

OMT Asphalt Plant Inspection Checklist

The Asphalt Producer will complete all fields. Those marked with a ■ will be verified by the QA Field Team.

Plant Description

Name & Type of Plant _____

Location _____

ATD Field Inspector _____

Date of Inspection _____

Minimum Capacity _____ Maximum Capacity _____

Rated Tons per Hour _____

General Requirements – Asphalt Storage

- 1. Are tanks for storage material properly identified? _____
2. Are tanks for storage of asphalt cement equipped for heating the material under effective and positive control at all times? _____
3. Are tanks or storage material properly heated? _____
4. Is a circulating system for the asphalt cement of adequate capacity to provide proper and continuous circulation between storage tank and proportioning units during the entire operating period? _____
5. Is the discharge end of the asphalt cement-circulating pipe kept below the surface of the material in the storage tank? _____

6. Are all pipe links and fittings steamed, oil jacketed, or otherwise properly insulated to prevent heat loss? _____
7. Is storage tank capacity such as to ensure continuous operation of the plant and uniform temperature of the asphalt cement when it is mixed with the aggregate?

8. Are tanks accurately calibrated to 100 gallons (378.5 L) and accessible for measuring the volume of the asphalt cement?

- 9. Is a sampling outlet provided at the last practical point between the binder control unit and the plant?

10. Is a drainage receptacle provided for flushing the outlet prior to sampling? _____
- 11. Have all liquid binders to be used for the state been fully sampled, tested and approved in the last 30 days? _____

Stockpiles

1. Are stockpiles properly separated? Yes/No _____
- 2. Are stockpiles constructed properly to prevent segregation? Yes/No _____
3. Has contractor submitted and received approval of intended materials sources and job mix formula? _____ If yes, are copies available _____
4. Do the stockpiles have proper drainage system? Yes/No _____
5. Is the equipment and material free from any contamination and intermingling?
Yes/No _____
- 6. Are stockpiles identified properly? Yes/No _____
7. Area areas clean and properly kept? _____

RAP

1. Is the processed RAP pile homogeneous and free of contamination? Yes/No _____
- 2. Is the RAP pile of a captured nature? Yes/No _____
- 3. Has the RAP pile for SHA been tested and approved for the State use? Yes/No
Tested by: _____

Anti-Strip and Other Additive Systems

1. Is anti-strip material added at plant site? _____ If yes, does it meet the specifications? _____
2. If other approved additives are used, are they handled in accordance with an established procedure? Yes/No _____

Cold Feed System

- 1. Number of cold feed bins? _____
2. Do cold feed bins have partitions high enough to prevent intermingling of bins? Yes/No _____
3. Are cold feed bins free of holes? Yes/No _____
- 4. Are means provided for diverting aggregates into trucks for calibration checks? Yes/No _____
- 5. Is a scalping screen in place and functional? Yes/No _____
6. Does the plant have mechanical or computerized means for uniformly feeding the aggregates into the dryer? Yes/No _____
7. Does cold feed system have a synchronized proportioning method when blending aggregates from two or more bins? Yes/No _____
8. If mineral filler is required, is a separate bin provided? Yes/No _____

9. Do individual feeder units have interlocking controls? Yes/No _____
- 10. Are all final weighbridges protected by windscreens? Yes/No _____

Dryer

1. How many driers are available? _____
2. Do they work satisfactorily? Yes/No _____
3. Is the fuel used for drying aggregates compatible with the plant manufacturer's recommendations (915.02.a)? Yes/No _____

Dust Collectors and Emission Controls

- 1. What type of dust collector is provided? _____
2. Is bag house or other dust collection system in good working condition without holes in the lines? Yes/No _____
3. Is dust return system consistent and controllable? Yes/No _____
4. Is the mineral system in a good working condition and calibrated in accordance to the latest edition of MSMT-453? Yes/No _____
5. Can the material collected in the dust collector be wasted or any part or all of the material is returned to the aggregate mixture? Yes/No _____
6. Does the plant meet applicable limitations on emissions? Yes/No _____
7. Has company received a permit to operate from MDE Yes/No ____ If yes, give permit number and date of issuance? _____

