U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, D.C. 20590

SEP 2 7 2016

Ms. Sharon Trippany
Alabama Power
Environmental Compliance - Land
600 North 18th Street / 12N-0831
Birmingham, AL 35203

Reference No. 16-0131

Dear Ms. Trippany:

This letter is in response to your July 22, 2016, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to non-specification packaging exceptions for wet, lead acid batteries. Specifically, you provide a detailed scenario and accompanying photographs of wet, lead acid batteries that are surrounded by a polyethylene battery bag, placed in a fiberboard box, and secured by straps to a pallet. You further explain that the battery terminals are protected with tape and caps and that waffleboard material is used to close the box.

We have paraphrased and answered your questions as follows:

Q1. You ask for confirmation that the pallet, to include the added fiberboard box, remains a non-specification package in accordance with § 173.159(d)(1).

A1. Typically, pallets are considered "overpacks" as defined in § 171.8. However, § 173.159(d)(1) permits the use of a pallet as a non-specification packaging, provided the requirements of §§ 173.159(d)(1) and 173.159(a) are both met. In accordance with § 173.159(d)(1), the electric storage batteries must be firmly secured to skids or pallets capable of withstanding the shocks normally incident to transportation. The height of the completed unit must not exceed 1 ½ times the width of the skid or pallet. The unit must be capable of withstanding, without damage, a superimposed weight equal to two times the weight of the unit or, if the weight of the unit exceeds 907 kg (2,000 pounds), a superimposed weight of 1,814 kg (4,000 pounds). Battery terminals must not be relied upon to support any part of the superimposed weight and must not short out if a conductive material is placed in direct contact with them.

Q2. You ask for confirmation that a non-specification box added to your packaging configuration would not be subject to the limitations on weight and number of batteries that are outlined in § 173.159(d)(2) through (d)(7).

A2. Section 173.159(d) provides the option for seven, separate non-specification packaging configurations listed in paragraphs (d)(1) through (d)(7). Therefore, if the battery is packaged in accordance with the option provided in § 173.159(d)(1), the packaging options and corresponding weight limitations of paragraphs (d)(2) through (d)(7) are not applicable. It should be noted that the requirements of § 173.159(a)(1) through (a)(3) must be followed.

Q3. You ask for confirmation that the fiberboard box in your packaging configuration is not required to be a specification package, as it is added to further secure the batteries and terminals in accordance with § 173.159(a)(2) and (3).

A3. Section 173.159(a) prohibits wet, lead acid batteries from being packed with other materials (including other battery types) and requires protective measures to prevent dangerous evolution of heat, short circuit, and damage to terminals. The examples of protective measures in § 173.159(a) are illustrative and do not require the use of specification packaging.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,

T. Glenn Foster

T. Glenn Foster
Chief, Regulatory Review and Reinvention Branch
Standards and Rulemaking Division

Lehman
§ 173.159
Batteries
16-0131

600 North 18th Street/12N-0831
Birmingham, AL 35203

ALABAMA POWER
A SOUTHERN COMPANY

July 22, 2016

U.S. DOT
PHMSA Office of Hazardous Materials Standards
Attn: PHH-10
East Building
1200 New Jersey Avenue, SE
Washington, DC 20590-0001

Submitted via email: phmsa.hm-infocenter@dot.gov

Re: Request for Written Clarification
49 CFR 173.159

To Whom It May Concern:

Our company ships varying numbers and sizes of used batteries (primarily lead acid) from the field back to a central facility where they are accumulated for shipment to a recycler. Often, the lead acid batteries can vary in size, up to 120 pounds each. A pallet serves as our non-specification package for the batteries per 49 CFR 173.159(d)(1).

In order to further secure the batteries and provide additional protection from short circuit and damage to the terminals [49 CFR 173.159(a)(2) and (3)], we are considering the addition of a non-specification, durable fiberboard box to the process. The packaging process would be as follows:

(1) Place an unconstructed box bottom on a standard pallet
(2) Place a heavy polyethylene battery bag on top of the cardboard box base (precautionary in the event of a spill during transport)
(3) Place non-leaking batteries inside the bag
(4) Band the batteries together with non-metallic banding
(5) Ensure each battery's terminals are taped, and caps are in place
(6) Secure the bag around the banded batteries
(7) Insert a cardboard piece designed to form the sides of the box
(8) Insert waffleboard material (1" and 2" thick pieces available) inside the box to fill any voids and close the box
(9) Place top on box
(10) Band (with non-metallic banding) the box to the pallet, using at least 4 straps.

These steps are demonstrated in the enclosure.

