1. Introduction

1.1. This procedure is to provide the NSL’s customers and FSCP staff with the requirement that must be met before the NSL will accept artifacts for calibration work.

2. Methodology

2.1. The laboratory handles, prepares and stores artifacts from both customers and FSCP field staff. Many of these artifacts come in contact with a variety of contaminants. These include chemicals, animal wastes, fuel and hazardous materials. It is the policy of the NSL that a clean environment be maintained within the laboratory. Proper preparation on artifacts is required to help manage this environment.

3. Responsibility and Authority

3.1. Standards laboratory responsibility and authority.

3.1.1. Trained metrology staff or trained designee will receive artifacts to be tested in the laboratory.

3.1.2. Trained metrology staff or trained designee will evaluate all incoming artifacts to determine if they are suitable and properly prepared in order to be brought into the Lab.

3.1.3. The laboratory staff is not responsible for the cleaning, painting or preparing of any artifacts that are scheduled for calibration.

3.1.4. The Laboratory manager reserves the right to reject and refuse services to any and all customers for artifacts that are determined not meeting the requirement in NEWAML-80 (NESOP-5).

3.2. Client responsibility and authority.

3.2.1. The laboratory client is responsible to make sure that all any artifacts, regardless of ownership, meet the requirements set forth in NEWAML-80 (NESOP-5).

3.3. FSCP staff responsibility and authority.

3.3.1. The FSCP staff is responsible for making sure that all State of Nebraska owned artifacts and/or related field equipment used in the scope of their normal respective duties, meet the requirements set forth in NEWAML-80 (SOP-5).

4. Procedures for Preparation of Artifacts Prior to Entry into the NSL


4.1.1. Cast iron NIST class-F artifacts;

4.1.1.1. All cast iron artifacts will be cleaned so that all lose paint and no foreign material is present on any surfaces especially underside of the artifacts.

4.1.1.1. Do not sandblast or use harsh abrasives to clean the artifacts. This may alter the artifact in such a way that calibration time may be extended or not permitted due un-repairable damage to the artifact.
4.1.1.2. **All** surfaces shall be painted with a **light** coat of **silver or aluminum** paint so that no bare metal surfaces are visible. This includes the bottom of the artifact.

4.1.1.3. If pressurized water is used, take care not to focus water stream on the sealing/adjustment area of the artifact. Doing so may result in extra time in the lab to let the artifact “dry out”.

4.1.2 Stainless steel artifacts;

4.1.2.1 All stainless steel artifacts shall be cleaned in such a way that no dirt, oil or other contaminants are present on the artifact.

4.1.2.2 NIST Class-F artifacts may be cleaned with Windex or simple green.

4.1.2.3 Highly polished artifacts are to be cleaned with **distilled water only**.

4.1.2.4 Weight cases are being in good condition with all hinges and locks operating properly and protecting the artifacts in a reasonable manner.

4.2 Volumetric Artifacts.

4.2.1 Test Measures, Stainless Steel Provers and LPG Provers;

4.2.1.1 Test Measures.

4.2.1.1.1 All test measures, i.e. 5 gallon, shall be cleaned and dried in such a manner that no fuel, chemical or other contaminants are present **on and inside** of the test measure.

4.2.1.1.2 All sight gauges and scale plate shall be intact and readable.

4.2.1.1.3 All mild steel test measures shall be painted Red in color.

4.2.1.2 Stainless Steel Provers.

4.2.1.2.1 Provers are shall be cleaned in such a manner that no fuel, chemical or other contaminants are present on and inside of the prover.

4.2.1.2.2 **Only FSCP staff** will be allowed to disassemble the prover from the storage tank on site, for proper cleaning of the **inside of the prover**.

4.2.1.2.3 All sight gauges and scale plates shall be intact and readable.

4.2.1.2.4 All leveling bubbles and means to level shall be intact and operational.

4.2.1.2.5 All prover trailers entering the lab shall be washed and cleaned of all fuel, oil or other contaminants prior to entering the facility.

4.2.1.3 LPG Provers.

4.2.1.3.1 All LPG provers shall be emptied and depressurized before entering the Lab.

4.2.1.3.2 Pop off valve shall be removed by the **customer**.

4.2.1.3.3 All sight gauges and scale plates shall be intact and readable.

4.2.1.3.4 All leveling bubbles and leveling means shall be intact and operational.

4.2.1.3.5 All trailers entering the lab shall be washed and cleaned of all foreign material before entering the facility.
4.3 Other artifacts not meeting the requirements set forth in NIST HB 150 series.

4.3.1 All artifacts shall be evaluated to determine if the lab can properly perform a measurable and traceable calibration on such artifacts.
4.3.2 Such artifacts may not be eligible for an official certificate of calibration.

5.0 FSCP vehicles, trailers and associated equipment.

5.1 All vehicles and trailers and associated equipment, will be evaluated by the lab staff for conditions of and/or signs of misuse. NEWAML-81 “Vehicle, Trailer and associated Equipment Condition Form” will be used and sent to the appropriate supervisor and the Director of FSCP.