STATE OF NEW HAMPSHIRE
DEPARTMENT OF ENVIRONMENTAL SERVICES
AIR RESOURCES DIVISION

PERFORMANCE AUDIT REPORT
MAY 2018

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To The Fiscal Committee Of The General Court:

We conducted a performance audit of the New Hampshire Department of Environmental Services, Air Resources Division (ARD) to address the recommendation made to you by the joint Legislative Performance Audit and Oversight Committee. We conducted this audit in accordance with generally accepted government auditing standards. Those standards require we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. The evidence we obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The purpose of the audit was to determine whether the ARD operated efficiently and effectively during State fiscal years 2016 and 2017.

Office of Legislative Budget Assistant

Office Of Legislative Budget Assistant

May 2018

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STATE OF NEW HAMPSHIRE
AIR RESOURCES DIVISION

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ABBREVIATIONS AND GLOSSARY OF TERMS

AFC	Administrative Fine By Consent
AO	Administrative Order
ARD	Air Resources Division
CAA	Federal Clean Air Act Of 1970
CAA Amendments	Federal Clean Air Act Amendments Of 1990
Criteria Pollutants	Most commonly emitted air pollutants including carbon monoxide, lead, ground-level ozone, particulate matter, nitrogen dioxide, and sulfur dioxide.
DOJ	Department Of Justice
EPA	Federal Environmental Protection Agency
ECHO	Enforcement And Compliance History Online
FFY	Federal Fiscal Year
GAO	Government Accountability Office
GSP	General State Permit
HAP	Hazardous Air Pollutant
LOD	Letter Of Deficiency
LPAOC	Legislative Performance Audit And Oversight Committee
Minor Source	Sources which do not have the potential to emit pollution at Title V thresholds. Minor sources are issued a State Permit to Operate.
Mobile Source	Equipment with engines that can be moved from one location to another. Mobile sources include motor vehicles, airplanes, trains, marine vessels, yard equipment, and other engines.
NAAQS	National Ambient Air Quality Standards
NHDES	New Hampshire Department Of Environmental Services
NPF	Notice Of Proposed Fine
NPV	Notice Of Past Violation

Opacity	The property of a substance whereby it partially or wholly obstructs the transmission of visible light. Expressed as the percentage to which light is obstructed.
Particulate Matter	Also known as particle pollution. A mixture of extremely small particles and liquid droplets that get into the air and, once inhaled, can affect the heart and lungs, and cause serious health effects.
PM	Particulate Matter
Potential To Emit	The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.
RATA	Relative Accuracy Test Audit
SIP	State Implementation Plan
SFY	State Fiscal Year
SSD	Stationary Source Database
State Permit To Operate	Issued to sources which are required to hold a temporary permit, but are not subject to the Title V operating permit program; or is choosing to limit potential emissions to a level below the threshold which would trigger a Title V operating permit. Contains the emission limits and other conditions the source is required to meet to ensure operations will not result in a violation of any air quality standard or regulation.
Stationary Source	Any fixed building, structure, facility, or installation that emits or may emit any regulated air pollutant.
Synthetic Minor Source	Sources with the potential to emit at Title V thresholds, but are choosing to limit their emissions to below the threshold. Synthetic minor sources are issued a State Permit to Operate.
Title V	Title V of the *Clean Air Act Amendments Of 1990* requiring states implement an air permitting program.
Title V Source	Generally, facilities with the potential to annually emit ten tons or more of any one HAP, 25 tons or more of any combination of HAPs, 50 tons or more of VOCs, or 100 tons or more of any criteria pollutant. Sources emitting certain levels of nitrogen oxide are also considered a Title V Source depending on the county in which they are located.
Title V Operating Permit	Issued to sources which emit, or have the potential to emit, pollutants at the Title V source levels, and are not choosing to limit their potential emissions. Contains the emission limits and any other conditions the source is required to meet to ensure the operation of the source will not result in a violation of any air quality standard or regulation.
Temporary Permit	Also known as a construction permit. Issued prior to the commencement of construction or installation of any new or modified source or device and valid for no longer than 18 months. Contains the parameters under which the source or device is constructed or operated. The first step toward obtaining either a State Permit to Operate or a Title V Operating Permit.
VOC	Volatile Organic Compound

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STATE OF NEW HAMPSHIRE
AIR RESOURCES DIVISION

EXECUTIVE SUMMARY

Since 1998, the Air Resources Division (ARD) has been responsible for administering the requirements of the federal *Clean Air Act* (CAA) in New Hampshire through its air permitting, air monitoring, inspection, compliance testing, and enforcement activities. During the audit period, the ARD oversaw over 600 permitted sources of pollution and approximately 1,200 additional businesses not requiring an operating permit, but still subjected to regulated hazardous air pollutants requirements.

We found the ARD was generally efficient and effective in carrying out its overall mission to protect New Hampshire's air quality and ensure the State complied with federal CAA requirements. Environmental Protection Agency (EPA) officials praised the quality of ARD's work and staff professionalism, reporting it was an excellent partner in implementing CAA programs. Periodic EPA evaluations also showed high levels of compliance with federal requirements. At least 80 percent of permitted facilities we surveyed expressed general satisfaction with the staff professionalism, with 96 percent reporting staff provided them with timely assistance and feedback. Contractors performing compliance stack testing also expressed satisfaction with communication during the testing process.

While the ARD's experienced and knowledgeable staff was an asset, it was also its biggest risk, as heavy reliance on this staff made it acutely vulnerable to potential turnover. On average, staff had 18 years of experience, and over half of the ARD's current staff will be eligible for retirement in the next five years. Seventy percent will be eligible in the next ten years. Consequently, to safeguard continuity of its operations at the level of performance to which its stakeholders are accustomed, the ARD must ensure adequate succession planning and knowledge transfer to its existing staff.

However, we found workforce planning was lacking, and some current practices did not fully align with written policies, procedures, and rules. Additionally, some practices were not consistently documented, potentially hampering future staff training. During the audit period, the ARD's 23 percent vacancy rate also hindered its ability to process permits timely, handle enforcement referrals timely, and conduct inspections at the frequency recommended. For the entire two-year audit period, six of the 16 positions dedicated to these three activities were vacant. The combination of persistent vacancies, an aging workforce, a lack of succession plans, and gaps within current policies and procedures posed significant risk the ARD could lose critical knowledge and skills, potentially hindering its ability to efficiently and effectively achieve its goals and objectives.

While we found the ARD was generally effective and efficient, more robust workforce planning, reviewing some internal practices, and aligning these practices with written guidance could ensure it continues to operate in this manner.

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STATE OF NEW HAMPSHIRE
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RECOMMENDATION SUMMARY

Observation Number	Page	Legislative Action May Be Required	Recommendations	Agency Response
1	14	No	Implement succession, workforce development, and knowledge management plans to enhance Department-wide planning initiatives. Evaluate current policies and procedures for gaps, identify areas for additional improvement, and finalize all policies. Air Resources Division (ARD) management should work with New Hampshire Department of Environmental Services management to update guidance and ensure all references reflect current statute, administrative rules, and federal policies.	Concur
2	20	No	Improve the permit process by tracking length of time between an application's arrival and when it is assigned to a permit engineer, ensuring application forms request all necessary information, reviewing renewal applications to ensure timely processing, reviewing timing of permit applications, and consider recruiting to fill vacant positions. Explore the cost and benefits of expanding online permitting.	Concur
3	24	No	Review public comment requirements to determine whether all permit types require the same amount of time for public comment and amend administrative rules accordingly.	Concur

Observation Number	Page	Legislative Action May Be Required	Recommendations	Agency Response
4	28	No	Review inspection schedules to ensure inspections occur at recommended frequencies. Review minor sources which have not been inspected in a long time to determine risk of non-compliance. Review whether staffing constraints pose a risk to meeting inspection goals and make a case to the Legislature to increase inspection staff, or negotiate an alternative inspection schedule with the Environmental Protection Agency.	Concur
5	30	No	Develop risk-based criteria to assist inspectors in determining whether seeing a device in operation is warranted.	Concur
6	32	No	Establish a follow-up process to ensure deficiencies not referred to Enforcement are corrected and additional information requested is received timely. Consider developing criteria for when a deficiency should be referred to Enforcement or monitored internally.	Concur
7	35	No	Develop criteria to determine whether staff should be present at all stack tests and amend administrative rules accordingly.	Concur
8	38	No	Enforce administrative rules related to pre-test protocol and pre-testing meeting requirements. Determine whether certain requirements are necessary to meet ARD's goals and objectives and amend administrative rules to reflect current practices, as warranted.	Concur
9	39	No	Clarify follow-up requirements and consistently document when follow-up may be needed and completed.	Concur
10	43	No	Review the enforcement process to determine whether staffing constraints negatively affected timeliness. Consider recruiting to fill a vacant position, or consider allocating administrative support to assist with some tasks.	Concur

BACKGROUND

In 1987, the Legislature created the New Hampshire Department of Environmental Services (NHDES) by consolidating and restructuring four formerly separate agencies: the Office of Waste Management, the Water Supply and Pollution Control Commission, the Water Resources Board, and the Air Resources Agency. RSA 21-O:10 established the Air Resources Division (ARD) to assume all responsibilities previously overseen by the Air Resources Agency. Specifically, the ARD's mission included "achieving and maintaining air quality in New Hampshire that is protective of public health and our natural environment."

Federal Clean Air Regulation

Regulation of the nation's air quality became a priority in 1970 when Congress passed the *Clean Air Act* (CAA) to regulate air emissions from stationary and mobile sources of pollution. Prior to 1970, federal air pollution efforts primarily focused on research, allowed states and municipalities to develop their own air control programs, and did not include mobile sources. The CAA authorized the federal Environmental Protection Agency (EPA) to establish national ambient air quality standards (NAAQS) to protect public health and welfare, and to regulate emissions of hazardous pollutants with the goal of all states meeting NAAQS by 1975. To achieve these goals, the EPA directed states to develop State Implementation Plans (SIP) applicable to the specific sources in their state. However, states had not achieved these standards, even in 1977.

In 1990, Congress passed the *Clean Air Act Amendments* (CAA Amendments) authorizing the EPA to establish a national operating permit program and improve enforcement to ensure better compliance. The law required the EPA to establish standards for stationary sources that emit, or have the potential to emit, certain amounts of regulated pollutants including carbon monoxide, lead, ground-level ozone, particulate matter, nitrogen dioxide, and sulfur dioxide. Title V of the CAA Amendments required states to develop and implement a program to issue a permit outlining all requirements a source must comply with before it could operate. It also required the source to file periodic reports showing compliance, and required states establish fees to cover all reasonable program costs. Additionally, the CAA Amendments allowed the EPA to classify nonattainment areas where air quality did not meet federal air quality standards, and established a process to impose sanctions on states failing to meet them. The EPA was allowed to delegate to the states the authority to implement the permit and enforcement programs on its behalf, and routinely audited states, including New Hampshire, to ensure programs were compliant with federal requirements. The CAA Amendments also included provisions for states to address mobile sources of pollution.

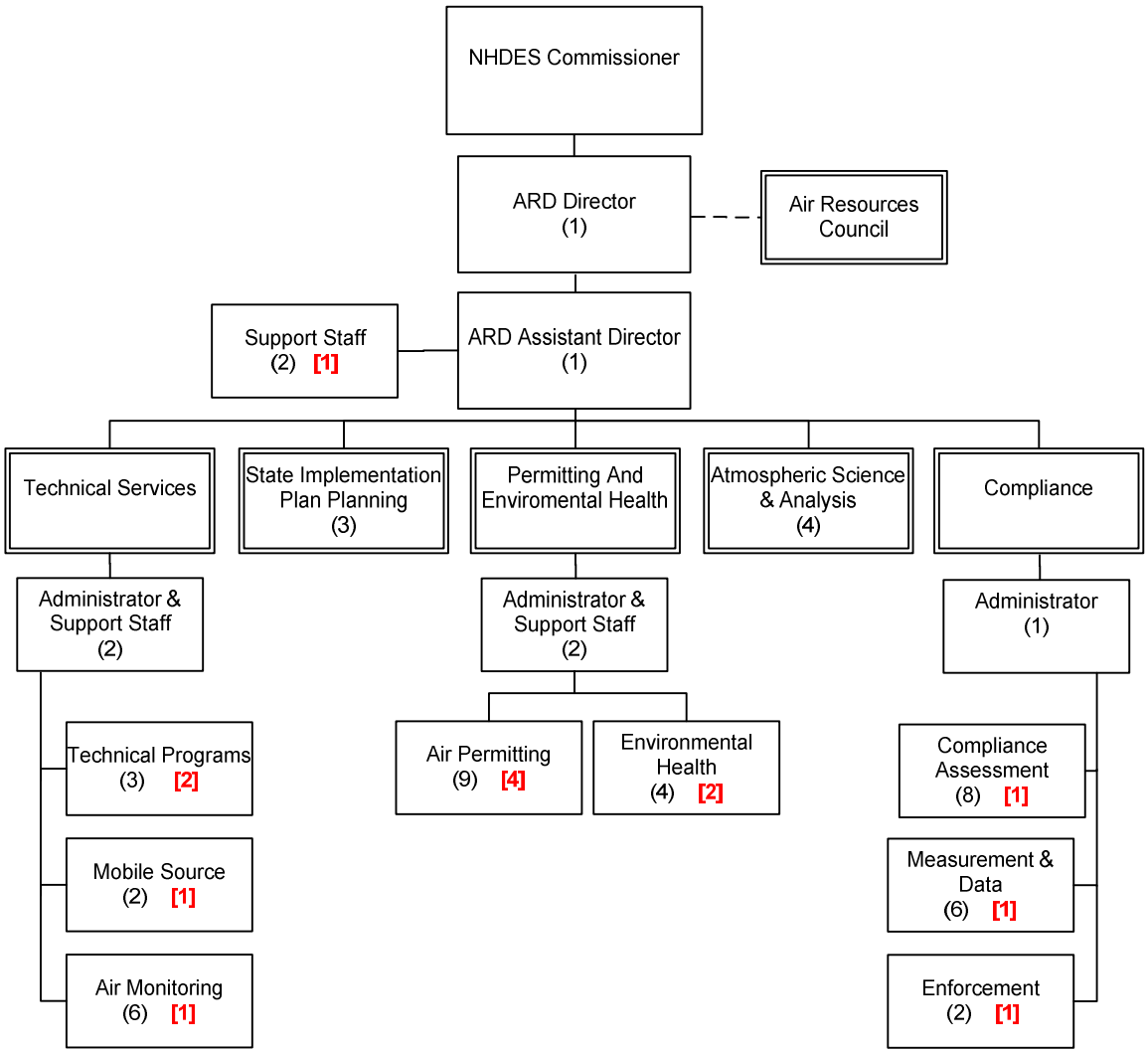
Air Resources Division Programs And Staffing

The ARD administered the requirements of the CAA and the CAA Amendments in New Hampshire through various programs in its three bureaus: Permitting and Environmental Health, Technical Services, and Compliance. In addition to staff in the three bureaus, personnel in the Director's Office were responsible for scientific analysis, strategic planning, and ensuring State

plans conformed to EPA requirements. The ARD had 56 filled staff positions and an additional 14 positions vacant at the end of the audit period. The 11 member Air Resources Council provided guidance to the ARD by offering input from various interest groups, reviewing proposed administrative rules, and hearing appeals of ARD decisions and orders. Figure 1 shows the ARD organization during the audit period.

Figure 1

ARD Organizational Structure As Of July 2017



Note: Positions in black parenthesis were filled and positions in red brackets were vacant at the end of the audit period.

Source: LBA analysis of ARD organizational charts.

ARD Revenues And Expenditures

As shown in Table 1, the ARD relied on a combination of federal grants, permitting and emissions fees, and other income to sustain its operations. The ARD's largest source of federal funds, CAA grants awarded by the EPA, accounted for approximately 28 and 24 percent of ARD revenues in State fiscal years (SFY) 2016 and 2017, respectively. Permitting and emissions fees, both Title V and State sources combined, were deposited into a non-lapsing fund and accounted for at least 50 percent of revenue in both fiscal years. The remaining revenues were from a combination of small grants awarded by various federal agencies, and other sources of revenue.

Table 1

ARD Revenues And Expenditures,
SFYs 2016 And 2017

	2016	2017
Revenues		
Permitting And Emissions Fees	$ 3,359,761	$ 4,006,548
Clean Air Act Grants	1,907,450	1,716,205
Other Federal Grants	1,008,694	1,053,087
Other Income	470,367	512,003
Total Revenues	***$ 6,746,272***	***$ 7,287,843***
Expenditures		
Personnel	$ 5,781,905	$ 5,827,395
Indirect Costs	402,743	437,378
Transfers To Other Agencies	678,752	724,355
Equipment	128,544	101,787
Current Expenses	120,257	121,457
Contracts For Program Services	80,989	119,376
Maintenance – Other Than Buildings	27,612	31,428
Travel	14,560	18,323
Other	98,449	139,439
Total Expenditures	***$ 7,333,811***	***$ 7,520,938***

Source: LBA analysis of NHFirst data.

