

Monitoring and Recordkeeping Program for Asphalt Related Products

May 2005

1. OBJECTIVE

Pursuant to the terms of the Consent Judgment Resolving the People's Claims Against Paving Defendants and the terms of the Consumer Advocacy Group, Inc. and Environmental World Watch, Inc. Consent Judgment (the "Consent Judgments"), each Settling Paving Defendant ("Settling Defendant") shall take the following exposure reduction measures to reduce or mitigate any occupational, environmental or consumer exposure to the certain chemicals known to the State of California to cause cancer and/or reproductive toxicity ("Covered Chemicals") arising from the use of Asphalt Related Products. "Asphalt Related Products" refers collectively to asphalt and all products containing asphalt as an ingredient. "Asphalt Related Products" also refers to chemicals that are ingredients in products that Settling Defendants use during Paving Operations. "Paving Operations" are the paving projects performed, supplied or undertaken by Settling Defendants, including Settling Defendants' manufacture, sale, distribution, transportation, application, storage, use and/or recycling of asphalt, and products that contain asphalt, will contain asphalt, or result in the exposure to asphalt, for use in such paving projects. A list of Covered Chemicals is attached hereto as Exhibit A.

2. TEMPERATURE REDUCTION MEASURES

Settling Defendants shall limit the temperature of Asphalt Related Products in their direct control to *either*: (1) no greater than 375 degrees Fahrenheit *or* (2) at least 25 degrees Fahrenheit below the product's "flash point," (as determined by the AASHTO test method T48 or ASTM test method D92) pursuant to the terms of the Consent Judgments.

Each Settling Defendant shall institute reasonable and appropriate measures to limit the temperature of Asphalt Related Products over which, and during such time at which, that defendant has direct control over such products. These reasonable and appropriate measures shall include measures to *regularly monitor and verify* the temperature of heated Asphalt Related Products used in the course of each Settling Defendant's paving business, from the refinery and thereafter, as detailed in Sections 2.1 to 2.8 below. Compliance with the measures described in Sections 2.1 to 2.8 shall be presumed to be reasonable and appropriate.

All records referred to herein may be created and/or stored in electronic form.

2.1 Transfer of Asphalt Binder to Haul Truck.

At a refinery or terminal, asphalt binder, the principal binding agent in Hot Mix Asphalt ("HMA"), is loaded into a Haul Truck for transport and delivery to a HMA Plant. In order to ensure that the temperature of the asphalt binder is either: (1) no greater than 375 degrees Fahrenheit *or* (2) at least 25 degrees Fahrenheit below the product's "flash point," the refinery or terminal will:

2.1.1 Monitor Temperature at Load-Out: Refinery or terminal employee(s) must monitor the temperature of asphalt binder that is approved for loading and may only load asphalt binder into the Haul Trucks that is either: (1) no greater than 375 degrees Fahrenheit *or* (2) at least 25 degrees Fahrenheit below the product’s “flash point.”

2.1.2 Verify Temperature at Load-Out: Refinery or terminal employee(s) must verify that the temperature of asphalt binder loaded into the Haul Truck is either: (1) no greater than 375 degrees Fahrenheit *or* (2) at least 25 degrees Fahrenheit below the product’s “flash point.” Refinery or terminal employee(s) shall prepare loading documents, which may include (but are not limited to) Bills of Lading, Manifests, and Lab Reports, indicating either: (1) the temperature of asphalt binder at load-out, if below 375 degrees Fahrenheit, or (2) the temperature of the asphalt binder at load-out and the product’s “flash point,” together with the following statement:

“Material temperature is less than 375 degrees Fahrenheit or at least 25 degrees Fahrenheit below the product’s flash point.”

Refineries and terminals shall maintain records of all such loading documents in a business-like manner for three (3) years.

