

State of Alaska FY2006 Governor's Operating Budget

Department of Environmental Conservation Air Quality Results Delivery Unit Budget Summary

Air Quality Results Delivery Unit

Contribution to Department's Mission

Protect air quality.

Core Services

- Issue air quality permits to facilities that release potentially harmful pollutants.
- Provide compliance assistance and enforcement (inspections and operating report reviews).
- Community assistance to protect air quality.
- Air quality assessments.
- Monitoring readiness for radioactive contaminants.

End Results	Strategies to Achieve Results
<p>A: Air quality is protected.</p> <p><u>Target #1:</u> 100% compliance with air quality health standards.</p> <p><u>Measure #1:</u> # of days exceeding the air quality health standards from human sources of pollution.</p> <p><u>Target #2:</u> 100% compliance with air quality health standards.</p> <p><u>Measure #2:</u> # of days exceeding the air quality health standards from natural sources of pollution.</p>	<p>A1: Establish standards for air quality that are protective of public health and the environment.</p> <p><u>Target #1:</u> Complete assessment of health impacts of diesel fuel emissions in rural communities by the end of FY2007.</p> <p><u>Measure #1:</u> % of assessment of health impacts of diesel fuel emissions in rural communities completed by FY2007.</p> <p><u>Target #2:</u> Complete regional haze SIP by FY2007.</p> <p><u>Measure #2:</u> % of SIP for regional haze complete by FY2007.</p> <p>A2: Improve and streamline air permit practices.</p> <p><u>Target #1:</u> All categories of permits have standardized applications and internal review procedures by the end of FY2005.</p> <p><u>Measure #1:</u> % of permits categories that have standardized application and internal review procedures.</p> <p><u>Target #2:</u> 95% of construction and minor permits issued within 130 days by the end of FY2006.</p> <p><u>Measure #2:</u> % of construction and minor permits issued within 130 days.</p> <p>A3: Minimize pollution from gasoline vehicles.</p> <p><u>Target #1:</u> For communities that have Inspection and Maintenance (I/M) programs, no more than 5% of vehicles are found to be out of compliance with tailpipe requirements.</p> <p><u>Measure #1:</u> % of vehicles found to be out of compliance.</p> <p>A4: Minimize pollution from stationary sources.</p> <p><u>Target #1:</u> 100% of facilities requiring air permits are in compliance.</p>

Measure #1: % of facilities that are in compliance, or on an enforceable compliance schedule, or subject to formal enforcement action by the department.

Major Activities to Advance Strategies

- Establish and operate air monitors.
- Operate an automated data collection system for vehicle inspection programs.
- Develop electronic air permit applications.
- Conduct compliance inspections.

FY2006 Resources Allocated to Achieve Results

FY2006 Results Delivery Unit Budget: \$7,093,000

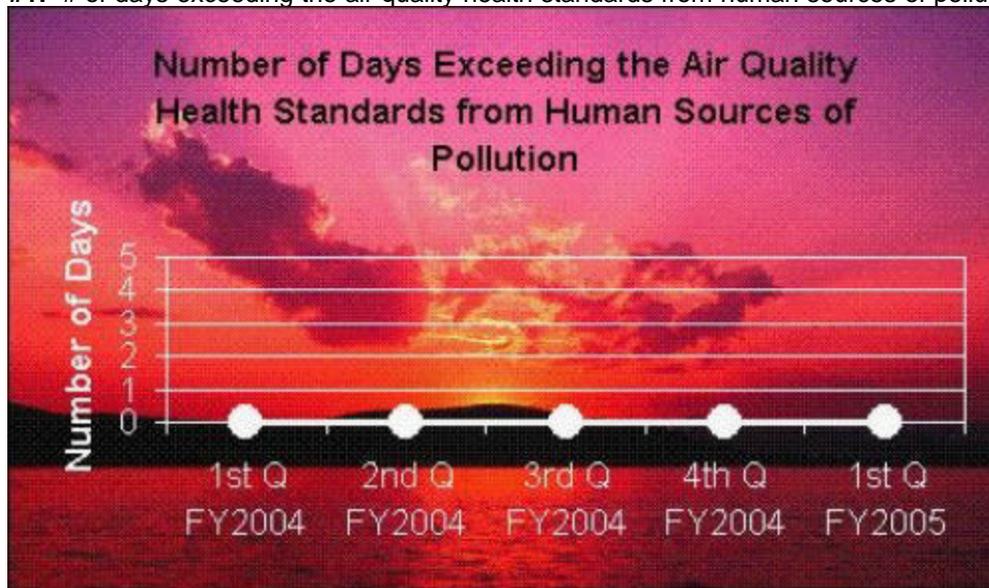
Personnel:	
Full time	62
Part time	0
Total	62

Performance Measure Detail

A: Result - Air quality is protected.