Our interpretation is that the package remains the non-specification pallet per 49 CFR 173.159(d)(1), and the non-specification box further secures the batteries and the terminals per 49 CFR 173.159(a)(2)

and (3). In addition, it is our interpretation that the addition of a non-specification box to the pallet as described will not subject the non-specification package to the limitations on the weight and number of batteries outlined in 49 CFR 173.159(d)(3) through (7), but rather the non-specification package remains subject to the weight limitations of 49 CFR 159.173(d)(1).

On May 25, 2016, we spoke with a representative of the Hazardous Materials Information Center and the representative agreed the box would provide further protection of the terminals and would help ensure the batteries are firmly secured to the pallet. As such, the pallet would remain the non-specification package (and thus the box does not have to meet UN specifications).

Questions:

We request DOT's confirmation that:

1. The box added to the packaging process is not required to be a specification package, as the added box is to further secure the batteries and terminals per 49 CFR 173.159(a)(2) and (3).
2. The pallet remains the non-specification package per 49 CFR 173.159(d)(1)
3. The non-specification box added to the packaging process would not be subject to the limitations on the weight and number of batteries outlined in 49 CFR 173.159(d)(3) through (7).

Our mailing address is as follows:

Attn: Sharon Trippany
Alabama Power
Environmental Compliance – Land
600 North 18th Street / 12N-0831
Birmingham, AL 35203

We appreciate your time in reviewing this request. Please do not hesitate to contact the undersigned at (205) 257-4462 or sctrippa@southernco.com.

Sincerely,

Sharon C. Trippany, CHMM

Enclosure (1)

ENCLOSURE

Battery transport.

This program will outline the proper method to:

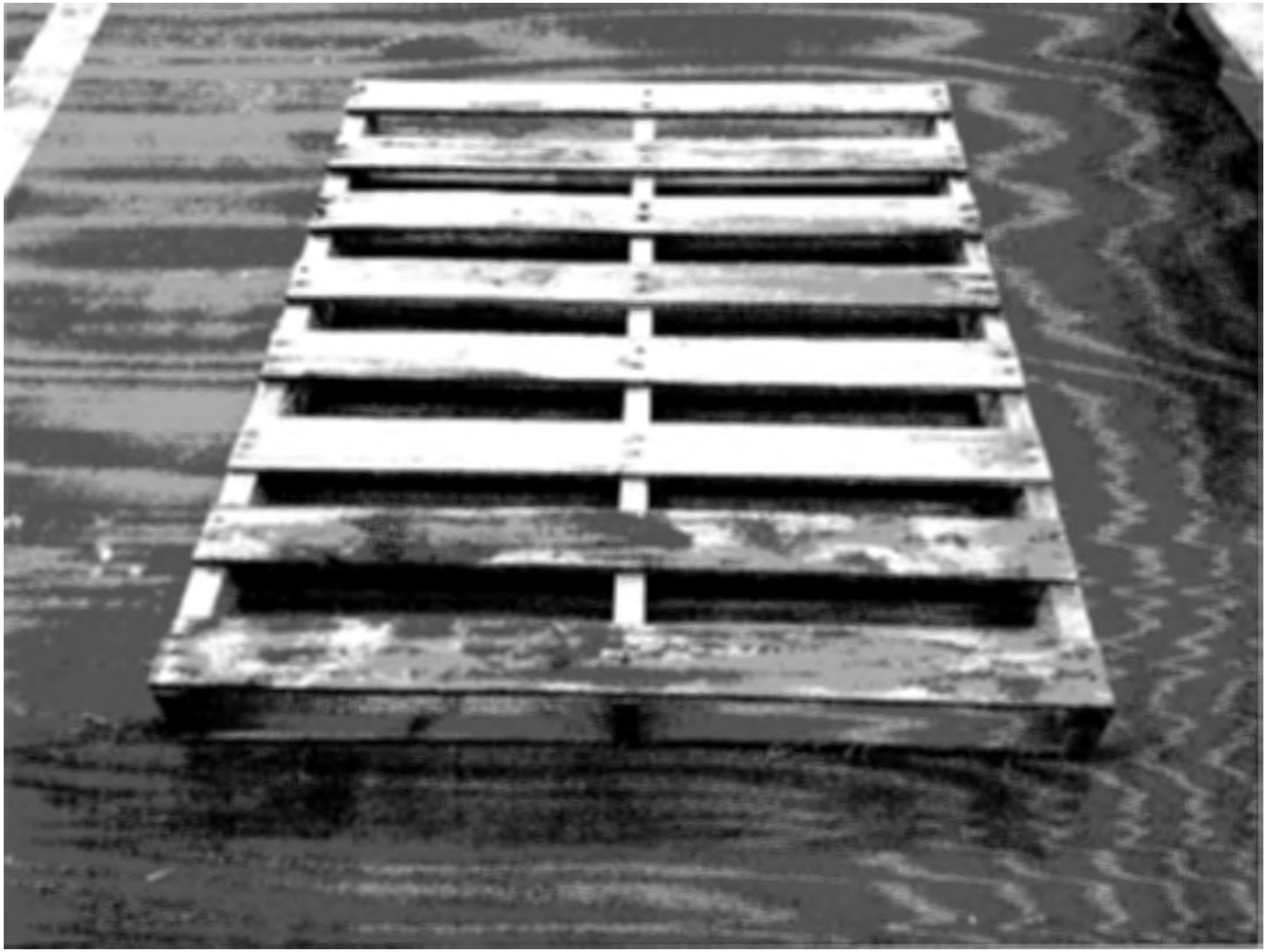
1. Package
2. Load
3. Secure
4. Transport batteries from one location to another.