Thermometric Equipment

1. Is the plant equipped with recording pyrometers, armored or infrared thermometers or other approved thermometric instruments at the discharge end of the drier?
Yes/No _____ If yes, does it work? _____
2. Has accuracy of pyrometers or thermometers been checked? Give date, _____
3. Are temperature control devices installed to control the mix temperature? Yes/No

Surge and Storage Bins/Silos (Surge Bins for Immediate Use of Material)

- 1. Is plant equipped with surge or storage bins? Yes/No _____
 - 2. Is unit enclosed, insulated, weather proof? Yes/No _____
 - 3. Is the storage capacity of each silo established and recorded? Yes/No _____
 - 4. Is conveyer system covered and insulated (if necessary) to prevent excessive loss of heat during transfer of material from mixing plant to storage bin? Yes/No _____
 - 5. Does storage bin have acceptable heating system? Yes/No _____
 - 6. Has surge or storage bin received prior evaluation and approval before using?
Yes/No _____ If yes, indicate inspector's name and date of approval,

- 7. Has the State truck loading policy of three drops (front or back first) been established and displayed in full view of trucks approaching the silo?
Yes/No _____

Safety and Inspection Provisions

- 1. Are gears, pulleys, chains, sprockets, and other dangerous moving parts thoroughly protected? Yes/No_____. Comment _____
- 2. Is an unobstructed and adequately guarded passage provided and maintained in and around the truck loading space for visual inspection purposes? Yes/No_____
- 3. Does plant have adequate and safe stairways or guarded ladders to plant units such as mixer platforms, control platforms, hot storage bins, asphalt storage tanks, etc. where inspections are required? Yes/No _____
- 4. Is an inspection platform provided with a safe stairway for sampling the asphalt mixture from loaded trucks? Yes/No _____
- 5. Is the inspection/sampling platform of sufficient height to permit easy visual inspection of the mix while standing on the platform? Yes/No_____

Truck Scales

- 1. Are scales capable of weighing the entire vehicle at one time? Yes/No _____
- 2. Do scales have digital printing recorder or automatic weight printer? Yes/No _____
If yes, is it calibrated? _____
- 3. Have scales been checked and certified by a reputable scale company in the last 30 days? Yes/No If yes, specify date/names of the scale company. _____

- 4. Is copy of certification available at the plant? Yes/No _____
- 5. Does the truck scale weighing conform to the National Institute for Standard and Technology (NIST) specifications (915.02.d)? Yes/No _____
- 6. Does the producer have a written plant summary showing the details of Contract number, truck identification (1.0.), typical material being produced, the number of truck loads, and the total tons of mix (915.02.d.1)? Yes/No _____

- 7. Does the producer supply a delivery ticket with the Mix I.D. number, Contract number, date, truck I.D. number, time loaded, gross and tare weights, and net weight of the mix for each load (915.02.d.2)? Yes/No _____

Truck Release Spray Station

- 1. Is a truck release spray station available and in good working order? Yes/No _____
- 2. Is an approved truck release agent being used? Yes/No _____

Scales

- 1. Do all plant and lab scales meet DOT Handbook 44 Specifications? Yes/No _____
- 2. Have all scales been certified within the last 30 days by an independent testing agency approved by the Engineer? Yes/No _____
- 3. Are all scales and their classifications clearly marked? Yes/No _____
- 4. Are all scales labeled with their minimum gradations and maximum capacity? Yes/No _____

Control Room

- 1. Is there a plant status printer available that gives a printout of all plant operating parameters in a timely manner? Yes/No _____

Transportation Equipment

- 1. Are truck bodies clean, tight, and in good condition (915.02.f)? Yes/No _____
- 2. Do trucks have covers to protect material from weather conditions (915.02.f)? Yes/No _____
- 3. Is the inside surface of all hauling units treated with an approved release agent that will not contaminate or alter the characteristics of the mixture (915.02.f)? Yes/No (Note petroleum derivatives shall not be used)
Brand: _____

