This letter is in response to your January 4, 1990 letter to Mr. Reilly, requesting guidance on renovation and demolition projects involving removal of normally non-friable asbestos containing material (ACM). I have enclosed a February 23, 1990 memorandum which clarifies the requirements of the Asbestos NESHAP regarding non-friable ACM. Because the linear measurement to determine NESHAP applicability can only be used for pipes, the 160 square feet applicability criterion in 61.145 must be used to determine the size of a sawing project that is subject to the NESHAP. Using standard industry practices we have determined that removing a roof by sawing 5580 square feet will produce 160 square feet of friable asbestos material. Therefore, when sawing is used to remove roofing felt, any project that is 5580 square feet or greater is subject to the Asbestos NESHAP.

During the sawing operation, if the friable material is not adequately wetted, the entire roof will become contaminated with friable asbestos. Consequently, for this type of operation, the contaminated roof, as well as the cut material, is considered friable. This will give rise to three general situations related to the size of the project. First, if the roofing felt being removed by sawing is less than 160 square feet, the project is not subject to the NESHAP and there are no restrictions. Second, if the sawing project is greater than 5580 square feet, it is subject to the NESHAP and must meet all requirements. Third, if the sawing project is 160 square feet or greater, but less than 5580 square feet, the entire roof is considered to be friable, and thus, subject to the NESHAP if the friable material made by the sawing is not adequately wetted. However, if the cut material is adequately wetted, the roof will not become contaminated, and it is not subject to the NESHAP.

Lastly, you requested that these issues be addressed in the revisions to the Asbestos NESHAP. The issue of friability has been the source of many questions and comments. The EPA's interpretation of when normally non-friable ACM is regulated under the NESHAP was proposed in the January 10, 1989 Federal Register notice under the definition of "asbestos containing material" which is defined in the proposal as follows: "Trivial asbestos material and nonfriable asbestos material that potentially can be crumbled, pulverized, or reduced to powder in the course of operations regulated by this subpart." We agree that the current interpretation should be promulgated as rulemaking and have taken steps to do so by proposing the interpretation directly into the regulation.

EPA's interpretation of when normally non-friable ACM is regulated under the NESHAP was codified in the regulation. As stated in the enclosed memorandum, roofing felt must be inspected prior to demolition, it must be tested for friability if it is in poor condition and be removed if it is friable. Because sawing abrades normally non-friable roofing felt, the material formerly occupied by the saw cut will either be crumbled, pulverized, or reduced to powder by the cutting operation. Therefore, the cutting operation and the friable material made by that operation will be subject to the Asbestos NESHAP if the amount of friable asbestos exceeds the applicability amounts specified in 40 CFR Part 61.145. In such cases the cutting operation will have to meet the work practice standards for the asbestos NESHAP in § 61.147 (e.g., adequately wetted and no visible emissions).

If the sawing project is 160 square feet or greater, but less than 5580 square feet, the entire roof is considered to be friable, and thus, subject to the NESHAP if the friable material made by the sawing is not adequately wetted. However, if the cut material is adequately wetted, the roof will not become contaminated, and it is not subject to the NESHAP.

Thank you for the opportunity to respond to your questions. If you have any further questions, please contact Scott Throwe of my staff at (202) 475-7002.

Sincerely,
Scott Throwe.
This letter is in response to your January 4, 1990 letter to Mr. Reilly, requesting guidance on renovation and demolition projects involving removal of normally non-friable asbestos containing material (ACM). I have enclosed a February 23, 1990 memorandum which clarifies the requirements of the Asbestos NESHAP regarding non-friable ACM.

You also inquired as to whether removing asbestos-containing roofing felt by cutting renders the ACM friable. As stated in the enclosed memorandum, roofing felt must be inspected prior to demolition; it must be tested for friability if it is in poor condition and be removed if it is friable. Because sawing abrades normally non-friable roofing felt, the material formerly occupied by the saw cut will either be crumbled, pulverized, or reduced to powder. Therefore, the cutting operation will have to satisfy the work practice standards for the asbestos NESHAP if the material produced by that operation will be subject to the Asbestos NESHAP if the amount of friable asbestos exceeds the applicability amounts specified in 40 CFR Part 61.145. In such cases the cutting operation will have to satisfy the work practice standards for the asbestos NESHAP in # 61.147 (e.g., adequately wetted and no visible emissions).

