workers drilling the wells, constructing the pipelines and associated facilities, and maintaining the facilities will continue to increase. Virginia expects this trend to continue over the next three or more years.

Public affected by mineral extraction operations:

- Public located near mineral extraction operations may be affected by activities at the operations. Such affects may include items such as ground vibrations from blasting, effects on groundwater quantity or quality, effects from uncontrolled release of material, such as flyrock or pushed tracked material, from the site, dust from blasting, construction, or travel on soft-surfaced roads, noise, light, or truck traffic. DMME's regulations control many of these impacts. While, some impacts, such as light, ambient noise, and local truck traffic are subject to local government land use controls, DMME receives and must investigate most complaints on all of the mining effects.
- DMME expects there will be additional people affected by mineral extraction operations in the coming years. -Surface coal mining operations are locating closer to built-up areas as the available remotely located coal reserves suitable for surface mining dwindle. This brings more of the public into close contact with the mining operations.
- -Natural gas producers have indicated that they may need to drill wells more closely together than is currently practiced. This will result in a denser population of well drilling locations and additional gathering pipeline locations. This will expose more people to the operations than with current practices.
- -Mineral mines have typically been located on the exurban fringes of built up areas. As suburban sprawl moves farther out from urban areas, residential and commercial development overtakes the mineral mine locations. This results in increasing numbers of persons affected by the operations.
- -The increasing proximity between mineral extraction operations and the public is expected to result in increased opposition to the locations of new operations.

Affiliated mineral extraction business interests:

- Numerous businesses support mineral extraction operations. These range from engineering firms that assist with permit preparation and facility design, to independent contractors providing non-mining services at mine sites (such as blasting, mobile equipment lubrication and maintenance, logging, overburden removal, plant construction), to independent trucking companies hauling mined material from a mine, to title attorneys, and others.
- DMME expects to see an increase in the number of affiliated business interests. Mining companies are increasingly outsourcing work on mines. DMME has been given expanded responsibility for regulation of activities of independent contractors on coal and mineral mines. DMME served over 2600 independent mineral

Department of Mines, Minerals and Energy

mining contractors in 2004. The department expects the number of independent contractor customers to continue to grow.

General public and businesses:

- DMME provides information on the state's mineral resources, geology, energy efficiency, and alternative energy development to the general public, educational customers (teachers, faculty, and students), facility managers, economic development officials, real estate developers, and other similar customers.
- DMME expects the general public and business customer base to increase over the next few years. As development moves into new areas, there is increasing need for geology and mineral resource information to properly plan for and support new development. As energy costs increase, there is increased interest in energy efficiency and alternative energy information. DMME also is expanding the information available across the Internet. As information is more readily available in electronic form, additional customers will become aware of its availability, thereby increasing DMME's customer base.

Other governmental agencies:

- DMME provides geologic, mineral resource, and energy information to a wide variety of governmental agencies.
- -Economic develop entities use mineral resource information in their business development activities. Other government agencies use geologic information to plan their projects. For example, this information is critical to proper planning of transportation projects and for completion of environmental impact assessments. Local governments use geologic information as an input to local land use planning processes. Geologic information is used by local or state agencies addressing groundwater issues.
- -State agencies are a primary customer of DMME energy efficiency information. DMME assists agencies in implementing energy service contracts to implement energy efficiency improvement projects in their facilities. DMME assists with submetering energy use in state facilities, and in procurement of alternative sources of energy (either new sources of electricity and natural gas or renewable energy supplies).
- -DMME provides information on the mineral extraction industry to other state and local agencies that have business relationships with the mineral extraction industry. These agencies look to DMME for guidance on how the extraction industry operates.
- -DMME coordinates mineral extraction regulatory activities with the similar regulatory agencies in neighboring states and in the federal government. Coal miners living in the area regularly cross borders in the course of their employment. Mining companies operate mines in all three states. Environmental impacts, such as water pollution, can cross state lines. Both the federal and state governments inspect coal mines for worker safety. This results in the need for reciprocity in worker certification and coordination of programs and regulatory coverage.
- DMME expects the other governmental agency customer group to grow in the next few years. For example, economic development organizations and localities will increasingly need information from DMME as the coalfield expressway is developed across Southwest Virginia. As electric utility restructuring further develops, DMME will be increasingly asked to assist the Commonwealth with purchasing from new electric suppliers. As energy prices continue to run high, additional state agencies will need assistance with energy efficiency projects.

Department of Mines, Minerals and Energy

Agency Products and Services:

Current Products and Services

Customer assistance:

- Job safety analysis, risk assessment, hazard identification, training, technical assistance, education, and cooperative projects in areas such as mine safety, environmental protection and land reclamation during mineral extraction, geologic investigation and mapping, economic mineral information, energy efficiency, and alternative energy development.
- Customer assistance services assists customers maintain safe and environmentally protective mineral extraction sites in compliance with regulatory requirements, use geologic and mineral resource information to manage development and natural resources, and appropriately use or conserve energy resources.

Inspection and enforcement:

- Thorough and consistent inspection and enforcement of laws and regulations addressing worker safety on mineral extraction sites, operational and reclamation environmental controls, and water quality. Assessing company and individual responsibility and liability as appropriate. Investigate accidents and complaints. Civil penalty assessment.
- Inspection and enforcement services assist customers maintain safe and environmentally protective mineral extraction sites in compliance with regulatory requirements.

Certification:

- Certification of persons performing mining and other specialized tasks on mineral extraction sites, such as certification of general coal miners, general mineral miners, mine foremen, blasters, electricians, underground diesel equipment mechanics, gas detection, hoisting engineer, and others.
- Mineral extraction worker certification services assures workers performing specialized tasks necessary to maintain safe mineral extraction sites are qualified to perform these tasks.

Permitting:

- \bullet Permit and plan review and approval, financial bonding, coordination with other agencies' regulatory requirements.
- Permitting and plan review services ensure mineral extraction operations can be conducted safely and protective of the environment (operations, land reclamation, water quality) and in compliance with mineral extraction laws and regulations.

Regulatory development:

- Establishing minimum operational and reclamation requirements consistent with governing laws for mineral extraction operations.
- Regulatory services ensure the legal standards governing mineral extraction operations will result in safe and environmentally protective operations while establishing the minimum required intrusion in permitted and licensed operations.

Land reclamation:

- Reclamation of abandoned coal mine lands, orphaned mineral mine lands, and orphaned gas and oil wells, and bond forfeiture sites; replacement of water supplies damaged from historic coal mining operations; emergency reclamation of imminent dangers caused from abandoned mined lands, restoration of streams damaged by acid mine drainage and sedimentation.
- Land reclamation services correct damage and mitigate risks of future damage from improperly reclaimed mineral extraction lands.

Correlative rights protection:

• Establishment of orders protecting the property interests for persons owning gas or oil interests around

Department of Mines, Minerals and Energy

producing gas and oil wells (called correlative rights). Management of escrow accounts where ownership of coalbed methane gas is contested and when owners of the gas or oil interests are unknown or unlocatable.

• Protects the ownership interests of persons owning oil or gas rights, ensuring that the proper owners will receive the proceeds from sales of produced gas or oil.

Grants and financing:

- Providing direct grants, serving as a grants manager for federal funds, and developing alternative financing sources for energy efficiency.
- Grant services provide funds to facilitate mineral and energy projects that would not be undertaken without the extra financial support.

Economic development:

- Managing economic development incentives for energy industry development and providing information in support of economic development (site geology, mineral availability, sources of water, and similar information).
- Economic development services support efforts to increase jobs and economic activity in Virginia.

Management and administrative support:

- Budget and accounting, human resource, purchasing, facility, equipment, information technology, internal audit, public information, issues management, evaluation, regulatory process, legislative affairs, training, management and direction services.
- Management and administrative support services assure compliance with externally mandated requirements (state and federal) and internal management standards, and promotes effectiveness and efficiency (doing the right things well) in DMME operations.

Factors Impacting Agency Products and Services

- Customer assistance requests are expected to increase as energy costs remain high, to address need to save money spent on energy supplies, and as high energy costs allow development of coal and natural gas in new areas. Utility restructuring provides the opportunity for state agencies and institutions to procure energy through new methods, increasing their needs for assistance. Mineral extraction companies will need additional assistance to comply with new water quality requirements necessary to implement TMDL implementation plans. Increased use of contractors on mineral extraction sites will increase requests for training and assistance from the contractors.
- Expansion of web-based electronic government capability will increase the efficiency of DMME permitting and licensing operations, and will increase the sales potential of geologic information and maps.
- High oil and natural gas costs have caused an increase in national interest in development of offshore hydrocarbon resources. Virginia offshore waters may contain such deposits. Assessment of these potential resources and the risk from developing and producing these resources will increase demands for DMME customer assistance in areas of geology, gas and oil operations, and related topics.
- Increased turnover in mine workers due to an aging miner workforce and competition with construction for experienced mineral mining workers will increase the need for training and certification services.
- The mineral mining industry competes with the construction industry for workers. As the construction workforce is increasingly made up of Spanish speaking workers, mineral mine workers will also become increasingly Spanish speaking.

