State of California
AIR RESOURCES BOARD
Resolution 00-27
July 20, 2000
Agenda Item No.: 00-7-4

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (ARB or Board) to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, on March 27, 1986, the Board identified asbestos (in the following forms: asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), tremolite, actinolite, and anthophyllite) as a toxic air contaminant pursuant to article 3 (commencing with section 39660), chapter 3.5, part 2, division 26 of the Health and Safety Code;

WHEREAS, the Board determined that there is not sufficient available scientific evidence to support identification of a threshold exposure level for asbestos below which no significant adverse health effects are anticipated (see title 17, California Code of Regulations (CCR), section 93000);

WHEREAS, sections 39658 and 39666 of the Health and Safety Code authorize the Board to establish airborne toxic control measures (ATCMs) for substances identified as toxic air contaminants in accordance with specified criteria;

WHEREAS, for toxic air contaminants for which the Board has not specified a threshold exposure level, section 39666 of the Health and Safety Code requires ATCMs to be designed to reduce emissions to the lowest level achievable through the application of best available control technology (BACT) or a more effective control method, considering factors specified in section 39665, unless the Board determines, based on assessment of risk, that an alternative level of emissions reduction is adequate or necessary to prevent an endangerment of public health;

WHEREAS, on April 12, 1990, pursuant to section 39666 of the Health and Safety Code, the Board approved the Asbestos Airborne Toxic Control Measure – Asbestos-Containing Serpentine, title 17, CCR, section 93106 (Asbestos ATCM), which prohibits the sale, supply, and use for surfacing applications of serpentine material with an asbestos content greater than five percent;
WHEREAS, modeling and monitoring studies conducted since 1990 have shown continued exposures to elevated levels of asbestos near unpaved surfaces covered with naturally-occurring asbestos-containing materials, even when the asbestos content of the material was less than five percent;

WHEREAS, ARB staff has identified quarries, construction, and grading activities operating in ultramafic rock formations as potential sources of asbestos-containing dust emissions from disturbances at these facilities;

WHEREAS, ARB staff participated in a multi-agency task force to address issues related to naturally-occurring asbestos in El Dorado County; the Task Force issued a White Paper and Findings and Recommendations regarding the asbestos issues; one of the findings of the Task Force recommended that El Dorado County consider lowering the five percent asbestos content limit;

WHEREAS, staff from the Department of Conservation, Division of Mines and Geology, has indicated that naturally-occurring asbestos is more likely to be found in ultramafic (also called ultrabasic) rock formations located in various areas in California;

WHEREAS, based upon the Task Force’s Findings and Recommendations, information from the Department of Conservation, Division of Mines and Geology, and the result of several monitoring and modeling studies, ARB staff has proposed to amend the Asbestos ATCM;

WHEREAS, the proposed amendments to the Asbestos ATCM would prohibit the sale, supply, and use for surfacing applications of ultramafic rock with an asbestos content of 0.25 percent or greater, and would also impose notice, recordkeeping, and reporting requirements;

WHEREAS, staff has worked closely with the air pollution control districts and air quality management districts (districts), the affected industry, and the public, as required by Health and Safety Code section 39665, to prepare a report identifying the need for, and appropriate degree of control of these toxic air contaminants;

WHEREAS, ARB staff has prepared a staff report entitled Initial Statement of Reasons for the Proposed Amendments to the Asbestos Airborne Toxic Control Measure for Surfacing Applications and appendices (Initial Statement of Reasons) which provides estimates of potential cancer risk due to airborne asbestos fibers near unpaved roads, discusses possible technologically feasible control alternatives, and discusses the potential cost impacts to the affected industry, local districts, and local and state government for implementation and compliance with the proposed amendments;

WHEREAS, to support the 1990 Asbestos ATCM, ARB staff prepared a staff report entitled Initial Statement of Reasons for the Proposed Control Measure for Asbestos-Containing Serpentine Rock in Surfacing Applications (1990 Staff Report) which contains estimates of potential risk to people living near roads surfaced with asbestos-containing material, presents technologically feasible control alternatives, and discusses the potential cost impacts to affected parties to comply with the Asbestos ATCM;
WHEREAS, the Initial Statement of Reasons and the 1990 Staff Report constitute the report on the need and appropriate degree of regulation for asbestos required by Health and Safety Code section 39665;

WHEREAS, in accordance with Health and Safety Code section 39665(c), the report and any relevant comments received during public consultation with the districts, affected sources, and the public were made available for public review and comment 45 days prior to the public hearing to consider the proposed amendments;

WHEREAS, the report discusses, to the extent data could reasonably be made available, the factors specified in Health and Safety Code section 39665(b);

WHEREAS, the proposed amendments to the Asbestos ATCM would substantially reduce asbestos emissions resulting from the use of naturally-occurring asbestos-containing materials for surfacing;

WHEREAS, in accordance with Health and Safety Code section 39666(c), the amendments have been designed, in consideration of the factors specified in Health and Safety Code section 39665(b), to reduce emissions of asbestos to the lowest levels achievable through application of best available control technology (BACT);

WHEREAS, based on comments received during the 45-day comment period prior to the public hearing, staff has proposed modifications to the original proposal; these modifications are set forth in Attachment B to this resolution;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project that may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, the proposed amendments to the Asbestos ATCM were made available to the public for review and comment, and concepts and drafts of the amendments were discussed at public consultation meetings on November 16, 1999, February 4, 2000, and May 23, 2000;

WHEREAS, in consideration of the staff report, written comments, and public testimony it has received, the Board finds that:

Existing federal, State, and local regulations do not sufficiently protect the public health from sources of naturally-occurring asbestos;
The use of naturally-occurring asbestos-containing material for surfacing may result in potentially harmful concentrations of asbestos fibers being entrained in the air, and these asbestos fiber concentrations may pose a significant health risk to exposed members of the public;

The proposed amendments to the Asbestos ATCM would substantially reduce asbestos emissions from the use of naturally-occurring asbestos-containing material for unpaved surfacing applications;

The proposed amendments to the Asbestos ATCM comply with the requirements of the State law for control of sources of toxic air contaminants identified by the Board;

The proposed amendments to the Asbestos ATCM constitute the best available control technology, as required by Health and Safety Code section 39666(c) and, also constitute a pollution prevention measure;

The economic impacts of the amendments have been analyzed as required by California law, and the conclusions and supporting documentation for this analysis are set forth in the Initial Statement of Reasons;

Suitable alternative surfacing materials are available which do not contain detectable levels of asbestos;

The benefits to human health, public safety, public welfare, or the environment justify the costs of the regulatory amendments;

The reporting requirements of the amendments which apply to businesses are necessary for the health, safety, and welfare of the people of the State; and

No alternative considered would be more effective at carrying out the purpose for which the amendments are proposed, or be as effective and less burdensome to the affected private persons and businesses than the amendments.

