Nebraska Perchloroethylene Dry Cleaner Compliance Manual

Nebraska Department of Environmental Quality

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Nebraska DEQ

Nebraska Perchloroethylene Dry Cleaner Compliance Manual

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The intent of this manual is to provide an assistance tool for complying with the environmental regulations. This guidance may not be inclusive and is not meant to serve as a substitute for being aware of and understanding all applicable regulations.

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INTRODUCTION

The purpose of this manual is to help Nebraska dry cleaning facilities using perchloroethylene understand and comply with state and federal environmental regulations. Recently, we have seen a high rate of non-compliance with the environmental regulations among area dry cleaners. The majority of violations we find are due to lack of sufficient recordkeeping.

The manual provides a desktop reference of current requirements and recommendations for Nebraska dry cleaners on air regulations, hazardous waste management and disposal, wastewater discharge, solid waste management and disposal, and general operating practices. Additionally, this manual will outline additional requirements for dry cleaning equipment using perchloroethylene located in a building with a residence.

Perchloroethylene Solvent

Perchloroethylene, known as perc or PCE, is the most commonly used cleaning agent in the Nebraska dry cleaning industry. Although commonly used, it is suspected of causing cancer and has been found to be moderately toxic to people. Long-term outdoor air concentrations of PERC as low as one-tenth part per billion pose a possible public health problem. In addition, spills and leaks can lead to PERC contamination of soil, surface water, and ground water. PERC is classified as a pollutant in both air and water regulations, and disposal is regulated as a hazardous waste.

The NDEQ Compliance Assistance Program

The Nebraska Department of Environmental Quality (NDEQ) is committed to providing multi-media compliance assistance to the regulated community. Compliance assistance is offered through a variety of methods including: NDEQ's website, telephone calls, workshops, meetings, seminars, and compliance assistance visits. The NDEQ has several staff members whose primary job function is to provide assistance to the businesses of Nebraska.

To request compliance assistance, call the toll free number (877) 253-2603. Additionally, the NDEQ Fact Sheet "NDEQ Compliance Assistance Program" details the assistance available, the methods of assistance, and contact numbers for those who provide assistance. The Fact Sheet is located in Appendix B of this document. The NDEQ strongly encourages Nebraska businesses to utilize the available assistance and to contact the appropriate NDEQ staff if you have questions.

Acknowledgements

The NDEQ would like to thank the Iowa Air Emissions Assistance Program (IAEAP) at the Iowa Waste Reduction Center for sharing their document with us and allowing us to modify it to fit the needs of Nebraska.

Air Quality Regulations

Since September 22, 1993, all perc dry cleaners have been required to comply with the National Emission Standards for Hazardous Air Pollutants (NESHAP). Coin operated perc dry cleaners are exempt from this rule. On July 27, 2006, the Environmental Protection Agency revised the regulations for dry cleaners. The new air quality requirements will be highlighted with an icon.

The NESHAP provision is covered in Title 40 of the Code of Federal Regulations, Part 63 Subpart M. Subpart M is adopted by reference in the Nebraska Air Quality Regulations - Title 129. The NESHAP requires perc dry cleaning facilities to take the identified steps described below to comply with the rule.

DETERMINING SOURCE CATEGORY

The first step to comply with the NESHAP is to determine your source category. The source category is based on the type of equipment installed and your facility's annual perc consumption. Perc consumption is calculated based on a rolling 12-month total of all perc purchases for a facility.

- Dry-to-dry machines wash and dry clothing in the same machine, eliminating the need to transfer clothes.
- Transfer machines wash and dry clothing in different machines. This may be a washer and dryer, washer and reclaimer or a dry-to-dry machine and a reclaimer.

SMALL AREA SOURCE category requirements apply if perc purchased over the preceding 12-month period was:

For facilities with:	Amount of perc purchased:
Dry-to-dry machine(s) only	less than 140 gallons
Transfer machine(s) only	less than 200 gallons
Both types of machines	less than 140 gallons

LARGE AREA SOURCE category requirements apply if perc purchased over the preceding 12-month period was:

For facilities with:	Amount of perc purchased:
Dry-to-dry machines only	between 140 to 2,100 gallons
Transfer machines only	between 200 to 1,800 gallons
Both types of machines	between 140 to1,800 gallons

MAJOR SOURCE category requirements apply if perc purchased over the preceding 12-month period was:

For facilities with:	Amount of perc purchased:
Dry-to-dry machines only	more than 2,100 gallons
Transfer machines only	more than 1,800 gallons
Both types of machines	more than 1,800 gallons

The flow charts on pages 4-5 will help you determine your source category.

DETERMINING SOURCE STATUS

Once the source category is established, the next step is to determine if the dry cleaning facility is a new or existing source.

If the facility commenced construction or reconstruction of dry cleaning equipment:

- On or after December 9, 1991 = **New Source**
- Before December 9, 1991 = **Existing Source**
- New transfer machine installed or reconstructed between December 9, 1991 and September 22, 1993 = **Existing Source**

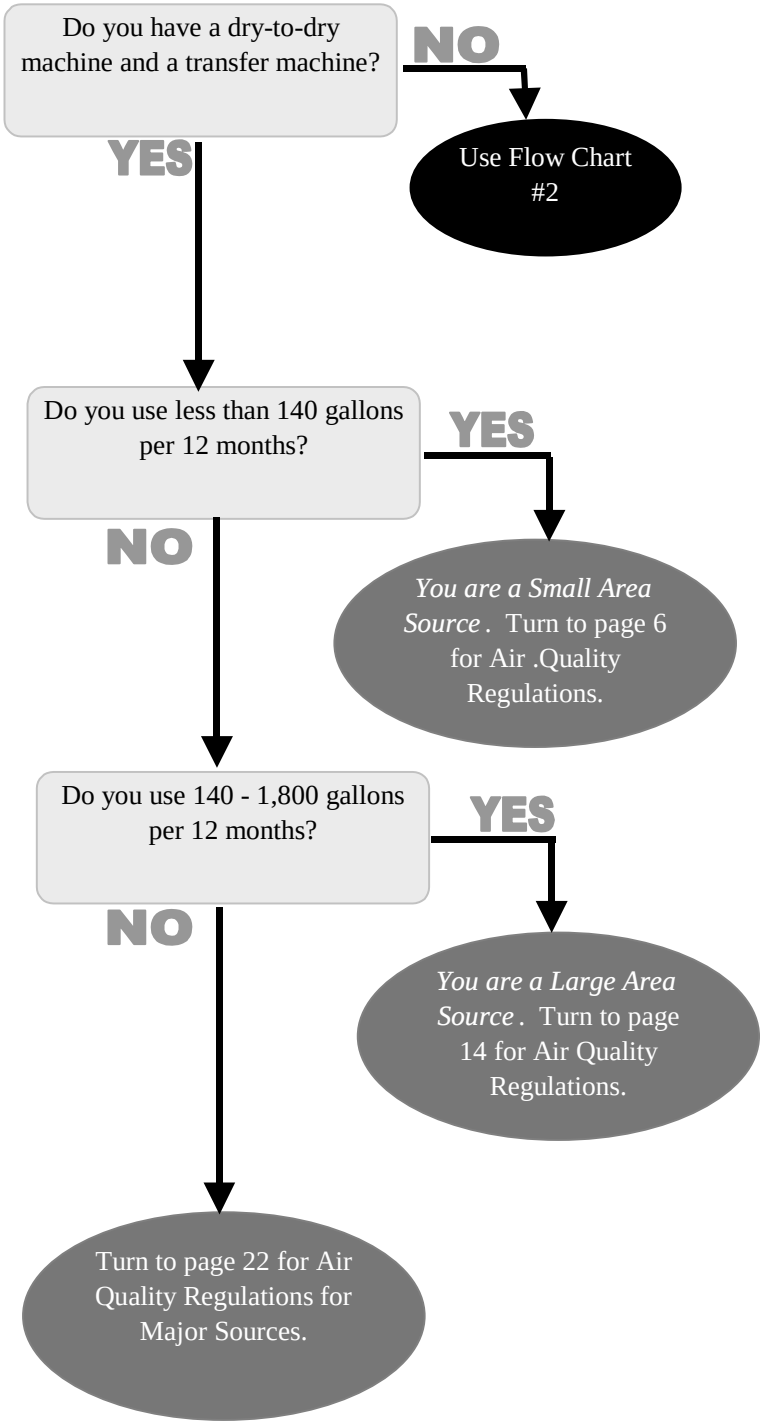
Source – for the purposes of this subpart, source means each dry cleaning system. The dry cleaning system includes the dry cleaning machine and its ancillary equipment.

Construction - for the purposes of this standard, construction means the on-site fabrication, erection or construction of a dry cleaning system subject to the NESHAP. This does not include the removal of existing equipment from one location to another or the sale of equipment to a new owner unless modifications are made that meet the definition of reconstruction below. However, other requirements may apply when a machine is moved from one location to another (i.e. air quality construction permit).

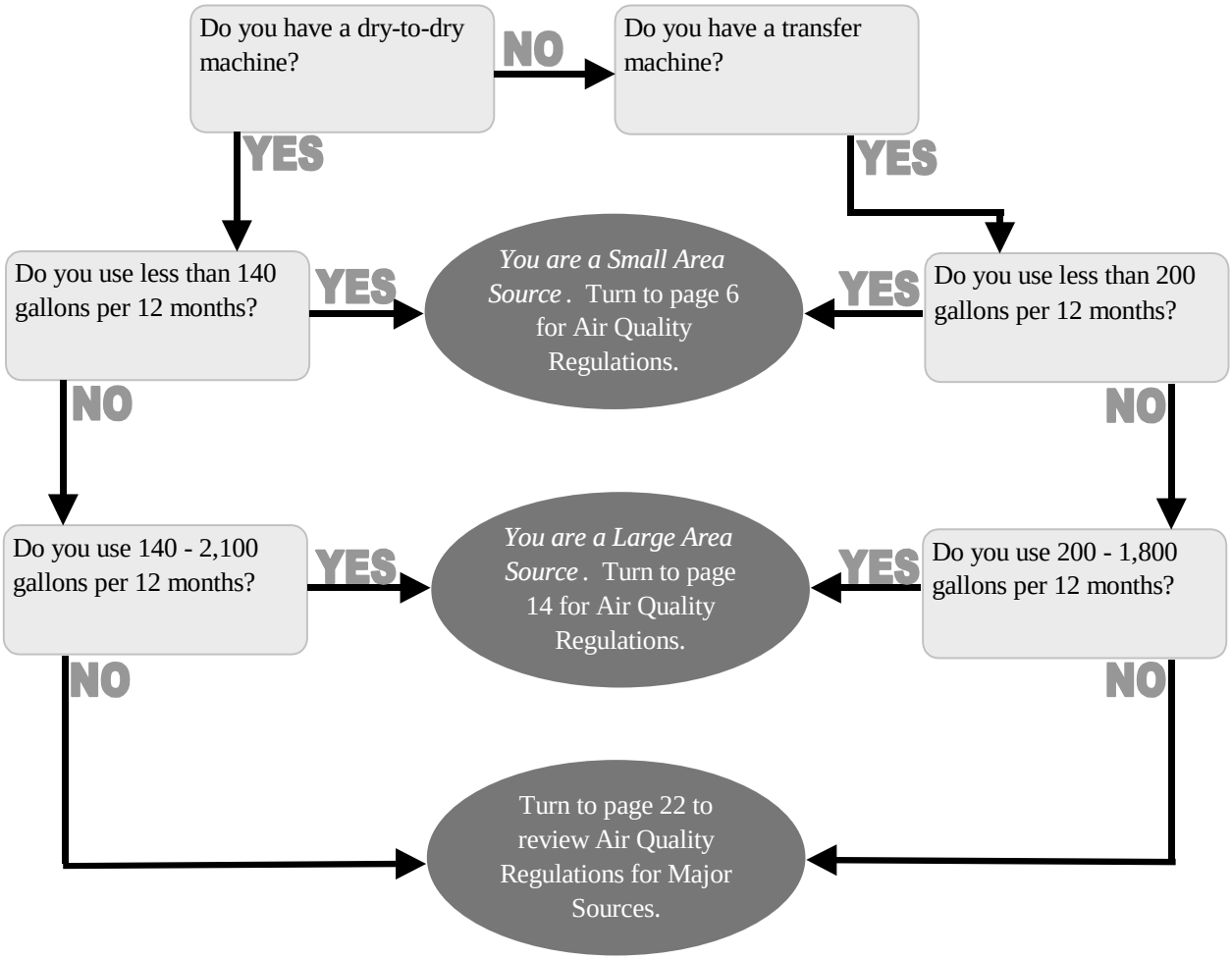
Reconstruction occurs when any component of the dry cleaning equipment is replaced and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct new comparable equipment.

Contact the Nebraska Department of Environmental Quality for assistance if anything in the facility has been replaced since December 9, 1991, if you are uncertain whether equipment is considered reconstructed or if a facility has been operating equipment, but was unaware of the NESHAP. Contact information is listed in Appendix A. This manual is divided into sections based on the source category. Skip to the source category that specifically applies to the equipment at your facility.

Air Quality Regulations **FLOW CHART 1**



Air Quality Regulations **FLOW CHART 2**



New And Existing Small Area Sources

- ✓ **Dry-to-dry machines** that purchase **<140 gallons** of perc per year
- ✓ **Dry-to-dry & transfer machines** that purchase **<140 gallons** of perc per year
- ✓ **Transfer machines** that purchase **< 200 gallons** of perc per year

The type of dry cleaning equipment plays a critical role in complying with the NESHAP requirements. Emission control requirements for a dry cleaning facility depend upon the construction date of the equipment, the type of dry cleaning machine (dry-to-dry and/or transfer) and the amount of perc purchased per year.

Control Equipment Requirements for Small Area Sources

Dry-to-dry machines:

- *Existing* small area sources:
  - Dry-to-dry machines constructed prior to December 9, 1991 are not required to install any new, additional perc control devices.

- *New* small area sources:
  - Equipment must be designed to route the air-perc gas vapor stream contained within each machine through a refrigerated condenser or equivalent control device.
  - Refrigerated condensers shall be operated to prevent the venting or release of the air-perc gas vapor stream from the machines to the atmosphere while the drum is rotating, and must use a diverter valve to prevent fresh air from passing through the refrigerated condenser when the machine door opens.
  - New equipment constructed after December 21, 2005 must also have a carbon adsorber following the refrigerated condenser that operates immediately before the machine door is opened.

Monitoring requirements for the different control devices are presented in Table 1 below.

Transfer machines:

- *Existing* small area sources:
  - Have no required controls. However, they must comply with the operating procedures, recordkeeping, reporting, inspection and repair, and state permitting requirements.

- *New* small area sources:
  - The NESHAP rule prohibits the operation of new transfer machines if they were installed after September 22, 1993.

All transfer machines must be taken out of operation by July 28, 2008.

Co-located Machines

A co-located dry cleaning machine is located in a building containing a residence. Residence means any dwelling or housing in which people reside excluding short-term housing that is occupied by the same person for a period of less than 180 days (such as a hotel room).

- As of **July 27, 2006,** dry cleaners using perc cannot be constructed or reconstructed in a building with a residence**.**
- All drycleaners must discontinue using perc in a building with a residence by **December 21, 2020.**
- *New* perc dry cleaning machines constructed or reconstructed between December 21, 2005 and July 12, 2006 and located in a building with a residence must discontinue the use of perc by **July 27, 2009.**
    - System must be operated inside a vapor barrier enclosure. Operate the exhaust system for the enclosure at all times the system is operating and during maintenance. Ensure the entry door to the enclosure is open only when a person is entering or exiting the enclosure.
    - Route the air-perc gas vapor stream through a refrigerated condenser and pass the air-perc gas vapor stream from inside the dry cleaning drum through a carbon adsorber immediately before the door of the dry cleaning machine is opened.
    - All other monitoring, recordkeeping, and reporting requirements must be followed for the *new* source including: weekly vapor leak inspections.

The monitoring requirements presented in Table 1 apply.