Department of Mines, Minerals and Energy

- Implementation of new permitting requirements by the U.S. Army Corps of Engineers due to mountaintop mining controversies will require increased permitting coordination between DMME and other state and federal agencies.
- Increased availability of digitized underground mine maps will allow mine permits and plans to account for the presence of the old mine works and result in a safer mining environment. Permitting services will have to expand to account for the availability of this information.
- Permitting of new mineral extraction sites will become more difficult as surface coal mining sites move closer to built-up areas (due to the limited areas of remaining coal reserves) and suburban and exurban sprawl reaches areas where mineral mines are located. This will increase the likelihood of litigated issue hearings and court challenges to permit decisions.
- Development of the coalfield expressway (CFX) across Buchanan, Dickenson, and part of Wise counties will increase the need for waivers of coal mining regulatory coverage when the highway construction crosses coal-bearing property. This will increase DMMR permitting and inspection activity without any corresponding increase in permit fee revenue. This also will increase requests for DMME support of economic development activities as the new highway opens new areas for industrial, commercial, and residential development.
- Federal authorization to collect fees under the Abandoned Mined Land Program will expire in June 2005 without further Congressional action. Other non-monitory incentives also will end without Congressional reauthorization. Lack of reauthorization will severely limit DMME's ability to provide land reclamation services. The loss of federal funds also will affect DMME's ability to support its administrative support services.
- A recent Virginia Supreme Court decision clarified ownership of coalbed methane gas when surface owners, coal owners, and natural gas owners each believe they own the coalbed methane gas. DMME (and the Virginia Gas and Oil Board) will see increased numbers of requests to release funds out of escrow that have been held in cases of conflicting claims to ownership of the coalbed methane gas. This fund currently has a balance of over \$10 million.
- Past reductions in DMME budgets has caused the agency to increasingly rely on permit and license revenue. DMME will spend down fund balances from these sources in the coming biennium, and will need additional general fund support to maintain current levels of service.
- DMME will need to replace a significant proportion of its workforce in the near future. This will eliminate a significant amount of the institutional knowledge that helps DMME understand and face the challenges of providing high quality customer service. DMME will be faced with increasing difficulty in finding these high quality workers at state salary rates as mining and other energy industries have substantially increased the amount they pay employees to combat their labor shortages.
- Efforts to centralize state government management activities, such as lease centralization, information technology, and enterprise applications will effect the ability of DMME to maintain its management and administrative support services as effectively and efficiently as is currently provided. Costs, at least in the short term, will likely increase.

Anticipated Changes in Agency Products and Services

- The demand for DMME customer services are anticipated to increase as the mineral extraction industry faces continuing business challenges and as energy costs remain high.
- DMME training and certification services are anticipated to increase as the high number of older

Department of Mines, Minerals and Energy

workers in the coal industry retire and are replaced with younger workers needing to be certified. DMME training and certification services will also continue to grow as the construction industry competes with the mineral mining industry for workers, causing a substantial turnover in mineral mine workers. These services will need to be adapted to account for increasing numbers of workers with Spanish as their primary language.

- Permitting and plan review services will grow as mineral extraction operators take advantage of high energy prices by opening additional coal mines and drilling additional gas wells.
- In response to a recent Virginia Supreme Court decision addressing ownership of coalbed methane gas, there will be increased demand for payments of escrowed funds in cases where there were conflicting claims to ownership of the coalbed methane gas.
- DMME anticipates loosing more employees to mine operators as these companies increase their salaries to respond to their labor shortages. We will also be faced with increasing difficulty attracting the same level of experienced employees at current state salaries.
- DMME will be faced with increasing demands for administrative and management services as efforts to centralize state administrative services continue.

Agency Financial Resources Summary:

DMME's funding comes from federal funds (47%), general funds (40%), permit and license fees paid by mineral extraction operators (7%), bond forfeiture proceeds (4%), and miscellaneous sources such as state designated mine rescue team dues, civil penalty payments, and orphaned mineral mine or well reclamation or plugging revenues (2%).

	Fiscal Year 2007		Fiscal Year 2008	
	General Fund	Nongeneral Fund	General Fund	Nongeneral Fund
Base Budget	\$9,545,201	\$17,845,337	\$9,545,201	\$17,845,337
Changes To Base	\$1,252,564	(\$1,285,000)	\$8,919,505	(\$1,285,000)
AGENCY TOTAL	\$10,797,765	\$16,560,337	\$18,464,706	\$16,560,337

Agency Human Resources Summary:

Human Resources Overview

As of May 1, 2005, the Department of Mines, Minerals and Energy has an authorized FTE level of 235 with 226 positions currently filled and 9 vacancies. DMME has offices in Richmond, Abingdon, Charlottesville, Keen Mountain, and Big Stone Gap, Virginia. There are 16 Division of Energy and Division of Administration employees working in Richmond; 43 Division of Mineral Mining and Division of Mineral Resources employees working out of the Charlottesville office; 31 Division of Mines and Division of Mined Land Reclamation employees working out of the Keen Mountain office; 14 Division of Gas and Oil and Division of Mineral Resources employees working out of the Abingdon office; and 122 Division of Mines, Division of Mined Land Reclamation, and Division of Administration employees working out of the Big Stone Gap office. We use 41 role codes with the largest employee population (115) in the Minerals Specialist I role (inspection/permit/administrative staff). Field inspection staff is located throughout the state with the highest concentration in the seven southwest coalfield counties. They work out of all-terrain vehicles and telecommute via cell phone, laptop computers, and two-way radios. DMME will face human resource issues as the current workforce retires and as the mineral extraction industry increases its salaries in response to labor shortages.

Department of Mines, Minerals and Energy

Full-Time Equivalent (FTE) Position Summary

Effective Date: 5/1/2	2005	
Total Authorized Position	on level	235
Vacant Positions		9
Non-Classified (Fil	led) 3	
Full-Time Classifie	d (Filled) 222	
Part-Time Classifie	ed (Filled) 0	
Faculty (Filled)	0	
Wage		4
Contract Employees		2
Total Human Resource	Level	221

Factors Impacting Human Resources

- \cdot Dealing with the affects of an aging work force: DMME has an aging workforce. Currently fourteen employees are eligible to retire with full benefits (at least 55/30) and 44 will be eligible within the next five years (approximately 26% of the current workforce). The average age of the DMME workforce is 52 and the average number of years of service is 17.5
- Retention of highly competent workforce: DMME trains its workforce to be on the cutting edge of technology in the industry it serves. As a result, our employees become targets for other employees. DMME needs the ability to offer financial incentives to have its best employees stay with the agency.
- Demand for more services with less workforce: Over the past 10 years, DMME has lost 55 positions: 28 in the WTA; 12 in the 1996 budget reductions; 6 in the 2002 budget cuts; 7 in the 2003 budget cuts; and 2 positions to VITA in July 2004. As a result of these actions, we do not have positions available for attrition, or to replace employees out due to long term illnesses and disabilities. All positions within the agency have been designated "essential".
- Offering ongoing specialized training: DMME will have to maintain its commitment to offering specialized training to keep the workforce proficient in advancing industry and DMME technologies.
- Human resource sharing: Due to all of the factors listed above, the need to share personnel and resources will become a necessity to achieve goals set for programs and services.

Anticipated Changes in Human Resources

- DMME may need to replace 26% of its workforce over the next five years due to retirements. This is on top of other turnover. Additional resources will be needed for severance costs, recruitment, and to respond to salary competition.
- DMME will need to increase personnel and resource sharing to account for shortages in individual positions due to attrition or temporary vacancies due to illnesses or disabilities.

Agency Information Technology Summary:

Current State / Issues

• DMME has a robust in-house custom application development capability to meet its business needs. DMME has developed most of the applications DMME customers and staff use to meet regulatory responsibilities. Some of the systems were developed using legacy systems such as Universe and need to be updated to use current databases such as SQL. DMME must maintain these critical applications as information technology hardware and software and management of information technology changes.

Department of Mines, Minerals and Energy

• DMME has an extensive investment in mapping and underlying data. Layers show surface and underground mines (active and abandoned), gas and oil wells and pipelines, surface topography and uses, and related information. Expanded use of these maps and data are critical to the agency being able to meet its worker and public safety and environmental management responsibilities.