WHEREAS, the Board further finds, in accordance with the Health and Safety Code, section 39650(e), that:

While absolute and undisputed scientific evidence may not be available to determine the exact extent of risk from emissions of asbestos from sources of naturally-occurring asbestos-containing materials, it is necessary to take action to protect public health; and
WHEREAS, pursuant to the requirements of the California Environmental Quality Act and the Board’s regulations, the Board further finds that:

No significant adverse environmental impacts should occur from the proposed amendments, with the exception that there may be very small increases in emissions of diesel particulate matter, carbon monoxide, nitrogen oxides, and hydrocarbons from heavy-duty diesel vehicles;

These emission increases may occur because in some cases alternative sources of aggregate may be transported an additional 25 to 50 miles, resulting in statewide emission increases per year of approximately 100 to 200 pounds of diesel particulate matter, 200 to 400 pounds of carbon monoxide, 2,000 to 4,000 pounds of nitrogen oxides, and 200 to 400 pounds of hydrocarbons;

The emission increases described above are extremely small, but could nevertheless constitute an adverse environmental impact;

Because alternative aggregate material is generally more durable and will not need to be replaced as frequently, any emission increases are expected to be short-term ones that will diminish over time;

The proposed amendments are necessary in order to protect public health by reducing asbestos emissions from the use of naturally-occurring asbestos-containing material for surfacing applications;

The considerations identified above override any adverse environmental impacts that may occur from an increase in heavy-duty vehicle emissions; and

There are no feasible mitigation measures or alternatives that would reduce the potential adverse impacts of the proposed amendments, while at the same time ensuring that the positive environmental impacts (i.e., a reduction in asbestos emissions) would be achieved.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the proposed amendments to section 93106, title 17, CCR, as set forth in Attachments A and B hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt the amendments set forth in Attachment A, with the modifications set forth in Attachment B and such other conforming modifications as may be appropriate, after making the modified regulatory language and any additional supporting documents and information available to the public for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make such modifications as may be appropriate in light of the comments received, and shall present the regulation to the Board for further consideration if he determines that this is warranted.
BE IT FURTHER RESOLVED that the Board directs the Executive Officer to continue working with the Department of Conservation in its efforts to develop assessment methodologies and guidance documents that will assist in determining the likely presence of naturally-occurring asbestos-bearing materials on parcels of land.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer, in consultation with the Department of Conservation, to assist the air pollution control districts and air quality management districts to:

1. Evaluate existing quarrying and other surface mining operations located in geographic ultramafic rock units for the presence of ultramafic rock and other asbestos-containing materials; and

2. Develop digitized geologic maps indicating the locations where asbestos is more likely to be found for the air pollution control districts and air quality management districts where asbestos is known to occur.

BE IT FURTHER RESOLVED that, pursuant to sections 39515, 39516, 39600, and 39601 of the Health and Safety Code, the Board expressly delegates to the Executive Officer the authority to adopt regulatory amendments to the Asbestos ATCM to reflect updates in the availability of the geologic maps identified in Appendix A to section 93106, title 17, CCR, indicating locations more likely to contain asbestos, and to conduct public hearings and take other appropriate actions to make such amendments.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer, in consultation with affected governmental agencies, regulated parties, and the California Air Pollution Control Officers Association, to develop appropriate implementation guidance that will allow for expeditious permitting of affected activities.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer, in consultation with affected governmental agencies, regulated parties, and the California Air Pollution Control Officers Association, to develop appropriate implementation guidance that will allow for expeditious permitting of affected activities.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer, in consultation with the regulated parties and the California Air Pollution Control Officers Association, to develop appropriate alternative sampling and testing procedures, including procedures to accommodate the in situ testing of ultramafic rock prior to excavation.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to work with the regulated parties and the California Air Pollution Control Officers Association to address the potential use of ultramafic rock on unpaved roads located in sparsely populated areas, in consideration of public health protection and future land use.
BE IT FURTHER RESOLVED that the Board directs the Executive Officer to explore options that would provide areas with incentives to pave existing roads surfaced with asbestos-containing material, while complying with the Asbestos ATCM.

I hereby certify that the above is a true and correct copy of Resolution 00-27, as adopted by the Air Resources Board.

Marie Kavan, Clerk of the Board
Resolution 00-27
July 20, 2000

Identification of Attachments to the Board Resolution


Attachment B: Staff's Suggested Changes to the Original Proposal (distributed at the Board hearing on July 20, 2000).
Attachment A

Proposed Amendments to the Asbestos Airborne Toxic Control Measure (section 93106, title 17, California Code of Regulations), as set forth in Attachment A to the Initial Statement of Reasons, released June 2, 2000
PROPOSED REGULATION ORDER

ASBESTOS AIRBORNE TOXIC CONTROL MEASURE
FOR SURFACING APPLICATIONS

[Note: The proposed amendments to Section 93106 are shown in strike-out to indicated proposed deletions and underline to indicate proposed additions.]

Section 93106. Asbestos Airborne Toxic Control Measure—Asbestos-Containing Serpentine for Surfacing Applications.

(a) Definitions. For the purposes of this section, the following definitions shall apply:

(1) "Aggregate" means a mixture of mineral fragments, sand, gravel, rocks, or similar minerals.

(2) "Alluvial deposit" means any deposit of sediments laid down by running water including but not limited to streams and rivers.

(3) "Approved asbestos bulk test method" means ARB Test Method 435 or an alternative asbestos bulk test method approved in writing by the Executive Officer of the Air Resources Board.

(4) "ARB" means the California Air Resources Board.

(5) ARB Test Method 435" means the test method specified in Title 17, California Code of Regulations, section 94147.

(6) "Asbestos" means asbestiforms of the following hydrated minerals: chrysotile (fibrous serpentine), crocidolite (fibrous riebeckite), amosite (fibrous cummingtonite–grunerite), fibrous tremolite, fibrous actinolite, and fibrous anthophyllite.

(7) "Asbestos-containing material" means any material that has an asbestos content of 0.25 percent or more as determined by an approved asbestos bulk test method.

(8) "Asbestos-containing serpentine material" means serpentine material that has an asbestos content greater than five percent (5.0%) as determined by ARB Test Method 435.

(8) "Asbestos geologic assessment" means a geologic evaluation of a property conducted by a registered geologist to determine the presence of asbestos, asbestos-containing material, or ultramafic rock.
"District" means any air pollution control or air quality management district created or continued in existence pursuant to Part 3 (commencing with section 40000), Division 26, Health and Safety Code.

"Executive Officer" means the Executive Officer of the ARB, the executive officer or air pollution control officer of any district, or designee thereof.

"Non-wearing surface" means any non-road surface that has an incline greater than twenty (20) percent, including, but not limited to, the use of riprap, road cuts, or soil stabilization.

"Owner/operator" or "person" includes, but is not limited to, an individual, trust, firm, joint stock company, business concern, partnership, limited liability company, association, or corporation including, but not limited to, a government corporation. "Owner/operator" or "person" also includes any city, county, district, commission, the state or any department, agency, or political subdivision thereof, any interstate body, and the federal government or any department or agency thereof to the extent permitted by law. "Owner/operator" or "person" also includes a project proponent and any of its contractors and subcontractors.

"Producer" means any person that extracts and processes aggregate material from the ground.

"Receipt" means any written acknowledgement that a specified amount of serpentine, serpentine material, or ultramafic rock was received, delivered, or purchased. Receipts include, but are not limited to, bills of sale, bills of lading, and notices of transfer.

"Registered geologist" means an individual that is currently licensed with the State of California, Department of Consumer Affairs, Board of Geology and Geophysicists as a geologist.

"Remote location" means any location that is at least one (1.0) mile from the location of a receptor, which includes, but is not limited to, hospitals, schools, day care centers, work sites, businesses, residences, and permanent campgrounds. The distance of one (1.0) mile is to be measured from the outer most limit of the area to be disturbed or road surface, whichever is further.

"Road surface" means the traveled way of a road and any shoulder which may extend up ten (10) feet from the edge of the traveled way.
(9) "District" means any air pollution control or air quality management district created or continued in existence pursuant to Part 3 (commencing with section 40000), Division 26, Health and Safety Code.

(10) "Executive Officer" means the Executive Officer of the ARB, the executive officer or air pollution control officer of any district, or designee thereof.

(11) "Non-wearing surface" means any non-road surface that has an incline greater than twenty (20) percent, including, but not limited to, the use of riprap, road cuts, or soil stabilization.

(12) "Owner/operator" or "person" includes, but is not limited to, an individual, trust, firm, joint stock company, business concern, partnership, limited liability company, association, or corporation including, but not limited to, a government corporation. "Owner/operator" or "person" also includes any city, county, district, commission, the state or any department, agency, or political subdivision thereof, any interstate body, and the federal government or any department or agency thereof to the extent permitted by law. "Owner/operator" or "person" also includes a project proponent and any of its contractors and subcontractors.

(13) "Producer" means any person that extracts and processes aggregate material from the ground.