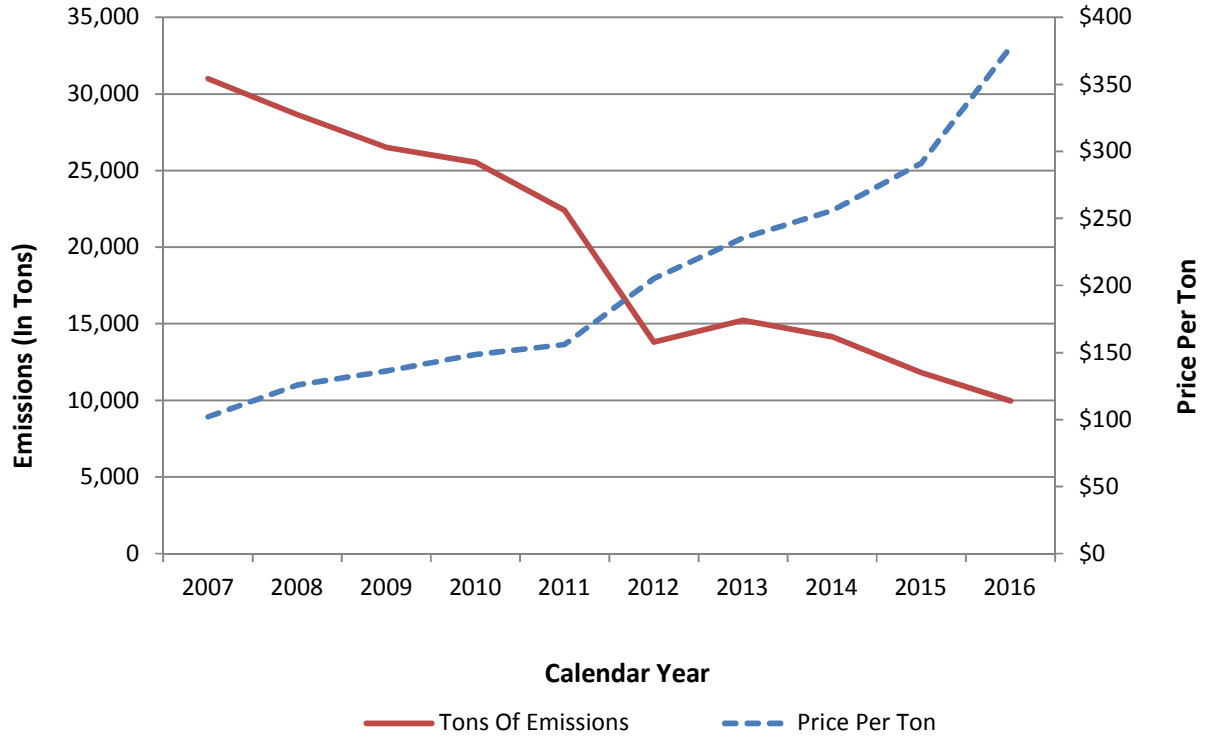
Expenditures remained relatively flat, with the ARD spending approximately $7.3 and $7.5 million in SFYs 2016 and 2017, respectively. The biggest source was personnel, which accounted for almost 80 percent of the ARD's annual expenditures.

According to ARD management, continued reliance on emission fees to fund the ARD was not sustainable. The ARD Director reported the ARD collected approximately $3.5 million annually in permitting and emission fees; therefore, as permitted facilities reduced their emissions, administrative rules required the cost per ton be increased to ensure adequate revenues were collected. Figure 2 shows the per-ton emission fee and the total tons emitted by all permitted

sources in the State for the past ten calendar years, 2007 to 2016. In the summer of 2017, the ARD created a stakeholder group to discuss alternative funding mechanisms for ARD. As a result of the stakeholder group, the ARD was expected to propose changes to the permit fee system by requiring all permitted sources pay an annual flat fee, which would vary depending on the facility type or type of pollutant the facility emitted. Permitted sources would also pay an annual emission fee, which would be offset by the amount collected in annual flat fees.

Figure 2

Emissions And Per-ton Emission Fees, Calendar Years 2007 To 2016



Source: LBA analysis of ARD data.

Statewide Air Permitting Program

The EPA delegated to the ARD authority to implement the Title V operating permit program on its behalf in 1998. Prior to 1998, the ARD had operated both a construction and operating permit program consisting of federal and State construction permits, as well as state operating permits. During the audit period, the permitting program regulated and limited sources of pollution by establishing requirements each source must meet to be compliant with State and federal standards.

Title V and State Operating Permits

Prior to adding a new, or modifying an existing, pollution source, a facility was first required to obtain a construction permit allowing it to construct and commence operations. Once operational, the facility obtained either a State or Title V operating permit, depending on its classification. Facilities annually emitting, or with the potential to emit, ten tons or more of any one hazardous air pollutant (HAP), 25 tons or more of any combination of HAPs, 50 tons or more of volatile organic compounds, or 100 tons or more of any criteria pollutant were required to obtain a Title V operating permit. Facilities operating certain devices, as specified in administrative rules, emitting below these thresholds were required to obtain a State operating permit. Operating permits were valid for up to five years. At the end of SFY 2017, the ARD regulated almost 650 stationary sources of pollution through its permitting program, 34 of which were Title V sources. New facilities, and those adding new equipment or modifying existing equipment, applied for a temporary permit, also known as a construction permit. Temporary permits were valid for 18 months from the date of issuance and could be renewed as many times as necessary. During the two-year audit period, the ARD received 176 permit applications.

Other Permits

In addition to Title V and State permits, the ARD also issued General State Permits for emergency generators and fire pumps, and Permits by Notification for Non-Metallic Mineral Processing Plants, which were issued for rock crushing equipment. These permits were obtained through an online permitting process and were processed mainly by a program specialist. Facilities operating rock crushers paid a one-time registration fee, while those operating emergency generators or fire pumps were required to renew their permit every five years. During the audit period, the ARD received 97 of these applications.

The ARD also processed a total of six applications for Limitations on Potential to Emit and Reasonably Available Control Technology orders. Limitations on Potential to Emit were issued primarily to screen printing, surface coating, and industrial laundry facilities emitting volatile organic compounds (VOC) or HAPs, and limited their emissions below a certain level. Reasonably Available Control Technology orders were issued to facilities subjected to certain federal VOC and nitrogen oxides rules, and outlined exceptions to particular emission limits. If approved by the EPA, these orders were formally incorporated into the State Implementation Plan.

Air Monitoring Program

In 1990, the EPA required states to meet NAAQS. States not meeting particular NAAQS were required to develop an implementation plan to meet the standard by a specific date or face sanctions. New Hampshire had been monitoring ambient air quality since 1962, when the first air monitoring station was built in Berlin, and expanded as part of CAA implementation. During the audit period, the State's monitoring network collected air quality data at 12 locations: Concord, Pembroke, Nashua, Londonderry, Portsmouth, Rye, Lebanon, Laconia, Keene, the summit of Mount Monadnock in Peterborough, and both the summit and base of Mount Washington. These stations collected meteorological data, as well as information on ozone and other pollutants such

as nitrogen oxide, sulfur dioxide, carbon monoxide, and small particle pollution found in New Hampshire's ambient air. Data collected were used to forecast air quality action days when ozone and particulate matter levels were forecasted to reach unhealthy levels, and to demonstrate compliance with federal ambient air quality standards. The EPA routinely audited the air monitoring program and routinely found the program did not have any major issues, and any minor issues identified were immediately resolved by the ARD.

Compliance Programs

The Compliance Bureau oversaw programs to ensure entities were in compliance with their permit, as well as federal and State air pollution regulations and laws. The Bureau conducted on-site inspections; responded to air quality complaints; monitored compliance stack-testing, oversaw asbestos management and licensing; and conducted enforcement. It also maintained the State's emissions inventory.

- *Stationary Source Compliance Inspections* were conducted on-site to ensure facilities complied with their permit conditions. On-site visits typically consisted of inspecting maintenance and repair records, reviewing equipment operation logs, reviewing visible emission test results, and checking compliance with general recordkeeping requirements. Inspectors could have also examined other equipment found on the site to determine whether they needed a permit. Issues found during an on-site inspection were typically referred to Enforcement for further action. If inspectors found non-permitted equipment, the facility was referred to both the Permitting and Enforcement Sections for further action. During the audit period, Bureau personnel conducted 165 compliance inspections.
- *Compliance Stack Testing* was conducted on-site to ensure facilities complied with emission limits outlined in their permit. The facility hired a contractor to conduct the emission testing. However, ARD compliance testing staff reviewed proposed test protocols, observed all stack tests, and reviewed test results. Facilities were required to submit a copy of the stack test results to the ARD within 60 days of the test. Facilities failing to do so were typically referred to Enforcement. During the audit period, Bureau personnel observed 165 stack tests.
- *Enforcement* received referrals of potential violations found during compliance inspections, stack testing, or permitting. Staff also received referrals through public complaints and the asbestos program. Inspectors, stack test personnel, and permitting staff generally referred a case to the Enforcement Section through the ARD's Stationary Source Database if they encountered a potential violation of State or federal laws or regulations, violation of the facility's permit, or noncompliance with ARD's requests. During the audit period, Enforcement received 226 referrals.
- *Asbestos Management* conducted on-site visits and inspections of asbestos abatement projects. Contractors were required to notify the ARD prior to starting an asbestos abatement project. ARD asbestos inspectors performed inspections at some sites to ensure contractors and workers were certified to perform abatement, and ensure protocols were followed. In SFY 2017, the Bureau visited or inspected 169 sites generated from asbestos abatement notifications and public complaints.

- *Emissions Inventory* staff compiled and maintained the State's emission inventory, which consisted of pollution emitted by permitted stationary sources; residential sources; and mobile sources, including vehicles. Data were reported to the EPA for inclusion in the national emissions inventory, which tracked the country's emission levels. Staff also calculated the emissions-based fees assessed on stationary sources annually, which accounted for the majority of the ARD's revenues.

Environmental Health Programs

The Environmental Health Section worked to promote and maintain environmental health for all NHDES divisions. Staff conducted health risk assessments for environmental contaminants and educated the public about health effects of environmental contaminants. The section also administered the Air Toxics Program, which was created to help protect public health and preserve the environment by controlling almost 190 EPA-established hazardous air pollutants likely to be emitted by businesses in the State. The program also established ambient air limits for approximately 700 other regulated toxic air pollutants required by State law, and required businesses to demonstrate they did not exceed established limits. Compliance Inspectors were responsible for checking to ensure businesses could demonstrate compliance with these limits through on-site inspections.

Technical And Mobile Source Programs

The Planning and Mobile Sources Section oversaw the ARD's energy efficiency, climate change, and mobile source efforts. Personnel worked with regional planning commissions to influence public transportation systems, promote energy efficiency initiatives, promote alternative vehicle technology, and collaborate with coastal communities on infrastructure planning to better prepare for climate change.

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AIR RESOURCES DIVISION STAFFING

Prior to the 1990 amendments, the *Clean Air Act* only required facilities to obtain a permit for construction of new or modified sources of pollutants. Existing sources did not need to obtain a permit unless they modified or increased their emissions, nor did they have to renew their permit. Under the *Clean Air Act Amendments of 1990* (CAA Amendments) permits became an important tool to help states enforce compliance. Permits were required to contain emission limits; monitoring, recordkeeping, annual certification, and reporting requirements; and periodic inspection requirements. Additionally, sources were required to periodically renew their permit. In July 1992, the federal Environmental Protection Agency (EPA) issued regulations to implement the permit program, but by 1994 was still modifying these regulations. The Air Resources Division (ARD) was not granted authority to operate the Title V permitting program on behalf of the EPA until 1998.

Since the implementation of the CAA Amendments, air regulations, and ultimately air permits, have become more lengthy and complex. According to the Congressional Research Service's 2016 publication, *Clean Air Permitting: Implementation And Issues*, "Consolidating existing requirements (some dating from the 1970s) into a single, comprehensive document, while undoubtedly beneficial, also has resulted in permits that are lengthy and detailed, making it difficult to read them without precise knowledge of the individual source's operations…." Since the early 2000s, ARD's responsibilities vis-à-vis subparts of the CAA's regulations have increased by approximately 50 percent. In 2004, New Hampshire was delegated authority over approximately 100 subparts of the CAA Amendments on behalf of the EPA. By 2018, it had taken authority over an additional 56 subparts. This additional authority required permits issued by the ARD to include monitoring, reporting, and inspection provisions pertaining to these additional areas for which sources may be subjected.

However, since the passage of the CAA Amendments, ARD staffing decreased. According to the ARD Director, during the early 2000s, the ARD was staffed with approximately 90 personnel. By 2018, this number had dwindled to 70, with at least 14 positions (20 percent) vacant for the majority of the audit period. Additionally, the average age and years of experience of ARD staff left the Division vulnerable to retirements, making workforce and succession planning imperative to ensure continuity of ARD operations.

Succession planning is an ongoing process of identifying, assessing, and developing talent to ensure continuity throughout an organization by sustaining operations with a knowledgeable labor supply. A strategic approach to succession planning minimizes resource waste through efficient and effective operations by incorporating elements of workforce development, workforce planning, and knowledge transfer processes. Statewide efforts to conduct strategic succession planning were decentralized, instead emphasizing the importance of individual organizational efforts. We found the ARD did not have such plans in place.

Observation No. 1

Implement A Strategic Approach To Succession Planning

The ARD lacked a strategic approach to succession planning. Additionally, ARD policies and procedures needed improvement to facilitate workforce development and knowledge management. The combination of an aging workforce, lack of succession plans, and gaps within current policies and procedures posed unmitigated risk of the ARD losing critical knowledge and skills, potentially hindering its ability to efficiently and effectively achieve its goals and objectives.

The New Hampshire Department of Environmental Services (NHDES) had a Department-wide strategic plan; however, workforce development and succession planning components were limited and the strategic plan was only projected through 2015. Additionally, the ARD Compliance Bureau had begun drafting its own strategic plan, but it did not include succession planning or comprehensive knowledge management and workforce development components.

Need For Succession Planning

Succession planning is the process of ensuring a knowledgeable labor supply exists to replace personnel leaving the organization regardless of the reason, especially for positions management identifies as being key to operations. Effective succession planning addresses current and anticipated staffing needs by assessing staff size, resource allocation, employee competencies, number of employees approaching retirement, and turnover rates; as well as anticipated legislative, environmental, and technological needs. Further, succession planning enables organizations to align workforce requirements directly into strategic and operational plans, identify and implement strategies to transition from the existing workforce to one that will fulfill future needs, and build the capability to continually shape the workforce to respond to emerging trends. Without succession planning, the ARD would be less able to effectively mitigate loss of critical skills, knowledge, and resources. NHDES management and ARD staff recognized the risks associated with an aging workforce, citing concerns related to staff turnover, vacancies, hiring, and impact on productivity and core knowledge. Difficulties in mitigating the aging workforce were attributed to competing with private sector compensation and benefits, as well as an acute reliance on current employees' institutional knowledge and experience.

Expected Turnover

As of July 2017, the ARD had 54 full-time equivalent positions filled out of 70. The average age of ARD employees was 53.4 years with an average of 18.4 years of service. We found 28 (52 percent) filled positions would reach normal retirement age within five years, and 38 (70 percent) would reach normal retirement age within ten years.

ARD management identified 25 (46 percent) of the 54 filled positions as key positions, or positions with mission critical tasks, unique expertise such as technical skills, and critical decision-making responsibilities. Fourteen (56 percent) of the key positions identified would reach normal retirement age within five years, and 17 (68 percent) of the key positions would

reach normal retirement age within ten years. From July 2017 through January 2018, three employees with an average of 27 years of service had already retired; one of which was identified as a key position. Another returned as a part-time employee shortly after retiring.

Gaps In Policies And Procedures

While we were provided policies and procedures for several areas of the ARD, both administrative and regulatory, we identified several gaps which could hinder the efficiency and effectiveness of the ARD in addition to potentially contributing to knowledge loss. Knowledge management facilitates effective succession planning by identifying, collecting, storing, and transferring knowledge through processes such as interviews, documentation, central databases, and mentoring, as well as on-the-job and formal training programs.

Several policies and procedures referred to NHDES guidance, which had not been updated since September 2000. We identified outdated references that affected the ARD, and at times, other divisions within NHDES. Some of these included references to:

- the organizational chart of the ARD which did not include the current makeup of the bureaus;
- the *Attorney General's Memorandum on New Hampshire's Right-To-Law, RSA Chapter 91-A*, dated May 10, 1999, which was updated in 2015;
- certain federal penalty policies and expired administrative rules affecting fines implemented by several NHDES divisions; and
- a Clean Air Act federal policy, *Policy On Timely And Appropriate Enforcement Response On High Priority Violations*, dated December 22, 1998, which was updated in 2014.

Other gaps in policies and procedures included the following:

- The standard operating procedure for State permits was inconsistent with administrative rules and ARD practice. The standard operating procedure stipulated if an applicant was anticipated to take longer than one week to provide additional information to the ARD, an *Incompleteness Letter* was to be drafted. Administrative rules specified 30 days, which was consistent with internal practice.
- Operating procedures for State permits stipulated the application would be assigned to a permit engineer to perform the completeness review. In practice, the completeness review was performed by a program specialist before it was assigned to the permit engineer.
- Policies and procedures relating to initiating enforcement cases and utilizing the database's enforcement module remained in draft form without a specified date for completion.
- During a review of stack testing files, several documents were not immediately located which resulted in the ARD staff having to verify and collate documents, such as testing protocols, by searching through hardcopy files, the central database, and email accounts.

Documentation of processes through policies and procedures is a necessary part of internal control, facilitates training, and mitigates loss of knowledge. Effective documentation of knowledge and corresponding policies and procedures requires continuous evaluation and monitoring to identify and improve deficiencies. Developing and implementing a strategic plan with components of succession planning and knowledge transfer practices, such as identifying gaps and updating policies and procedures, would reduce the risk of staff turnover negatively affecting operations.

Recommendations:

We recommend ARD management improve its succession planning efforts by:

- **developing and implementing succession, workforce development, and knowledge management plans to enhance Department-wide strategic planning initiatives; and**
- **evaluating current policies and procedures to identify gaps, determine where improvement is necessary, and ensure all policies are finalized.**

We also recommend ARD management work with NHDES management to update Department-wide guidance and ensure all references reflect current statute, administrative rules, and federal policies.

Auditee Response:

ARD concurs with the recommendations.

ARD agrees with the need to further develop and implement additional succession planning efforts. The average age and seniority of existing ARD staff is concerning. The issue is further compounded by the increased difficulty to recruit and retain the "next generation" due to a number of factors. Specific efforts to address succession planning include continuing its ongoing efforts to review and update all written operating procedures across all programs. In addition, as part of the FY 20/21 budget request, ARD intends to budget funds in key program areas with the goal of refilling certain key positions prior to existing senior staff leaving state government, particularly in cases where long-serving staff have pre-announced plans to retire. Finally, ARD is constantly monitoring pending state legislative efforts, federal regulatory initiatives, and the projected state of business and industry in New Hampshire as they might affect ARD's workload and revenue.

