



# Congestion Relief Plan Memorandum

**TO:** DISTRIBUTION LIST  
**FROM:** Paul D. Kovacs, P.E., Chief Engineer PK  
**SUBJECT:** Construction Bulletin No. 10-01  
**DATE:** January 22, 2010

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Attached is a copy of **Construction Bulletin No. 10-01: Guidelines of Best Management Practices for the Operation of Asphalt Shingle Recycling Facilities (Eff. 01/20/10)**.

Copies of this Construction Bulletin should be provided to all of your active Construction Managers.

The Construction Bulletin will be posted on the Tollway Website.

PDK: kjk

Attachment

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# Congestion Relief Plan Memorandum

January 22, 2010

**Construction Bulletin No. 10-01**

**Subject: Guidelines of Best Management Practices for the Operation of Asphalt Shingle Recycling Facilities (Eff. 01/20/10).**

Post consumer (tear-off) and pre-consumer (manufactured tabs) asphalt roof shingles are able to be recycled and used on Illinois Tollway construction projects as a substitute for asphalt and/or fiber reinforcement in hot-mix asphalt (HMA) mixtures as specified in contract specifications. The attached guidelines for operation of asphalt roof shingle recycling facilities or processors have been approved by the Illinois Environmental Protection Agency and will be required to be used as a reference for all processors that apply for IEPA permits to operate.

Any processor that applies to the IEPA for permit to operate at a Beneficial Use Determination (BUD) site will require a signed letter from the Chief Engineer that confirms that the Tollway has a specified use for recycled asphalt shingles in active projects. The requests for such confirmation letters should be submitted to Tollway Materials.

Paul D. Kovacs, P.E.  
Chief Engineer

01/25/10

Date

# Guidelines of Best Management Practices for the Operation of Post-Consumer (*Tear-Off*) Asphalt Shingle Recycling Facilities

The purpose of this document is to provide potential recyclers/processors with guidelines for recycling post-consumer tear-off asphalt shingles into a raw material for hot mix asphalt that meets Illinois Tollway specifications for use in hot-mix asphalt applications. Where appropriate, these guidelines may be submitted as support information for applications for Illinois Environmental Protection Agency permits (Bureaus of Air, Land and Water) or beneficial use determinations (Bureau of Land). Please note that facilities accepting shingles mixed with metal, paper, plastic or other unacceptable / deleterious materials may not be able to obtain a beneficial use determination for incoming materials and may require solid waste permits and local siting approval for their waste acceptance and sorting activities.

The ***Post-Consumer Asphalt Shingle Recycling Facility*** shall meet the following requirements:

1. For purposes of this document:

“Clean Loads” of *Tear-off* asphalt shingles supplied to a processor operating under a beneficial use determination (“BUD”)(415ILCS 5/22.54) are loads of shingles that do not contain wastes. Clean loads of shingles supplied to BUD site processors shall have been sorted by the supplier to contain only nails and felt attached to shingles and no more than 1.5% other unacceptable / deleterious material by weight including felt but not including nails.

“Mixed Loads” of *Tear-off* asphalt shingles supplied to a processor at a solid waste permitted site are loads of shingles that are mixed with other wastes (e.g., construction or demolition debris). Mixed loads shall be sorted at the solid waste site or by the supplier before grinding to contain only nails and felt attached to shingles, and no more than 1.5% other unacceptable / deleterious material by weight, including felt but not including nails. Unacceptable/deleterious materials removed from the mixed load shall be recycled or sent to a properly permitted landfill for disposal.

“NESHAP” means National Emission Standards for Hazardous Air Pollutants.

“Post-consumer (tear-off) asphalt shingles” or “tear-off asphalt shingles” means asphalt shingles removed from private residential homes as part of shingle or roof replacements not subject to NESHAP. The private residential homes may include single family buildings up to four-unit dwellings.

“Pre-processed” means unsorted and unground.

“Post-processed” means sorted and ground.

“Sub-piles” means a sampled stockpile divided equally as required by the guidelines to allow for each sub-pile to be sampled at a specific frequency and for specific tests in accordance with the guidelines.

