June 13, 2006

AGA VOLUNTARY GUIDELINE
FOR
HANDLING COAL TAR OR ASPHALTIC ENAMEL WRAPPED PIPE

1.0 Purpose
The purpose of this Voluntary Guideline is to describe the work practices that a company may use when handling asbestos coal tar or asphaltic enamel wrap on gas pipe and other buried utilities. This Voluntary Guideline is based on a benchmarking and roundtable project conducted by an American Gas Association (AGA) task force. It provides general guidelines to assist member companies in developing procedures for managing coal tar or asphaltic enamel wrapped pipe. The use of this guideline document is purely voluntary. A company should consult with its own legal counsel and technical staff to develop a procedure that is appropriate for the company, based on its own specific facts and applicable law.

2.0 Scope
The Voluntary Guideline is applicable to workers or contractors who remove coal tar enamel or asphaltic enamel pipe wrap (“Pipe Wrap”) from pipe or conduit, or who remove coal tar enamel wrapped pipe or conduit from the ground. This procedure assumes that all Pipe Wrap is an asbestos-containing material (“ACM”) unless there is reliable evidence to the contrary. This Voluntary Guideline is not applicable to the handling of other asbestos containing materials -- such as steam piping insulation, thermal system insulation, or asbestos in buildings -- all of which must be handled in accordance with other standards and procedures.

3.0 Pipe Wrap is Regulated by EPA and OSHA
Regulation of Pipe Wrap Under EPA’s “Asbestos NESHAP”.Pipe Wrap in good condition is a nonfriable material under the federal environmental protection agency’s “Asbestos NESHAP.” If Pipe Wrap in a dry state can be crumbled, pulverized or reduced to a powder by hand pressure, it is a “friable” ACM and is a regulated asbestos-containing material (“RACM”) under the federal environmental protection agency’s “Asbestos NESHAP” work standard. In addition, Pipe Wrap that is initially in good condition can become RACM if it is crumbled, pulverized or reduced to powder, or is likely to become so by forces acting upon it. As an example of the latter situation, Pipe Wrap in good condition becomes RACM if it is sawn, ground, or significantly abraded. Note that the Asbestos NESHAP is a “work standard” and not an “emission standard.” Therefore, the well-documented tendency of Pipe Wrap to retain asbestos fibers in the coal tar or asphaltic enamel matrix and not release the fibers into the air is not directly relevant to determining whether the material is “friable” under the Asbestos NESHAP.

2 Whether Pipe Wrap is a Category I or Category II non-friable ACM is an open question. Since Pipe Wrap is not among the specific materials listed as Category I ACM, a literal reading of the regulation results in it being a Category II ACM. However, EPA has in the past designated Pipe Wrap as a Category I ACM, no doubt because it shares many of the physical properties of the Category I ACMs. See, e.g., Asbestos NESHAP Regulated Asbestos Containing Materials Guidance, EPA-340/1-90-018 (December 1990), at Table 1, page 4.
3 40 C.F.R. §61.141, definition of “friable asbestos material.”
4 40 C.F.R. §61.141, definition of “regulated asbestos-containing material.”
Regulation of Pipe Wrap Under OSHA’s “Asbestos Construction Standard”. Pipe Wrap is also regulated by the Occupational Safety and Health Administration (“OSHA”) under section (g)(11) of OSHA’s Asbestos Construction Standard. The OSHA regulations recognize that Pipe Wrap does not readily release asbestos fibers into the air, which is consistent with numerous studies and air quality data accumulated by Industry. Accordingly, OSHA does not impose stringent work practices unless the work practices in 29 C.F.R. §1926.1101(g)(11) are not followed or Pipe Wrap is not only crumbled, pulverized, or reduced to a powder, but becomes so deteriorated that the asbestos fibers are no longer likely to be bound within the coal tar matrix, in which case the much more stringent provisions of section (g)(8) the OSHA Asbestos Standard become applicable.

4.0 Pipe Wrap Worker/Competent Person Training.

4.1 All workers who handle Pipe Wrap (“Pipe Wrap Workers”) must receive “asbestos pipe wrap training” at the time of initial assignment. The Company’s Environmental or Safety Department should be contacted for the specific training requirements. NOTE: Pipe Wrap Worker training only qualifies workers to handle Pipe Wrap, not other asbestos-containing material.

4.2 Individuals who act as competent persons on jobs involving Pipe Wrap (“Pipe Wrap Competent Persons”) must receive Pipe Wrap Worker training plus training in additional aspects of Pipe Wrap management. Training for Pipe Wrap Competent Persons shall be provided at the time of initial assignment. The Company’s Environmental or Safety Department should be contacted for the specific training requirements.