(14) "Receipt" means any written acknowledgement that a specified amount of serpentine, serpentine material, or ultramafic rock was received, delivered, or purchased. Receipts include, but are not limited to, bills of sale, bills of lading, and notices of transfer.

(15) "Registered geologist" means an individual that is currently licensed with the State of California, Department of Consumer Affairs, Board of Geology and Geophysicists as a geologist.

(16) "Remote location" means any location that is at least one (1.0) mile from the location of a receptor, which includes, but is not limited to, hospitals, schools, day care centers, work sites, businesses, residences, and permanent campgrounds. The distance of one (1.0) mile is to be measured from the outer most limit of the area to be disturbed or road surface, whichever is further.

(17) "Road surface" means the traveled way of a road and any shoulder which may extends up ten (10) feet from the edge of the traveled way.
(8)(18) "Sand and gravel operation" means any aggregate-producing facility operating in alluvial deposits.

(9)(19) "Serpentine" means any form of hydrous magnesium silicate minerals—including, but not limited to, antigorite, lizardite, and chrysotile.

(10)(20) "Serpentine material" means any material that contains at least ten percent (10%) serpentine as determined by a registered geologist. The registered geologist must document precisely how the serpentine content of the material in question was determined.

(21) "Serpentinite" means a rock consisting almost entirely of serpentine, although small amounts of other minerals such as magnetite, chromite, talc, brucite, and tremolite-actinolite may also be present.

(11)(22) "Surfacing" means the act of covering any surface used for pedestrian, vehicular, or non-vehicular travel; or decoration, including, but not limited to, roads, road shoulders, streets, access roads, alleys, lanes, driveways, parking lots, playgrounds, trails, squares, plazas, and fairgrounds.

(23) "Ultramafic rock" means an igneous rock composed chiefly of one or more iron/magnesium-rich, dark-colored minerals such as pyroxene, amphibole, and olivine; includes, but is not limited to serpentine, dunite, peridotite, and pyroxenite.

(b) Requirements for use or sale of asbestos-containing serpentine material:

(1) No person shall use or apply serpentine material for surfacing in California unless the material has been tested using ARB Test Method 435 and determined to have an asbestos content of five percent (5.0%) or less. A written receipt or other record documenting the asbestos content shall be retained by any person who uses or applies serpentine material, for a period of at least seven years from the date of use or application, and shall be provided to the Air Pollution Control Officer or his designee for review upon request.

(2) Any person who sells, supplies, or offers for sale serpentine material in California shall provide with each sale or supply a written receipt containing the following statement: "Serpentine material may have an asbestos content greater than five percent (5.0%). It is unlawful to use serpentine material for surfacing unless the material has been tested and found to contain less than or equal to five percent (5.0%) asbestos. All tests for asbestos content must use California Air Resources Board Test Method 435, and a written record documenting the test results must be retained for at least seven years if the material is used for surfacing."
(3) No person shall sell, supply, or offer for sale serpentine material for surfacing in California unless the serpentine material has been tested using ARB Test Method 435 and determined to have an asbestos content of five percent (5.0%) or less. Any person who sells, supplies, or offers for sale serpentine material that he or she represents, either orally or in writing, to be suitable for surfacing or to have an asbestos content that is five percent (5.0%) or less, shall provide to each purchaser or person receiving the serpentine material a written receipt which specifies the following information: the amount of serpentine material sold or supplied; the dates that the serpentine material was produced, sampled, tested, and supplied or sold; and the asbestos content of the serpentine material as measured by ARB Test Method 435. A copy of the receipt must, at all times, remain with the serpentine material during transit and surfacing.

(4) Any person who sells, supplies, or offers for sale serpentine material, shall retain for a period of at least seven years from the date of sale or supply, copies of all receipts and copies of any analytical test results from asbestos testing of the serpentine material. All receipts and test results shall be provided to the Air Pollution Control Officer or his designee for review upon request.

[Note: The existing language in subsection 93106(b) has been reorganized and amended. Some of the language shown below in new subsections (b), (c), and (d) is new language, and some is language that currently appears in the existing subsection 93106(b)(1) through (b)(4). To improve the readability of the proposed amendments, however, the entire text of the existing subsection 93106(b)(1) through (b)(4) has been struck out, and all of the language in new subsections (b), (c), and (d) is shown in underline format.]

(b) Prohibitions on the Use or Sale of Certain Materials for Surfacing

(1) The Executive Officer may require testing for the asbestos content of any material represented as being suitable or used for surfacing.

(2) No person shall use, apply, sell, supply, or offer for sale or supply any of the following materials for surfacing, unless one of the exemptions listed in subsections (f) or (b)(3) applies:

(A) Serpentine or serpentine material.

(B) Ultramafic rock, or

(C) Any material that has been tested and found to have an asbestos content of 0.25 percent or more.
(3) No person shall sell, supply, or offer for sale serpentine material for surfacing in California unless the serpentine material has been tested using ARB Test Method 435 and determined to have an asbestos content of five percent (5.0%) or less. Any person who sells, supplies, or offers for sale serpentine material that he or she represents, either orally or in writing, to be suitable for surfacing or to have an asbestos content that is five percent (5.0%) or less, shall provide to each purchaser or person receiving the serpentine material a written receipt which specifies the following information: the amount of serpentine material sold or supplied; the dates that the serpentine material was produced, sampled, tested, and supplied or sold; and the asbestos content of the serpentine material as measured by ARB Test Method 435. A copy of the receipt must, at all times, remain with the serpentine material during transit and surfacing.

(4) Any person who sells, supplies, or offers for sale serpentine material, shall retain for a period of at least seven years from the date of sale or supply, copies of all receipts and copies of any analytical test results from asbestos testing of the serpentine material. All receipts and test results shall be provided to the Air Pollution Control Officer or his designee for review upon request.

[Note: The existing language in subsection 93106(b) has been reorganized and amended. Some of the language shown below in new subsections (b), (c), and (d) is new language, and some is language that currently appears in the existing subsection 93106(b)(1) through (b)(4). To improve the readability of the proposed amendments, however, the entire text of the existing subsection 93106(b)(1) through (b)(4) has been struck out, and all of the language in new subsections (b), (c), and (d) is shown in underline format.]

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(2) No person shall use, apply, sell, supply, or offer for sale or supply any of the following materials for surfacing, unless one of the exemptions listed in subsections (f) or (b)(3) applies:

(A) Serpentine or serpentine material.

(B) Ultramafic rock, or

(C) Any material that has been tested and found to have an asbestos content of 0.25 percent or more.
(3) **Exemption for Ultramafic Rock that Has Been Tested:** Ultramafic rock may be used, applied, offered for sale or supply, sold, or supplied for surfacing, if the rock has been tested using an approved asbestos bulk test method, and has been determined to contain less than 0.25 percent asbestos.

(4) **Nonsurfacing Applications:** All of the materials listed above in (b)(2) may be used, applied, offered for sale or supply, sold, or supplied for nonsurfacing applications. However, the noticing requirements specified in section (c)(3) must be complied with, as well as the recordkeeping and reporting requirements specified in subsection (d)(3).

(c) **Noticing Requirements**

(1) **Noticing Requirements for Producers of Ultramafic Rock for Surfacing.** A producer is any person that extracts and processes aggregate material from the ground. Any producer who sells, supplies, or offers for sale or supply ultramafic rock that the person represents, either orally or in writing, as being suitable for surfacing, must provide to the recipient of the ultramafic rock a written receipt that displays all of the following information:

(A) The amount of ultramafic rock sold or supplied;

(B) The dates that the ultramafic rock was sampled and tested, or a statement that the material is exempt pursuant to subsection (f)(6);

(C) The asbestos content of the ultramafic rock, if tested; and

(D) The dates that the ultramafic rock was supplied or sold.