Factor Impacting Information Technology

- Changes driven by VITA transformation activities may change DMME's ability to serve external agency and internal information technology customers. This is likely to increase agency overhead costs to meet the transformation mandates.
- DMME customers are expecting to transact more programmatic and financial business with DMME across automated systems. This will require DMME to expand electronic government services.
- DMME customers regularly update their information technology systems. DMME must upgrade its systems to the same level to continue providing high quality service to these customers.
- Federal grantor agencies, such as the federal Office of Surface Mining set standards for information technology data such as from GPS systems. DMME must upgrade its systems to this same level in order to ensure interoperability with the federal agencies.
- DMME is part of the Commonwealth's implementing of the Statewide Agency Radio System (STARS). This will require replacing the agency's unique radio system with new equipment and training agency staff on use of the new system.

Anticipated Changes / Desired State

- DMME will need to fully implement and maintain comprehensive web-based and laptop computer based mapping and database systems to show locations of mines, gas and oil wells, pipelines and related facilities in relation to other land uses.
- DMME will expand its electronic-government systems to include its gas and oil and mine safety programs. The agency will expand appropriate parts of this e-government system, such as electronic financial transactions, to its non-regulatory programs.
- DMME will update its legacy Universe based systems to current technology such as SQL based systems.
- DMME will receive high quality and timely service from VITA, responsive to our locations in Southwest Virginia, our field staff located across the state, and office locations elsewhere in Virginia, with no increases in service costs.

Agency Information Technology Investments:

	Cost-Fiscal Year 2007		Cost-Fiscal Year 2008	
	General Fund	Nongeneral Fund	General Fund	Nongeneral Fund
Major IT Projects	\$0	\$0	\$0	\$0
Non-Major IT Projects	\$50,000	\$50,000	\$50,000	\$50,000
Major IT Procurements	\$67,500	\$157,500	\$67,500	\$157,500
Non-Major IT Procurements	\$0	\$0	\$0	\$0
Totals	\$117,500	\$207,500	\$117,500	\$207,500

Department of Mines, Minerals and Energy

Agency Capital Investments Summary:

Current State / Issues

- DMME owns its facility in Big Stone Gap, Wise County. This facility is twelve years old and requires increasing amounts of maintenance to replace or update systems and facility components (such as HVAC, carpeting, paint, pavement and walkways, landscaping) as they reach the end of their useful lives.
- Other DMME facilities are located in leased or other agency owned space.
- DMME must maintain a fleet of four-wheel drive vehicles for staff to access regulated mine sites.

 DMME operates its own garage-vehicle maintenance facility adjacent to its Big Stone Gap office to ensure cost-effective and reliable fleet operations.
- DMME maintains an agency radio system to provide for needed communication between field staff and its offices and among field staff. This system consists of in-vehicle and in-office radios and a series of repeaters located at high points throughout southwest Virginia. Most of the repeater sites are located at State Police radio towers.

Factors Impacting Capital Investments

- DMME will need to meet maintenance standards to maintain its facilities in top condition.
- The Commonwealth is implementing the Statewide Agency Radio System (STARS), which will replace the DMME radio system. DMME will no longer be required to maintain its independent repeater equipment.

Capital Investment Alignment

The majority of DMME customers are located in the seven southwestern Virginia counties and City of Norton. DMME must maintain its primary office and vehicle maintenance facilities in southwestern Virginia to provide the customer services necessary under the agency's mission.

Agency Goals

Goal #1:

Provide for safe and environmentally sound mineral and fossil fuel extraction

Goal Summary and Alignment:

Virginia needs energy and mineral resources to support its economy. Persons working at Virginia's mineral extraction sites, persons living in the vicinity of the sites, and Virginia's environment should be protected from the negative effects of producing these energy and mineral resources.

Statewide Goals Supported by Goal #1

- Be a national leader in the preservation and enhancement of our economy.
- Protect, conserve and wisely develop our natural, historical and cultural resources.
- Protect the public's safety and security, ensuring a fair and effective system of justice and provided prepared response to emergencies and disasters of all kinds.
- Ensure that Virginia has a transportation system that is safe, enables easy movement of people ar goods, enhances the economy and improves our quality of life.

Objectives For Goal #1

Department of Mines, Minerals and Energy

Objective 1.01

To advance the elimination of accidents, injuries, and fatalities at mineral and fossil fuel sites through June 30, 2008.

Measures For Objective 1.01

Measure 1.01.01

Serious personal injury-fatality incident rate

Measure Type: Outcome Measure Frequency: Annually

Measure Baseline: The five-year rolling average of this measure for 2004 is 0.038 incidents

per 200,000 work hours.

Measure Target: Reduce the five-year rolling average each year.

Measure Source and Calculation:

Data is collected from reports of serious personal injuries and fatalities submitted by permitted mine operators throughout the year and the reports of employee work hours reported by permitted mine operators on their annual tonnage reports submitted to DMME. The rate is calculated as the number of serious personal injuries and fatalities per 200,000 work hours. DMME evaluates the five-year rolling average of this rate to determine the trend.

Measure 1.01.02

Percent of safety violations successfully eliminated by the violations' due dates

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: Mineral extraction operators corrected 97.0% of safety violations by their

due date during the four calendar quarters of FY 2004.

Measure Target: Maintain at least a 95% elimination rate.

Measure Source and Calculation:

This measure is calculated using information from DMME's automated enforcement systems. Records of violations show date issued, target date for correcting the violation, and date the violation is corrected. The percentage is calculated based on total number of safety violations corrected by their due dates and of total safety violations issued.

Strategies For Objective 1.01

- DMME will identify and eliminate unsafe conditions and practices through assistance and consistent, thorough inspections to ensure compliance with laws and regulations.
- DMME will provide assistance to enhance safe mining and well site conditions and practices, including:
 - -Regular evaluation of customer operational risk factors and safety performance.
 - -Proactive review and consultation with customers and stakeholders concerning identified safety risks and needed improvements.
 - -Follow-up contacts with customers and stakeholders to evaluate the extent that risk and safety concerns are addressed.
- DMME will investigate accidents and complaints and take actions to prevent future occurrences of unsafe acts and conditions.
- DMME will assess company and individual responsibility for violations of laws and regulations and take appropriate actions to prevent future violations.

Department of Mines, Minerals and Energy

- DMME will minimize duplication of inspection activities through communication and coordinated inspections and investigations with other local, state, and federal agencies.
- DMME's divisions will collaborate on safety issues involving mining and gas and oil activities, including:
 - -Developing comprehensive automated mapping of all DMME mine, gas well, and geologic data.
 - -Communicating on issues of mutual concern related to mining and gas well activities.
 - -Increasing coordination of DMME inspection activities.

Objective 1.02

To advance the elimination of adverse environmental conditions and public safety hazards resulting from mineral and fossil fuel extraction sites through June 30, 2008.

Measures For Objective 1.02

Measure 1.02.01

Percent of mineral and fossil fuel extraction sites with no adverse off-site environmental

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: The five-year rolling average is as of the end of FY 2004 is 97.26%.

Measure Target: Reduce the five-year rolling average each year.

Measure Source and Calculation:

This measure is calculated using information from DMME's automated enforcement systems. Records of violations show whether there was any off-site damage or public safety hazard related to a violation of environmental laws or regulations. The number of sites with no violations causing off-site impacts is calculated as a percentage of permitted sites.

Measure 1.02.02

Percent of environmental violations successfully eliminated by the violations' due dates.

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: Mineral extraction operators eliminated 81.0% of environmental

violations by their due date during the four calendar quarters of FY 2004.

Measure Target: Maintain at least an 80% elimination rate.

Measure Source and Calculation:

This measure is calculated using information from DMME's automated enforcement systems. Records of violations show date issued, target date for eliminating the violation, and date the violation is eliminated. The total number of environmental violations eliminated by its due date is calculated as a percentage of total environmental violations issued.

Strategies For Objective 1.02

- DMME will provide assistance and inspections to ensure compliance with laws and regulations and to identify and eliminate adverse environmental conditions and public safety hazards. Assistance and inspections will be coordinated among DMME divisions and with other local, state, and federal agencies.
- DMME will identify "red zone" areas and ensure increased public protection through permitting requirements, inspections, and assistance.