2.2 Transport of Asphalt Binder to HMA Plant.

From the refinery or terminal, asphalt binder is transported to a HMA Plant where it is loaded into storage tanks. In order to ensure that the temperature of the asphalt binder during transport and off-loading into the HMA storage tanks is either: (1) no greater than 375 degrees Fahrenheit *or* (2) at least 25 degrees Fahrenheit below the product’s “flash point,” the transporter will:

2.2.1 Limit Temperature During Transport: If a transporter utilizes a Haul Truck with tank heaters to transport the asphalt binder, and the Haul Truck is equipped with an automated temperature control device, the device must be set to comply with the temperature requirements of this paragraph and calibrated at least once every twelve (12) months. If a transporter utilizes a Haul Truck with tank heaters to transport the asphalt binder, and the Haul Truck is not equipped with an automated temperature control device, the operator of the truck will (1) not allow the temperature of the asphalt binder to exceed the requirements of this paragraph, and (2) on each occasion the tank heater is activated, manually record the temperature of the asphalt binder (and the product’s “flash point” if it is being used as the basis for calculating the product’s maximum allowable temperature) just before turning off the tank heater. Records describing the results of the calibrations or temperatures recorded are to be maintained by the transporter in a business-like manner for three years.

2.3 Storage and Mixing at HMA Plant.

Asphalt binder is stored until pumped into a “drum” or “pugmill” where it is mixed with aggregate material to form HMA. In order to ensure that the temperature of the asphalt binder during storage and the temperature of the mixture are either: (1) no greater than 375 degrees Fahrenheit *or* (2) at least 25 degrees Fahrenheit below the product’s “flash point,” the HMA Plant will:

2.3.1 *Monitor & Verify the Temperature of Asphalt Binder During Storage:* HMA Plant employee(s) must monitor and control the representative temperature of the asphalt binder in the storage tanks. The temperature of the asphalt binder in any storage tank must be either: (1) no greater than 375 degrees Fahrenheit *or* (2) at least 25 degrees Fahrenheit below the product’s “flash point.” Storage tanks with automated temperature control devices must be set to comply with the temperature requirements of this paragraph and calibrated at least once every twelve (12) months. If asphalt binder is stored in tanks that do not have automated temperature controls the temperature must be recorded at least once per week. The record shall indicate the result of the temperature test, including either: (1) the temperature of asphalt binder, if below 375 degrees Fahrenheit, or (2) the temperature of the asphalt binder and the product’s “flash point.” Records describing the results of the calibrations or temperature tests are to be maintained in a business-like manner for three years. Where no substantial direct heat is added to the asphalt binder during storage, HMA Plant personnel are not required to monitor or verify the temperature and may instead rely on the monitoring and verification of the party transporting asphalt binder from the Refinery.

2.3.2 *Monitor & Verify the Temperature of the HMA:* If additional substantial direct heat is added during the mixing of asphalt binder to create HMA, the HMA Plant employee(s) responsible for pumping the asphalt binder into the “drum” or “pugmill” for mixing into HMA shall monitor the temperature of the binder during pumping. If a HMA Plant is equipped with an automated temperature control device, the device must be set to comply with the temperature requirements of this paragraph and calibrated at least once every twelve (12) months. If a HMA Plant is not equipped with an automated temperature control device, plant personnel must monitor and record the temperature of the HMA manually at least once daily. The record shall indicate the result of the temperature test, including either: (1) the temperature of asphalt binder, if below 375 degrees Fahrenheit, or (2) the temperature of the asphalt binder and the product’s “flash point.” Records describing the results of the calibrations or temperature tests are to be maintained by the plant in a business-like manner for three years.

2.4 Transfer of HMA from HMA Plant to Haul Truck.

HMA is loaded into Haul Trucks for transport to project sites and into paving machines. In order to ensure that the temperature of the HMA during the transfer is

either: (1) no greater than 375 degrees Fahrenheit *or* (2) at least 25 degrees Fahrenheit below the product's "flash point," the HMA Plant will:

2.4.1 Monitor Temperature of HMA During Load-Out: If additional substantial direct heat is added to the HMA after mixing, HMA Plant employee(s) must periodically test the temperature of the HMA loaded into the Haul Trucks as described below. If a HMA Plant is equipped with an automated temperature control device at load-out, the device must be set to comply with the temperature requirements of this paragraph and calibrated at least once every twelve (12) months. If a HMA Plant is not equipped with an automated temperature control device at load-out, plant personnel must monitor and record the temperature of the HMA manually at least once daily. The record shall indicate the result of the daily temperature test, including either: (1) the temperature of asphalt binder at load-out, if below 375 degrees Fahrenheit, or (2) the temperature of the asphalt binder and the product's "flash point." Records describing the results of the calibration or temperatures tests are to be maintained by the plant in a business-like manner for three years.