Table 1

Monitoring Requirements for **new small dry-to-dry machines**:

Control Requirement	**Weekly** Monitoring Requirement
NEW! Refrigerated condenser	♦ Measure and record the high pressure and low pressure during the drying phase. The pressure should be within the range specified by the manufacturer. ♦ If the machine is not equipped with a pressure gauge, monitor and record temperature of the exhaust on the outlet side of the condenser. o Temperature sensors must be designed to measure a temperature of 45°F (7.2°C) to an accuracy of +/- 2°F (1.1°C). The temperature must be 45°F or less. o If the temperature is greater than 45°F, necessary repairs or adjustments must be made. Parts must be ordered within two working days of detection of non-compliance and installed within five working days after receipt. ♦ Measure inlet and outlet temperature of the condenser on the washer. Calculate the difference. It must be greater than 20°F (11.1°C). The temperature sensor should be designed to measure between 32°F (0°C) and 120°F (48.9 °C) to an accuracy of +/- 2°F (1.1°C).
NEW! Carbon Adsorber	♦ If the exhaust passes through the adsorber **immediately upon door opening**, measure and record the concentration of perc in the exhaust of the adsorber. o Use a colorimetric detector tube or perc gas analyzer. The analyzer must measure a concentration of 100 ppm of perc in air to an accuracy of ± 25 ppm. o The concentration of perc in the carbon adsorber exhaust must be 100 parts per million (ppm) or less. ♦ If the exhaust passes through the adsorber **before the machine door is opened**, measure the perc concentration of perc in the dry cleaning machine drum at the end of the dry cleaning cycle. o Use a colorimetric detector tube or perc gas analyzer. The analyzer must measure a concentration of 300 ppm of perc in air to an accuracy of ± 75 ppm. o Place the tube or analyzer into the open space at the rear end of the drum immediately after door opening. The concentration of perc in the carbon adsorber exhaust must be 300 parts per million (ppm) or less.

If the measured concentration does not meet the parameters in Table 1, make the necessary repairs or adjustments. Parts must be ordered within two working days of detection of non-compliance and installed within five working days after receipt.

The sampling ports in which perc concentration measurements are drawn must be easily accessible; located at least eight times the diameter of the stack or duct downstream from any flow disturbance; not downstream from any other inlet; and two times the diameter of the stack or duct upstream from any flow disturbance.

Operating Procedure Requirements for Small Area Sources

1. Maintain, on site, a copy of the design specifications and operating manuals for each machine and control device at your facility. If this is not available, download a copy of a generic document that will meet this requirement from the Environmental Protection Agency's website at www.epa.gov/ttn/atw/dryperc/dryclpg.html, or contact the EPA's Region VII Air Program at (800) 223-0425.

2. Operate and maintain the equipment according to manufacturer's specifications and recommendations or its equivalent.

3. Keep all material safety and data sheets (MSDS) for perc solvent and all other hazardous chemicals used in your facility readily accessible. (Examples may include stain removers and facility cleaning products.)

4. Follow operating practices to eliminate emissions of perc. At a minimum to include:
    a. Store all new and waste perc solvent and perc containing wastes in containers that are leak-proof and tightly covered.
    b. Waste perc solvent and perc containing wastes should be properly labeled as "HAZARDOUS WASTE."
    c. Drain cartridge filters in their housings or other sealed container for 24 hours before removing from facility.
    d. Keep machine doors closed at all times, except when adding or removing clothing.

Reporting Requirements for Small Area Sources

All perc dry cleaners are required to submit an Initial Notification Report, Notification of Compliance Status, a Compliance Report for Pollution Prevention and a Compliance Report for Control Requirements.

- All perc dry cleaners need to send a Compliance Status Notification by July 28, 2008.
- All existing sources should have submitted an Initial Notification Report and Compliance Report for Pollution Prevention.
- New Sources are required to submit an Initial Notification Report upon startup. A Compliance Report for Pollution Prevention should be submitted within 30 days after startup. The Compliance Report for Control Requirements must also be submitted within 30 days of startup.

The reports should be submitted to the NDEQ Air Quality Division at the address listed in the Contacts and Resources section of this document (Appendix A), unless the dry cleaner is located in Lancaster County or the city limits of Omaha. Then, they will need

to submit the reports to their local air quality permitting agency. The Contacts and Resources section of this manual (Appendix A) lists the addresses for the Lancaster County Health Department and Omaha Air Quality Control Program. If a facility has not submitted these forms, it is encouraged to submit them as soon as possible.

The recommended forms for the Initial Notification, Compliance Status Notification, Compliance Report for Pollution Prevention, and Compliance Report for Control Requirements are included in Appendix C.

If the operating status (as listed below) for a facility changes, a Revised Compliance Report for Pollution Prevention and Revised Compliance Report for Control Requirements must be submitted within 180 days of the change. The changes that would require a facility to resubmit include:

1. An increase in annual perc purchases, indicating a change in source category. For example, if a facility is currently categorized as a small area source, but the amount of perc purchased exceeds 140 gallons per year. The increase in perc purchases changes the facility category to a large area source, and a new Compliance Report must be submitted;
2. A change in ownership or address of the facility; and
3. The purchase and construction of new equipment.

Inspection and Repair Requirements for Small Area Sources

Existing small area sources are required to complete machine inspections on all equipment **once every two weeks**.

1. Inspect all equipment for leaks that are obvious from sight, smell or touch. An obvious leak is defined as any perc vapor or liquid leak that can be detected by perc odor, visual observation or felt when passing fingers over surface of equipment. Special detection equipment is not required but the inspection must be done while the dry cleaning equipment is operating.

New small area sources constructed or reconstructed before December 21, 2005 are required to comply with the inspection requirements by July 28, 2008. *New* small area sources constructed or reconstructed after December 21, 2005 are required to comply with the inspection requirements by July 27, 2006 or upon startup.

1. **Inspect all equipment for leaks weekly** that are obvious from sight, smell or touch. An obvious leak is defined as any perc vapor or liquid leak that can be detected by perc odor, visual observation or felt when passing fingers over surface of equipment. Special detection equipment is not required but the inspection must be done while the dry cleaning equipment is operating.

2. **Inspect for vapor leaks on a monthly basis** using a halogenated hydrocarbon detector or a perc gas analyzer. Place the probe at the surface where leakage could occur and move it slowly along the surface.

3. **Machines located in a building with a residence must inspect for vapor leaks on a weekly basis** using a halogenated hydrocarbon detector or a perc gas analyzer. Place the probe at the surface where leakage could occur and move it slowly along the surface.

The following components of perc-containing equipment, as applicable, must be inspected during the weekly or biweekly inspections:

- Hose and pipe connections, fittings, couplings and valves;
- Door gaskets and seatings;
- Filter gaskets and seatings;
- Pumps;
- Solvent tanks and containers;
- Water separators;
- Muck cookers;
- Stills;
- Exhaust dampers;
- Diverter valves; and
- Cartridge filter housings.

All detected leaks must be repaired within 24 hours. If parts are required, they must be ordered within two working days of detection and installed within five days of receipt.

Recordkeeping Practices for Small Area Sources

All small area sources using perc must comply with the following recordkeeping practices. All recordkeeping must be kept in some sort of designated log and made available to the NDEQ upon request. The NDEQ Dry Cleaner Compliance Calendar, or EPA-designed forms provided in Appendix D are two different methods that can be used as a recordkeeping log. You can obtain the Compliance Calendar by contacting the NDEQ Air Quality Division or by locating it on NDEQ's website at www.deq.state.ne.us.

1. Keep and maintain **receipts of perc purchases** on site for a period of five years.

2. Maintain a log of the following information on site for a period of five years:

   a. On the first day of every month, the operator should **record the amount of perc purchased** during the previous month. You will then need to add the new perc purchases from that month with the 11 preceding months (to obtain a 12 month rolling total). If no perc was purchased during a given month, then the owner/operator would enter zero gallons into the log.

   b. **Dates when the components of the dry cleaning equipment are inspected** for perceptible leaks and vapor leaks and the location(s) of the components where perceptible leaks are detected.
   c. **The dates of repair** and records of written or verbal orders for repair parts to demonstrate compliance.

d. For equipment with a refrigerated condenser, **record weekly the date and temperature sensor monitoring results or the high and low pressure gauge readings**.
e. For equipment with a carbon adsorber, **record weekly the date and perc concentration reading.**

3. A copy of the design specifications and the operating manuals for the dry cleaning equipment and emission control devices must be retained at the facility for the life of the equipment.

Air Quality Permits for Small Area Sources

There are two types of NDEQ air quality permits a dry cleaning operation may need to apply for: construction and operating.

Construction Permits

Any facility constructing (installing new dry cleaning machines, or modifying or reconstruction existing dry cleaning machines) with a net increase in potential emissions exceeding the construction permit threshold will need a construction permit. The NDEQ Fact Sheet "Construction Permits" outlines the details of the construction permit program requirements. Potential emissions are based on operating the machines every day, 24 hours per day for a year at maximum capacity. The Construction Permit Fact Sheet explains provides a more detail and is found in Appendix B of this manual.

You may need to obtain a construction permit if your net change in potential solvent usage in a year due to construction meets the following:

- ✓ Transfer machine without controls with potential use of 396 gallons per year;
- ✓ Dry-to-dry machine without controls with potential use of 426 gallons per year;
- ✓ Machine with primary controls with potential use of 477 gallons per year; or
- ✓ Machine with primary and secondary controls with potential use of 740 gallons per year.

If you think a construction project will cause your potential usage to exceed these thresholds, contact the NDEQ Construction Permit Hotline at (877) 834-0474. If a construction permit is needed, it must be obtained prior to construction of the dry cleaning machine. Construction permits generally take four months to process, but can take up to nine months depending on the quality of the application, public interest, etc. Plan accordingly and contact NDEQ early in the planning process to discuss your project.

Operating Permits

Any facility that has actual emissions above the operating permit emission thresholds must obtain an operating permit.

The NDEQ Fact Sheet "Operating Permits" outlines the details of the operating permit program requirements. The Operating Permit Fact Sheet is found in Appendix B of this manual.

You may need to obtain an operating permit if your actual solvent usage in a year has ever exceeded the following:

- ✓ Transfer machine without controls with actual use of 792 gallons per year;
- ✓ Dry-to-dry machine without controls with actual use of 851 gallons per year;
- ✓ Machine with primary controls with actual use of 954 gallons per year; or
- ✓ Machine with primary and secondary controls with actual use of 1,480 gallons per year.

To determine if this applies to your operation, you should review your records for several years in the past, i.e., at least five years. If your solvent usage has ever exceeded the above levels and can reasonably be expected to exceed those levels again, then you should apply for an operating permit.

If an operating permit is needed, permit applications must be submitted within 12 months of initial startup of the emission unit. If you are not sure whether you need an air quality permit, contact the NDEQ Air Quality Division for assistance.

New And Existing Large Area Sources

- ✓ **Dry-to-dry machines** that purchase **140 – 2,100 gallons** of perc per year
- ✓ **Dry-to-dry & transfer machines** that purchase **140 – 1,800 gallons** of perc per year
- ✓ **Transfer machines** that purchase **200 – 1,800 gallons** of perc per year

The type of dry cleaning equipment plays a critical role in complying with the NESHAP requirements. Emission control requirements for a dry cleaning facility depend upon the construction date of the equipment, the type of dry cleaning machine (dry-to-dry and/or transfer) and the amount of perc purchased per year.

Control Equipment Requirements for Large Area Sources

Dry-to-dry machines

- *Existing* large area source equipment must have one of the following vapor recovery systems:
  - A refrigerated condenser. Refrigerated condenser must use a diverter valve to prevent air passing through the refrigerated condenser when the machine door opens.
  - A carbon adsorber if installed before September 22, 1993. ***Note: Once the carbon adsorber can no longer work effectively, you must install a refrigerated condenser to be used as a perc control device.*

- *New* large area sources:
  - Must have a refrigerated condenser.
  - Equipment installed after December 21, 2005 must also have a closed loop system with a carbon adsorber following the refrigerated condenser that operates immediately before the machine door is opened.

Monitoring requirements for the different control devices are summarized in Table 2.

Transfer machines

- *Existing* large area source machines must have one of the following:
  - A refrigerator condenser may be used if it is designed to prevent perc vapor from being released during operation and is equipped with a diverter valve to prevent air from passing through the refrigerator condenser when the door is open.
  - A carbon adsorber may be used if it was in place before September 22, 1993. ***Note: Once the carbon adsorber can no longer work effectively, you must install a refrigerated condenser to be used as a perc control device.*

        - Transfer machines installed before September 23, 1993 may remain in operation if the appropriate control equipment and general requirements are followed.
    - *New* large area sources:
        - The NESHAP prohibits the operation of new transfer machines installed after September 23, 1993.

All transfer machines must be taken out of operation by July 28, 2008.

Monitoring requirements for the different control devices are summarized in Table 2.

Co-located Machines

A co-located dry cleaning machine is located in a building containing a residence. Residence means any dwelling or housing in which people reside excluding short-term housing that is occupied by the same person for a period of less than 180 days (such as a hotel room).

- As of **July 27, 2006,** dry cleaners using perc cannot be constructed or reconstructed in a building with a residence**.**
- All drycleaners must discontinue using perc in a building with a residence by **December 21, 2020.**
- *New* perc dry cleaning machines constructed or reconstructed between December 21, 2005 and July 12, 2006 and located in a building with a residence must discontinue the use of perc by **July 27, 2009.**
    - System must be operated inside a vapor barrier enclosure. Operate the exhaust system for the enclosure at all times the system is operating and during maintenance. Ensure the entry door to the enclosure is open only when a person is entering or exiting the enclosure.
    - Route the air-perc gas vapor stream through a refrigerated condenser and pass the air-perc gas vapor stream from inside the dry cleaning drum through a carbon adsorber immediately before the door of the dry cleaning machine is opened.
    - All other monitoring, recordkeeping, and reporting requirements must be followed for the *new* source including weekly vapor leak inspections.

The monitoring requirements presented in Table 2 apply.

Table 2

Monitoring Requirements for **large area sources**:

Control Requirement	Weekly Monitoring Requirement
Refrigerated condenser	♦ Measure and record the high pressure and low pressure during the drying phase. The pressure should be within the range specified by the manufacturer. ♦ If the machine is not equipped with a pressure gauge, monitor and record temperature of the exhaust on the outlet side of the condenser. o Temperature sensors must be designed to measure a temperature of 45°F (7.2°C) to an accuracy of +/- 2°F (1.1°C). The temperature must be 45°F or less. o If the temperature is greater than 45°F, necessary repairs or adjustments must be made. Parts must be ordered within two working days of detection of non-compliance and installed within five working days after receipt. ♦ Measure inlet and outlet temperature of the condenser on the washer. Calculate the difference. It must be greater than 20°F (11.1°C). The temperature sensor should be designed to measure between 32°F (0°C) and 120°F (48.9 °C) to an accuracy of +/- 2°F (1.1°C).
Carbon absorber	♦ If the exhaust passes through the adsorber **immediately upon door opening**, measure and record the concentration of perc in the exhaust of the adsorber. o Use a colorimetric detector tube or perc gas analyzer. The analyzer must measure a concentration of 100 ppm of perc in air to an accuracy of ± 25 ppm. o The concentration of perc in the carbon adsorber exhaust must be 100 parts per million (ppm) or less. ♦ If the exhaust passes through the adsorber **before the machine door is opened**, measure the perc concentration of perc in the dry cleaning machine drum at the end of the dry cleaning cycle. o Use a colorimetric detector tube or perc gas analyzer. The analyzer must measure a concentration of 300 ppm of perc in air to an accuracy of ± 75 ppm. o Place the tube or analyzer into the open space at the rear end of the drum immediately after door opening. The concentration of perc in the carbon adsorber exhaust must be 300 parts per million (ppm) or less.

If the measured concentration does not meet the parameters in Table A-1, make the necessary repairs or adjustments. Parts must be ordered within two working days of detection of non-compliance and installed within five working days after receipt.

The sampling ports in which perc concentration measurements are drawn must be easily accessible; located at least eight times the diameter of the stack or duct downstream from any flow disturbance; not downstream from any other inlet; and two times the diameter of the stack or duct upstream from any flow disturbance.

Operating Procedure Requirements for Large Area Sources

1. Maintain, on site, a copy of the design specifications and operating manuals for each machine and control device at your facility. If this is not available, download a copy of a generic document that will meet this requirement from the Environmental Protection Agency's website at www.epa.gov/ttn/atw/dryperc/dryclpg.html, or contact the EPA's Region VII Air Program at (800) 223-0425.