Department of Mines, Minerals and Energy

- DMME will investigate health, safety, and environmental issues, concerns, and complaints.
- DMME will provide timely review and approval, consistent with laws and regulations, or permits, certificates, and plans.
- DMME will collaborate seamlessly on environmental and public safety issues involving coal and gas well activities, such as:
 - -Underground workings impounding water and slurry injection sites.
 - -Surface refuse impoundments.
 - -Automated mapping project.
 - -Water supply diminution or loss.
 - -Subsidence.
 - -Impacts of timber harvesting.
- DMME will work with customers and stakeholders proactively to seek joint resolution of significant and emerging issues.
- DMME will reclaim high priority and emergency, abandoned, orphaned, and forfeited sites using available resources.
- DMME will enhance inventory lists of abandoned, orphaned, and forfeited sites by capturing watershed, wetland, carbon sequestration, and economic development site information.
- DMME will pursue methods, such as external funding, partnerships, leveraging, and cooperating with other state and federal projects, to advance the elimination of adverse environmental and public health and safety hazards.

Objective 1.03

To improve the health, safety, and environmental knowledge and skills of mineral and fossil fuel extraction workers through June 30, 2008.

Measures For Objective 1.03

Measure 1.03.01

Percent of miners who rate DMME provided mine safety training as very helpful or very e

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: The five-year rolling average is as of the end of FY 2004 is 70.2%.

Measure Target: Maintain the five-year rolling average above 70%.

Measure Source and Calculation:

This measure is calculated using results of evaluations completed by miners attending DMME mine safety training. The percent of miners rating the information as very helpful or very effective in helping them work more safely (level 5 on a 1 to 5 scale) is calculated from the total number of miners in the training sessions.

Strategies For Objective 1.03

- DMME will provide for certification and related training programs that:
 - -Ensure required competency in critical job skills.
 - -Address the needs of mine operators and miners.
 - -Develop and promote web delivery capabilities.
- DMME will develop and provide educational services targeted to reduce trends in accidents, injuries, and health and safety violations.

Department of Mines, Minerals and Energy

- DMME will assess the education and training needs of mineral and fossil fuel workers and provide leadership for the development and delivery of innovative and effective training concepts and methods.
- DMME will partner with other providers of training programs and services and will participate in training with out entities.

Goal #2:

Encourage economic development through our customers' wise management of Virginia's energy, mineral, land, and water resources.

Goal Summary and Alignment:

Virginia should use its energy mineral resources in a way that minimizes waste of and enhances conservation of the resources, so that the resources are available for to support the state and the national economy.

Statewide Goals Supported by Goal #2

- Be a national leader in the preservation and enhancement of our economy.
- Protect, conserve and wisely develop our natural, historical and cultural resources.

Objectives For Goal #2

Objective 2.01

To improve our customers' ability to establish and maintain efficient, viable operations through June 30, 2008.

Measures For Objective 2.01

Measure 2.01.01

Percent of timely permit decisions on initial permit applications for mineral mines, coal

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: The five-year rolling average, as of the end of FY 2004, is 97.8%.

Measure Target: Maintain the five-year rolling average above 95%.

Measure Source and Calculation:

This measure is calculated using permit tracking data from DMME divisions. Each division totals the number of permit decisions make within the time deadlines for that program as compared to total permit decisions due that quarter. These numbers are used to calculate the percentage of timely permit decisions.

Strategies For Objective 2.01

- DMME will provide effective, timely, and useful assistance to its customers through site visits, referrals, training, consultative services, technology transfer, partnerships, or leveraging other resources, etc.
- DMME will involve its customers and stakeholders in continually identifying, developing, and implementing process improvements to include e-government, regulatory guidance, electronic information/data distribution, and technical assistance.
- DMME will work with federal agencies, coal mine operators, utilities, landholders, publicprivate partnerships, and community interests to expand land reclamation and development through remining.

Department of Mines, Minerals and Energy

- DMME will promote energy savings, use of alternative energy providers, and use of alternative energy sources with a focus on state facilities, communities, and local governments.
- DMME will evaluate the feasibility of involvement in energy, environmental, and economic development initiatives in key technologies, such as solar, wind, biodiesel, geothermal, synfuels, and hydrogen.
- DMME will identify, prioritize, conduct, and make available results of geologic and mineral resource investigations, which facilitate economic development.
- DMME will collaborate with state, regional, and local economic development organizations to provide information on the mineral and energy infrastructure useful for development opportunities.

Objective 2.02

To improve our customers' capabilities in the development and wise use of rock, mineral, land, and water resources, and energy technologies through June 30, 2008.

Measures For Objective 2.02

Measure 2.02.01

Virginia Geospatial Data Index

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: The index has grown by 8% per year since July 1, 2000.

Measure Target: DMME's target is to increase the index by at least 4% per year.

Measure Source and Calculation:

This measure is calculated based on data showing the level of detail and degree of completion of geologic information and maps available in web, digital, published paper, or open file form, adjusted based on a relevance factor related to population growth in each county covered by the data. The index is used to calculate percentage growth per year.

Measure 2.02.02

Percentage of customer forms submitted electronically.

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: DMME customers submitted approximately 60% of forms electronically

to DMME in FY 2004.

Measure Target: 75% of forms submitted electronically.

Measure Source and Calculation:

DMME divisions count the number of electronic form submissions using activity logs. The total number of form submissions is estimated by DMME program managers based on the level of business activity. This measure is calculated as a percentage of the number of forms submitted electronically as compared to an estimate of the total number of forms submitted by DMME customers.

Strategies For Objective 2.02

• DMME will identify, prioritize, develop, and make available information that meets customers' needs.

Department of Mines, Minerals and Energy

- DMME will support state, regional, and local economic development organizations to enhance development, such as:
 - -Industrial parks
 - -Commercial development sites
 - -Highway construction projects
 - -Utility construction
 - -Coal to liquid projects.
- DMME will conduct geologic and mineral resource investigations based upon a defined rationale that identifies the areas and concepts of investigation.
- DMME will seek opportunities to partner with stakeholders to develop mined land for economic
 development and other beneficial land uses, such as carbon sequestration projects, industrial
 development sites, and other types of facilities and uses.
- DMME will continue to improve the delivery of customer services via the DMME web site, including areas such as expanding the number of products that are electronically available.
- DMME will identify information needs, opportunities, and delivery methods and provide information on agency services and products.
- DMME will identify emerging issues, such as TMDL, AML continuation, remining litigation, offshore drilling, logging, single source coal reporting, and consolidated federal coal permitting and work with our customers to address potential impacts.

Goal #3:

Provide for the effective performance of DMME personnel.

Goal Summary and Alignment:

By maximizing the effectiveness and efficiency of its personnel, DMME will ensure that it is a benchmark for excellence in providing value-added services to its customers in an atmosphere of trust.

Statewide Goals Supported by Goal #3

- Engage and inform citizens to ensure we serve their interests.
- Be recognized as the best-managed state in the nation.

Objectives For Goal #3

Objective 3.01

To perform administrative functions in compliance with externally mandated and internal performance standards.

Measures For Objective 3.01

Department of Mines, Minerals and Energy

Measure 3.01.01

Rating in external audits, such as from the Auditor of Public Accounts (agency audit), D

Measure Type: Outcome Measure Frequency: Other

Measure Baseline: DMME has not received any written findings in the last APA and DOA

audits.

Measure Target: No written findings.

Measure Source and Calculation:

Data is derived from external audit reports. This measure counts the number of written findings in external audits.

Strategies For Objective 3.01

DMME will perform administrative functions to include financial management, personnel
management, general services, automated information services, public relations, issues
management, and evaluation services in compliance with state, federal, and agency regulations
and policies. DA will involve DMME employees in developing the procedures for compliance
and identifying opportunities for innovation and will ensure open communications with
employees throughout the process.

Objective 3.02

To enable all DMME employees to meet or exceed their annual employee objectives established in their Employee Work Profiles each year.

Measures For Objective 3.02

Measure 3.02.01

Percentage of employees at contributor or above in annual performance reviews.

Measure Type: Outcome Measure Frequency: Annually

Measure Baseline: 100% of DMME employees received a contributor or higher rating in

2004.

Measure Target: DMME's target is to have 100% of employees rated at contributor or above.

Measure Source and Calculation:

Data is derived from completed employee performance review forms. The measure is calculated as a percentage of employees being rated at contributor or above in annual employee performance reviews.

Measure 3.02.02

Average hours of training by DMME employees.

Measure Type: Output Measure Frequency: Every Six Months

Measure Baseline: 23.45 hours/employee for the first two quarters of FY 2005.

Measure Target: 40 hours/employee/year.

Measure Source and Calculation:

Data is taken from the DMME University training system. The system is used to generate a report of DMME training hours per employee.