Target #1: 100% compliance with air quality health standards.

Measure #1: # of days exceeding the air quality health standards from human sources of pollution.



Number of Days Exceeding the Air Quality Health Standards from Pollution

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	YTD
2004	0	0	0	0	0
2005	0	0	0	0	0

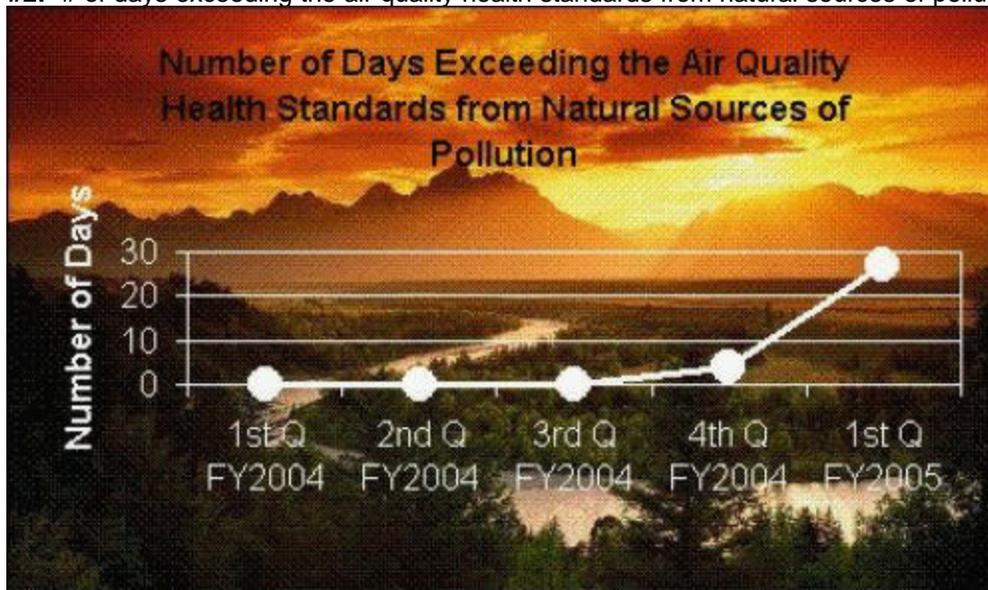
Analysis of results and challenges: DEC has been collecting ambient air data, using a statewide monitoring network, at selected locations around the state for over 20 years. Air monitoring is performed to ensure compliance with the National Ambient Air Quality Standards (NAAQS) for the protection of public health. A

majority of the State's monitoring takes place in larger communities or where complaints have been received. There were no violations of the carbon monoxide (CO) standard during the winter 2003-2004 or fine particulate standard (PM 2.5) from human caused activity.

The Air Quality division is engaged in an air monitoring project to measure before and after conditions for PM 10 airborne particle pollution (dust) as part of a Department of Transportation research project associated with paving a major roadway in central Kotzebue. Airborne dust levels violate health-based standards in Kotzebue and other rural hub communities due to dust from unpaved roads and high use off-road vehicles in adjoining areas. The monitoring results from Kotzebue and Noorvik suggest that unhealthy pollution conditions exist in both communities. The Department will be working with the affected communities and the Alaska Department of Transportation to develop an effective control strategy for dust in the Region.

Target #2: 100% compliance with air quality health standards.

Measure #2: # of days exceeding the air quality health standards from natural sources of pollution.



Number of Days Exceeding the Air Quality Health Standards from Natural Events

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	YTD
2004	0	0	0	4	4
2005	27	0	0	0	27

Analysis of results and challenges: Alaska has many sources of natural pollution; wind blown dust, volcanic dust and smoke from forest fires. Although natural in source, this form of pollution can severely impact public health and impact the public's enjoyment of Alaska.

The US EPA has provisions in the Clean Air Act which do not hold a state liable for violations of the air quality standard when it is caused by natural sources. The state is, however, required to issue air advisories warning the public of potential dangers and recommending protective action.