2. Operate and maintain the equipment according to the manufacturer's specifications and recommendations or its equivalent.

3. Keep all material safety and data sheets (MSDS) for the perc solvent and all other chemicals used in the facility readily accessible. (Examples may include stain removers and facility cleaning products.)

4. Follow operating practices to eliminate emissions of perc. At a minimum to include:
   a. Store all new and waste perc solvent and perc containing wastes in containers that are leak-proof and tightly covered.
   b. Waste perc solvent and perc containing wastes should be labeled as "HAZARDOUS WASTE."
   c. Drain cartridge filters in their housings or other sealed container for 24 hours before removing from facility.
   d. Keep machine doors closed at all times, except when adding or removing clothing.

Reporting Requirements for Large Area Sources

All perc dry cleaners are required to submit an Initial Notification Report, Notification of Compliance Status, a Compliance Report for Pollution Prevention and a Compliance Report for Control Requirements.

- All perc dry cleaners need to send a Compliance Status Notification by July 28, 2008.
- All existing sources should have submitted an Initial Notification Report and Compliance Report for Pollution Prevention.
- New Sources are required to submit an Initial Notification Report upon startup. A Compliance Report for Pollution Prevention should be submitted

within 30 days after startup. The Compliance Report for Control Requirements must also be submitted within 30 days of startup.

The reports should be submitted to the NDEQ Air Quality Division at the address listed in the Contacts and Resources section of this document (Appendix A), unless the dry cleaner is located in Lancaster County or the city limits of Omaha. Then, they will need to submit the reports to their local air quality permitting agency. The Contacts and Resources section of this manual (Appendix A) lists the addresses for the Lancaster County Health Department and Omaha Air Quality Control Program. If a facility has not submitted these forms, it is encouraged to submit them as soon as possible.

The recommended forms for the Initial Notification, Compliance Status Notification, Compliance Report for Pollution Prevention, and Compliance Report for Control Requirements are included in Appendix C.

If the operating status (as listed below) for a facility changes, a Revised Compliance Report for Pollution Prevention and Revised Compliance Report for Control Requirements must be submitted within 180 days of the change. The changes that would require a facility to resubmit include:

1. An increase in annual perc purchases, indicating a change in source category. For example, if a facility is currently categorized as a small area source, but the amount of perc purchased exceeds 140 gallons per year. The increase in perc purchases changes the facility category to a large area source, and a new Compliance Report must be submitted;
2. A change from using a carbon adsorber to a refrigerated condenser. ***Note - carbon adsorbers can only be used if they were installed before September 23, 1993. Once the carbon adsorber can no longer work effectively, you must install a refrigerated condenser to be used as a perc control device;*
3. A change in ownership or address of the facility; or
4. Purchase and installation of new equipment.

Inspection and Repair Requirements for Large Area Sources

1. Inspect all equipment for leaks that are obvious from sight, smell or touch **weekly**. An obvious leak is defined as any perc vapor or liquid leak that can be detected by perc odor, visual observation or felt when passing fingers over surface of equipment. Special detection equipment is not required, however, inspection must be done while the dry cleaning system is operating.

2. *New* large area sources constructed or reconstructed before December 21, 2005 are required to complete **monthly** vapor leak detections on all equipment beginning July 28, 2008. *New* large area sources constructed or reconstructed after December 21, 2005 are required to complete **monthly** vapor leak detections on all equipment beginning July 27, 2006 or upon startup.

- Use a halogenated hydrocarbon detector or a perc gas analyzer. Place the probe at the surface where leakage could occur and move it slowly along the surface.

3. *New* large area sources **located in a building with a residence** and constructed or reconstructed before December 21, 2005 are required to complete **weekly** vapor leak detections on all equipment beginning July 28, 2008. **New** large area sources **located in a building with a residence** and constructed or reconstructed after December 21, 2005 are required to complete **weekly** vapor leak detections on all equipment beginning July 27, 2006 or upon startup.
    - Use a halogenated hydrocarbon detector or a perc gas analyzer. Place the probe at the surface where leakage could occur and move it slowly along the surface.

The following components of perc containing equipment, as applicable, must be inspected:

- Hose and pipe connections, fittings, couplings and valves;
- Door gaskets and seatings;
- Filter gaskets and seatings;
- Pumps;
- Solvent tanks and containers;
- Water separators;
- Muck cookers;
- Stills;
- Exhaust dampers;
- Diverter valves; and
- Cartridge filter housings.

All detected leaks must be repaired within 24 hours. If parts are required they must be ordered within two working days of detection and installed within five days of receipt.

Recordkeeping Practices for Large Area Sources

All large area sources using perc must comply with the following recordkeeping practices. All record keeping must be kept in some sort of designated log and made available to the NDEQ upon request. The NDEQ Dry Cleaner Compliance Calendar, or EPA-designed forms provided in Appendix D are two different methods that can be used as a recordkeeping log. You can obtain the Compliance Calendar by contacting the NDEQ Air Quality Division or by locating it on NDEQ's website at www.deq.state.ne.us.

1. Keep and maintain **receipts of perc purchases** on site for a period of five years.

2. Maintain a log of the following information on site for a period of five years:

    a. On the first day of every month, the operator should **record the amount of perc purchased** during the previous month. You will then need to add

the new perc purchases from that month with the 11 preceding months (to obtain a 12 month rolling total). If no perc was purchased during a given month, then the owner/operator would enter zero gallons into the log.

b. **Dates when the components of the dry cleaning equipment are inspected** for perceptible leaks and vapor leaks and the location(s) of the components where perceptible leaks are detected.

c. **The dates of repair** and records of written or verbal orders for repair parts to demonstrate compliance.

d. For equipment with a refrigerated condenser**, record the date and temperature sensor monitoring results or high and low pressure readings weekly**.

e. For equipment with a carbon adsorber**, record weekly the date and colorimetric detector tube monitoring results**.

3. A copy of the design specifications and the operating manuals for the dry cleaning equipment and emission control devices must be retained at the facility for the life of the equipment.

Air Quality Permits for Large Area Sources

There are two types of NDEQ air quality permits a dry cleaning operation may need to apply for: construction and operating.

Construction Permits

Any facility constructing (installing new dry cleaning machines, or modifying or reconstruction existing dry cleaning machines) with a net increase in potential emissions exceeding the construction permit threshold will need a construction permit. The NDEQ Fact Sheet "Construction Permits" outlines the details of the construction permit program requirements. Potential emissions are based on operating the machines every day, 24 hours per day for a year at maximum capacity. The Construction Permit Fact Sheet explains provides a more detail and is found in Appendix B of this manual.

You may need to obtain a construction permit if your net change in potential solvent usage in a year due to construction meets the following:

- ✓ Transfer machine without controls with potential use of 396 gallons per year;
- ✓ Dry-to-dry machine without controls with potential use of 426 gallons per yea;
- ✓ Machine with primary controls with potential use of 477 gallons per year; or
- ✓ Machine with primary and secondary controls with potential use of 740 gallons per year.

If you think a construction project will cause your potential usage to exceed these thresholds, contact the NDEQ Construction Permit Hotline at (877) 834-0474. If a construction permit is needed, it must be obtained prior to installation of the dry cleaning machine. Construction permits generally take four months to process, but can take up to

nine months depending on the quality of the application, public interest, etc. Plan accordingly and contact NDEQ early in the planning process to discuss your project.

Operating Permits

Any facility that has actual emissions above the operating permit emission thresholds must obtain an operating permit.

The NDEQ Fact Sheet "Operating Permits" outlines the details of the operating permit program requirements. The Operating Permit Fact Sheet is found in Appendix B of this manual.

You may need to obtain an operating permit if your actual solvent usage in a year has ever exceeded the following:

- ✓ Transfer machine without controls with actual use of 792 gallons per year;
- ✓ Dry-to-dry machine without controls with actual use of 851 gallons per year;
- ✓ Machine with primary controls with actual use of 954 gallons per year; or
- ✓ Machine with primary and secondary controls with actual use of 1,480 gallons per year.

To determine if this applies to your operation, you should review your records for several years in the past, i.e., at least five years. If your solvent usage has ever exceeded the above levels and can reasonably be expected to exceed those levels again, then you should apply for an operating permit.

If an operating permit is needed, permit applications must be submitted within 12 months of initial startup of the emission unit. If you are not sure whether you need an air quality permit, contact the NDEQ Air Quality Division for assistance.

New And Existing Major Sources

- ✓ **Dry-to-dry machines** that purchase > **2,100 gallons** of perc per year
- ✓ **Dry-to-dry & transfer machines** that purchase > **1,800 gallons** of perc per year
- ✓ **Transfer machines** that purchase > **1,800 gallons** of perc per year

The type of dry cleaning equipment plays a critical role in complying with the NESHAP requirements. Emission control requirements for a dry cleaning facility depend upon the installation date of the equipment, the type of dry cleaning machine (dry-to-dry and/or transfer) and the amount of perc purchased per year.

Control Equipment Requirements for Major Sources

Dry-to-dry machines

- *Existing* major source equipment must have one of the following:
  - A refrigerated condenser. Refrigerated condenser must use a diverter valve to prevent air passing through the refrigerated condenser when the machine door opens.
  - A carbon adsorber if constructed before September 22, 1993. ***Note: Once the carbon adsorber can no longer work effectively, you must install a refrigerated condenser to be used as a perc control device.*

- *New* major source equipment must have:
  - A refrigerated condenser and a carbon adsorber. New equipment installed after December 21, 2005 must have a closed loop system and a carbon adsorber following the refrigerated condenser that operates immediately before the machine door is opened.

Monitoring requirements are presented in Table 3.

Transfer machines

- *Existing* major source equipment must have one of the following, as well as a room enclosure as indicated below:
  - A refrigerator condenser may be used if it is designed to prevent perc vapor from being released during operation and is equipped with a diverter valve to prevent air from passing through the refrigerator condenser when the door is open.
  - A carbon adsorber may be used if it was in place before September 22, 1993. ***Note: Once the carbon adsorber can no longer work effectively, you must install a refrigerated condenser to be used as a perc control device.*

- The existing transfer dry cleaning machine must be contained inside a room enclosure. The room enclosure must be:
  - Impermeable to perc;
  - Designed to maintain a negative pressure when the machine is operating so air inside the enclosure does not vent out any openings; and
  - Vented to a carbon adsorber to capture emissions from the enclosure.

- *New* major source equipment
  - The NESHAP rule prohibits the operation of new transfer machines if they were installed after September 22, 1993.

All transfer machines must be taken out of operation by July 28, 2008.

Monitoring requirements for the different control devices are summarized in Table 3.

Co-located Machines

A co-located dry cleaning machine is located in a building containing a residence. Residence means any dwelling or housing in which people reside excluding short-term housing that is occupied by the same person for a period of less than 180 days (such as a hotel room).

- As of **July 27, 2006,** dry cleaners using perc cannot be constructed or reconstructed in a building with a residence**.**
- All drycleaners must discontinue using perc in a building with a residence by **December 21, 2020.**
- *New* perc dry cleaning machines constructed or reconstructed between December 21, 2005 and July 12, 2006 and located in a building with a residence must discontinue the use of perc by **July 27, 2009.**
  - System must be operated inside a vapor barrier enclosure. Operate the exhaust system for the enclosure at all times the system is operating and during maintenance. Ensure the entry door to the enclosure is open only when a person is entering or exiting the enclosure.
  - Route the air-perc gas vapor stream through a refrigerated condenser and pass the air-perc gas vapor stream from inside the dry cleaning drum through a carbon adsorber immediately before the door of the dry cleaning machine is opened.
- All other monitoring, recordkeeping, and reporting requirements must be followed for the *new* source including: weekly vapor leak inspections.

The monitoring requirements presented in Table 3 apply.

Table 3

Monitoring Requirements for **major sources**:

Control Requirement	Weekly Monitoring Requirement
Refrigerated condenser	♦ Measure and record the high pressure and low pressure during the drying phase. The pressure should be within the range specified by the manufacturer. ♦ If the machine is not equipped with a pressure gauge, monitor and record temperature of the exhaust on the outlet side of the condenser. o Temperature sensors must be designed to measure a temperature of 45°F (7.2°C) to an accuracy of +/- 2°F (1.1°C). The temperature must be 45°F or less. o If the temperature is greater than 45°F, necessary repairs or adjustments must be made. Parts must be ordered within two working days of detection of non-compliance and installed within five working days after receipt. ♦ Measure inlet and outlet temperature of the condenser on the washer. Calculate the difference. It must be greater than 20°F (11.1°C). The temperature sensor should be designed to measure between 32°F (0°C) and 120°F (48.9 °C) to an accuracy of +/- 2°F (1.1°C).
Carbon Adsorber	♦ If the exhaust passes through the adsorber **immediately upon door opening**, measure and record the concentration of perc in the exhaust of the adsorber. o Use a colorimetric detector tube or perc gas analyzer. The analyzer must measure a concentration of 100 ppm of perc in air to an accuracy of ± 25 ppm. o The concentration of perc in the carbon adsorber exhaust must be 100 parts per million (ppm) or less. ♦ If the exhaust passes through the adsorber **before the machine door is opened**, measure the perc concentration of perc in the dry cleaning machine drum at the end of the dry cleaning cycle. o Use a colorimetric detector tube or perc gas analyzer. The analyzer must measure a concentration of 300 ppm of perc in air to an accuracy of ± 75 ppm. o Place the tube or analyzer into the open space at the rear end of the drum immediately after door opening. The concentration of perc in the carbon adsorber exhaust must be 300 parts per million (ppm) or less.

If the measured concentration does not meet the parameters in Table A-1, make the necessary repairs or adjustments. Parts must be ordered within two working days of detection of non-compliance and installed within five working days after receipt.

The sampling ports in which perc concentration measurements are drawn must be easily accessible; located at least eight times the diameter of the stack or duct downstream from any flow disturbance; not downstream from any other inlet; and two times the diameter of the stack or duct upstream from any flow disturbance.

Operating Procedure Requirements for Major Sources

1. Maintain, on site, a copy of the design specifications and operating manuals for each machine and control device at your facility. If this is not available, download a copy of a generic document that will meet this requirement from the Environmental Protection Agency's website at www.epa.gov/ttn/atw/dryperc/dryclpg.html, or contact the EPA's Region VII Air Program at (800) 223-0425.

2. Operate and maintain the equipment according to the manufacturer's specifications and recommendations or its equivalent.

3. Keep all material safety and data sheets (MSDS) for the perc solvent and all other chemicals used in the facility readily accessible. (Examples may include stain removers and facility cleaning products.)

4. Follow operating practices to eliminate emissions of perc. At a minimum to include:
   a. Store all new and waste perc solvent and perc containing wastes in containers that are leak-proof and tightly covered.
   b. Waste perc solvent and perc containing wastes should be labeled as "HAZARDOUS WASTE."
   c. Drain cartridge filters in their housings or other sealed container for 24 hours before removing from facility.
   d. Keep machine doors closed at all times, except when adding or removing clothing.

Reporting Requirements for Major Sources

All perc dry cleaners are required to submit an Initial Notification Report, Notification of Compliance Status, a Compliance Report for Pollution Prevention and a Compliance Report for Control Requirements.

- All perc dry cleaners need to send a Compliance Status Notification by July 28, 2008.
- All existing sources should have submitted an Initial Notification Report and Compliance Report for Pollution Prevention.
- New Sources are required to submit an Initial Notification Report upon startup. A Compliance Report for Pollution Prevention should be submitted

within 30 days after startup. The Compliance Report for Control Requirements must also be submitted within 30 days of startup.

The reports should be submitted to the NDEQ Air Quality Division at the address listed in the Contacts and Resources section of this document (Appendix A), unless the dry cleaner is located in Lancaster County or the city limits of Omaha. Then, they will need to submit the reports to their local air quality permitting agency. The Contacts and Resources section of this manual (Appendix A) lists the addresses for the Lancaster County Health Department and Omaha Air Quality Control Program. If a facility has not submitted these forms, it is encouraged to submit them as soon as possible.

The recommended forms for the Initial Notification, Compliance Status Notification, Compliance Report for Pollution Prevention, and Compliance Report for Control Requirements are included in Appendix C.

