



**New Mexico Environment Department**

**Office of the Secretary**

**PIPE BURSTING GUIDELINES**

- SUBJECT:** Regulatory requirements for "trenchless" replacement of asbestos containing cement water or sewer pipe or utility conduit replacement.
- PURPOSE:** To provide guidance to the regulated community when considering the use of "pipe bursting," or similar technologies for pipe replacement, when such technologies may impact material known or suspected to contain asbestos.
- REVISIONS:** None.
- APPLICABILITY:** The Regulated Community and all NMED employees.
- REFERENCES:** 40 CFR 61, Subpart M – National Emission Standard for Asbestos Asbestos surveys and demolition notifications, wetting, wrapping, labeling and disposal requirements, 40 CFR 763, Asbestos, Subpart E Inspection, handling and disposal of asbestos in schools, and air sampling requirements, 40 CFR 763, Asbestos, Appendix C to Subpart E Accreditation requirements for asbestos contractors and workers, 40 CFR 763, Asbestos, Subpart G, Asbestos Abatement Projects Protection of public employees performing asbestos abatement work not covered by OSHA asbestos standards, 29 CFR 1910.1001, General Industry 29 CFR 1910.1101, Construction Industry 29 CFR 1910.134, Use of Respirators Occupational Safety and Health Administration (OSHA) regulations that cover employees engaged in demolition and construction, and other situations where that may involve asbestos exposure, including removal, encapsulation, repair, maintenance, spill/emergency clean up, transportation and storage of ACM, 29 CFR 1926.58 Protective measures for workers for all construction work involving asbestos, 49 CFR 171 and 172 Department of Transportation (DOT) requirements for transportation of hazardous materials, including asbestos, New Mexico Solid Waste Management Regulations (SWMR), 20.9.1 NMAC Storage, labeling, wrapping, manifesting, transporting and disposal of asbestos waste, and permitting requirements for special waste facilities.

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APPROVAL:   
Ron Curry, Cabinet Secretary

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## **NMED Guidance For Pipe Replacement By Pipe Bursting And Similar Technologies**

### **I. SUMMARY.**

Pipe bursting, pipe reaming, pipe implosion, pipe splitting, pipe eating, pipe ejection, or other similar technologies should not be used for trenchless replacement of pipes or conduit that contain asbestos. Use of these technologies will make asbestos containing pipe or conduit RACM, subjecting that material to state and federal asbestos regulation. Trenchless replacement using these technologies necessarily implies that RACM will be disposed in place, which would create an asbestos disposal and special waste disposal site under federal and state law. Failure to follow the requirements in asbestos regulations could subject the violator to civil and criminal penalties. Pipe bursting and other similar technologies may be used on pipe or conduit, which does not contain asbestos without triggering asbestos regulation.

### **II. PURPOSE.**

This document is intended to provide guidance to the regulated community when considering the use of "pipe bursting," or similar technologies for pipe replacement, when such technologies may impact material known or suspected to contain asbestos. This document does not establish binding regulatory requirements; such requirements are contained in the applicable regulations and statutes.

### **III. GOAL.**

Pipe bursting and similar technologies are utilized for the trenchless replacement of water or sewer pipes, utility conduit replacement projects, or other similar applications. Frequently, pipes that will be subject to such methods contain asbestos. These guidelines are provided to clarify the NMED regulatory requirements for the handling and disposal of asbestos containing materials (ACM), and to prevent the inadvertent generation of regulated asbestos containing material triggering noncompliance with state and federal requirements concerning human health, transportation, and disposal.

### **IV. TERMINOLOGY & BACKGROUND.**

#### **General Terminology.**

"Pipe bursting" is a technology used in trenchless pipe or utility conduit replacement, which fractures the pipe and displaces the fragments outward while a new pipe is drawn in to replace the fractured pipe. There are similar technologies for trenchless pipe replacement, including pipe reaming, pipe implosion, pipe splitting, pipe eating, and pipe

ejection, all of which generate pipe fragments or slurries, portions of which may be left in-situ.

“Asbestos” is naturally occurring, fibrous minerals with fibers that are resistant to heat and most chemicals. They have been mined and used in over 3,000 different products, and are often found in cement pipe that is used for water or sewer lines and electrical conduit applications. Asbestos is a known carcinogen and is particularly hazardous to human health when asbestos fibers are inhaled.