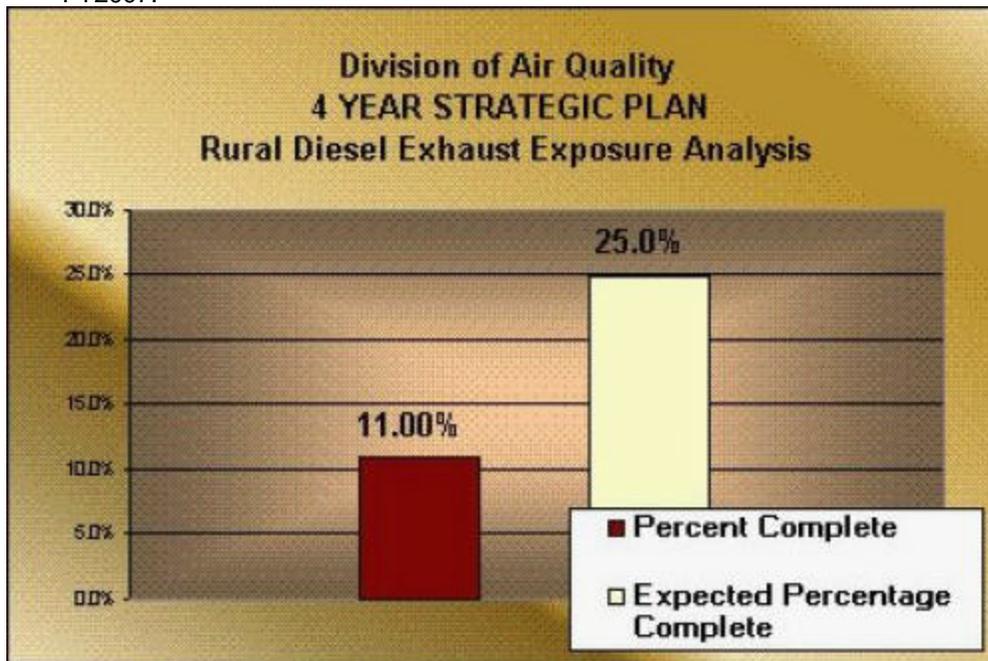
Three fine particle, PM2.5, violations resulted from wildfires in late June with smoke intrusion into Fairbanks and other interior communities. These incidents signaled the beginning of numerous smoke events as the summer fire season reached historic levels.

Twenty-seven exceedances of the fine particle standards (PM2.5) were recorded in Fairbanks during July and August from wildfire activity in Interior Alaska from the Canadian Border westward to the Bering Sea. Numerous small communities were also affected by the smoke during Alaska's worst fire season on record.

A1: Strategy - Establish standards for air quality that are protective of public health and the environment.

Target #1: Complete assessment of health impacts of diesel fuel emissions in rural communities by the end of FY2007.

Measure #1: % of assessment of health impacts of diesel fuel emissions in rural communities completed by FY2007.



Percent of Assessment of the Health Impacts of Diesel Fuel Emissions in Rural Communities Completed by FY2007

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	YTD
2004	2%	3%	5%	8.33%	
2005	11%	0	0	0	

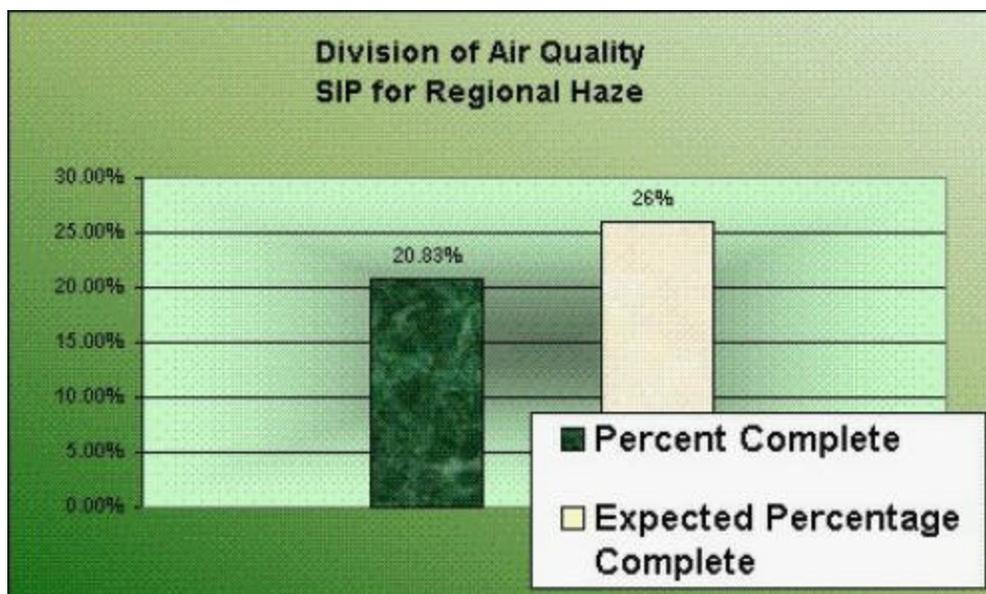
Analysis of results and challenges: The diesel health assessment project is designed to quantify health risks due to diesel exhaust pollutants. New federal rules will reduce diesel exhaust pollution from mobile equipment, like trucks and buses. Diesel fuel use in rural Alaska is dominated by power generation and home heating equipment – not mobile sources. The federal rules do not address these rural Alaska sources of diesel exhaust. And, the federal rules did not consider the unique source and population exposure profile of rural Alaska. Credible scientific information is needed to determine whether diesel related health impacts are occurring in rural areas and whether the costs associated with converting communities to cleaner diesel fuel are justified.