Strategies For Objective 3.02

Department of Mines, Minerals and Energy

- Each employee will work with their supervisor to update their Employee Work Profile to successfully implement the Strategic and Operational Plans through:
 - -Documentation of work by position to facilitate cross training.
 - -Mentoring.
 - -Inter-divisional job exchanging, such as (1) Mines, Mined Land Reclamation, and Gas and Oil; (2) Mineral Mining, Mineral Resources, and Mined Land Reclamation; and (3) Administration and Energy.
 - -Technology and other skills training.
 - -Addressing the authority to accomplish expectations.
 - -Increased employee recognition and the use of rewards.
 - -Interaction necessary to ensure buy-in.
- Each of us will take personal responsibility for improving communications as reflected in each Employee Work Profile by:
 - -Giving priority to communications skills development.
 - -Including communications issues in operational team, staff, and section meetings.
 - -Participating in focus groups to solve specific communications problems.
 - -Interacting by sharing information and work experiences with other divisions when our actions affect those divisions' services.
- Each employee will obtain and document targeted annual training (recommended at 40 hours) through:
 - -Identifying needs in the Personal Learning Goals section of the Employee Work Profile.
 - -Full use of DMME University training opportunities and tracking system including pursuing specialized needs through sources, such as internal training seminars, trade associations, partnerships with other agencies, community college system, and self-directed initiatives. Supervisors will communicate employees' training needs to the DMME Training Coordinator. DMME will further develop its internal capabilities for delivering training in the DMME University.
- Training opportunities shall be available to enable employees to make decisions that are
 consistent with DMME values and that result in quality customer service as described in our
 Strategic and Operational Plans.

Objective 3.03

To achieve a rating of meets or exceeds expectations form 90 percent of customers surveyed regarding the delivery of DMME services each year.

Measures For Objective 3.03

Measure 3.03.01

Percent of DMME employees rating administrative services as meeting or exceeding exp

Measure Type: Outcome Measure Frequency: Quarterly

Measure Baseline: The average rating of all employee ratings for FY 2004 was 3 or above on

100% of surveys.

Measure Target: 90% or greater rate meets or exceeds.

Measure Source and Calculation:

One-quarter of DMME employees are surveyed quarterly about the quality of administrative services. The percent of employees with an average rating of 3 (meets) or 4 (exceeds) on a 1-4 point scale is calculated.

Department of Mines, Minerals and Energy

Strategies For Objective 3.03

- All managers and their staff will serve their customers by:
 - -Taking initiative and being innovative.
 - -Evaluating new ideas for implementation.
 - -Advancing inter- and intra-divisional consistency, e.g. through job exchange.
 - -Eliminating or controlling internal and external barriers to customer service.
 - -Freely forming work teams across DMME to improve services.
 - -Communicating in accordance with our values.
- Division Directors will use recommendations from the Seamless Task Force, customers, and employees to improve customer service across division lines.
- Each employee will utilize both customer comment and numeric customer satisfaction measures and other performance measures to improve services delivered.
- Each division, with assistance from DA, will review current processes identified through customer surveys as needed to be improved and implement approved continuous quality improvement changes to enhance seamless and efficient operations.

Objective 3.04

To provide for the most efficient and effective application of DMME resources through June 30, 2008.

Measures For Objective 3.04

Measure 3.04.01

Prompt pay compliance.

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: 98.8% of dollars were paid within 30 days in FY 2004.

Measure Target: At least 95%.

Measure Source and Calculation:

Data is taken from Department of Accounts reports of prompt pay compliance. The percent of total dollars paid within 30 days of the invoice date is calculated.

• Measure 3.04.02

Payroll processing accuracy.

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: 98.8% accurate for FY 2004.

 $\textbf{Measure Target: } 98\% \ of \ entries \ accurate \ on \ their \ initial \ entry.$

Measure Source and Calculation:

Data is taken from the number of corrections needed to payroll records. The number of corrections is compared to the total number of records processed.

Department of Mines, Minerals and Energy

Measure 3.04.03

Vehicle maintenance time spent on vehicle service.

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: 73% of hours in FY 2004 spent on direct vehicle repair.

Measure Target: 70% of hours.

Measure Source and Calculation:

Data is taken from work logs of DMME vehicle repair staff. The time spent directly working on vehicles is calculated against the total time on the job.

Measure 3.04.04

Purchases made within 24 hours of requisition entry.

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: 97.8% purchase orders entered within 24 hours of requisition time in FY

2004.

Measure Target: 90%.

Measure Source and Calculation:

Data is taken from purchaser logs. Requisition processing time is measured. Percent completed within 24 hours of requisition entry time is calculated.

Strategies For Objective 3.04

- DA, with input from the divisions, will compile strategic planning and budgeting documents from the divisions' operating plans, performance measures, baselines, targets, and other background information.
- Each division, with assistance from DA, will monitor their financial needs and projected revenues, and their impacts on services.
- Divisions that serve common customers will review and evaluate current operational activities for the purpose of streamlining minimizing duplication of services, and reducing costs.

Objective 3.05

To enable DMME employees to effectively utilize available technology through June 30, 2008.

Measures For Objective 3.05

Measure 3.05.01

Technology Survey.

Measure Type: Outcome Measure Frequency: Annually

Measure Baseline: The February 2004 survey average is 2.97. The 2004 average is 3.00. The

2003 average is 3.05. The 2002 average is 3.05. The four-year average is

3.02.

 $\label{eq:measure Target: 3.0 average.} \textbf{Measure Target: } 3.0 \ average.$

Measure Source and Calculation:

Data is taken from the annual DMME employee technology survey. The average score for satisfaction (on a 1 to 4 scale) is calculated for the 24 technology types addressed in the survey.

Department of Mines, Minerals and Energy

Strategies For Objective 3.05

- OMIS will continue to work with all divisions to identify needs and implement the approved projects from the project priority list.
- DMME will use/obtain the resources that are provided by central services, such as VITA, eVA, etc., to ensure that adequate technology is available to serve our customers.
- DMME will continue to implement the digital mapping team's recommendations approved by the Strategic Team.
- Each division will work with OMIS, OFS, and OPS to implement e-government services for our customers.
- Employees will use available technology to enhance their job performance and, with their respective supervisors, will identify training needed for effective use of technology.
- DMME will continue to implement GPS methodologies as recommended by the DMME GPS team and approved by the Strategic Team.
- OMIS and OGS will expand high-speed remote access for DMME field staff.
- DMME will review processes to assess and eliminate duplication to enhance utilization of
 electronic systems as they are developed, in order to move towards a paperless environment
 where possible.

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

Service Area Background Information

Service Area Description

This service area implements the Virginia Mineral Mine Safety Act and Virginia's mineral mining reclamation laws. Products and services include:

- Customer service such as training, technical assistance, and risk assessment,
- Inspection and enforcement of the mine safety and reclamation laws and regulations,
- Certification of general mineral mine workers and miners performing specialized mineral mining tasks,
- Permitting and licensing of mineral mine sites,
- Regulatory development to establish minimum requirements for worker and public safety and operation and reclamation of mineral mine sites,
- Land reclamation through use of financial guarantees to ensure proper reclamation on permitted sites and reclamation of orphaned (abandoned) mineral mine lands, and
- Economic development support through helping ensure adequate supplies of non-fuel mineral products are available to support Virginia's economic needs.

Service Area Alignment to Mission

This service area directly aligns with DMME's mission of enhancing the development of mineral resources in a safe and environmentally sound manner to support a more productive economy.

Service Area Statutory Authority

- Chapter 14.1 provides for the establishment of the department and its divisions, and establishes the authority of the department director.
- Chapters 14.4:1 through 14.6, known as the Virginia Mineral Mine Safety Act, establish the minimum requirements for mineral-mine safety in Virginia. Virginia's mineral-mine safety program is implemented independent of the federal mine safety program. However, the federal Department of Labor, Mine Safety and Health Administration recognizes Virginia's state certifications of persons completing specialized duties on coal mines such as mine foremen and mine electricians.
- Chapter 16 establishes environmental protection requirements for operation and reclamation of mineral mines in Virginia.
- Chapter 18.1 establishes requirements for construction and operation of refuse piles, water and silt retaining dams on mineral mines in Virginia.
- Chapter 21 establishes requirements for exploration for uranium ore in Virginia. Note that mining of uranium ore is prohibited under current Virginia law. There are currently no uranium exploration activities in Virginia.