If the operating status (as listed below) for a facility changes, a Revised Compliance Report for Pollution Prevention and Revised Compliance Report for Control Requirements must be submitted within 180 days of the change. The changes that would require a facility to resubmit include:

1. An increase in annual perc purchases, indicating a change in source category. For example, if a facility is currently categorized as a small area source, but the amount of perc purchased exceeds 1,800 gallons per year. The increase in perc purchases changes the facility category to a major source, and a new Compliance Report must be submitted;
2. A change in control equipment;
3. A change in ownership or address of the facility; or
4. Purchase and installation of new equipment.

Inspection and Repair Requirements for Major Sources

1. Inspect all equipment **weekly** for leaks that are obvious from sight, smell or touch. An obvious leak is defined as any perc vapor or liquid leak that can be detected by perc odor, visual observation or felt when passing fingers over surface of equipment. Special detection equipment is not required, however, inspection must be done while the dry cleaning system is operating.

2. *New* major sources constructed or reconstructed before December 21, 2005 are required to complete **monthly** vapor leak detections on all equipment beginning July 28, 2008. *New* major sources constructed or reconstructed after December 21, 2005 are required to complete **monthly** vapor leak detections on all equipment beginning July 27, 2006 or upon startup.
    - Use a perc gas analyzer and operate it according to EPA Method 21. Method 21 requirements can be found on EPA's website at: http://www.epa.gov/ttn/emc/promgate/m-21.pdf.

3. *New* major sources **located in a building with a residence** and constructed or reconstructed before December 21, 2005 are required to complete **weekly** vapor leak detections on all equipment beginning July 28, 2008. *New* major sources **located in a building with a residence** and constructed or reconstructed after December 21, 2005 are required to complete **weekly** vapor leak detections on all equipment beginning July 27, 2006 or upon startup.
    - Use a halogenated hydrocarbon detector or a perc gas analyzer. Place the probe at the surface where leakage could occur and move it slowly along the surface.

The following components of perc containing equipment, as applicable, must be inspected:

- Hose and pipe connections, fittings, couplings and valves;
- Door gaskets and seatings;
- Filter gaskets and seatings;
- Pumps;
- Solvent tanks and containers;
- Water separators;
- Muck cookers;
- Stills;
- Exhaust dampers;
- Diverter valves; and
- Cartridge filter housings.

All detected leaks must be repaired within 24 hours. If parts are required, they must be ordered within two working days of detection and installed within five days of receipt.

Recordkeeping Practices for Major Sources

All major sources using perc must comply with the following recordkeeping practices. All recordkeeping must be kept in some sort of designated log and made available to the NDEQ upon request. The Dry Cleaner Compliance Calendar, or EPA recordkeeping forms provided in Appendix D are two methods that can be used as a recordkeeping log. In addition, the Compliance Calendar or record keeping forms can be accessed and downloaded at www.deq.state.ne.us.

1. Keep and maintain **receipts of perc purchases** on site for a period of five years.

2. Maintain a log of the following information on site for a period of five years:

    a. On the first day of every month, the operator should **record the amount of perc purchased** during the previous month. You will then need to add the new perc purchases from that month with the 11 preceding months (to obtain a 12 month rolling total). If no perc was purchased during a given month, then the owner/operator would enter zero gallons into the log.

b. **Dates when the components of the dry cleaning equipment are inspected** for perceptible leaks and the location of the components where perceptible leaks are detected.

c. **Dates when the components of the dry cleaning equipment are inspected** for perceptible leaks and vapor leaks and the location(s) of the components where perceptible leaks are detected.

d. For equipment with a refrigerated condenser**, record the date and temperature sensor monitoring results or high and low readings weekly**.

e. For equipment with a carbon adsorber**, record weekly the date and colorimetric detector tube monitoring results**.

3. A copy of the design specifications and the operating manuals for the dry cleaning equipment and emission control devices must be retained at the facility for the life of the equipment.

Air Quality Permits for Major Sources

There are two types of NDEQ air quality permits a major source must apply for: construction and operating.

Construction Permits

Any facility constructing or modifying an emission source with the net increase in their potential emissions exceeding the major source thresholds (potential emissions >10 tons of perc per year) will need a construction permit. The NDEQ Fact Sheet "Construction Permits" outlines the details of the construction permit program requirements. The Construction Permit Fact Sheet is found in Appendix B of this manual.

Construction permits must be obtained prior to installation of the emission source. Construction permits can take four to nine months to process. Plan accordingly and contact NDEQ early in the planning process to discuss your project. If you have questions, contact the NDEQ Air Quality Construction Permit Hotline at (877) 834-0474.

Operating Permits

Dry cleaners categorized as a major source are required to obtain a Title V Operating Permit.

The NDEQ Fact Sheet "Operating Permits" outlines the details of the operating permit program requirements. The Operating Permit Fact Sheet is found in Appendix B of this manual. If an operating permit is needed, permit applications must be submitted within 12 months of initial startup of the emission unit.

If you are not sure whether you need an air quality permit, contact the NDEQ Air Quality Division for assistance. Call the NDEQ for additional information and technical assistance for NESHAP and operating requirements.

HAZARDOUS WASTE REGULATIONS

The following chart lists the types of wastes usually generated from perc dry-to-dry machines.

Waste Type	Source
Perc still bottoms	Residual from the dry cleaning equipment distillation unit
Carbon filters	Adsorption filters to maintain the quality of perc circulated through the dry cleaning equipment
Lint	Fabric dust screened from garments during the dry cleaning wash and dry cycles

Applicable Regulations

Nebraska hazardous waste regulations are covered by Title 128 - Nebraska Hazardous Waste Regulations. Title 128 directly addresses perc wastes. In essence, waste perc, any waste contaminated with waste perc and still bottoms from recovery of waste perc are listed hazardous waste (F002) by definition in all instances.

Title 128 also established the following four characteristics by which a waste may be defined as hazardous:

- Ignitability

A waste exhibits the characteristic of ignitability if it is a liquid and has a flash point (determined by vendor information or laboratory analysis) less than 140°F.

- Corrosivity

A waste exhibits the characteristic of corrosivity if it is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5.

- Reactivity

A waste exhibits the characteristic of reactivity if it reacts violently or generates toxic vapors when mixed with water.

- Toxicity

A waste exhibits the characteristic of toxicity if it contains one or more of the contaminants listed in Title 128, Chapter 3, Table 3 at concentrations equal to or greater than their corresponding regulatory level as measured by laboratory analysis using the Toxicity Characteristic Leaching Procedure (TCLP) test.

On- and off-site management of hazardous waste is regulated under Title 128. The regulations require facilities to determine their monthly hazardous waste generation rate and the amount of hazardous waste accumulated at the facility. The NDEQ recommends that you document this information so you can substantiate your actual generator status

from month to month. The monthly hazardous waste generation rate of all hazardous waste – not just the perc wastes - and on-site storage quantity define which one of the three regulatory categories applies to the facility and the applicable set of hazardous waste regulations that must be met.

If a facility consistently generates less than 220 pounds of hazardous waste per calendar month and never accumulates more than 2,200 pounds of hazardous waste on site at any time, then the **Conditionally Exempt Small Quantity Generator (CESQG)** requirements apply to the facility. The CESQG regulations are the least stringent and require a facility to document its generation rate and storage quantities (to prove the CESQG category applies). CESQGs are allowed to dispose of their non-liquid hazardous wastes in municipal solid waste landfills. Note that individual landfills or local governments might be more restrictive so check first. For example, Lancaster County prohibits CESQG waste from their landfill. A summary of the CESQG regulations as well as recommended options for storage and disposal of hazardous waste are enclosed at Appendix E.

If the facility generates between 220 and 2,200 pounds of hazardous waste during any calendar month, or stores between 2,200 and 13,200 pounds of hazardous waste on site at any time, then the **Small Quantity Generator (SQG)** requirements apply. The SQG regulations are significantly more involved. SQGs must, among other things, obtain an EPA hazardous waste generator identification number from the NDEQ, perform weekly hazardous waste storage area inspections, label and date all hazardous waste storage containers and dispose of hazardous waste through an EPA-permitted hazardous waste management facility within 180 days of the date the waste was first added to the storage container. A detailed summary of SQG regulations is enclosed at Appendix F.

If the SQG limits are exceeded, the most stringent **Large Quantity Generator (LQG)** requirements apply. The LQG regulations include those established for SQGs plus a shorter on-site storage time allowance (90 days), biennial reporting to EPA and more stringent training and planning requirements. An LQG summary is not enclosed as part of this manual, as it will not likely apply to most dry cleaning facilities, but one can be found at the NDEQ web site using the Waste Management Fact Sheet, “Comparison of Hazardous Waste Generator Requirements.” The fact sheet can also be obtained by contacting the NDEQ at the address and telephone number listed in Appendix A.

Note that a hazardous waste generator must determine its status each calendar month. Each calendar month is different and the CESQG, SQG, or LQG hazardous waste regulations apply for the affected month. Fortunately, most dry cleaners generate fairly consistent amounts of hazardous waste from month to month. If you do change to a higher hazardous waste generator status, you must notify the NDEQ of your new status within 30 days. The notification form can be downloaded from the NDEQ website in the Waste Management Publications and Forms Section, or you can contact the NDEQ directly for a copy. Contact information is listed in Appendix A.

A hazardous waste manifest and land disposal restriction (LDR) form must accompany hazardous waste shipments from an SQG or an LQG. These documents track the waste as it is shipped from the point of generation to the final destination. While the hazardous waste management company will generally supply and prepare this paperwork, it is the generator's responsibility to assure it is correct and that it accompanies the shipment. Each party that handles the waste (the generator, hauler and disposal facility) must sign the document and keep a copy. When the waste reaches its final destination, the original copy of the manifest, which should be signed by all parties, must be returned to the generator within 60 days for an SQG or 45 days for an LQG. The generator must keep this paperwork on file for at least three years.

Compliance Recommendations

Perc still bottoms are F002 hazardous waste and must be managed accordingly. As well, waste carbon filters and lint are also hazardous waste due to the specific F002 listing and thus must be managed accordingly. Management of these wastes include accounting for the amount of still bottoms, filters, and lint generated in a facility hazardous waste inventory, storage in a closed and labeled container, on-site management in compliance with the applicable hazardous waste regulations (CESQG, SQG, or LQG) and proper disposal.

Dry cleaners also need to determine if any hazardous waste toxicity characteristic metals are present. These considerations apply no matter what type of solvent is used. Note: Dry cleaner wastes tend to be variable. Therefore, one-time sampling and testing will rarely be sufficient to accurately determine if your dry cleaning waste will always be nonhazardous. See the attached Guidance Document "Waste Determinations & Hazardous Waste Testing" at Appendix B.

WATER REGULATIONS

Excess and undesirable water (separator water) accumulates in the perc dry-to-dry machine waste solvent tank and requires periodic disposal.

Applicable Regulations

According to Title 128, commercial wastewater is not subject to hazardous waste regulations when it is mixed with domestic sewage and treated through a publicly owned wastewater treatment facility. This exemption does not, however, exclude wastewater "while it is being collected, accumulated or treated before discharge." This means that hazardous waste accumulated before disposal to a sanitary sewer serviced by a wastewater treatment facility must be counted as hazardous waste and managed accordingly.

Industrial users of municipal sewers are subject to regulations created as part of the Clean Water Act and contained in Title 119 Chapter 26 – Rules and Regulations Pertaining to the Issuance of NPDES Permits. The regulations prohibit introduction of wastewater pollutants that pass through the treatment system (enter a waterway) or interfere with the operation of the treatment system (concentrate in treatment sludge). Also prohibited are pollutants that create a fire or explosion hazard including, but not limited to, waste streams with a closed cup flash point of less than140°F, pollutants that cause corrosive structural damage and in no case waste streams with a pH lower than 5.0, solid or viscous pollutants that cause obstructions, petroleum products that cause interference or pass-through, wastewaters that contain heat in amounts that can inhibit biological activity, and those that result in the presence of toxic gases, vapors, or fumes within a treatment facility in a quantity that may cause acute worker health and safety problems.

In the case where wastewater streams exceed 25,000 gallons per day or contribute 5% or more of the average dry weather hydraulic or organic capacity of the municipal wastewater treatment facility, or have categorical pretreatment standards (Title 119 Chapter 27) a Nebraska Pretreatment Program (NPP) Permit, or have significant impact on the wastewater treatment facility or the quality of the wastewater treatment facility's effluent will be required as per NDEQ Title 119. If the wastewater loads are less than stated above, the municipal wastewater facility should be contacted and the wastewater discharge would fall under city ordinances.

Any direct discharge of wastewater to waters of the state (including both surface and ground waters) requires a site specific National Pollutant Discharge Elimination System (NPDES) permit. Applications are found at http://www.deq.state.ne.us under the Water Division link or by contacting NDEQ directly. Discharge of wastewater from the dry cleaning process to a septic system with a leach field is normally prohibited and plans to do so must be approved by the NDEQ.

Compliance Recommendations

Regulatory requirements regarding management of separator water prior to disposal depend on the manner in which it is disposed. If the separator water is plumbed directly from the dry cleaning equipment to a sanitary sewer serviced by a wastewater treatment facility, it need not be considered a hazardous waste. Instead it is considered a wastewater and, thus, subject to wastewater regulations. General wastewater regulations require notification of the wastewater treatment plant superintendent and/or city engineer of the types and quantities of wastewater discharged and approval (preferably in writing) prior to discharge. Documentation of this approval should be maintained on site to verify compliance.

As stated previously, the wastewater exemption does not apply to waste "while it is being collected, accumulated or treated." Furthermore, separator water that has been in contact and/or contaminated with waste perc must be considered hazardous waste the moment it is removed from the dry cleaning equipment and placed in a container. As with other hazardous waste, containerized separator water must be accounted for in the facility's hazardous waste inventory, accumulated in a closed and labeled container, managed on site in compliance with the applicable hazardous waste regulations (SQG or LQG) and disposed of. Acceptable disposal options include 1) disposal through a permitted hazardous waste treatment, storage, and disposal facility or 2) additional on-site treatment (phase separation, carbon absorption, or evaporation of the separator water in a tank in accordance with hazardous waste regulations) to recover any reusable perc or reduce the perc concentration in the separator water.

If additional on-site treatment is implemented, the water phase may be discharged directly to the sanitary sewer serviced by a POTW if prior approval (preferably written) is obtained from the city wastewater treatment plant superintendent or city engineer. The perc phase may be collected and returned to the dry cleaning equipment for reuse. If carbon filters or other disposable treatment devices are used, they should be managed as F002 listed hazardous waste (i.e., accumulated in closed and labeled containers, accounted for in the facility's hazardous waste inventory, managed on site in compliance with the applicable hazardous waste regulations (SQG or LQG) and properly disposed of.

REFRIGERATION SYSTEM REGULATIONS

Dry-to-dry perc dry cleaning machines utilize a refrigeration system for condensation and recovery of perc. Periodic servicing of the system is expected.

Applicable Regulations

Conventional hydrocarbon-based refrigerants are Class I or Class II substances and as such are strictly regulated under Clean Air Act regulations. To obtain a list of Class I and Class II substances, view EPA's website at http://www.epa.gov/ozone/ods.html. Among other requirements, release of refrigerant during service work is prohibited and technicians servicing refrigerant-containing systems must be certified and use EPA-approved recovery equipment.

Compliance Recommendations

Dry cleaning facilities should assure any refrigeration repair work is performed by technicians that maintain proper certification to perform such work and that EPA-approved refrigerant recovery equipment is used or is available for use during service work. Documentation of certification and proper equipment usage (statements on invoices or work orders) should be maintained to verify compliance. If maintenance is to be done in-house, the equipment and training certification would apply to the facility. Contact the NDEQ to review a summary of these requirements.

Lubricating oils collected from refrigeration systems are allowed to be managed as used oil. If managed as used oil, the material is exempted from hazardous waste regulations.