4.3 While functioning as a Pipe Wrap Competent Person, the person should make sure that his or her training is current and that proof of training can be made available upon request of the regulatory agency. NOTE: Pipe Wrap Competent Person training only qualifies the Pipe Wrap Competent Person to provide inspection services on jobs where Pipe Wrap is the only asbestos-containing material present.

5.0 Duties of Pipe Wrap Competent Person; Stop Work Authority.

5.1 The Pipe Wrap Competent Person shall monitor the job to make sure the material aspects of this procedure are being followed. If the Pipe Wrap Competent Person determines material aspects of this procedure are not being
followed, the Pipe Wrap Competent Person shall take prompt corrective measures.\textsuperscript{13}

5.2 Prior to the commencement of a job involving Pipe Wrap and during the job, the Pipe Wrap Competent Person shall inspect the exposed Pipe Wrap to determine (1) if it is non-friable; or (2) if it is RACM (is or is likely to become crumbled, pulverized or reduced to powder, or can be made so using hand pressure); or (3) if it is crumbled, pulverized or otherwise deteriorated to the point where it is likely that the asbestos fibers are no longer bound in the coal tar matrix.\textsuperscript{14}

5.3 The Pipe Wrap Competent Person shall keep a running total of the amount of Pipe Wrap that is RACM that is or is likely to become generated during the course of the job.\textsuperscript{15} If the Pipe Wrap Competent Person believes that the job will involve more than 260 linear feet of RACM on the pipeline and/or more than 35 cubic feet of RACM debris (where the length of pipe could not be measured previously), the Pipe Wrap Competent Person must contact the Company’s Environmental Department so that the required regulatory notice may be filed.\textsuperscript{16}

6.0 \textbf{Required Agency Notification if Job Involves > 260 ft. of RACM on Pipe.}

6.1 A written notification must be filed with the appropriate regulatory agency if the Pipe Wrap job involves or is expected to involve more than 260 linear feet of RACM on the pipeline and/or more than 35 cubic feet of RACM debris (where the length of pipe could not be measured previously).\textsuperscript{17} The notice must be filed at least ten (10) working days prior to the commencement of the job and must contain all of the information specified in the applicable regulations (i.e., the federal asbestos regulations at 40 C.F.R. §61.145(b) or equivalent state or local asbestos regulations). The Pipe Wrap Competent Person should work with the Company’s Environmental Department to make sure that all of the required information is provided in a timely manner.\textsuperscript{18}

7.0 \textbf{Pipe Wrap Removal Procedures.} Non-RACM Pipe Wrap will not be made RACM if the following procedures are closely adhered to, in particular the mandate that only wet methods and hand tools be used to remove Pipe Wrap.\textsuperscript{19}

7.1 \textbf{Personal Protective Equipment.} In accordance with the Company’s safety procedures and in coordination with the Company’s Safety Department, identify and utilize the specific personal protective equipment (PPE) appropriate to the potential hazards presented at the work site. Such PPE may include: safety

\begin{footnotesize}
\begin{enumerate}
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\item 29 C.F.R. 1926.1101(g)(11)(i).
\item That is, is no longer “intact” as defined by 29 C.F.R. 1926.1101(b).
\item 40 C.F.R. §61.145(a).
\item 40 C.F.R. §61.145(a)(4).
\item 40 C.F.R. §61.145(a)(4). The notification requirements of the Asbestos NESHAP also provide that notification be given if the job generates or is expected to generate more than 35 cubic feet of RACM debris where the length of pipe could not be measured previously.
\item Some local regulatory agencies may require written notification for all Pipe Wrap jobs involving asbestos-containing Pipe Wrap. In addition, a written annual notification may need to be filed with the appropriate regulatory agency if the combined additive [or cumulative] amount of RACM to be removed from related smaller projects during a calendar year is greater than 260 linear feet (or greater than 35 cubic feet of RACM debris where the length of pipe could not be previously measured.) Contact the Company’s environmental compliance department and legal department for guidance as to the existence and applicability of federal, state and local asbestos rules and regulations.
\item 29 C.F.R. 1926.1101(g)(11)(iii).
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glasses with side shields; face shield as necessary; leather or disposable gloves (such as latex, nitrile, cotton, etc.) and steel-toed work boots.