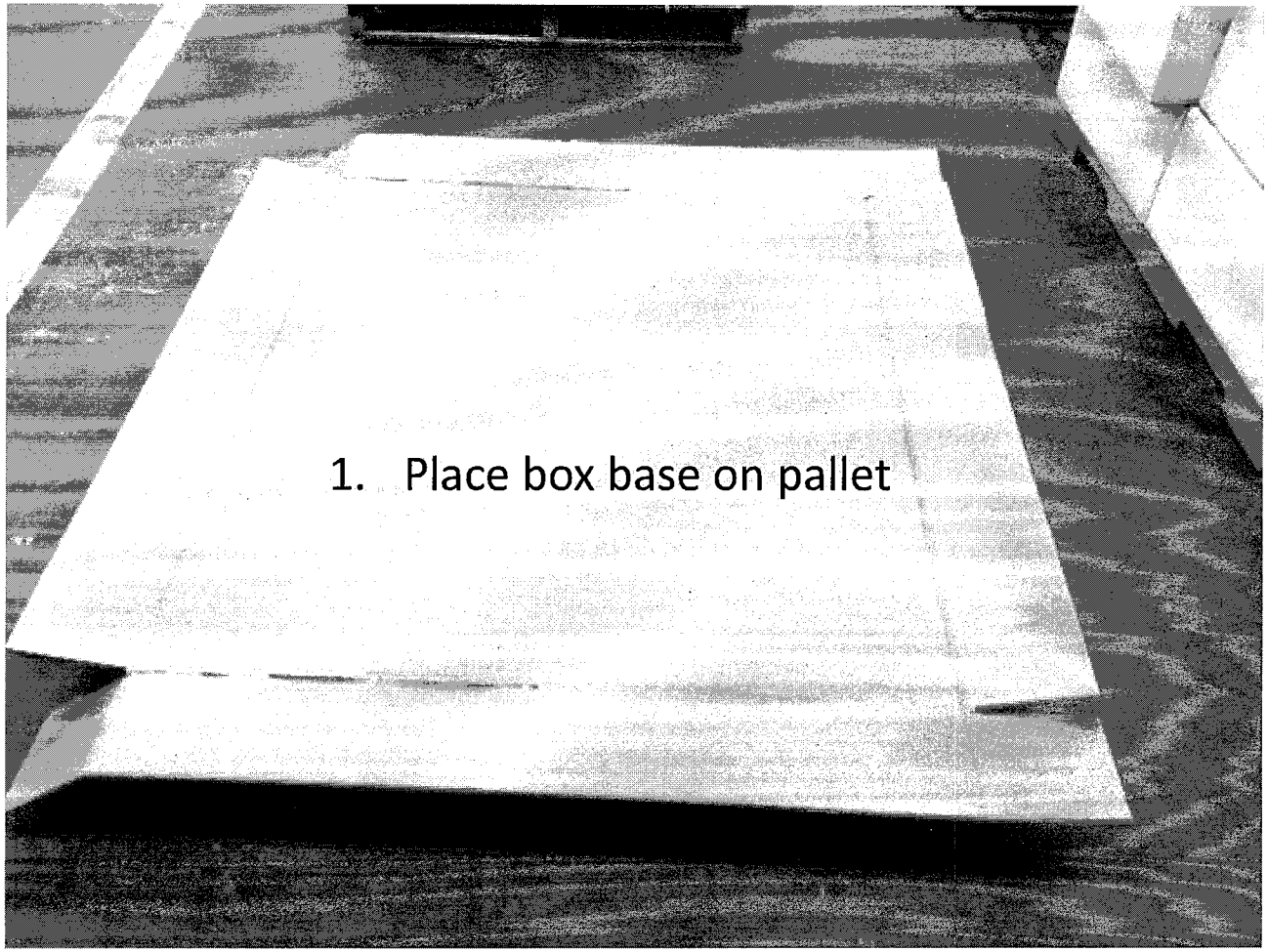
*Battery transport boxes come in two sizes to accommodate the various number of batteries being shipped.