(2) **Noticing Requirements for Persons, Other than Producers, Who Sell Ultramafic Rock for Surfacing.** Any person, other than a producer, who sells, supplies, or offers for sale or supply ultramafic rock that the person represents, either orally or in writing, as being suitable for surfacing, must provide to the recipient of the ultramafic rock a written receipt that displays all of the following information:

(A) The amount of ultramafic rock sold or supplied;

(B) The dates that the ultramafic rock was sold or supplied; and

(C) Verification that the asbestos content of the ultramafic rock is less than 0.25 percent.
(3) **Noticing Requirements for Persons Who Sell Material for Nonsurfacing Applications.** Any person who sells, supplies, or offers for sale or supply any of the following materials:

(A) Serpentine or serpentine material,

(B) Ultramafic rock that has not been tested,

(C) Ultramafic rock that has been tested and found to have an asbestos content of 0.25 percent or greater; or

(D) Any material that has been tested and found to have an asbestos content of 0.25 percent or greater,

must provide with each sale or supply a written receipt that displays the following statement:

"**WARNING!**
This material may contain asbestos.

It is unlawful to use this material for surfacing or any application in which it would remain exposed and subject to possible disturbances.

Extreme care should be taken when handling this material to minimize the generation of dust."

(4) All of the written notices and statements required by this section must be displayed in such a manner that they are readily observable and clearly legible.

(d) **Recordkeeping and Reporting Requirements**

(1) **Recordkeeping Requirements for Persons who Use or Apply Ultramafic Rock for Surfacing:** Any person who uses or applies ultramafic rock (other than serpentine) for surfacing must retain any written receipt or other record verifying that the material is suitable for surfacing for a minimum of seven years from the date the material is used or applied. In addition, the person must have a copy of any receipt or record at all times during the actual application of the ultramafic rock for surfacing.

(2) **Recordkeeping Requirements for Persons who Transport Ultramafic Rock for Surfacing:** Any person who transports ultramafic rock for surfacing must maintain a copy of any receipt or record required by subsection (c) with the ultramafic rock at all times during transport.
(3) **Noticing Requirements for Persons Who Sell Material for Nonsurfacing Applications.** Any person who sells, supplies, or offers for sale or supply any of the following materials:

(A) Serpentine or serpentine material.

(B) Ultramafic rock that has not been tested.

(C) Ultramafic rock that has been tested and found to have an asbestos content of 0.25 percent or greater; or

(D) Any material that has been tested and found to have an asbestos content of 0.25 percent or greater.

must provide with each sale or supply a written receipt that displays the following statement:

"**WARNING!**
This material may contain asbestos.

It is unlawful to use this material for surfacing or any application in which it would remain exposed and subject to possible disturbances.

Extreme care should be taken when handling this material to minimize the generation of dust."

(4) All of the written notices and statements required by this section must be displayed in such a manner that they are readily observable and clearly legible.

(d) **Recordkeeping and Reporting Requirements**

(1) **Recordkeeping Requirements for Persons who Use or Apply Ultramafic Rock for Surfacing:** Any person who uses or applies ultramafic rock (other than serpentine) for surfacing must retain any written receipt or other record verifying that the material is suitable for surfacing for a minimum of seven years from the date the material is used or applied. In addition, the person must have a copy of any receipt or record at all times during the actual application of the ultramafic rock for surfacing.

(2) **Recordkeeping Requirements for Persons who Transport Ultramafic Rock for Surfacing:** Any person who transports ultramafic rock for surfacing must maintain a copy of any receipt or record required by subsection (c) with the ultramafic rock at all times during transport.
(3) **Recordkeeping Requirements for Persons who Sell or Supply Serpentine, Serpentine Material, or Ultramafic Rock:** Any person who sells, supplies, or offers for sale or supply serpentine, serpentine material or ultramafic rock must retain copies of all receipts, and any analytical test results from asbestos testing of the rock, for a minimum of seven years from the date of sale or supply.

(4) **Reporting Requirements:** Any receipts, records, or test results referred to in this section shall be provided to the Executive Officer for review upon request.

(e) **Test Methods**

(1) ARB Test Method 435 or an alternative asbestos bulk test method approved in writing by the Executive Officer of the Air Resources Board shall be used to determine compliance with this section. For the purposes of determining compliance with this section, references in ARB Test Method 435 to “serpentine aggregate” shall mean “aggregate material.”

(5)(2) If ARB Test Method 435 or an alternative asbestos bulk test method approved in writing by the Executive Officer of the Air Resources Board has been used to perform two or more tests on any one volume of serpentine material, whether by the same or a different person, the arithmetic average of these test results shall be used to determine the asbestos content of the serpentine. The test results indicating the greater amount of asbestos shall be used to determine the presence of asbestos in the material.

(e)(f) **Exemptions.**

(1) **Sand and Gravel Operations:** The provision of subdivisions (b)(2)(A), (b)(2)(B), (c) and (d) through (b)(5) shall not apply to aggregate extracted from sand and gravel operations.

(2) **Roads located at Surface Mining Operations:** The provisions of subdivision (b)(4) shall not apply to roads located at serpentine quarries, asbestos mines, quarries or mines located in serpentine deposits that are in ultramafic rock units or asbestos mines, provided the material was obtained on site from the quarry or mine property.

(3) **Maintenance Operations on Existing Roads:** The provisions of subdivision (b)(4) shall not apply to maintenance operations on any existing road surfaces, or to the construction of new roads in serpentine deposits, as long as no additional asbestos containing serpentine material is applied to the road surface.
(3) Emergency Road Repairs: The air pollution control officer Executive Officer may issue a temporary exemption from the requirements of subdivision (b)(4) to an applicant who demonstrates that a road repair is necessary due to a landslide, flood, or other emergency and that the use of material other than serpentine or ultramafic rock is not feasible for this repair. The air pollution control officer Executive Officer shall specify the time during which such exemption shall be effective, provided that no exemption shall remain in effect longer than six (6) months or 90 days.

(4) Bituminous and Concrete Materials: The provisions of subdivision (b)(4), (c) and (d) shall not apply to serpentine, serpentine material, or ultramafic rock that is an integral part of the production of bituminous concrete, portland cement concrete, or construction of a bituminous surface, or other similar cemented materials.

(5) Landfill Operations: The provisions of subdivision (b)(4) shall not apply to landfill operations other than the surfacing of public-access roads dedicated to use by vehicular traffic.

(6) Geologic Assessment: The Executive Officer may provide an exemption from subdivisions (b)(2)(B) and (c)(3) for aggregate composed of ultramafic rock other than serpentine provided a registered geologist has conducted an asbestos geologic assessment of the property from which the aggregate was obtained and determined that asbestos is not likely to be found in any of the ultramafic rock located on the property. The owner/operator shall provide a written copy of the asbestos geologic assessment to the Executive Officer for his consideration when providing this exemption.

(7) Non-wearing surfaces: The Executive Officer may provide an exemption from the provisions of subdivision (b) for the use of aggregate on non-wearing surfaces provided that the owner/operator can demonstrate that:

(A) There are no reasonably alternative aggregate available; and

(B) The surface is not located in an area zoned or identified in a land use plan for civic, residential, or commercial use;

(8) Remote locations: The Executive Officer may provide an exemption from the provisions of subdivision (b) for the use of aggregate on unpaved provided that:

(A) The owner/operator can demonstrate that:

1. The surface is located in a remote location; and
(3) **Emergency Road Repairs:** The air pollution control officer Executive Officer may issue a temporary exemption from the requirements of subdivision (b)(4) to an applicant who demonstrates that a road repair is necessary due to a landslide, flood, or other emergency and that the use of material other than serpentine or ultramafic rock is not feasible for this repair. The air pollution control officer Executive Officer shall specify the time during which such exemption shall be effective, provided that no exemption shall remain in effect longer than six (6) months, 90 days.

(4) **Bituminous and Concrete Materials:** The provisions of subdivision (b)(4), (c) and (d) shall not apply to serpentine, serpentine material, or ultramafic rock that is an integral part of the production of bituminous concrete, portland cement concrete, or construction of a bituminous surface, or other similar cemented materials.