Service Area Customer Base

Customer(s)	Served	Potential
Affiliated mineral extraction business interests	1,350	2,000
Other governmental agencies	13	150
Mineral extraction operations	468	6,724
Mineral extraction workers	3,668	3,668
Public affected by mineral extraction operations	9,400	9,400

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

Anticipated Changes In Service Area Customer Base

Mineral extraction operations:

- The tonnage of non-fuel minerals produced in Virginia historically changes in relation to the state of Virginia's economy. As the economy is strong, mineral mine production increases. As the economy is weaker, production decreases. The production of construction aggregates is also affected by the amount of highway construction and repair and amount of housing, commercial, industrial, and institutional development. However, the number of mineral mines producing these materials remains fairly stable, ranging from 450 to 500 mines.
- Recently, the aggregate industry has grown based on residential, commercial, and institutional construction. In 2004, 106,308,288 tons of non-fuel minerals were produced from 472 mines. DMME expects that there will be a similar number of permitted mineral mines and an increase in mineral production as long as Virginia's economy remains strong and interest rates remain relatively low. Any offset in residential or commercial construction due to rising interest rates may be offset by additional funds available for transportation projects. Most of the increase in production will come from existing mines. New mineral mines are increasingly hard to open due to population growth and development over the mineral deposit locations.

Mineral extraction workers:

- Mineral mine employment in Virginia changes based on the amount of tonnage produced in Virginia's mineral mines and changes in miner productivity. The number of mineral miners also is affected by the use of independent contractors on mineral mine sites. Some operators have shifted parts of operations away from their employees to contractor employees.
- Virginia had 3,603 production workers in 2004. This compares to 4,816 mineral miners working in 1989, 4,104 mineral miners working in 1994, and 4,258 mineral miners in 1999. DMME anticipates the number of mineral miners to remain relatively stable in the coming years.
- These factors have caused mineral miner productivity to increase from 18,647 tons/miner/year in 1989 to 29,505 tons/miner/year in 2004.

Public affected by mineral extraction operations:

- Public located near mineral extraction operations may be affected by activities at the operations. Such affects may include items such as ground vibrations from blasting, effects on groundwater quantity or quality, effects from uncontrolled release of material, such as flyrock or pushed tracked material, from the site, dust from blasting, construction, or travel on soft-surfaced roads, noise, light, or truck traffic. DMME's regulations control many of these impacts. While, some impacts, such as light, ambient noise, and local truck traffic are subject to local government land use controls, DMME receives and must investigate most complaints on all of the mining effects.
- Mineral mine operators are required to notify property owners within 1,000 feet of the permit area boundary when applying for new permits. DMME used this distance to measure the number of public affected by mineral extraction operations. The applicant for a typical new mineral mine permit notifies 20 property owners. The actual number notified may range from one or two for rural operations to hundreds of property owners in more built up areas.
- DMME expects there will be additional people affected by mineral extraction operations in the coming years. Mineral mines have typically been located on the exurban fringes of built up areas. As suburban sprawl moves farther out from urban areas, residential and commercial development overtakes the mineral mine locations. This results in increasing numbers of persons affected by the operations.

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

- The increasing proximity between mineral extraction operations and the public is expected to result in increased opposition to the locations of new operations.
- Public are affected by orphaned (abandoned and not reclaimed) mineral mine lands. Such lands may cause water pollution from non-point source runoff or acid mine drainage. Abandoned quarries or other mines may be public safety hazards from abandoned equipment, water filled pits, unprotected highwalls, or other features. DMME does not have a count of the numbers of people affected by these orphaned mineral mine sites.

Affiliated mineral extraction business interests:

- Numerous businesses support mineral extraction operations. These range from engineering firms that assist with permit preparation and facility design, to independent contractors providing non-mining services at mine sites (such as blasting, mobile equipment lubrication and maintenance, logging, overburden removal, plant construction), to independent trucking companies hauling mined material from a mine, to title attorneys, and others.
- DMME expects to see an increase in the number of affiliated business interests. Mining companies are increasingly outsourcing work on mines. DMME has been given expanded responsibility for regulation of activities of independent contractors on mineral mines. DMME has registered approximately 2000 independent mineral mining contractors in 2004. Of these, approximately 1350 were reported as working on mineral mines during 2004. The department expects the number of independent contractor customers to continue to grow.

General public and businesses:

- All Virginia residents are potentially served through DMME's mineral mining activities. All Virginians travel on Virginia roads constructed with Virginia produced aggregates. All Virginians use public infrastructure and private facilities constructed with Virginia produced aggregates. DMME does not track actual numbers of individual people served.
- DMME expects the general public and business customer base to increase over the next few years. As development moves into new areas, there is increasing need for geology and mineral resource information to properly plan for and support new mineral mine development. DMME also is expanding the information available across the Internet. As information is more readily available in electronic form, additional customers will become aware of its availability, thereby increasing DMME's customer base.

Other governmental agencies:

- DMME provides geologic, mineral resource, and energy information to a wide variety of governmental agencies.
- Economic develop entities use mineral resource information in their business development activities. Economic development organizations contact DMME for information about the availability of specific minerals in response to companies wishing to locate operations in Virginia. Availability of construction aggregate is critical to proper planning of transportation projects. Local governments use mineral resource information as an input to local land use planning processes. Mineral mine information is used by local or state agencies addressing groundwater issues.
- DMME provides information on the mineral extraction industry to other state and local agencies that have business relationships with the mineral extraction industry. These agencies look to DMME for guidance on how the extraction industry operates.

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

- DMME coordinates mineral extraction regulatory activities with the similar regulatory agencies in neighboring states and in the federal government. Environmental impacts, such as water pollution, can cross state lines.
- DMME does not conduct regular safety inspections on mineral mines inspected by the federal Mine Safety and Health Administration (MSHA). DMME instead uses its mineral mine safety resources to provide training and technical support to enhance worker safety. Both DMME and MSHA investigate accidents that result in serious personal injuries or fatalities on mineral mines. MSHA recognizes Virginia mineral mine worker certifications. This requires coordination between DMME and MSHA.
- Virginia's mineral mining reclamation law allows localities, at their discretion, to regulate the operation and reclamation on mineral mine sites. The local programs must provide for at least the same level of regulatory coverage as DMME's mine reclamation activities. DMME periodically reviews the local programs to ensure they maintain this minimum level of regulatory coverage. Fairfax and Henrico counties exercise this authority.

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

Service Area Products and Services

• Inspection and enforcement:

-Thorough and consistent inspection and enforcement of laws and regulations addressing worker safety on mineral extraction sites and operational and reclamation environmental controls. Assessing company and individual responsibility and liability as appropriate. Investigate accidents and complaints. Note that DMME does not inspect for worker health and safety on those mineral mines inspected by the federal Mine Safety and Health Administration (MSHA). The agency does complete these inspections on those mines not inspected by MSHA. DMME does investigate accidents and complaints on all mine sites. Appeals to DMME reclamation enforcement actions are taken to the Board of Surface Mining Review.

-Inspection and enforcement services assist customers maintain safe and environmentally protective mineral extraction sites in compliance with regulatory requirements.

Permitting:

- -Permit and plan review and approval, financial bonding, coordination with other agencies' regulatory requirements.
- -Permitting and plan review services ensure mineral extraction operations can be conducted safely and protective of the environment (operations, land reclamation) and in compliance with mineral mining laws and regulations.

• Regulatory development:

- -Establishing minimum operational and reclamation requirements consistent with governing laws for mineral mining operations. DMME is the regulatory authority for mine safety and reclamation regulations. The Board of Mineral Mining Examiners promulgates regulations governing certification of mineral miners.
- -Regulatory services ensure the legal standards governing mineral mining operations will result in safe and environmentally protective operations while establishing the minimum required intrusion in permitted and licensed operations.

Land reclamation:

- -Reclamation of orphaned (abandoned and not reclaimed) mineral mine lands and bond forfeiture sites. Funds for the land reclamation activities come from bonds posted by permitted mine operators or the Minerals Reclamation Fund (a pool bonding fund) for permitted operations. DMME uses interest earned on the Minerals Reclamation Fund and grants to fund reclamation of orphaned mine land. The orphaned land program uses the Orphaned Land Advisory Committee for guidance on which orphaned lands should receive the highest priority for reclamation.
- -Land reclamation services correct damage and mitigate risks of future damage from improperly reclaimed mineral extraction lands.

• Economic development:

- -Providing information on mineral availability in support of economic development.
- -Reclaimed mineral mines may be developed into new commercial, industrial or residential sites.
- -Economic development services support efforts to increase jobs and economic activity in Virginia.

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

Service Area Products and Services

- Customer assistance:
 - -Job safety analysis, risk assessment, hazard identification, training, technical assistance, education, and cooperative projects in areas such as mine safety, environmental protection and land reclamation during mineral extraction.
 - -Customer assistance services assists customers maintain safe and environmentally protective mineral extraction sites in compliance with regulatory requirements and use mineral production information to manage development and natural resources.