“Suppliers” means general contractors, roofing contractors, home builders, home owners, properly permitted construction or demolition debris waste management facilities, and other entities that generate or manage pre-processed post-consumer tear-off asphalt shingles in accordance with applicable laws.

2. *Post-Consumer (Tear-Off)* asphalt shingles shall be limited to shingles from residential buildings with four or fewer dwelling units not subject to NESHAP. Suppliers shall provide a completed “*Supply Certification Form*” (See Appendix A) certifying that the loads consist of asphalt shingles only from residential buildings of four or fewer units, do not contain asbestos, and that the shingles have not come in contact with hazardous wastes. The processor will indicate on the form whether the load has been accepted or rejected as provided in guideline 3 below. Certification forms will be required for each load (accepted or rejected) and will be kept on file at the facility and available for review.
3. Only clean loads as defined in guideline 1 above may be accepted by processors unless the facility has the applicable permits to accept and process mixed loads. Incoming loads of *Tear-off* asphalt shingles will be inspected and accepted or rejected by an Illinois certified asbestos inspector trained to identify potential asbestos containing material and other unacceptable wastes and materials. Loads identified by the Illinois certified asbestos inspector as containing potential asbestos containing material or excessive amounts of unacceptable wastes and materials will be rejected. Acceptance and rejection of loads will be documented and records maintained on-site with the certification documentation containing the date, reason for rejecting the load, vehicle license plate number, name of supplier, and signature of the asbestos inspector. A carbon copy of the completed certification form will be presented to the supplier. No flat roof, built-up asphalt roofing, or asbestos cement shingles will be accepted in a clean load. A list of unacceptable items for recycling will be posted at the point of inspection of incoming clean loads. (See *Supplier List of Acceptable and Unacceptable Materials* attached as Appendix B). OSHA regulations will be followed and signs posted as needed. In addition, a site Health & Safety Plan will be completed and kept on site.
4. Training of the suppliers and processor facility personnel on acceptable and unacceptable materials will be completed by the site certified asbestos inspector(s). The goal of the training is to achieve separation of unacceptable materials at the source for clean loads or to train personnel at mixed load facilities to sort shingles to achieve applicable standards for removal of unacceptable materials. Training will be completed in one of the following formats:
  - a. On-site Power Point training sessions, which will include a review of “*Training Materials for Suppliers*” (copies of a referenced training session are attached as Appendix C) along with a hand-out of acceptable and unacceptable materials (copies attached as Appendix B) that is reviewed individually with suppliers by the certified asbestos inspector; or

- b. A hand-out with full-sized color Power Point slides (8½ x 11 inches or larger) created from the “*Training Materials for Suppliers*” (copies attached as Appendix C) along with a list of acceptable and unacceptable materials (copies attached as Appendix B) that are reviewed individually with suppliers by the certified asbestos inspector.
- c. Records shall be kept of the dates of training and names of employees trained.

BUD site processors may accept clean loads of pre-processed *Tear-off* asphalt shingles only from suppliers that have completed the training. Hot mix asphalt producers may accept post-processed *Tear-off* asphalt shingle product only from BUD site processors or permitted waste sites that have completed the training.