(5) **Landfill Operations:** The provisions of subdivision (b)(4) shall not apply to landfill operations other than the surfacing of public-access roads dedicated to use by vehicular traffic.

(6) **Geologic Assessment:** The Executive Officer may provide an exemption from subdivisions (b)(2)(B) and (c)(3) for aggregate composed of ultramafic rock other than serpentine provided a registered geologist has conducted an asbestos geologic assessment of the property from which the aggregate was obtained and determined that asbestos is not likely to be found in any of the ultramafic rock located on the property. The owner/operator shall provide a written copy of the asbestos geologic assessment to the Executive Officer for his consideration when providing this exemption.

(7) **Non-wearing surfaces:** The Executive Officer may provide an exemption from the provisions of subdivision (b) for the use of aggregate on non-wearing surfaces provided that the owner/operator can demonstrate that:

(A) There are no reasonably alternative aggregate available; and

(B) The surface is not located in an area zoned or identified in a land use plan for civic, residential, or commercial use:

(8) **Remote locations:** The Executive Officer may provide an exemption from the provisions of subdivision (b) for the use of aggregate on unpaved provided that:

(A) The owner/operator can demonstrate that:

1. The surface is located in a remote location; and
2. There are no reasonably available alternative aggregate.

(B) In providing this exemption, the Executive Officer shall:

1. Consider the following information: county land use plans, the current use of the surrounding land, and the current and anticipated zoning designations;

2. Provide public notice and solicit comments for a 30-day period before providing this exemption; and

3. Require that any surface exempted pursuant to this subdivision be posted with a permanent sign alerting the public to potential asbestos exposures.

ATTACHMENT B

FOR CONSIDERATION BY THE AIR RESOURCES BOARD AT THE PUBLIC HEARING ON THE PROPOSED AMENDMENTS TO THE ASBESTOS AIRBORNE TOXIC CONTROL MEASURE

JULY 20, 2000

This attachment shows staff's suggested changes to the originally (June 2, 2000) proposed amendments to the Asbestos Airborne Toxic Control Measure (title 17, California Code of Regulations, section 93106).

Changes were made to both the text and the organization of the originally proposed amendments. For clarity, staff's suggested changes are shown in plain text format, because using underlines, strikeouts, or some other format to indicate the changes would make the text too difficult to read.

All proposed modifications will be made available to the public for a 15-day comment period.
PROPOSED REGULATION ORDER

ASBESTOS AIRBORNE TOXIC CONTROL MEASURE
FOR SURFACING APPLICATIONS

Section 93106. Asbestos Airborne Toxic Control Measure for Surfacing Applications.

(a) Effective Date. The requirements of this section shall become effective on March 1, 2001.

(b) Applicability.

This section shall apply to any person who produces, sells, supplies, offers for sale or supply, uses, applies, or transports any of the following materials:

(1) Aggregate material extracted from property where any portion of the property is located in a geographic ultramafic rock unit (as defined in subsection (i)(9)); or

(2) Aggregate material extracted from property that is NOT located in a geographic ultramafic rock unit (as defined in subsection (i)(9)) if the material has been:

(A) Evaluated at the request of the Air Pollution Control Officer (APCO) and determined to be ultramafic rock or serpentine;

(B) Tested at the request of the APCO and determined to have an asbestos content of 0.25 percent or greater as determined using an approved asbestos bulk test method; or

(C) Determined by the owner/operator of a facility to be ultramafic rock, or serpentine, or material that has an asbestos content of 0.25 percent or greater.

(3) Any mixture of aggregate material that contains ten percent (10%) or more of any of the materials listed above in subsection (b)(1) or (b)(2).

(c) Prohibition On the Use, Sale, and Supply of Restricted Aggregate material.

Unless one of the exemptions in subsection (f) applies, no person shall use, apply, sell, supply, or offer for sale or supply any restricted material (as defined in subdivision (i)(20)) for surfacing, unless it has been tested using an approved asbestos bulk test method and determined to have an asbestos content that is less than 0.25 percent.
(d) Requirements to Provide Notice with Restricted Material.

(1) Requirements for Producers of Restricted Material for Surfacing Applications: Any producer who sells, supplies, or offers for sale or supply restricted material for surfacing that has been tested using an approved asbestos bulk test method and determined to have an asbestos content that is less than 0.25 percent, must provide to the recipient of the restricted material a written receipt that contains the following information:

(A) The amount of the restricted material that was sold or supplied;

(B) The date that the restricted material was sold or supplied;

(C) The dates that the restricted material was sampled and tested, or verification that the material is exempt under subsection (f)(7); and

(D) A statement that the asbestos content of the restricted material is less than 0.25 percent.

(2) Requirements for Persons – Other than Producers – who Sell or Supply Restricted Material for Surfacing Applications: Any person, other than a producer, who sells, supplies, or offers for sale or supply restricted material for surfacing, must provide to the recipient of the material a written receipt which specifies the following information:

(A) The amount of the restricted material that was sold or supplied;

(B) The date that the restricted material was sold or supplied; and

(C) A statement that the asbestos content of the restricted material is less than 0.25 percent.

(3) Requirements for the Sale or Supply of Restricted Materials for Non-Surfacing Applications: Any person who sells or supplies, or offers for sale or supply restricted material for non-surfacing applications must provide with each sale or supply a written receipt containing the following statement:
Requirements to Provide Notice with Restricted Material.

(1) **Requirements for Producers of Restricted Material for Surfacing Applications:** Any producer who sells, supplies, or offers for sale or supply restricted material for surfacing that has been tested using an approved asbestos bulk test method and determined to have an asbestos content that is less than 0.25 percent, must provide to the recipient of the restricted material a written receipt that contains the following information:

(A) The amount of the restricted material that was sold or supplied;

(B) The date that the restricted material was sold or supplied;

(C) The dates that the restricted material was sampled and tested, or verification that the material is exempt under subsection (f)(7); and

(D) A statement that the asbestos content of the restricted material is less than 0.25 percent.

(2) **Requirements for Persons – Other than Producers – who Sell or Supply Restricted Material for Surfacing Applications:** Any person, other than a producer, who sells, supplies, or offers for sale or supply restricted material for surfacing, must provide to the recipient of the material a written receipt which specifies the following information:

(A) The amount of the restricted material that was sold or supplied;

(B) The date that the restricted material was sold or supplied; and

(C) A statement that the asbestos content of the restricted material is less than 0.25 percent.

(3) **Requirements for the Sale or Supply of Restricted Materials for Non-Surfacing Applications:** Any person who sells or supplies, or offers for sale or supply restricted material for non-surfacing applications must provide with each sale or supply a written receipt containing the following statement:
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"WARNING!
This material may contain asbestos.

It is unlawful to use this material for surfacing or any application in which it would remain exposed and subject to possible disturbances.

Extreme care should be taken when handling this material to minimize the generation of dust."

(e) Recordkeeping and Reporting Requirements.

(1) Recordkeeping Requirements for Persons Who Use Restricted Material for Surfacing: Any person who uses or applies restricted material for surfacing must retain any written receipt or other record received verifying that the material has an asbestos content of less than 0.25 percent for a minimum period of seven years from the date of use or application.

(2) Recordkeeping Requirements for Persons Who Transport or Apply Restricted Material: Any person transports or applies restricted material must maintain a copy of all receipts or records required by subsection (d) with the material at all times during transit and application.

(3) Recordkeeping Requirements for Persons Who Sell or Supply Restricted Material: Any person who sells, supplies, or offers restricted material for sale or supply shall retain copies of all receipts or records required by to subsection (d) for a minimum period of seven years from the date of sale or supply.

(4) Reporting Requirements for Persons Who Use, Sell, or Supply Restricted Material: Any person who uses restricted material for surfacing, sells, supplies, or offers restricted material for sale or supply must provide receipts and test results to the APCO for review upon request.

(f) Exemptions.