AIR PERMITTING

The Air Resources Division (ARD) was responsible for regulating and limiting air emissions from a multitude of facilities across New Hampshire through its statewide permitting program. As part of this, the ARD issued: a temporary permit (i.e., construction permit) to facilities constructing new or adding new equipment to an existing facility; Title V Operating Permit (Title V permit) for facilities emitting pollutants at or above levels established by the Environmental Protection Agency (EPA); and State Permit to Operate (State permit) for sources emitting below the EPA threshold (i.e., minor sources) or those choosing to limit their emissions to remain below EPA-established levels. Sources were also required to submit one of three types of permit applications before making modifications. The ARD issued a significant permit amendment application for modifications potentially resulting in increased emissions, a minor permit amendment for modifications not resulting in increased emissions, and an administrative amendment to correct minor errors in the permit.

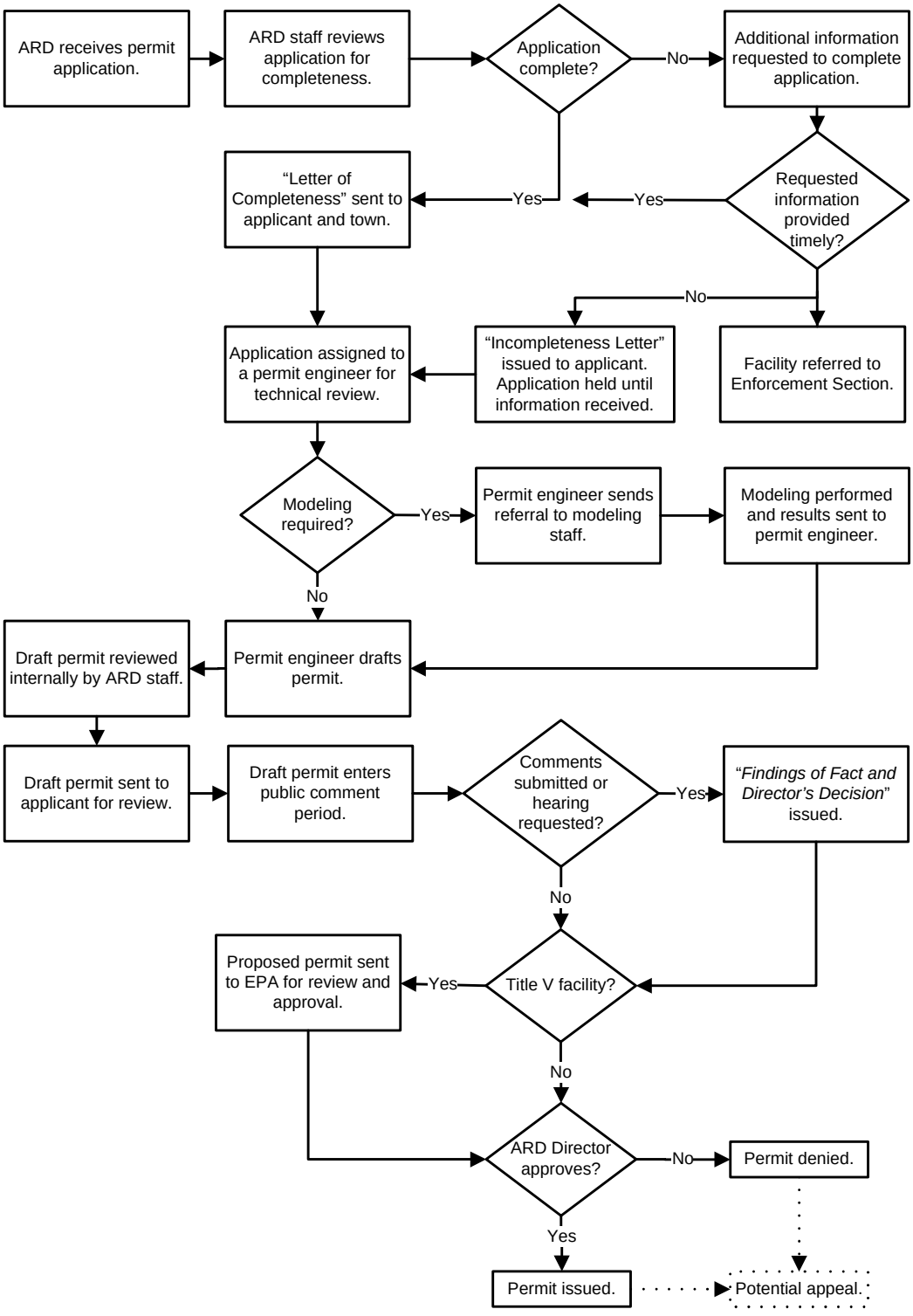
Prior to adding a new, or modifying an existing, pollution source, a facility must first obtain a construction permit allowing it to install or modify equipment and commence operations. Construction permits were valid for 18 months from the issue date and could be renewed as many times as necessary. Once operational, the facility obtained either a State permit or Title V permit, depending on its classification. Facilities emitting, or having the potential to emit, pollution at or above EPA-established thresholds obtained a Title V permit. Facilities emitting or choosing to limit their emissions below that threshold were required to obtain a State permit. Both Title V and State permits were valid for five years, at which point, a source was required to renew their permit.

EPA officials reported Title V permits issued by the ARD were well written, thorough, and did a good job protecting air quality while balancing the needs of the business community. Facilities we surveyed were also generally satisfied with the permitting process, with almost 80 percent reporting some level of satisfaction with the process as well as with the timeliness of permit processing for all permit types. However, we found the ARD could adjust its practices to facilitate timelier permit processing, especially for renewals. Our review of 159 permit applications processed during the audit period showed applications took an average of seven months to process, with the longest taking approximately two and a half years. This was not unique to New Hampshire, as EPA officials reported all states had a backlog in permit processing. The three other New England states we contacted also reported permitting backlogs, with one state reporting a ten year backlog for some of its non-Title V renewal applications. Shortening the public comment period for some permit applications could result in timelier processing. Less than five percent of permit applications actually received a comment from the public; however, the process added a little over one month to all permit applications.

The permit renewal process is shown in Figure 3. Facilities renewing a permit must submit an application to the ARD within certain timeframes. Title V sources, facilities with the potential to annually emit at or above certain levels of hazardous air pollutants, were required to submit their renewal application at least six months prior to the expiration of their current permit, while non-Title V facilities were required to submit the application three months prior to expiration.

Figure 3

ARD Permit Renewal Process



Source: LBA analysis of ARD information.

If the application was filed timely and the application was deemed complete, (i.e., all necessary information is provided on the application), the ARD issued a "Letter of Completeness" to the facility and the town where the facility was located. Once the application was deemed complete, the facility was covered under application shield, which allowed it to operate under the current permit, regardless of how long it took the ARD to issue a new permit. If information was missing from the application, ARD staff generally requested the facility provide the missing information and, if received timely, the application would be deemed complete. If the application was untimely, or was not deemed complete, ARD staff issued an "Incompleteness Letter." If the application was deemed incomplete, it was assigned to a permit engineer for processing after the ARD received missing information; however, the facility would not be covered under application shield, and upon expiration of the current permit, was typically referred to the Enforcement Section for further action.

The application was then assigned to an air permitting engineer for technical review to identify the specific regulations applicable to the facility, review emissions data, and determine whether air dispersion modeling was necessary. Renewal permits generally did not require air dispersion modeling. However, new facilities or facilities adding or modifying equipment were required to complete modeling if they emitted pollutants above certain thresholds.

Once modeling was complete, the permitting engineer generated a draft permit, which was subject to two levels of review before it was sent for public comment. Internally, the draft permit was reviewed by a senior permitting engineer; permitting program managers; and staff performing compliance inspections, stack testing, and enforcement functions. The draft permit was then transmitted to the facility for an external review, and circulated for a 30-day public comment period.

During the comment period, members of the public could request a hearing, which was usually held in the town where the facility was located. All comments received during the public comment period or at the public hearing must receive a written response, which was provided through a *Finding of Fact and Director's Decision*. The permitting engineer then modified the draft permit to incorporate the Director's decisions. According to permitting staff, public comments were infrequent, and public hearings were even less frequent.

If the facility was a Title V facility, the draft permit was sent to the EPA for a 45-day review and comment period. If the EPA rejected the proposed permit, disputed elements were addressed before the permit was issued. If the facility was a non-Title V facility, the permit could be issued once the Director's decisions were incorporated into the permit. Permits could have also been denied; however, according to ARD staff, this rarely happened and most permits were approved once all disputed requirements had been addressed. Once issued, interested parties could appeal the permit to the Air Resources Council, and Title V permits also could have been appealed to the EPA. During the audit period, no permits were appealed.

Observation No. 2

Improve Permitting Process

Some applications for air permits, especially renewal permits for non-Title V facilities, were not processed timely. The EPA required states to take final action on complete renewal applications within 18 months of being submitted. The ARD's informal goal was to process State permit renewal applications within six months, and applications for construction permits and significant amendments within 90 days. At the end of the audit period, the ARD had a total of 53 permit applications still under review, which exceeded its internal processing goals.

Some Permit Applications Were Not Processed According To ARD Goals

Our file review of a sample of 159 permit applications processed during the audit period included 60 that represented minor or administrative changes; and 99 other applications including 37 construction permits or significant amendments, 57 renewals of State permits, and five renewals of Title V permits. Of the 99 applications, 70 (71 percent) were not processed within ARD informal goals. Table 2 shows the majority (45 applications) were for a renewal of the facility's State permit, 22 were construction permits or applications for significant amendments to a facility's existing permit, and three were for a Title V renewal permit. Specifically, we found the following were not processed timely:

- Forty-five of the 57 (79 percent) State permit renewals,
- Three of the five (60 percent) Title V permit applications, and
- Twenty-two of the 37 (59 percent) applications for construction permits or significant amendments.

Table 2

Permit Applications Not Meeting Processing Goals
By Application Type

	Application Type		
Permit Type	**Construction Or Significant Amendment**	**Renewal**	**Total**
Title V Operating Permit	8	3	**11**
State Permit To Operate	14	45	**59**
Total	**22**	**48**	**70**

Source: LBA analysis of a sample of ARD applications.

Several Factors May Have Contributed To Untimely Processing

Reasons for untimely processing varied and some applications experienced multiple reasons for potential delays. According to permitting management, some permit applications were not assigned to a permit engineer until months after arrival at the ARD. Of the 159 permit applications we reviewed, 51 applications (32 percent) were not assigned to a permit engineer until at least two months after they were received, and 25 (16 percent) were not assigned until at least six months after receipt. We found this was the most common factor contributing to untimely processing. Of the 70 permit applications which we found were not processed timely, 43 applications (61 percent) were not assigned to a permit engineer until at least two months after it was received by the ARD, and 20 applications (29 percent) were not assigned until at least six months after. One renewal application was not assigned to an engineer until 21 months after it arrived at the ARD.

We found the following factors may have also contributed to untimely processing:

- Fourteen cases where it appeared the ARD either needed to request additional information multiple times, or had to wait on information to be submitted by the facility to continue processing the application;
- Eleven cases where the application was retained for air dispersion modeling for over two months, or had to be sent back and forth to modeling multiple times; and
- Four cases where the application underwent internal and external review for over two months, or were sent for review multiple times.

Timing For Submitting Permit Applications May Not Be Adequate

EPA rules required Title V applications be submitted at least six months prior to expiration or "such other longer time as may be approved … that ensures that the term of the permit will not expire before the permit is renewed." ARD rules required Title V sources to submit their application at least six months prior to expiration and non-Title V sources at least three months prior to expiration.

Our review of five Title V and 57 State permit renewal applications processed during the audit period showed Title V renewal applications took, on average, 15 months to process, while State permit renewal applications took ten months. Based on the actual processing time, Title V permits would have expired, on average, nine months before their new permit was issued, and State permits would have been expired for seven months. Additionally, the timing of when applications were required to be submitted did not appear to align with ARD's internal processing goals – 18 months for Title V renewal applications and six months for non-Title V renewal applications.

Little Incentive To Promptly Process Renewals Because Permits Remain Valid

According to ARD staff, applications for construction permits or significant amendments were prioritized over renewal applications. Statutes prohibited facilities from building a new facility, or installing new or upgrading existing equipment until it was permitted by the ARD.

Consequently, these applications were prioritized because the ARD did not want to delay businesses expansion. Therefore, if an application for a new construction project or for a significant modification to an existing facility arrived, it took precedence over renewal applications.

As shown in Table 2, forty-eight of the 70 applications not processed timely were renewal applications. If a facility submitted a complete renewal application within specific timelines, the application received "application shield" per administrative rule, which allowed the facility to continue operating under its existing permit until a new permit was issued. Application shield did not expire, regardless of how long the ARD took to process the renewal application.

On average, all facilities we reviewed operated for nine months under application shield until the new permit was issued, with ten facilities operating for over one year and two operating under application shield for over two years. ARD management noted one case prior to the audit period where the facility's permit had expired for over five years before the renewal permit was even sent for public comment.

Staffing Levels May Have Contributed To Processing Delays

According to ARD management, staffing levels impacted the ARD's ability to process permit applications timely. During the audit period, the ARD had two supervisors and eight positions responsible for processing permit applications. However, for each year of the audit period, the equivalent of four positions responsible for processing permit applications were vacant. In addition to the four vacant positions, two permit engineers had just been hired in July and September 2016. As of March 2018, the Permitting Section still had four vacant positions, all of which were dedicated to processing permit applications.

The ARD received 99 permit applications in State fiscal year (SFY) 2016 and 83 permit applications in SFY 2017. According to management, the ARD's goal was for each permit engineer to process between 25 and 30 permit applications per year. However, the two new staff members were only expected to process approximately ten permit applications during their first year.

Other States' Efforts To Improve Timeliness

Other New England states have made efforts to improve timeliness. One state extended the renewal cycle for non-Title V facilities to ten years between renewals instead of five years. Another state implemented an online application system, which retained permitting information from the facility's current permit. Facilities renewing their permit updated the existing information instead of filling out a new application. The system flagged updated information for the permit reviewer. To decrease the time that permitting staff spent reviewing unneeded information or requesting additional information, this state also reviewed its application forms to ensure they collected only information needed to process the application.

ARD management reported a desire to enhance online capacity to process applications. During the audit period, the ARD had online processes for issuing permits for rock crushing plants and

emergency generators. Additionally, Permitting Section management reported the application forms required updating because some regulations changed, but most forms had not been updated since 2003 and 2004.

Recommendations:

We recommend ARD management improve permit processing by:

- **continuously tracking how long applications have been at the ARD before they are assigned to an engineer;**
- **assigning applications sooner after being submitted;**
- **reviewing its application forms to ensure facilities include all necessary information in permit applications;**
- **reviewing the renewal process and ensuring timely processing despite competing priorities;**
- **reviewing internal timelines for when renewal applications must be submitted and requesting EPA approval for modifications to Title V applications, if necessary; and**
- **considering recruitment efforts to fill vacant permit processing positions.**

We also recommend New Hampshire Department of Environmental Services and ARD management begin exploring the costs and benefits of expanding online permitting.

Auditee Response:

ARD concurs with the recommendations.

ARD provides the following responses to the specific recommendations noted in the Performance Audit Report.

- *Continuously tracking how long applications have been at ARD before they are assigned to an engineer – ARD permit program managers now continuously track this metric.*
- *Assigning applications sooner after being submitted – ARD will implement this recommendation. However, with "First In - First Out" permit processing being NHDES Standard Operating Procedure, ARD is unsure if this will have a significant impact on the permit processing timeframe. Currently, if the permit engineers cannot move forward with any of their currently assigned priority (Temporary / Construction) permit applications, they are expected to request another application from their permit program manager. However, as noted above, ARD intends to implement this work practice, monitor this metric, and evaluate impacts to the overall process.*
- *Reviewing its application forms to ensure facilities include all necessary information in permit applications – ARD will implement this recommendation. While problems noted in this finding have mainly resulted from changes to federal regulations for non-Title V sources (which ARD implements in permits through its delegation agreement with EPA), ARD also recognizes that some information required on its application forms may also no longer be necessary or relevant, and has identified other changes that would improve the quality of the*

forms. Therefore, ARD will complete the recommended review and, as appropriate, propose changes to NH Administrative Rule Env-A 1700 Permit Application Forms.

- *Reviewing the renewal process and ensuring timely processing despite competing priorities - ARD is implementing this recommendation. Given budgetary and other challenges of filling vacant positions as noted in the Audit Report, the initial focus of ARD's review will be on (1) whether to extend the terms of State Permits to Operate beyond the current 5 year term, and (2) whether it would be appropriate to regulate certain sources under a General State Permit. Also, as recommended in the Audit Report, ARD is currently exploring the costs and benefits of expanding its online permit system.*
- *Reviewing internal timelines for when renewal applications must be submitted and requesting EPA approval for modifications to Title V applications, if necessary – ARD will conduct this review and, if necessary, engage EPA to request any warranted changes.*
- *Considering recruitment efforts to fill vacant permit processing positions – ARD is addressing this issue on two fronts. First, ARD has submitted position posting requests to fill two currently vacant permit processing positions. These positions are intended to help reduce the time it takes to assign an application to a permit engineer and address the backlog of operating permits.*

  As noted above, ARD is implementing other improvements to reduce permit processing timeframes. It believes that if these efforts are successful, they may result in a future opportunity to reduce the number of staff needed to carry out the functions of this program.

Observation No. 3

Review Public Comment Period For Permit Applications

The EPA required all Title V permit applications to receive a 30-day public comment period. However, unlike other New England states, the ARD required all other permit applications to also receive a 30-day public comment period, even though historically, very few permit applications actually received public comment.

ARD staff reported very few permit applications received public comment and there could be a benefit to modifying public comment periods for some application types. Of the 159 permit applications we reviewed, only five (three percent) received comments from the public. Of these, three were applications for a construction or temporary permit, another was an application to convert a temporary permit to an initial State operating permit and only one was an application for a permit renewal. On average, the public comment period added 41 days to the permit process.

Statute allowed the NHDES Commissioner to adopt rules to exempt sources or devices which would have an insignificant effect on air quality from the public comment and hearing process. However, ARD rules required all permit applications for Title V and State Operating permits to go through a 30-day public comment period, with the exception of administrative amendments and minor amendments which would not increase a facility's emission level. According to ARD

management, although the EPA only required a comment period for Title V sources, the ARD has traditionally followed this guidance for all permit applications.