- 5. There shall be not sorting or grinding of *Tear-off* asphalt shingles until asbestos testing has been completed and the results reviewed. The first 100 loads or 1,000 tons (whichever is met first) of pre-processed *Tear-off* asphalt shingles shall be sampled and tested by an independent NIST accredited laboratory for asbestos containing materials (ACM) as follows:
  - a. Each load will be weighed, ticketed, and stockpiled separately in an assigned area. Stockpiles will be marked and placed in the order of arrival.
  - b. Representative samples will be collected from the pre-processed shingle pile according to the sampling method determined by the on-site Illinois certified asbestos inspector. Representative samples will include different colors and patterns present.
  - c. Samples will be sent to an independent National Institute of Standards and Technology (NIST) accredited laboratory for testing of ACM using the polarized light microscopy (PLM) analysis to determine the presence and percent of asbestos.
  - d. Documentation of results will be recorded and maintained on site.
  - e. In the event that a sample is found to contain > 1.0% ACM, the load shall be disposed of consistent with EPA’s interpretation under NESHAP 40 CFR, Part 61, and Subpart M: Appendix A, III. C: 3.C.1., that Category I nonfriable asbestos-containing material that is not cut, ground or abraded may be disposed of as non-asbestos waste. Otherwise, the following process shall be used to further analyze the load:
    - i. The represented pile will be stratified into four sub piles for representative random sampling and will be sampled three additional times for each of the subsequent sub-piles. All shingle sub-piles that contain >1.0% ACM will be disposed of as defined in subsection (e)(ii) below.
    - ii. All shingle sub-piles containing > 1.0% ACM will be disposed of consistent with EPA’s interpretation under NESHAP 40 CFR, Part 61, and Subpart M: Appendix A, III. C: 3.C.1., that Category I nonfriable asbestos-containing material that is not cut, ground or abraded can be disposed of as non-asbestos waste.
    - iii. Disposal documentation will be recorded and maintained on site.
- 6. In the event that the first 100 loads or 1,000 tons (whichever is met first) of pre-processed *Tear-off* asphalt shingles tested for ACM are negative, the sampling protocol will be reduced to one sample every 250 tons collected (approximately every 25 loads). The sampling procedure and handling of the loads will be conducted as defined above in 5(a-e).

7. In the event that one or more samples of pre-processed *Tear-off* asphalt shingles test positive for ACM, the testing for ACM will continue for an additional 100 loads or 1,000 tons (whichever is met first) of pre-processed *Tear-off* asphalt shingles. At the end of the sampling of the 200 loads (approximately 2,000 tons), the results will be presented to the IEPA Asbestos Unit Program Manager, P.O. Box 19276, Springfield, IL 62794-9276, for review including a statistically based sampling protocol for implementation.
8. The first 1000 tons of post-processed *Tear-off* asphalt shingles shall be sampled and tested for asbestos containing materials (ACM) at 100 ton intervals for a total of 10 samples as follows:
  - a. Representative samples will be collected from the post-processed shingle pile according to the sampling method determined by the on-site Illinois certified asbestos inspector.
  - b. Samples will be sent to a National Institute of Standards and Technology (NIST) accredited laboratory for testing of ACM using the polarized light microscopy (PLM) analysis to determine the presence and percent of asbestos.
  - c. Documentation of results will be recorded and maintained on site.
  - d. In the event that a sample is found to contain >1.0% ACM, the tested pile can be disposed of in a landfill as described in guideline 5(e)(ii), or the represented pile will be stratified into four sub piles for representative random sampling and will be sampled three additional times for each of the subsequent sub piles. Shingle sub-piles that contain >1.0% ACM will be disposed of in a landfill as described in guideline 5(e)(ii) .
9. In the event that the first 1000 tons of post-processed *Tear-off* asphalt shingles tested for ACM are negative, the sampling protocol will be reduced to one sample every 500 tons of post-processed shingles or quarterly (whichever comes first). The sampling procedure and handling of the loads will be conducted as defined above in 8(a-d).
10. Air monitoring of the equipment operators during the grinding of the post-consumer *Tear-off* asphalt shingles will be completed by a certified industrial hygienist (CIH) as follows:
  - a. An initial exposure assessment (personal breathing zone air sampling) for asbestos fibers will be conducted in the breathing zone of equipment operators during the grinding of the asphalt shingles within the first month of processing. The assessment will include samples collected at 30-minute, four-hour, and eight-hour durations. Samples will be analyzed by Phase Contrast Microscopy (PCM), which counts all fibers in the air. If the results exceed 0.1 f/cc, samples will require further analysis by Transmission Electron Microscopy (TEM), which differentiates and counts only asbestos fibers.
  - b. Documentation of results will be reported to the IEPA Asbestos Unit Program Manager, P.O. Box 19276, Springfield, IL 62794-9276, and maintained on site.
  - d. Bi-yearly exposure assessments will be conducted the first year and then yearly exposure assessments will be conducted as defined above in 10(a-b).
  - e. Documentation of results will be reported to the IEPA Asbestos Unit Program Manager, P.O. Box 19276, Springfield, IL 62794-9276, and maintained on site.

