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EPA

NATIONAL PRIMARY DRINKING WATER REGULATIONS FOR LEAD AND COPPER

Proposed Minor Revisions -- Annotated Flow Charts

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National Primary Drinking Water Regulations For Lead and Copper Flow Charts Annotated to Show Effect of Proposed Revisions

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EPA Contract No. 68-C4-0011
Work Assignment 2-49

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Washington D.C.

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INTRODUCTION

The Lead and Copper Rule Flow Charts in this document are intended to present the logic associated with State compliance determination and reporting of required information to EPA for all aspects of rule implementation. The flow charts have undergone significant modification from the original set presented in 1992, including corrections to errors in logic and rule citing, as well as identification of changes in rule logic associated with modifications to the rule that EPA is proposing in 1996.. The corrections have been presented in *ITALIC* format, while changes and/or additions that EPA is proposing have been presented as hand-written and cross-outs, where appropriate.

Although care has been taken to ensure that these charts accurately reflect the rule and the proposed changes, if there is any ambiguity in the charts, or differences between the rule and the charts, the language in the rule should be used for clarification.

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LEAD AND COPPER RULE - FLOW CHARTS

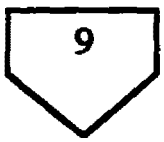
SYMBOL KEY

Termination point - All activity begins, ends, or stalls at this location.

Action block - Perform the action described in the block

Decision diamond - A yes/no answer to the statement contained within it will dictate the path followed next. This is the major logic flow control symbol.

On-page connector - Connects to another location ON THE SAME PAGE. The number in the symbol identifies the matching location. If there is an arrow leading to this symbol, then the logic flow branches to its matching symbol located elsewhere on the same page. If there is an arrow leading away from this symbol, then the logic branches to this location.



Off-page connector - Connects to another location, ON A DIFFERENT PAGE. The number in the symbol identifies the matching location. If there is an arrow leading to this symbol, then the logic flow branches to its matching symbol located on a different page of the chart. If there is an arrow leading away from this symbol, then logic branches to this location.

Function block - Perform this function, defined in a different chart, at this location in the logic.

Reporting symbol - At this point in the logic, data is to be reported, or a report is to be created.

ITALICS ***Indicates an omission on or correction to the flowcharts for the current requirements.***

- - - - → **Indicates an optional action.**

HANDWRITTEN Indicates changes to the flowcharts resulting from the proposed revisions.

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ERRATA SHEET
(version 1/31/96)

Initial Lead and Copper Tap Monitoring

General: Added 141.86 citations, where appropriate.

pg. 1: Added term "if used" to second decision diamond.

pg. 3: Added to logic, two missing decision diamonds, "Correct location of tap sample sites used" and "Correct sample collection method used", and corresponding citations.

pg. 4: Corrected logic to include pathway for systems exceeding both lead and copper action levels.

Inserted "C800" to indicate data record associated with PB90 and CU90 milestones.

Added 142.15 citations, where appropriate.

Included footnotes that indicate wording changes to 142.15(c)(4)(i) and that the reporting of C800 milestone record for PB90 is optional.

pg. 5: Clarified citation associated with Initial Water Quality Parameter (WQP) Monitoring and Initial Source Water Monitoring function blocks.

Added the word "Treatment" to the Optimal Corrosion Control Treatment (OCCT) function blocks.

Added citation to decision diamond.

pg. 6: Added citation to first decision diamond.

Added logic that large system must conduct initial WQP monitoring during first six months of monitoring.

Follow-up Lead and Copper Tap Monitoring

pg. 1: Clarified citation associated with action block.

Corrected citation for "correct number of samples collected" decision diamond.

Added footnote that defines follow-up lead and copper tap monitoring.

pg. 2: Added 141.86 citations, where appropriate.

pg. 3: Added decision diamond "Valid 90th percentile data eventually submitted for compliance period".

pp. 3&4: Corrected logic to separate follow-up monitoring into two distinct compliance periods, based on system size.

Corrected logic to include pathway for systems exceeding both lead and copper action levels.

pg. 4: Added requirement for large systems, not exceeding either the lead or copper action level, to conduct follow-up WQP monitoring and corresponding citations.

Corrected reporting requirement for PB90 to read "Report C2100 record type PB90 to SDWIS".

Included option for PWS to report C800 milestone code PB90, and provided further clarification in a footnote.

Added 142.15(c)(4)(i) citations, where appropriate.

Added citations for Lead Service Line Replacement (LSLR) and Public Education function blocks.

Added Follow-up WQP Monitoring function block and corresponding citation for systems exceeding lead or copper action level.

Inserted "C800" to indicate data record associated with CU90 milestone.

Routine Lead and Copper Tap Monitoring - Medium/Small Systems

General: In title, corrected < 50,000 to ≤ 50,000

Added 141.86 citations, where appropriate.

pp.2,6,11: Added to logic, two missing decision diamonds "Correct location of tap sample sites used" and "Correct sample collection method used", and appropriate citations.

pp.3,7,12: Corrected citation for first decision diamond.

pg. 4: Added citation for decision diamond, "Second or later consecutive 6-month compliance period with no lead or copper exceedance."

pp.4,8,13a: Corrected logic to include pathway for systems exceeding both lead and copper action levels, and included relevant citations.

Corrected reporting requirement for PB90 to read "Report C2100 record type PB90 to SDWIS."

Included option for PWS to report C800 milestone code PB90 and provided further clarification in a footnote.

Inserted "C800" to indicate data record associated with CU90 milestone.

pp.5,8,13b: Added function blocks for Routine WQPs and OCCT for small and medium systems exceeding the lead or copper action level.

pp.5,9,13b: Corrected logic to allow systems meeting WQPs to go on reduced monitoring, and included relevant citations.

Routine Lead and Copper Tap Monitoring - Large Systems

General: Added 141.86 citations, where appropriate.

pp.2,5,10: Added to logic, two missing decision diamonds "Correct location of tap sample sites used" and "Correct sample collection method used", and appropriate citations.

pp.2,6,10: Corrected citation associated with PWS reporting of lead and copper 90th percentile levels.

pp.3,7,11a: Added pathway for systems exceeding both lead and copper action levels.

Corrected reporting requirement for PB90 to read "Report C2100 record type PB90 to SDWIS."

Included option for PWS to report C800 milestone code PB90 and provided further clarification in a footnote.

Inserted "C800" to indicate data record associated with CU90 milestone.

ERRATA SHEET
(continued)

pp.3,7,11b: Added footnote to clarify that flowchart logic assume WQP monitoring is being conducted properly.

pg. 11b: Added additional relevant citation to decision diamond, "PWS has maintained WQPs within state-specified ranges during entire tap water monitoring period".

Initial Water Quality Parameter Monitoring

pg. 1: Clarified wording in first decision diamond to indicate initial WQP monitoring is always required to be performed by large systems but only by medium and small systems when they exceed the lead or copper action level.

Added wording and appropriate citation that tap samples are to be representative of water quality throughout the distribution system.

pg. 2: Made first decision diamond more general to also make it applicable to large systems.

Corrected citation for last decision diamond.

pg. 3: Added wording "where appropriate" to first decision diamond to indicate that PWSs may not always use certified laboratories to analyze WQPs.

Follow-up Water Quality Parameter Monitoring

pg. 1: Added footnote that clarifies definition of follow-up WQP monitoring.

pg. 2: Added wording "where appropriate" to first decision diamond to indicate that PWSs may not always use certified laboratories to analyze WQPs.

pp. 2&3: Corrected logic to separate follow-up WQP monitoring into two distinct monitoring periods and included relevant citations.

pg. 3: Corrected violation codes for follow-up WQP monitoring and reporting violations.

pg. 3: Added footnote that clarifies that entry point compliance is determined biweekly.

Routine Water Quality Parameter Monitoring

pg. 2: Added footnote that clarifies that entry point compliance is determined biweekly.

pp.2,4,6,8 Added wording "where appropriate" to first decision diamond.

Inserted "M/R" into third decision diamond.

Added other relevant citations to decision diamond, "Range of each value at each site within State's ranges".

pp. 5&7: Added other relevant citation to the last decision diamond.

Initial Source Water Monitoring

No corrections.

Follow-up Source Water Monitoring

pg. 1: Added footnote that clarifies definition of follow-up source water monitoring.

pg. 2: To the first decision diamond, added missing reporting requirement and associated citation that requires systems to indicate if any sampling locations have changed.

Routine Source Water Monitoring

pp. 1&3: Added missing reporting requirement and associated citation that requires systems to indicate if any sampling locations have changed.

pg. 3: Added other relevant citation to action block regarding surface water sources.

pg. 4: Corrected logic that system on reduced monitoring does not return to standard monitoring if it exceeds its maximum permissible levels (MPLs).

Source Water Treatment

pg. 2: Corrected logic to show that LSLR is not optional if required by the state.

pp. 2&3: Inserted "(c)" into 142.15 citations.

pg. 3: Added other relevant citations to Routine Source Water Monitoring action block.

Optimal Corrosion Control Treatment - Medium/Small Systems

pg. 1: To the note at the top of the page, added the phrase "from 2 consecutive 6-month monitoring periods".

Added the words "6-month" to the first decision diamond.

Clarified citation in second decision diamond.

Added other relevant citations to last decision diamond.

Deleted incorrect citation, 141.86(d)(3), from the Routine Lead and Copper Tap Monitoring function block.

pg. 2: Added note that flowcharts show intention of current rule for "b2" and "b3" systems.

Added pathway for "b3" systems and appropriate citations.

Clarified state's setting WQPs applies to "b2" systems.

Corrected reporting requirement associated with a state's establishing WQPs for "b2" systems, including correcting citation and deleting requirement to report milestone OTIN for "b2" systems.

pg. 3: Corrected citations associated with decision diamond to include all of 141.82(c) and added 141.90(c)(3) citation.

pg. 4: Corrected citation for state reporting of the OTDE milestone.

Corrected citation associated with system certification of OCCT installation.

Corrected logic to indicate LSLR is not optional if required by state.

pg. 5: Added off-page connector "10" to indicate pathway for "b3" systems.

Optimal Corrosion Control Treatment - Large Systems

pg. 1: Added other relevant citations to last decision diamond.

pg. 2: Added note that flowcharts show intention of current rule for "b2" and "b3" systems.

pg. 2: Added pathway for "b3" systems and appropriate citations.

Clarified state setting WQPs applies to "b2" systems.

Corrected reporting requirement associated with a state's establishing WQPs for "b2" systems, including correcting citation and deleting requirement to report milestone OTIN for "b2" systems.

Added 141.81(d)(2) citation regarding action block, "PWS performs corrosion control study".

pg. 3: Corrected citations associated with first decision diamond to include all of 141.82(c) and added 141.90(c)(3) citation.

Corrected citation regarding state designation of OCCT for large systems.

pg. 4: Corrected citation for state reporting of the OTDE milestone.

Corrected citation associated with system certification of OCCT installation and wording to clarify that system certifies proper OCCT installation.

Switched the order of the violation routine function block and the reporting of the violation.

Added 141.81(d)(4) citation to decision diamond, "Treatment installation completed, eventually".

Corrected logic to indicate LSLR is not optional if required by state.

pg. 5: Added 141.87 citation to Routine Lead and Copper Monitoring, and Water Quality Parameter Monitoring function blocks.

Lead Service Line Replacement

pg. 1: Added pathway for systems that had been triggered into LSLR before.

pg. 2: Added citation for PWS reporting related to LSLR.

Inserted "(c)" into 142.15 citation.

ERRATA SHEET
(continued)

pg. 3: Consolidated first and third decision diamonds.

Added clarification and appropriate citation to second decision diamond that indicates LSL monitoring is only required if system is trying to demonstrate that a line does not need to be replaced.

Public Education

pg. 1: Consolidated decision diamond regarding 60-day delivery requirement with decision diamond on page 2 for NTNCWSs and page 3 for CWSs.

pg. 2: Deleted irrelevant citation next to Community PWS decision diamond.

Clarified that public education must meet both content and delivery requirements.

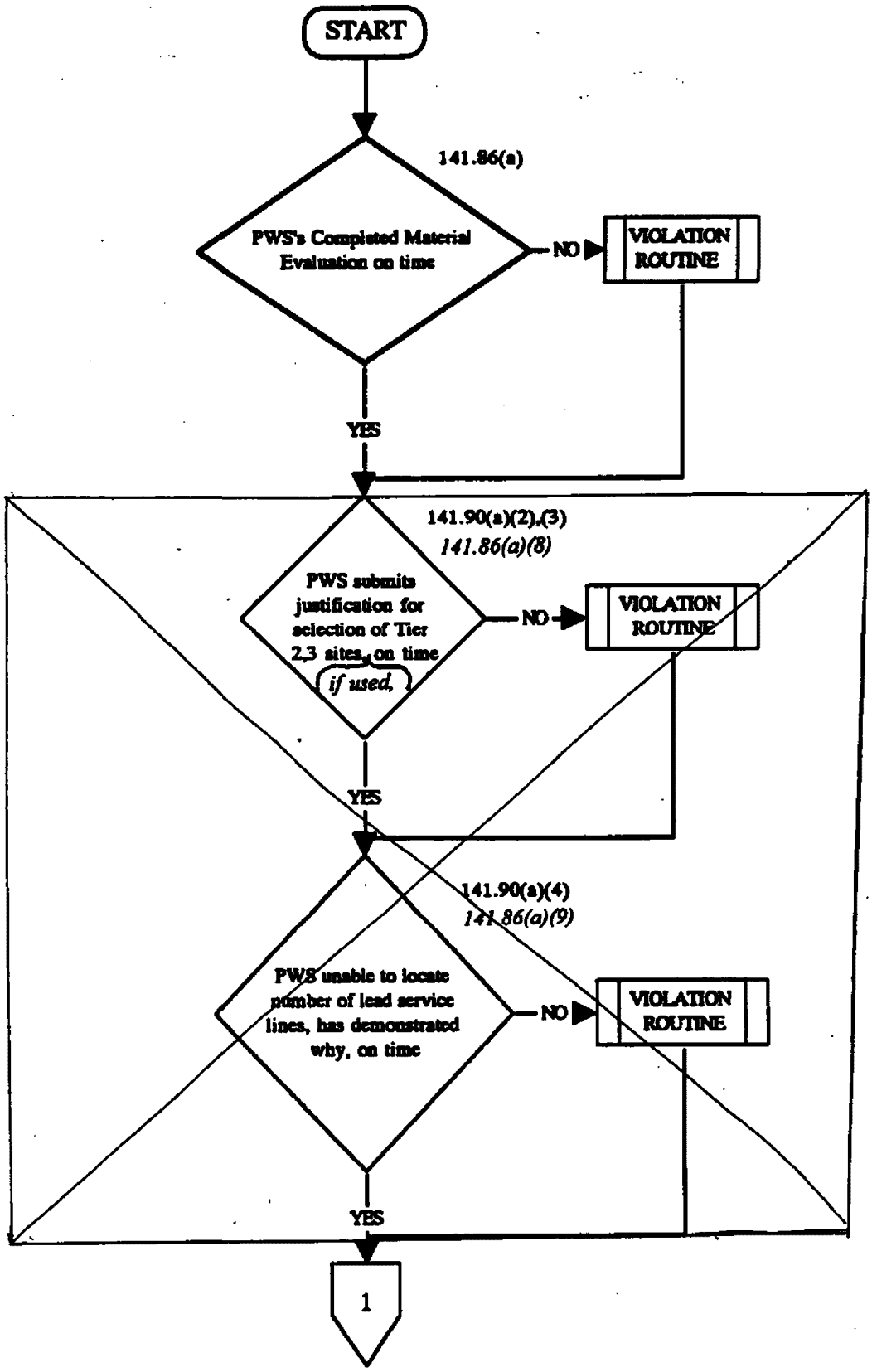
pg. 4: Added pathway for systems that had been triggered into public education before.