Public Notice Process In Other New England States

Other New England states have implemented alternate public comment periods for their non-Title V facilities. Specifically:

- One state required new construction applications to receive a 30-day public notice period. Renewal applications were subject to a 14-day comment period.
- One state required a 21-day comment period for what they classified as medium sources and no public comment period for minor sources.
- One state required minor sources applying for a construction permit or performing major modifications to their facility to receive a 20-day public comment period when the application was filed, as well as a 30-day comment period prior to the finalization of the permit. Minor sources applying for a renewal of their permit only required a 20-day public comment when filing the application.

Recommendations:

We recommend ARD management review public comment requirements and determine whether a 30-day public comment period is warranted for all non-Title V permit types. If it determines a 30-day public comment period may not be warranted for all permit types, it should amend its administrative rules to reflect the new public comment periods.

Auditee Response:

ARD concurs with the recommendations.

The air permit public notice process is somewhat unique because sources of air pollution can have far ranging impacts on public health and the environment, well beyond the surrounding neighborhood. For this reason, public notices are published both in a statewide and a local newspaper in an effort to (1) notify the general public of this source of air pollution, and (2) for those who may have questions or concerns about the source to review the permit application and ARD's supporting materials, including the proposed permit conditions. It is important to note that at the time of public notice, ARD has in the vast majority of cases made a decision to issue a permit. That is, the opportunity to comment is on the draft permit not the application.

Depending on the source, applications and the associated permit documents can be very technical and complex; reviewing and understanding these materials may require a substantial amount of time. The 30-day public notice period generally affords the time for citizens and other interested parties to obtain and review the draft materials, and if desired, to provide written comments to ARD. If, after reviewing these materials, a person would like a public hearing, the person must then prepare a written request that must meet certain criteria contained in ARD's public notice rules. This is being noted as a major consideration regarding the decision to

reduce the public notice period, as in some instances it may not provide a reasonable amount of time for the public to review these documents and prepare written comments.

ARD will solicit input from both the public and regulated sources on eliminating or shortening the length of public notices in certain instances. ARD notes that in the permitting survey conducted during the audit, over half of the permitted sources believed that the public notice was beneficial for all permit types, citing "Public Awareness/Right to Know" as the main reason.

ARD will give this issue close attention, recognizing the obvious benefit of shorter permit processing timeframes. It has also spoken with its counterparts in neighboring states who have recently shortened/eliminated public notice requirements to learn from their experience. Based on its initial review, ARD believes that certain types of permits may be able to have a shortened public notice period, or may instead be appropriate as a General State Permit (GSP) category (which requires a 30-day public notice to establish the GSP, but does not require this of individual sources when registering under GSP). Below is a (summarized) set of actions that ARD plans to implement this recommendation:

- *Complete Internal Proposal[1] - Changes to Public Notice*
- *Conduct Stakeholder Meeting*
  - *Discuss ARD Initial Proposal*
  - *Receive Stakeholder Comment on ARD Proposal*
  - *Discuss Stakeholder Ideas/Proposals*
- *Draft changes to NH Administrative Rule Env-A 600*
- *Initiate Env-A 600 Rulemaking Revision Process[2]*

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1 Includes input from the EPA, who ultimately approves changes to the NH State Implementation Plan.

2 Once this process commences, the timeframe for completion is not completely controlled by ARD. For example, the length of time for the NHDES Legal Unit to review the draft rule changes may be impacted by other major rulemaking efforts by the Department.

COMPLIANCE PROGRAMS

The *Clean Air Act Amendments of 1990* (CAA Amendments) required states to implement programs to ensure they met national ambient air quality standards. As part of this, the CAA Amendments required states establish programs to: inspect facilities to monitor compliance with permitting requirements, require facilities submit periodic reports, and implement stack testing requirements. The CAA Amendments also required states to implement a system to handle enforcement against non-compliant facilities.

The Compliance Bureau within the Air Resources Division (ARD) oversaw programs to ensure entities were in compliance with their permit, as well as federal and State air pollution regulations and laws. As part of its responsibilities, the Bureau conducted on-site compliance evaluations (i.e., compliance inspections), monitored compliance stack-testing, and conducted enforcement.

We found the ARD's compliance programs to be generally effective. According to Environmental Protection Agency (EPA) representatives, the ARD's compliance programs functioned very well, and enforcement action taken against Title V sources were timely and appropriate. Periodic federal reviews of ARD's enforcement activities also gave the ARD high marks for its activities to monitor Title-V facilities' compliance efforts. However, we found vacancies in positions responsible for conducting compliance inspections and handling enforcement may have negatively affected the ARD's ability to perform some tasks on a timelier basis. Also, some modifications to processes could help the programs operate more efficiently.

Compliance Inspections

Compliance inspections were conducted on-site to ensure facilities complied with all requirements of their permit. Inspections generally consisted of reviewing maintenance and repair records, equipment operation logs, visible emission test results, and checking compliance with general recordkeeping requirements. Deficiencies found by an inspector during an on-site inspection were referred to the Enforcement Section for further action after being discussed with the Enforcement Section Supervisor, Compliance Assessment Section Supervisor, and the Compliance Program Manager.

The EPA established national guidelines to advise states on how often Title V facilities and synthetic minor sources (i.e., facilities choosing to limit their emissions below the Title V threshold) should be inspected. To guide its work, the ARD established, with the input of the EPA, an annual Compliance Monitoring Strategy, which outlined its inspection goals for the year.

EPA officials reported the ARD conducted inspections well. The most recent EPA review of ARD's Title V inspection activity showed the ARD met or exceeded expectations in inspection coverage and report quality, as well as identifying violations from inspections. Additionally, 87 percent of facilities we surveyed expressed some level of satisfaction with the professionalism of ARD inspection staff and 78 percent expressed some level of satisfaction with the quality and

comprehensiveness of the inspection report. Facilities also expressed satisfaction with how the ARD informed them of deficiencies found during the inspection.

In general, we found compliance inspections of the vast majority of Title V facilities occurred according to the EPA's recommended schedule; however, some improvements could be made to ensure non-Title V sources are inspected more timely. On average, inspection reports were completed well within established goals, with approximately 75 percent of inspection reports being issued within 30 days. We also found all deficiencies referred to the Enforcement Section were assessed to determine whether further action was warranted. However, the ARD lacked a process to follow up on deficiencies that were not referred to the Enforcement Section and requests for additional information. Additionally, we found the ARD could enhance its ability to assess whether all of a facility's devices were in compliance by establishing guidelines for when a device should be seen in operation at the time of the inspection.

Observation No. 4

Review Inspection Frequency At Permitted Facilities

During the audit period, compliance evaluations (i.e., inspections) did not always occur according to the ARD's goals, especially at synthetic minor and minor sources. Although the ARD strived to inspect minor sources on a five-year schedule, ARD management stated they were not always inspected timely. According to the EPA, inspections were designed to address "all regulated pollutants at all regulated emission units." Further, inspections should address the current compliant status "as well as the continuing ability of the facility to maintain compliance at each emission unit." Not ensuring sources were inspected on a periodic basis could potentially hinder the ARD's ability to assess current and continued compliance of regulated units.

Inspection Goals

The EPA recommended that states inspect Title V major, Title V mega, and synthetic minor sources once every two, three, and five years, respectively. However, the EPA allowed states to negotiate alternative inspection frequencies for Title V and synthetic minor sources to address local compliance issues. The ARD incorporated these frequencies into its own annual monitoring plans. Additionally, the ARD's federal fiscal year (FFY) 2016 *Compliance Monitoring Strategy Plan* established the goal of inspecting minor sources once every five years; however, the FFYs 2017 and 2018 *Compliance Monitoring Strategy* no longer included this goal. According to the Compliance Bureau Administrator, beginning in FFY 2017, minor sources were annually chosen for inspection based on criteria including complaint trends, toxicity of pollutants emitted, population density in the area the source was located, and the facility's compliance history.

Inspection Frequency

In our sample of 120 inspections conducted during State fiscal years (SFY) 2016 and 2017 (Inspection 1), we found 96 had at least one inspection (Inspection 2) prior to the one conducted during the audit period. Of these, 41 facilities (43 percent) were not inspected within the frequencies established in the ARD's *Compliance Monitoring Strategy*. One facility was

classified as a Title V major source, 18 were synthetic minor sources, and 22 were minor sources. Thirteen facilities (14 percent) operated for at least ten years between Inspection 1 and Inspection 2, nine of which were minor sources. Four minor sources went over 15 years between inspections, with two going 18 years between inspections.

Sixty-six facilities in our sample also had an even earlier third inspection (Inspection 3). Of these, 22 facilities (33 percent) were not inspected within the established frequency, two of which were classified as Title V major sources, 14 were synthetic minor sources, and six were minor sources. Two sources went at least ten years between Inspection 2 and Inspection 3, with one minor source going 12 years between inspections.

The ARD was responsible for ensuring air quality compliance at over 260 facilities holding a Title V or State Operating permit. It was also tasked with ensuring compliance with State and federal regulations for over 1,200 additional facilities emitting regulated air pollutants, but not requiring a Title V or State Operating permit. Based on the various inspection frequencies of sources holding Title V and State Operating permits, the ARD's two inspectors would have had to conduct approximately 62 inspections per year in addition to other inspections at unpermitted facilities.

Inspection Staffing

According to ARD management, staffing impacted the ARD's ability to conduct inspections timely. During the audit period, the Compliance Assessment Section had four positions: one supervisor and three inspectors, two of whom were responsible for conducting on-site inspections. The third inspector was primarily responsible for processing air quality complaints and reviewing reports submitted by facilities that experienced emission levels exceeding their permit limit. For most of the audit period, the Section was short-staffed by the equivalent of one position, as the Section Supervisor position was vacant for approximately eight months, and an inspector position was vacant for approximately three months. The Section returned to normal staffing in August 2017; however, one inspector conducting on-site inspections vacated the position in mid-February 2018, again leaving the Section short-staffed until the position is filled.

Recommendations:

We recommend ARD management improve the inspection process by:

- **reviewing its inspection schedule to ensure all Title V and synthetic minor sources are inspected according to the established recommended frequency;**
- **reviewing minor sources which have not been inspected in long periods of time to determine their risk of non-compliance with State regulations;**
- **considering staffing constraints and anticipated workload when determining inspection priorities; and**
- **working with the EPA to establish an alternative monitoring plan, if necessary.**

If ARD and NHDES management determine the expected level of inspections pose excessive risk to New Hampshire's air quality, the NHDES should make the case for increased inspection staff to the Legislature with a plan to pay for it.

Auditee Response:

ARD concurs with the recommendations.

In collaboration with EPA Region 1, each July ARD reviews the inspection goals for the upcoming federal fiscal year. Some of the considerations when choosing the minor sources to be targeted include complaints, toxicity, population density, and compliance history. ARD plans to confer with EPA about inspecting certain Title V facilities that consistently demonstrate ongoing compliance and have advanced levels of emission monitoring by means of a lower level compliance assessment for every other inspection. Such an accommodation would likely free up existing staff resources and allow for the inspection of additional minor sources on a more consistent cycle. ARD notes that inspections cannot uncover all instances of non-compliance during an inspection cycle. Inspections, by definition, are only a snapshot in time. Other ongoing efforts to evaluate compliance of a permitted source include reviews of annual compliance fillings and other periodic reports. What is equally important is that the mere possibility of a random inspection has significant deterrence effect, so long as the chance of an inspection is credible.

Observation No. 5

Develop Criteria To Determine Whether Devices Should Be Operating During Inspections

The ARD did not require inspectors observe permitted devices in operation during full compliance inspections, nor did it have criteria to help inspectors assess whether a device should be observed in operation. During the audit, we observed an inspection which included a seasonal device that was not yet operating at the time. The last time the device was seen in operation by ARD inspection personnel was ten years prior during the last inspection.

Not All Permitted Devices Are Inspected While In Operation

Of the 95 full inspections we reviewed during our audit, we found 34 had at least one permitted, non-emergency device which was not in operation at the time of the inspection (36 percent). As a result, these reports indicated the inspector could not verify the opacity of the smoke emitted from the smoke stack. Facilities were required to limit the opacity of the smoke they emitted to certain levels based on when the device was installed. In 14 cases, the same device was also not seen in operation during the prior inspection, and in five cases, the inspection prior to that as well.

Additionally, in eight inspections, we noted the inspector reported not being able to determine the facility's compliance with the particulate matter (PM) standard, as this could only be determined through compliance stack testing, and to date, the facility had not been required to

have a compliance stack test. The reports also noted that under "normal operating conditions," the device should have been able to meet the PM standard. According to ARD management, compliance stack tests were costly and smaller entities would not be required to conduct a stack test unless the ARD identified an issue. Subsequently, the ARD used opacity of the smoke as an indicator of PM. Generally, if a facility met its opacity limits, it was likely also meeting its PM standard. We found none of these eight devices were in operation at the time of the inspection, five were not seen in operation during the prior inspection, and two were not in operation during the inspection prior to that as well.

Inspections Do Not Necessarily Need Devices To Be Running

According to ARD management, it was often difficult to ensure a device was operating when an inspection occurred. The EPA preferred states conduct unannounced inspections and a device may not have been operating that day for a number of reasons including the facility's normal operating schedule; seasonal variations in the facility's operation; or routine maintenance, inspection, and repairs. Inspectors were required to review records including operating logs, maintenance and repair records, fuel usage, the facility's own observations, complaint history, and other records to assess whether a device was functioning properly during the inspection period. Additionally, personnel could use the facility's records to calculate emission levels and obtain reasonable assurance the device was operating as intended.

Requirements To Have Devices Running Differs Among New England States

While the EPA did not require states observe a device in operation during an inspection, two of the four other New England states we contacted required inspectors observe devices, with the exception of emergency devices, in operation as part of their inspection process. These states also required inspectors to revisit a site if devices were not operating during the inspection. While these states acknowledged inspectors may not observe every device in operation, the general policy was to see the majority of devices in operation. A third New England state reported, while it did not require all devices be seen in operation during inspections, the permit requirements determined whether the inspector would need to observe the device in operation. This state also reported requiring inspectors to return to the facility if the device was not in operation during the inspection.

According to the EPA and other states, observing a device in operation during the inspection enabled the inspector to verify the opacity of the smoke emitted from the stack corresponded to the facility's records. It also allowed the inspector to see whether the facility was operating the device according to the manufacturer's specifications.

Recommendations:

We recommend ARD management improve inspections by:

- **developing risk-based criteria to assist inspectors in determining whether seeing a device in operation is warranted;**

- **considering incorporating risk factors to guide inspectors, such as the age of the device, the potential amount of pollutants, and when it was last seen in operation; and**
- **considering seasonal variations in device operations when scheduling inspections, such as inspecting furnaces only during the heating season.**

Auditee Response:

ARD concurs with the recommendations.

ARD will develop risk-based criteria to guide inspectors on when to assess visible emissions from a particular device. With respect to the visible assessment of emissions, the federally-approved method for assessing compliance with opacity limitations was developed by EPA as a cost-effective and time-efficient means of assessing gross compliance. It is typically used by operators and inspectors as a tool to gauge the combustion efficiency of a device. In some cases, PM exceeding permitted limits can be invisible to the eye. In other words, the emissions of PM may surpass permit limitations at much lower levels than would result in an exceedance of an opacity limit. PM emissions are most accurately measured by means of a stack test or a continuous emission monitoring system, both of which are much more costly methods. In addition, for many devices, the device manufacturer certifies the maximum emissions per hour from the device, as long as the device is properly maintained and operated. Finally, permit holders are required to submit deviations from permitted limits, including opacity deviations, to ARD.

Even with those considerations in mind, ARD will consider a policy of seeking to revisit facilities in cases where devices were not in operation at the time of inspection (depending on the nature of the device). In addition, ARD, as suggested, will revisit its inspection scheduling practices to consider seasonal variations in operational schedules to maximize the likelihood of a device being in operation during an inspection.

Observation No. 6

Improve Follow-up From Inspections

The ARD did not have a process to make sure deficiencies found during compliance inspections and not referred for review by the Enforcement Section were corrected. Additionally, documents requested as part of the inspection were not always provided, and the ARD did not have a process to follow up on these requests.

No Follow-Up Process In Place Except A Referral To The Enforcement Section

If inspectors found a deficiency during the course of an on-site inspection, they discussed the deficiency with the Enforcement Section Supervisor, Compliance Assessment Section Supervisor, and the Compliance Program Manager to assess whether the facility should be referred to the Enforcement Section for further action. ARD procedures required significant

deficiencies be referred to the Enforcement Section. However, depending on severity, some deficiencies were not referred.

According to ARD management, the only follow-up process in place was to refer the facility to the Enforcement Section for review. Management further stated there should not be a follow-up process outside of the referral to the Enforcement Section as some deficiencies did not warrant follow-up. Also, requiring an additional follow-up process would put further strain on inspection staff, who would be required to re-visit the facility.

No Process To Ensure Deficiencies Were Corrected

Deficiencies were noted in the inspection report if a facility was not in compliance with requirements of their permit or other regulatory requirements. Of 120 inspection reports we reviewed, we found inspectors cited at least one deficiency during 69 inspections (58 percent). Generally, deficiencies cited did not receive follow-up until the next time a facility was inspected, which in some cases did not occur until several years later depending on the type of facility. As discussed in Observation No. 4, some facilities went ten years or more between inspections. In four inspections we reviewed, some deficiencies identified in previous inspection reports were not corrected at the time of the next inspection and the facility was cited again for the same deficiency. These repeat deficiencies included:

- one facility cited for failing to submit reports timely;
- one facility cited for repeatedly exceeding opacity limits;
- one facility cited for failing to: perform stack tests as required, report permit deviations timely, submit emission reports and fees timely, and maintain adequate fuel use records; and
- one facility cited for failing to: record daily pressure readings for a piece of equipment, perform and record visual observations of the same piece of equipment, perform and record visual observations of the facility's emissions, report fuel usage three years in a row, and pay emissions fees three years in a row (this facility was cited for similar deficiencies for three inspections in a row).

All four of these inspections were referred to the Enforcement Section.

