

Monsanto.

FROM (NAME & LOCATION) J. A. Glass - LP&S, Texas City

DATE May 2, 1978

CC.

SUBJECT Proposed P-Bulletin P-0139
"Inspection of Steam Condensate Tanks"

REFERENCE

TO : Plant Manager's Expanded Staff
(See Distribution)

PLAINTIFF'S EXHIBIT

MON-1421

Attached is a copy of the SECOND DRAFT of the Proposed Plant Procedure (P-0139) that was reviewed and approved as an acceptable part of the settlement of Monsanto's contest of the OSHA citation resulting from the condensate tank (15T16) failure.

This procedure will be implemented on a plantwide basis following a review by the Plant Manager's Safety Board on May 17, 1978. Comments or questions about implementation of the procedure in your department should be directed to your representative on the Board prior to the May 17 review.

Arnold
J. A. Glass

vf

Att.

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THIRD
SECOND
DRAFT

PROPOSED P-BULLETIN P-0139
INSPECTION OF STEAM CONDENSATE TANKS

I. PURPOSE

To insure safe continued use of ~~condensate~~ tanks *including atmospheric and pressure condensate tanks.*

II. POLICY

To comply with the Corporate policy of providing a safe and healthful place to work.

III. SCOPE

This procedure applies to ~~all~~ tanks in service throughout the plant. *atmospheric and pressure*
~~These vessels are normally~~
~~in service.~~

IV. RESPONSIBILITIES

Plant Manufacturing Supervision, as a normal part of their continuing responsibility for the safe and efficient operation of their units, will be responsible for the operation of ~~condensate~~ *all* tanks, including the regular inspection, observation, and reporting of any unusual conditions or events that might have adverse effects upon the safe continued use of these tanks.

It shall be the joint responsibility of Manufacturing, Maintenance, and Materials and ^{Mechanical} Technology Section to see that the unit ~~condensate~~ tanks are properly cataloged, instructions about the equipment inspection are documented and a frequency of inspection is set. Extention beyond this frequency can only be approved by the General Superintendent after consulting with Materials and

Mechanical Technology.

Regular, routine, chemical analyses of ~~the~~ condensate will be made and results recorded and reviewed by Manufacturing Supervisor.

The analytical and process sections of Process Technology will review the results, make appropriate checks on the validity of the analyses, and make appropriate recommendations about control of the chemical content of ~~the~~ condensate *contained in tanks.*

Plant Engineering will be responsible for making proper repairs or revisions as specified by Engineering Design, and Mechanical and Materials Technology.

Mechanical and Materials Technology Section will be responsible for conducting and reporting results of periodic scheduled inspections including recommendations for corrective or protective actions. They will also report any situation that has significant loss or personnel exposure potential to Loss Prevention and Safety.

All records, memos, and information developed by all parties about the operation, condition, repair, or revision of these tanks shall be sent to and retained by the Central Files Section of Engineering Design.

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The General Manufacturing Superintendent will be responsible for assigning individual responsibilities for implementing this procedure and for reporting results to the Plant Manager at ^{yearly} ~~regular~~ intervals.

PROCEDURES

1. A. Manufacturing Superintendents will assign responsibility to Manufacturing Supervisors for operation of the tank and related facilities including:
 - Detailed operating instructions.
 - Regular external inspection of tank.
 - Observation and reporting of unusual conditions or events.
 - Monitoring chemical composition of ^{contents} ~~condensate~~.
 - Recording, reviewing, and reporting of analytical results.
1. B. The Manufacturing Superintendent will be responsible for setting up the necessary controls to ensure that above items are completed.
2. The appropriate process section of Process Technology will review the monthly data sheets of chemical composition of ~~the~~ steam condensate contained in ~~the~~ tanks. They will compare the results with predetermined limits and report on their findings. Also, random condensate

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samples will be taken and analyzed to assure the data is valid. Special analytical tools or techniques may also be used to validate the results or add additional information.

3. The tank inspection will be performed at predetermined intervals based on service and tank history as indicated on the monthly equipment inspection list. Items to be checked are identified on Attachment A. A Maintenance Work Order shall be initiated from this list before the indicated month to allow for proper planning and scheduling of the work.

If the inspection requires a plant shutdown, the work order should still be processed by the indicated month so it can be worked if the plant is suddenly shut down.

When the equipment inspection is actually performed, all of the requested instructions for interior and exterior surfaces will be accomplished and information will be documented for feedback to Manufacturing, Plant Engineering, Engineering Design, and Mechanical and Materials Technology. Follow-up action will be accomplished on items noted during the inspection. This may involve technical assistance and/or additional work request to be initiated. The individual making the inspection should clearly define the follow-up action required and its urgency. Loss Prevention and Safety will be notified when "urgency" is other than routine maintenance.

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The item will again appear for inspection based on the findings in this inspection. This frequency and associated activities will be continuously reviewed and altered, based on the findings in each subsequent inspection. The dates for the next inspection should be set after current inspection and noted on future inspection list.

4. Revisions or repairs will be made by Plant Engineering according to directions specified by Engineering Design and/or Mechanical and Materials Technology Section. When the work is completed, Mechanical and Materials Technology will make appropriate inspections to determine whether the work was done in the specified manner. An inspection report will be produced that documents the results found.

It will be addressed to the operating department supervisor and other interested persons or groups.

5. On a regular basis, the General Manufacturing Superintendent will systematically review all of the accumulated information available from all groups. He will summarize the results and report the conclusions to the Plant Manager.

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and Pressure
ATMOSPHERIC STORAGE TANKS

MASTER ACTIVITY LIST - INSPECTION

EXTERIOR

1. Measure shell plate thickness.
2. Measure roof plate thickness.
3. Inspect shell for leakage.
4. Inspect floor for leakage.
5. (a) Inspect tank foundation for settlement and/or cracking.
(b) Is tank foundation above grade?
6. Inspect shell for corrosion under insulation.
7. Inspect shell insulation and weatherproofing for deterioration.
8. Establish condition of shell protective coating.
9. Establish condition of roof protective coating.
10. Inspect shell for corrosion.
11. Check cathodic protection system.
12. Check fire protection piping system for corrosion.
13. Inspect roof pontoons for leakage (floating roofs).
14. Inspect blanketing (nitrogen) system for deterioration.
15. Inspect for stress corrosion cracking (stainless steel).
16. *Inspect stairway and ladder supports*

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