11. Recycler/processor sorting personnel will be required to attend a training session conducted by the on-site certified asbestos inspector to identify and remove unacceptable material prior to beginning work on the sorting line. The goal of the contingency procedure is to ensure that shingles found with mastic and all other unacceptable materials are removed prior to processing (see Appendix D, *'Training Materials for Sorting Personnel'*) The training materials referenced in Appendix D are for guidance only. Actual training materials are to be created or obtained and included in the applicant's proposed guidelines.
12. All *Tear-off* asphalt shingles shall be stored in a confined area to prevent mixing or contamination of the shingle piles. Operation of the area shall include without limitation:
  - a. Access to the storage facility will be controlled by a gated entrance and exit. The gate must be locked when facility personnel are not present.
  - b. A sign will be posted at the entrance of the processing facility indicating the name of the facility and hours of operation.
  - c. Incoming loads will be inspected for unacceptable waste and materials by a certified asbestos inspector familiar with the requirements and operation procedures of the facility.
  - d. Storage and unloading of the *Tear-off* asphalt shingles will be confined to an approved designated area with a concrete or asphalt "tipping pad".
  - e. Fencing at least six feet in height will be constructed to prevent windblown material from leaving the storage area.
  - f. Storage of the shingles shall be a minimum of 100 feet from waters of the U.S.
  - g. A sort line with a conveyor belt staffed by trained personnel will be used to sort mixed loads of *Tear-off* asphalt shingles (*See Training Materials for Sorting Personnel* attached as Appendix D).
  - h. Sorting of mixed loads of shingles will be completed daily unless a longer period is authorized by the regulatory agency.
  - i. Unacceptable material separated from shingles will be evaluated periodically to determine the amount of unacceptable material received in loads from each supplier, and this information will be provided to the supplier to be used to reduce the amount of unacceptable material in the loads from that supplier. Unacceptable material will be disposed of at a permitted disposal facility within 72 hours or transported off-site for recycling within 45 days unless a longer period is authorized by the regulatory agency.
  - j. Stockpiles of sorted unground *Tear-off* asphalt shingles shall not exceed 7,500 tons (15,000 cubic yards. ) Storage time should be minimized. Shingles will be ground within four months after collection unless a longer period is authorized by the regulatory agency.
13. The regulatory agency will be allowed to conduct random visits to the facility as deemed necessary.
14. Clean loads consisting of sorted unground *Tear-off* asphalt shingle material ready for grinding shall not exceed a cumulative total of 1.5% by weight of felt attached to shingles, asbestos,

metal flashings, glass, rubber, paper, plastic, rolls or sheets of felt, or other unacceptable / deleterious material. This total does not include nails that are attached to the shingles and removed for recycling in conjunction with the grinding process.