Some Requested Information Not Received

After completing an on-site inspection, an inspector requiring additional information to determine the facility's compliance could request the facility submit the information prior to the completion of the report. We found 89 inspection reports in which the inspector requested the facility provide additional information. In four of these inspections (4.5 percent), we did not find evidence the ARD received the requested information. Two facilities inspected in January and May 2016 were required to provide the facility's plan for meeting volatile organic compound (VOC) control technology requirements, and documentation of the facility's compliance with hazardous air pollutant and VOC emission requirements. Another two facilities inspected in March and April 2017 were required to provide the facility's EPA certification for a piece of equipment, and a form designating the facility's responsible official. However, as of January

2018, these items had not been received. Of these four inspections, none were flagged for follow-up and only one of these cases was referred to the Enforcement Section for further review. This case resulted in no action being taken and the referral was closed without the information being provided.

Mechanism Allowing Inspectors To Flag Facilities For Follow-up Was Inconsistently Used

The Stationary Source Database (SSD) allowed inspectors to flag items for follow-up by selecting the "Follow Up Needed" button. However, we found the button was inconsistently used to flag inspections where additional information had been requested.

Permit requirements were established to reflect all State and federal regulations applicable to each facility, helping to ensure New Hampshire met national ambient air quality standards established by the EPA. Without a follow-up process on additional information needed to determine compliance or to ensure deficiencies not warranting a referral to the Enforcement Section were corrected, the ARD risked facilities continuing to operate out of compliance with their permit requirements, in some cases for ten years or more, potentially affecting New Hampshire's compliance with Clean Air Act requirements.

Recommendations:

We recommend ARD management establish a follow-up process to ensure deficiencies not referred to the Enforcement Section are corrected and additional information requested to determine a facility's compliance with its permit requirements is received. The process should consider which types of deficiencies may warrant a referral to the Enforcement Section and which should be monitored within the Compliance Assessment Section. Deficiencies designated for internal monitoring should be flagged for follow-up and periodically reviewed for compliance.

Auditee Response:

ARD concurs with the recommendations.

ARD is currently updating its data handling procedures to ensure that deficiencies not referred for enforcement are tracked and reviewed periodically. By way of background, a typical operating permit issued by ARD is several dozen pages long and contains many operational, recordkeeping, and reporting requirements. In their inspection reports, inspectors note certain minor deficiencies or areas of concern of low level significance. For example, one facility did not include industry classification codes on a certain emission report. The protocol in the Compliance Bureau for items of this type during the audit period was to note the deficiency in the inspection report, speak to the company about the issue, and check to see if it is corrected at the next inspection. For some low priority items like these, it may not be an effective use of time to check compliance at intervals more frequent than the typical inspection interval. A referral to enforcement may become appropriate if the deficiency is not corrected over a longer time.

Compliance Stack Testing

Compliance stack testing was conducted on-site to ensure facilities complied with emission limits outlined in their permit. "Compliance stack test" generally referred to both the annual relative accuracy test audit (RATA) and the compliance stack emissions test. The facility hired a contractor to conduct the compliance stack testing. However, ARD compliance testing staff reviewed proposed test protocols, observed all stack tests, and reviewed test results. Facilities were required to submit a copy of the compliance stack emissions test results to the ARD within 60 days of the test and within 45 days of the RATA. Reports were generally submitted timely; however, facilities with untimely report submissions and facilities with a failed compliance stack test could have been referred to the Enforcement Section requiring further follow-up.

Facilities we surveyed were mainly satisfied with the ARD's stack testing efforts, with at least 70 percent reporting satisfaction with timeliness, communication, follow-up procedures, and professionalism of ARD staff. EPA representatives also reported high levels of satisfaction with ARD's compliance stack testing performance, commenting the EPA held the quality of ARD's work in high regard. We found some areas in which the ARD could enhance its processes to improve efficiency and effectiveness. The ARD's practice of requiring staff to observe every stack test may not be necessary and should be reviewed for efficiency. While we found facilities generally received a compliance stack test as required, pre-testing requirements were not always clearly documented and pre-testing practices did not always align with requirements outlined in administrative rules. Additionally, instances of follow-up conducted were inconsistently documented in some cases. In combination with the ARD's issue with retirement and vacancies, properly documenting practices could ensure continuity of operations.

Observation No. 7

Determine Whether An ARD Representative Is Needed At All Compliance Stack Tests

The ARD may benefit from assessing whether staff resources could be allocated more effectively during compliance stack testing. While not a State or federal requirement, the ARD promulgated administrative rules requiring an ARD representative be present at all compliance stack tests. If an ARD representative was unavailable, the test would have to be rescheduled.

ARD management reported that having a representative present at every compliance stack test was necessary to: 1) cross-check data against those collected by the contractor during the test; 2) quickly accommodate changes to the test methods if circumstances warranted a deviation from the test protocol, rather than waiting for approval if the contractor had to call the ARD for accommodations; and 3) provide public assurance the ARD could verify emission levels for a facility if it was ever brought up during the public comment period during the permitting process. However, these reasons may not have been completely valid.

Minimal Evidence An ARD Representative Was Needed At All Tests

Our review of 73 emission stack test reports showed minimal benefit of having an ARD representative on-site to make decisions or subsequently cross-check data. Of the 73 applicable

compliance stack test files we reviewed, we found 22 (30 percent) either experienced an issue during the test, or the ARD subsequently requested revisions to the report. Twenty of the 73 (27 percent) required an immediate decision by the ARD for the test to continue, or it was beneficial having the ARD representative present to subsequently identify necessary revisions to data in the report. Six of the 73 tests (eight percent) experienced both an issue during testing and required revisions to data in the report.

Additionally, the ARD rarely received comments from the public during the permitting process, disputing one of the reported purposes of having an ARD representative on-site for all compliance stack tests. We reviewed 159 permit applications and found only five (three percent) received a comment from the public. Outside of public comment, if complaints were brought to the ARD's attention regarding a facility's emissions, an ARD representative generally contacted the facility to inquire or went on-site to investigate rather than solely relying on previous stack test results.

Stakeholder Input

All 11 contractors and 20 (59 percent) of the 34 permitted facilities subject to compliance stack testing responding to our survey cited some benefit to having an ARD representative present for testing, including the ability to resolve issues on-site if they occurred, and ensuring testing was compliant with regulations. However, at least four (36 percent) contractors and ten (29 percent) applicable permitted entities also indicated there may be specific situations in which a representative would not always be needed, such as for a repetitive, routine test for the same facility. Further, six (55 percent) contractors reported deviations from the test protocol requiring an ARD decision to be made on-site rarely or never occurred during a test. Our review of compliance stack test files showed 13 of the 73 (18 percent) experienced an issue during testing, only ten of which required an ARD decision to continue testing.

Other States' Compliance Stack Test Requirements

New Hampshire's stack testing requirements appeared stricter than other states. Compliance stack testing contractors reported at least seven other Northeast states did not require a staff person attend all compliance stack tests or were only required to be present for a portion of the compliance stack test. Four representatives from other New England states' air resources agencies and an EPA representative reported similar, less strict requirements. For example, in an effort to better allocate scarce resources, the EPA used criteria to determine whether a representative should attend the compliance stack test including: whether the industry had been subject to new regulations, the experience of the contractor, the facility's compliance stack testing history, and the age and condition of the equipment being tested. The EPA representative also reported sending staff to observe the test set up to ensure all equipment was placed in the correct location or portions of the test, instead of requiring they observe the entire test. One New England state's representative reported a staff person would attend compliance stack tests:

- for a facility undergoing a test for the first time;
- if an emissions limit needed to be established to obtain a permit; or

- based on other factors such as the facility's compliance record, issues with previous compliance stack tests, reported permit deviations, using a different contractor, or changes to the testing protocols.

The ARD reported challenges in retaining and hiring staff. Effectively managing resources was vital to ensuring the ARD continued to effectively regulate entities while also achieving goals and objectives. Assessing and allocating resources to address areas of greatest risk would alleviate staffing strains during periods of declining resources without detrimentally affecting the ARD, the entities it oversees, or the public.

Recommendations:

We recommend ARD management consider whether compliance stack test resources could be more efficiently and effectively allocated by:

- **evaluating whether all stack tests require an ARD representative be present, and**
- **developing relevant criteria to determine when a representative would be beneficial to observe a compliance stack test.**

If the ARD determines a representative is not required at all compliance stack tests, it should amend its administrative rule accordingly.

Auditee Response:

ARD concurs with the recommendations.

ARD will consider whether all stack tests require that an ARD representative be present. As part of this evaluation, ARD will assess the different types of tests being conducted and the type and frequency of the sources being tested. In addition, ARD will carefully evaluate the results of the stack testing surveys conducted as part of this performance audit. ARD continues to believe that having a consistent and robust presence at stack tests assures the public that ARD has checked the stack test methods, the execution of these methods, and the resulting data. This especially applies in the case where the public questions the intention or integrity of a regulated source that hires and pays for the testing by a third party. ARD's presence on-site during the testing provides for a significant and real "check and balance" on the entire testing process. Without ARD's attendance at stack tests, the public may become more concerned about the integrity of the emission test results.

Further, the benefit to the regulated community extends beyond ARD's timely response to issues arising during the test. Having ARD staff on-site can result in significant cost savings to a facility, for instance when ARD staff identify errors in real time, avoiding the need for, and cost of, re-tests. Finally, ARD continues to believe that the work of the staff of the stack testing section, both on-site and off, and in collaboration with both EPA and the stack testing contractors, contributes to the accuracy of the test results.

Observation No. 8

Follow Pre-test Administrative Rules

The ARD needed to improve aspects of compliance stack testing by aligning its internal pre-testing practices with administrative rule.

Pre-test Meetings And Reissuing Pre-test Protocols

Per administrative rules, facility owners were required to submit pre-test protocols to the NHDES within 30 days of a compliance stack test. Additionally, a pre-test meeting between ARD staff, the facility owner, and the testing contractor was to occur in person or over the phone within 15 days of the scheduled compliance stack test to review the pre-test protocol. The pre-test meeting could occur within less than 15 days of the compliance stack test if staff were available, requested changes to the test protocol could be made prior to the test, and the integrity of testing was upheld. These requirements did not apply to a repeated compliance stack test, such as an annual test with no changes or following a failed stack test. Instead, the owner or contractor was required to send a letter to the NHDES referencing the previously approved pre-test protocol.

We reviewed 71 applicable pre-test protocols and found they were generally issued timely. However, the ARD inconsistently documented pre-test meetings reportedly due to changes to internal practice. Additionally, at least 14 (20 percent) pre-test protocols were reissued for at least one or more tests over several years, but letters referencing the previously approved pre-test protocol were not consistently documented. Further, the method of documentation was sometimes sent through email, which administrative rule did not appear to allow. ARD management stated a compliance stack test did not and would not occur unless the pre-test protocol was approved, either through a pre-test meeting or verifying reissuance. However, without documenting this step in the process, the ARD risked the appearance of noncompliance and potentially made it more difficult to ensure future employees were aware of previously approved pre-test protocols.

Pre-test Protocol Information Requirements

All pre-test protocols were required to contain at least 15 distinct pieces of information, which were then required in the final compliance stack test report submitted to the NHDES. We found 48 (68 percent) pre-test protocols omitted the required safety and emergency response procedures "applicable to the area of the facility…" being tested. Within those 48 pre-test protocols, 11 (23 percent) also lacked additional information required such as facility address and contact information, or calibration and sample data sheets. Excluding the applicable safety and emergency response procedures, all final reports contained required information from the pre-test protocol.

Neither administrative rule nor ARD policy qualified what would be considered "applicable;" therefore, when safety or emergency response procedures were identified in pre-test protocols, it

ranged from what could be construed as broadly applicable for any facility, to limited applicability to only certain facilities. For example, one test protocol contained two sentences directing visitors to check in with facility staff and wear proper safety gear, while another pre-test protocol utilized a full page to detail facility, contractor, and NHDES responsibilities. ARD management could not verify whether this requirement was necessary or if omitting the information posed any risk to the compliance stack test. Policies and procedures interpret administrative rules, enforce management's expectations, and address related risks. The ARD risked noncompliance with administrative rules by not clearly defining expectations, which could potentially lead to inconsistently enforcing requirements.

Recommendations:

We recommend ARD management enforce administrative rules related to pre-test protocol requirements and pre-test meetings, as well as determine whether certain requirements are necessary for the ARD to effectively meet its goals and objectives. The ARD may want to consider amending administrative rules to reflect current practices if it is determined to be more effective.

Auditee Response:

ARD concurs with the recommendations.

While pre-test meetings are required to be completed prior to compliance stack tests, the existing data handling protocol does not require staff to document the occurrence of the meeting in the ARD's database. ARD will look into adding this feature to the database. With respect to the reuse of prior test protocols for periodic compliance stack tests, ARD will ensure that the protocols and the protocol approvals are adequately documented in the database. Finally, regarding the safety and emergency procedures required to be included in the pre-test protocols submitted to ARD, ARD will require that facilities submit the appropriate safety information in the pre-test protocol.

Observation No. 9

Improve Compliance Stack Test Follow-up Documentation

The ARD inconsistently indicated when follow-up was necessary for a compliance stack test report. Stack test personnel used a module in the ARD SSD to document phases of a compliance stack test, ranging from receiving the pre-test protocol to the final status of the test. It was also utilized to flag whether the test required additional follow-up. The database user manual did not specify what type of follow-up should be flagged, only that it should be used if follow-up was needed. A corresponding field was provided to indicate the date follow-up was completed. Compliance Bureau personnel reported the "Follow Up Needed" field should have been completed any time a failed compliance stack test occurred or when the ARD requested additional information from the contractor or facility following a test, such as revisions to

reports. Based on the purpose of these fields, if the test was not flagged for follow-up, then the "Date Complete" field would not need to be utilized.

We reviewed 73 compliance stack tests and found the "Follow Up Needed" field was utilized in seven (ten percent) instances while the "Date Completed" field was utilized in 31 (42 percent) instances. Of these 31 instances, two were documented as "unknown" rather than a date, one of which had received follow-up and should have included a date when the follow-up occurred. Additionally, our sample included five failed compliance stack tests; however, only two tests were flagged as requiring follow-up. Regardless, all five failed stack tests did receive follow-up through a re-test and four out of the five were referred to the Enforcement Section for review.

Further, we identified an additional 10 reports which received some type of follow-up, but were not flagged in the database as needing follow-up. However, we were only able to determine that 22 of the 42 (52 percent) actually required follow-up including:

- 15 instances where the ARD requested report revisions,
- five instances where the facility failed a stack test, and
- two instances where action was still pending.

The other instances in which the "Date Completed" field was utilized, but did not appear necessary included:

- nine instances citing the date the ARD reviewed the report,
- ten instances where unknown or no reason was identified, and
- two instances documenting the date of an upcoming stack test.

Although the ARD followed up on instances it identified as necessary, utilizing the SSD to consistently indicate when follow-up was needed may improve efficiency and effectiveness by providing accurate records of compliance stack tests throughout all phases. Additionally, capturing complete data would help ensure appropriate action would be taken when necessary, especially during times of staff turnover, and potentially aid ARD management with identifying trends with certain facilities or contractors.

Recommendations:

We recommend ARD management clarify compliance stack test follow-up requirements and consistently document when follow-up may be needed and when it is completed.

Auditee Response:

ARD concurs with the recommendations.

ARD notes that the audit period overlapped with the initial roll-out and subsequent update of the portion of the ARD's database corresponding with these observations. ARD will review the applicable operating procedures and make any changes necessary to match the database inputs with the activity of the section.

Enforcement

The Enforcement Section received referrals of potential violations found during compliance inspections, stack testing, or permitting. Staff also received referrals through public complaints and the asbestos program. Inspectors, stack test personnel, and permitting staff typically referred a case to the Enforcement Section through the SSD if they encountered a potential violation of State or federal laws or regulations, violation of the facility's permit, or if the facility did not comply with ARD's requests.

Generally, the ARD was effective in handling enforcement against permitted facilities. We found all issues which had been referred by other ARD sections were assessed and disposed by the Enforcement Section. EPA officials reported the ARD's enforcement activities were timely and sanctions were appropriate, and the most recent EPA review of ARD's Title V enforcement activities also showed the ARD met or exceeded expectations for timely and appropriate action, as well as for calculating penalties against facilities found to be in violation of air quality standards. The vast majority of facilities we surveyed had not been subject to enforcement action during the audit period. Facilities which did experience enforcement action were split on their satisfaction with ARD's process, with the most unsatisfactory responses correlating with timeliness. Facilities gave the lowest satisfaction ratings to timeliness of overall case processing with 30 percent reporting some level of dissatisfaction (see Appendix D for survey results). We found referrals took, on average, seven months to process, and some aspects of the process could benefit from additional staff support to improve timeliness.