2.5 Transport of HMA to Project Sites and Paving Machines.

HMA is off-loaded from the Haul Trucks at project sites and into paving machines. The material is then placed on a surface where the pavement is compacted and rolled until cooled. Any asphalt containing material that arrives at a project site at either: (1) no greater than 375 degrees Fahrenheit *or* (2) at least 25 degrees Fahrenheit below the product's "flash point" shall not be substantially directly heated in paving machines or otherwise during the paving process. In order to ensure that the temperature of the HMA during transport is either: (1) no greater than 375 degrees Fahrenheit *or* (2) at least 25 degrees Fahrenheit below the product's "flash point," the transporter will:

2.5.1 Limit Temperature During Transport: HMA must not be exposed to additional substantial direct heat during transport to a project site. If a transporter utilizes a Haul Truck with a materials heating device to transport HMA, and the Haul Truck is equipped with an automated temperature control device, the temperature control device must be set to comply with the temperature requirements of this paragraph and calibrated at least once every twelve (12) months. If a transporter utilizes a Haul Truck with a materials heating device to transport the asphalt binder, and the Haul Truck is not equipped with an automated temperature control device, the operator of the truck will (1) not allow the temperature of the HMA to exceed the requirements of this paragraph, and (2) on each occasion the materials heating device is activated, manually record the temperature of the HMA (and the product's "flash point" if it is being used as the basis for calculating the product's maximum allowable temperature) just before turning off the materials heating device. Records describing the results of the calibrations or temperatures recorded are to be maintained by the transporter in a business-like manner for three years.

2.5.2 Field Blend Rubber Binder.

Settling Defendants utilizing Field Blend Rubber Binder shall use existing procedures for production, monitoring and recording. “Field Blend Rubber Binder” is defined as a binder blended in the field that contains crumb rubber. Producers of Field Blend Rubber Binder shall:

Monitor the Temperature During Production: The temperature of Field Blend Rubber Binder during production must be either: (1) no greater than 375 degrees Fahrenheit *or* (2) at least 25 degrees Fahrenheit below the product’s “flash point.” If a Field Blend Rubber Binder production facility is equipped with an automated temperature control device, the device must be set so the temperature complies with the requirements of this paragraph and calibrated at least once every twelve (12) months. If a Field Blend Rubber Binder production facility is not equipped with an automated temperature control device, facility personnel must test and record the temperature of at least one batch of Field Blend Rubber Binder per day immediately after the batch is completed. The record shall indicate the results of the temperature test, including either: (1) the temperature of Field Blend Rubber Binder, if below 375 degrees Fahrenheit, or (2) the temperature of the Field Blend Rubber Binder and the product’s “flash point.” Records describing the results of the calibrations or temperatures recorded are to be maintained by the Field Blend Rubber Binder producer in a business-like manner for three years

2.5.3 Monitor the Temperature of Materials During Storage: The temperature of Field Blend Rubber Binder during storage must be either: (1) no greater than 375 degrees Fahrenheit *or* (2) at least 25 degrees Fahrenheit below the product’s “flash point.” If a Field Blend Rubber Binder storage facility is equipped with an automated temperature control device, the device must be set so the temperature complies with the requirements of this paragraph and calibrated at least once every twelve (12) months. If a Field Blend Rubber storage facility is not equipped with an automated temperature control device, facility personnel must test and record the temperature of the Field Blend Rubber Binder at least once per day. The record shall indicate the results of the temperature test, including either: (1) the temperature of Field Blend Rubber Binder, if below 375 degrees Fahrenheit, or (2) the temperature of the Field Blend Rubber Binder and the product’s “flash point.” Records describing the results of the calibrations or temperature tests are to be maintained by the Field Blend Rubber Binder producer in a business-like manner for three years

2.6 Spray Apply Applications.

2.6.1 Verify Temperature at Load-Out: Companies supplying Asphalt Related Products for Spray Apply Applications must periodically test the temperature of the product(s) as described below. If a supplier is equipped with an automated temperature control device at load-out, the device must be set to comply with the temperature requirements of this paragraph and calibrated at least once every twelve (12)

months. If a supplier is not equipped with an automated temperature control device at load-out, supplier personnel must monitor and record the temperature of the product(s) manually at least once daily. The record shall indicate the result of the daily temperature test, including either: (1) the temperature of the product(s) at load-out, if below 375 degrees Fahrenheit, or (2) the temperature of the product(s) and the product's "flash point." Records describing the results of the calibrations or temperature tests are to be maintained by the supplier in a business-like manner for three years.