Appendix A
Resources

Contacts and Resources
Additional Internet Addresses

Contacts and Resources

Nebraska Department of Environmental Quality (NDEQ)
PO Box 98922
Lincoln, NE 68509-8922
Phone: (402) 471-2186
Toll Free: (877) 253-2603
E-Mail: moreinfo@ndeq.state.ne.us

NDEQ - Waste Management Compliance Assistance
Phone: (402) 471-8308

NDEQ – Air Quality Compliance Assistance
Phone: (402) 471-6624

NDEQ – Water Quality Compliance Assistance
Phone: (402) 471-4220

NDEQ – Small Business and Public Assistance Program
Phone: (402) 471-8697

Omaha Air Quality Control Program
5600 S. 10th St.
Omaha, NE 68107
Phone: (402) 444-6015
Website: co.douglas.ne.us/dept/publicworks/index.php

Lincoln-Lancaster County Health Department
Air Quality Program
3140 "N" St.
Lincoln, NE 68510
Phone: (402) 441-8000
Website: www.lincoln.ne.gov/city/health/environ/pollu/index.htm

Iowa Nebraska Drycleaners and Laundry Association
8345 University Blvd., Suite F-1
Des Moines, IA 50325
Phone: (515) 225-2323
E-Mail: indla@assoc-serv.com

Pollution Prevention Information Clearinghouse (PPIC)
U.S. EPA Pollution Prevention Clearinghouse (PPIC)
401 M Street S.W. (7409)
Washington, DC 50460
Phone: (202) 260-1023
E-Mail: ppic@epa.gov

US EPA Region VII
Air Program
901 N 5th St
Kansas City, KS 66101
Phone: (800) 223-0425
E-Mail: r7actionline@epa.gov

U.S. Department of Transportation
Hazardous Materials Information Center
Phone: (800) 467-4922
*Provides information about DOT's hazardous materials regulations

National Response Center (NRC)
Phone: (800) 424-8802
*In the event of a fire, explosion or other release of hazardous waste that has the potential to threaten human life outside the facility, call the NRC to report the emergency. The NRC will evaluate the situation and help you make appropriate emergency decisions.

Additional Internet Addresses

Nebraska Department of Environmental Quality
http://www.deq.state.ne.us

EPA Air Toxics
http://www.epa.gov/ttn/atw/dryperc/dryclpg.html

EPA Home Page
www.epa.gov

EPA RCRA Hazardous Waste Resources
www.epa.gov/osw/topics.htm

EPA SQG RCRA Guidance - Managing Your Hazardous Waste: A Guide for Small Businesses
http://www.epa.gov/epaoswer/hazwaste/sqg/sqghand.htm
(Note: Disregard the used oil guidance in this document, Nebraska has a different set of regulations.)

Code of Federal Regulations
www.epa.gov/docs/epacfr40/

EPA Publication#: EPA/310-R-95-001
Profile of the Dry Cleaning Industry
http://www.epa.gov/compliance/resources/publications/assistance/sectors/notebooks/dry.html

RCRA Online
www.epa.gov/rcraonline
*searchable database with interpretive memos and other information targeted to specific industry sectors

GreenEarth Cleaning
http://www.greenearthcleaning.com/

EPA Pollution Prevention Information Clearinghouse
http://www.epa.gov/opptintr/library/ppicindex.htm

Petroleum dry cleaners
http://www.epa.gov/opptintr/dfe/pubs/garment/frapc/petrfact.htm

EPA: Plain English Guide for Dry Cleaners: A Step By Step Approach to Understanding Federal Environmental Regulations
http://www.epa.gov/Compliance/resources/publications/assistance/sectors/dryclean.pdf

EPA: Plain English Guide for Perc Users
http://www.epa.gov/opptintr/dfe/pubs/garment/perc/index.htm

Training Curriculum for Alternative Clothes Cleaning
http://www.epa.gov/dfe/pubs/garment/tech_ rep/clothes.pdf

Appendix B
NDEQ Fact Sheets and Guidance Documents

Compliance Assistance Program
Air Quality Construction Permits
Air Quality Operating Permits
Waste Determinations & Hazardous Waste Testing

Nebraska Department of Environmental Quality

ENVIRONMENTAL FACT SHEET

06-193 February 2006

NDEQ Compliance Assistance Program

Introduction

The Nebraska Department of Environmental Quality (NDEQ) is required by statute and is committed to providing compliance assistance to the regulated community. Compliance assistance is preferable to enforcement in achieving regulatory compliance and as such the NDEQ emphasizes providing assistance as a primary course of action toward achieving compliance. By having staff members whose primary function is providing assistance and integrating the practices of compliance assistance into all NDEQ functions, effective assistance is available to Nebraska businesses that promote regulatory compliance and ultimately enhances Nebraska's environment.

What Assistance is Available?

As the state's lead environmental agency, the NDEQ has knowledge of and access to many of the resources and tools available to help you achieve and go beyond your environmental compliance obligations. Compliance assistance is available in many forms and on a variety of topics. Whether you have questions regarding hazardous waste, air quality, water quality, pollution prevention, energy conservation, or any other environmentally related issue, the NDEQ's assistance program is available to help you understand, comply with, and potentially surpass the environmental regulations. Some of the areas where the NDEQ can provide assistance are:

- Determining what permits you may need to apply for and who the NDEQ contact is for those permits;
- Providing technical assistance for completing permit applications, emission inventories, discharge monitoring reports and other required documents;
- Explaining regulations and their application to your situation;
- Listing contacts in other federal, state, or local agencies that you may need to contact for assistance;
- Providing informative Fact Sheets, Guidance Documents, pamphlets, websites and many other environmental resources; and
- Identifying energy conservation, waste reduction, and other pollution prevention measures you can take that may result in reducing your regulatory requirements.

How To Get Assistance

- **Website information:** The NDEQ's website, **www.deq.state.ne.us**, has numerous Fact Sheets and Guidance Documents designed to help businesses and the public understand Nebraska's environmental regulations. Additionally, NDEQ's regulations and many of the NDEQ's permit applications are posted on the website.
- **Workshops, seminars, and conferences:** The NDEQ hosts, participates in, and presents current regulatory information at these events. Dates of these events are posted on a Calendar of Events on the NDEQ website under the What's New About NDEQ section.
- **Phone:** Much of the assistance that the NDEQ provides is through phone calls and e-mails. If you know which program you need assistance with, use the phone numbers of assistance providers located in the following section of this document. Or you can call NDEQ's toll free number at **1-877-253-2603** or e-mail NDEQ at **moreinfo@ndeq.state.ne.us**.
- **Compliance assistance visits:** Upon your request, NDEQ compliance assistance staff will come to your facility and meet with you and others in your organization. During a compliance assistance visit, we can advise you of your regulatory obligations and inform you of possible options to achieve and maintain regulatory compliance and/or direct you to other experts.

Who Provides Assistance?

All NDEQ staff members have a role in providing assistance, but to better serve the regulated community and the public, the NDEQ has staff members whose primary role is to provide assistance. Please call any of the following programs for answers to your questions:

- **Small Business & Public Assistance (SBPA) Program Coordinator, (402) 471-8697**. The SBPA program provides air, waste, and water environmental assistance to the regulated community and the public. While the SBPA program does not issue permits, it does include a One-Stop Permitting program that is designed to help you evaluate what NDEQ permits you may need to apply for and the process you need to follow during the application process. The SBPA program is a general clearinghouse for information about and contacts for environmental programs administered by the NDEQ and other local, state or federal agencies and will help you get to the right people to answer your questions. The SBPA program also maintains a current list of consultants providing environmental services. The SBPA program also can provide on-site compliance assistance and information about non-regulatory programs such as Environmental Management Systems and Pollution Prevention. The SBPA program coordinator also serves as the NDEQ's Public Advocate and Small Business Ombudsman, and in this role can assist you if you have concerns or problems.
- **Air Quality Environmental Assistance Coordinator, (402) 471-6624.** The Air Quality Environmental Assistance program is dedicated to providing the public, industries, and government agencies assistance in understanding and complying with the air quality regulations. The assistance coordinator can help you interpret and understand the federal and state air quality regulations that may apply to you. If you have questions related to emission calculations, the air permitting process, or completing air permits applications, the assistance coordinator will be able to help you. This staff member will also perform on-site compliance assistance visits, when requested, to provide specific air quality information related to your business.
- **Air Quality Construction Permit Hotline (877) 834-0474.** The Air Quality Construction Permit Hotline was established to enhance customer service. The hotline is available to assist air quality construction permit applicants in completing new applications. The hotline staff will answer questions related to construction permit forms, fees, pre-application meetings, emission calculations, the permitting process, and the status of your construction permit application.
- **Waste Management Environmental Assistance Coordinator, (402) 471-8308.** The Waste Management Environmental Assistance program provides regulatory and waste minimization assistance to business, government, and individuals. The assistance coordinator can help solve your regulatory questions about hazardous waste and non-hazardous waste. This staff member can answer questions about how to do waste determinations, how the waste regulations apply to your situation, and finding appropriate disposal options. The program also offers on-site compliance assistance visits that are not inspections.
- **Water Quality Program Assistance, (402) 471-4220.** Due to the great variety of water quality related assistance available, you will be directed to the appropriate NDEQ water quality staff by calling this number. The NDEQ can provide water quality assistance or guidance for groundwater protection; septic system installation and maintenance; wastewater treatment system operators' training, system engineering and discharge requirements; livestock waste control requirements; storm water regulatory requirements; and surface water quality issues.
- **Nebraska Environmental Partnerships (NEP) Program Coordinator, (402) 471-3193**. The NEP program assists communities with obtaining grant and loan money for evaluating and constructing wastewater and drinking water systems. This assistance entails the NEP program coordinator working closely with communities to secure consulting engineer services, State Revolving Fund money, and access to appropriate NDEQ staff for information about regulatory issues.
- **NDEQ Regulatory Staff.** Much of the assistance the NDEQ provides is through the interaction of the regulated community with the NDEQ's inspection, engineering, and permitting staff members. Oftentimes during permit development or on-site inspections, environmental issues arise either within or outside of the individual NDEQ staff member's area of expertise. The NDEQ's regulatory staff will provide you with guidance for addressing these issues or refer you to the appropriate NDEQ staff.

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*Produced by: Nebraska Department of Environmental Quality, P.O. Box 98922, Lincoln, NE 68509-8922; phone (402) 471-2186. To view this Fact Sheet, and other information related to our agency; visit our web site at **www.deq.state.ne.us***

Nebraska Department of Environmental Quality

ENVIRONMENTAL FACT SHEET

05-165 March 2005

Construction Permits

Introduction

The NDEQ has had a construction permit program for air contaminant sources since 1972. The program was modified in the early 1990's to reflect changes brought about by the Clean Air Act Amendments of 1990. Facilities are required to obtain a construction permit **before they construct, reconstruct or modify** any air contaminant source or emission unit where there is a net increase in the potential to emit (PTE) pollutants above the following thresholds found in Title 129, Chapter 17:

15 tons per year (tpy) of PM_{10} (Particulate Matter 10 microns in diameter or smaller.),

40 tpy of SO_2 (Sulfur dioxide) or SO_3 (Sulfur trioxide) or any combination thereof,

40 tpy of oxides of nitrogen (calculated as NO_2),

40 tpy VOC (Volatile Organic Compounds),

50 tpy CO (Carbon Monoxide),

0.6 tpy Lead, or

2.5 tpy of any single HAP (Hazardous Air Pollutant) or 10 tpy of all HAPs combined.

In addition, all incinerators, regardless of emissions, must have a construction permit.

Beginning January 1, 2005, a permit application fee must accompany each construction permit application. The fee ranges from $250 to $3,000 depending on the potential emissions of the source (refer to Form 1.1 of the construction permit application and the "Construction Permit Fee" Fact Sheet found at **www.deq.state.ne.us** under Publications).

Purpose

A construction permit allows the facility to construct the emission unit(s) while protecting the ambient air quality. In addition to allowing construction, the permit will also establish operating, monitoring, and record keeping requirements. These requirements are necessary to assure the emission units are in compliance with the applicable regulations. The requirements are also necessary in the event the source isn't required to obtain an operating permit. A construction permit is issued for the life of the emission unit(s).

Frequently Asked Questions

The Air Quality Division receives many questions regarding construction permits for air contaminant sources. Many of these questions arise from the uncertainty about who exactly is required to obtain a permit. Some of the most frequently asked questions are listed below, along with answers to help you determine whether your source requires a construction permit and how to apply for one.

Q. What is the difference between an operating permit and a construction permit?

A. A construction permit must be obtained prior to constructing or modifying an air contaminant source and it does not expire. An operating permit must be applied for within 12 months after startup of an air contaminant source and is valid for up to 5 years. Operating permits contain all applicable requirements for all emission points at the source. This includes incorporating conditions from the construction permits issued to that source.

Q. How do I know if I need to obtain a construction permit?

A. Generally, a construction permit is required for the construction of any new emission unit or the modification of an existing unit at a source that produces a net increase in ***potential emissions*** (referred to as PTE) equal to or exceeding the levels noted above. A construction permit is also required for all incinerators, regardless of size. If you are not sure, you can apply for a permit or contact the Air Division's Construction Permit Hotline at (877) 834-0474 or the Environmental Assistance Division at (402) 471-6974 to discuss your project.

Q. How do I calculate my potential-to-emit (PTE)?

A. PTE is the basis for determining if you need a permit. It is the maximum quantity of air pollutant(s) an emission unit or source can emit in a year given its physical and operational design. PTE is calculated with the assumption that the source is operated continuously for one year (24 hours a day, 365 days a year, or 8,760 hours a year). The PTE must be calculated separately for each pollutant.

The PTE calculation also assumes the emission unit(s) is uncontrolled. However, the PTE can include reductions for control equipment or other process limitations if they are included in a federally enforceable permit. For instance, if a facility has an existing air quality construction permit that limits the amount of material you can process per hour, you can take that into consideration in your PTE calculation.

Additionally, you can take into consideration certain process limitations or bottlenecks when calculating your PTE. A bottleneck is an activity or process that restricts the capacity of another operation. For example, a grain elevator dryer has a capacity of 45,000 bushels per hour (bu/hr). The facility has one conveyor leg that feeds grain to the dryer. The leg has a capacity of 30,000 bu/hr. Since the leg physically limits the amount of grain that can be dried, it is a bottleneck and 30,000 bu/hr can be used to calculate the PTE for the dryer.

Potential-to-emit example:

The emission unit is a 50 million Btu/hour natural gas fired boiler. Following is the PTE calculation for nitrogen oxides (NOx).

Heating value of natural gas = 1,020 Btu/cubic foot

Annual operating hours = (365 days/year)(24 hours/day) = 8,760 hours/year

Hourly maximum fuel use = $\frac{50 \text{ Million Btu/hr}}{1{,}020 \text{ Btu/ft}^3}$ = 49,020 cubic feet/hour

NO_x emission factor from AP-42 = 100 pounds of NO_x emitted per million ft^3 of natural gas burned

8760 hr/yr X 49,020 ft^3 natural gas/hr = 429.41 million ft^3 natural gas/year

429.41 million ft^3 natural gas/yr X 100 pounds NO_x/yr = 42,941 pounds of NO_x per year

42,941 pounds/yr ÷ 2,000 pounds/ton = 21.47 tons/year

Q. What is the difference between potential emissions and actual emissions?

A. Generally, potential emissions are the maximum emissions that would result from operating the facility at full capacity 24 hours a day, seven days a week, 52 weeks a year taking into consideration federally enforceable requirements. Actual emissions are emissions produced by a facility, based on actual operating times and actual operating conditions.

Q. What is an "emission unit"?

A. An "emission unit" is any part or activity at a stationary source that emits or would have the potential to emit any regulated air pollutant. A source has one or more emission units.

Q. How do I determine if my emissions meet or exceed those requiring a construction permit?

A. Generally, an estimation of emissions using emission factors will have to be done. However, emissions data, from testing on a similar unit, *may* be acceptable. For estimations, the Department generally uses emission factors from the Compilation of Air Pollutants Emission Factors (AP-42) or from Factor Information Retrieval Data System (FIRE). These and other emission factor resources may be found on the internet at **www.epa.gov/ttn/chief**. Most emission factors are based on fuel usage, throughput or other quantifiable process information.

Q. How long before I intend to construct must I send in a construction permit application?

A. Depending on the quality of the application and our workload, a construction permit will take 4 – 12 months to process, so an application should be submitted to the Department as soon as possible. For more complicated sources and for Prevention of Significant Deterioration (PSD) sources, the permitting process may take longer. We strongly encourage facilities to meet with NDEQ Air Quality staff prior to submitting the construction permit application. A pre-application meeting will ensure the facility is aware of NDEQ's expectations and will likely result in the facility submitting a complete application. For more guidelines on submitting a complete construction permit application, see the "Construction Permit Application Tips" fact sheet on NDEQ's website at **www.deq.state.ne.us** under the Air Quality publications and forms.