Steps involved in battery transportation include,

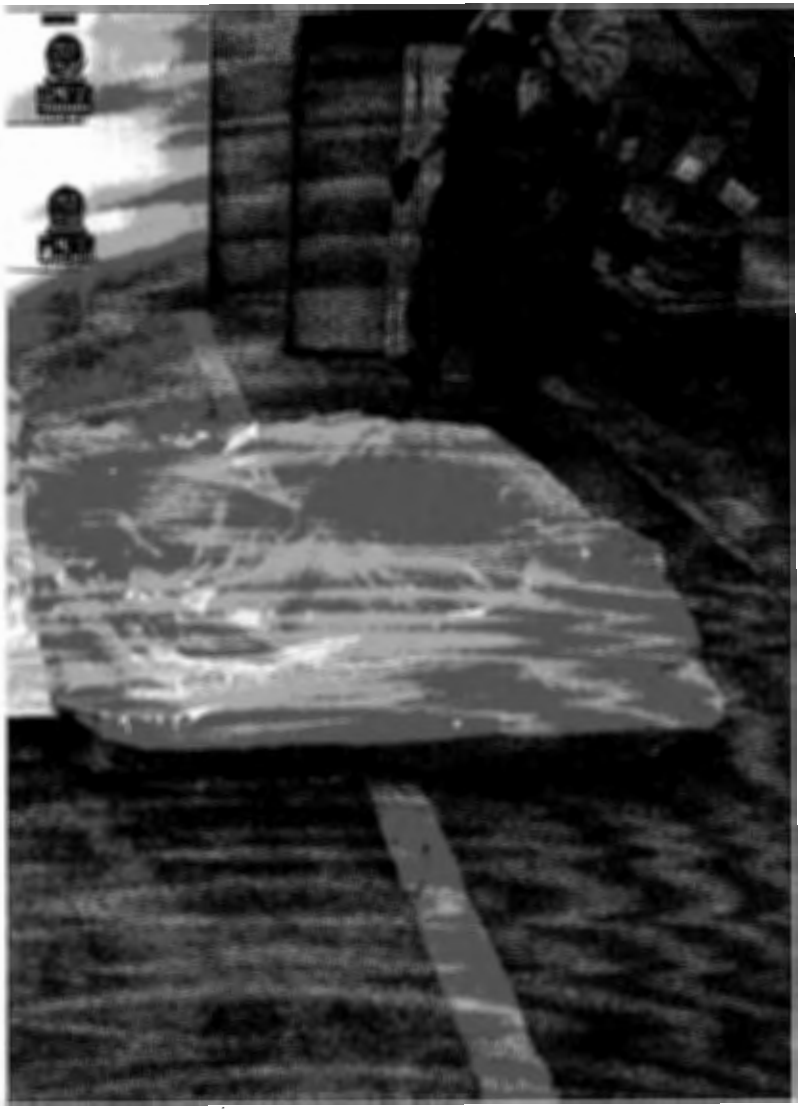
1. Place box base on pallet
2. Place plastic bag on box base
3. Install shipping caps
4. Tape terminals
5. Place the batteries inside plastic bag on pallet
6. Band batteries together
7. Seal bag around batteries
8. Install shipping box side portion
9. Fill any voids around plastic bag inside shipping box
10. Install top portion of shipping box
11. Band shipping box to the pallet for transport.
    (Minimum of 4 bands)
12. Label shipping box with UTR #, number of batteries, battery type (lead acid), shipped form (location) and shipping to (location).

Standard 40”X48” pallet.