“ACM” or “asbestos containing material” is material that contains asbestos.

“RACM” or “regulated asbestos containing material” is ACM that contains greater than one percent (1%) asbestos and is friable, has become friable, or is likely to become friable by the forces expected to act upon it during demolition, renovation, transportation or disposal.

“Asbestos Waste” is RACM, as defined under the New Mexico Solid Waste Management Regulations (SWMR), Subsection H of 20.9.1.7 NMAC. Asbestos waste is further defined under the SWMR, Subsection BZ (3) of 20.9.1.7 NMAC, as a special waste that has unique handling, transportation and disposal requirements to assure protection of the environment and the public health, welfare and safety.

“Asbestos Containing Waste Material,” as defined under 40 CFR 61.141, Subpart M – National Emission Standard for Asbestos, is RACM waste and materials contaminated with asbestos, including disposable equipment and clothing, that must be treated and disposed in the same manner as any other RACM waste.

#### **Background.**

Pipe bursting is believed to have been used in New Mexico since the early 1990s. It is believed that thousands of feet of pipe may have been replaced utilizing pipe bursting, or similar technologies. When the pipe being replaced is manufactured with concrete or clay, pipe bursting may be the most desirable method; however, if the pipe to be replaced contains asbestos (e.g., asbestos-cement pipe), then the generation and subsequent disposal of RACM must be considered. NMED has developed this guidance to respond to the concerns of the regulated community regarding the regulatory status of pipe bursting of asbestos containing pipe.

#### **V. REGULATORY ANALYSIS OF PIPE REPLACEMENT PRACTICES.**

**Pipe Bursting.** Pipe bursting, pipe reaming, pipe implosion, pipe splitting, pipe eating, pipe ejection, or other similar technologies should not be used for trenchless replacement of pipes or conduit, which contain asbestos. These technologies make the asbestos containing pipe or conduit RACM, subjecting it to state and federal asbestos regulation. Trenchless replacement using these technologies necessarily implies that RACM will be

disposed in place, which would create an asbestos disposal and special waste disposal site under federal and state law.

If a pipe contains greater than 1% asbestos content and the pipe to be replaced exceeds 260 linear feet, the project is subject to Asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP) at 40 CFR 61, Subpart M. (These standards are incorporated into state law at 20.2.78 NMAC.) Once subject to the NESHAP, the pipe replacement project is subject to notification and emission control requirements under 40 CFR 61.145. Any pipe fragments or slurry must be properly containerized and labeled before transport to an approved asbestos landfill. If all RACM is not removed from the ground, the site would be considered an active waste disposal site under 40 CFR 61.154. Trenchless replacement using pipe bursting and similar technologies necessarily result in disposal of RACM in-situ, creating an asbestos disposal site subject to active asbestos landfill regulations.

Under 20.9.1 NMAC, if pipe bursting or similar technology is used to replace a pipe containing greater than one percent (1%) asbestos content, the pipe would become "asbestos waste" as defined in 20.9.1.105.H NMAC. Asbestos waste is a special waste that may only be disposed of in a landfill permitted for disposal of asbestos waste under 20.9.1. NMAC. Special waste landfills are required to meet strict design requirements and are also subject to closure and post closure care requirements, including financial assurance and groundwater monitoring. There is no minimum threshold amount of asbestos waste under which these regulations would not apply.

The regulatory costs and risks to public health and the environment are expected to greatly outweigh any benefits of pipe bursting over abandonment in place or removal and replacement of asbestos containing pipe. NMED strongly discourages anyone from using pipe bursting or similar technology as a means to replace asbestos containing pipe, or any pipe suspected to contain asbestos. If a person decides to utilize pipe bursting (or similar technologies) upon pipe that is known or presumed to contain greater than one percent (1%) asbestos, all necessary authorizations and permits for the resulting asbestos waste disposal site and special waste landfill under the NESHAP and the SWMR must be obtained prior to disturbance of any of the pipe.