Q. What if I determine I don't need a permit?

A. Many people believe they need confirmation (commonly referred to as a "No Permit Required Determination" or NPR) stating they do not need a permit. In fact, sources do not need a NPR determination from NDEQ if they are able to document and provide information to a NDEQ representative supporting their claim.

To demonstrate you don't need a permit, you should be able to provide the PTE calculation and any supporting documentation used in the calculation.

You must document what emission factors you used in your PTE calculation and the source of the emission factors. Emission factors may originate from continuous emissions monitor data, stack test data, material balance equations, industry/trade organizations, and Environmental Protection Agency (EPA) documents. You must use the emission factor that best represents your facility. For example, if you have stack-testing data for your emission unit, you would use that information to calculate your PTE because it is the most accurate information you have. If you don't have source specific information such as stack test or continuous emission monitor data, you can typically find emission factors for your process in EPA's "AP-42, Compilation of Air Pollutant Emission Factors." You can find this document, as well as other emission factor resources, on EPA's website at **www.epa.gov/ttn/chief/**.

You must also document the emission unit(s) design capacity. Manufacturer's data can be used when the nameplate capacity is used in the PTE calculation. You must also provide documentation if you utilized any bottlenecks, permit limitations, or control equipment in your calculation and be able to explain how and why those were used in the PTE calculation. For instance, if a permit limitation was used, have a copy of the permit available.

Be sure your calculation documentation includes the appropriate units (i.e. pounds/hour, Btu/hour, etc). It is also beneficial to provide the date that the PTE was calculated.

In addition to keeping this documentation on-site, we encourage you to submit a letter to the NDEQ Air Quality Division explaining your project and providing your emission calculations that support your determination. This will provide our staff with the most current information about your facility and remain as documentation in our filing system. Also, in the event that a routine inspection is conducted at your facility, this information will help our staff be better prepared prior to conducting the inspection, which will most likely result in a more expedited and efficient visit.

Q. How do I obtain a permit application?

A. To obtain a construction permit application, you may call or write the Air Quality Division of the Nebraska Department of Environmental Quality, P.O. Box 98922, Lincoln, NE 68509-8922, phone: (877) 834-0474. You may also send an e-mail to **MoreInfo@ndeq.state.ne.us**, or download a permit application from our website at **www.deq.state.ne.us** under the **Publications** section.

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Nebraska Department of Environmental Quality

ENVIRONMENTAL FACT SHEET

00-008 March 2001

Operating Permits

Introduction

The operating permit program is the result of the Federal Clean Air Act Amendments of 1990 and the passage of LB1257 (1992) by the Nebraska Legislature. The Department was required to establish and implement a comprehensive operating permit program for sources of certain air pollutants. The Federal operating permit program is referred to as the "Title V" operating permit program. The State of Nebraska's Title V operating permit program is referred to as the Class I operating permit program. While the Federal Title V program only regulates major sources of air pollution the Nebraska program also regulates minor, or Class II, sources.

Major vs. Minor

A source's Major/Minor status is determined by its emissions, with the larger emitting sources being considered Major and the smaller emitting sources being considered Minor. The following are explanations of these terms:

- Class I Source: A source that is required to obtain a Class I operating permit. The criteria is the same as that of a Major source;
- Class II Source: A source that is required to obtain a Class II operating permit. The criteria is the same as that of a Minor source;
- Major Source: Those sources that have the potential to emit any air pollutant in quantities greater than 100 tons per year. Lower thresholds exist for hazardous air pollutants--10 tpy of any one HAP or 25 tpy of a combination of HAPs; and 5 tpy of lead.
- Minor Source: Those sources with the potential to emit below the major source criteria, but have actual emissions more than 50 tpy of $PM_{10,}$ NO_x, SO_x, VOC or CO; 5 tpy of any one HAP or 12.5 tpy of a combination of HAPs; and 2.5 tpy of lead.

Types of Operating Permits

When it comes to operating permits, the Department has two options, it can issue a ***general*** permit or an ***individual*** permit. A general permit is one that is issued on a statewide basis that covers specific categories of sources (see examples in the next section). With general operating permits, one permit, with the same conditions, is issued covering all sources in that category (provided the source meets the applicability criteria for coverage). This process saves the Department permit development costs on an individual basis and the associated administrative costs. In addition, once a general permit is issued, a source can be covered without going through the individual public notice process, which speeds up the permitting process for the industry. Therefore, general permits offer a tremendous resource savings for the Department and offer a streamlined process for applicants.

In regard to individual permits, they are issued to a specific source at a specific location. These permits address the particular needs and issues at the source in question. Because they are "tailor made" for the source, they are much

more labor intensive which increases the development costs and the associated administrative costs. In addition, all individual permits must go through a 30-day public notice period, so the timeframe, from application to issuance, is much longer. Therefore, individual permits can be more expensive to develop and require a much longer timeframe to issue.

Why Not Issue Only General Permits?

You may be wondering why the Department doesn't issue general permits for all sources, since it has advantages for both the Department and sources. Just like humans, all sources are unique. Although a number of sources can be grouped together for permitting purposes, there are always certain sources that don't fit the mold. For these sources, the Department issues individual permits. In addition, there are sources that prefer to have an individual permit instead of a general permit. Because the Department establishes criteria for coverage under a general permit and the permit conditions are uniform, the source doesn't have very much flexibility in certain areas. If the source wishes to maintain flexibility, an individual permit may be their answer.

Because of the appeal of general permits, the Department has developed several of them in categories of sources that can be easily grouped. In Nebraska general operating permits are available for grain elevators, asphalt plants, alfalfa dehydrators, various surface coating (painting/volatile organic compound) operations, concrete plants, aggregate (limestone) operations, internal/external combustion engines, and incinerators. It is estimated that as many as 1000 sources will be covered by general permits.

Low Emitters

Revisions to the operating permit regulations in September 1997 relieved a considerable number of sources from the permit requirements. These revisions shifted the focus of the permit program from Potential-to-Emit to actual emissions and are known as the Low Emitter Rule. In general, if sources can demonstrate that their actual emissions are below levels established in the regulations, then they are not required to obtain an operating permit. The result has been a significant reduction in the number of permits that will need to be issued, with no subsequent degradation of our air quality. See the Fact Sheet titled "Nebraska's Low Emitter Rule," located on the NDEQ website at **www.deq.state.ne.us** under Publications/Forms.

Frequently Asked Questions

The Air Quality Division receives many questions regarding operating permits for air contaminant sources. Many of these questions arise from the uncertainty of who exactly is required to obtain one. Some of the most frequently asked questions are listed below, along with answers to help you determine if this applies to your source.

Q. What is the difference between an operating permit and a construction permit?

A. A construction permit must be obtained prior to constructing an air contaminant source and is valid for the life of the emission units. An operating permit must be applied for within 12 months of startup of an air contaminant source and is valid for up to 5 years. Operating permits contain all applicable requirements for all emission points at a facility. This includes incorporating conditions from the construction permits issued to that source.

Q. How do I know if I need an operating permit?

A. An operating permit is required for all sources that have **actual emissions** that are equal to or greater than the Class II thresholds in the 'Major vs. Minor' section of this Fact Sheet. Sources that have **actual emissions** at or above the Class I thresholds, as listed, are required to obtain a Class I Operating Permit. Those sources with **actual emissions** between the Class II and Class I thresholds are required to obtain a Class II Operating Permit. If your **actual emissions** are less than the Class II thresholds, but your **potential emissions** are greater than the Class I thresholds, you may apply to be a low emitter. If your **actual emissions** are less than

Class II thresholds and your **potential emissions** are less than Class I thresholds, your facility will fall not need a permit.

Q. What is an "emission unit"?

A. An "emission unit" is any part or activity of a stationary source that emits or would have the potential to emit any regulated air pollutant.

Q. What is the difference between potential emissions and actual emissions?

A. Generally, potential emissions are the maximum emissions that would result from operating the facility at full capacity 24 hours a day, seven days a week, 52 weeks a year taking into consideration Federally enforceable requirements. Actual emissions are emissions produced by a facility, based on actual operating times and actual operating conditions.

Q. How do I determine if my emissions meet or exceed those requiring an operating permit?

A. Generally, an estimation of emissions using emission factors will have to be done. However, emissions data, from testing on a similar unit, may be acceptable. For estimations, the Department generally uses emission factors from the Compilation of Air Pollutants Emission Factors (AP-42) or from Factor Information Retrieval Data System (FIRE). These and other emission factor sources may be found on the internet at **www.epa.gov/ttn/chief**. Most emission factors are based on fuel usage, throughput or other quantifiable process information.

Q. How do I obtain a permit application?

A. To obtain an operating permit application you may call or write the Air Quality Division of the Nebraska Department of Environmental Quality, P.O. Box 98922, Lincoln, NE 68509-8922 PH: (402) 471-2189. You may also send an e-mail to **MoreInfo@ndeq.state.ne.us**.

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Nebraska Department of Environmental Quality

ENVIRONMENTAL GUIDANCE DOCUMENT

00-066 August 18, 2000

Waste Determinations & Hazardous Waste Testing

This Environmental Guidance Document discusses the topic of hazardous waste determinations, who needs to do determinations, what a waste determination entails, and considerations concerning analytical testing. The department has found that this topic can be complex and involves decisions that are often technical in nature. References are to Title 128 – Rules and Regulations Governing Hazardous Waste Management in Nebraska.

1. Who must do hazardous waste determinations?

- Businesses, governments, schools, and organizations that generate solid waste (this includes liquids too) must determine if that waste is a hazardous waste (Title 128, Chapter 4, Section 002). Household waste is exempt from this requirement.

2. What does a hazardous waste determination entail?

- The waste generator should first determine if the waste is excluded from being a hazardous waste by regulation (Title 128, Chapter 2, Sections 008 through 013).
    - Some examples of excluded solid or hazardous wastes include household waste, punctured and hot drained oil filters, scrap metal that is recycled, certain ash wastes from the combustion of coal, cement kiln dust waste from kilns that don't burn hazardous waste, and domestic sewage and other wastes that pass through a sewer system to a publicly owned treatment works (municipal wastewater treatment plant).
- Next, determine if the waste is *listed* as a hazardous waste in Title 128, Chapter 3, Sections 013 through 016.
    - *Listed* wastes are wastes from certain nonspecific and specific defined sources. The actual lists for the F, K, P, and U listed wastes are found at Tables 4 through 7 of Title 128.
    - The P and U *listed* wastes are commercial chemical products. If the waste is a technical grade or off-specification product having *only* the generic name as listed then the waste is P or U *listed.* If the listed ingredient is the ***sole active ingredient*** in the disposed commercial chemical product, then the waste is a P or U *listed* waste.

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for the regulations found in Title 128 – Nebraska Hazardous Waste Regulations or other applicable Nebraska environmental regulations.

- Practically, this means that just because your waste has a chemical on the P or U list at Tables 6 or 7, does not necessarily mean the waste is a P or U *listed* waste.

- F *listed* wastes are much more common than P or U *listed* wastes. The first five (F001 through F005) are spent solvents and contain certain percentages of listed constituents before use. Always check Table 4 closely when dealing with spent solvents.

- Next, determine whether the waste is *characteristic* as identified in Title 128, Chapter 3, Sections 005 through 010. *Characteristic* wastes can be any combination of ignitable, corrosive, reactive, or toxic. You may identify the characteristics by doing either of the following as appropriate:

  - The generator may apply knowledge of the hazardous characteristic in light of the materials or processes used. Be able to back up your knowledge of the waste with some kind of documentation. If you can't do that then you need to do the following;

  - Test the waste using specified analytical methods.

- Last, *if* the waste is determined to be hazardous, refer to Title 128 chapters 2, 3, 7, 20 through 22, and 25 for possible exclusions or restrictions pertaining to management of the waste.

3. What's a good way to apply generator knowledge of the waste in light of the materials or processes used without having to test?

- A waste generator can use valid generator knowledge to perform waste determinations. Material Safety Data Sheets (MSDSs) can provide useful information and you must have them for Occupational, Safety, and Health Act (OSHA) purposes anyway. Be aware that MSDSs often do not list constituents below de minimus levels of 1%. This is important because a 100% solid product with constituent "X" present at 0.9% can still have constituent levels of "X" as high as 450 mg/L (ppm) in a TCLP test. A 100% liquid, using the same example, would have constituent "X" present at 9,000 mg/L!

4. What does analytical testing refer to?

- Analytical testing for hazardous waste refers to determining if any of the 40 toxicity characteristic (TC) constituents listed in Table 3 of Title 128, Chapter 3, Section 010 are present in a ***representative sample*** of your waste at or above the stated regulatory levels. These are leachable levels, not actual levels present, and are stated in milligrams per liter (mg/L). The analytical test for determining leaching levels is the *toxicity characteristic leaching procedure* (TCLP). This test simulates the conditions in a landfill and how those conditions will affect your waste over an extended time. It essentially determines how much, if any, of the TCs will leach from your waste and enter the environment.

- Analytical testing can also include testing for D001, ignitibility (finding the temperature a liquid will flash at); D002, corrosivity (finding the pH of an aqueous solution); and D003, reactivity for cyanides or sulfides that may generate toxic gases.

- Ensure the test method selected has a detection level at least as low as the TC regulatory level for the contaminant in question. A detection limit that only goes as low as 10 mg/L TCLP for arsenic will not tell you if the sample is a hazardous waste for arsenic when the TCLP regulatory level is 5.0 mg/L.

5. Do I have to use the "TCLP" test all the time? I've heard it can be expensive.

- The TCLP itself may be run for constituents of concern. By running the TCLP for constituents of concern you will get the actual TCLP results and, if the sampling was correctly performed, you will have unambiguous results. However, the TCLP is expensive and can take considerable time. There may be times when you can test using a less expensive alternative.

- A less expensive alternative to running the TCLP is to do a "totals" analysis on the waste stream for the constituents of concern. The totals analysis can be selected when there is a reasonable expectation that the waste stream will not contain the constituent of concern at or above Table 3 regulatory levels. Totals analysis can also be used if you believe the waste will "fail" for the constituents of concern and you are not concerned about managing the resulting hazardous waste. Do not use the totals analysis to test for hazardous waste if you are interested in positively excluding the possibility that the waste is hazardous and there is some reason to believe the results may be close.

    - Only single phase waste streams should be selected for a totals analysis. Single phase means either all solid or all liquid.

    - For liquids with less than 0.5% solid present the totals analysis is the actual TCLP result.

    - With **100% solid** samples, the totals result may be divided by 20 to determine if the waste sample may exhibit hazardous waste toxicity characteristics. For example, if a **100% solids** sample exhibits a 90 mg/kg (or ppm) level for **total** lead, you can state the sample is not a hazardous waste for lead. Divide 90 ppm by 20 and the result is 4.5 ppm. That is less than the 5.0 ppm (or mg/L) regulatory level for the TC of lead. The assumption is that 20 is the dilution factor for the TCLP extraction and if the sample were *fully* leachable in the extraction, it could not attain the TC level.

$$\frac{\text{90 mg/kg total lead result}}{\text{20 (TCLP dilution factor)}} = 4.5 \text{ mg/kg} \quad (< 5.0 \text{ mg/L lead TCLP limit})$$

Note that for this purpose mg/L and mg/kg are both parts per million.

6. Do I have to test for all the chemicals that are on Table 3?

- Testing for waste streams should only be done for those constituents that may reasonably be expected to be present. For example, if a facility had a parts washer, the parts washer may reasonably be expected to contain leachable metals. (Chromium or cadmium is often a coating or constituent from bearings, pistons, or other metal products.) Since pesticides would not reasonably be expected to be present in normal parts washer operations, do not test for any of the pesticides that are in Table 3.

- If you are unfortunate enough to have a waste that is absolutely unknown, you will probably need to test for all the TC constituents on Table 3 of Title 128. This situation could occur, for example, if a 55 gallon drum of unknown liquid was abandoned on your property and you could not find the original owner. This waste would need a full determination for the TC constituents and other characteristics.