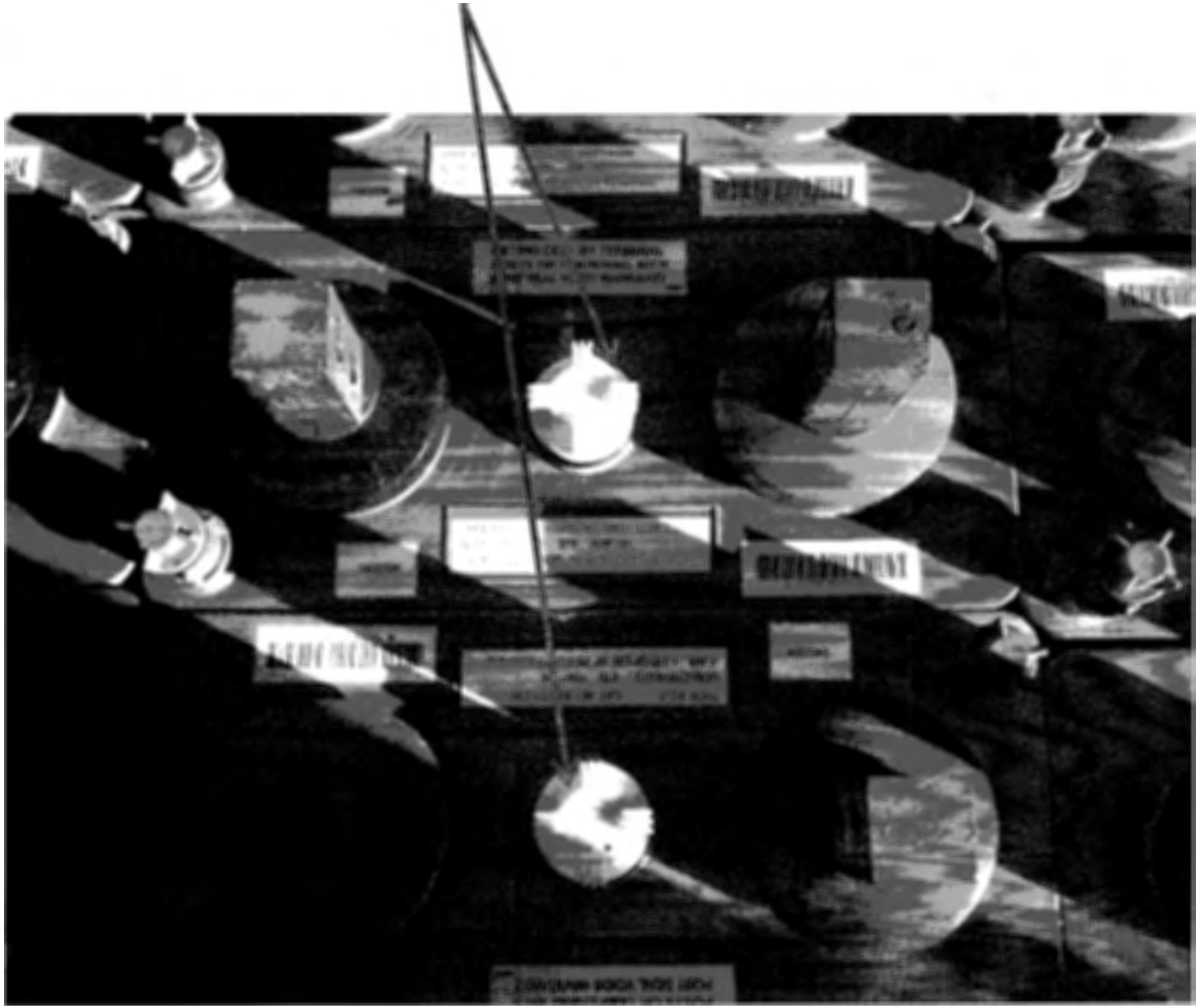



1. Place box base on pallet

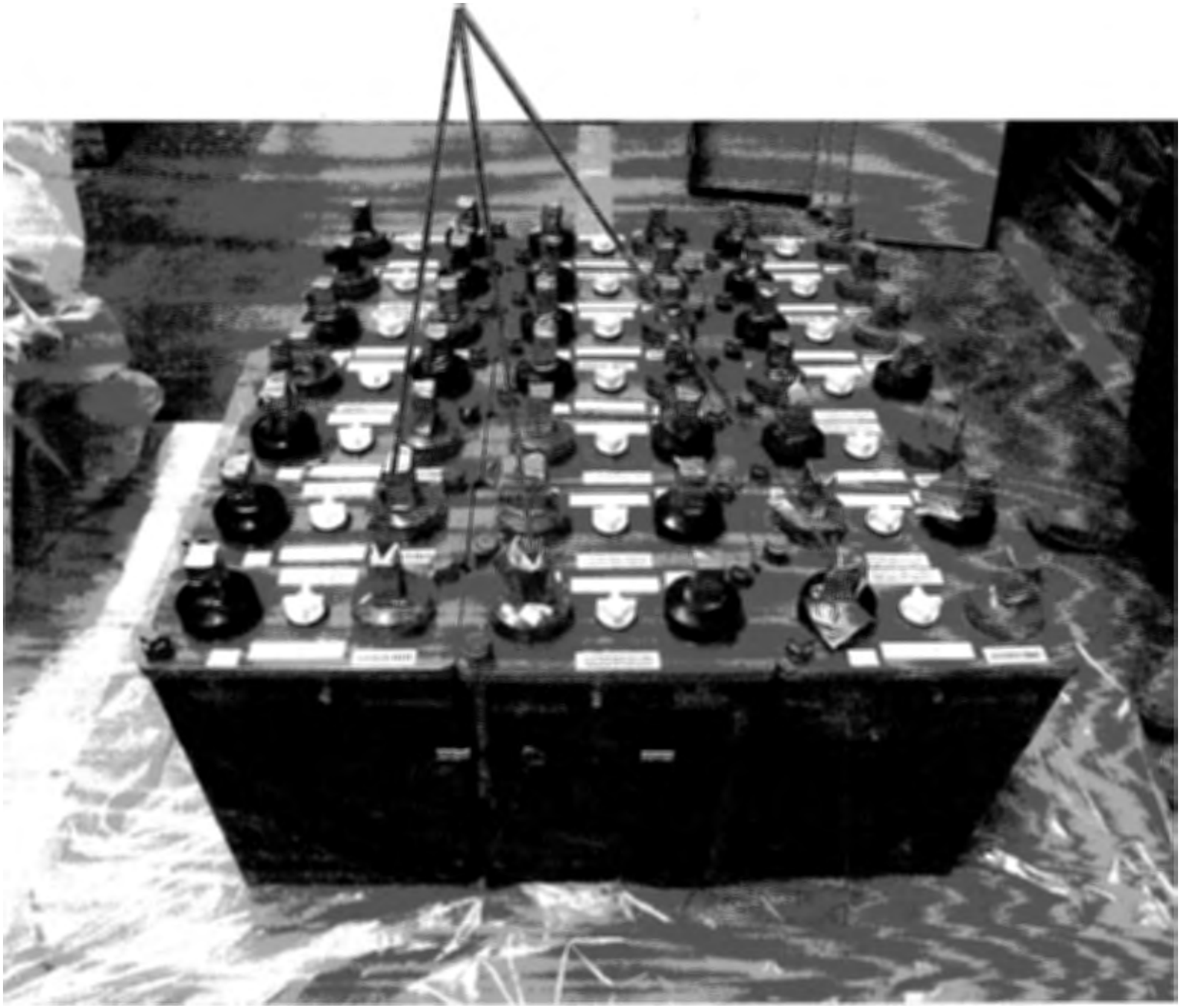