1/31/96

LEAD AND COPPER RULE - FLOW CHART

INITIAL LEAD AND COPPER TAP MONITORING (141.86)

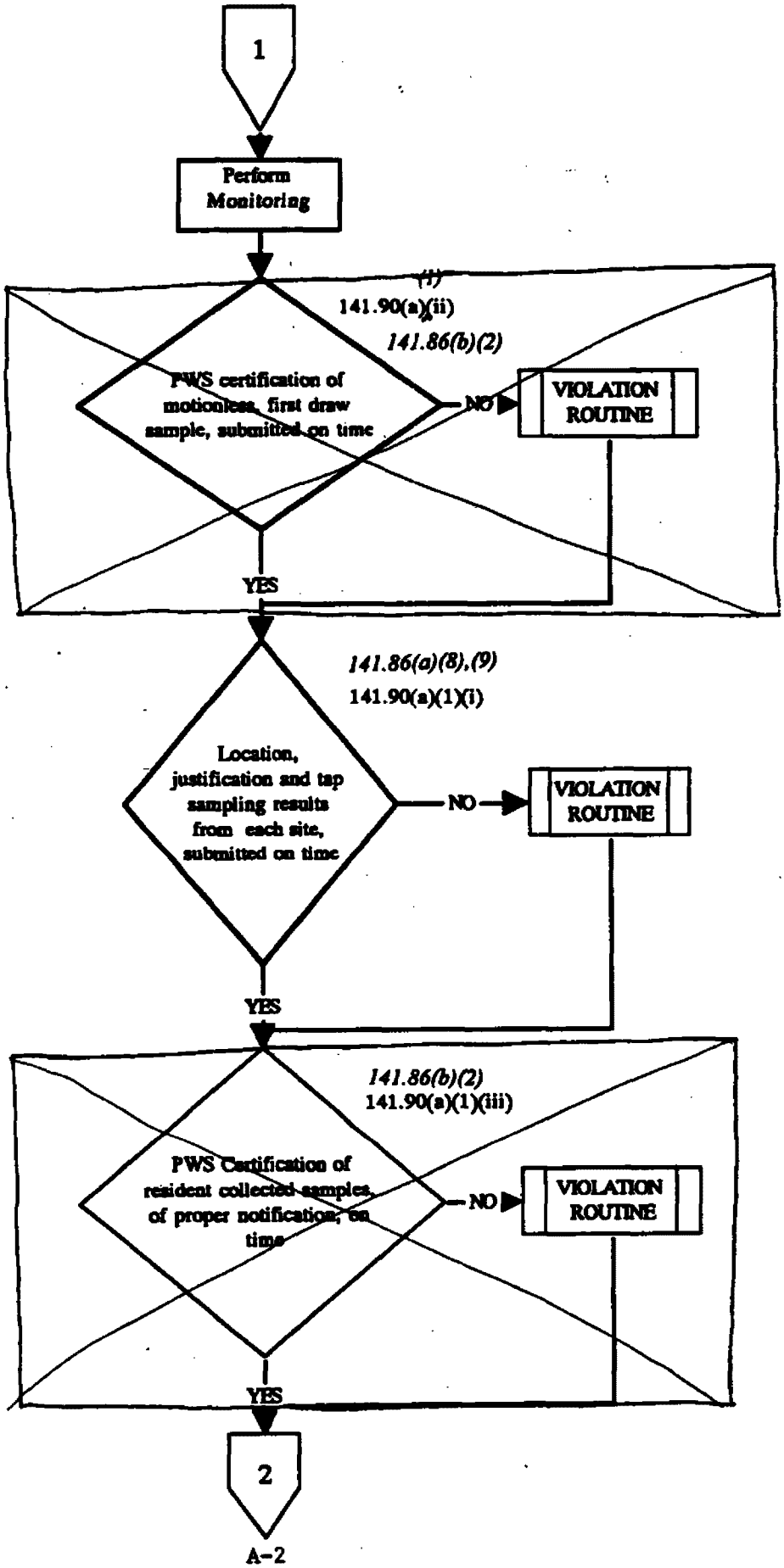
ALL SYSTEMS SIZES



LEAD AND COPPER RULE - FLOW CHART

INITIAL LEAD AND COPPER TAP MONITORING (141.86)

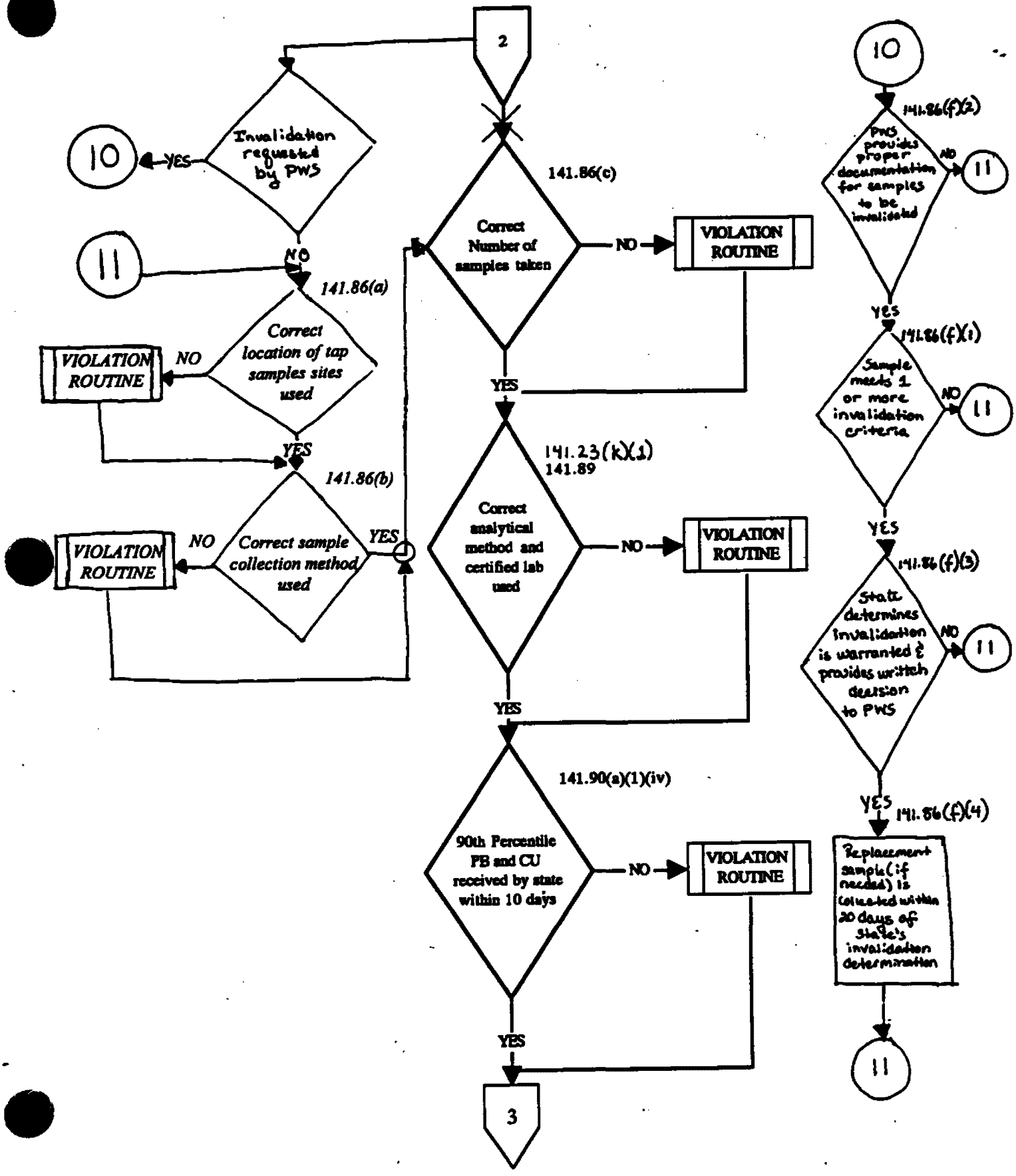
ALL SYSTEMS SIZES



LEAD AND COPPER RULE - FLOW CHART

INITIAL LEAD AND COPPER TAP MONITORING (141.86)

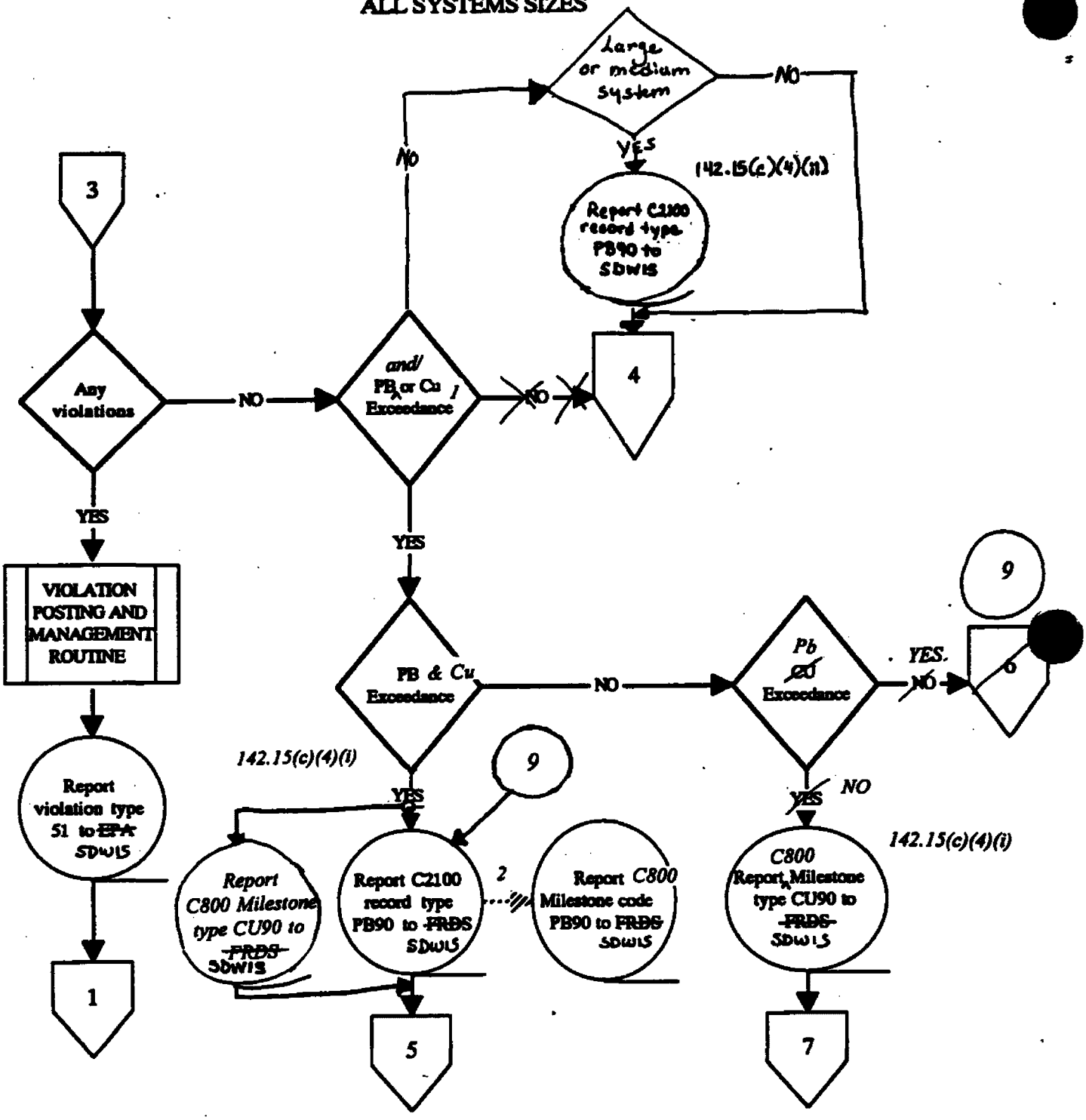
ALL SYSTEMS SIZES



LEAD AND COPPER RULE - FLOW CHART

INITIAL LEAD AND COPPER TAP MONITORING (141.86)

ALL SYSTEMS SIZES



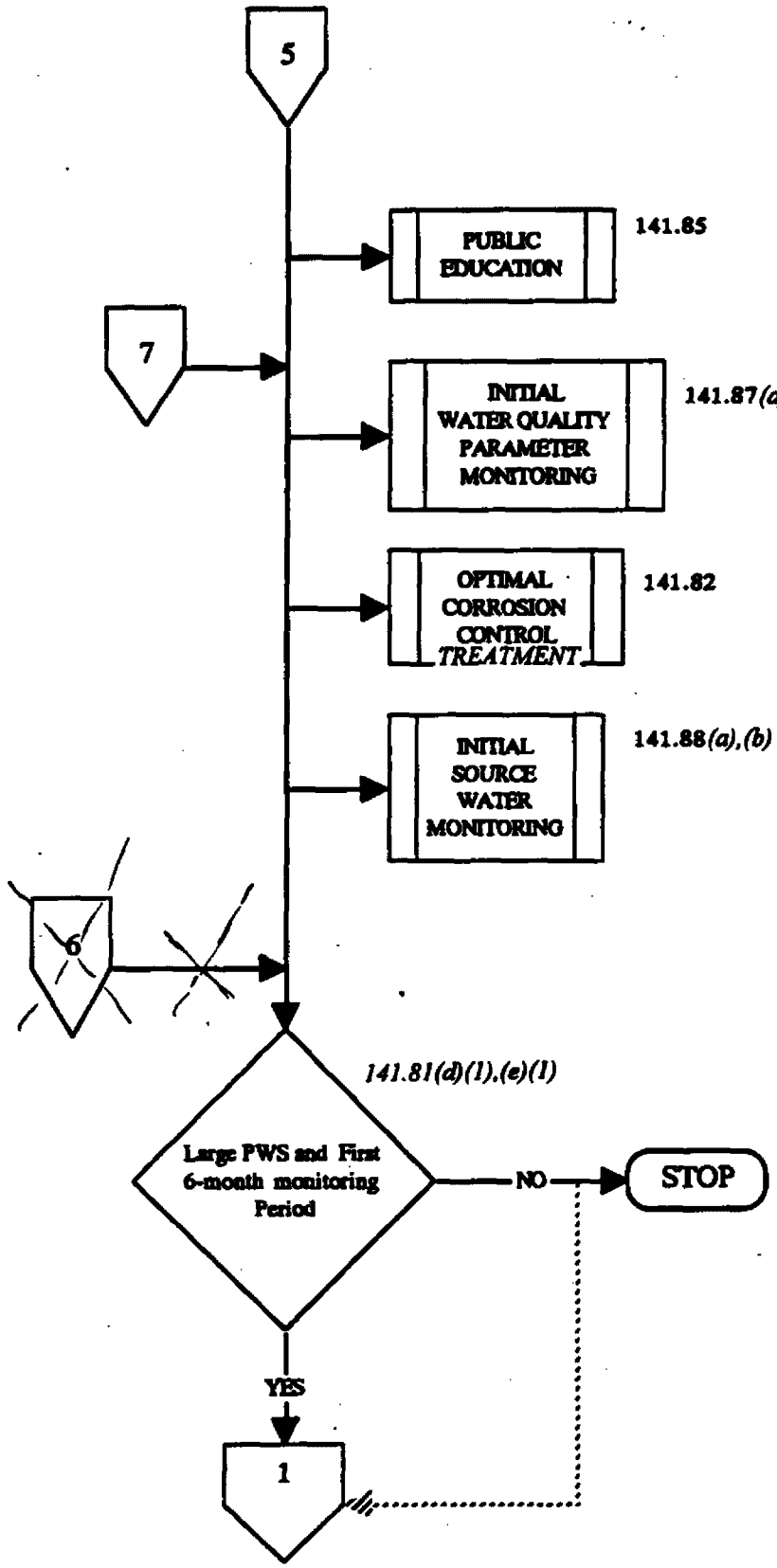
[1] *This flowchart shows the intent of the current rule that requires State reporting to EPA of any system which exceeds either the lead or copper action level. The proposed revisions would clarify this requirement by changing the wording in 142.15(c)(4)(i) from "and" to "or."*

[2] *For any exceedance of the lead action level, the State need only report the exceedance as a parametric data record (C2100), SDWIS will create and post the milestone record (C800).*

LEAD AND COPPER RULE - FLOW CHART

INITIAL LEAD AND COPPER TAP MONITORING (141.86)

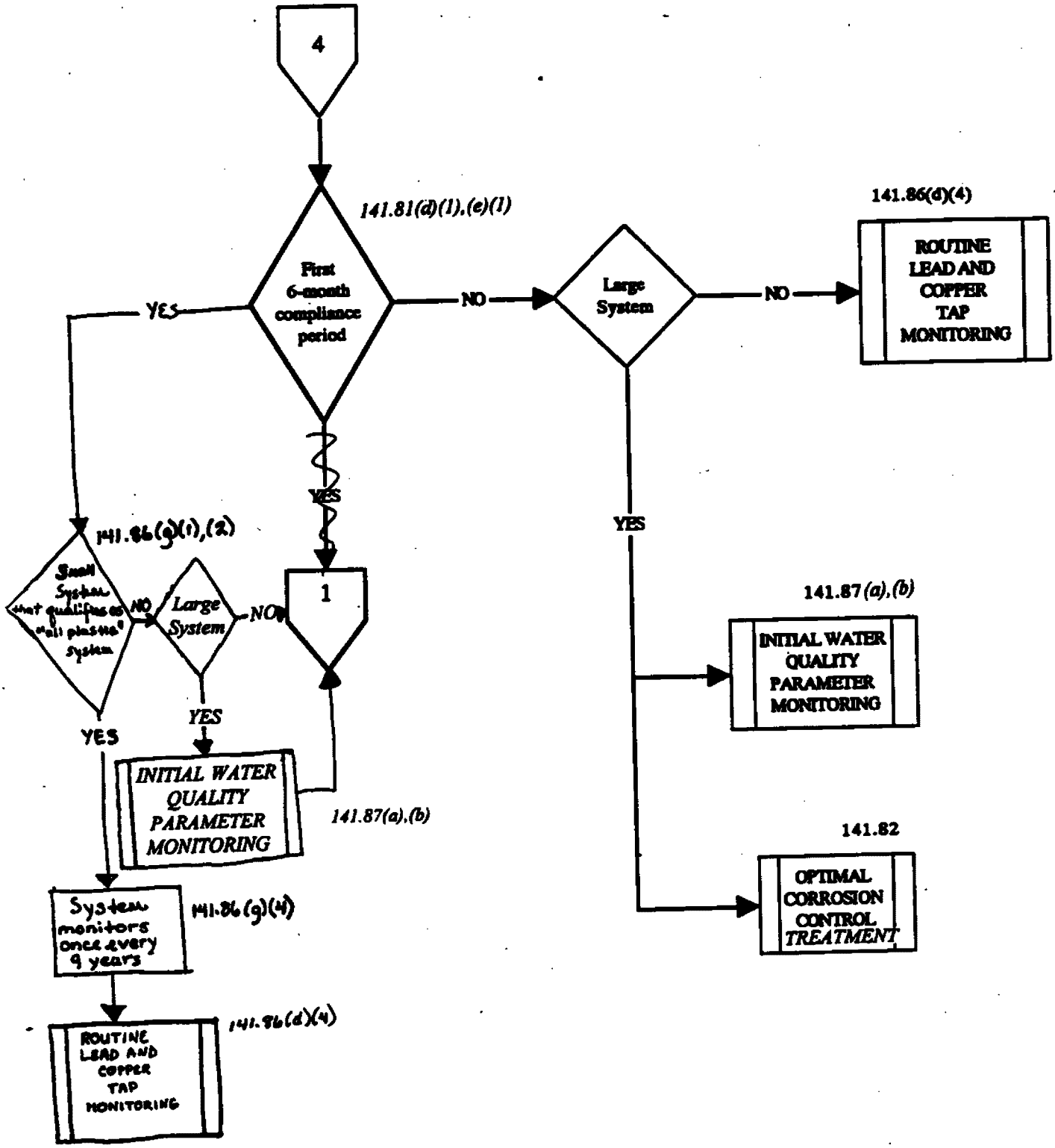
ALL SYSTEMS SIZES



LEAD AND COPPER RULE - FLOW CHART

INITIAL LEAD AND COPPER TAP MONITORING (141.86)