7.2 **Equipment/Materials List.** The following equipment or supplies are useful when removing Pipe Wrap:

7.2.1 An amended water solution such as leak detection fluid, water amended with a soap surfactant, or water amended with glue;

7.2.2 Pump sprayer/bottle for applying "amended water;"

7.2.3 Heavy gauge plastic sheeting or plastic bags cut open to form a sheet, tarp or equivalent;

7.2.4 Appropriately-labeled heavy-gauge plastic bags;

7.2.5 Duct tape;

7.2.6 Basic hand tools – hammer/ mallet, chisel, scraper, machete, and/or putty knife;

7.2.7 Burlap sacks, as needed;

7.2.8 Absorbent rags;

7.2.9 Pallet wrap or equivalent material for securing any areas on the pipe where the Pipe Wrap may be dislodged.

7.3 **Pipe Wrap Removal Procedure.**

**NOTE:** Non-RACM Pipe Wrap is not made RACM if it is removed with wet methods and hand tools. If, however, at any point in the job the Pipe Wrap Competent Person determines that the Pipe Wrap has become crumbled, pulverized, reduced to a powder, or otherwise has deteriorated to the point where it is likely that the asbestos fibers are no longer likely to be bound in the coal tar matrix, then all work on such material must immediately cease. The area containing such material must be demarcated and onsite personnel must be instructed to stay out of that area. Then, the Pipe Wrap Competent Person shall contact the Company’s Environmental Compliance and Safety Departments to arrange for the removal of
the deteriorated Pipe Wrap.\textsuperscript{20} 

7.3.1 Expose the pipe or other buried utility containing Pipe Wrap, taking care to minimize disturbance of the Pipe Wrap.

7.3.2 If the job requires that the pipe be supported or lifted, appropriately rated wheeled cradles, or web or nylon straps or slings shall be used to carefully lift the pipe segment out of trench. Care should be taken to minimize the abrasion of the Pipe Wrap and to capture dislodged pieces of Pipe Wrap, as practicable. Do not use steel chains, hooks or cables or other similar devices on the portion of the pipe covered with Pipe Wrap, although chains, hooks or cables may be used to connect to the ends of the pipe section after the Pipe Wrap has been removed from the bearing surface.

7.3.3 Prior to removing Pipe Wrap, spread tarps or plastic sheeting underneath the pipe as necessary to contain dislodged Pipe Wrap.

7.3.4 Remove only as much Pipe Wrap from the pipe as is necessary to perform the task.

7.3.5 All Pipe Wrap being removed from the pipe must be removed using wet methods (spray Pipe Wrap with amended water before and during removal operations or cover removal area with wet fabric).

7.3.6 If desired, establish clean end cuts in the Pipe Wrap by applying masking tape and scoring the coal tar wrap with a utility knife, chisel, machete or similar tool.

7.3.7 Use hand tools (e.g., mallet, hammer, scraper, machete) to disbond and remove the Pipe Wrap. \textbf{Do not utilize power tools (such as abrasive blasters, power grinders, pipe benders, sanders or saws), or other measures that abrade, pulverize or reduce the Pipe Wrap to powder.}\textsuperscript{21} Wet burlap bags or plastic pallet wrap may be used as a barrier between the Pipe Wrap and impact tools..

7.3.8 Wet wipe tools used for wrap removal with soapy water and rags.

7.3.9 Before transporting removed pipe, use duct tape, pallet or shrink wrap or other similar means to secure loose Pipe Wrap that may be present on removed pipe and/or wrap the entire pipe segment with plastic pallet wrap or cover the roll off box. Field personnel should contact the Company’s environmental compliance department for instructions on the disposition of surplus pipe with Pipe Wrap remaining on it.

\textsuperscript{20} Note that this aspect of the procedure preserves the difference between the Asbestos NESHAP definition of “RACM” and the OSHA Asbestos Construction Standard’s definition of “intact.” Under the Construction Standard, a material can be crumbled, pulverized, otherwise deteriorated (or reduced to a powder within the meaning of the NESHAP) and still be “intact,” if, despite extensive breakage, it is likely that the asbestos fibers are still bound in the coal tar matrix. In other words, a material may simultaneously be “RACM” under the Asbestos NESHAP and “intact” under the Construction Standard. Thus, the relatively minimal work practice requirements of 29 C.F.R. 1926.1101(g)(11) apply to “RACM” Pipe Wrap until the material has become so deteriorated that the asbestos fibers are no longer likely to be bound in the coal tar matrix. At that point, 1926.1101(g)(8) becomes applicable, and not 1926.1101(g)(11).

\textsuperscript{21} 29 C.F.R. 1926.1101(g)(11)(iii).
7.3.10 Place disposable PPE on sheeting, fold sheeting containing removed Pipe Wrap and other contaminated materials into disposal bag(s).

7.3.11 Field personnel should contact the Company’s environmental compliance department for additional waste disposal instructions.

8.0 Advice and Counsel

Contact the Company’s legal, environmental compliance, or safety department as appropriate for advice and counsel regarding this procedure and other asbestos related concerns.

9.0 Definitions

- **Asbestos** – means the asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite.

- **Amended Water** – means water to which a soap surfactant has been added.

- **Asbestos Containing Material (ACM)** – means any material containing more than one percent asbestos by weight, as determined using the method specified in appendix E, subpart E, 40 C.F.R. Part 763, section 1, Polarized Light Microscopy.