15. Grinding of sorted loads of *Tear-off* asphalt shingles shall be conducted on-site with an industrial grinder. The industrial shingle grinder will utilize water nozzles for dust control and to reduce the heat build-up during the grinding process as needed. The final ground product will be reduced to a size that meets owner/agency specifications for use in hot-mix asphalt applications.
16. During storms, heavy rain or high winds grinding operations will be halted until the weather clears.
17. The final post-processed *Tear-off* asphalt shingle product shall be free of nails and other metals and unacceptable materials and have at most 1.5% deleterious material as confirmed in a quality control/quality assurance plan approved by the regulatory agency. Deleterious materials including, but not limited to asbestos, metals (including nails), glass, rubber, soil, brick, tars, paper, wood, felt, and plastics, shall not exceed a cumulative total of 1.5% by weight as determined on material retained on the 4.75 mm (No. 4) sieve.
18. Storage of the final post-processed *Tear-off* asphalt shingle product shall be a minimum of 100 feet from waters of the U.S.
19. Storage of the final post-processed *Tear-off* asphalt shingle product should be minimized. Stockpiles shall not exceed **5,000 tons** (10,000 cubic yards) and will be delivered to the end user within four months after processing unless a longer period is authorized by the regulatory agency. Records must be kept to document compliance with this requirement.
20. The following documentation will be collected, maintained on site for a minimum of three years, and made available to the regulatory agency upon request:
  - a. Reference to this guidance document;
  - b. Description of the asbestos testing program and specific sampling and testing methods as defined by the on-site certified asbestos inspector under guideline 5 (reference can be given to AHERA (Asbestos Hazard Emergency Response Act) approved training programs);
  - c. Description of the air monitoring program and specific sampling and testing methods as defined by the Industrial Hygienist (as certified by the American Board of Industrial Hygienists) under guideline 10;
  - d. Test results of the pre-processed *Tear-off* asphalt shingles as required under guidelines 5(a-e), 6 or 7 will be compiled monthly and maintained in bound or electronically imaged chronological files;
  - e. Test results of the post-processed *Tear-off* asphalt shingles as required under guideline 8(a-d) will be compiled quarterly and maintained in bound or electronically imaged chronological files;
  - f. Test results of the air monitoring program as required under guideline 10(a-d) will be compiled yearly and maintained in bound or electronically imaged chronological files;



- g. Accepted or rejected supply certification forms on the sourcing of the *Tear-off* asphalt shingles as required under guidelines 2 and 3 will be compiled monthly; and maintained in bound or electronically imaged chronological files
- h. Tonnage of *Tear-off* asphalt shingles accepted will be compiled monthly and maintained in bound or electronic chronological files;
- i. Tonnage of *Tear-off* asphalt shingles accepted but subsequently disposed of as per 5(e) and 8(d) will be compiled monthly and maintained in bound or electronically imaged chronological files;
- j. Tonnage of *Tear-off* asphalt shingles rejected will be compiled monthly and maintained in bound or electronically imaged chronological files;
- k. Tonnages of *Tear-off* asphalt shingles processed will be compiled monthly and maintained in bound or electronically imaged chronological files;
- l. Tonnages of *Tear-off* asphalt shingles stored and retention times under guidelines 12(j) and 19 will compiled monthly and maintained in bound or electronically imaged chronological files;
- m. Training records under guideline 4 will be compiled for each training session and maintained in bound or electronically imaged chronological files;
- n. Copies of all environmental permits and beneficial use determinations used by the Illinois Environmental Protection Agency.

## Referenced Specifications and Documents:

A guide by CMRA funded in part by the EPA Region 5: "Recycling Tear-off Asphalt Shingles: Best Practices Guide".

American Association of State Highway and Transportation (AASHTO), "Provisional Standard Recommended Practice for Design Considerations when using Reclaimed Asphalt Shingles in New Hot Mix Asphalt (R2005A-TS-2c)" Final Publication in preparation.

American Association of State Highway and Transportation (AASHTO), "Use of Reclaimed Asphalt Shingle as an Additive in Hot Mix Asphalt: A Provisional Standard Specification (M2005A-TS-2c)" Final publication in preparation.

Missouri Department of Transportation (February 2008), Standards and Specifications – Standard Plans - Section 403: Asphaltic Concrete Pavement.

National Institute for Standards and Technology, a list of nationwide laboratories accredited by the NIST to analyze bulk samples for asbestos using polarized light microscopy (PLM).

Ramsey County Department of Public Works in conjunction with the Minnesota Department of Transportation (June 2007), "Specifications, Special Provisions, and General Provisions for the Construction of a Pedestrian Trail on Lower Afton Road from McKnight Road South to Century Avenue South, Ramsey County, MN, City of St. Paul, MN – S.A.P.138-020-033".

State of Michigan Department of Environmental Quality, (September 2007), "Asphalt Shingle Exemption".