7. Do I have to do analytical testing for F, K, P, or U listed wastes?

- Analytical testing for hazardous waste identification is generally only useful for characteristic and TC hazardous waste. It is usually unnecessary to test for *listed* hazardous waste. *Listed* wastes refer to the F, K, P, or U wastes listed in Title 128, Chapter 3, Tables 4, 5, 6, or 7. For example, if you did an extensive analysis that showed acetone was present in a waste stream that would not automatically mean the waste is

a F003 or U002 waste. *Listed* wastes do not have a corresponding concentration level that makes the waste hazardous. In this case, the waste **might** be F003, but only if the waste was a spent solvent meeting the F003 definition, mixed with a spent F003 solvent, derived from a F003 solvent, or mixed with discarded, unused commercial chemical product acetone (U002). It is the actual source or activity that makes a solid waste a *listed* waste.

8. What do I need to know about analytical laboratories?

- Be sure the analytical laboratory you contract to perform the waste analyses is able to do the test desired. Even if the laboratory you select is not in your area, most labs will provide you instructions on how to take the sample. In addition, they should send you the appropriate sample collection containers, shipping container, shipping instructions, and a "chain of custody" document that should be properly completed.

- Depending where you are in the state, you can find information on analytical labs in your local phone book. Additionally, the NDEQ publishes the Directory of Hazardous Waste Management Facilities. The directory has a section listing analytical laboratories that are in Nebraska and surrounding states. You can obtain a current copy from the department. This document can also be found on the NDEQ web page.

9. Contact the NDEQ Hazardous Waste Compliance Assistance Specialist at (402) 471-8308 for assistance.

HELPFUL WEB SITES:

- Title 128 – Nebraska Hazardous Waste Regulations: ***http://www.deq.state.ne.us/*** and click on "Rules and Regulations"

- MSDS information: ***http://www.msdssearch.com/***

4. **CONTACTS:**

• NDEQ Hazardous Waste Compliance Assistance	(402) 471-8308
• NDEQ Waste Management Section	(402) 471-4210

Appendix C
Reports

Initial Notification Report
Compliance Status Notification
Compliance Report for Pollution Prevention
Compliance Report for Control Requirements

Nebraska perchloroethylene dry cleaning facilities are required to complete and submit an Initial Notification Report and Compliance Report of Pollution Prevention to the address listed below. Copies of both forms are attached. Facilities within the city limits of Omaha or in Lancaster County should submit these forms to their respective county agencies at the addresses listed below.

NDEQ Air Quality Division
PO Box 98922
Lincoln, NE 68509-8922
Phone: (402) 471-2186
http://www.deq.state.ne.us

Omaha Air Quality Control Program
5600 S. 10th St.
Omaha, NE 68107
Phone: (402) 444-6015

Lincoln-Lancaster County Health Dept
Air Quality Program
3140 "N" St.
Lincoln, NE 68510
Phone: (402) 441-8000

All facilities with new machines (installed on or after December 9, 1991) must also submit a Compliance Report for Control Requirements to the NDEQ or Omaha or Lancaster County agencies within 30 days of startup. This one time report need only be resubmitted if a change affecting compliance with the NESHAP occurs.

1. Print or type the following for each separately located dry cleaning plant (facility). The owner of more than one plant must fill out a separate form for each plant.

Owner/Operator _____

Company Name _____

Mailing Address _____

City _____

Plant Address (if different than mailing address):

Street Address _____

City _____ State _____ Zip _____

Phone Number _____

---

2. Check below if:

_____ your dry cleaner is a pick-up store

_____ your dry cleaning plant has only coin-operated dry cleaning machines that are operated by the customers

_____ your dry cleaning plant has only petroleum dry cleaning machines

*If you checked any box above, you can **STOP HERE** you do not need to submit.*

---

3. Write in the total volume of perchloroethylene (perc) purchased for ALL of the machines at the dry cleaning plant over the past 12 months:

_____ gallons

NOTE: If perchloroethylene purchase records have not been kept at the plant, the volume may be estimated for this initial report.

Method of determining gallons (circle one):

actual estimated

---

4. Next to each machine type listed below, write the number of machines of that type located at your plant:

_____ Dry-to-Dry _____ Transfer

5. Provide the following information for EACH MACHINE at your plant. If you have more than four machines at your plant, make additional copies of this page.

	MACHINE 1	MACHINE 2	MACHINE 3	MACHINE 4
MACHINE TYPE (Circle One)	Dry-to-Dry or Transfer	Dry-to- Dry or Transfer	Dry-to-Dry or Transfer	Dry-to-Dry or Transfer
Date Machine Was Installed				
Control Device (Use WORKSHEET) on Pages 4 & 5 to Determine Required Control)				
Date Control Device Was Installed or Is Planned to Be Installed				

6. The following pollution prevention practices must be performed at your plant. These practices are listed on an attached sheet that can be posted next to your machine:

- Conduct a weekly leak detection and repair program to inspect all dry cleaning equipment for leaks that are obvious from sight, smell or touch. NOTE: This program is required every other week if you wrote NO CONTROL REQUIRED in the box in Question 5.
- Repair leaks within 24 hours after they are found or order repair parts within two working days after detecting a leak that needs repair parts. Install the repair parts by five working days after they are received.
- Keep a log of the weekly (or biweekly) results of the leak detection and repair program.
- Follow good housekeeping practices which include keeping all perc and wastes containing perc in covered containers with no leaks, draining cartridge filters in closed containers and keeping machine doors shut when clothing is not being transferred.
- Operate and maintain all dry cleaning equipment according to manufacturers' instructions.

7. The following records must be kept at your plant:

- A log of the results of the leak detection and repair program.
- A log of the amount of perc purchased for the past 12 months, calculated each month.
- The operation and maintenance manuals for all dry cleaning equipment at the plant.

8. If a room enclosure is installed on a transfer machine as stated in Question 4, the following information about the room enclosure must be attached to this report.

- Description of the materials that the room enclosure is constructed of to show that it is impermeable to perchloroethylene;
- Explanation of how the room enclosure is operated to maintain negative pressure at all times while the transfer machine is operating; and
- Explanation of how the room enclosure exhausts into a carbon adsorber.

9. Print or type the name and title of the Responsible Official for the dry cleaning plant:

Name _____ Title _____ Date _____

A Responsible Official can be:

- The president, vice president, secretary or treasurer of the company that owns the dry cleaning plant;
- An owner of the dry cleaning plant;
- The manager of the dry cleaning plant;
- A government official if the dry cleaning plant is owned by the Federal, State, City or County government; or
- A ranking military officer if the dry cleaning plant is located at a military base.

The Responsible Official must certify below that all of the information presented in this initial report is accurate and true.

I CERTIFY THE INFORMATION CONTAINED IN THIS REPORT TO BE ACCURATE AND TRUE TO THE BEST OF MY KNOWLEDGE.

_____

(Signature of Responsible Official)

WORKSHEET

A. To find out if control is required:
Check all boxes that apply:

- ❑ I reported less than 140 gallons in Question 3 (page 1).

- ❑ I reported less than 200 gallons in Question 3 (page 1) AND reported only transfer machines in Question 4 (page 1).

If you checked either box above and all your machines were installed before **12/9/91**, you can STOP HERE. Write NO CONTROL REQUIRED in the box on page 2 for each machine at your plant that was installed before **12/9/91**. You are finished with the worksheet. GO TO QUESTION 6 (page 2).

For those machines installed on or after **12/9/91**, continue with the rest of the worksheet.

If you did not check a box above, go to Part B below.

B. Control is required. Fill out Part B for EACH MACHINE at your plant
Check the appropriate box:

- ❑ Machine was installed BEFORE 12/9/91

If you checked this box, your required control is a refrigerated condenser or a carbon adsorber that was installed before 9/22/93. Write REFRIGERATED CONDENSER or CARBON ADSORBER in the box below the machine on page 2. Control must be installed by 9/22/96.

- ❑ Machine was installed ON OR AFTER 9/22/93.

If you checked this box, your required control is a dry-to-dry machine with refrigerated condenser. Write DRY-TO-DRY MACHINE WITH REFRIGERATED CONDENSER in the shaded box below the machine on page 2. NOTE: NO NEW OR USED TRANSFER MACHINES CAN BE INSTALLED AFTER 9/22/93. Control must be installed when machine is installed.

- ❑ Machine was installed ON OR AFTER 12/9/91 AND BEFORE 9/22/93.

If you checked this box, your required control is a dry-to-dry machine with refrigerated condenser. Write DRY-TO-DRY MACHINE WITH REFRIGERATED CONDENSER in the shaded box below the machine on page 2.

WORKSHEET (continued)

C. To find out if additional control is required:
Check all boxes that apply:

- ❑ I reported 1,800 gallons or less in Question 3 (page 1)

- ❑ I reported 2,100 gallons or less in Question 3 (page 1) AND I reported only dry-to-dry machines in Question 4 (page 1).

If you checked either box above, you can STOP HERE. No additional controls are required.

YOU ARE FINISHED WITH THE WORKSHEET. RETURN TO QUESTION 5 (page 2) and write in the dates the controls were or will be installed. If you did not check a box above, go to Part D below.

D. If additional control is required, fill out Part D for EACH machine at your plant:
Check a box below, if it applies:

- ❑ Machine is a dry-to-dry machine that was installed ON or AFTER 12/9/91.

If you checked this box, you are also required to install a supplemental carbon adsorber.

Write SUPPLEMENTAL CARBON ADSORBER in the shaded box below the machine on page 2.

- ❑ Machine is a transfer machine.

If you checked this box, you are also required to install a room enclosure. Write ROOM ENCLOSURE in the shaded box below the machine on page 2.

YOU ARE FINISHED WITH THE WORKSHEET. RETURN TO QUESTION 5 and write in the dates all controls were and will be installed (page 2).

NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY
Air Quality Division

COMPLIANCE STATUS NOTIFICATION

Applicable Rule: *40 CFR Part 63, Subpart M-* National Emission Standards for Hazardous Air Pollutants (NESHAP) for Dry Cleaners

Company Name_____ Facility ID#_____

Owner/Operator/Title _____

Mailing Address _____

City _____ Zip _____

Plant Address (if different than owner/operator's mailing address):

Street _____

City _____ Zip _____

Plant Phone Number _____

Plant Contact/Title _____

This form must be completed, signed and submitted to the following agencies by July 28, 2008.

NDEQ Air Quality Division	and	**Region VII EPA**
1200 'N' St. Atrium, Suite 400		**901 5th Street**
Lincoln, NE 68509-8922		**Kansas City, KS 66101-2907**

If you facility is located in Omaha or Lancaster County, you must submit a notification to the appropriate air pollution control agency in that area and Region VII EPA.

1. What is the total volume of perchloroethylene (perc) purchased for ALL of the machines at the dry cleaning plant over the past 12 months:

   _____ gallons

2. Check the box that applies:

   ☐ Facility is a major source of hazardous air pollutants (HAPs).
   - *Operate dry-to-dry machines and consume more than 2,100 gallons of perc per year.*
   - *Operate transfer machines or a combination of dry-to dry and transfer machines and consume more than 1,800 gallons of perc per year.*

   ☐ Facility is an area source of HAPs.

   ☐ Source classification is unknown.

***NOTE:** A major source is a facility that has a potential to emit greater than 10 tons per year of any single HAP or 25 tons per year of multiple HAPs. All other sources are area sources.*

3. Is the dry cleaning operation located in a residential building? ☐ YES ☐ NO

   Residence means any dwelling or housing in which people reside excluding short-term housing that is occupied by the same person for a period of less than 180 days (such as a hotel room).

4. Is the dry cleaning operation located in a building with other tenants? ☐ YES ☐ NO

5. List the number of each type of dry cleaning machine located at your facility:

   _____ Dry-to-dry machine(s)

   _____ Transfer machine(s)

6. Are you in compliance with the National Emission Standard for Hazardous Air Pollutant requirements promulgated for perc dry cleaners on September 22, 1993 and July 27, 2006? ☐ YES ☐ NO

For more information related to the air regulations for perc dry cleaners visit EPA's website at: http://www.epa.gov/ttn/atw/dryperc/dryclpg.html.

Print or type the name and title of the Responsible Official for the facility:

Name: _____ Title: _____

A Responsible Official can be:

- The president, vice president, secretary, or treasurer of the company that owns the plant;
- An owner of the plant;
- The plant engineer or supervisor of the plant;
- A government official, if the plant is owned by the Federal, State, City, or County government; or
- A ranking military officer, if the plant is located at a military base.

I CERTIFY THAT INFORMATION CONTAINED IN THIS REPORT TO BE ACCURATE AND TRUE TO THE BEST OF MY KNOWLEDGE.

_____ _____

(Signature of Responsible Official) *(Date)*

COMPLIANCE REPORT FOR POLLUTION PREVENTION

1. Print or type the following for each separately located dry cleaning plant (facility). The owner of more than one plant must fill out a separate form for each plant.

Owner/Operator _____

Company Name _____

Mailing Address _____

City _____ State _____ Zip _____

Plant Address (if different than mailing address):

Street Address _____

City _____ County _____ State _____ Zip _____

Phone Number _____

---

2. Write in the total volume of perchloroethylene (perc) purchased for ALL of the machines at the dry cleaning plant over the past 12 months (based on actual purchase receipts):

_____ gallons

---

3. The following pollution prevention practices must be performed at your plant as of 12/20/93.

- Conduct a weekly leak detection and repair program to inspect all dry cleaning equipment for leaks that are obvious from sight, smell, or touch. NOTE: This program is required only every other week (biweekly) if you reported NO CONTROLS REQUIRED in the INITIAL NOTIFICATION REPORT (existing small area sources.)
- Repair leaks within 24 hours after they are found or order repair parts within two working days after detecting a leak that needs repair parts. Install the repair parts by five working days after they are received.
- Keep a log of the weekly (or biweekly) results of the leak detection and repair program.
- Follow good housekeeping practices, which include keeping all perc and wastes containing perc in covered containers with not leaks, draining cartridge filters in closed containers, and keeping machine doors shut when clothing is not being transferred.
- Operate and maintain all dry cleaning equipment according to manufacturers' instructions.

4. The following records must be kept at your plant:

- A log of the results of the leak detection and repair program.
- A log of the amount of perc purchased for the past 12 months, calculated each month; and
- The operation and maintenance manuals for all dry cleaning equipment at the plant.

5. Print or type the name and title of the Responsible Official for the dry cleaning plant:

Name _____ Title _____ Date _____

A Responsible Official can be:

- The president, vice president, secretary or treasurer of the company that owns the dry cleaning plant;
- An owner of the dry cleaning plant;
- The manager of the dry cleaning plant;
- A government official if the dry cleaning plant is owned by the Federal, State, City or County government; or
- A ranking military officer if the dry cleaning plant is located at a military base.

The Responsible Official must certify below that all of the information presented in this initial report is accurate and true.

I CERTIFY THE INFORMATION CONTAINED IN THIS REPORT TO BE ACCURATE AND TRUE TO THE BEST OF MY KNOWLEDGE.

_____

(Signature of Responsible Official)

COMPLIANCE REPORT FOR CONTROL REQUIREMENTS

1. Print or type the following for each separately located dry cleaning plant (facility). The owner of more than one plant must fill out a separate form for each plant.

Owner/Operator _____

Company Name _____

Mailing Address _____

City _____ State _____ Zip _____

Plant Address (if different than mailing address):

Street Address _____

City _____ State _____ Zip _____

Phone Number _____

---

2. Write in the total volume of perchloroethylene (perc) purchased for the dry cleaning plant over the last 12 months (based on actual purchase receipts):

_____ gallons

---

3. Fill out the table below for each machine at your plant. Use the WORKSHEET on pages 4 and 5 of the INITIAL NOTIFICATION REPORT to determine required controls.

	MACHINE TYPE (DRY-TO-DRY OR TRANSFER)	DATE MACHINE PURCHASED	REQUIRED CONTROL	DATE CONTROL INSTALLED
1				
2				
3				
4				
5				
6				
7				

4. If you listed a required control in question 3 (page 1) for any machine at your plant, you must monitor your control.

To find out what type of monitoring is required, check all boxes that apply:

- ❑ I use a refrigerated condenser on a dry-to-dry machine to meet the required control

  If you checked this box, you are required to perform a weekly monitoring test to show that the temperature on the outlet side of the refrigerated condenser is less than or equal to 45 degrees Fahrenheit.
- ❑ I use a refrigerated condenser on a transfer machine to meet the required control.

