

513 Pavement Marking Paint Quality Management Plan

1. Introduction

- 1.1. The purpose of the Pavement Marking Paint Quality Management Plan (QMP) is to establish the procedures for becoming pre-qualified as a supplier or applicator of marking paint.

2. Applicable References

- 2.1. Utah Department of Transportation (UDOT), Standard Specifications.
- 2.2. UDOT Manual of Instruction Section 932, Procedure for Sampling/Accepting Pavement Marking Paint.

3. Procedure for Establishment as a Qualified Supplier of Pavement Marking Paint

- 3.1. The supplier will request qualified designation by submitting to UDOT's Central Materials Testing Lab (CMTL) Engineer or representative, a letter demonstrating and certifying the following:
 - 3.1.1. The supplier maintains a quality control program. Include the name, position, address and telephone number of an individual who is responsible for quality control of the paint used on UDOT projects and a copy of the QC program details. It must be signed by someone having legal authority to bind the company.
 - 3.1.2. The supplier participates in AASHTO re:source proficiency sample testing for paint and when requested submits results to the UDOT Central Laboratory.
 - 3.1.3. The supplier maintains a record of all tests performed on each lot of paint for UDOT projects and provides copies of all results to the UDOT Central Laboratory.
- 3.2. The supplier submits two (2) one-pint cans, randomly sampled, of the intended white or yellow formulations for each lot used on UDOT projects to the Central Laboratory. The Central Laboratory or its representative laboratory will conduct quality assurance testing.
- 3.3. Qualified paint suppliers will be listed as such on the UDOT Materials website.

4. Procedure for Establishment as a Qualified Applicator of Pavement Marking Paint

- 4.1. The applicator will request qualified designation by submitting to UDOT's Central Materials Testing Lab Engineer or representative, a letter demonstrating and certifying the following:
 - 4.1.1. The applicator maintains a quality control program. Include the name, position, address, and telephone number of an individual who is responsible for quality control of the material used on UDOT projects and a copy of the QC program details. It must be signed by someone having legal authority to bind the company.
 - 4.1.2. The applicator will use pavement marking paint from a qualified source.
 - 4.1.3. The applicator will follow all manufacturer recommended procedures for storage and handling.

4.1.4. The applicator will perform paint application in accordance with the requirements of this quality management plan.

4.1.5. The applicator maintains a valid painting contractor's license through the Utah Department of Commerce.

4.2. Qualified applicators will be listed as such on the UDOT materials website.

5. Responsibilities of UDOT's Central Materials Engineer

5.1. Qualify the supplier or applicator by indicating approval in writing based on the requirements of this quality management plan.

5.2. Maintain a current file on each applicator or supplier containing the required company and testing data in the UDOT Central Materials offices.

5.3. Conduct inspection of storage facilities as necessary for quality assurance. Sampling, testing and inspection may be performed by designated representatives.

5.3.1. Sampling

5.3.1.1. UDOT or its representative will sample paint and beads according to UDOT's Materials Manual of Instruction Section 932 and submit to the UDOT Central Materials Laboratory.

5.3.1.1.1. UDOT will sample one random sample per batch per applicator for applicator paint handling process verification. UDOT will sample one random sample of beads per truck for bead quality.

5.3.1.1.1.1. UDOT may adjust frequency of sampling based on performance of applicator.

5.3.1.1.2. UDOT will randomly sample, prior to storage or handling, materials delivered to applicators for quality verification.

5.3.1.1.2.1. UDOT or its representative will coordinate sampling with delivery of new batches delivered to applicators.

5.3.1.1.3. Upon request, UDOT will provide a sample split to the applicator.

5.3.2. Manufacturer Supplied Sample Testing

5.3.2.1. The Department or its representative will test sample in accordance with the specifications.

5.3.2.2. The Department will disqualify suppliers if samples fall outside of the 1.0 pay factor in the specification.

5.3.3. Applicator Paint Handling Process Sample Testing

5.3.3.1. The Department or its representative will test sample in accordance with the specifications.

5.3.3.1.1. Paint handling process sampling testing will be based on Total Solids, Pigment and

Non-Volatile Vehicle.

5.3.3.2. If Paint Handling Process sample test results deviate from the manufacturer supplied sample by more than 5 percent, testing frequencies may be increased and an evaluation of field practices will begin.

5.3.3.3. If deviations from expected paint handling processes are identified, the applicator will be notified in writing requiring that actions be taken to correct the deviations.

5.3.3.4. The applicator must respond in writing within 14 days of notice of a failed sample describing steps taken to correct deficiencies.

5.3.4. Quality Verification Sample Testing

5.3.4.1. The Department will test in accordance with the specifications

5.3.4.2. The Department will apply pay factors to the applicable project quantities in accordance with the specifications.

5.4. Disqualify the supplier or applicator in writing based on failure to meet the requirements of this quality management plan.

5.4.1. An applicator may be removed from the list of qualified sources if results of any applicator paint handling process sample deviates from manufacturer supplied samples by more than 10 percent.

5.4.2. An applicator may be removed from the list of qualified sources if they fail to address noted deviations in expected paint handling processes.

5.4.3. An applicator or supplier may be removed for failure to submit qualifying data and samples as requested.

5.4.4. An applicator or supplier may be removed from the qualified source list for failure to maintain all of the requirements within this QMP.

5.4.5. Applicators or suppliers removed from the qualified list must reapply according to all requirements within this Quality Management Plan.

6. Responsibilities of the Resident Engineer.

6.1. Verify through the UDOT Qualified lists that the applicator and supplier is pre-qualified.

6.2. Conduct verification sampling in the field.

7. Responsibilities of the Qualified Supplier

7.1. Semi-annually, submit two (2) one-pint cans, randomly sampled, of the current white and yellow formulations and for each lot used on UDOT projects to the Central Laboratory. The Central Laboratory or its representative laboratory will conduct quality assurance testing.

8. Responsibilities of Qualified Pavement Marking Applicator

8.1. Storage of Marking Paint

8.1.1. Paints will be protected from exposure to sunlight at all times except during transport.

8.1.2. Storage facility temperatures will be maintained at a minimum of 40 °F and a maximum of 105 °F.

8.1.3. The Department or its representative will retest paint stored and not used within one-year prior to use.

8.1.4. Paint in storage for more than 14 days must be re-circulated before application.

8.2. Requirements for Application of Marking Paint

8.2.1. Agitate all totes before application

8.2.2. Meet all mil thickness requirements as specified in the contract documents.

8.3. Calibrate all meters on the paint truck annually and certify for application rate verification.

8.3.1. Use the following calibration tolerances for meters:

8.3.1.1. Paint: ± 0.1 gal

8.3.1.2. Beads: ± 0.5 lb/gal

8.3.2. Keep a clean, legible copy of calibration report with the paint truck.

8.3.3. Provide a copy of certification at the Engineer's request.