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

Factors Impacting Service Area Products and Services

- Customer assistance requests are expected to increase due to increased use of contractors on mineral extraction sites. This will increase requests for training and assistance from the contractors.
- Expansion of web-based electronic government capability will increase the efficiency of DMME permitting and licensing operations.
- The mineral mining industry competes with the construction industry for workers. As the construction workforce is increasingly made up of Spanish speaking workers, mineral mine workers will also become increasingly Spanish speaking.
- Implementation of new permitting requirements by the U.S. Army Corps of Engineers due to mountaintop mining controversies will require increased permitting coordination between DMME and other state and federal agencies.
- Increased availability of digitized underground mine maps will allow mine permits and plans to account for the presence of the old mine works and result in a safer mining environment. Permitting services will have to expand to account for the availability of this information.
- Permitting of new mineral extraction sites will become more difficult as suburban and exurban sprawl reaches areas where mineral mines are located. This will increase the likelihood of litigated issue hearings and court challenges to permit decisions.
- Past reductions in DMME budgets has caused the agency to increasingly rely on permit and license revenue. DMME will spend down fund balances from these sources in the coming biennium, and will need additional general fund support to maintain current levels of service.
- DMME will need to replace a significant proportion of its workforce in the near future. This will eliminate a significant amount of the institutional knowledge that helps DMME understand and face the challenges of providing high quality customer service. DMME will be faced with increasing difficulty in finding these high quality workers at state salary rates as mining and other energy industries have substantially increased the amount they pay employees to combat their labor shortages.

Anticipated Changes To Service Area Products and Services

- The demand for DMME customer services are anticipated to increase as the mineral extraction industry faces continuing business challenges.
- DMME training and certification services are anticipated to increase as the construction industry competes with the mineral mining industry for workers, causing a substantial turnover in mineral mine workers. These services will need to be adapted to account for increasing numbers of workers with Spanish as their primary language.
- DMME anticipates loosing more employees to mine operators as these companies increase their salaries to respond to their labor shortages. We will also be faced with increasing difficulty attracting the same level of experienced employees at current state salaries.

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

Service Area Financial Summary

	Fiscal Year 2007		Fiscal Year 2008	
	General Fund	Nongeneral Fund	General Fund	Nongeneral Fund
Base Budget	\$963,635	\$1,035,000	\$963,635	\$1,035,000
Changes To Base	\$338,210	\$0	\$337,939	\$0
SERVICE AREA TOTAL	\$1,301,845	\$1,035,000	\$1,301,574	\$1,035,000

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

Service Area Objectives, Measures, and Strategies

Objective 50602.01

To advance the elimination of injuries and fatalities at mineral and fossil fuel sites.

Protection of worker and public safety from the dangers on mineral mine sites is of critical importance to ensure the safety of Virginians working on or living near mineral mine sites. Dangers may be present due to improper conditions or improper actions by miners. DMM provides customer assistance and inspection and enforcement of mine safety based on a risk assessment of mines, with the riskiest mines receiving a higher level of services. The mineral mine safety program is mandated in Chapters 14.4:1 through 14.6 of Title 45.1, known as the Virginia Mineral Mine Safety Act. This act establishes the minimum requirements for mineral-mine safety in Virginia. Safety around impoundments on mineral mines is mandated in Chapter 18.1 of Title 45.1. This objective is consistent with DMME's mission of enhancing the development of mineral resources in a safe manner.

This Objective Supports the Following Agency Goals:

Provide for safe and environmentally sound mineral and fossil fuel extraction

(The mineral mine safety program is mandated in Chapters 14.4:1 through 14.6 of Title 45.1, known as the Virginia Mineral Mine Safety Act. This act establishes the minimum requirements for mineral-mine safety in Virginia. Safety around impoundments on mineral mines is mandated in Chapter 18.1 of Title 45.1. This objective is consistent with DMME's mission of enhancing the development of mineral resources in a safe manner.)

This Objective Has The Following Measure(s):

Measure 50602.01.01

Serious personal injury-fatality incident rate.

Measure Type: Outcome Measure Frequency: Annually

Measure Baseline: The five-year rolling average of this measure through the end of FY-2004 is 0.1

incidents per 200,000 work hours.

Measure Target: Reduce the five-year rolling average each year.

Measure Source and Calculation:

Data is collected from reports of serious personal injuries and fatalities submitted by permitted mine operators throughout the year and the reports of employee work hours reported by permitted mineral mine operators on their annual tonnage reports submitted to DMME. The rate is calculated as the number of serious personal injuries and fatalities per 200,000 work hours. DMME evaluates the five-year rolling average of this rate to determine the trend.

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

Measure 50602.01.02

Percent of safety violations successfully eliminated by the violations' due dates.

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: Mineral mine operators corrected 97.0% of safety violations by their due date

during the first two calendar quarters of FY 2005.

Measure Target: Maintain at least a 95% correction rate.

Measure Source and Calculation:

This measure is calculated using information from DMME's automated enforcement systems. Records of violations show date issued, target date for correcting the violation, and date the violation is corrected. The percentage is calculated based on total number of safety violations corrected by their due dates and of total safety violations issued.

Objective 50602.01 Has the Following Strategies:

- DMM will develop and provide site-specific educational services and products targeted to eliminate
 accidents, injuries, fatalities, and adverse health effects. DMM will work with DMME Divisions of
 Mines and Gas and Oil, the federal Mine Safety and Health Administration (MSHA), and other
 providers to improve quality and accessibility of training services provided to miners by:
 - -Emphasizing material development and acquisition.
 - -Improving web access to materials for trainers.
 - -Updating and improving training games and evaluating and classifying existing training videos.
 - -Pursuing external funding opportunities for a DMM Training Materials Coordinator.
 - -The Education and Training team will meet quarterly to address training issues.
- DMM will provide certification and related training programs and services that ensure required competency and improve safe mining practices. In particular, DMM will:
 - -Update surface foreman and surface blaster initial and renewal certification course training materials (e.g., PowerPoint presentations, study guides) to reflect new regulations, changes to existing laws and regulations, and updated accident statistics and trends.
 - -Continue to develop the certification exam data banks and implement the electronic testing and grading system.
- DMM will investigate accidents and resolve safety and health complaints associated with mineral
 mine sites. DMM will provide timely and complete reporting, timely dissemination of information,
 and take actions to prevent future occurrences of unsafe practices and conditions.
- DMM will collaborate with other DMME divisions on safety issues involving mining and gas well
 activities to include:
 - -Developing comprehensive automated mapping of all DMME mine, gas well, and geologic data.
 - -Communicating on issues of mutual concern related to mining and gas well activities.
 - -Increasing coordination of inspection activities.
- DMM will minimize duplication of inspection activities through communications and coordinated inspections and investigations with other state and federal agencies.
- DMME Division of Mineral Mining (DMM) will provide customer assistance and conduct thorough and consistent inspections to achieve compliance with mine safety laws and regulations, and enhance safe mine practices through regular evaluation of risk factors.

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

Objective 50602.02

To advance the elimination of adverse environmental conditions and public safety hazards at mineral mine sites.

Protection of the public safety and the environment from the off-site effects of activities on mineral mine sites is of critical importance in areas such as protecting against harm to people near the mines from items such as blasting, discharge of materials, and protecting against the deleterious effects mining may have on the environment. DMM provides customer assistance, hazard identification, and inspection and enforcement of mine reclamation to meet this objective.

This Objective Supports the Following Agency Goals:

• Provide for safe and environmentally sound mineral and fossil fuel extraction

(The mineral mine reclamation program is mandated in Chapter 16 of Title 45.1 of the Code of Virginia. Chapter 16 establishes environmental protection requirements for operation and reclamation of mineral mines in Virginia.

The uranium exploration regulatory program is mandated in Chapter 21 of Title 45.1 of the Code of Virginia. This chapter establishes requirements for exploration for uranium ore in Virginia. Note that mining of uranium ore is prohibited under current Virginia law. This objective is consistent with DMME's mission of enhancing the development of mineral resources in an environmentally sound manner.)

This Objective Has The Following Measure(s):

Measure 50602.02.01

Percent of mineral and fossil fuel extraction sites with no adverse off-site environmental damage or pub

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: The five-year rolling average is as of the end of FY-2004 is 94.8%.

Measure Target: Reduce the five-year rolling average each year.

Measure Source and Calculation:

This measure is calculated using information from DMM's automated enforcement system. Records of violations show whether there was any off-site damage or public safety hazard related to a violation of environmental laws or regulations. The number of sites with no violations causing off-site impacts is calculated as a percentage of permitted sites.

Measure 50602.02.02

Percent of environmental violations successfully eliminated by the violations' due dates.

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: Mineral mine operators eliminated 93.8% of environmental violations by their

due date during the first two calendar quarters of FY 2005.

Measure Target: Maintain at least an 80% elimination rate.