Place plastic bag on box base.



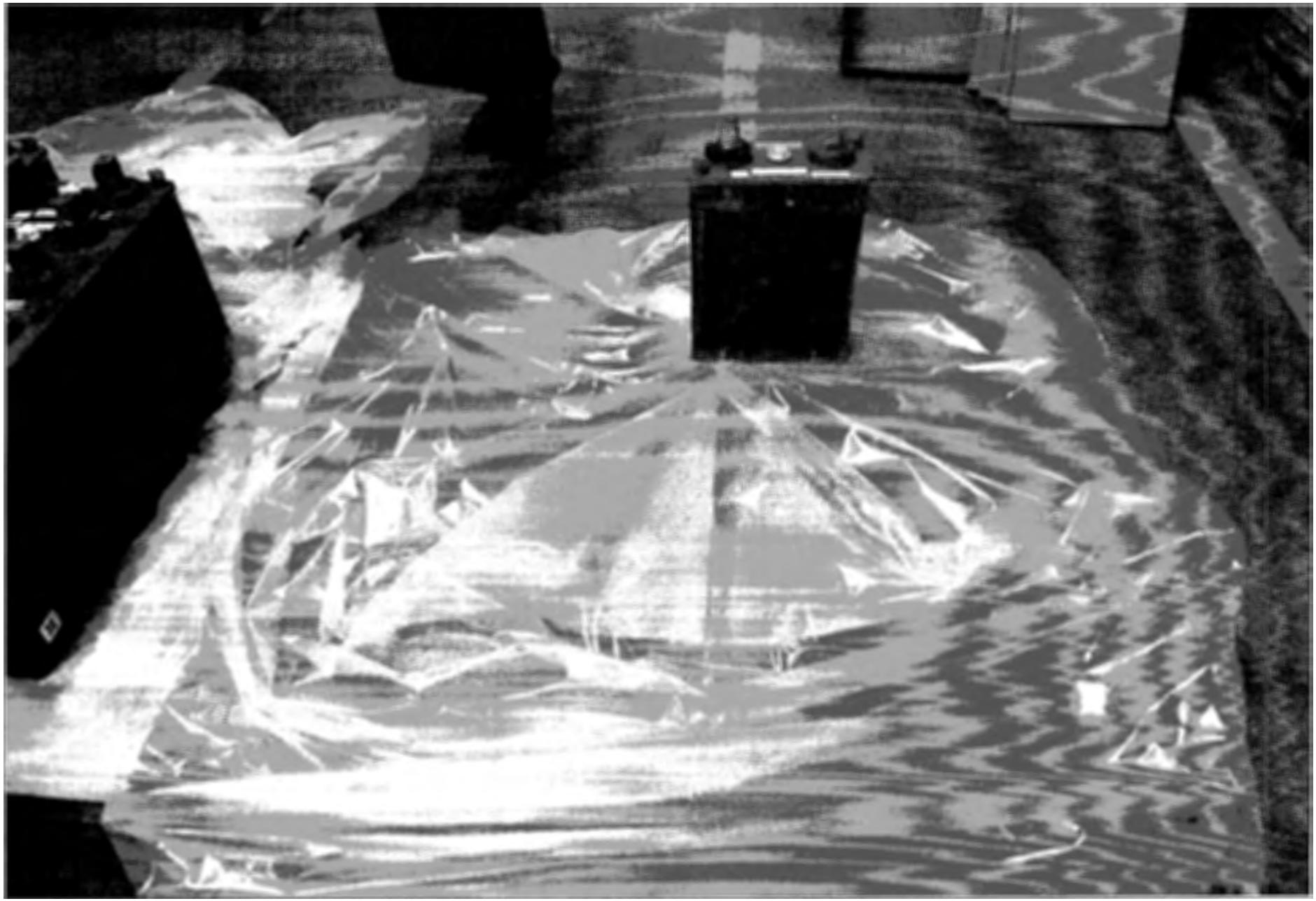
Install shipping caps.