  If you checked this box, you are required to perform a weekly monitoring test to show that the temperature on the outlet side of the refrigerated condenser on the transfer dryer is less than or equal to 45 degrees Fahrenheit AND that the difference between the inlet and the outlet temperatures of the refrigerated condenser on the transfer washer is greater than or equal to 20 degrees Fahrenheit.
- ❑ I use a carbon adsorber on a dry-to-dry or a transfer machine to meet the required control. OR
- ❑ I use a supplemental carbon adsorber on a dry-to-dry machine and the exhaust passes through the carbon adsorber IMMEDIATELY UPON door opening.

  If you checked either of the two boxes above, you are required to perform a weekly monitoring test with a colorimetric detector tube to show that the concentration of perc in the exhaust from the carbon adsorber is not over 100 parts per million.
- ❑ I use a supplemental carbon adsorber on a dry-to-dry machine and the exhaust passes through the carbon adsorber BEFORE the machine door is opened.

  If you checked this box, you are required to perform a weekly monitoring test with a colorimetric detector tube to show that the concentration of perc inside the dry cleaning machine drum at the end of the drying cycle is not over 300 parts per million.
- ❑ I use a room enclosure on a transfer machine.

  If you checked this box, you are required to vent all air from inside the room enclosure through a carbon adsorber. The room enclosure must be constructed of materials impermeable to perc, must be designed and operated to maintain a negative pressure at all time while the transfer machine is operating, and must exhaust to a carbon adsorber.

COMPLIANCE REPORT FOR CONTROL REQUIREMENTS *page 3 of 3*

5. Print or type the name and title of the Responsible Official for the dry cleaning facility:

Name _____ Title _____

A Responsible Official can be:

- The president, vice president, secretary or treasurer of the company that owns the dry cleaning plant;
- An owner of the dry cleaning plant;
- The manager of the dry cleaning plant;
- A government official if the dry cleaning plant is owned by the Federal, State, City or County government; or
- A ranking military officer if the dry cleaning plant is located at a military base.

The Responsible Official must certify below that all of the information presented in this initial report is accurate and true.
I CERTIFY THE INFORMATION CONTAINED IN THIS REPORT TO BE ACCURATE AND TRUE TO THE BEST OF MY KNOWLEDGE.
(Signature of Responsible Official)

Appendix D
Record-Keeping Logs

Perchloroethylene Purchase Log
Monthly Machine Maintenance Log

PERCHLOROETHYLENE PURCHASE LOG page _____

Starting amount: _____
(amount of perc purchases reported in INITIAL NOTIFICATION)

MONTH/DAY/YEAR	AMOUNT OF PERC PURCHASED	12-MONTH TOTAL

Staple or keep all perc purchase receipts with this form.

MONTHLY MACHINE MAINTENANCE LOG

CHECK EVERY 7 DAYS Put "N" – for No Leak Put "Y" – for Perceptible Leak	Week __ Date	Week __ Date	Week __ Date	Week __ Date	Week __ Date
1. Hoses, pipe connections, fittings, couplings, and valves					
2. Door gaskets and seatings					
3. Filter gaskets and seatings					
4. Pumps					
5. Solvent tanks and containers					
6. Water separators					
7. Muck cookers					
8. Stills					
9. Exhaust dampers					
10. Diverter Valves					
11. Cartridge filter housings					

CHECK EVERY 7 DAYS (applicable sections only) Monitoring not required for existing plants until September 22, 1996.					
Transfer system (washer) temperature difference (Measure difference between inlet and outlet temperatures of refrigerated condenser) Write °C or °F					
Dry-to-dry machines, dryers, and reclaimers Condenser temperature (outlet) Write °C or °F					
Carbon adsorber concentration (ppm)					

• Perchloroethylene purchased: _____ gallons (calculate on first of every month).
• Running 12 month total _____ gallons per year.
• Date and description of repairs or adjustments _____
_____
_____
• Were parts ordered? _____ If yes, when and what parts were ordered? _____
• Staple or keep all solvent purchase receipts which also show perc volume, parts/repair invoices, and repair orders (if written) with this sheet and save for at least five years.

Appendix E

Conditionally Exempt Small Quantity Generator (CESQG) RCRA Summary

Do these regulations apply to my operation?

These regulations apply if your facility generates hazardous waste at a rate at or less than 220 pounds per month and never stores more than 2,200 pounds of hazardous waste on-site at any time. Facilities generating or storing hazardous waste in quantities greater than the above limits are subject to more stringent Small Quantity Generator (SQG) or Large Quantity Generator (LQG) regulations.

General Requirements

All waste generators must, at a minimum:

- Accurately characterize each facility waste as hazardous or non-hazardous;
- Know the facility's monthly hazardous waste generation rate and the amount of hazardous waste accumulated on site; and
- Manage hazardous wastes in compliance with applicable on- and off-site federal regulations.

What are the benefits of proper management of hazardous waste?

Hazardous waste regulations (the Resources Conservation and Recovery Act, or RCRA) were established to minimize human and environmental exposure to hazardous chemicals. The Environmental Protection Agency (EPA) has written a comprehensive set of regulations that govern the management of hazardous waste from the point of generation to disposal. They also incorporate a record keeping/reporting/tracking system to verify and document that the waste is, in fact, managed appropriately. Finally, compliance with hazardous waste regulations is an enforceable law. Non-compliance can result in fines.

CESQG Regulatory Requirements

CESQG regulations are relatively lenient compared to the other hazardous waste generator requirements and only stipulate the following:

- Waste must be appropriately categorized as hazardous or non-hazardous. Copies of laboratory data documenting the hazardous/non-hazardous status of waste should also be available for review;
- CESQGs may not generate more than 220 pounds of hazardous waste per calendar month. This is based on actual waste generation in a calendar month, not an average over several months;

- CESQG hazardous waste must be treated or disposed of (as discussed below) before the on-site storage amount reaches 2,200 pounds;
- If the facility's hazardous waste generation rate exceeds 220 pounds per month or more than 2,200 pounds of hazardous waste is allowed to accumulate on site, then the facility is no longer a CESQG and must comply with the more stringent set of regulations established for Small Quantity Generators (SQGs) or Large Quantity Generators (LQGs); and
- CESQG hazardous waste must be treated or disposed of:

  - By a RCRA permitted treatment, storage or disposal facility;
  - At a municipal solid waste landfill. Individual counties or landfills might restrict CESQG waste, so call first. Also, Nebraska landfills are not allowed to accept any free liquids. Waste must be able to pass the "paint filter test" in order to be able to be disposed to a solid waste landfill; or
  - At a facility which beneficially uses or legitimately recycles hazardous waste.

CESQGs are not required to obtain an EPA Hazardous Waste Generator Identification Number according to Title 128, but may be asked to have an ID number as a matter of policy imposed by a hazardous waste transportation/disposal company providing service. Application for an ID number is accomplished by completing EPA Form 8700-12 that can be printed from the NDEQ website. Go to Publications, click on "Waste Management" and the form is in the "Application and Forms" section.

CESQG Hazardous Waste Management Recommendations

While not required by law, the following hazardous waste management recommendations should be considered for implementation to reduce the likelihood of spills, mismanagement, adverse human and environmental effects and resulting liabilities.

- Hazardous waste should be accumulated in closed containers that are clearly labeled "Hazardous Waste" or with words describing the waste such as "Waste Solvent."
- Hazardous waste storage containers should be packaged, labeled and marked according to the Department of Transportation's (DOT) hazardous materials transport regulations.
- All shipments of hazardous waste should be accompanied by a Uniform Hazardous Waste Manifest and a Land Disposal Restriction Notification form (if applicable).
- Hazardous waste should be disposed to a permitted RCRA hazardous waste treatment, storage and disposal facility.
- Hazardous waste storage areas should be maintained and operated to minimize the possibility of fire, explosion or release of hazardous waste.
- Personnel handling hazardous waste should receive adequate training to assure they are competent to perform this activity and should have immediate access to a telephone to summon help in the event of a spill. Emergency response telephone numbers should be posted next to an accessible phone.

- Copies of laboratory data documenting the hazardous/non-hazardous status of waste, hazardous waste generation rate/storage inventories, hazardous waste manifests, proof of employee training, etc., should be maintained on file to document compliance.

Appendix F
Small Quantity Generator (SQG) RCRA Summary

Do these regulations apply to my operation?

If your facility generates between 220 and 2,200 pounds of hazardous waste per month or stores between 2,200 and 13,200 pounds of hazardous waste on site at any time, Title 128 applies. Facilities generating or storing more or less than these limits are subject to the Large Quantity Generator (LQG) or Conditionally Exempt Small Quantity Generator (CESQG) regulations respectively.

General Requirements

All waste generators must, at a minimum:

- Accurately characterize each facility waste as hazardous or non-hazardous;
- Know the facility's monthly hazardous waste generation rate and the amount of hazardous waste accumulated on site; and
- Manage hazardous wastes in compliance with applicable on- and off-site federal regulations.

What are the benefits of proper management of hazardous waste?

Hazardous waste regulations (the Resources Conservation and Recovery Act, or RCRA) were established to minimize human and environmental exposure to hazardous chemicals. The Environmental Protection Agency (EPA) has written a comprehensive set of regulations that govern the management of hazardous waste from the point of generation to disposal. The regulations also incorporate a record keeping/reporting/tracking system to verify and document that the waste is, in fact, managed appropriately. Finally, compliance with hazardous waste regulations is an enforceable law.

SQG Regulatory Requirements

In addition to the general requirements listed previously, SQGs must also comply with the following:

- Obtain an EPA Identification Number. SQGs must obtain an NDEQ Hazardous Waste Generator Identification Number. This number is used to identify the facility and the hazardous waste activities occurring there. It is also required on all waste shipping papers. An ID number is obtained by completing EPA Form 8700-12.

- Waste Generation, Accumulation and Storage

  - SQGs may not generate more than 2,200 pounds of hazardous waste per month, nor store more than 13,200 pounds of hazardous waste on site at any given time. If either limit is exceeded, the facility becomes subject to the more stringent Large Quantity Generator (LQG) regulations.
  - Hazardous waste storage containers must remain closed, except when adding or removing waste.
  - Hazardous waste storage containers must be clearly labeled "Hazardous Waste."
  - Up to 55 gallons of hazardous waste may be accumulated at the point of generation and under the supervision of the individual generating the waste for an indefinite period of time. The container must be labeled "Hazardous Waste" or other words to identify the contents and should include "Satellite Accumulation." When 55 gallons has accumulated, the satellite accumulation container must be moved to a permanent hazardous waste storage area within three days.
  - Hazardous waste containers must be marked with the date they first received waste or the date when moved from the satellite accumulation area to the permanent hazardous waste storage area.
  - The permanent hazardous waste storage area must be inspected weekly for leaking containers, proper container labeling and dating, to assure the containers are closed, and to maintain adequate access to all containers. Weekly inspections should be documented and the information maintained on site.
  - Hazardous waste may not be accumulated on site for more than 180 days (270-day storage is allowed if the waste is being transported more than 200 miles for proper management).

- Preparation for Off-Site Transportation
  - Hazardous waste storage containers must be packaged, labeled, and marked according to the Department of Transportation's (DOT) hazardous materials transport regulations. This includes the following information on each container:
    - "HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency";
    - Generator's Name and Address; and
    - Manifest Document Number.
  - Commercially available labels can be used. The generator must also assure the hazardous waste transport vehicle is affixed with the appropriate DOT placards.

- Shipping Papers

- A Uniform Hazardous Waste Manifest must accompany all shipments of hazardous waste.
- The manifest is a multiple copy form that must be signed by the generator, transporter, and disposal facility personnel. Each entity should keep its respective copy of the form. The original copy of the manifest must be returned to the generator by the disposal facility within 60 days.
- Both the generator copy and original copy of the manifest must be filed on site and be readily available for inspection for at least three years.
- For waste subject to Land Disposal Restrictions, a Land Disposal Restriction Notification form must accompany the hazardous waste manifest. The transporter/disposal facility can assist in determining if a Land Disposal Restriction Notification form is required. If so, a copy must remain on site and be readily available for inspection for at least three years.

- Preparedness and Prevention

  - Hazardous waste storage areas must be maintained and operated to minimize the possibility of fire, explosion, or release of hazardous waste.
  - Hazardous waste storage areas must be equipped with or provide immediate access to the following:
    - Internal communications or alarm system;
    - A telephone to summon emergency assistance from local authorities;
    - Fire extinguisher and control equipment;
    - Spill control equipment; and
    - Water to supply hoses or sprinkler systems.
  - All equipment must be tested and maintained to assure proper operation.
  - When hazardous waste is handled, all personnel involved must have immediate access to an internal alarm or emergency communication device.
  - If just one employee is present, he or she must have immediate access to a device capable of summoning external assistance.
  - Aisle space must be maintained to allow for fire protection and spill control in an emergency.
  - The generator must familiarize local police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes. An example letter to assist in preparing this notification is attached. Where authorities decline to enter into arrangements, documentation of the attempt to make arrangements (e.g., certified letter requesting arrangements) must be kept on file.

- Contingency Requirements

  - At all times, there must be at least one employee available, or on call, with the responsibility for coordinating all emergency response measures (emergency coordinator).

- The following information must be posted at the telephone:
  - Name and telephone number(s) of emergency coordinator(s);
  - Location of fire extinguishers, spill control material, and fire alarm; and
  - Telephone number of the fire department.
- All employees involved in waste handling and management must be thoroughly familiar with proper waste handling and emergency procedures.
- The emergency coordinator must respond appropriately to emergencies as follows:
  - Fire: Call the fire department and/or attempt to extinguish it.
  - Spill: Contain the flow of waste and clean up waste and contaminated materials/soil to prevent or minimize release to the environment.
  - For releases that threaten human health outside the facility or spills that could reach surface water: Notify the National Response Center (800/424-8802) and the Nebraska Department of Environmental Quality at (402/471-2186).

- Recordkeeping

  Copies of hazardous waste manifests, Land Disposal Restriction notification forms, hazardous waste storage area inspection logs, and employee training documentation should be maintained on file in chronological order, and be readily available for regulatory agency inspection. Copies of laboratory data documenting the hazardous waste determinations, notification of emergency response agencies, etc., should also be available for review at the facility.

Notification of Small Quantity Waste Generation Activity
Example Letter

Date:
To: (Specific Individual (i.e., Fire Chief, Police Captain, Hospital Administrator, etc.)).
From: (Company and contact name)
Re: Notification of Small Quantity Hazardous Waste Generation Activity.

Company name generates small quantities (less than 2,200 lbs/month) of hazardous waste, which is accumulated for *time period* before being collected by an authorized transporter. Waste generated and accumulated include *type of waste(s).*
This waste is collected and accumulated in our *location of storage area* that is located at *address (see drawing).* The maximum amount accumulated at any one time is less than *number gallons*.
A Material Safety Data Sheet for the original material is enclosed. Fire and health risks from the used material are expected to be similar to that of the original material. A schematic of the site and the locations of hazardous waste is attached. This letter is sent in order to fulfill Title 128, Chapter 17, §007 requirements.

Sincerely,

Authorized Personnel
Enclosure

Note:
Recommend you send letter by certified mail so a return receipt can document that the letter was received. This is not required.

Appendix G
Hazardous Waste Management Companies

http://www.deq.state.ne.us. Follow the links through Publications and Forms, Waste Management, and Guidance Document to "Hazardous Waste Service Providers Directory" on the NDEQ website.

This list IS NOT AN ENDORSEMENT OR WARRANTY by/from the NDEQ relating to any company or product. Businesses should determine that any company or product they use complies with all applicable environmental laws.

Appendix H
Analytical Laboratories

For a listing of Analytical Laboratories follow the links through Publications and Forms, Waste Management, and Guidance Document to "Hazardous Waste Service Providers Directory" on the NDEQ website. http://www.deq.state.ne.us

This list IS NOT AN ENDORSEMENT OR WARRANTY by/from the NDEQ relating to any company or product. Businesses should determine that any company or product they use complies with all applicable environmental laws.