4. Has each unit convenient access from ground level to insert thermometers to determine temperatures (915.02.f)? Yes/No _____

Quality Control Plan

- 1. Has a Quality Control Plan been submitted and approved by the State? Yes/No If yes, is the plan properly displayed at the plant? _____
2. Will the Quality Control Lab serve multiple plants? Yes/No ____ If yes, give details of plants and tests to be performed _____

Plant Quality Control Lab

- 1. Is laboratory properly equipped and approved? Yes/No _____
2. Have the following testing procedures and items been inspected by the State within the past two years? Yes/No Date of next Plant QC Lab Inspection: _____
1. Maximum Specific Gravity
 2. Gradation
 3. Scales
 4. Gyratory Compactor
 5. Asphalt Content
 6. Splitter
 7. Oven
 8. Mix Apparatus

SPECIAL REQUIREMENT FOR DRUM MIXERS

Aggregate Delivery System

1. How many cold feed bins are working? _____

- 2. Does the cold feed system have an automatic shut-off system (“No-flow”) that activates when any individual feeder is interrupted? Yes/No _____. If yes, when was the system last calibrated? _____

3. Are provisions available for conveniently sampling the full flow of material from each cold feed and the total cold feed? Yes/No _____, Comment

4. Is the total feed weighed continuously? Yes/No _____, Comment

5. Are there provisions for automatically correcting the wet aggregate weight to dry aggregate weight? Yes/No _____, Comment

6. Is the flow of aggregate dry weight displayed digitally in appropriate units of weight and time and totaled? Yes/No _____, Comment

7. Are means provided for diverting aggregate delivery into trucks, front-end loaders, or other containers for checking accuracy of aggregate delivery system? Yes/No _____. If yes, describe _____

Calibration, Drum Plants:

- Have the following items checked and/or calibrated for compliance with the State Specifications within the last year?

Individual belt scales

Final belt scale (totalizer)

Asphalt meter

Anti-strip system

Out-of-Tolerance system

No-Flow system

Mineral filler system

Readout displays and recordation devices

Asphalt Cement Delivery System

1. Are satisfactory means provided to introduce the proper amount of asphalt material into the mix? Yes/No _____ If yes, explain _____
- 2. Does the delivery system for metering the asphalt material prove accurate within \pm 0.5 percent? Yes/No _____ If yes, when was it checked last time? _____
3. Does the asphalt material delivery interlock with aggregate weight control? Yes/No _____
4. Can the asphalt material be diverted into distributor trucks, containers or calibration tank for checking accuracy of delivery systems? Yes/No _____

Drum Mixer

1. Is the drum mixer capable of drying and heating the aggregate to the moisture and temperature requirements set forth in the specifications, and capable of producing a uniform mix? Yes/No _____ If yes, when was it last calibrated _____
2. Does plant have provisions for diverting mixes at start-up and shutdowns or where mixing is not complete or uniform? Yes/No _____

Plant Approval

- 1. Is plant approved for use? Yes/No _____ If yes, what is the approval date _____

SPECIAL REQUIREMENTS FOR BATCH PLANTS

Weigh Box or Hopper

1. Does gate close tightly so that material cannot leak into the mixer while a batch is being weighed? Yes/No _____

Aggregate Scales

- 1. Have scales been checked and certified by a reputable scales company. Yes/No _____ If yes, specify date and names of the scale company.

- 2. Is copy of certification available on the plant? Yes/No _____

Asphalt Cement Bucket

1. Is bucket large enough to handle a batch in a single weighing so that the asphalt material will not overflow, splash or spill? Yes/No _____
2. Is the bucket steamed, or oil-jacketed or equipped with properly insulated electric heating units? Yes/No _____
3. Is the bucket equipped to deliver the asphalt material over the full length of the mixer? Yes/No _____

Asphalt Cement Scales

- 1. Have scales been checked and certified by a reputable scale company? Yes/No _____ If yes, give date _____. Is copy of certification available? _____

Screen Deck

1. Condition of screens. Satisfactory/Unsatisfactory _____
2. Do the plant screens have adequate capacity and size range to properly separate all the aggregate into sizes required for proportioning so that they may be recombined consistently? Yes/No _____