(1) Sand and Gravel Operations: The requirements of subsections (c), (d), and (e) shall not apply to aggregate material extracted from a sand and gravel operation. A "sand and gravel operation" means any aggregate-producing facility operating in alluvial deposits.

(2) Roads Located at Quarries or Mines: The requirements of subsection (c) shall not apply to roads at quarries or mines that are located in a geographic ultramafic rock unit, an ultramafic rock deposit, or a serpentine deposit, provided that the aggregate material was obtained on site from the quarry or mine property.
(3) *Maintenance Operations on Existing Roads*: The requirements of subsections (c), (d), and (e) shall not apply to maintenance operations on any existing road surface, if no additional restricted material is applied to the road surface.

(4) *Emergency Road Repairs*: The APCO may issue a temporary exemption from the requirements of subsections (c), (d), and (e) to an applicant who demonstrates that a road repair is necessary due to a landslide, flood, or other emergency, and that the use of aggregate material other than restricted material is not feasible for this repair. The APCO shall specify the time during which such exemption shall be effective; however, no exemption shall remain in effect longer than 90 days.

(5) *Asphalt and Concrete Materials*: The requirements of subsections (c), (d), and (e) shall not apply to restricted material that is an integral part of the production of asphalt concrete, portland cement concrete or other similarly cemented materials; or construction of a asphalt or a portland cement concrete surface.

(6) *Landfill Operations*: The use and application requirements of subsection (c) shall not apply to landfill operations, except for the surfacing of public-access roads dedicated to use by vehicular traffic.

(7) *Geologic Evaluation*: The APCO may provide an exemption from subsections (c), (d), and (e) for aggregate material extracted from within a geographic ultramafic rock unit if a registered geologist has conducted a geologic evaluation of the property from which the aggregate material is obtained and determined that serpentine or ultramafic rock is not likely to be found on the property. Before an exemption can be granted, the owner/operator must provide a written copy of the geologic evaluation to the APCO for his or her consideration.

At a minimum, the geologic evaluation must include:

(A) A literature search of available geologic maps and studies of the area;

(B) A physical site inspection including:
   1. Reconnaissance of the property
   2. Visual inspection of exposed outcropping, and
   3. Hand lens analyses of rock found;

(C) Collection of various rock samples for possible analysis;
(3) **Maintenance Operations on Existing Roads:** The requirements of subsections (c), (d), and (e) shall not apply to maintenance operations on any existing road surface, if no additional restricted material is applied to the road surface.

(4) **Emergency Road Repairs:** The APCO may issue a temporary exemption from the requirements of subsections (c), (d), and (e) to an applicant who demonstrates that a road repair is necessary due to a landslide, flood, or other emergency, and that the use of aggregate material other than restricted material is not feasible for this repair. The APCO shall specify the time during which such exemption shall be effective; however, no exemption shall remain in effect longer than 90 days.

(5) **Asphalt and Concrete Materials:** The requirements of subsections (c), (d), and (e) shall not apply to restricted material that is an integral part of the production of asphalt concrete, portland cement concrete or other similarly cemented materials; or construction of a asphalt or a portland cement concrete surface.

(6) **Landfill Operations:** The use and application requirements of subsection (c) shall not apply to landfill operations, except for the surfacing of public-access roads dedicated to use by vehicular traffic.

(7) **Geologic Evaluation:** The APCO may provide an exemption from subsections (c), (d), and (e) for aggregate material extracted from within a geographic ultramafic rock unit if a registered geologist has conducted a geologic evaluation of the property from which the aggregate material is obtained and determined that serpentine or ultramafic rock is not likely to be found on the property. Before an exemption can be granted, the owner/operator must provide a written copy of the geologic evaluation to the APCO for his or her consideration.

At a minimum, the geologic evaluation must include:

(A) A literature search of available geologic maps and studies of the area;

(B) A physical site inspection including:
   1. Reconnaissance of the property
   2. Visual inspection of exposed outcropping, and
   3. Hand lens analyses of rock found;

(C) Collection of various rock samples for possible analysis;
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(D) Petrographic analyses and/or analyses for asbestos of collected rock samples when determined to be appropriate by the registered geologist or the APCO;

(E) Archive of collected rock samples for third party examination; and

(F) A geologic evaluation report describing the conclusions of the geologist, and the evidence and reasoning supporting those conclusion.

(8) **Limited Access Surfaces:** The APCO may provide an exemption from the requirements of subsection (c) for the use of restricted material on limited access surfaces, if the owner/operator can demonstrate that:

(A) No alternative materials are reasonably available; and

(B) The surface is not located in an area zoned or identified in a land use plan for residential, recreational, or commercial use.

"Limited access surface" means any surface not subject to vehicular travel or pedestrian access that has an incline greater than twenty (20) percent.

(9) **Surfacing Application in Remote Locations:**

(A) The APCO may provide an exemption from the requirements of subsection (c) for surfacing applications if the owner/operator can demonstrate that:

1. The surface is located in a remote location (as defined in subsection (i)(19)); and

2. No alternative aggregate materials are reasonably available; and

3. Any aggregate material used for surfacing has been tested according to an approved asbestos bulk test method and determined to have an asbestos content of one (1.0) percent or less.

(B) The APCO may consider allowing the use of restricted material with an asbestos content up to five (5.0) percent if the owner/operator can demonstrate that the materials listed above in the subsections (f)(9)(A)2. and (f)(9)(A)3. are not reasonably available.

(C) Before providing this exemption, the APCO shall:
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1. Consider the following information: county land use plans, the current use of the surrounding land, and the current and anticipated zoning designations;

2. Provide public notice and solicit comments for a 30-day period;

3. Require that any surface exempted pursuant to this subsection be posted with a permanent sign alerting the public to potential asbestos exposures; and

4. Require reapplication for the exemption every three years; if the owner/operator cannot demonstrate that all the criteria listed in subdivision (f)(9)(A) are met at the time of reapplication, the exemption shall be revoked.

(10) Roads Located at Construction Sites: The requirements of subsections (c), (d), and (e) shall not apply to restricted material used for the construction of temporary road surfaces located at on-going construction sites where vehicle traffic is limited to construction personnel and equipment. This exemption does not apply to the use of restricted material for temporary roads for public use.

(11) Riprap: The requirements of subsection (c) (d), and (e) shall not apply to restricted material used for riprap. "Riprap" means the material used to construct a loose assemblage of broken stones along a water course or shoreline to prevent erosion or provide stability.

(g) APCO's Authority to Require a Geologic Evaluation and Asbestos Testing.

The APCO or the Executive Officer of the ARB may require:

(1) A geologic evaluation for the presence of ultramafic rock or serpentine on any property from which aggregate material is extracted; or

(2) Testing for the asbestos content of any aggregate material sold, supplied, offered for sale or supply, or used for surfacing.

(h) Applicable Test Methods.

(1) Ultramafic Rock: The ultramafic rock composition of any material shall be determined using a standard analysis technique including, but not limited to, color index assessment, microscopic examination, petrographic analysis or rock thin sections, or chemical analysis techniques, such as X-ray fluorescence spectrometry or indirect coupled plasma analysis.
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1. Consider the following information: county land use plans, the current use of the surrounding land, and the current and anticipated zoning designations;

2. Provide public notice and solicit comments for a 30-day period;

3. Require that any surface exempted pursuant to this subsection be posted with a permanent sign alerting the public to potential asbestos exposures; and

4. Require reapplication for the exemption every three years; if the owner/operator cannot demonstrate that all the criteria listed in subdivision (f)(9)(A) are met at the time of reapplication, the exemption shall be revoked.

(10) Roads Located at Construction Sites: The requirements of subsections (c), (d), and (e) shall not apply to restricted material used for the construction of temporary road surfaces located at on-going construction sites where vehicle traffic is limited to construction personnel and equipment. This exemption does not apply to the use of restricted material for temporary roads for public use.