Tape terminals.



Place the batteries inside plastic bag on pallet.



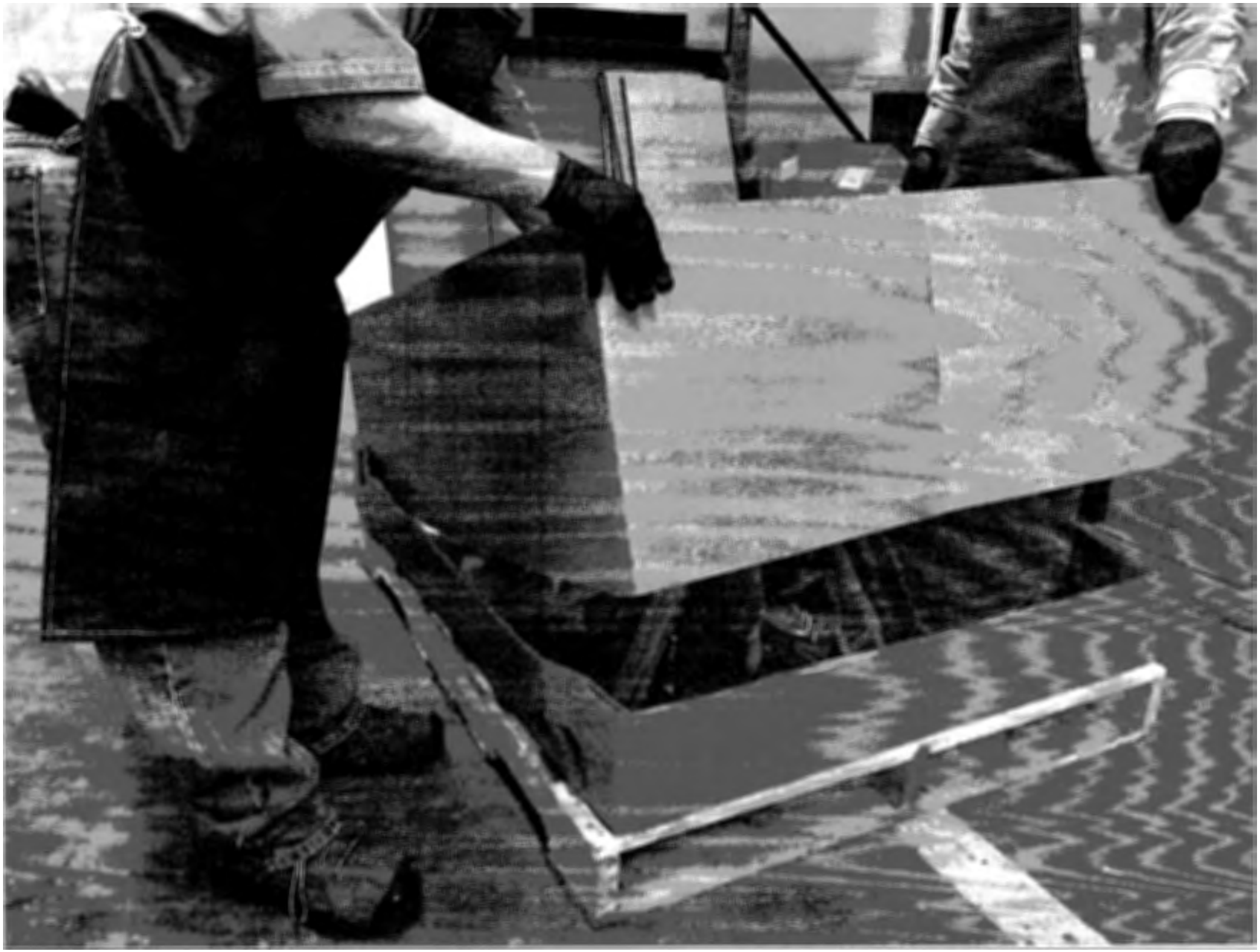
Band batteries together.