Hot Bins

1. How many hot bins are available? _____
2. Are bins properly partitioned? Yes/No, _____
3. Are bins equipped with overflow pipes? Yes/No _____
4. Will gates cut off quickly and completely? Yes/No _____
5. Can samples be obtained from bins? Yes/No _____
6. Are bins equipped with device to indicate the position of aggregate at the lower quarter point? Yes/No _____
- 7. Are the hot aggregate bins equipped with alarms (915.02.b)? Yes/No _____

Mixer Unit for Batch Method

1. Is the plant equipped with an approved pug mill batch mixer that will produce a uniform mixture? Yes/No _____ If yes, specify the approval date

2. Can the mixer blades be adjusted to ensure proper and efficient mixing? Yes/No

3. Are the mixer blades in satisfactory condition? Yes/No _____
4. Does the mixer gate close tight enough to prevent leakage? Yes/No _____

5. Does the mixer discharge the mixture without appreciable segregation? Yes/No _____
6. Is the mixer equipped with time lock? Yes/No _____
7. Does timer lock the weigh box gate until the mixing cycle is completed? Yes/No _____
8. Will timer control dry and wet mixing time? Yes/No _____
9. Can timer be set in five-second intervals throughout the designated mixing cycles? Yes/No _____
10. Can timer be locked to prevent tampering? Yes/No _____

Automation of Batching

1. Is the plant fully automatic and approved (915.02.e)? Yes/No _____
- 2. Does the plant print a weighing ticket for each load showing the cumulative weight, Contract number, time loaded, Mix I.D. number, and net weight (915.02.e)? Yes/No _____ If yes, is the copy available for review? _____
3. Is the automatic proportioning system capable of weighing the materials within ± 2 percent of the total sum of the batch sizes? Yes/No _____

Plant Approval

- 1. Is plant approved for use? Yes/No If Yes, what is the approval date? _____

COMMENTS:

Special Requirements for Warm Mix Asphalt Use/Plants

Foaming Processes:

Equipment Requirements

1. How is the system connected to the plant?
2. How is the water attached to the system?

Plant Automation

1. How is the water dosage controlled?
2. What is the dosage rate?
3. Is this rate varied with the type of mix being used? Mix with RAP vs No RAP mix.
4. Would the dosage rate be varied? Reasons?
5. What is the recommended mixing temperature(s)?
6. Any equipment maintenance issues?

For Chemical or Organic Additives that are Pre-Blended into the PG Binder:

1. Are there any special storage/handling requirements for the pre-blended material?
2. Allowable storage time?
3. Mixing or recirculation needs?
4. Is there any dosage rate information that the HMA plant should be aware of when ordering pre-blended PG binder?
5. Varying dosage rates for various RAP contents?

6. What will the HMA plant do if situations change? (Example: Plant plans to run a 20% RAP mix. They order a pre-blended PG binder containing the proper dosage for that amount of RAP. During production, the RAP belt breaks down, what will the producer do? Does the dosage rate have a detrimental effect on a non-RAP mix?

7. What is the recommended mixing temperature?

8. Is this a set temperature or a drop of XX degrees from the HMA mixture?

Chemical, Organic or Zeolites that are blended into the PG binder or the mixture at the HMA plant:

1. Are there any special storage/handling requirements for the additive itself?

2. What is the shelf life of the additive itself?

3. What is required to get the additive into the PG binder or the mixture?

4. What equipment is needed?

5. Are pumps capable of pumping a minimum of XX.XX gpm.

6. What connections to the plant need to be made?

7. What is used to meter the amount of additive?

Plant Automation -

1. For Drum Plants, does the plant need to run at a constant speed or is the additive equipment variable and linked to the plant speed.

2. How will recording of the dosage rate be accomplished?

3. What is the dosage rate?

4. What is the recommended mixing temperature(s)?

5. Is this a set temperature or a drop of XX degrees from the HMA mixture?

COMMENTS:

DISTRIBUTION:

ATD Field Team Leader

Asphalt Plant

OMT Plant File