(11) Riprap: The requirements of subsection (c) (d), and (e) shall not apply to restricted material used for riprap. “Riprap” means the material used to construct a loose assemblage of broken stones along a water course or shoreline to prevent erosion or provide stability.

(g) APCO’s Authority to Require a Geologic Evaluation and Asbestos Testing.

The APCO or the Executive Officer of the ARB may require:

(1) A geologic evaluation for the presence of ultramafic rock or serpentine on any property from which aggregate material is extracted; or

(2) Testing for the asbestos content of any aggregate material sold, supplied, offered for sale or supply, or used for surfacing.

(h) Applicable Test Methods.

(1) Ultramafic Rock: The ultramafic rock composition of any material shall be determined using a standard analysis technique including, but not limited to, color index assessment, microscopic examination, petrographic analysis or rock thin sections, or chemical analysis techniques, such as X-ray fluorescence spectrometry or indirect coupled plasma analysis.
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(2) **Asbestos Testing:** ARB Test Method 435 or an alternative asbestos bulk test method approved in writing by the Executive Officer of the Air Resources Board shall be used to determine compliance with this section. For the purposes of determining compliance with this section, references in ARB Test Method 435 to "serpentine aggregate" shall mean "aggregate material."

(3) **Averaging of Test Results:** If ARB Test Method 435 or an alternative approved asbestos bulk test method has been used to perform two or more tests on any one volume of aggregate material, whether by the same or a different person, the arithmetic average of these test results shall be used to determine the asbestos content of the aggregate material.

(4) **Sampling Frequency:** For the purposes of this section, the sampling frequency required for determining the asbestos content of any aggregate material shall be no less than one composite sample per 1000 tons of aggregate material processed, as specified in ARB Test Method 435, unless the APCO approves an alternative sampling frequency as follows:

(A) The APCO may approve an alternative sampling frequency after reviewing and verifying the authenticity of the following information, which shall be provided by the owner/operator of the quarry:

1. An established history of analytical test results which demonstrate that no aggregate material sampled and tested in accordance with an approved asbestos bulk test method had an asbestos content that was 0.25 percent or greater;

2. The established history of analytical test results must include:

   i. Test results from ten percent of the expected total yield over the life of the quarry as stated in any permit pursuant to the California Surface Mining and Reclamation Act, Public Resources Code, Division 2, Chapter 9, Section 2710 et seq.; or

   ii. Test results that cover at least two years of production of surfacing material; this production amount must be verified with sales receipts and testing results as required in subsection (e)(3);

3. A geologic evaluation of the quarry that has been conducted in accordance with the provisions in subsection (f)(7);
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4. Any permits issued pursuant to the California Surface Mining and Reclamation Act, Public Resources Code, Division 2, Chapter 9, Section 2710 et seq.;

5. Sales receipts retained by the quarry pursuant to subsections (d) and (e)(3).

(B) The APCO shall not approve any alternate sampling frequency that requires less than one test per 100,000 tons of aggregate material processed for surfacing.

(C) If any of the aggregate material tested is determined to have an asbestos content of 0.25 percent or greater using an alternative sampling frequency approved by the APCO, the owner/operator must:

1. Resume the sampling frequency specified in ARB Test Method 435 immediately after receiving the test results; and

2. Report the detection of asbestos and provide a copy of the analytical test results to the APCO within 48 hours after receiving the test results.

(i) Definitions. For the purposes of this section, the following definitions shall apply:

(1) “Aggregate” means a mixture of mineral fragments, sand, gravel, cobbles, rocks, stones, or similar minerals that may or may not be crushed or screened. “Aggregate” does not include, elemental metals, gemstones, petroleum products, organic materials, or mineral ore to be processed offsite of the property from which it was extracted.

(2) “Alluvial deposit” means any deposit of sediments laid down by running water including, but not limited to, streams and rivers.

(3) “APCO” means the executive officer, air pollution control officer; or the designee of the executive officer or air pollution control officer of any air pollution control or air quality management district created or continued in existence pursuant to Part 3 (commencing with section 40000), Division 26, Health and Safety Code;

(4) “Approved asbestos bulk test method” means ARB Test Method 435 or an alternative asbestos bulk test method approved in writing by the Executive Officer of the Air Resources Board.

(5) “ARB” means the California Air Resources Board.
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4. Any permits issued pursuant to the California Surface Mining and Reclamation Act, Public Resources Code, Division 2, Chapter 9, Section 2710 et seq.;

5. Sales receipts retained by the quarry pursuant to subsections (d) and (e)(3).

(B) The APCO shall not approve any alternate sampling frequency that requires less than one test per 100,000 tons of aggregate material processed for surfacing.

(C) If any of the aggregate material tested is determined to have an asbestos content of 0.25 percent or greater using an alternative sampling frequency approved by the APCO, the owner/operator must:

1. Resume the sampling frequency specified in ARB Test Method 435 immediately after receiving the test results; and

2. Report the detection of asbestos and provide a copy of the analytical test results to the APCO within 48 hours after receiving the test results.

(i) Definitions. For the purposes of this section, the following definitions shall apply:

1. "Aggregate" means a mixture of mineral fragments, sand, gravel, cobbles, rocks, stones, or similar minerals that may or may not be crushed or screened. "Aggregate" does not include, elemental metals, gemstones, petroleum products, organic materials, or mineral ore to be processed offsite of the property from which it was extracted.

2. "Alluvial deposit" means any deposit of sediments laid down by running water including, but not limited to, streams and rivers.

3. "APCO" means the executive officer, air pollution control officer; or the designee of the executive officer or air pollution control officer of any air pollution control or air quality management district created or continued in existence pursuant to Part 3 (commencing with section 40000), Division 26, Health and Safety Code;

4. "Approved asbestos bulk test method" means ARB Test Method 435 or an alternative asbestos bulk test method approved in writing by the Executive Officer of the Air Resources Board.

5. "ARB" means the California Air Resources Board.
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(6) "ARB Test Method 435" means the test method specified in title 17, California Code of Regulations, section 94147.

(7) "Asbestos" means asbestiforms of the following hydrated minerals: chrysotile (fibrous serpentine), crocidolite (fibrous riebeckite), amosite (fibrous cummingtonite--grunerite), fibrous tremolite, fibrous actinolite, and fibrous anthophyllite.

(8) "Decoration/landscaping" means the application or use of aggregate materials for aesthetic purposes.

(9) "Geographic ultramafic rock unit" means a geographic area that is designated as an ultramafic rock unit or ultrabasic rock unit, including the unit boundary line, on any of the Department of Conservation, Division of Mines and Geology maps, as referenced in Appendix A.

(10) "Geologic evaluation" means an evaluation of a property, as specified in subsection (f)(7), to determine the presence of various rock types, including ultramafic rock, serpentinite, or other metamorphic derivatives of ultramafic rock.

(11) "Limited access surface" means any surface not subject to vehicular travel or pedestrian access that has an incline greater than twenty (20) percent.

(12) "Non-surfacing applications" means any application of aggregate material that will not remain a part of the uppermost layer, such as fill, base rock, or drain rock.

(13) "Owner/operator" or "person" includes, but is not limited to:

(A) An individual, trust, firm, joint stock company, business concern, partnership, limited liability company, association, or corporation including, but not limited to, a government corporation;

(B) Any city, county, district, commission, the state or any department, agency, or political subdivision thereof, any interstate body, and the federal government or any department or agency thereof to the extent permitted by law; or

(C) A project proponent and any of its contractors and subcontractors.

(14) "Producer" means any person that extracts and processes aggregate material from the ground.
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(15) "Property" means any real property including, but not limited to, any contiguous parcel or parcels of land and anything attached to, or erected on it.

(16) "Quarry" means a facility or operation that obtains stone from the earth by means of cutting, digging, excavating, or blasting.

(17) "Receipt" means any written acknowledgement that a specified amount of restricted material was received, delivered, or purchased. Receipts include, but are not limited to, bills of sale, bills of lading, and notices of transfer.