2.6.2 Monitor Temperature During Transport: If a spreader truck is equipped with an automated temperature control device, the device must be set to comply with the temperature requirements of this paragraph and calibrated at least once every twelve (12) months. If a spreader truck is not equipped with an automated temperature control device, the operator of the truck will (1) not allow the temperature of the product to exceed the requirements of this paragraph, and (2) on each occasion the heater is activated, manually record the temperature of the product (and the product's "flash point" if it is being used as the basis for calculating the product's maximum allowable temperature) just before turning off the heater. Records describing the results of the calibrations or temperatures recorded are to be maintained by the company operating the spreader truck in a business-like manner for three years.

3. CLEAR AND REASONABLE WARNINGS AND TRAINING MEASURES

Each Settling Defendant agrees to provide clear and reasonable Proposition 65 warnings and training to its California employees who are exposed to the Asphalt Related Products as described below.

3.1 Clear and Reasonable Warnings.

Settling Defendants agree to take the following actions to provide clear and reasonable Proposition 65 warnings to its employees:

3.1.1 Incorporate Proposition 65 Warnings in Training Materials: Each Settling Defendant shall incorporate the Proposition 65 warning below into the chemical hazard warnings and trainings provided in its hazard communication training plans under the California Hazard Communication Standard set forth in California Code of Regulations, Title 8, Section 5194.

3.1.2 Post Proposition 65 Warning Sign at Permanent Places of Business: Each Settling Defendant shall post a Proposition 65 warning sign *conspicuously* at each of its permanent places of business in California where employees are likely to handle, use, store or be exposed to Asphalt Related Products, in the location where warnings and employee notices are customarily posted and employees are likely to see and read the warning sign. The Proposition 65 warning sign must include the following warning statement:

WARNING: CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM ARE PRESENT IN YOUR WORK AREA.

Asphalt, sand, diesel engine exhaust and other materials in your work area contain chemicals known to the State of California to cause cancer and/or reproductive harm. Exposure to some or all of these chemicals occurs during paving operations and related activities. Always familiarize yourself with the hazards of the materials and equipment you are using and follow the precautions indicated on product labels, Material Safety Data Sheets and your health and safety training program.

3.2 Employee Training.

3.2.1 *Training in Physical and Health Hazards:* Each Settling Defendant shall require its employees to read and sign the following Proposition 65 warning, a sample of which is attached hereto as Exhibit B:

WARNING: CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM ARE PRESENT IN YOUR WORK AREA.

Asphalt, sand, diesel engine exhaust and other materials in your work area contain chemicals known to the State of California to cause cancer and/or reproductive harm. Exposure to some or all of these chemicals occurs during paving operations and related activities. Always familiarize yourself with the hazards of the materials and equipment you are using and follow the precautions indicated on product labels, Material Safety Data Sheets and your health and safety training program.

3.2.2 *Training in Protection Measures:* Each Settling Defendant shall train its employees in the measures that they can take to protect themselves from physical and health hazards, including the measures implemented by the employer to protect employees from exposure to hazardous substances. Such training shall include those measures described herein and each employee shall sign a document reflecting such training (see attached).

Acknowledgment of Training and Notification Regarding Production and Use of Asphalt Related Products

Following receipt of training and instruction concerning requirements of the Monitoring and Recordkeeping Program, please sign and print your name, as appropriate, where indicated below.

- (1) I have been provided instruction concerning information contained in the Monitoring and Recordkeeping Program and understand the requirements of the Program.

While the measures in the Monitoring and Recordkeeping Program are anticipated to significantly reduce or eliminate the risks of exposure to chemicals included in asphalt related products, employees should be aware that there may be potential risks associated with exposure to such chemicals. As an employee of a company involved in asphalt production, asphalt paving, and related activities, please be advised of the following:

WARNING: CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM ARE PRESENT IN YOUR WORK AREA.

Asphalt, sand, diesel engine exhaust and other materials in your work area contain chemicals known to the State of California to cause cancer and/or reproductive harm. Exposure to some or all of these chemicals occurs during paving operations and related activities. Always familiarize yourself with the hazards of the materials and equipment you are using and follow the precautions indicated on product labels, Material Safety Data Sheets and your health and safety training program.

- (2) I have read and understand the above warning regarding the potential risks associated with chemicals contained in asphalt related products.

Signature of Employee

Name of Employee (Print)