Measure Source and Calculation:

This measure is calculated using information from DMM's automated enforcement system. Records of violations show date issued, target date for eliminating the violation, and date the violation is eliminated. The total number of environmental violations eliminated by its due date is calculated as a percentage of total environmental violations issued.

Objective 50602.02 Has the Following Strategies:

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

- DMM will provide assistance and inspections to ensure compliance with laws and regulations, and identify potential hazards and eliminate existing environmental conditions and public safety hazards. Assistance and inspections will be provided by mine inspectors in a manner that is most efficient for the customer, including coordination among DMME divisions and other local, state, and federal agencies.
- DMM will identify potential hazards that could impact environmental conditions or public safety and ensure increased public protection through regulatory requirements, inspections, and assistance.
- DMM will investigate and effectively resolve environmental complaints, concerns, and public safety hazards with assistance from all DMME divisions, where appropriate, and provide timely and complete reporting to concerned, involved parties.
- DMM will provide a timely and complete review of mine permit applications and amendments consistent with laws and regulations.
- DMM will work with all DMME divisions to provide technical assistance to customers and stakeholders, and work with them to proactively seek joint resolutions of significant and emerging issues.
- DMM will develop and provide educational services and products designed and targeted to identify potential and eliminate existing adverse environmental conditions.
- All potential bond forfeiture sites will be assessed and actions will be taken to prevent bond forfeitures using customer and stakeholder involvement, and a bond forfeiture inventory will be maintained.
- DMM will monitor and evaluate waiver programs to ensure consistency with laws and regulations.

Objective 50602.03

To advance the elimination of environmental and public safety hazards associated with orphaned mineral mines and bond forfeiture sites.

Orphaned (abandoned and not reclaimed) mineral mine lands and permitted mine sites not properly reclaimed by the permit holder may cause water pollution from non-point source runoff or acid mine drainage. Abandoned mineral mines may cause public safety hazards from abandoned equipment, water filled pits, unprotected highwalls, or other features. This objective directs DMME work to reclaim the highest priority orphaned mineral mine sites.

This Objective Supports the Following Agency Goals:

Provide for safe and environmentally sound mineral and fossil fuel extraction

 (Reclamation of orphaned and bond forfeiture mineral mines are mandated in Chapter 16 of Title 45.1 of the Code of Virginia. This objective is consistent with DMME's mission of enhancing the development of mineral resources in an environmentally sound manner.)

This Objective Has The Following Measure(s):

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

Measure 50602.03.01

Percent of the total number of orphaned mineral mine sites assessed and with data entered into the orph

Measure Type: Output Measure Frequency: Annually

Measure Baseline: DMM has inventoried 52.4% (1,573) of the estimated 3000 orphaned mineral

mines

Measure Target: Maximize the use of external grant funds to inventory orphaned mineral mine

sites on a watershed-by-watershed basis each year based on funding availability.

Measure Source and Calculation:

DMME has estimated that there are 3000 orphaned mineral mine sites based on historical records of mineral mining activity in the state. The total number of inventoried mineral mine sites is taken from the orphaned mined land information system. The percent is calculated from these data.

Measure 50602.03.02

Percent of the total number of orphaned mineral mine sites where safety and health hazards have been e

Measure Type: Output Measure Frequency: Annually

Measure Baseline: DMM has reclaimed 2.8% (85) of the estimated 3000 orphaned mineral mines.

Measure Target: Maximize the use of orphaned land fund and grants to eliminate environmental

and safety hazards on the highest priority orphaned mine sites in priority

watersheds.

Measure Source and Calculation:

DMME has estimated that there are 3000 orphaned mineral mine sites based on historical records of mineral mining activity in the state. The total number of reclaimed mineral mine sites is tracked by DMME staff after the final inspection of the reclamation work is completed. The percent is calculated from these data.

Objective 50602.03 Has the Following Strategies:

- DMM, with the involvement of customers and stakeholders, will reclaim watershed restoration
 projects, bond forfeiture sites, and the highest priority orphaned mineral mine sites, by using all
 available funds and resources.
- DMM will administer the nonpoint source (NPS) pollution control program for orphaned mineral mines and apply for additional funding to continue the NPS coordinator position.
- DMM will increase the watershed inventory of orphaned mineral mines and forfeited sites by pursuing methods such as:
 - -Integrating the orphaned land inventory with the mineral resources of Virginia work of the Division of Mineral Resources.
 - -Cooperation with schools and universities, gem and mineralogical societies, county GIS systems, MSHA/OSM Stay Out-Stay Alive program.
 - -External/internal funding.
 - -Partnerships.
 - -Leveraging.
 - -Cooperation with other state and federal projects.

The inventory, which includes existing or potential wetlands, carbon sequestration potential, and economic development site information for orphaned/forfeited mineral mines will be provided at all DMME divisions.

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

DMM will pursue innovative methods, such as external funding, partnerships, leverage, and
cooperation with other state and federal projects to advance the elimination of adverse
environmental and public health and safety hazards on orphaned and bond forfeited mineral mine
sites.

Objective 50602.04

To improve our customers' ability to establish and maintain efficient, viable operations

DMME strives to help regulated entities establish and maintain economically viable operations that will be both profitable and operate safely and respectful of the environment. DMME works with its customers to implement process improvements to increase efficiency of interaction with DMME and provide mineral information needed for economic development.

This Objective Supports the Following Agency Goals:

- Provide for safe and environmentally sound mineral and fossil fuel extraction
- Encourage economic development through our customers' wise management of Virginia's energy, mineral, land, and water resources.

This Objective Has The Following Measure(s):

Measure 50602.04.01

Percent of timely permit decisions on initial permit applications for mineral mines.

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: DMME processed 96.4% of its new permits within the 60 day time frame in FY

2004.

Measure Target: Maintain the five-year rolling average above 95%.

Measure Source and Calculation:

This measure is calculated using permit tracking data from the DMM mineral mining database system. The number of permit decisions make within the time deadlines for the mineral mining permitting program (60 days of in-house time) is compared to total permit decisions due during the review period. These numbers are used to calculate the percentage of timely permit decisions.

Objective 50602.04 Has the Following Strategies:

- DMM will provide effective, timely, and useful assistance to customers and will involve them in identifying areas for improvement.
- DMM will involve its customers and stakeholders in continually identifying, developing, and implementing process improvements to include e-government, regulatory guidance, electronic information/data distributions, and technical assistance.
- DMM will collaborate with state, regional, and local economic development organizations to provide information on the mineral mining infrastructure useful for business development.

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

Objective 50602.05

To improve our customers and stakeholders' capability to make informed decisions regarding the development and use of rock, mineral, land, water resources, and energy technologies.

DMME provides its customers with information to help them have the knowledge needed to make decisions about their operations. This can take the form of providing information on mineral development opportunities, help permitted mine operators and economic development organizations develop mined land for beneficial land uses, and respond to emerging issues that may affect their operations.

This Objective Supports the Following Agency Goals:

• Encourage economic development through our customers' wise management of Virginia's energy, mineral, land, and water resources.

(This objective is consistent with DMME's mission of enhancing the development of mineral resources to support a more productive economy.)

This Objective Has The Following Measure(s):

Measure 50602.05.01

Customer satisfaction rate with DMM services.

Measure Type: Outcome Measure Frequency: Every Six Months

Measure Baseline: DMM's customers rated their satisfaction with DMM services in 88% of the

responses received during the second quarter of FY 2005.

Measure Target: 90% of customers satisfied with DMM services.

Measure Source and Calculation:

Data is derived from DMM customer surveys addressing satisfaction with DMME services in providing information, permitting, and field inspections. The number of customers expressing satisfaction or higher is counted as a percent of total questionnaires received from customers.

Objective 50602.05 Has the Following Strategies:

- DMM will provide customers and stakeholders with information regarding rock, mineral, land, water resources, and energy technologies associated with mineral mining by:
 - -Identifying their needs and delivery methods.
 - -Providing rock and mineral resources information from DMR, and energy conservation and use information from DE.
 - -Developing products to meet their needs.
 - -Expanding, with OMIS' assistance, the number of products that are electronically available.
- DMM will assist customers and partner with stakeholders to develop mined land for economic development and other beneficial land use such as:
 - -Watershed restoration.
 - -Industrial and recreation development.
 - -Wetland development.
 - -Carbon sequestration.
 - -Water resources.

DMM will work with other divisions to compile and provide information that will be useful to stakeholders in developing mined land.

Department of Mines, Minerals and Energy

Mineral Mining Environmental Protection, Worker Safety and Land Reclamation (50602)

• DMM will identify emerging issues, such as TMDL, watershed restoration, off-shore mineral location, and solution mining, and work with our customers and stakeholders to address potential impacts.