(18) "Registered geologist" means an individual that is currently licensed as a geologist with the State of California, Department of Consumer Affairs, Board of Geology and Geophysicists.

(19) "Remote location" means any location that is at least one (1.0) mile from the location of a receptor, which includes, but is not limited to, hospitals, schools, day care centers, work sites, businesses, residences, and permanent campgrounds. The distance to the nearest receptor is to be measured from the outermost limit of the area to be disturbed or road surface, whichever is closer.

(20) "Restricted material" means any of the following:

(A) Aggregate material extracted from property where any portion of the property is located in a geographic ultramafic rock unit (as defined in subsection (i)(9)); and

(B) Aggregate material extracted from property that is NOT located in a geographic ultramafic rock unit (as defined in subsection (i)(9)) if the material has been:

1. Evaluated at the request of the Air Pollution Control Officer (APCO) and determined to be ultramafic rock or serpentine;

2. Tested at the request of the APCO and determined to have an asbestos content of 0.25 percent or greater; or

3. Determined by the owner/operator of a facility to be ultramafic rock, serpentine, or aggregate material that has an asbestos content of 0.25 percent or greater.

(C) Any mixture of aggregate material that contains ten percent (10%) or more of any of the materials listed above in subsection (i)(20)(A)
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(15) "Property" means any real property including, but not limited to, any contiguous parcel or parcels of land and anything attached to, or erected on it.

(16) "Quarry" means a facility or operation that obtains stone from the earth by means of cutting, digging, excavating, or blasting.

(17) "Receipt" means any written acknowledgement that a specified amount of restricted material was received, delivered, or purchased. Receipts include, but are not limited to, bills of sale, bills of lading, and notices of transfer.

(18) "Registered geologist" means an individual that is currently licensed as a geologist with the State of California, Department of Consumer Affairs, Board of Geology and Geophysicists.

(19) "Remote location" means any location that is at least one (1.0) mile from the location of a receptor, which includes, but is not limited to, hospitals, schools, day care centers, work sites, businesses, residences, and permanent campgrounds. The distance to the nearest receptor is to be measured from the outermost limit of the area to be disturbed or road surface, whichever is closer.

(20) "Restricted material" means any of the following:

(A) Aggregate material extracted from property where any portion of the property is located in a geographic ultramafic rock unit (as defined in subsection (i)(9)); and

(B) Aggregate material extracted from property that is NOT located in a geographic ultramafic rock unit (as defined in subsection (i)(9)) if the material has been:

1. Evaluated at the request of the Air Pollution Control Officer (APCO) and determined to be ultramafic rock or serpentine;

2. Tested at the request of the APCO and determined to have an asbestos content of 0.25 percent or greater; or

3. Determined by the owner/operator of a facility to be ultramafic rock, serpentine, or aggregate material that has an asbestos content of 0.25 percent or greater.

(C) Any mixture of aggregate material that contains ten percent (10%) or more of any of the materials listed above in subsection (i)(20)(A)
Staff's Suggested Changes to the Original Proposal
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or (i)(20)(B), or any combination thereof, shall also be considered "restricted material."

(21) "Riprap" means material used to construct a loose assemblage of broken stones along a water course or shoreline to prevent erosion or provide stability.

(22) "Road surface" means the traveled way of a road and any shoulder which extends up to ten (10) feet from the edge of the traveled way.

(23) "Sand and gravel operation" means any aggregate-producing facility operating in alluvial deposits.

(24) "Serpentine" means any form of hydrous magnesium silicate minerals, including, but not limited to, antigorite, lizardite, and chrysotile.

(25) "Serpentine" means a rock consisting almost entirely of serpentine, although small amounts of other minerals such as magnetite, chromite, talc, brucite, and tremolite-actinolite may also be present. Serpentine is a metamorphic derivative of the ultramafic rock, peridotite.

(26) "Surfacing" means the act of providing or creating a temporary or permanent covering for a surface used for pedestrians, motor vehicles, non-motor vehicles, decoration, landscaping, soil stabilization, or erosion control. Examples of surfaces include, but are not limited to, roads, road shoulders, streets, access roads, alleys, lanes, driveways, parking lots, playgrounds, trails, squares, plazas, and fairgrounds. For the purposes of this section, "surface" does not include asphalt concrete or portland cement concrete.

(27) "Ultrabasic rock" means ultramafic rock.

(28) "Ultramafic rock" means an igneous rock composed of 90 percent or greater of one or a combination of the following iron/magnesium-rich, dark-colored silicate minerals: olivine, pyroxene, or more rarely amphibole. For the purposes of this section, "ultramafic rock" includes the following rock types: dunite, pyroxenite, and peridotite; and their metamorphic derivatives: talc rock, talc schist, and serpentine.

APPENDIX A

California Department of Conservation
Division of Mines and Geology

AVAILABLE GEOLOGIC MAPS FOR CALIFORNIA

GEOLOGIC ATLAS OF CALIFORNIA Scale 1:250,000

GEOLOGIC ATLAS OF CALIFORNIA: ALTURAS
Compiled by Gay, T.E. and others, 1958

GEOLOGIC ATLAS OF CALIFORNIA: BAKERSFIELD
Compiled by Smith, A.R., 1964 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: DEATH VALLEY
Compiled by Streitz, R.L. and Stinson, M.C., 1974 (reprinted 1991)

GEOLOGIC ATLAS OF CALIFORNIA: FRESNO
Compiled by Matthews, R.A. and Burnett, J.L., 1965 (reprinted 1991)

GEOLOGIC ATLAS OF CALIFORNIA: LONG BEACH
Compiled by Jennings, C.W., 1962 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: LOS ANGELES

GEOLOGIC ATLAS OF CALIFORNIA: MARIPOSA

GEOLOGIC ATLAS OF CALIFORNIA: NEEDLES
Compiled by Bishop, C.C., 1963 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: REDDING
Compiled by Strand, R.G., 1962

GEOLOGIC ATLAS OF CALIFORNIA: SALTON SEA
Compiled by Jennings, C.W., 1967 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SAN LUIS OBISPO
Compiled by Jennings, C.W., 1958 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SAN DIEGO - EL CENTRO
Staff's Suggested Changes to the Original Proposal
(distributed at the Board hearing on July 20, 2000)

GEOLOGIC ATLAS OF CALIFORNIA: SANTA ANA
Compiled by Rogers, T.H., (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SANTA CRUZ

GEOLOGIC ATLAS OF CALIFORNIA: SANTA MARIA
Compiled by Jennings, C.W., 1959 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: UKIAH

GEOLOGIC ATLAS OF CALIFORNIA: WALKER LAKE
Compiled by Koenig, J.B., 1963 (reprinted 1992)

REGIONAL GEOLOGIC MAP SERIES Scale 1:250,000

GEOLOGIC MAP OF THE SACRAMENTO QUADRANGLE
(set of four sheets)
Compiled by Wagner, D.L. and others, 1981

GEOLOGIC MAP OF THE SANTA ROSA QUADRANGLE
(set of five sheets)
Compiled by Wagner and D.L., Bortugno, E.J. (reprinted 1999)

GEOLOGIC MAP OF THE SAN BERNARDINO QUADRANGLE
(set of five sheets)

GEOLOGIC MAP OF THE WEED QUADRANGLE
(set of four sheets)
By Wagner, D.L. and Saucedo, G.J., 1987

GEOLOGIC MAP OF THE SAN FRANCISCO-SAN JOSE QUADRANGLE
(set of five sheets)
Color-coded faults

LOCAL GEOLOGIC MAPS

AREAS MORE LIKELY TO CONTAIN NATURALLY-OCCURRING ASBESTOS IN WESTERN EL DORADO COUNTY, CALIFORNIA
By Ron Churchill, March 2000
Scale 1:100,000
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GEOLOGIC ATLAS OF CALIFORNIA: SANTA ANA
Compiled by Rogers, T.H., (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SANTA CRUZ

GEOLOGIC ATLAS OF CALIFORNIA: SANTA MARIA
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