**Abandonment In Place.** Current replacement practices of potable water pipe, sewage line or utility conduit includes the laying of new line and the undisturbed abandonment of existing line. If the abandoned line is ACM and has not become regulated, it may remain in place as long as it remains undisturbed. Such pipe or conduit would be classified as "clean fill" under 20.9.1.105.L NMAC. NMED strongly encourages owners to record the location of the undisturbed ACM pipe and note it in the project records, plat map, and on the deed. Future disturbance of the asbestos containing pipe or conduit may result in it becoming RACM requiring compliance with federal and state asbestos regulation.

**Complete Removal.** Asbestos containing pipe or conduit may also be removed and disposed of as construction and demolition debris, if it is removed and transported without being subjected to sanding, grinding, cutting, abrading; or will not become

crumbled, pulverized, or reduced to powder by the forces expected to act on it during demolition or removal. Such intact non-RACM asbestos containing pipe or conduit would be classified as construction and demolition debris under 20.9.1.105.T NMAC. Any pipe fragments, powders or contaminated soils at pipe connection locations or removal pits (assuming the pipes contain greater than one percent (1%) asbestos) must be handled as RACM under NESHAP regulations and disposed as asbestos waste, a special waste under 20.9.1 NMAC.

**Penalties For Non-Compliance.** Failure to follow the requirements in asbestos regulations could subject the violator to civil and criminal penalties. NMSA § 74-9-36(B) authorizes the Secretary to assess a civil penalty of \$5,000 per day of noncompliance for each violation of the New Mexico Solid Waste Act (“SWA”), NMSA 1978, §§ 74-9-1 to 74-9-43 (2001) or SWMR. NMSA § 74-9-37 authorizes criminal penalties for violations of the SWA. NMSA 1978, § 74-2-12 (2001) and § 74-2-12.1 authorize civil penalties up to \$15,000 per day of noncompliance with the New Mexico Air Quality Control Act (“AQCA”), NMSA 1978, § 74-2-1 et. seq. or implementing regulations. NMSA 1978, § 74-2-14 also provides for criminal penalties for violation of the AQCA.

## VI. REGULATIONS.

The following regulations and guidance documents are applicable, in whole or in part, to any activity that involves the handling, disturbance and disposal of ACM, including pipe bursting and similar technologies:

- 40 CFR 61, Subpart M – National Emission Standard for Asbestos
  - Asbestos surveys and demolition notifications, wetting, wrapping, labeling and disposal requirements.
- 40 CFR 763, Asbestos, Subpart E
  - Inspection, handling and disposal of asbestos in schools, and air sampling requirements.
- 40 CFR 763, Asbestos, Appendix C to Subpart E
  - Accreditation requirements for asbestos contractors and workers.
- 40 CFR 763, Asbestos, Subpart G, Asbestos Abatement Projects
  - Protection of public employees performing asbestos abatement work not covered by OSHA asbestos standards.
- 29 CFR 1910.1001, General Industry
- 29 CFR 1910.1101, Construction Industry
- 29 CFR 1910.134, Use of Respirators
  - Occupational Safety and Health Administration (OSHA) regulations that cover employees engaged in demolition and construction, and other situations where that may involve asbestos exposure, including removal, encapsulation, repair, maintenance, spill/emergency clean up, transportation and storage of ACM.
- 29 CFR 1926.58
  - Protective measures for workers for all construction work involving asbestos.

- 49 CFR 171 and 172
  - Department of Transportation (DOT) requirements for transportation of hazardous materials, including asbestos.
- New Mexico Solid Waste Management Regulations (SWMR), 20.9.1 NMAC
  - Storage, labeling, wrapping, manifesting, transporting and disposal of asbestos waste, and permitting requirements for special waste facilities.