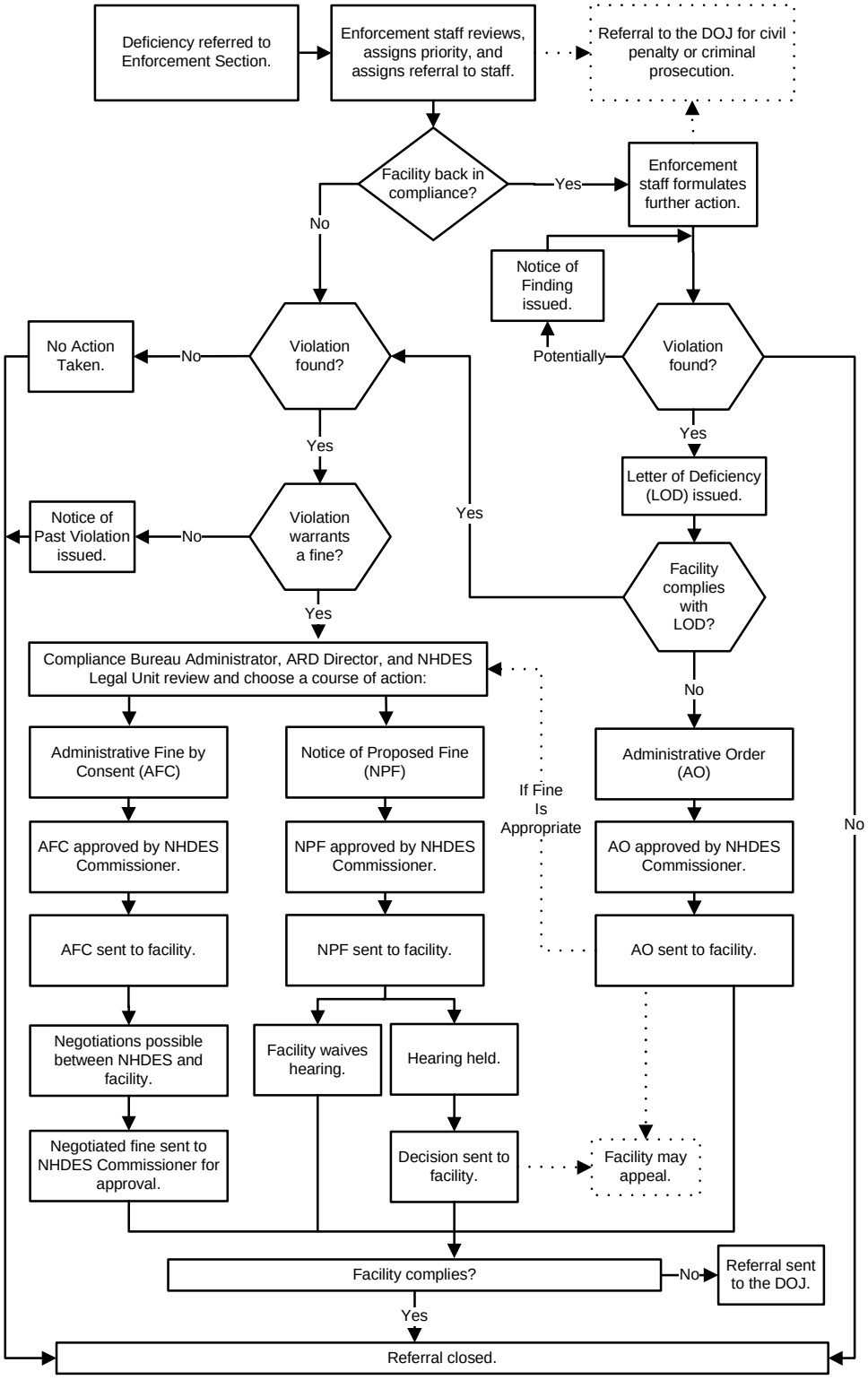
Screening

Figure 4 shows the enforcement process. Once received, Enforcement staff screened the deficiency, assigned it to Enforcement staff, and determined a priority ranking depending on severity and whether the deficiency was still occurring. If the deficiency was no longer occurring and the facility was back in compliance with its permit requirements, staff reviewed whether the deficiency violated any laws or regulations. If no violation occurred, staff drafted an internal memo outlining the circumstances surrounding the referral, indicating no action was taken, and closed the case. If a violation occurred, staff determined whether the violation warranted a fine. If no fine was warranted, the case was closed and the facility was issued a "Notice of Past Violation," which outlined the violation and the corrective action the facility had already taken to correct the problem.

If the deficiency was still occurring, staff determined whether the action was violating any laws or regulations. If staff were unsure whether the action constituted a violation, they issued a "Notice of Findings," requiring the facility provide additional information, which would be used to determine whether a violation occurred. If a violation occurred, staff issued a "Letter of Deficiency" (LOD) outlining what the facility was required to do to become compliant. If the facility did not comply, the ARD issued an administrative order, which compelled the facility to take the ordered actions. Administrative orders were drafted by the NHDES Legal Unit and must be approved by the NHDES Commissioner prior to being sent to the facility. Orders could be appealed to the Air Resources Council. If the facility did not comply with the order, the case was referred to the Department of Justice (DOJ) for further action. Once the facility complied with the required action, staff determined whether the violation warranted a fine.

Figure 4

ARD Enforcement Process



Source: LBA analysis of ARD information.

Fines

If Enforcement staff determined a fine was warranted, personnel determined the appropriate level depending on factors such as severity and frequency of the violation, enforcement history, economic benefit to the facility of non-compliance, and the facility's level of cooperation. All fines were drafted in consultation with NHDES Legal Unit.

Fines imposed by consent could be negotiated between the facility and NHDES personnel, but must be approved by the Commissioner before they were finalized. Fines issued by consent could not be appealed. If a facility did not agree or the ARD did not anticipate the facility would agree to a fine, the ARD issued a proposed fine. Proposed fines were also required to be approved by the Commissioner prior to being sent to the facility, and the facility had the opportunity to request a hearing. The facility could also waive its right to a hearing and pay the proposed fine. Hearings were handled by a hearings officer whose decision could be appealed to the New Hampshire Superior Court. If warranted, severe violations were referred to the DOJ for prosecution, and the ARD could request DOJ involvement at any point during the enforcement process.

Observation No. 10

Review The Administrative Aspects Of Enforcement

Some aspects of the enforcement process could benefit from additional staffing. Of the 75 referrals of permitted facilities we reviewed, we found 65 had been closed. On average, these 65 cases took over seven months to process from the time they were referred to the Enforcement Section to the time it was closed. The majority (48 of 65) resulted in either a "Notice of Past Violation" or no action taken. Another ten referrals were still open and, as of March 2018, had been open for an average of 19 months.

We found the following may have contributed to some referrals not being processed timely:

- *Delay In Assigning Referral To Enforcement Staff:* On average, the 75 referrals we reviewed were not assigned to staff until an average of 3.5 months after they had been referred to the Enforcement Section. While 26 referrals (35 percent) were assigned to Enforcement staff within one month of being referred, 37 (49 percent) were not assigned until at least three months after the referral was made. In fact, 15 (20 percent) were still not assigned six months after the referral was made.

- *Delay In Closing Out Referral After Requested Documents Were Received:* In 12 cases, the ARD issued the facility a "Letter of Deficiency" or "Notice of Findings," requesting the facility provide additional documentation. Once received, it took, on average, three months for the ARD to issue a letter of compliance and close out the referral. On average, these cases took nine months to close out and were not assigned to Enforcement staff until over two and a half months. Ultimately, the case was inactive for approximately half of its processing time.

- *Delay In Closing Referral Even Though Facility Corrected The Issue Months Before Enforcement Review:* In 29 of the 65 closed cases (45 percent), we found the referral was not assigned to Enforcement staff until an average of 3.5 months *after* the facility had already corrected the issue. For example, we found facilities were cited for operating an emergency generator without a permit. While all facilities in our sample applied for or received a permit within a month of being notified, Enforcement staff were not assigned to these cases until months after the permit had been issued. On average, it took the ARD almost five months to close out these cases, with ten cases open for six months or more before being closed.

Enforcement Staffing And Caseload

During the audit period, the Enforcement Section was comprised of one Supervisor and two Enforcement Specialist positions. One of the three positions was vacant during the entire audit period and had been vacant for several years prior. In fall 2017, the supervisor vacated the position and the Enforcement Specialist was the only staff member in the Section until one new staff member was hired in November 2017. During the audit period, the Section received 226 referrals, consisting of referrals from compliance inspections, stack testing, emissions inventory, the asbestos program, and public complaints. The Section did not have any administrative support during the audit period.

Timely enforcement action is important to ensure facilities are aware of identified violations and correct them in an appropriate manner. The Enforcement Section's draft procedures for initiating enforcement cited timely enforcement as an "important tool in achieving compliance…." Additionally, the NHDES Compliance Assurance Response Policy indicated regulated entities reasonably want closure, and one facility responding to our survey specifically cited delays in the enforcement process. Additionally, the policy noted the NHDES must "close out cases as quickly as reasonably possible, so that other matters can be worked on."

Recommendations:

We recommend ARD management determine the best approach to making its enforcement activities more efficient and timely by either: 1) filling the vacant professional position it already has, or 2) using a lower cost administrative position to support current staffing. For example, administrative personnel could track when requests for additional documentation arrive, and potentially draft Notices of Past Violation or memos indicating the ARD was taking no action in the case. This could free up enforcement personnel to attend to cases which demand more staff time and expertise.

Auditee Response:

ARD concurs with the recommendations.

ARD will assess the staffing of the Enforcement Section and will examine whether the addition of administrative support would be an effective use of resources. The current revenue for the Division does not support filling the currently vacant Enforcement Specialist position. In any

case, ARD will review the operating procedures of the Enforcement Section to continue to reduce the time needed to review and process enforcement responses.

In general, the Enforcement Section seeks to ensure that the actions it takes are accurate and well-grounded in the facts and the law. ARD believes that the enforcement staff has done an admirable job in reducing the enforcement back-log in the face of turnover and training the newest member of the staff. Finally, ARD notes that the policy of referring a case for enforcement even after a facility has returned to compliance is by design. Enforcement is not only a tool to prod a facility into achieving compliance, but it is also a method to document violations, and assess fines for those violations that are more serious.

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OTHER ISSUES AND CONCERNS

In this section, we present issues we considered noteworthy, but did not develop into formal observations. The New Hampshire Department of Environmental Services (NHDES), Air Resources Division (ARD), and the Legislature may wish to consider whether these issues deserve further study or action.

Improve Dissemination Of Enforcement Information

The ARD did not have a central location where closed enforcement action taken against permitted facilities for violating Clean Air Act regulations could be found. The NHDES *Compliance Assurance Response Policy* stated, "Because environmental compliance has a direct impact on everyone, [NH]DES seeks to expand public involvement in compliance assurance efforts, and strongly supports the public's right to know about the compliance status of New Hampshire facilities and the state of New Hampshire's environment." To promote this, the ARD posted some closed enforcement action on its OneStop Data and Information portal, the NHDES Legal Unit's website, and the federal Environmental Protection Agency's *Enforcement and Compliance History Online* (ECHO) system. However, these systems were difficult to navigate, required the user to search each individual facility's record to determine whether a violation occurred, and no single site contained all of a facility's enforcement-related records.

At least 69 percent of facilities responding to our survey question reported if information on enforcement action against other facilities were available, they would use it to identify where their facility may have been out of compliance, or to correct their own compliance issues. Others reported enforcement information could be used to create awareness of potential compliance issues. However, a majority of the facilities surveyed were not aware of ARD enforcement action taken against other facilities, and those who were, reported mainly obtaining their information from newspaper articles or by word of mouth. Only six of the 20 who answered the survey question reported getting the information from OneStop, three reported getting the information from the NHDES Legal Unit website, and two reported getting this information from ECHO.

Three other New England states we contacted reported posting enforcement action against permitted facilities online; however, most states only posted violations resulting in some sort of sanction (i.e., an order or a fine). One state reported it was in the process of starting a long-term project to create an online system where all compliance related information, including self-reported emissions and stack test results, may be found in one location.

We suggest the ARD enhance compliance-related information available to the public and permitted facilities.

Auditee Response:

ARD concurs with the suggestions.

As noted in the Audit report, information regarding ARD enforcement actions is available in a number of different locations and agrees that navigating these systems can be difficult for non-routine users. ARD also agrees that such information would be helpful to regulated sources and easy access to such information is also equally important to the public. ARD will work with the NHDES Legal Unit and evaluate mechanisms to enhance the availability of compliance-related information to the public and permitted facilities.

Review Mobile Source Fees

Mobile sources, especially motor vehicles, airplanes, marine vehicles, and off-road vehicles, have been identified as the largest generators of hydrocarbons, volatile organic compounds (VOC), nitrogen oxides, and carbon monoxide pollution in the United States. According to the ARD, mobile sources account for half of all pollution emitted in New Hampshire. Although federal requirements mandated cleaner burning fuels and pollution control mechanisms, which significantly reduced mobile source impact, more cars were being driven on New Hampshire roads than ever before. Unlike permitted facilities, which were required to comply with emission limits set in their permit and pay an annual emission fee, the ARD had limited tools to address mobile source pollution. The majority of the ARD's mobile source work centered on outreach activities, primarily focusing on commercial fleets.

To help fund this work, the ARD received 25 cents for each motor vehicle inspection conducted in New Hampshire, which totaled approximately $300,000 in State fiscal year 2017. In contrast, the ARD collected approximately $4 million in permitting and emission fees. Emission and permit fees charged to stationary sources accounted for over half of the ARD's SFY 2017 revenues, while fees from mobile sources accounted for less than five percent. This was considerably disproportionate to the amount of pollutants emitted by each of these source types. In 2014, the ARD estimated mobile sources accounted for approximately 60 percent of the State's total emissions. This percentage has remained stable since 2008. In contrast, pollution generated by permitted facilities and other stationary sources declined from 12 percent in 2008 to four percent in 2014.

We suggest the ARD continue to track this disparity and periodically inform the Legislature incase policy makers wish to address this issue in the future.

Auditee Response:

ARD concurs with the suggestions.

ARD agrees that mobile sources remain the single largest source of air pollution in the state and expects that to remain consistent in the foreseeable future. ARD will continue to update periodic emission inventories of all emission sectors including stationary, mobile, and area sources. ARD has in the past, and will continue to, inform the NH General Court of this fact.

APPENDIX A
SCOPE, OBJECTIVES, AND METHODOLOGY

Scope And Objectives

In December 2015, the Fiscal Committee approved a joint Legislative Performance Audit and Oversight Committee (LPAOC) recommendation to conduct a performance audit of the New Hampshire Department of Environmental Services (NHDES), Air Resources Division (ARD). We held an entrance conference at the end of March 2016. However, one week later, the LPAOC voted to suspend audit work due to other priorities. We resumed the audit and held a re-entrance conference at the end of August 2017. Our audit was designed to answer the following question:

Did the ARD operate efficiently and effectively in State fiscal years (SFY) 2016 and 2017?

Specifically, we focused on the following areas:

- the process for approving construction and operating permits;
- compliance inspections and stack testing; and
- enforcement referrals.

Methodology

To gain an understanding of the ARD's activities and its operating and control environment, we:

- reviewed relevant federal legislation and regulations, State laws, administrative rules, policies, procedures, guidelines, plans, reports, audits, and similar materials;
- interviewed NHDES and ARD management and staff, and contacted stakeholders;
- analyzed ARD financial documents and budgets;
- reviewed and analyzed ARD permits, inspection reports, compliance testing documents, and enforcement files;
- reviewed differences in requirements across multiple states' air resources programs, relevant federal guidelines and audits, and other states' audits of similar programs;
- analyzed ARD organizational charts and staff supplemental job descriptions;
- compared ARD practices to relevant guidelines and accepted practices;
- attended two Air Resources Council meetings, three Permit Fee Stakeholders Group meetings, and a meeting between the ARD and Environmental Protection Agency (EPA);
- observed stack testing and inspections by accompanying ARD staff on five site visits; and
- reviewed prior audits and evaluated the status of relevant past audit findings.

To determine the efficiency and effectiveness of ARD activities, we:

- conducted 22 interviews with ARD personnel from each of the four Bureaus and two phone interviews with regional EPA personnel;
- surveyed stack testing contractors who frequently performed testing in New Hampshire;
- surveyed all entities with a State Permit to Operate or a Title V permit;
- conducted reviews of a random sample of ARD permitting, compliance inspection, compliance stack testing, and enforcement files;
- reviewed ARD LEAN project reports and other administrative improvement projects;
- reviewed and analyzed available ARD data and information, ARD reports, and reports created to meet federal reporting requirements;
- reviewed and analyzed forms, permitting applications, inspection reports, compliance stack test protocols and reports, and enforcement referrals to determine compliance with regulations, timeliness, and follow up;
- reviewed and analyzed ARD staffing to determine risk related to staff turnover and operational efficiency;
- reviewed and analyzed financial information; and
- reviewed and analyzed relevant studies, plans, audits, evaluations, guidelines, and related materials from academia, interest groups, other states, and similar entities.

Surveys

We conducted two surveys supporting the audit's objectives.

Survey Of Contractors Performing Compliance Stack Testing In New Hampshire

To obtain feedback from contractors regarding experience with the ARD and New Hampshire compliance stack testing processes, we surveyed contractors whose companies reportedly performed most of the annual compliance stack tests in New Hampshire. We requested a list of contractors routinely performing compliance stack testing from the ARD and were provided a list of 13 contractors. We sent surveys to all 13 contractors and received 11 complete responses for a response rate of 85 percent. Our survey was intended to solicit contractors' opinions on certain aspects of the compliance stack testing process. Therefore, we did not project the results to the general population.

The results of this survey are in Appendix C.

Survey Of Facilities Permitted By The ARD

To obtain feedback regarding the efficiency and effectiveness of the permitting, inspection, compliance stack testing, and enforcement processes, we surveyed all New Hampshire entities with a State Permit to Operate or a Title V Permit. We requested a list of permitted entities from the ARD and received a list with 364 contact names. In order to mitigate the risk of receiving multiple responses from a single facility, we reviewed the list to identify and delete duplicate contact names for each specific facility. We also removed any facilities with no email address for the contact and two facilities which the email was sent back to us as undeliverable. In total, 299

permitted facilities received our survey. We received 108 completed responses for a 36 percent response rate. Our survey was intended to obtain facilities' opinions of ARD processes and was not intended to be projected to the general population.

The results of this survey are in Appendix D.

ARD Staff Eligibility To Retire

We reviewed organizational charts from each of the four Bureaus and staff position lists dated July 2017 to determine the risk associated with staff turnover due to staff retirement. At the time of analysis in December 2017, the ARD had 70 positions, 54 of which were filled. ARD management identified 25 of the positions as key positions, none of which were vacant at the time of the analysis. We used the State's human resources database to determine the birth date and hire date of each employee, and then calculated years of service. Using this information, we determined whether the employee was eligible to retire within five and ten years based on statutorily established retirement age.

Review Of ARD Files

Between November 2017 and March 2018, we reviewed four types of ARD files to assess compliance with laws, rules, and timeliness of ARD activities.

Review Of Permit Application Files

We reviewed a random sample of electronic and hardcopy files of permit applications approved between July 1, 2015 and June 30, 2017. Our file review was designed to assess: compliance with established goals for processing each permit type, frequency of submitted public comments, timeliness of internal review requirements, and adherence to EPA requirements, and identify phases in the permitting process which could potentially contribute to delays.

We received a list of 438 permit applications approved during SFYs 2016 and 2017. We excluded the following types of applications as they did not follow the standard permitting process: 165 online applications for emergency generator permits, eight applications to determine whether a permit was needed, seven requests for waivers, and ten records where the application was withdrawn. This left a population size of 248. We used a 90 percent confidence level with a five percent margin of error to calculate a sample size of 157 applications, but rounded the sample up to 160 files. Using a random number generator, we selected 160 permit applications. While conducting the file review, we noticed one application was a duplicate and removed this from the sample, bringing the total number of applications reviewed to 159. Data was collected intermittently over several months, first using information in the Stationary Source Database (SSD), and supplementing with information in the hardcopy files.