This is a multi-year project that is just getting started. During the first three quarters of fiscal year 2004, the department developed study proposals for both the health and air monitoring components of the project. In order to develop a scientifically sound approach for the study, a group was formed to review the options. The group was comprised of DEC staff, the Alaska Native Health Board Epidemiological Center, University of Alaska Institute for Circumpolar Health, and the Environmental Protection Agency. The group evaluated a number of study options. In the coming year, the department and its partners will follow up on this initial work by conducting pilot studies and developing a final study proposal through a peer review process.

To plan and conduct the project the Department will collect, analyze, and evaluate air monitoring and health data. The project is broken into major steps such as (but not limited to) project development, peer review of study design, ambient air and health data collection, analysis of data, and report drafting. The Department will measure progress towards completing the rural diesel health assessment project by tracking the major project steps.

Target #2: Complete regional haze SIP by FY2007.

Measure #2: % of SIP for regional haze complete by FY2007.



Percent of SIP for Regional Haze Completed by FY2007

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	YTD
2004	4%	6%	10%	15.69%	
2005	20.83%	0	0	0	

Analysis of results and challenges: A Regional Haze State Implementation Plan (SIP) is required by the Clean Air Act to address visibility concerns in Denali National Park and three wildlife refuges in Alaska. The plan is due to EPA by January 31, 2008.

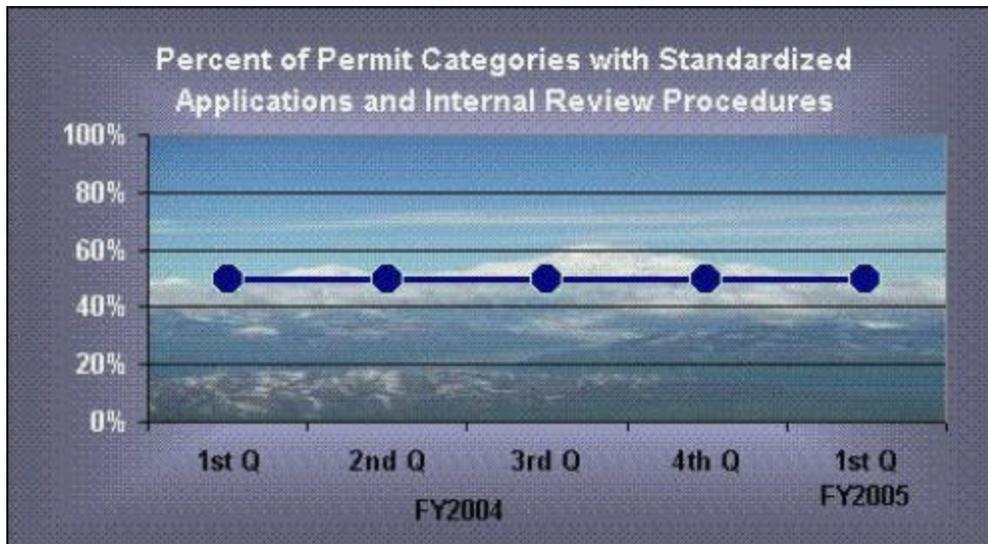
This is a multi-year project. During the first three quarters of fiscal year 2004, the department focused on the development of the technical information needed for the plan with help from external organizations. Federal agencies operate the primary visibility monitoring network. Alaska is a member of the Western Regional Air Partnership (WRAP), a regional planning organization that consists of states, tribes, and federal agencies. WRAP assists Alaska with developing technical information and policy tools needed for the SIP including: developing an inventory of emissions, visibility forecast models for future years and analysis of air monitoring samples.