State of Wisconsin Department of Natural Resources, (September 2007), "Approval for Exemption from Solid Waste Processing Rules for Recycling of Asphalt Shingles in Hot Mix Asphalt Concrete".

Texas Department of Transportation (February 2009), "Special Provision 341.022, Section A, Aggregate (4)".

Texas Commission on Environmental Quality Interoffice Memorandum, "*Recycled Asphalt Shingles (RAS) as Recycled Asphalt Products (RAP) in Hot Mix Asphalt (HMA) Plants*", February 12, 2009

U.S. EPA's rules for National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61, Subpart M: National Emission Standard for Asbestos (40 CFR 61 Subpart M).

Appendix E, Subpart E, 40 CFR part 763 – Interim Method of The Determination of Asbestos in Bulk Insulation Samples – Section 1. Polarized Light Microscopy (refer to PDF pages 74-79 or document pages 834-839)

U.S. EPA's rules for National Emission Standards for Hazardous Air Pollutants (NESHAP), Appendix A to 40 CFR Subpart M of Part 61 –Interpretive Rule Governing Roof Removal Operations (III. C. 3.C.1.).

# **APPENDIX A**

## *SUPPLY CERTIFICATION FORM*

# Supply Certification Form

## *Post-Consumer Tear-off Asphalt Shingles*

**Supplier Company Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_  
\_\_\_\_\_

**Contact:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**E-mail:** \_\_\_\_\_

We the undersigned, certify that:

1. All *Post Consumer (Tear-off)* asphalt shingle scrap came from residential buildings having four or fewer dwelling units (see addresses below or attached);
2. These residential buildings are not “regulated facilities” according to state and federal NESHAP 40 CFR Part 61, Subpart M.; and
3. The roofing waste material delivered consists of asphalt shingles and normal roofing debris only and contains no known hazardous material (e.g., asbestos).

**Residential re-roof customer address(es) where the *Post-Consumer or Tear-off* asphalt shingle scrap originated:**

\_\_\_\_\_  
\_\_\_\_\_

(Please attach additional sheets as needed to record each customer address)

Layers of shingles present: \_\_\_\_\_

**Name and address of shingle recycler where the *Post-Consumer or Tear-off* asphalt shingle scrap was supplied to:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Post-Consumer or Tear-off* asphalt shingles supplier (signature)

Date

**For Shingle Recycler/Processor Use Only:**

**Load:** Accepted  Rejected  **Delivery Vehicle License:** \_\_\_\_\_

**Reason for Rejection:** \_\_\_\_\_

**Certified Asbestos Inspector Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

# **APPENDIX B**

*SUPPLIERS LIST OF  
ACCEPTABLE AND UNACCEPTABLE MATERIALS*

**Suppliers List of Acceptable and Unacceptable Materials**  
*For*  
***Recycling of Post-Consumer Tear-off Asphalt Shingles***

“Acceptable”

**Include these items:**

- Shingles
- Felt attached to shingles
- Nails

“Unacceptable”

**Do NOT include these items:**

- Wood
- Metal flashings, gutters, etc
- Rolls or sheets of felt paper
- Plastic wrap, buckets
- Paper waste
- No garbage, trash or other waste materials
- Flat Roofing Shingles
- Built-up Asphalt Roofing
- Asbestos and Asbestos-Containing Materials

# **APPENDIX C**

*TRAINING MATERIALS FOR SUPPLIERS*

## **A Guide to Understanding Acceptable Materials For Asphalt Shingle Recycling**

### ***On-Site Source Separation of Asphalt Shingles***

#### **Training for Suppliers**

## **Why Recycle Asphalt Shingles?**

### **Economical Opportunities**

- Reduced tipping fees
- Savings on trucking time and distance

### **Environmental Opportunities**

- Reduce Landfill Waste
- Green Certification

## **Acceptable Materials**

- Asphalt Shingles
- Nails
- Felt attached to shingles



## **Non-Acceptable Materials**

- Felt Paper
- Wood
- Metal flashings, gutters etc.
- Plastic wrap, buckets
- Paper waste
- Other garbage and trash