Because the linear measurement to determine NESHAP applicability can only be used for pipes, the 160 square feet applicability criterion in # 61.145 must be used to determine the size of a sawing project that is subject to the NESHAP. Using standard industry practices we have determined that removing a roof by sawing 5580 square feet will produce 160 square feet of friable asbestos material. Therefore, when sawing is used to remove roofing felt, any project that is 5580 square feet or greater is subject to the Asbestos NESHAP.

During the sawing operation, if the friable material is not adequately wetted, the entire roof will become contaminated with friable ACM. Consequently, for this type of operation, the contaminated roof, as well as the cut material, is considered friable. This will give rise to three general situations related to the size of the project. First, if the roofing felt being removed by sawing is less than 160 square feet, the project is not subject to the NESHAP and there are no restrictions. Second, if the sawing project is greater than 5580 square feet, as discussed above, it is subject to the NESHAP and must meet all requirements. Third, if the sawing project is 160 square feet or greater, but less than 5580 square feet, the entire roof is considered to be friable, and thus, subject to the NESHAP if the friable material made by the sawing is not adequately wetted. However, if the cut material is adequately wetted, the roof is not subject to the NESHAP. If roofing felt being removed by sawing is greater than 5580 square feet, the roof is considered to be friable, and thus, subject to the NESHAP if the friable material made by the sawing is not adequately wetted. Consequently, for this type of operation, the contaminated roof, as well as the cut material, is considered friable. This will give rise to three general situations related to the size of the project. First, if the roofing felt being removed by sawing is less than 160 square feet, the project is not subject to the NESHAP and there are no restrictions. Second, if the sawing project is greater than 5580 square feet, as discussed above, it is subject to the NESHAP and must meet all requirements. Third, if the sawing project is 160 square feet or greater, but less than 5580 square feet, the entire roof is considered to be friable, and thus, subject to the NESHAP if the cut material is adequately wetted, the roof is not subject to the NESHAP. If roofing felt being removed by sawing is greater than 5580 square feet, the roof is considered to be friable, and thus, subject to the NESHAP if the cut material is adequately wetted.
This letter is in response to your January 4, 1990 letter to Mr. Reily, requesting guidance on renovation and demolition projects involving removal of normally non-friable asbestos containing material (ACM). I have enclosed a February 23, 1990 memorandum which clarifies the requirements of the asbestos NESHAP regarding non-friable ACM. You also inquired as to whether removing asbestos-containing roofing felt by cutting renders the ACM friable. As stated in the enclosed memorandum, roofing felt must be inspected prior to demolition, it must be tested for friability if it is in poor condition and be removed if it is friable. Because sawing abrades normally non-friable roofing felt, the material formerly occupied by the saw cut will either be crumbled, pulverized, or reduced to powder by the cutting operation. Therefore, the cutting operation and the friability made by that operation will be subject to the Asbestos NESHAP if the amount of friable asbestos exceeds the applicability amounts specified in 40 CFR Part 61.145. In such cases the cutting operation will have to satisfy the work practice standards for the asbestos NESHAP in § 61.147 (e.g., adequately wetted and no visible emissions).

Because the linear measurement to determine NESHAP applicability can only be used for pipes, the 160 square feet applicability criterion in § 61.145 must be used to determine the size of a sawing project that is subject to the NESHAP. Using standard industry practices we have determined that removing a roof by sawing 5580 square feet will produce 160 square feet of friable asbestos material. Therefore, when sawing is used to remove roofing felt, any project that is 5580 square feet or greater is subject to the Asbestos NESHAP.