ALL SYSTEMS SIZES

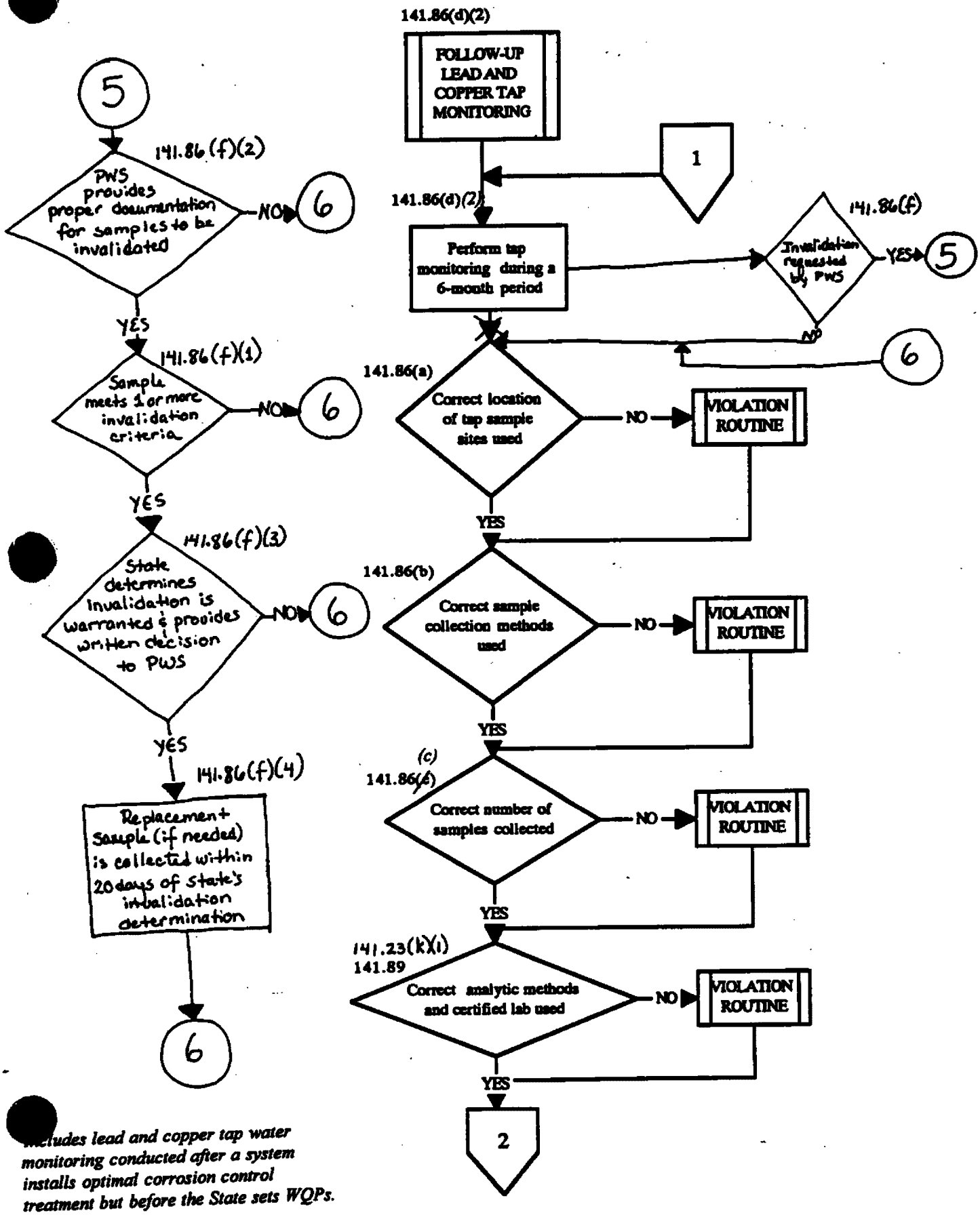


1/31/96

LEAD AND COPPER RULE - FLOW CHART

FOLLOW-UP LEAD AND COPPER TAP MONITORING (141.86(d)(2))

ALL SYSTEMS SIZES

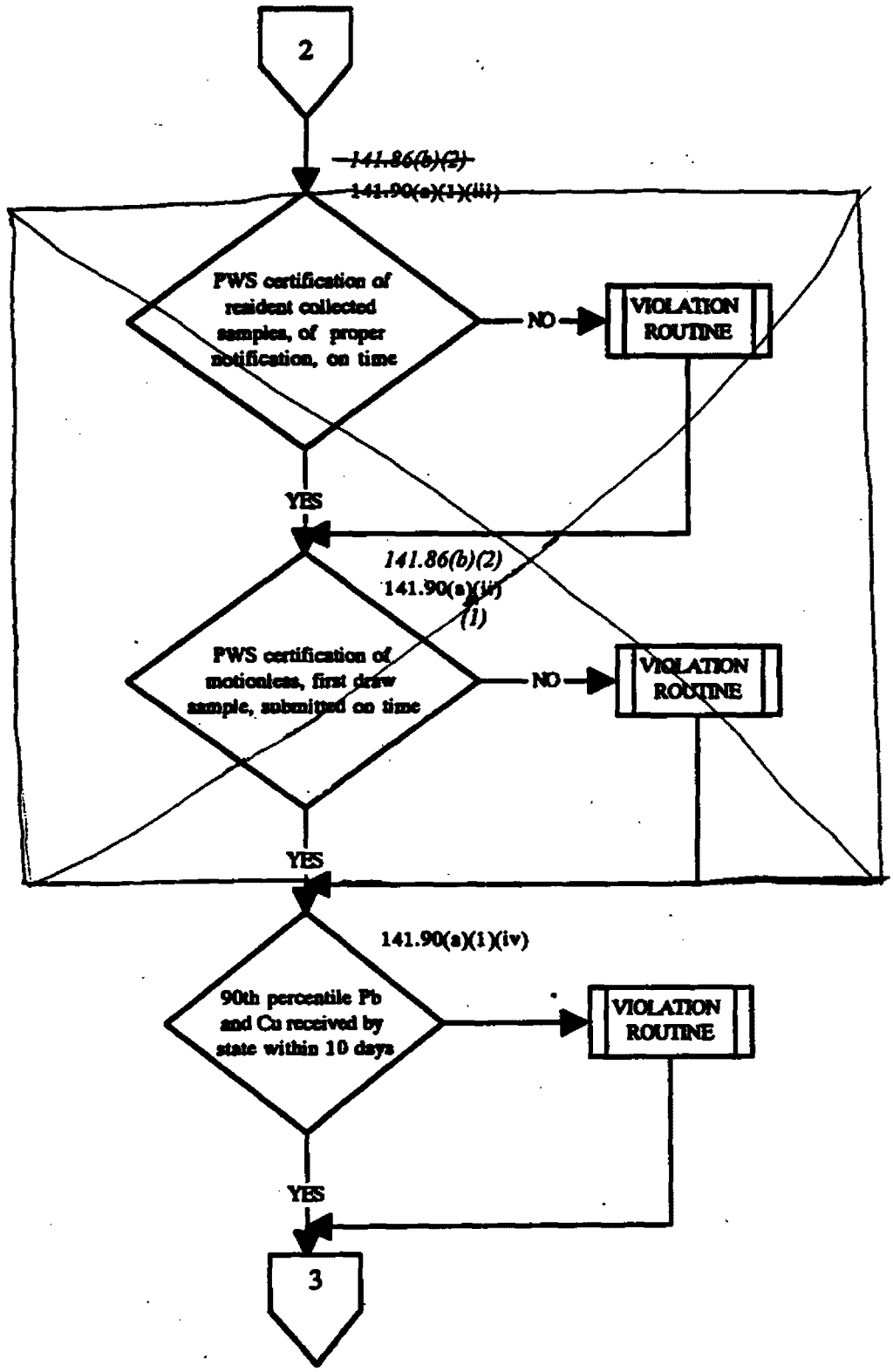


Includes lead and copper tap water monitoring conducted after a system installs optimal corrosion control treatment but before the State sets WQPs.

LEAD AND COPPER RULE - FLOW CHART

FOLLOW-UP LEAD AND COPPER TAP MONITORING (141.86(d)(2))

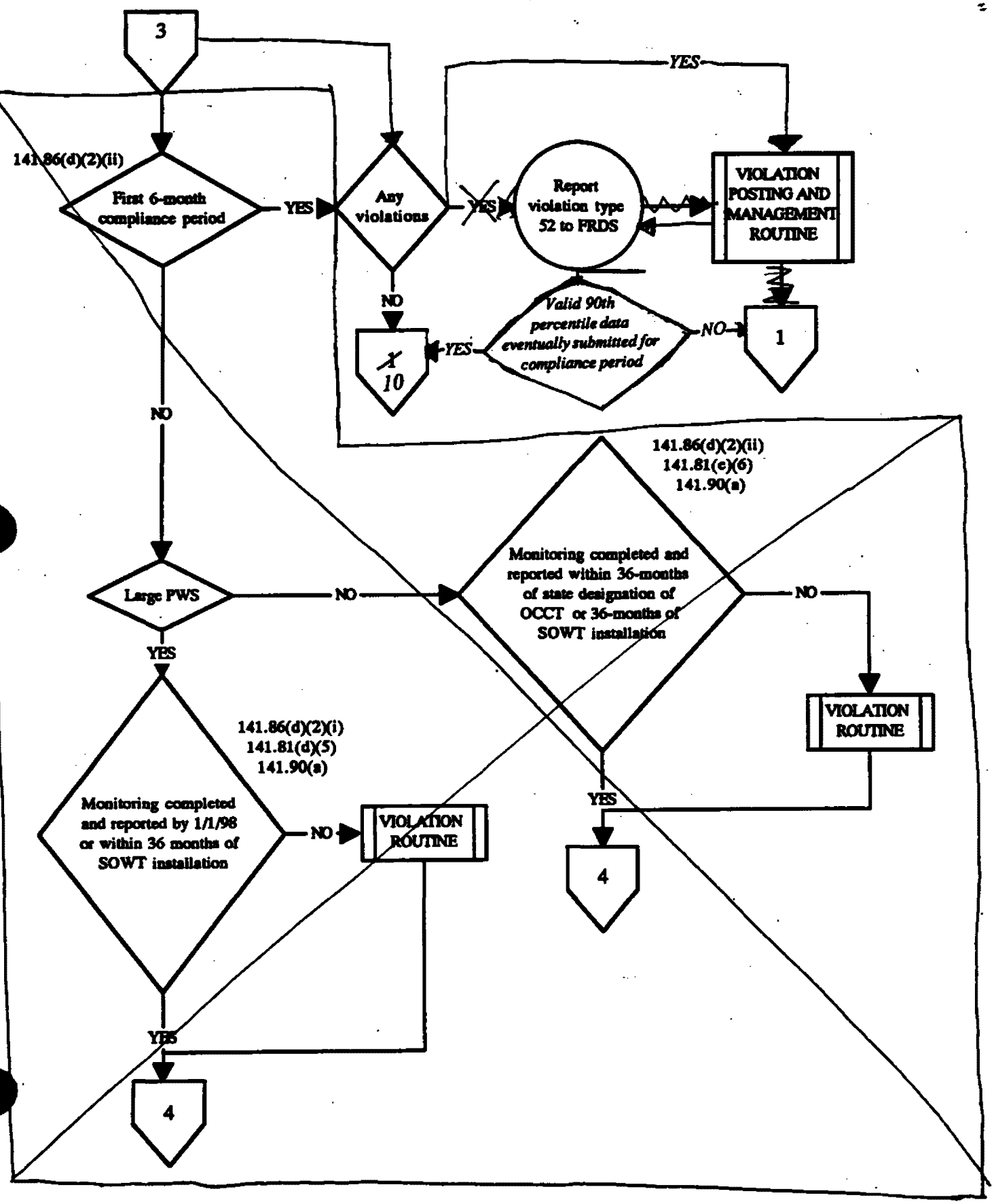
ALL SYSTEMS SIZES



LEAD AND COPPER RULE - FLOW CHART

FOLLOW-UP LEAD AND COPPER TAP MONITORING (141.86(d)(2))

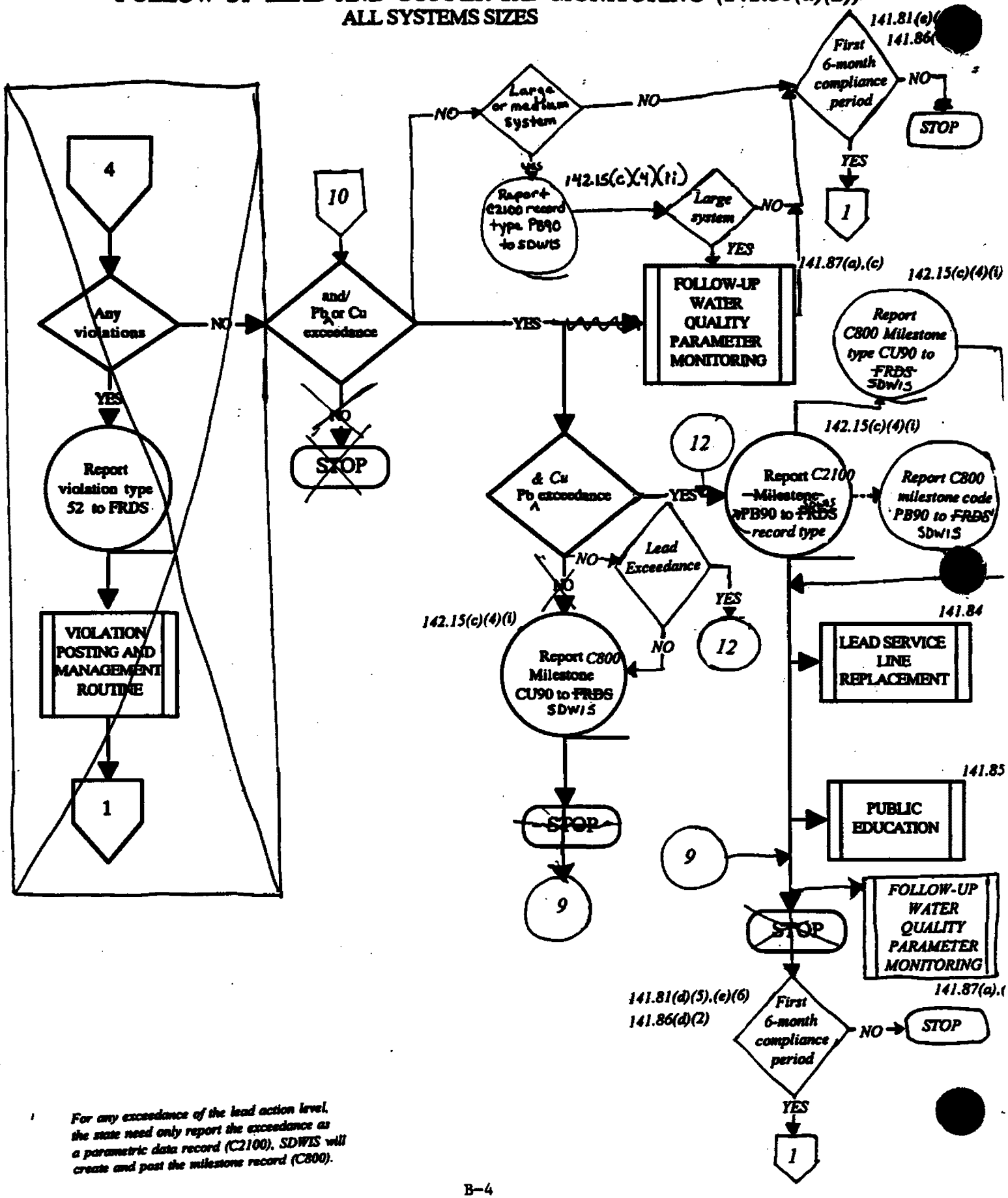
ALL SYSTEMS SIZES



LEAD AND COPPER RULE - FLOW CHART

FOLLOW-UP LEAD AND COPPER TAP MONITORING (141.86(d)(2))

ALL SYSTEMS SIZES



For any exceedance of the lead action level, the state need only report the exceedance as a parametric data record (C2100). SDWIS will create and post the milestone record (C800).