#### VII. OTHER GUIDANCE.

In addition to the guidance provided by this document, EPA has also provided numerous guidance documents regarding NESHAP applicability to pipe bursting and similar technologies, and the regulatory status of asbestos pipe removal activities. This guidance may be researched in the EPA's Applicability Determination Index at <http://cfpub.epa.gov/adi/>. Particularly relevant guidance documents include:

- Letter from Michael S. Alushin, Director, Compliance Assessment & Media Programs, U.S. EPA to Mr. John Nowak, Nowak Pipe Reaming, Inc. (April 16, 2003)
  - Indicates that when ACM pipe (>1% asbestos) is subjected to pipe reaming, assuming greater than 260 linear feet of pipe is involved, the project is subject to the NESHAP, and may also be subject to additional state and local requirements. Active landfill regulations at 40 CFR 61.150 would apply to remaining asbestos.
- Asbestos Cement Pipe Disposal, Determination Control Number: C99 from John B. Rasnic to Joseph L. Perez (July 17, 1991)
  - Crushing of asbestos-cement pipe, Category II nonfriable ACM, would cause the material to become regulated ACM. Backfilling and burial of crushed A/C pipe in place would make the site subject to active disposal regulations at 40 CFR 61.154.
- Removal of Pipe, Determination Control Number: A960010 from John Rasnic to Theresa Franks (October 12, 1994)
  - NESHAP would apply if at least 260 linear feet of AC pipe has become or will become crushed, crumbled or pulverized.
- Leaving/Missing RACM-Citation/violation, Determination Control Number: A930001 from John B. Rasnic to Kurt Jones (February 26, 1993)
  - Leaving RACM in place after an abatement project would be violation of NESHAP regulations, but if intent were to leave A/C pipe intact, that would not be a violation.

#### VIII. COORDINATION.

Prior to advertising, bidding or contracting for any job impacting any pipe or conduit, which may contain asbestos, a person should contact the following agencies and bureaus to ensure they have up-to-date regulatory information and guidance. Smaller local governmental entities would benefit from information concerning project regulatory requirements, appropriate technology and possible financial assistance.

**Construction Industries Division (Department of Regulation and Licensing).**

Coordination should include discussion regarding the necessary licensure requirements for contractors or other persons that will perform pipe or conduit replacement. Specific requirements are specified in Title 14 NMAC, Housing and Construction, including 14.6.6 NMAC, Classification and Scopes, which prescribe the required licensing certifications for contractors. Title 14 may be viewed on the web at <http://www.nmcpr.state.nm.us/nmac/title14/title14.htm>. Questions may be directed to the Bureau Chief, Mechanical Bureau, at (505) 476-4661.

**Construction Programs Bureau (NMED).**

Coordination should include discussion about project costs and early determination regarding the status of pipes that may contain asbestos. Submittals for projects involving replacement of pipe or conduit should include a description of pipe being impacted or replaced. Information about the Construction Programs Bureau may be viewed on the web at <http://www.nmenv.state.nm.us/cpb/cpbtop.html>. Questions may be directed to the Bureau Chief at (505) 827-9691.

**Air Quality Bureau (NMED).**

Coordination should include discussion about conducting an inspection for the presence of asbestos and exposure control prior to starting any activity that would disturb ACM. Specific requirements are specified in 40 CFR 61, Subpart M – NESHAP, and are based upon the quantity, classification, condition and planned activity – including storage, wrapping, manifesting, transporting and disposal of RACM. The text of Subpart M – NESHAP may be viewed on the web at <http://www.nmenv.state.nm.us/aqb/asbestos/asbestos.html>. Call (505) 955-8076 or (505) 955-8011 to discuss requirements of Subpart M with the Air Quality Bureau asbestos group.

**Solid Waste Bureau (NMED).**

Coordination should include discussion of the project, technology to be used, regulatory status of the material generated and requirements concerning the storage, labeling, wrapping, manifesting, transporting and disposal of regulated asbestos containing material. The SWMR, 20.9.1 NMAC, may be viewed on the web at <http://www.nmcpr.state.nm.us/nmac/parts/title20/20.009.0001.htm>. Questions may be directed to the Enforcement Section Manager at (505) 827-2924.

**Occupational Health and Safety Bureau (NMED).**

Coordination should include discussion regarding worker safety and protection from asbestos exposure, to include necessary personal protective equipment (PPE) and monitoring. The New Mexico Occupational Health and Safety Bureau website may be



viewed at [http://www.nmenv.state.nm.us/Ohsb\\_Website/ohsb\\_home.htm](http://www.nmenv.state.nm.us/Ohsb_Website/ohsb_home.htm). Questions may be directed to the Bureau Chief at (505) 827-4230.