During the coming year, the department and these other agencies will work on developing the technical basis for the SIP and, if controls are warranted, begin evaluating of control options. To do this, the Department will collect, analyze, and evaluate visibility impacts from air pollution in these areas, and identify controls to reduce those visibility impacts. The project is broken into major steps such as (but not limited to) the collection of technical information, analysis of control strategies, drafting of the SIP document, regulation development and the public adoption process. The Department will measure progress toward completing the regional haze SIP by tracking major project steps.

A2: Strategy - Improve and streamline air permit practices.

Target #1: All categories of permits have standardized applications and internal review procedures by the end of FY2005.

Measure #1: % of permits categories that have standardized application and internal review procedures.



Percent of Permit Categories that have Standardized Applications and Internal Review Procedures

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	YTD
2004	50%	50%	50%	50%	
2005	50%	0	0	0	

Analysis of results and challenges: Standardized applications and internal review procedures allow the Department to act consistently and efficiently on permit applications. Our permitting program has four distinct categories of permits: Construction permits, general permits, facility specific operating permits, and minor permits. General permits are either general operating permits or general minor permits.

As of the October 1, 2004 effective date of new permit program regulations, all construction permits and general permits had standard applications and internal review procedures. Operating permits have standard application forms, but not standard internal review procedures. We have already issued the initial round of operating permits. Therefore, we will be developing the standard procedures for renewal of operating permits first, followed by applications and procedures for permit revisions and new operating permits.

The construction permit program has been rewritten. The existing guidance document, review procedures and application forms for construction permits need to be reviewed.

Writing of application review procedures for operating permits is ongoing.

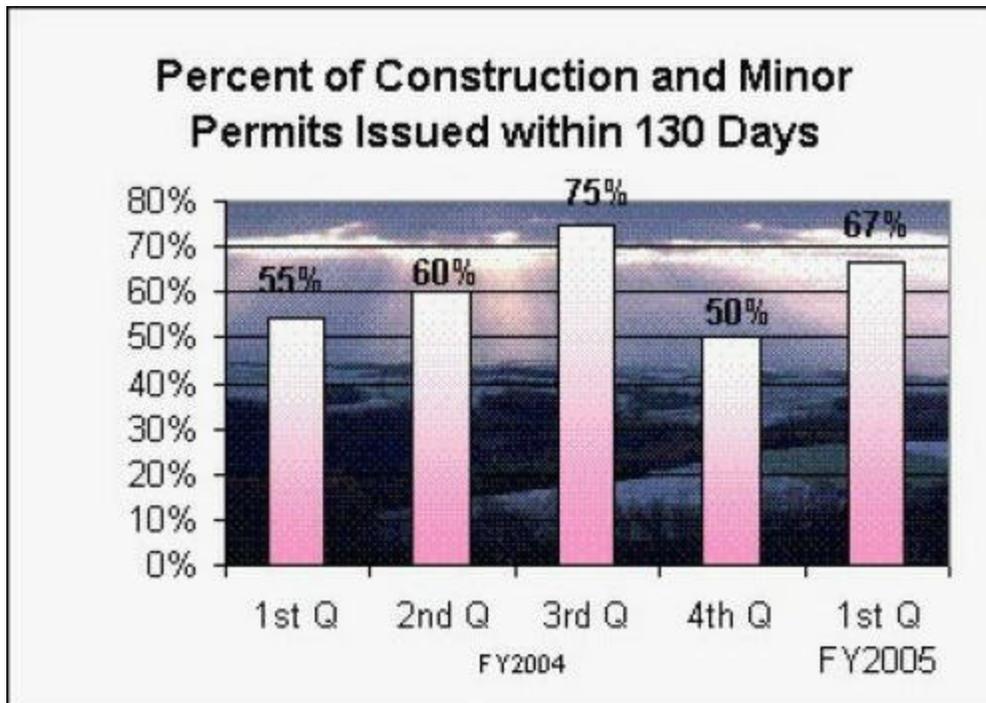
Minor permits will be required under regulations effective October 1 2004, and will reduce the number of major construction permits. Standard applications have been developed for minor permits. New general minor permits will be developed, and standard applications will be issued along with each general permit. An on-line application is being developed for the first general minor permit, and is expected to be ready in January.