Review Of Compliance Inspection Reports

We reviewed a random sample of compliance inspections conducted during the audit period. Our file review was designed to: assess compliance with inspection frequency goals, reporting

requirements; and determine whether inspections were conducted in a manner that allowed inspectors to assess compliance with permit conditions. We also assessed whether issues identified during compliance inspections received appropriate follow-up. We received a list of 165 inspections conducted between July 1, 2015 and June 30, 2017. We used a 90 percent confidence level with a five percent margin of error to calculate a sample size of 119 inspection files, but rounded the sample up to 120 files. We used a random number generator to select 120 inspections for review. We collected data using the SSD.

Review Of Compliance Stack Test Files

We reviewed a random sample of electronic and hardcopy files consisting of annual compliance stack test pre-test protocols and corresponding reports conducted between July 1, 2015 and June 30, 2017. Our file review was designed to assess compliance with testing cycles, pre-test meetings, pre-test protocol and report submission requirements, and follow-up to compliance stack tests. The ARD provided a list of 165 compliance stack tests during SFYs 2016 and 2017. Initially, we intended to use the same confidence level and margin of error as the file reviews of permit applications and compliance inspections; however, due to time constraints, we based our sample on a 90 percent confidence level and ten percent margin of error for a sample of 69 compliance stack tests. We selected 80 compliance stack tests to review. Using a random number generator, we selected 80 tests from the population. ARD staff oriented us to the compliance stack test module in the SSD and compliance stack test hardcopy files. We collected data from the SSD and hardcopy files.

During our review, we encountered limitations due to some information not being documented in either location. As a result, ARD personnel had to verify instances of compliance through email accounts, such as pre-test protocols reissued for multiple tests. Additionally, most pre-test meetings were no longer documented during the audit period; therefore, this compliance point was removed from the file review, but was addressed as an issue in our report.

During analysis, we identified seven tests as visible opacity tests, which did not follow the same compliance stack testing requirements. Additionally, two pre-test protocols were not available due to specific requirements for one facility, which has since closed. Therefore, we analyzed data collected for 73 compliance stack tests and 71 pre-test protocols.

Review Of Enforcement Referrals

We reviewed a random sample of enforcement files referred to the Enforcement Section between July 1, 2015 and June 30, 2017. Our file review was designed to assess timeliness of processing, outcomes, and compliance with referral processing procedures. The ARD provided a list of 226 enforcement referrals; however, we excluded 47 referrals originating from a public complaint or asbestos projects, as they generally were not related to regulated, stationary sources. We based our sample on a 90 percent confidence level and ten percent margin of error for a sample of 72 referrals, but rounded the sample up to 75 referrals. Using a random number generator, we randomly selected 75 referrals for review. Data were collected from the SSD.

APPENDIX B
AGENCY RESPONSE TO AUDIT

The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

April 10, 2018

The Honorable Neal M. Kurk, Chairman
Fiscal Committee of the General Court
And Members of the Committee
State House
Concord, NH 03301

RE: State of New Hampshire Department of Environmental Services, Air Resources Division Performance Audit Report, May 2018

Dear Chairman Kurk and Members of the Committee:

Thank you for the opportunity to comment on the "Department of Environmental Services, Air Resources Division Performance Audit Report, May 2018" written by the Legislative Budget Assistant's Audit Division (LBA-Audit Division).

The Department of Environmental Services (DES) sincerely appreciates the excellent work of the LBA-Audit Division staff. In particular, Vilay Skidds, Andrea Kabala, and Paige Lorenz are to be commended for the professionalism and thoroughness that is reflected in the quality of the Audit Report. They were all accommodating and sensitive to our current workload as they performed their duties and made great efforts to learn about our agency and critically analyze our operations. The extra time they spent attending inspections, meeting with staff, and researching the Air Permitting and Compliance Programs is a testament of their commitment to their job and the citizens of NH.

From the outset, DES viewed this audit as an opportunity to improve by receiving an independent, outside perspective on its performance. The recommendations contained in the Audit Report will be valuable to DES in making improvements to the efficiency and performance of its operations. Further, DES appreciates the surveys of regulated facilities and testing contractors that were conducted as part of the audit. We consider the feedback from those that we regulate very helpful in determining what is working and where improvements can be made.

DES concurs with the final audit findings, and is committed to implementing the recommendations contained in the report to improve the Air Permitting and Compliance programs.

Thank you, again, for your consideration. If you have questions concerning our response to the Audit Report, please contact me at 271-2958 or robert.scott@des.nh.gov.

Sincerely,

Robert R. Scott
Commissioner

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APPENDIX C
SURVEY OF COMPLIANCE STACK TESTING CONTRACTORS

We sent surveys to the 13 stack test contractors who reportedly performed most of the compliance stack tests in New Hampshire. We received 11 responses for an 85 percent response rate. If respondents selected "Do Not Know," we excluded these responses when calculating response percentages. We combined and simplified similar answers to open-ended questions and presented them in topical categories; multipart responses were counted in multiple categories where applicable. Some totals in the following tables may not add up to 100 percent due to rounding or where respondents could respond multiple times to the same question.

Question 1. How many New Hampshire entities contracted your services for compliance stack testing within the past two calendar years? Please provide an approximate number.

Comments	Count
25	1
12	1
8	3
4	3
2	1
1	2
provided comment	**11**

Question 2. On average, how many compliance stack tests do you complete in New Hampshire annually? Please provide an approximate number.

Comments	Count
25	1
10	1
8	1
6	2
5	1
4	2
2	1
1	2
provided comment	**11**

Question 3. Is a representative from the Air Resources Division (ARD) always present during compliance stack testing of a New Hampshire facility?

Answer Options	Count	Percent
Yes	9	81.8
No	2	18.2
Do not know	0	NA
respondent answered question	**11**	
respondent skipped question	**0**	

Question 4. Why was an ARD representative not present for all compliance stack testing?	
Comments	**Count**
Don't know assume it could be due to prioritization of their staff resources	1
Scheduling conflicts	1
provided comment	**2**
not asked question	**9**

Question 5. In your opinion, is it beneficial to have an ARD representative present for all compliance stack testing?		
Answer Options	**Count**	**Percent**
Yes	5	45.5
No	0	0.0
Sometimes	6	54.5
respondent answered question	**11**	
respondent skipped question	**0**	

Question 6. Please explain why you do or do not find it beneficial to have an ARD representative present for all compliance stack testing.	
Comments	**Count**
It is beneficial to have an ARD representative present to make decisions, emphasize compliance, or validate data.	6
Sometimes it is not beneficial for every test, especially for routine or simple tests.	4
It is not always beneficial to have an ARD representative present, but it emphasizes the importance of compliance.	1
provided comment	**11**

Question 7. Do you always meet with the client and ARD for a pre-test meeting either in person or via phone prior to the initial compliance stack testing date?		
Answer Options	**Count**	**Percent**
Yes	8	72.7
No	3	27.3
Do Not Know	0	NA
respondent answered question	**11**	
respondent skipped question	**0**	

Question 8. Why does a meeting not always occur prior to the initial compliance stack testing date?	
Comments	**Count**
Not necessary for simple stack testing methods such as visible emission testing.	1
The testing is very routine with little or no changes between testing events. Pre-test meetings are not necessary.	1
A lot of the work is repetitive and is conducted annually.	1
provided comment	**3**
not asked question	**8**

Question 9. Generally, how often do deviations from the approved compliance stack testing protocol occur, which need additional on-site approval by an ARD representative to continue testing?		
Answer Options	**Count**	**Percent**
Never	2	18.2
Rarely	4	36.4
Sometimes	5	45.5
Almost Always	0	0.0
respondent answered question	**11**	
respondent skipped question	**0**	

Question 10. What was the reason for the most recent instance of a deviation requiring on-site approval from an ARD representative in order to continue testing?	
Comments	**Count**
Process interruption	3
Do not remember/not a common issue requiring on-site approval	3
Change to pre-test protocols	2
Other	1
provided comment	**9**
not asked question	**2**

Question 11. How often does the ARD request revisions to the submitted report?		
Answer Options	**Count**	**Percent**
Never	0	0.0
Rarely	4	36.4
Sometimes	6	54.5
Almost Always	1	9.1
respondent answered question	**11**	
respondent skipped question	**0**	

Question 12. Please provide one or two examples of report revisions that have been requested by the ARD.	
Comments	**Count**
Revisions to data, calculations, procedures, or certifications.	9
Minor edits.	2
provided comment	**11**

Question 13. Has the ARD ever requested you submit an entirely new report?		
Answer Options	**Count**	**Percent**
Yes	1	10.0
No	9	90.0
Do Not Know	1	NA
respondent answered question	**11**	
respondent skipped question	**0**	

Question 14. What reason(s) did the ARD provide for requesting an entirely new report in the most recent instance?	
Comments	**Count**
Formatting issues	1
provided comment	**1**
not asked question	**10**

Question 15. Have you, or does your company, perform compliance stack testing for entities in other states?		
Answer Options	**Count**	**Percent**
Yes	11	100.0
No	0	0.0
respondent answered question	**11**	
respondent skipped question	**0**	

Question 16. Which states, if any, require a state representative be present when compliance stack testing occurs if it is being completed by a contractor? If none, please type NA.	
Comments	**Count**
Most of them observe at least a portion	1
Massachusetts, Rhode Island	1
I do testing primarily in New England and NH. They don't all require it but have to be given the opportunity to attend.	1
CT, NY, VT, ME	1
Maine, Massachusetts, Vermont	1
Maine, Vermont, Massachusetts, NH, NH, PA, MI, VA, MO, OH, MD, AK, HI, FL	1
NJ & MA (usually), PA, MD, ME, and CT (occasionally)	1
NY, PA, NJ, DE	1
~50% of the time in Mass, and in CT they are most often on site for a portion of the time.	1
CT, NJ, NY, VT, IN	1
NJ, CT, VT, NY, PA, and ME	1
provided comment	**11**

Question 17. To the best of your knowledge, do any other states' procedures include performing or scheduling inspections in conjunction with compliance stack testing?		
Answer Options	**Count**	**Percent**
Yes	2	18.2
No	2	18.2
Sometimes	7	63.6
Do Not Know	0	NA
respondent answered question	**11**	
respondent skipped question	**0**	

Question 18. Please indicate how much you agree or disagree with each of the following statements regarding the NH Administrative Rules regulating compliance stack testing requirements:

Answer Options	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Response Count
The rules are clear.	0 (0.0%)	1 (9.1%)	1 (9.1%)	3 (27.3%)	6 (54.5%)	11
The rules are comprehensive.	0 (0.0%)	0 (0.0%)	1 (9.1%)	5 (45.5%)	5 (45.5%)	11
The rules are specific.	0 (0.0%)	1 (9.1%)	1 (9.1%)	3 (27.3%)	6 (54.5%)	11
The rules are easy to understand.	0 (0.0%)	1 (9.1%)	2 (18.2%)	5 (45.5%)	3 (27.3%)	11

respondent answered question **11**
respondent skipped question **0**

Question 19. If you somewhat disagree or disagreed with any of the statements that the NH Administrative Rules regulating compliance stack testing requirements are clear, comprehensive, specific, or easy to understand, please briefly explain why.

Comments	Count
NH DES seems to like to impose its own requirements beyond EPA methods that do not improve data quality and take additional time on-site.	1
I have a long history of reading and interpreting rules and even helped write a few so I find them relatively clear, but that's one of the reasons why people hire me.	1
With almost all regulatory language, it takes a little while to sort through how a particular source is affected by the regulations and why the specific requirements are.	1
NA	1

provided comment **4**
respondent skipped question **7**

Question 20. Overall, how satisfied are you with communication from the NHDES regarding changes, scheduling, and compliance stack testing processes?

Answer Options	Count	Percent
Satisfied	8	72.7
Somewhat Satisfied	3	27.3
Neither Satisfied Nor Unsatisfied	0	0.0
Somewhat Unsatisfied	0	0.0
Unsatisfied	0	0.0

respondent answered question **11**
respondent skipped question **0**

Question 21. Why are you somewhat unsatisfied or unsatisfied with communication from NHDES regarding changes, scheduling, and compliance stack testing processes?	
Comments	**Count**
There were no responses.	0
provided comment	**0**

Question 22. Is there anything else you think could be improved about the compliance stack testing requirements or process in NH?	
Comments	**Count**
Get previous ARD staff back!	1
I think they do a very good job. They are a good group of people. I think they are probably underfunded and understaffed and deserve a raise.	1
Simplification of test protocol in situations where EPA references method(s) is being followed without alteration. Regurgitating the reference method in the NH protocol does nothing to improve data quality, and ultimately costs the test firm and the client time and money.	1
Conduct the pretest meeting via phone and not require an on-site meeting. The on-site pretest meeting adds expense to the project that could be spent elsewhere. Reduce the number of questions generated on the review of the compliance source test protocol. If the contractor agrees to follow a particular test method, and not deviate, then a simple concur would suffice. Any particular questions can be addressed during the pretest meeting.	1
We've always had a good level of communication and (I feel) good rapport with the ARD personnel. I've always found them to be firm but fair in our interactions. I cannot think of how the requirements or the overall process can be improved, but they should continue to keep good people on the staff.	1
Giving the on-site ARD representative more power to make on-site judgment calls. There are many instances where questions arise and they have to call the office or the EPA for clarification which most of the time will not be answered immediately. Sound engineering decisions could be made right then and there, as we see in lots of other states and/or with the EPA. One other improvement is when errors are made in an approved protocol and then realized during testing. We have been held to the protocol, even though it is contrary to the regulation.	1
One of the field inspectors can be intimidating although from a management perspective I do believe that occasionally having people on edge can be a positive. When I am in the field I do believe that the inspectors are trying to get the most representative data possible while working with the various industries as best they can.	1
Maybe more flexibility with scheduling.	1
No.	2
provided comment	**10**
respondent skipped question	**1**

Question 23. Is there anything else you would like to add related to the NHDES Air Resources Division?	
Comments	**Count**
NH DES used to be a nice and reasonable folks, and the job got done. Now the atmosphere is much more (unnecessarily) adversarial.	1
Consider doing a survey about how people feel about Chapter Env-A 1400. You might get some very useful information.	1
I have no knowledge or perception of shortcomings within the ARD. I think the personnel they have are excellent – professional and conscientious. However: 1) If they see shortcomings in our deliverables, field presence, etc., I'd like to know about it so that we can continue to improve our services in NH. 2) If [our company] meets all of ARD's criteria for a good and qualified stack testing company, I would hope that this information gets passed along to prospective clients who may ask them about [our company]. 3) Again, if we do not meet their criteria, or they see ways that [our company] could make their oversight, protocol/report review easier, I'd like to know about it.	1
Keep doing a good job.	1
More flexibility with scheduling may require inspectors to visit more than one site on a given day.	1
No.	2
provided comment	**7**
respondent skipped question	**4**

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APPENDIX D
SURVEY OF PERMITTED FACILITIES

We sent surveys to the 299 facilities permitted by the Air Resources Division (ARD). We received 108 responses for a 36 percent response rate. When respondents selected "Do Not Know," or "Not Applicable," we excluded these responses when calculating response percentages. We combined and simplified similar answers to open-ended questions and presented them in topical categories; multipart responses were counted in multiple categories where applicable. Some totals may not add up to 100 percent due to rounding or where respondents could respond multiple times to the same question.