During the sawing operation, if the friable material is not adequately wetted, the entire roof will become contaminated with friable asbestos. Consequently, for this type of operation, the contaminated roof, as well as the cut material, is considered friable. This will give rise to three general situations related to the size of the project. First, if the roofing felt being removed by sawing is less than 160 square feet, the project is not subject to the NESHAP and there are no restrictions. Second, if the sawing project is greater than 5580 square feet, as discussed above, it is subject to the NESHAP and must meet all requirements. Third, if the sawing project is 160 square feet or greater, but less than 5580 square feet, the entire roof is considered to be friable, and thus, subject to the NESHAP if the friable material made by the sawing is not adequately wetted. However, if the cut material is adequately wetted, the roof will not become contaminated, and it is not subject to the NESHAP.

Lastly, you requested that these issues be addressed in the revisions to the Asbestos NESHAP. The issue of friability has been the source of many questions and comments. The EPA’s interpretation of when normally non-friable ACM is regulated under the NESHAP was proposed in the January 10, 1989 Federal Register notice under the definition of “asbestos containing material” which is defined in the proposal as follows: "Friable asbestos material and nonfriable asbestos material that potentially can be crumbled, pulverized, or reduced to powder in the same manner as regulated by this subpart." We agree that the current interpretation should be promulgated as rulemaking and have taken steps to do so by proposing the interpretation to be codified directly into the regulation.

Thank you for the opportunity to respond to your questions. If you have any further questions, please contact Scott Throwe of my staff at (202) 475-7002.

Sincerely,
John S. Seitz
Director
Stationary Source Compliance Division
Office of Air Quality Planning and Standards

cc: Alan Powell, Region IV
Sims Ray, (MD-15)
Omaya Salgado, (EN-341)
Charles Garlie, (LE-134A)

1. Sawing Asbestos Roofing Felt
2. SAE: 303
3. Category: Asbestos
4. EPA Office: SSCD
5. Date: 06/12/1990
6. Title: Sawing Asbestos Roofing Felt
7. Recipient: Crop, Wayne
8. Author: Seitz, John S.
9. Subparts: Part 61, M, Asbestos
10. References: 61.141, 61.140(a), 61.140(c)
11. Abstract: If roofing felt being removed by sawing is less than 160 square feet, it is not subject to the NESHAP and there are no restrictions. If the sawing project is greater than 5580 square feet, the roofing felt is subject to the NESHAP. If the sawing project is 160 square feet or greater, but less than 5580 square feet, and the friable material made by the sawing is not adequately wetted, the entire roof is considered subject to the NESHAP. If the cut material is adequately wetted, however, the roof will not become contaminated, and it is not subject to the NESHAP.
12. Letter: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON,D.C. 20460
Jun 12, 1990
J. Wayne Crop
Director
Chattanooga - Hamilton County
Air Quality Control Bureau
3511 Rossville Blvd.
Chattanooga, Tennessee 37407

Dear Mr. Crop:

Enclosure

This letter is in response to your January 4, 1990 letter to Mr. Reily, requesting guidance on renovation and demolition projects involving removal of normally non-friable asbestos containing material (ACM). I have enclosed a February 23, 1990 memorandum which clarifies the requirements of the Asbestos NESHAP regarding non-friable ACM. You also inquired as to whether removing asbestos-containing roofing felt by cutting renders the ACM friable. As stated in the enclosed memorandum, roofing felt must be inspected prior to demolition, it must be tested for friability if it is in poor condition and be removed if it is friable. Because sawing abrades normally non-friable roofing felt, the material formerly occupied by the saw cut will either be crumbled, pulverized, or reduced to powder by the cutting operation. Therefore, the cutting operation and the friability made by that operation will be subject to the Asbestos NESHAP if the amount of friable asbestos exceeds the applicability amounts specified in 40 CFR Part 61.145. In such cases the cutting operation will have to satisfy the work practice standards for the asbestos NESHAP in § 61.147 (e.g., adequately wetted and no visible emissions).

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Director
Stationary Source Compliance Division
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Enclosure

cc: Alan Powell, Region IV
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