Standard review procedures are still being developed for minor permits. A transition plan for the new program has been written.

Staff turnover has slowed minor permit procedure development and may present an ongoing challenge throughout FY2005 and into FY2006.

Target #2: 95% of construction and minor permits issued within 130 days by the end of FY2006.

Measure #2: % of construction and minor permits issued within 130 days.



Percent of Construction and Minor Permits Issued Within 130 Days

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	YTD
2004	55%	60%	75%	50%	
2005	67%	0	0	0	

Analysis of results and challenges: During fiscal year 2004, 61% of construction permits were issued within 130 days. The program's first priority is project authorization. The program assigns a lower priority to applications for after-the-fact authorization and permit revision requests. Of the project applications received in FY2004, five requested review extensions to resolve issues and eight lower priority projects are behind schedule.

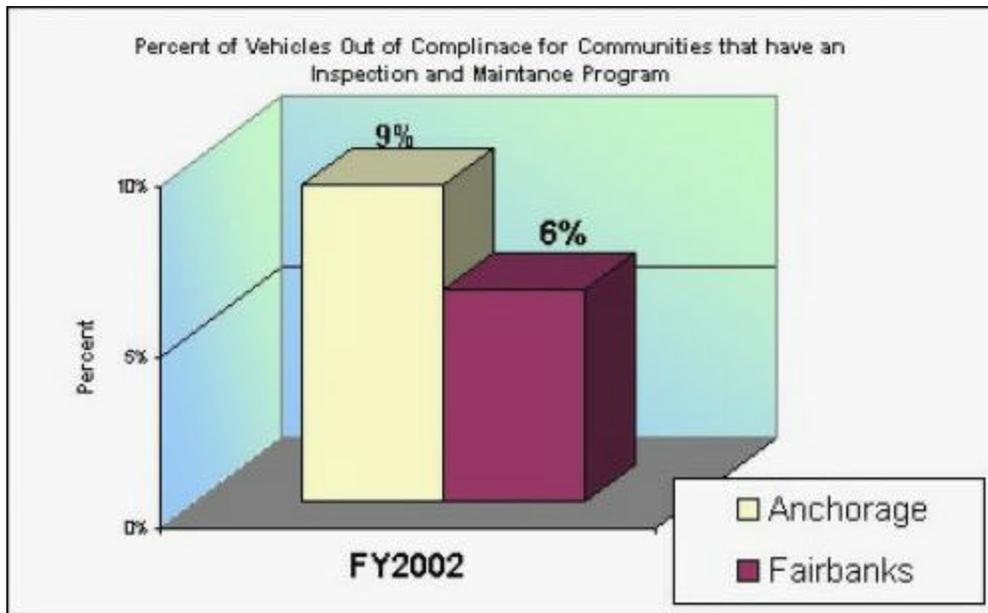
The program's performance in FY2004 was as expected. Recently adopted regulations in the minor permit program will allow permits to be issued more quickly but, those regulations did not become law until the second quarter of FY2005. Construction permits included in the above figures still followed the previous, full permitting procedures.

Included in the two year projection for streamlining the program are: establishment of a new quality management system, implementation of on-line electronic permitting, and hiring, training and retaining staff. Program activities are on track to have improvements completed and reduce permitting times by the end of FY2006.

A3: Strategy - Minimize pollution from gasoline vehicles.

Target #1: For communities that have Inspection and Maintenance (I/M) programs, no more than 5% of vehicles are found to be out of compliance with tailpipe requirements.

Measure #1: % of vehicles found to be out of compliance.



Percent of Vehicles Found to be Out of Compliance

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	YTD
2002	0	0	0	0	8%

Analysis of results and challenges: Anchorage and Fairbanks exceeded health based standards for carbon monoxide in 1972. This required the start of a vehicle inspection program in 1985. Vehicles registered in both communities must pass an emission inspection to be registered or have their registration renewed by DMV. In addition, vehicle owners who live outside of Anchorage or Fairbanks but commute to work and school inside these locales are required to have an inspection.