Question 1. When did your facility first receive an air permit from the ARD?		
Answer Options	**Count**	**Percent**
Within the past year	5	4.8
Between 1 and 5 years ago	7	6.7
Between 5 and 10 years ago	20	19.2
More than 10 years ago	72	69.2
Do Not Know	4	NA
respondent answered question	**108**	
respondent skipped question	**0**	

Question 2. Do you understand all requirements of your permit?		
Answer Options	**Count**	**Percent**
Yes	99	91.7
No	9	8.3
respondent answered question	**108**	
respondent skipped question	**0**	

Question 2. Text Responses, Unclear areas:	**Count**
I believe so.	1
Required additional assistance from a consulting facility to understand permit requirements.	4
Permit language is difficult to understand; many EPA and NHDES permit requirements have changed.	3
Utilized ARD assistance/services to gain an understanding of any unclear requirements.	2
Other	3
provided comment	**13**

Question 3. Please indicate your source type.		
Answer Options	**Count**	**Percent**
Title V: a source with the potential to annually emit 10 tons or more of any one hazardous air pollutant (HAP), 25 tons or more of any combination of HAPs, 50 tons or more of volatile organic compounds, or 100 tons or more of any criteria pollutant	27	29.7
Synthetic Minor: a source choosing to limit their potential emissions below the Title V threshold	23	25.3
Minor: a source that does not have the potential to emit emissions at the Title V threshold	41	45.1
Do Not Know	17	NA
respondent answered question	**108**	
respondent skipped question	**0**	

Question 4. Please rate your satisfaction with the ARD's permitting process.		
Answer Options	**Count**	**Percent**
Unsatisfied	1	0.9
Somewhat Unsatisfied	5	4.6
Neither Satisfied Nor Unsatisfied	19	17.6
Somewhat Satisfied	10	9.3
Satisfied	73	67.6
respondent answered question	**108**	
respondent skipped question	**0**	

Question 5. Please provide a brief explanation of why you were "Somewhat Unsatisfied" or "Unsatisfied" with the ARD's permitting process.	
Comments	**Count**
The process can be confusing/complicated.	3
Required additional assistance from a consultant to understand calculations.	1
Emission fees have risen without proper explanation.	1
Other	2
provided comment	**7**

Question 6. Do you agree with ARD's determination of which regulations apply to your devices?		
Answer Options	**Count**	**Percent**
Disagree	2	1.9
Somewhat Disagree	1	0.9
Neither Disagree Nor Agree	17	15.7
Somewhat Agree	10	9.3
Agree	78	72.2
respondent answered question	**108**	
respondent skipped question	**0**	

Question 7. Please provide a brief explanation of why you "Somewhat Disagree" or "Disagree" with the ARD's determination of which regulations apply to your devices.	
Comments	**Count**
Little flexibility for specific situations.	1
Exceedances experienced during part of the permit period caused the facility to be in non-compliance for the entire time, although otherwise emissions were relatively low for the rest of the period.	1
The ARD's permit process negatively affects small businesses seeking a permit.	1
provided comment	**3**

Question 8. Is your facility currently permitted under a General State Permit for Emergency Engines (GSP) or Permit By Notification for Non-Metallic Mineral Processing Plants (PBN)?		
Answer Options	**Count**	**Percent**
Yes	30	27.8
No	78	72.2
respondent answered question	**108**	
respondent skipped question	**0**	

Question 9. Please rate your satisfaction with the quality of the ARD's online permitting process.		
Answer Options	**Count**	**Percent**
Unsatisfied	0	0.0
Somewhat Unsatisfied	1	3.3
Neither Satisfied Nor Unsatisfied	7	23.3
Somewhat Satisfied	1	3.3
Satisfied	21	70.0
respondent answered question	**30**	
not asked question	**78**	

Question 10. Please explain why you are "Somewhat Unsatisfied" or "Unsatisfied" with the quality of the ARD's online permitting process.	
Comments	**Count**
Too expensive.	1
provided comment	**1**

Question 11. Please rate your satisfaction with the timeliness of the ARD's processing of the following permit application types, as applicable:							
Answer Options	**Unsatisfied**	**Somewhat Unsatisfied**	**Neither Satisfied Nor Unsatisfied**	**Somewhat Satisfied**	**Satisfied**	**Not Applicable**	**Response Count**
Temporary or Construction Permit	2 (3.5%)	0 (0.0%)	8 (14.0%)	4 (7.0%)	43 (75.4%)	51 (NA)	108
Minor Amendment	1 (1.6%)	0 (0.0%)	4 (6.5%)	4 (6.5%)	53 (85.5%)	46 (NA)	108
Significant Amendment	1 (2.6%)	0 (0.0%)	7 (17.9%)	4 (10.3%)	27 (69.2%)	69 (NA)	108
Renewal Permit	2 (2.0%)	6 (5.9%)	12 (11.8%)	11 (10.8%)	71 (69.6%)	6 (NA)	108
RACT Order/ Limitations on Potential to Emit (LPE)	1 (3.0%)	0 (0.0%)	9 (27.3%)	5 (15.2%)	18 (54.5%)	75 (NA)	108
						respondent answered question	**108**
						respondent skipped question	**0**

Question 12. If you responded "Somewhat Unsatisfied" or "Unsatisfied" with the timeliness of the ARD's permit processing for any of the application types above, please explain why.	
Comments	**Count**
The renewal process is too long; process is generally slow and inefficient.	11
NA; satisfied.	4
Process is cumbersome and bureaucratic.	1
Expensive.	1
provided comment	**15**

Question 13. Please rate your satisfaction with the professionalism of the ARD's permitting staff.		
Answer Options	**Count**	**Percent**
Unsatisfied	0	0.0
Somewhat Unsatisfied	0	0.0
Neither Satisfied Nor Unsatisfied	7	6.5
Somewhat Satisfied	5	4.6
Satisfied	96	88.9
respondent answered question	**108**	
respondent skipped question	**0**	

Question 14. Please explain why you were "Somewhat Unsatisfied" or "Unsatisfied" with the professionalism of the ARD's permitting staff.	
Comments	**Count**
There are no responses.	0
provided comment	**0**

Question 15. Has your facility submitted a permit application to the ARD in the past two years?		
Answer Options	**Count**	**Percent**
Yes	70	64.8
No	38	35.2
respondent answered question	**108**	
respondent skipped question	**0**	

Question 16. How many of each permit application type did your facility submit in the past two years?						
Answer Options	**0**	**1-2**	**3-5**	**More Than 5**	**Not Applicable/ Do Not Know**	**Response Count**
Temporary or Construction Permit	25 (59.5%)	16 (38.1%)	1 (2.4%)	0 (0.0%)	28 (NA)	70
Minor Amendment	20 (48.8%)	19 (46.3%)	1 (2.4%)	1 (2.4%)	29 (NA)	70
Significant Amendment	29 (80.6%)	7 (19.4%)	0 (0.0%)	0 (0.0%)	34 (NA)	70
Renewal	5 (7.6%)	54 (81.8%)	4 (6.1%)	3 (4.5%)	4 (NA)	70
RACT Order/Limitations on Potential to Emit (LPE)	26 (92.9%)	2 (7.1%)	0 (0.0%)	0 (0.0%)	42 (NA)	70
				respondent answered question		**70**
				not asked question		**38**

Question 17. Of the permit applications your facility submitted to the ARD in the past two years, how many received a comment during the public notice period?						
Answer Options	**0**	**1-2**	**3-5**	**More Than 5**	**Not Applicable/ Do Not Know**	**Response Count**
Temporary or Construction Permit	31 (91.2%)	2 (5.9%)	0 (0.0%)	1 (2.9%)	36 (NA)	70
Minor Amendment	31 (96.9%)	1 (3.1%)	0 (0.0%)	0 (0.0%)	38 (NA)	70
Significant Amendment	26 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	44 (NA)	70
Renewal	47 (94.0%)	2 (4.0%)	0 (0.0%)	1 (2.0%)	20 (NA)	70
RACT Order/Limitations on Potential to Emit (LPE)	23 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	47 (NA)	70
				respondent answered question		**70**
				not asked question		**38**

Question 18. In your opinion, is a public notice period beneficial for all permit application types?		
Answer Options	**Count**	**Percent**
Yes	37	52.9
No	33	47.1
respondent answered question	**70**	
not asked question	**38**	

Question 18. Text Responses, Why or why not:	**Count**
Public awareness; Right-to-Know.	22
Community does not need to know everything; neighbors are unconcerned, limited knowledge.	12
Unnecessary for renewals and/or minor permits or amendments; minimal benefit.	13
Slows down process.	8
The public is entitled to information, but all of the professional expertise associated with a prospective permit should reside in the ARD, where the staff is extraordinarily well trained.	2
provided comment	**58**

Question 19. With the exception of rock crushers, emergency generators, or fire pump engines, do you have devices requiring an air permit?		
Answer Options	**Count**	**Percent**
Yes	89	82.4
No	19	17.6
respondent answered question	**108**	
respondent skipped question	**0**	

Question 20. When was the last time ARD Compliance Assessment staff inspected your facility?		
Answer Options	**Count**	**Percent**
Never been inspected	0	0.0
Within the past year	20	24.1
Between 1 and 5 years ago	57	68.7
Between 5 and 10 years ago	6	7.2
More than 10 years ago	0	0.0
Do Not Know	6	NA
respondent answered question	**89**	
not asked question	**19**	

Question 21. Please rate your satisfaction with the following parts of the compliance inspection process:						
Answer Options	**Unsatisfied**	**Somewhat Unsatisfied**	**Neither Satisfied Nor Unsatisfied**	**Somewhat Satisfied**	**Satisfied**	**Response Count**
Inspection frequency (how often ARD inspects your facility).	1 (1.2%)	0 (0.0%)	17 (20.5%)	5 (6.0%)	60 (72.3%)	83
Lead time ARD gives prior to an inspection occurring.	1 (1.2%)	3 (3.6%)	13 (15.7%)	11 (13.3%)	55 (66.3%)	83
How ARD informs you of deficiencies found during the inspection.	2 (2.4%)	1 (1.2%)	16 (19.3%)	7 (8.4%)	57 (68.7%)	83
Follow-up, if any, after the inspection.	2 (2.4%)	1 (1.2%)	18 (21.7%)	5 (6.0%)	57 (68.7%)	83
Quality and comprehensiveness of the inspection report.	1 (1.2%)	1 (1.2%)	16 (19.3%)	7 (8.4%)	58 (69.9%)	83
ARD reminders about outstanding items.	1 (1.2%)	0 (0.0%)	18 (21.7%)	5 (6.0%)	59 (71.1%)	83
Professionalism of ARD inspection staff.	0 (0.0%)	1 (1.2%)	10 (12.0%)	6 (7.2%)	66 (79.5%)	83
				respondent answered question		**83**
				not asked question		**25**

Question 22. If you responded "Somewhat Unsatisfied" or "Unsatisfied" for any part of the ARD's compliance inspection process, please explain why.	
Comments	**Count**
Inspection conducted with little notice.	2
ARD staff unprofessional/arrogant.	2
No formal close out; surprises in the inspection report.	3
NA.	1
Report was too long and detailed.	1
provided comment	**9**

Question 23. Do any of your permitted devices require a compliance stack test?		
Answer Options	**Count**	**Percent**
Yes	36	33.3
No	72	66.7
respondent answered question	**108**	
respondent skipped question	**0**	

Question 24. When was the last time your facility had a compliance stack test?		
Answer Options	**Count**	**Percent**
Never received a compliance stack test	2	5.7
Within the past year	16	45.7
Between 1 and 5 years ago	15	42.9
Between 5 and 10 years ago	1	2.9
More than 10 years ago	1	2.9
Do Not Know	1	NA
respondent answered question	**36**	
respondent skipped question	**0**	
not asked question	**72**	

Question 25. Please rate your satisfaction with the following parts of the compliance stack testing process:						
Answer Options	**Unsatisfied**	**Somewhat Unsatisfied**	**Neither Satisfied Nor Unsatisfied**	**Somewhat Satisfied**	**Satisfied**	**Response Count**
Timeliness of ARD's pre-testing protocol review.	1 (3.0%)	0 (0.0%)	7 (21.1%)	4 (12.1%)	21 (63.6%)	33
ARD's communication about the test and testing schedule.	1 (3.0%)	0.0 (0%)	6 (18.2%)	1 (3.0%)	25 (75.8%)	33
Timeliness of ARD informing you of deficiencies found after its review of the compliance stack test report.	0 (0.0%)	0 (0.0%)	9 (27.3%)	1 (3.0%)	23 (69.7%)	33
Follow-up, if needed, after the compliance stack test.	1 (3.0%)	0 (0.0%)	8 (24.2%)	1 (3.0%)	23 (69.7%)	33
Re-testing, if required.	1 (3.0%)	0 (0.0%)	9 (27.3%)	1 (3.0%)	22 (66.7%)	33
Professionalism of ARD staff while observing compliance stack tests.	1 (3.0%)	0 (0.0%)	3 (9.1%)	4 (12.1%)	25 (75.8%)	33
respondent answered question						**33**
respondent skipped question						**0**
not asked question						**75**

Question 26. If you responded "Somewhat Unsatisfied" or "Unsatisfied" for any part of the ARD's compliance stack testing process, please explain why.	
Comments	**Count**
Measurements and emissions limitations provided were not appropriate following initial stack testing	1
No retesting required	1
NA	1
provided comment	**3**

Question 27. In New Hampshire, ARD staff observe all compliance stack tests performed. In your opinion, is this beneficial?		
Answer Options	**Count**	**Percent**
Yes	20	58.8
No	14	41.2
respondent answered question	**34**	
respondent skipped question	**1**	
not asked question	**73**	

Question 27. Text Responses, Why or why not:	**Count**
Not always necessary.	8
ARD presence is beneficial; eliminates questions.	6
Waste of time/money.	3
There should be random testing; partial observances.	2
Other.	1
provided comment	**15**

Question 28. Does your facility have a continuous emissions monitoring system (CEMS)?		
Answer Options	**Count**	**Percent**
Yes	15	44.1
No	19	55.9
respondent answered question	**34**	
respondent skipped question	**1**	
not asked question	**73**	

Question 29. When was the last time your facility had an annual Relative Accuracy Test Audit (RATA) which was observed by ARD staff?		
Answer Options	**Count**	**Percent**
Never had a RATA	4	33.3
Within the past year	8	66.7
Between 1 and 5 years ago	0	0.0
Between 5 and 10 years ago	0	0.0
More than 10 years ago	0	0.0
Do Not Know	3	NA
respondent answered question	**15**	
respondent skipped question	**1**	
not asked question	**92**	

Question 30. In New Hampshire, ARD compliance stack testing and monitoring staff attend an annual RATA performed at facilities with CEM systems. In your opinion, is this beneficial?		
Answer Options	**Count**	**Percent**
Yes	5	50.0
No	5	50.0
respondent answered question	**10**	
respondent skipped question	**1**	
not asked question	**97**	

Question 30. Text Responses, Why or why not:	**Count**
Provides opportunity to ask questions; ARD can confirm procedures are followed	2
Waste of ARD resources.	3
Testing companies are qualified to perform tests	2
NA.	1
provided comment	**8**

Question 31. Has your facility been subject to any compliance-related enforcement actions in the past two years?		
Answer Options	**Count**	**Percent**
Yes	10	9.5
No	95	90.5
Do Not Know	3	NA
respondent answered question	**108**	
respondent skipped question	**0**	

Question 32. Please rate your satisfaction with the following aspects of the ARD's enforcement process:

Answer Options	**Unsatisfied**	**Somewhat Unsatisfied**	**Neither Satisfied Nor Unsatisfied**	**Somewhat Satisfied**	**Satisfied**	**Response Count**
Timeliness of notifying you of a referral to the Enforcement Unit.	2 (20.0%)	0 (0.0%)	2 (20.0%)	1 (10.0%)	5 (50.0%)	10
Method of notifying you of a referral to the Enforcement Unit.	1 (10.0%)	1 (10.0%)	2 (20.0%)	0 (0.0%)	6 (60.0%)	10
Keeping you informed of the status of your case.	2 (20.0%)	0 (0.0%)	3 (30.0%)	0 (0.0%)	5 (50.0%)	10
Information exchange between you and Enforcement personnel.	1 (10.0%)	0 (0.0%)	1 (10.0%)	0 (0.0%)	8 (80.0%)	10
Timeliness of the investigation.	1 (10.0%)	0 (0.0%)	3 (30.0%)	2 (20.0%)	4 (40.0%)	10
Severity of the sanction imposed in relation to the deficiency.	2 (20.0%)	0 (0.0%)	3 (30.0%)	0 (0.0%)	5 (50.0%)	10
Timeliness of overall processing (from the time you were made aware of a referral to the Enforcement Unit to the time the issue was resolved).	3 (30.0%)	0 (0.0%)	1 (10.0%)	0 (0.0%)	6 (60.0%)	10
Professionalism of ARD Enforcement staff.	1 (10.0%)	1 (10.0%)	0 (0.0%)	0 (0.0%)	8 (80.0%)	10
respondent answered question						**10**
not asked question						**98**

Question 33. If you responded "Somewhat Unsatisfied" or "Unsatisfied" for any part of the ARD's compliance enforcement process, please explain why.	
Comments	**Count**
Long period of time without certainty of the status of deficiencies.	1
NA.	1
Other.	2
provided comment	**4**

Question 34. Are you aware of ARD enforcement actions taken against other permitted facilities?		
Answer Options	**Count**	**Percent**
Yes	20	18.5
No	88	81.5
respondent answered question	**108**	
respondent skipped question	**0**	

Question 35. How did you become aware of ARD enforcement against other permitted facilities? Please check all that apply.		
Answer Options	**Count**	**Percent**
NHDES OneStop	6	30.0
NHDES Legal Unit website	3	15.0
Enforcement And Compliance History Online (ECHO)	2	10.0
New articles	11	55.0
Word of mouth	9	45.0
Other (please specify)	3	15.0
respondent answered question	**20**	
not asked question	**88**	

Question 35. Text Responses, Other:	**Count**
Informed by ARD Personnel.	1
NHDES website.	1
Unsure. Possibly through a class or conference.	1
provided comment	**3**

Question 36. In your opinion, were sanctions against other permitted facilities appropriate for the deficiency identified?		
Answer Options	**Count**	**Percent**
Yes	5	83.3
No	1	16.7
Do Not Know	14	NA
respondent answered question	**20**	
not asked question	**88**	

Question 37. If information on enforcement actions against other facilities were made available, how would you use this information? Please check all that apply.		
Answer Options	**Count**	**Percent**
To identify areas where my facility may have been out of compliance.	78	72.2
To correct areas where my facility may have been out of compliance.	75	69.4
We would not use this information.	9	8.3
Other (please specify)	15	13.9
respondent answered question	**108**	
respondent skipped question	**0**	

Question 37. Text Responses, Other:	**Count**
To assess and ensure the compliance of our own facility.	7
To educate staff and management about the importance of compliance.	3
To be more knowledgeable of compliance issues.	2
Other.	2
provided comment	**14**

Question 38. In general, has your facility received timely assistance and feedback from ARD staff?		
Answer Options	**Count**	**Percent**
Yes	104	96.3
No (Please explain what could be improved.)	4	3.7
respondent answered question	**108**	
respondent skipped question	**0**	

Question 38. Text Responses, Improvements:	**Count**
Staff were very helpful.	2
Other	2
provided comment	**4**

Question 39. Do you have any other feedback regarding ARD services?	
Comments	**Count**
The ARD staff is professional and responsive; helpful.	36
Lengthy permit process.	4
Small New Hampshire businesses require more assistance.	4
Reduce emissions-based fees.	3
No other comments.	13
Other.	1
provided comment	**61**

Question 40. If you would like to receive a link to our report when it becomes public, please provide the email address where you would like to receive the link. (This email address will not be reported or retained after the report is made public.)		
Answer Options	**Count**	**Percent**
No, thank you.	33	30.6
Yes (Please provide email address).	75	69.4
answered question	**108**	
skipped question	**0**	

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STATE OF NEW HAMPSHIRE
AIR RESOURCES DIVISION

APPENDIX E
STATUS OF PRIOR AUDIT FINDING

The following is the status of one observation found in our prior LBA financial audit, entitled *Department Of Environmental Services Financial And Compliance Audit Report For The Fiscal Year Ended June 30, 2004*.

No.	Title	Status
20.	Air Resources Fund Should Be Established *The Department of Environmental Services had not taken steps to establish a non-lapsing fund account for air pollution control activities revenues and interest as required by statute.*	● ●

A copy of the prior report can be accessed on-line at our website:
http://www.gencourt.state.nh.us/LBA/AuditReports/FinancialReports/pdf/DES_2004_full.pdf.

Status Key			Count
Resolved	●	●	1
Remediation In Process (Action beyond meeting and discussion)	●	○	
Unresolved	○	○	

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