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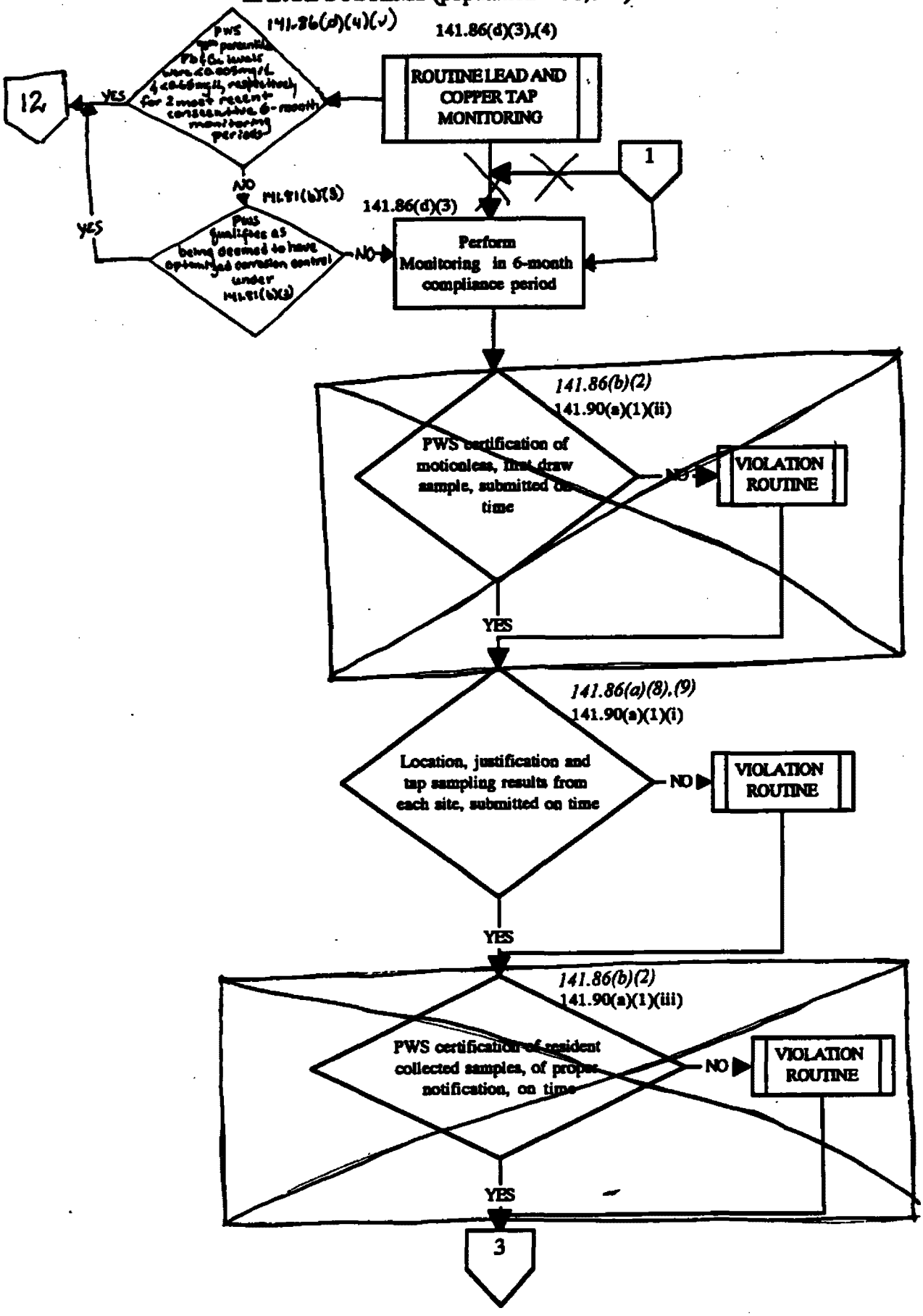
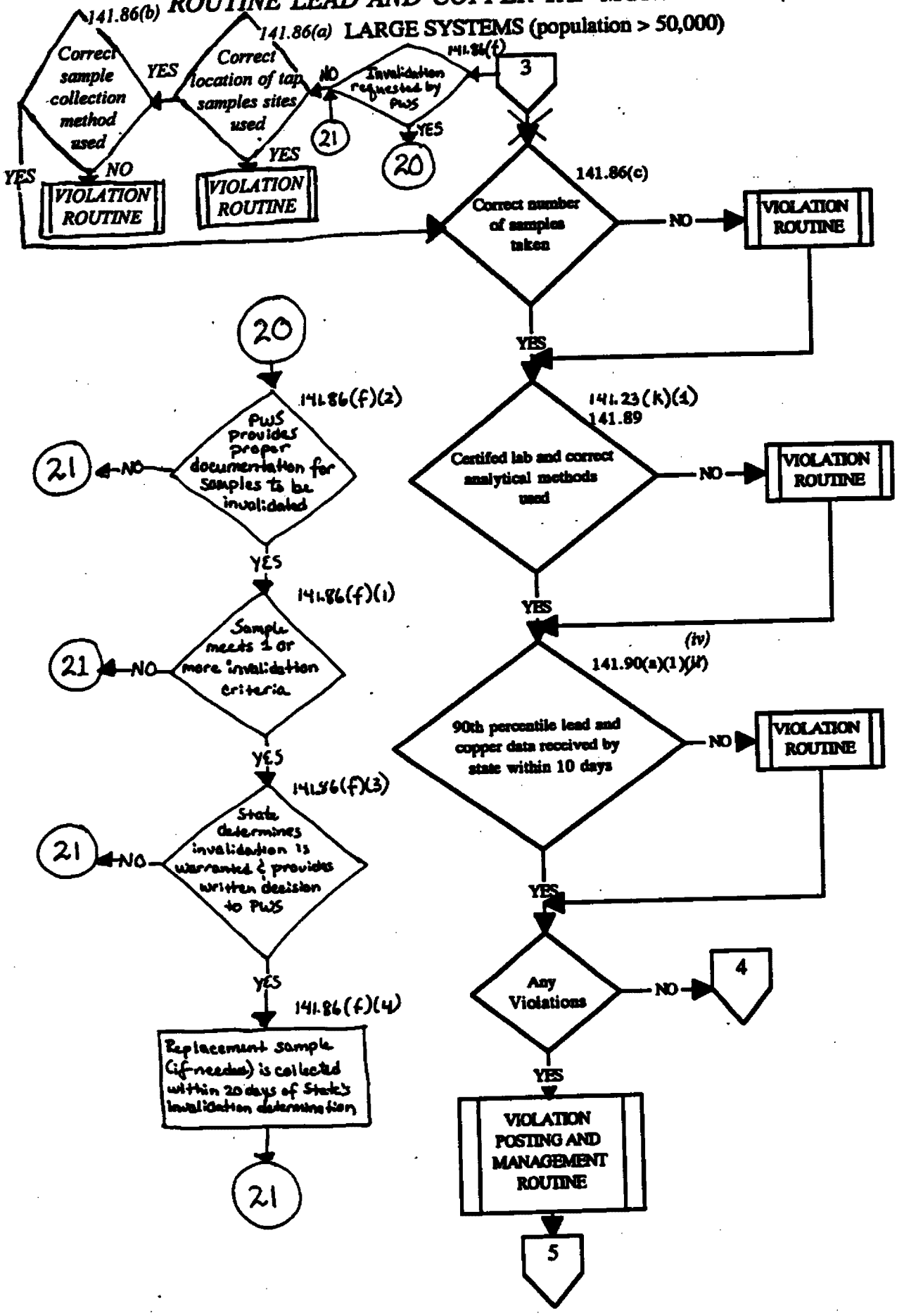
LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

LARGE SYSTEMS (population > 50,000)



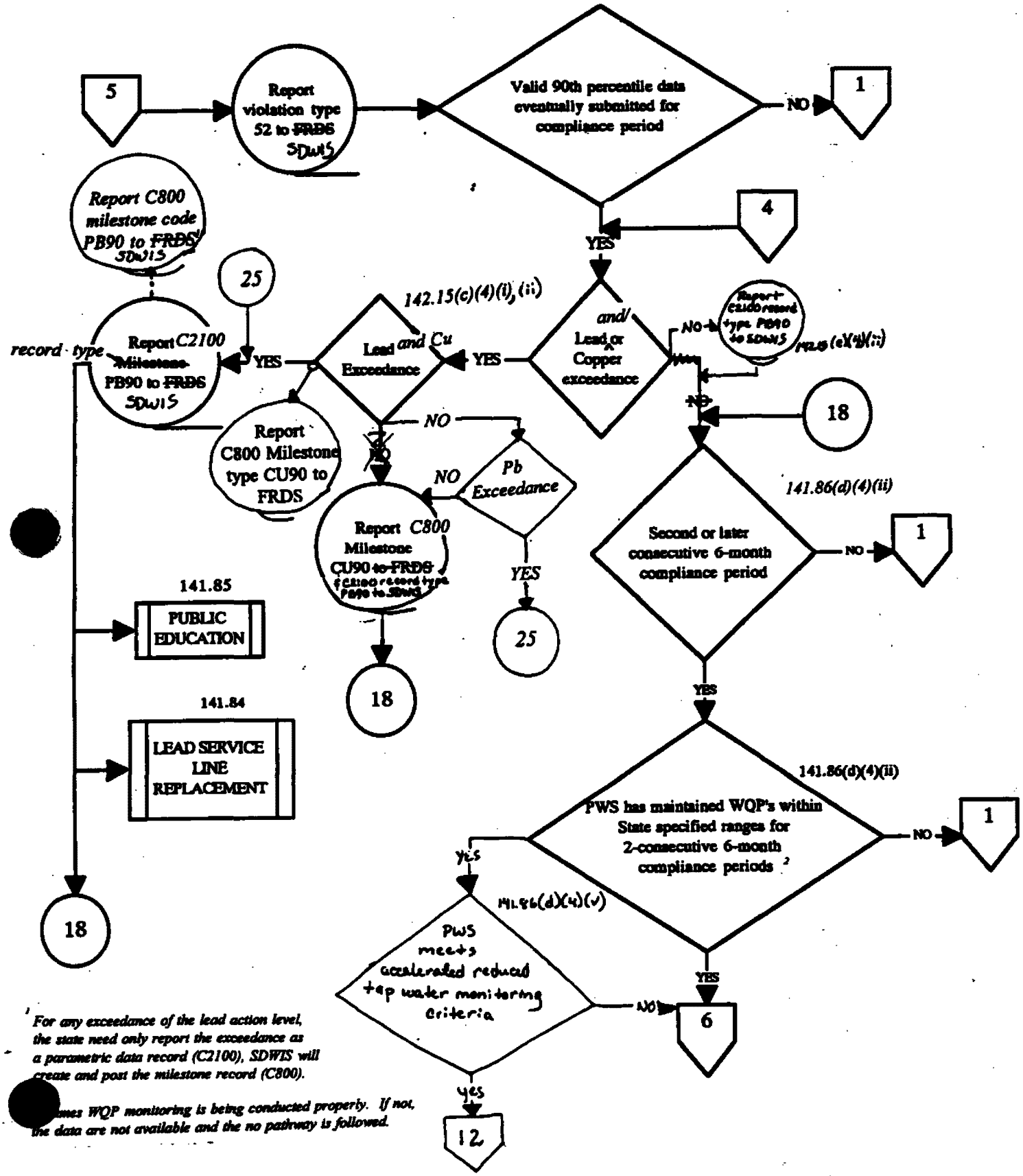
ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))



LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

LARGE SYSTEMS (population > 50,000)



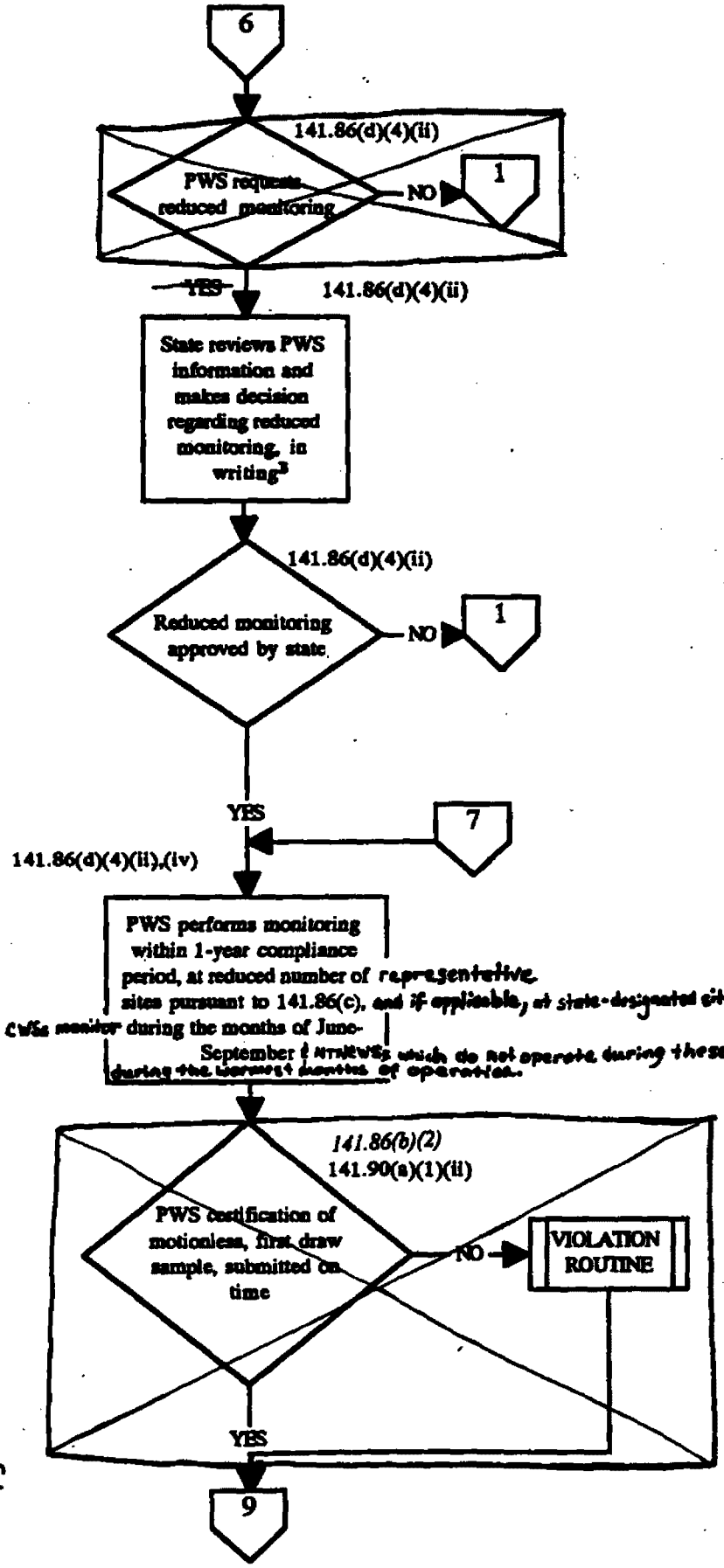
For any exceedance of the lead action level, the state need only report the exceedance as a parametric data record (C2100), SDWIS will create and post the milestone record (C800).

...mes WQP monitoring is being conducted properly. If not, the data are not available and the no pathway is followed.

LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

LARGE SYSTEMS (population > 50,000)

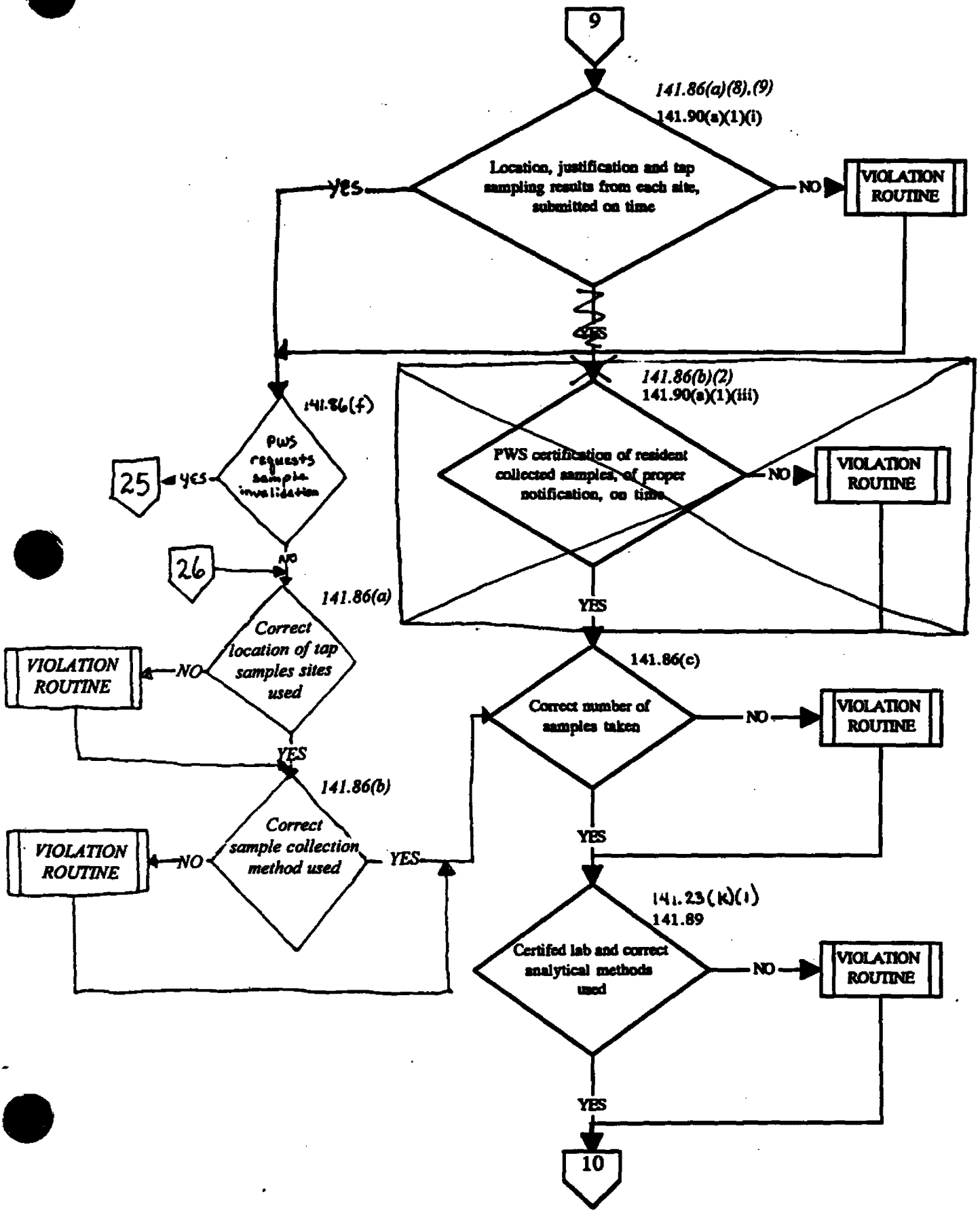


[3] The proposed rule would no longer require large systems to request state permission to go on reduced lead and copper tap water monitoring. However, the state still must approve this reduced monitoring.

LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

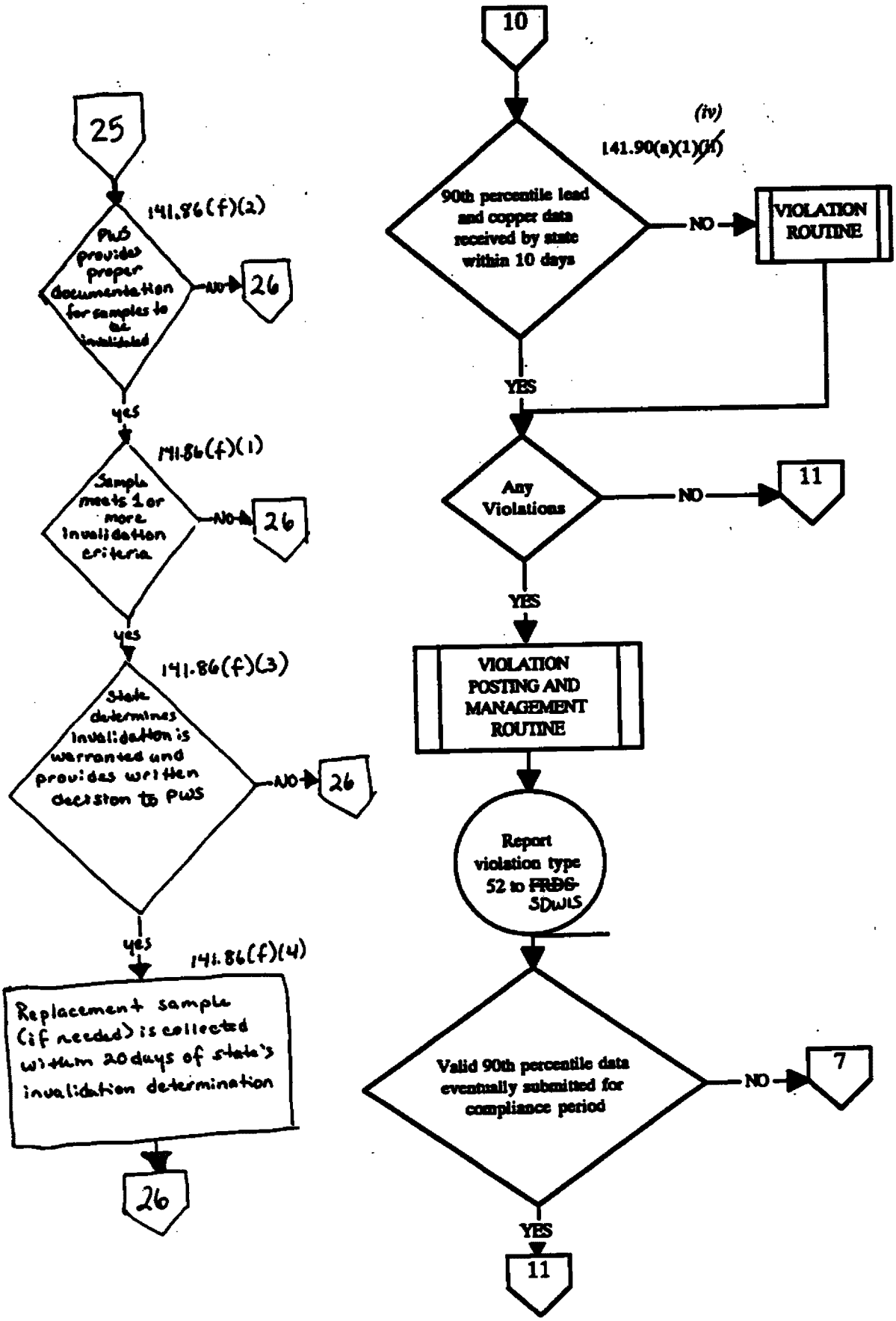
LARGE SYSTEMS (population > 50,000)



LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

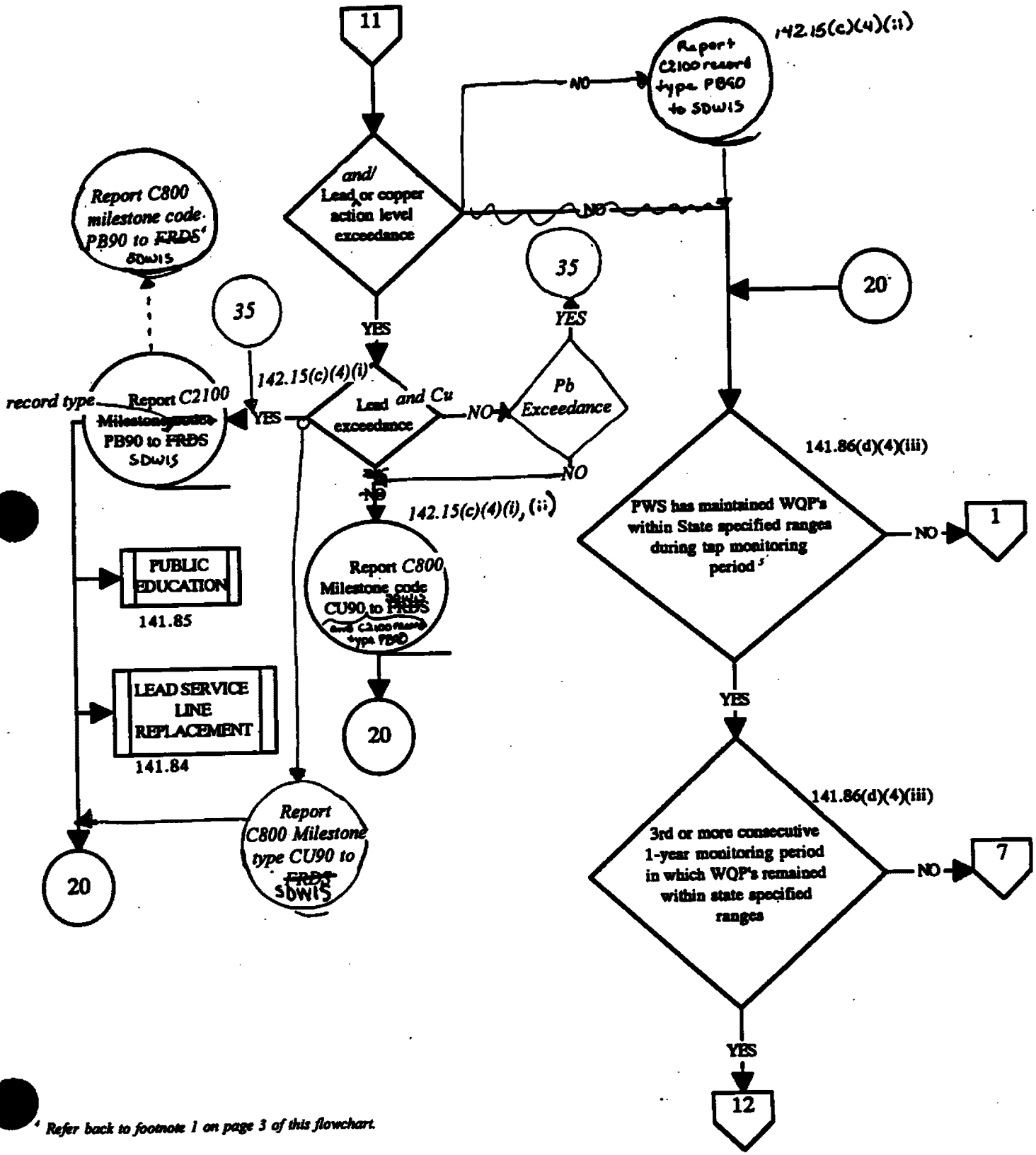
LARGE SYSTEMS (population > 50,000)



LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

LARGE SYSTEMS (population > 50,000)



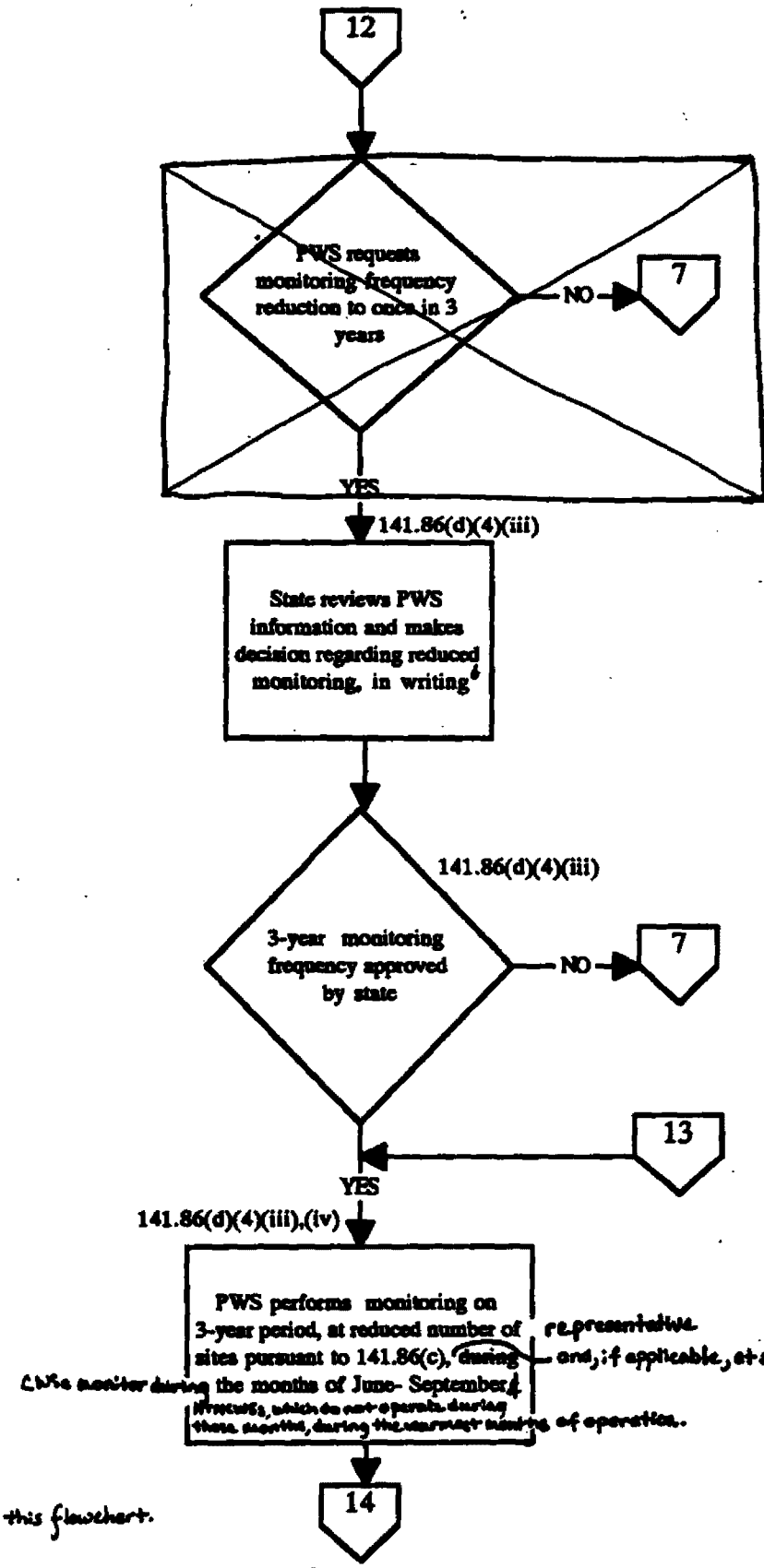
[4] Refer back to footnote 1 on page 3 of this flowchart.

[5] Refer back to footnote 2 on page 3 of this flowchart.

LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

LARGE SYSTEMS (population > 50,000)

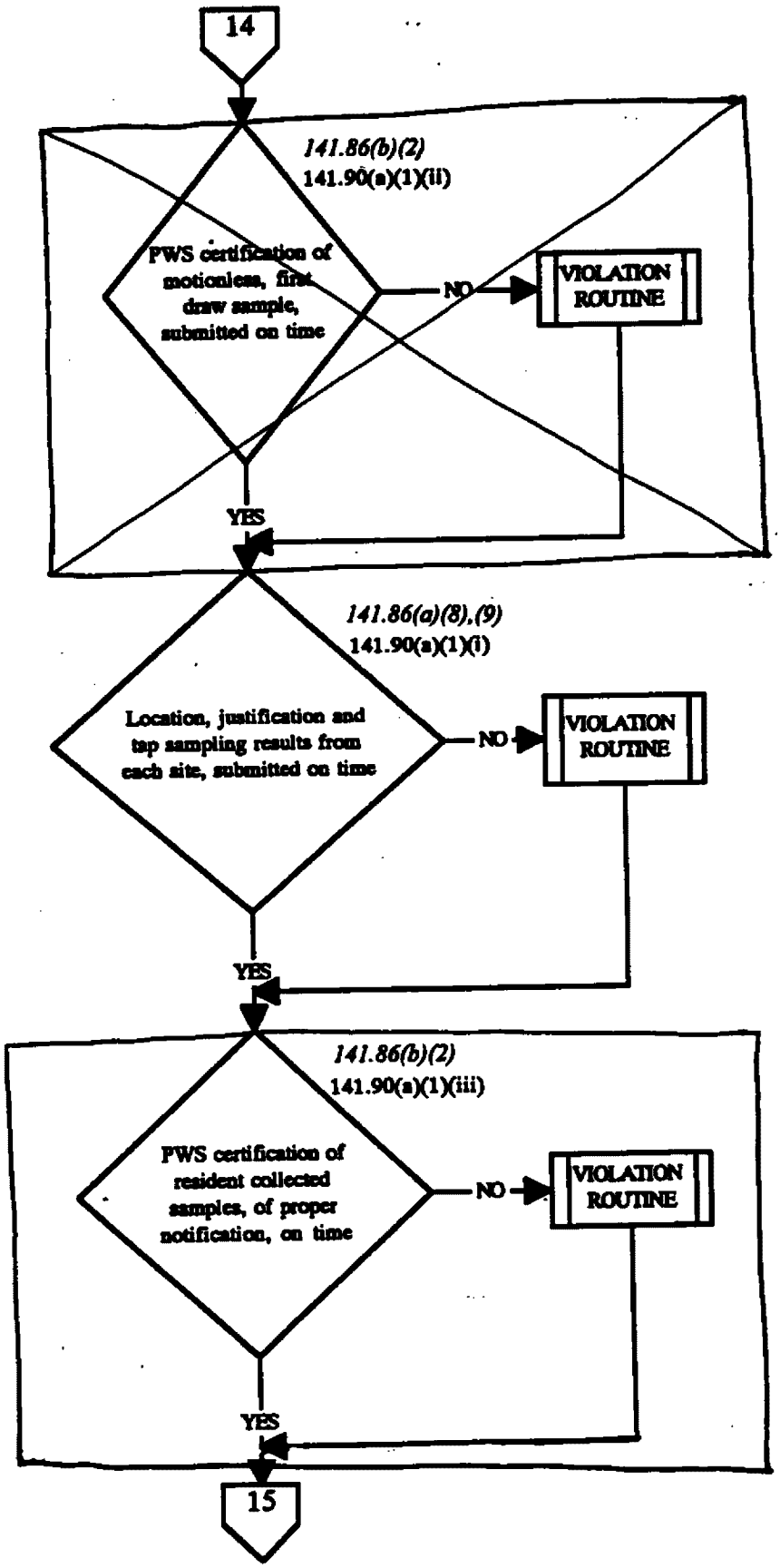


[6] Refer back to footnote on page 4 of this flowchart.

LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

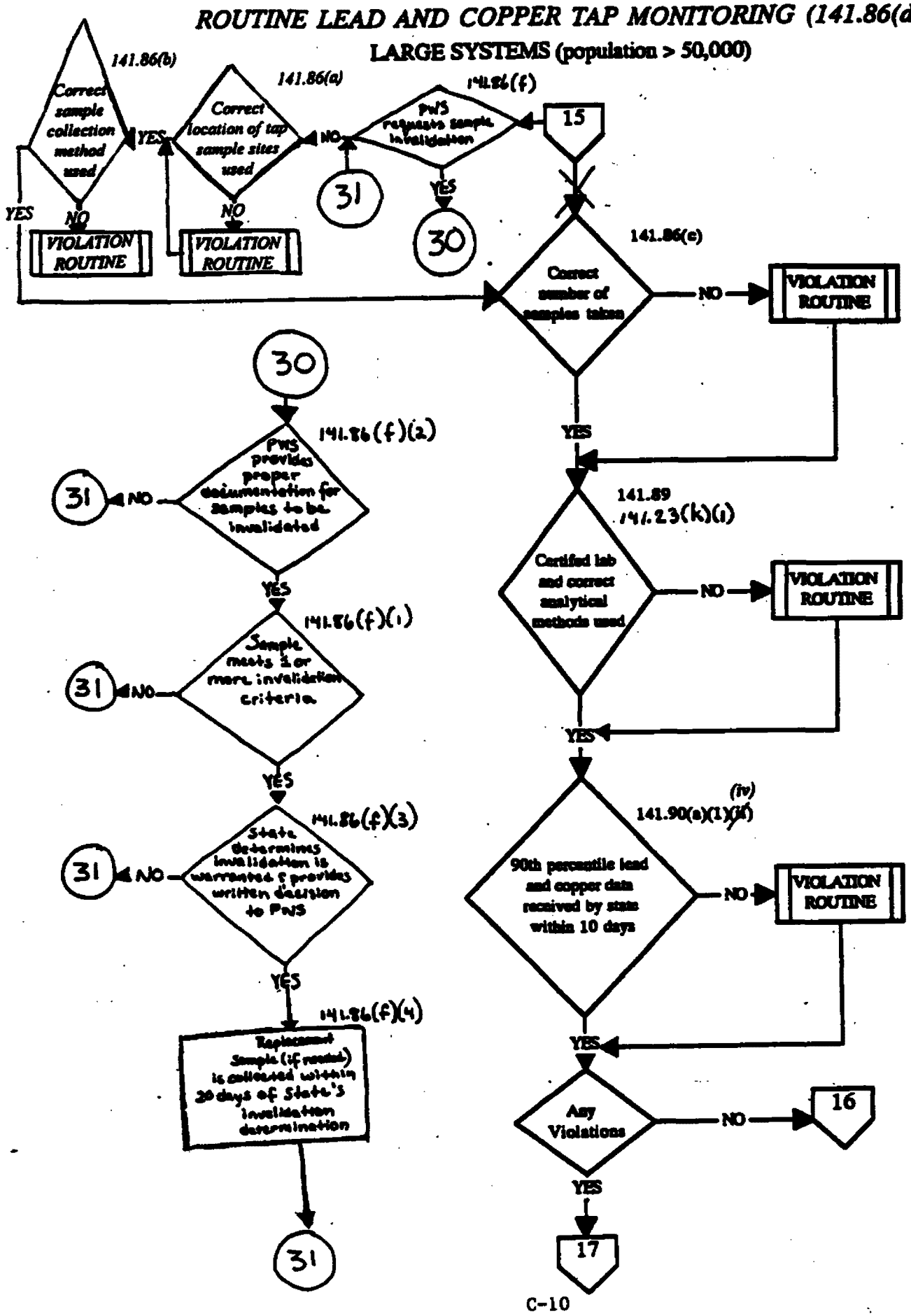
LARGE SYSTEMS (population > 50,000)



LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

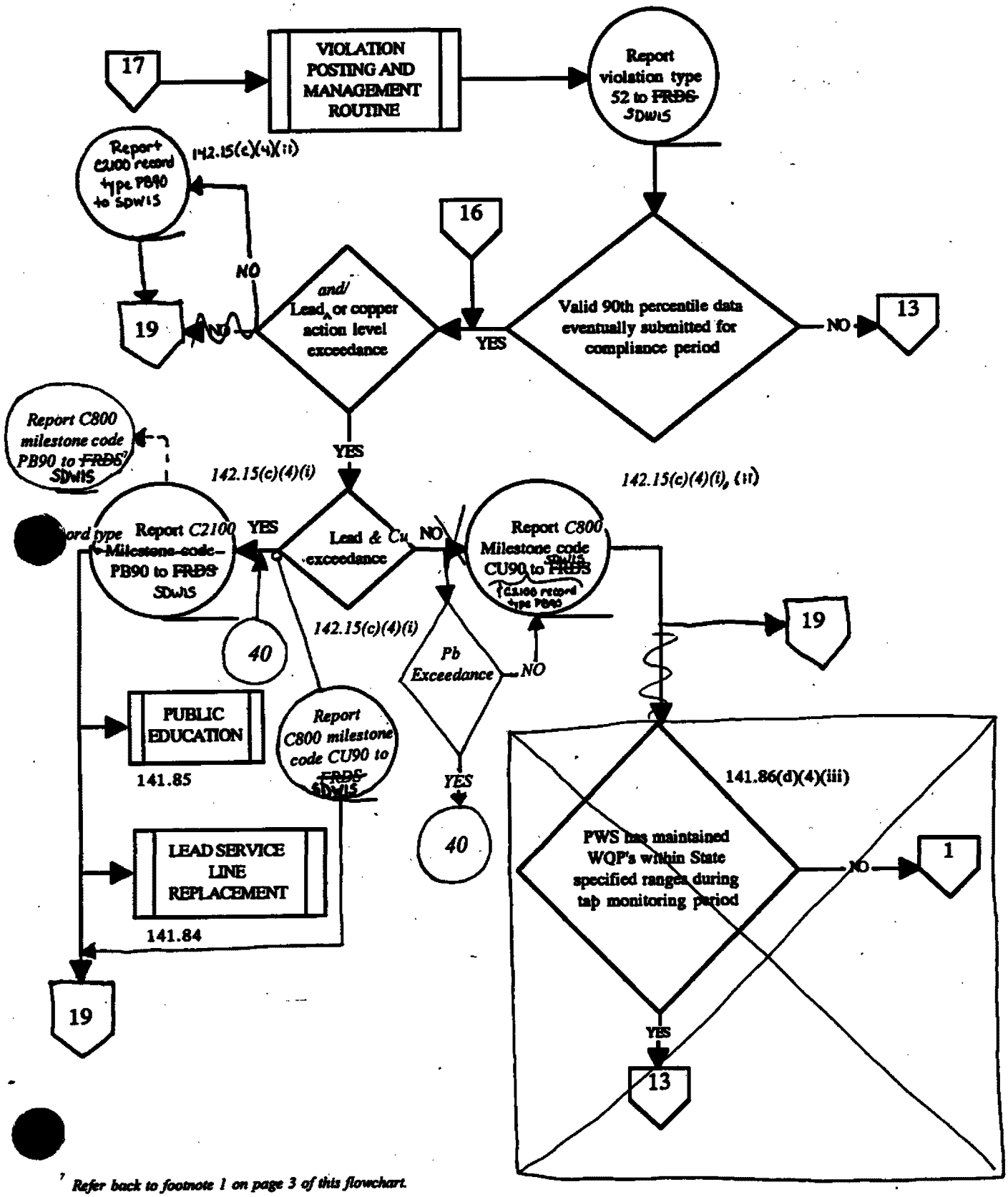
LARGE SYSTEMS (population > 50,000)



LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

LARGE SYSTEMS (population > 50,000)

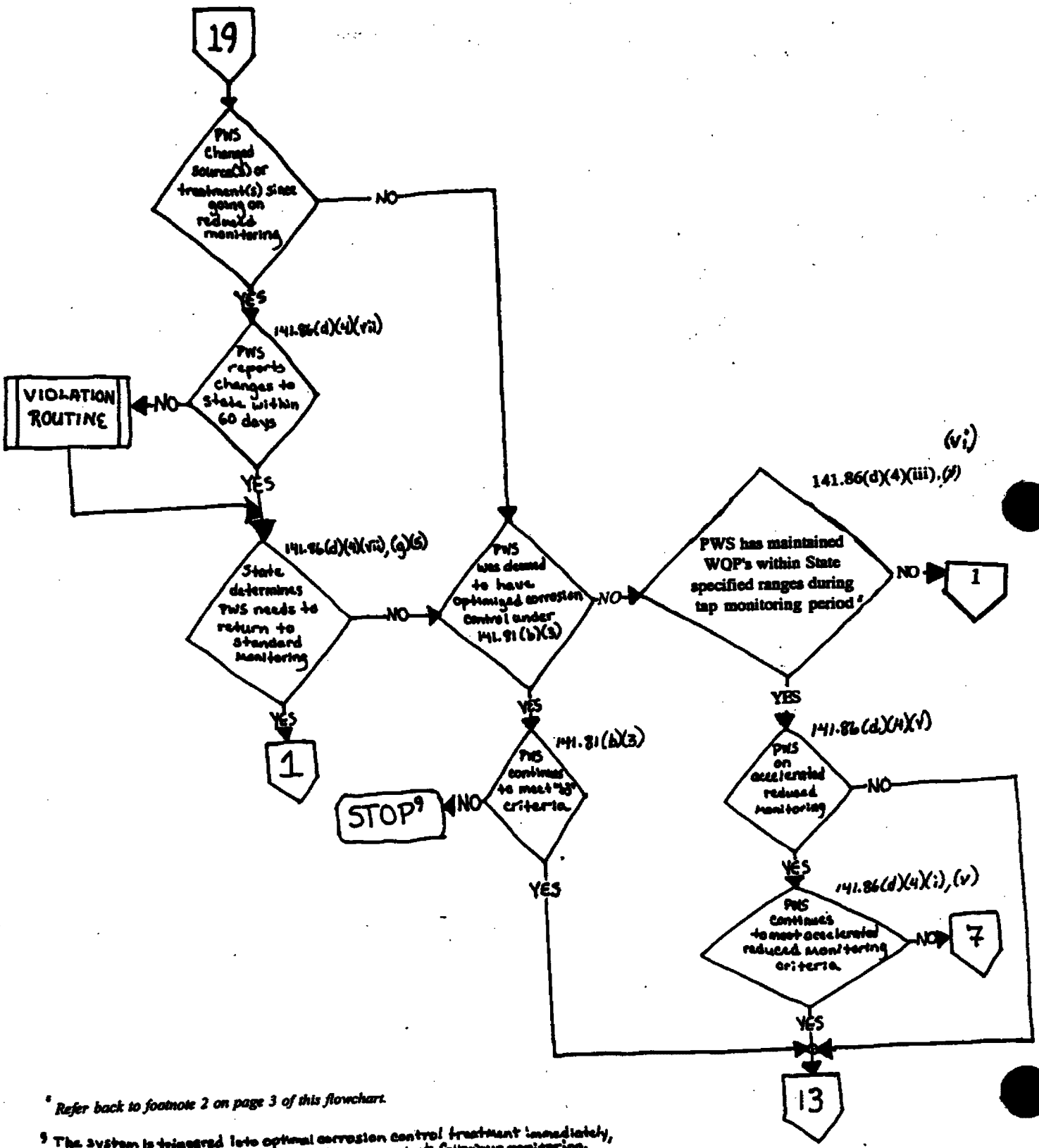


[7] *Refer back to footnote 1 on page 3 of this flowchart.*

LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

LARGE SYSTEMS (population > 50,000)



[8] *Refer back to footnote 2 on page 3 of this flowchart.*

[9] The system is triggered into optimal corrosion control treatment immediately, and the state may also require the system to conduct follow-up monitoring.

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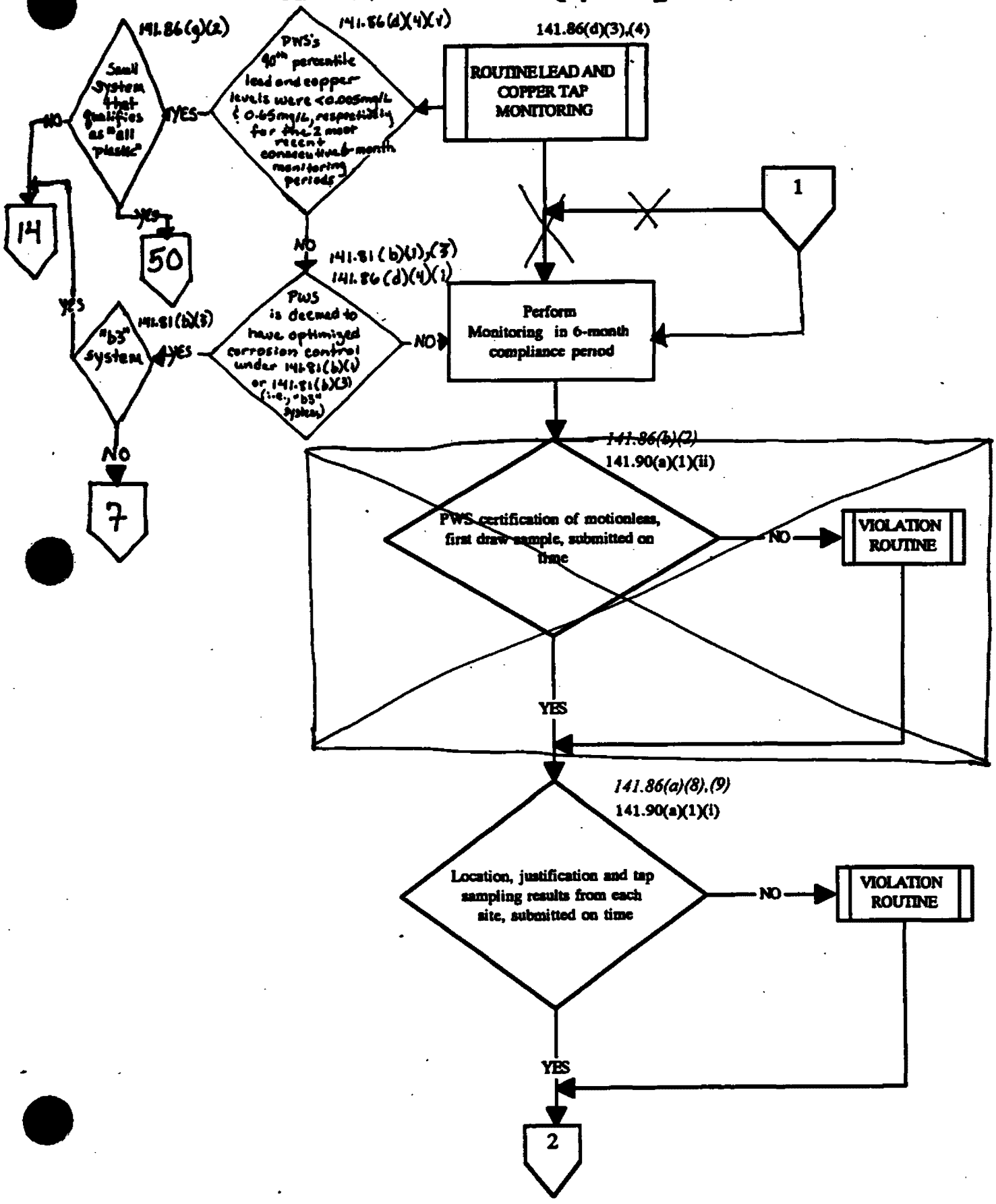
LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