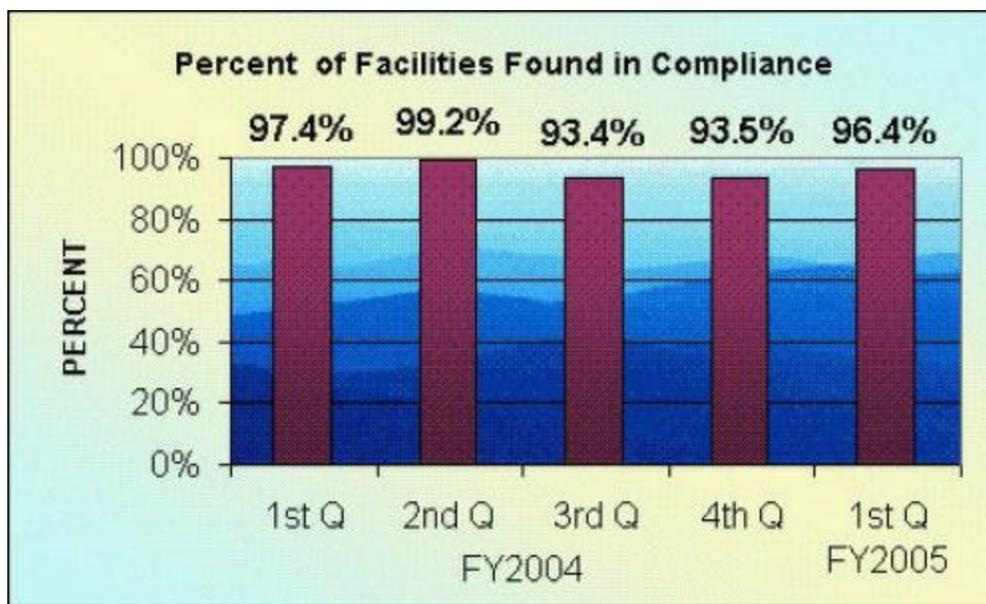
To determine compliance with the vehicle inspection program, the department performs a survey of in-use vehicles every other year in Anchorage and Fairbanks, recording the license plate and windshield sticker information. In order to be statistically valid, approximately 10,000 non-duplicative vehicle license plate recordings are needed in Anchorage and approximately 6,000 in Fairbanks. In-use vehicle records from the survey are electronically compared to the I/M inspection database, which can identify whether the vehicle has a current inspection.

The time and location for each survey is selected very carefully. Surveys are not conducted during evenings or weekends. Emphasis is placed on areas used by the local resident, businesses, and school parking lots. Information is collected in winter when carbon monoxide problems exist. Those vehicles that do not need an inspection are excluded. The time necessary to collect the number of vehicle observations is very labor intensive. Due to these limitations of time and expense, data is collected once every two years.

A4: Strategy - Minimize pollution from stationary sources.

Target #1: 100% of facilities requiring air permits are in compliance.

Measure #1: % of facilities that are in compliance, or on an enforceable compliance schedule, or subject to formal enforcement action by the department.



Percent of Facilities Found in Compliance, or on an Enforceable Compliance Schedule, or Subject to Formal Enforcement Action by the Department

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	YTD
2004	97.4%	99.2%	93.4%	93.5%	
2005	96.4%	0	0	0	

Analysis of results and challenges: These figures represent the number of permitted stationary sources that have unaddressed compliance issues and the total number of permitted sources. The Department does not have ready access to data regarding similar activities in other states.

Air program inspectors record data regarding source compliance issues found through public complaints, permittee self-reporting, and during the inspectors' scheduled compliance evaluations. The program implemented a new compliance monitoring strategy in FY 2004. Under this strategy, the program now evaluates compliance status of each permitted source no less than once every two years.

Quarterly data for FY2004 reflects additional compliance issues uncovered as the program conducted its first round of scheduled source evaluations. On June 30, 2004, we completed the first half of the permitted source evaluations.

The program expects that the percentage of permitted sources with unresolved compliance issues will continue to increase as the program completes the first source compliance evaluations on the remaining permitted stationary sources in FY 2004. The number of compliance issues will increase with discovery and percentages may continue to decline through the end of the fiscal year. After the program completes this initial evaluation period and addresses compliance issues, we expect that the percent of sources in compliance will again approach 100%.

Key RDU Challenges

Rural Alaska communities are facing a major decision about diesel fuel use. By 2007, they must decide to either incur the cost of building a separate and new fuel tank infrastructure for handling the new cleaner diesel fuel federally mandated for trucks and buses or to convert their entire community to the cleaner more expensive fuel for electrical power, heating and vehicle uses. Either case will incur significant costs for the community, individuals and the state. This division is engaged in field studies during FY2005 and FY2006 to ascertain if diesel fired power plants cause a health risk and if so, decide if these power plants must switch to the cleaner fuel.