Band batteries together.

Seal bag around batteries.

Fold bottom corners of shipping box base.

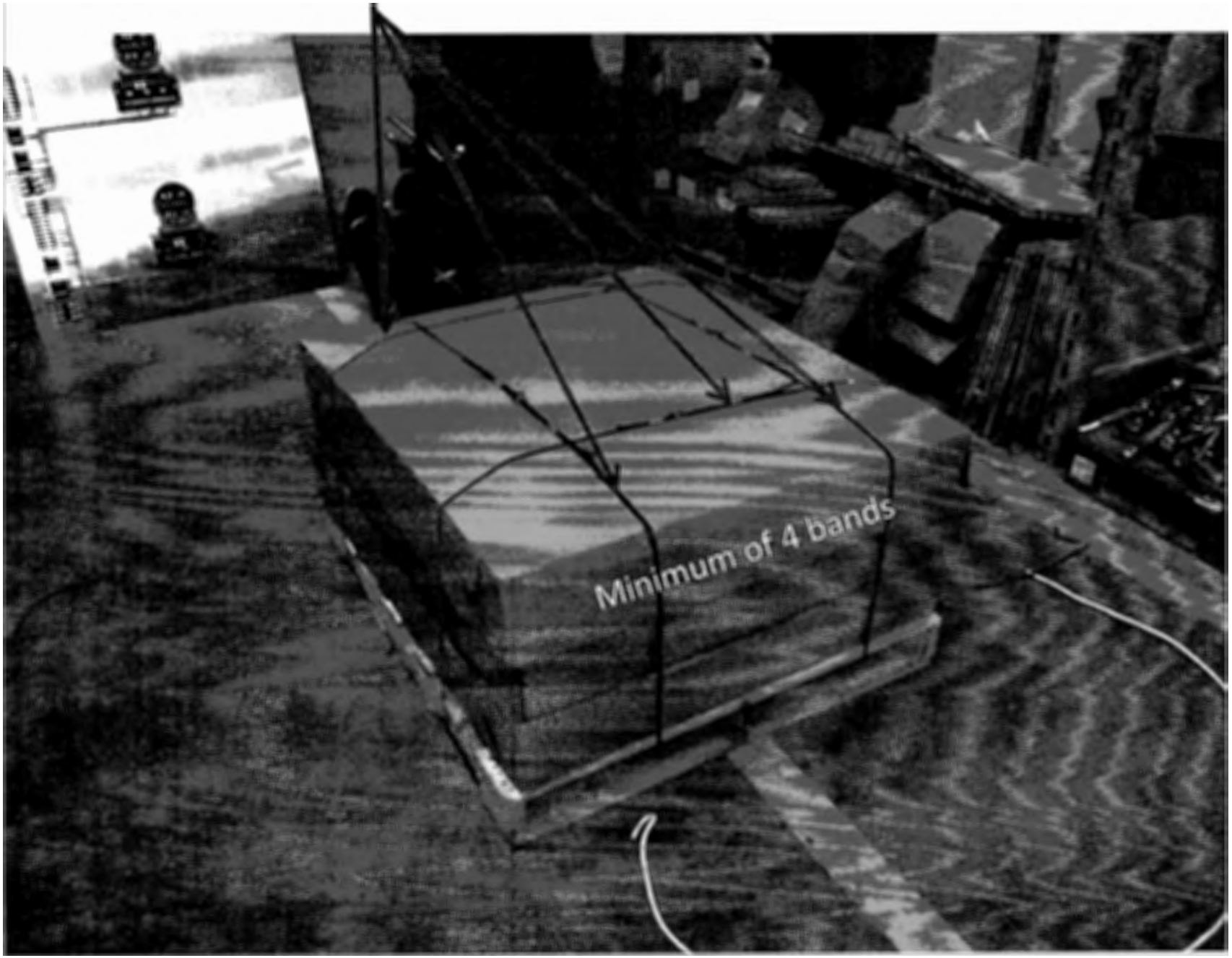
Install shipping box side portion.



Fill any void around plastic bag inside shipping box.

Install top portion of shipping box.

Band shipping box to pallet for transport.



Label shipping box with DOT label, number of batteries, battery type (lead acid), shipped form (location) and shipping to (location).