- **Category I nonfriable ACM** – means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than one percent asbestos and asphalt roofing products containing more than one percent asbestos as determined using the method specified in appendix E, subpart E, 40 C.F.R. Part 763, section 1, Polarized Light Microscopy.

- **Category II nonfriable ACM** – means any material, excluding Category I nonfriable ACM, containing more than one percent asbestos as determined using the method specified in appendix E, subpart E, 40 C.F.R. Part 763, section 1, Polarized Light Microscopy that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

- **Friable ACM** – means any material containing more than one percent asbestos as determined using the method specified in appendix E, subpart E, 40 C.F.R. Part 763, section 1, Polarized Light Microscopy that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Note: The hand pressure utilized for the test for the tendency of a material to crumble contemplates hand pressure applied in one effort and not to repeated attempts.24

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22 These definitions are all from the federal Asbestos NESHAP, except where otherwise designated with an asterisk.

23 Note that (unlike the OSHA definition of an “intact” ACM) the EPA definition of “RACM” does not consider the tendency of a material to release fibers into the air. This is because the Asbestos NESHAP is not an emissions standard but a work practice standard promulgated under subsection Title III, subsection (h) of the federal Clean Air Act. That subsection says that the EPA may prescribe a work practice standard if it is “not feasible” to set an emission standard for a Hazardous Air Pollutant. “Not feasible” means any situation where a HAP cannot be emitted through a conveyance designed to emit or capture HAP, or measurement technology is not practicable due to technological and economic limitations. 42 U.S.C. Sec. 7412(h)(2)(A) and (B). Thus, even though the clear intent of the work practice standard is to minimize exposures to airborne asbestos fibers, the actual regulatory language is silent on the issue. On this basis, in enforcement proceedings EPA has taken the counter-intuitive position that evidence that a material does not have a tendency to release fibers is irrelevant to the question of whether it is RACM or not.

24 As stated in the Asbestos NESHAP Preamble, “In 1973 when the asbestos NESHAP rules were first promulgated for the demolition of buildings, EPA’s intention was to distinguish between materials that would
• **Intact** – means the ACM has not been crumbled, pulverized, or otherwise deteriorated to the extent that it is no longer likely to be bound with its matrix.\(^{25}\)

• **Non Friable ACM** - any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 C.F.R. Part 763, section 1, Polarized Light Microscopy that, when dry, can not be crumbled, pulverized, or reduced to powder by hand pressure.

• **Pipe Wrap** - means a protective pipeline coating consisting of a series of layers of coal tar enamel or asphaltic enamel and layers of paper or “felt” that often contains asbestos embedded in a coal tar matrix. Pipe Wrap is identified by its hard, thick, black in color outer coating that is often covered with a brown craft paper that usually does not contain asbestos.

• **Pipe Wrap Competent Person** – means a person trained in accordance with the applicable provisions of the OSHA Asbestos Construction Standard (29 C.F.R. 1101(g)(11)(i)).\(^{26}\)

• **Pipe Wrap Worker** – means a person trained in accordance with the applicable provisions of the OSHA Asbestos Construction Standard (20 C.F.R. 1926.1101(g)(11)(ii)).\(^{27}\)

• **Regulated Asbestos-Containing Material (RACM)** – means (a) Friable ACM (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

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readily release fibers when damaged or disturbed and those materials that were unlikely to result in the release of significant amounts of asbestos fibers. To accomplish this, EPA labeled as “friable” those materials that were likely to readily release fibers. Friable materials, when dry, could easily be crumbled, pulverized, or reduced to powder using hand pressure. The term “reduced to powder” is readily understood to mean that the affected material is changed to a dust or powder that can become airborne. “Pulverized” indicates that the resulting material will include dust as well as a large number of small pieces of the original material. The term “crumbled” indicates that the affected material is easily (i.e., using hand pressure) broken into a large number of small pieces. Although dust is likely to be produced as a result of crumbling, it is possible that there are some types of materials that can be crumbled without producing dust. It is also understood that crumbling refers to an action that occurs essentially in one effort and not to repeated attempts to crumble the material. For example, floor tile in good condition can be broken by hand into a few large pieces, but it is not easily broken in one effort into many small pieces. On the other hand, floor tile that has lost its structural matrix is in poor condition and can be broken into many small pieces in one effort.”


\(^{25}\) 29 C.F.R. 1926.1101(b).

\(^{26}\) For specific training requirements for the Pipe Wrap Competent Person, see 60 Fed. Reg. 33974, 33976 (June 29, 1995).

\(^{27}\) See 60 Fed. Reg. at 33976 (June 29, 1995).
10.0 **References**


- Relevant State Department of Labor regulations for occupational asbestos exposure Latest Revision.