Without replacement funding for one-time capital funds, vehicle air pollution emissions will increase in Anchorage and Fairbanks and Division of Motor Vehicles (DMV) will see longer lines at their counters. The vehicle emissions inspection

and maintenance (I/M) program is the primary air pollution control strategy used in Anchorage and Fairbanks. The I/M program is reliant upon a highly efficient interface between private inspection garages, DMV, DEC and the local governments of Anchorage and Fairbanks. Each entity has separate responsibilities ranging from internet based re-licensing of vehicles (DMV), maintaining proper specification for I/M tests (DEC) and appropriate compliance and enforcement actions for emissions violations (local governments and DEC). These separate jurisdiction duties are efficiently executed via a highly integrated DEC computer database system working through the internet. DEC and the two local governments are supporting separate legislation to raise user fees essential to maintaining the existing level of service provided by DEC.

Significant Changes in Results to be Delivered in FY2006

None.

Major RDU Accomplishments in 2004

Working with Anchorage and Fairbanks, the division developed air quality plans that demonstrated long term compliance with the air quality health standards for carbon monoxide in Anchorage and Fairbanks. EPA approved the air quality maintenance plans and re-designated both cities as clean air areas for carbon monoxide. Air quality continues to improve in Anchorage and Fairbanks. DEC must work closely with both communities to continue effective carbon monoxide control strategies to retain clean air and protect public health.

The department completed a comprehensive revision to its air permit regulations to incorporate the changes mandated by HB160 (2003). These regulations became effective October 1, 2004 and make Alaska's major source permitting more consistent with federal regulations. The regulations also establish a streamlined minor source permitting program to protect air quality while allowing facility changes to meet fast changing market demands.

In FY2004, the air permits program issued twenty-eight air construction permits for new industrial stationary sources and modification to existing sources. During September 2003, the air permits program renewed general operating permits for three source categories including asphalt plants, aggregate manufacturing, and soil remediation units.

Air permits staff investigated one hundred forty-nine citizen air pollution complaints. Staff prepared fifty on-site and fifty-two off-site full compliance evaluations of permitted stationary sources to help operators comply with air permits. Staff resolved forty-one compliance problems without the need for formal enforcement action.

The division submitted a plan to the EPA for the gradual implementation of ultra low sulfur diesel fuel for use in trucks and buses in rural Alaska. The recommendation provides flexibility for rural communities to bring in the fuel as they need it, within a 2010 deadline for use of ultra low sulfur diesel in all diesel vehicles. The plan provides adequate time for DEC to assess rural health risks from diesel fuel use as necessary to support an infrastructure and fuel choice decision before 2010.

The division initiated a road dust study for DOT/PF in Kotzebue to determine the effectiveness of various types of surface paving to mitigate air pollution. Staff provided technical assistance to the villages in the North West Arctic Borough including Noatak, Kivalina, Noorvik, Selawik, Buckland and Ambler to assess breathable airborne particulate pollution in their communities. The division is also working with several other villages across the State to determine if their communities have a fine particulate air pollution problem.

Contact Information

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**Air Quality
RDU Financial Summary by Component**

All dollars shown in thousands

	FY2004 Actuals				FY2005 Management Plan				FY2006 Governor			
	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds
Formula Expenditures												
None.												
Non-Formula Expenditures												
Water Quality	2,347.8	2,140.3	504.7	4,992.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Com'l	0.0	0.0	386.3	386.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Passenger Vessel Program												
Air Quality Director	218.2	0.0	0.0	218.2	216.6	0.0	0.0	216.6	218.8	0.0	0.0	218.8
Air Quality	1,209.8	836.2	3,172.0	5,218.0	1,221.9	1,567.6	3,914.1	6,703.6	1,248.6	1,599.3	4,026.3	6,874.2
Totals	3,775.8	2,976.5	4,063.0	10,815.3	1,438.5	1,567.6	3,914.1	6,920.2	1,467.4	1,599.3	4,026.3	7,093.0

Air Quality
Summary of RDU Budget Changes by Component
From FY2005 Management Plan to FY2006 Governor

All dollars shown in thousands

	<u>General Funds</u>	<u>Federal Funds</u>	<u>Other Funds</u>	<u>Total Funds</u>
FY2005 Management Plan	1,438.5	1,567.6	3,914.1	6,920.2
Adjustments which will continue current level of service:				
-Air Quality Director	2.2	0.0	0.0	2.2
-Air Quality	26.7	31.7	112.2	170.6
FY2006 Governor	1,467.4	1,599.3	4,026.3	7,093.0