## **No felt paper or rolls of felt paper**





**No wood or pallets**



**No paper**



**No flashing or gutters**



**No Plastic Waste**



**No ladders, chairs or other metal!**



**No asbestos  
cement shingle  
material**





**No cedar  
shake shingle  
material**



**No flat roof  
asphalt  
shingles  
or**

**built up  
asphalt  
roofing  
material**



## Unacceptable Loads



## Benefits of on-site Source Separation

- Lowered tipping fee's for suppliers
- Marketing opportunities for roofing contractors
- No other garbage or trash
- Reduces the time the shingles will need to be handled

Some sites require roll-offs. Shingles are kept separated from other roofing debris in two roll-offs. One roll-off is taken to the landfill the other roll-off is delivered to the shingle recycling facility.



Some roofing companies use trailers to dispose of their shingles. Shingles are kept separated from other roofing debris using two trailers. One trailer goes to the landfill the other to the shingle recycling facility.



Completed certification forms will be required for all loads delivered. The forms require roofing contractors to certify that the shingles are coming from residential buildings four unit dwellings or less. Suppliers will be required to provide the address of the shingle source.



*Asphalt Recycling Center*  
**Asphalt Recycling Center**  
*Asphalt Recycling Center*

Shingle Source Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_  
State: \_\_\_\_\_  
Zip: \_\_\_\_\_

Vehicle License Plate No. \_\_\_\_\_

1. All shingles must be from residential buildings four units or less.  
2. Shingles must be from a residential building located within the State of Michigan.  
3. Shingles must be from a residential building located within the State of Michigan.  
4. Shingles must be from a residential building located within the State of Michigan.

Signature of Certified Asbestos Inspector: \_\_\_\_\_  
Date: \_\_\_\_\_

Signature of Driver: \_\_\_\_\_  
Date: \_\_\_\_\_

Reason for Rejection: \_\_\_\_\_



Certification forms will be signed by the roofing contractor and the certified asbestos inspector. Copies of the certification forms will be kept on file at the shingle recycling facility.

- All in-coming loads will be inspected by an accredited asbestos inspector for unacceptable material. Rejected loads will be accompanied by a form identifying:
- *Date*
  - *Vehicle license plate number*
  - *Reason the load was rejected*
  - *Signature of the Certified Asbestos Inspector*
  - *Signature of the driver of the vehicle*

A copy of the form will be given to the driver and the original will be kept on file at the recycling facility.

**Keep Shingles out of the LAND-FILL!**



**The asphalt shingles go from...**



**...the roofs to the *ROADS!***



***Thank-you!***



**For more information  
contact:**

**Shingle Recycling Facility**  
Address  
City, State 00000-0000  
(000) 000-0000

# **APPENDIX D**

*TRAINING MATERIALS  
FOR  
SORTING PERSONNEL*

## Training Guide for Sorting Personnel

*Working on the  
Asphalt Shingle Recycling  
Sort Line*

## Acceptable Materials

- Asphalt Shingles
- Nails
- Felt attached to shingles



## Non-Acceptable Materials

- Felt Paper
- Wood
- Metal flashings, gutters etc.
- Plastic wrap, buckets
- Paper waste
- Flat Roofing Shingles
- Built-up Asphalt Roofing
- Asbestos-containing building material
- No other garbage or trash

Remove any small or large  
remaining remnants of felt paper



Remove any wood, paper or foam



### Remove paper

Paper



### Remove flashing and metal



### Remove plastic waste



### Remove pop-cans or Styrofoam or plastic cups



**Mastic can sometimes be found on shingles that are placed near chimneys or pipes. Remove any asphalt shingles with mastic coating**



Mastic



**Remove any signs or remnants of Asbestos Cement Shingle Material**





**Remove any remnants of cedar shake shingles**

**Place all garbage in the appropriate recycling or waste container**



**Wear a hard-hat, gloves, safety glasses and vest at all times**



***If you have any questions contact:***

Name Placeholder for Contact Person  
Phone Number: xxx-xxx-xxxx  
Company Name  
Address