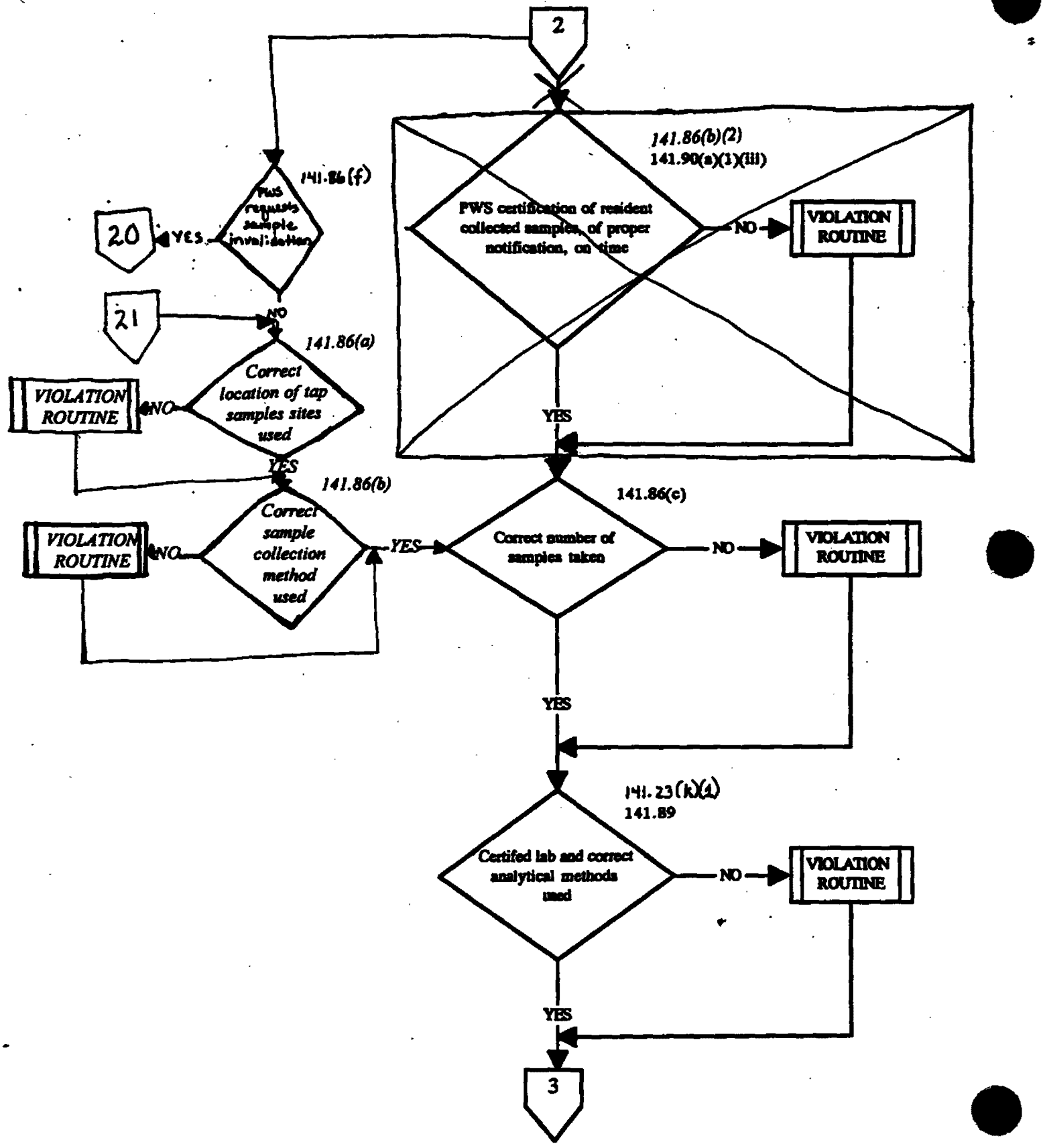
MEDIUM/SMALL SYSTEMS (population ≤ 50,000)



LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

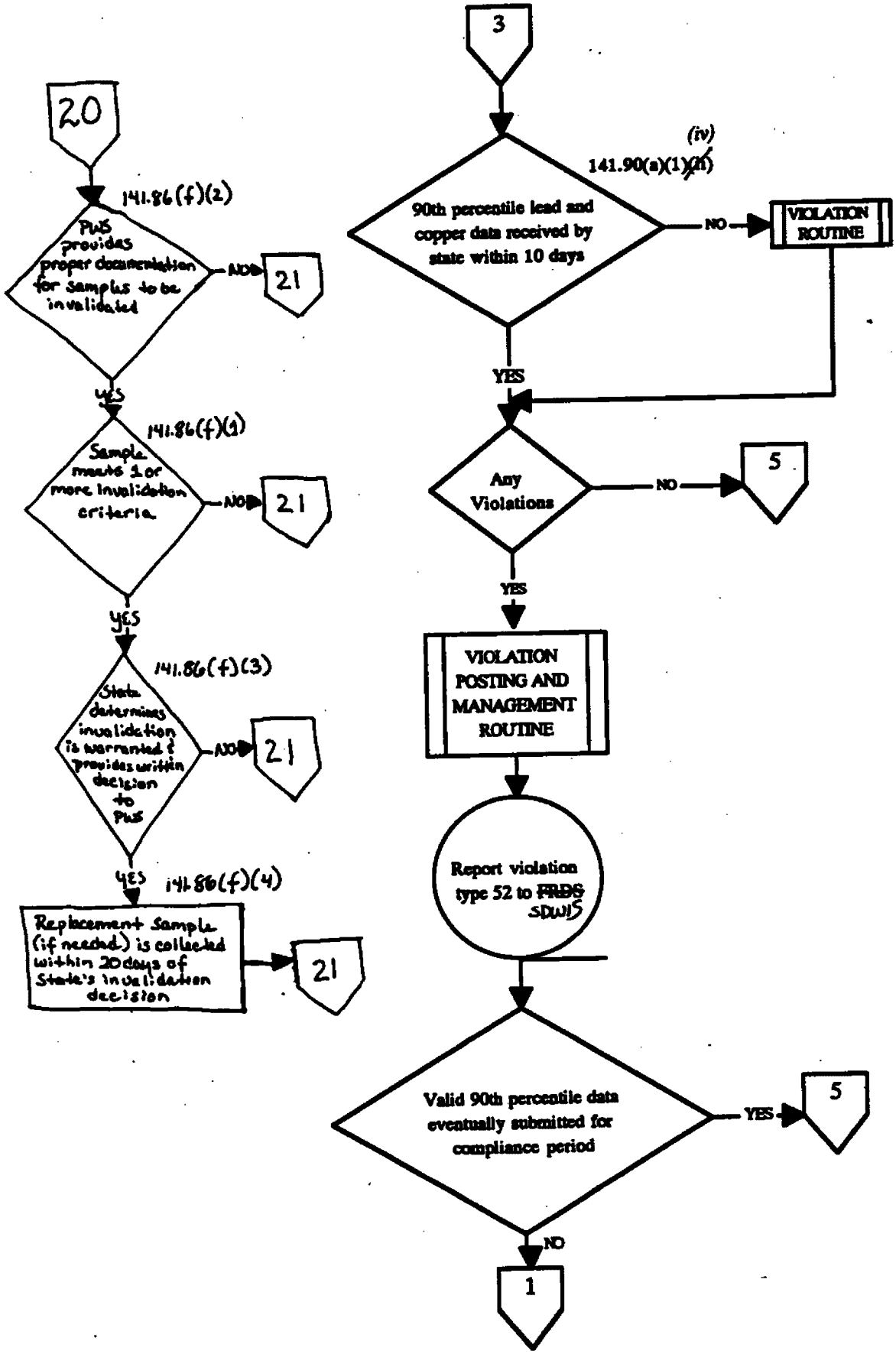
MEDIUM/SMALL SYSTEMS (population ≤ 50,000)



LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

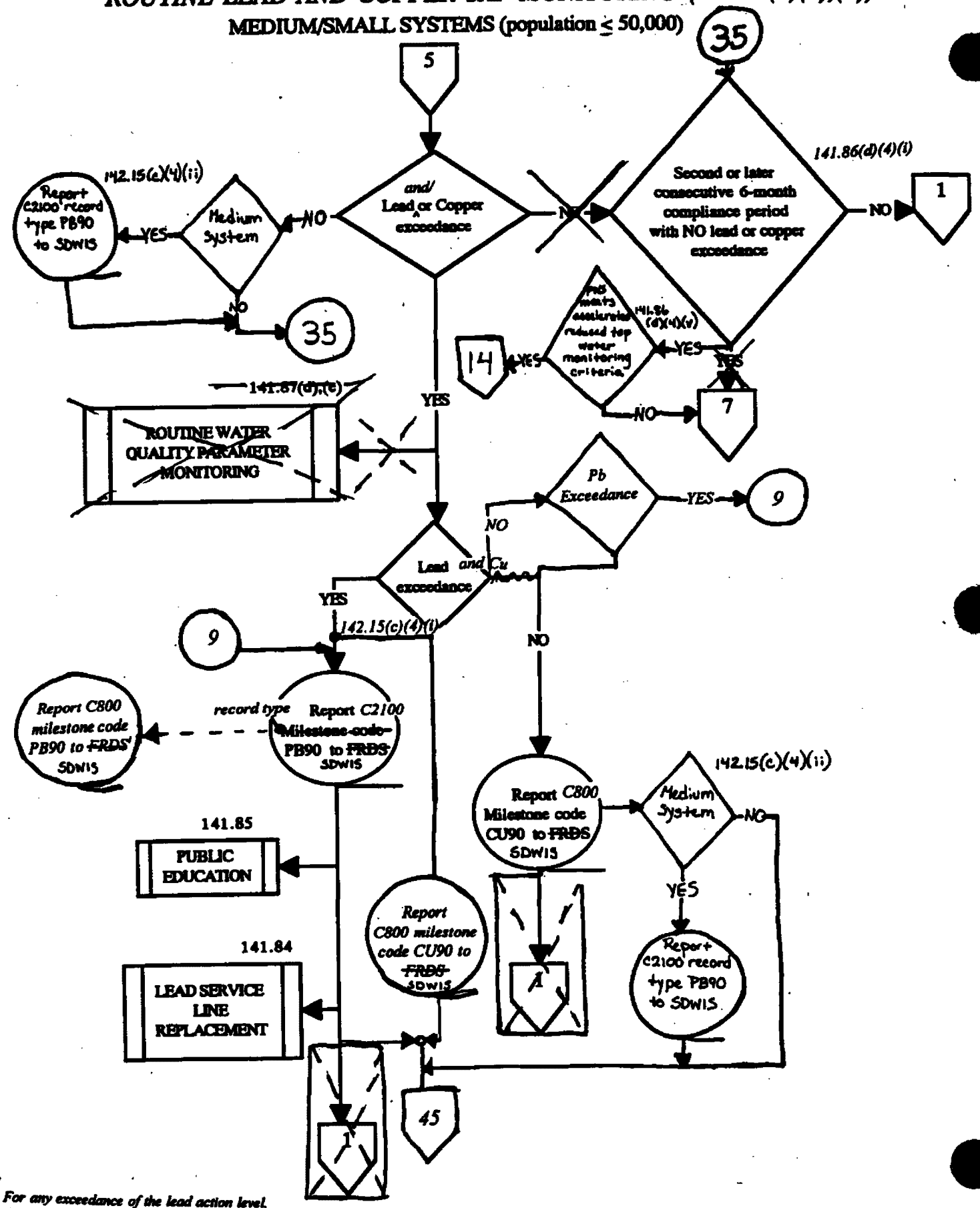
MEDIUM/SMALL SYSTEMS (population ≤ 50,000)



LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

MEDIUM/SMALL SYSTEMS (population ≤ 50,000)

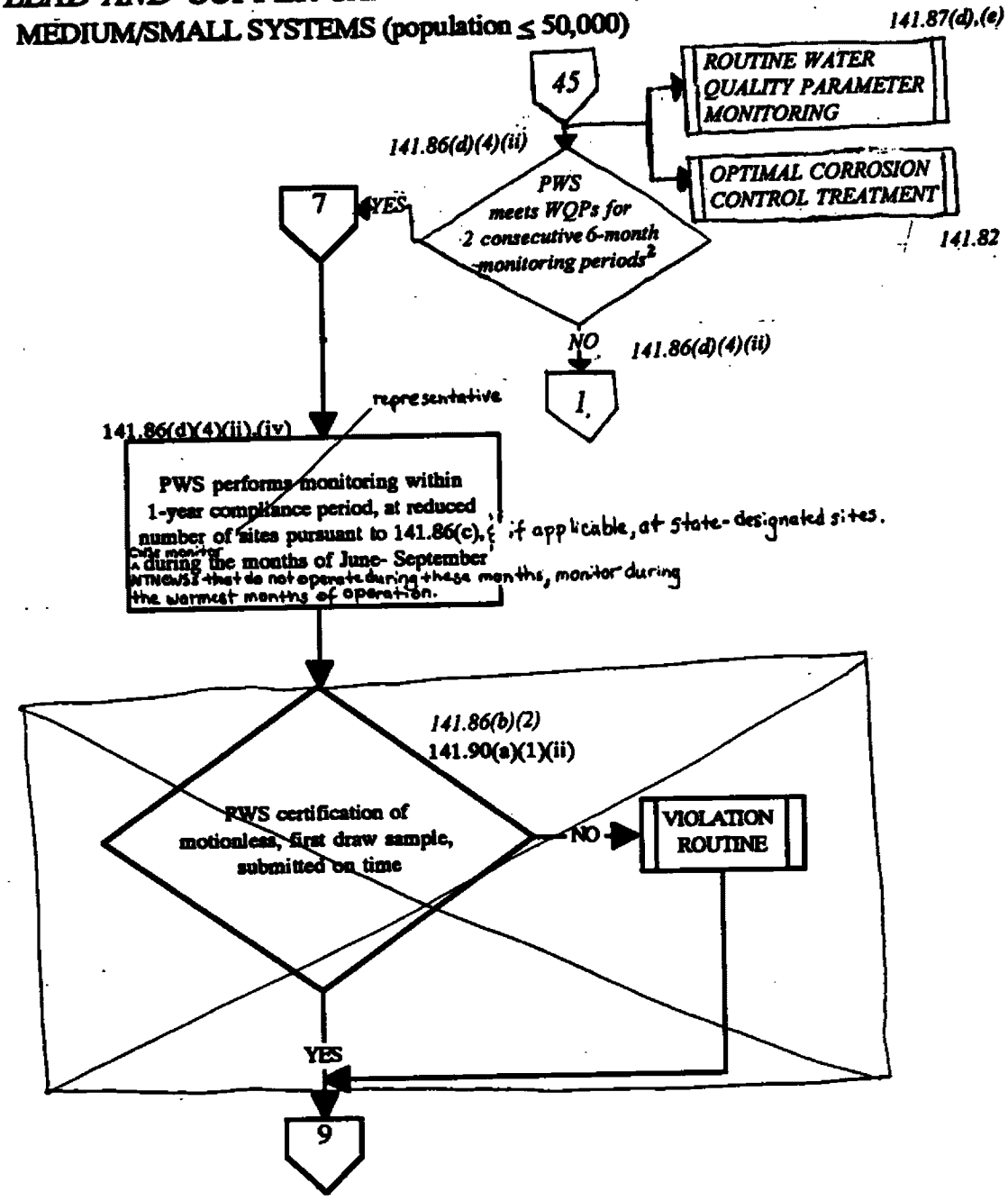


For any exceedance of the lead action level, the state need only report the exceedance as a parametric data record (C2100). SDWIS will create and post the milestone record (C800).

LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

MEDIUM/SMALL SYSTEMS (population ≤ 50,000)

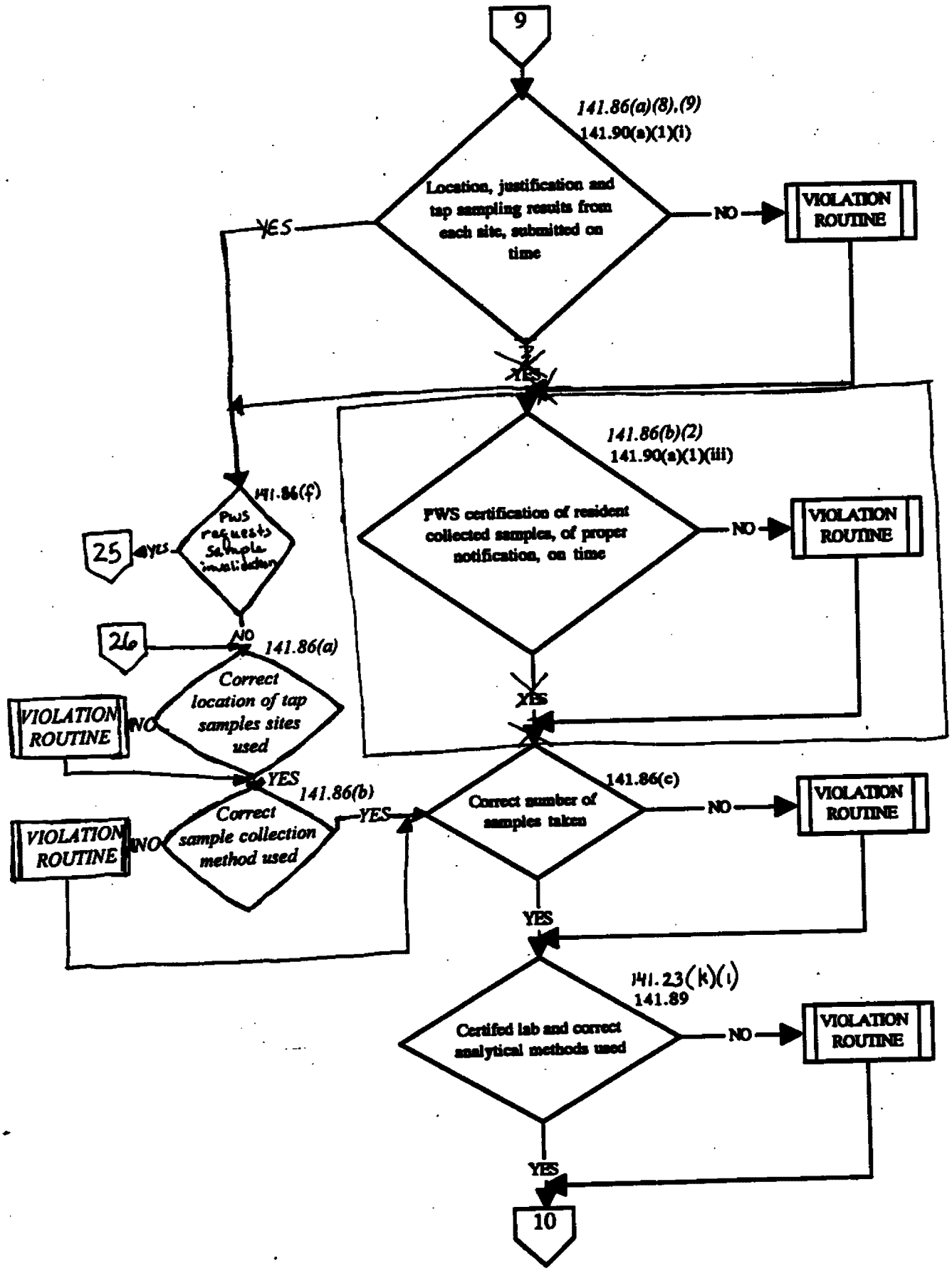


2 The proposed revisions would eliminate the requirement for systems meeting their optimal water quality parameters to submit a request to the state to go to reduced lead and copper tap water monitoring. However, the states are still required to approve this reduced monitoring.

LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

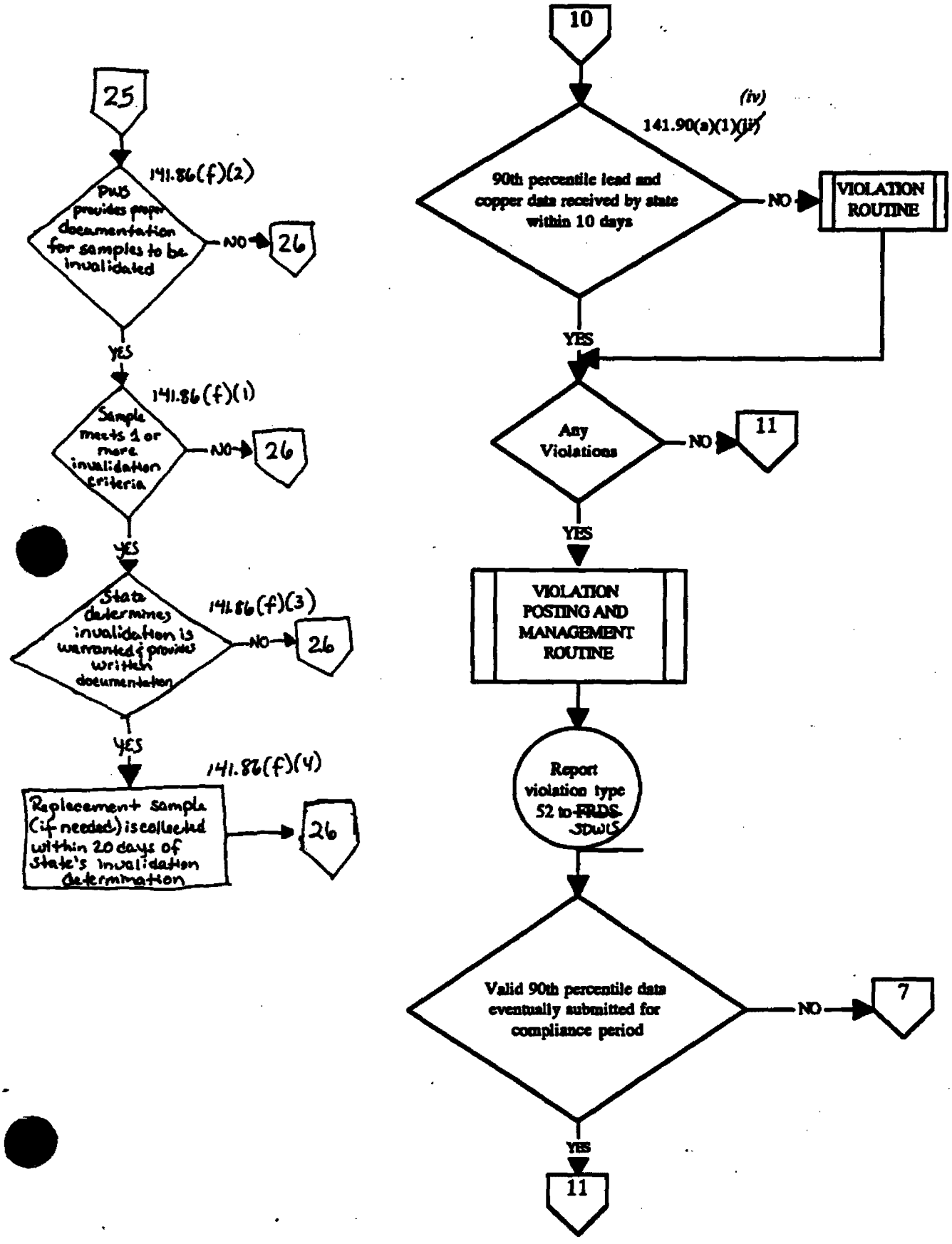
MEDIUM/SMALL SYSTEMS (population ≤ 50,000)



LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

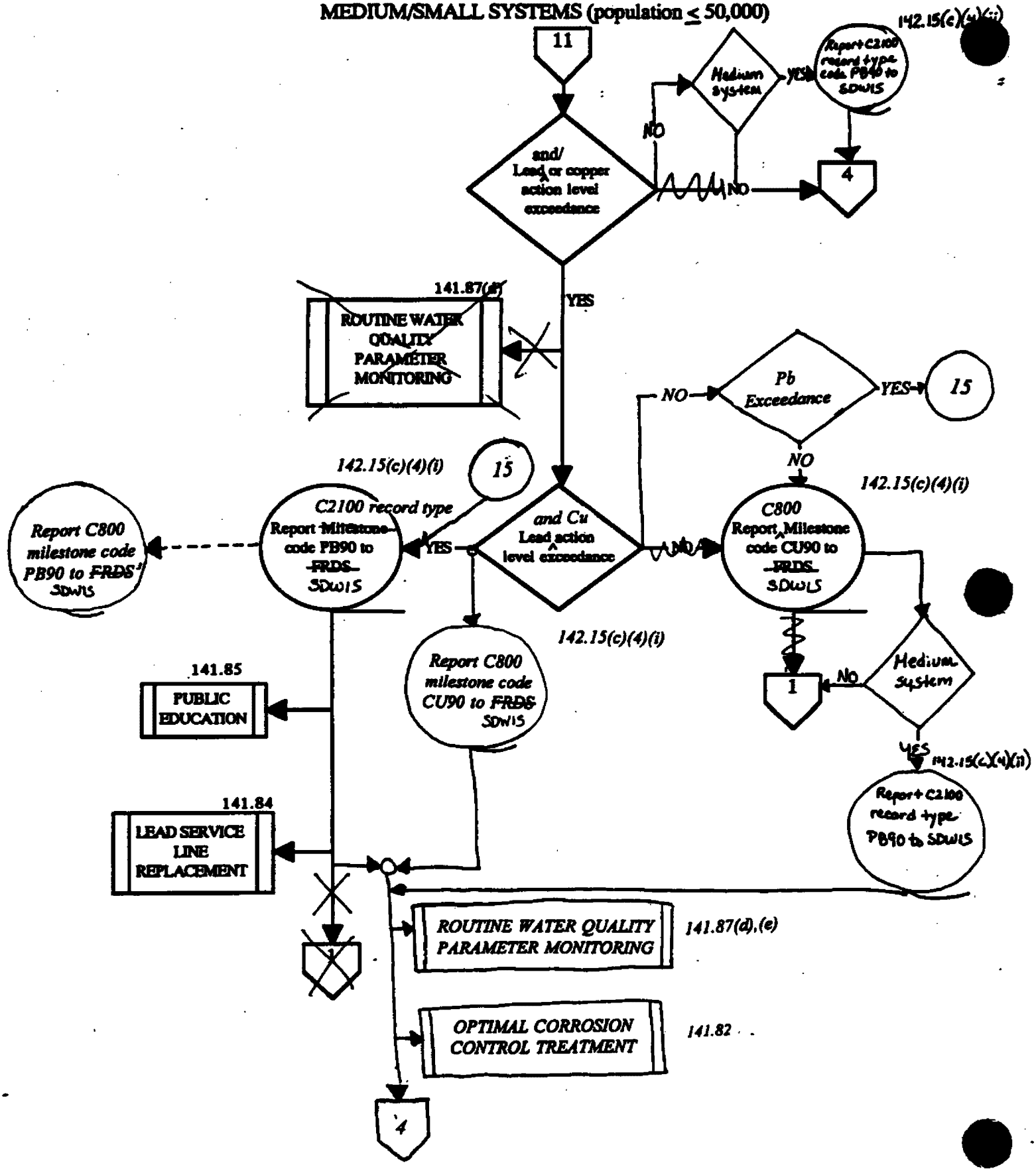
MEDIUM/SMALL SYSTEMS (population ≤ 50,000)



LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

MEDIUM/SMALL SYSTEMS (population ≤ 50,000)

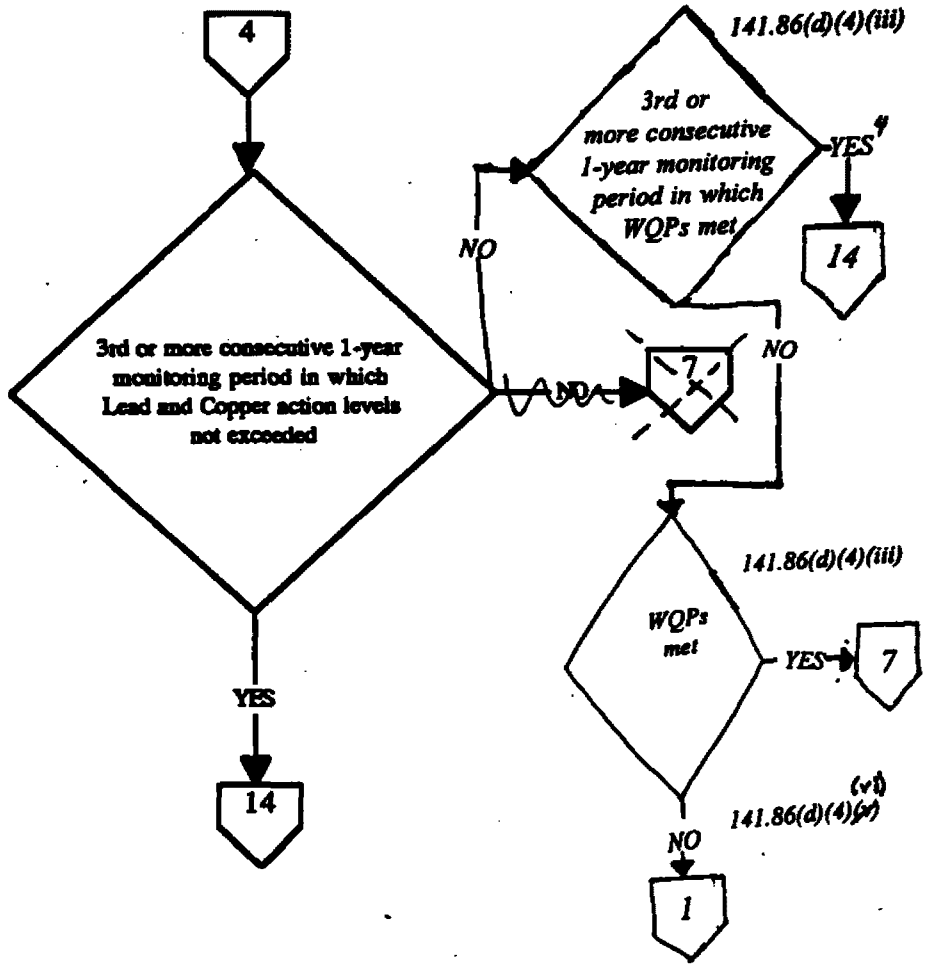


1 *Refer back to footnote on page 4.*

LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

MEDIUM/SMALL SYSTEMS (population ≤ 50,000)

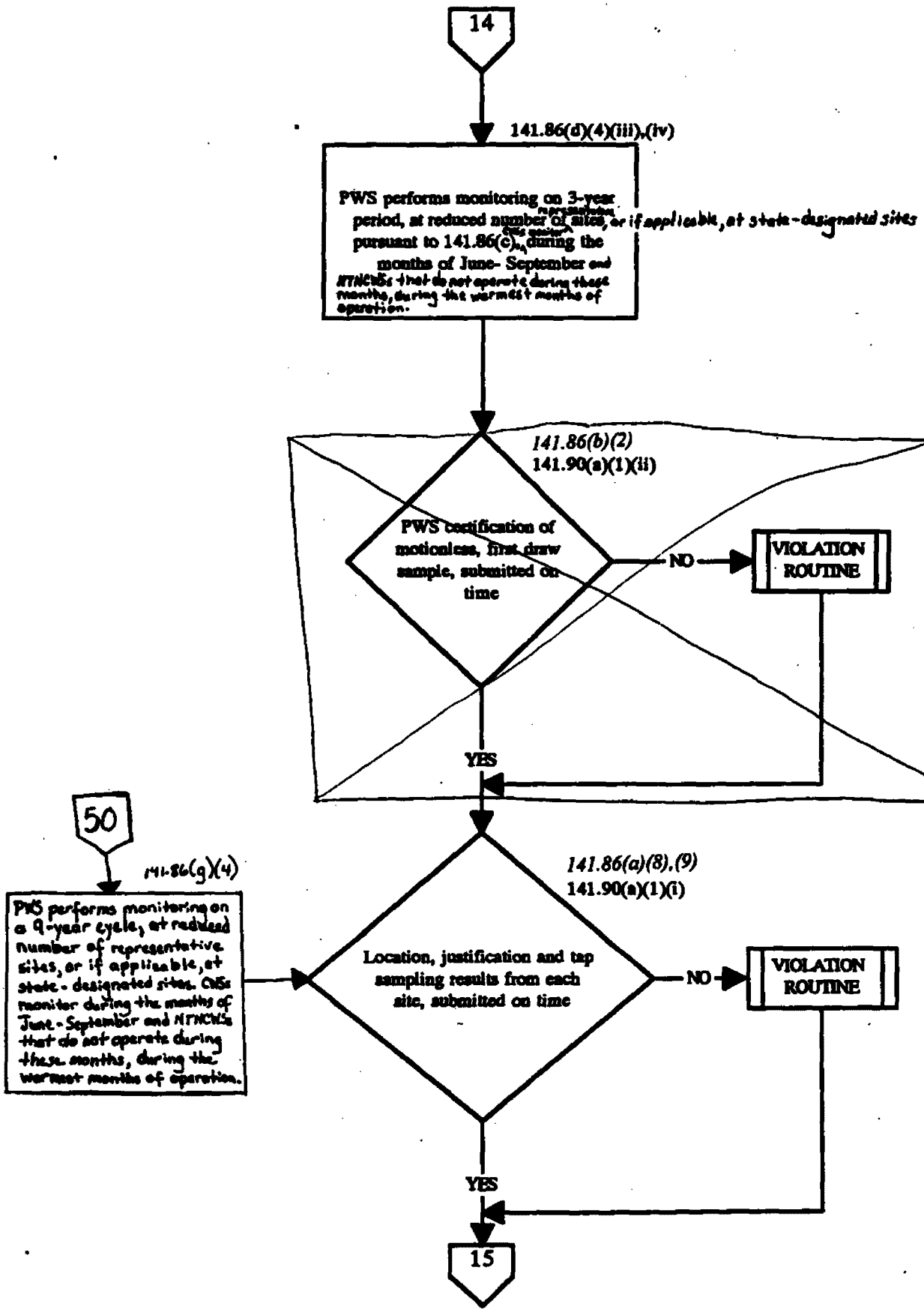


[4] Refer back to footnote on page 5 of this flowchart.

LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

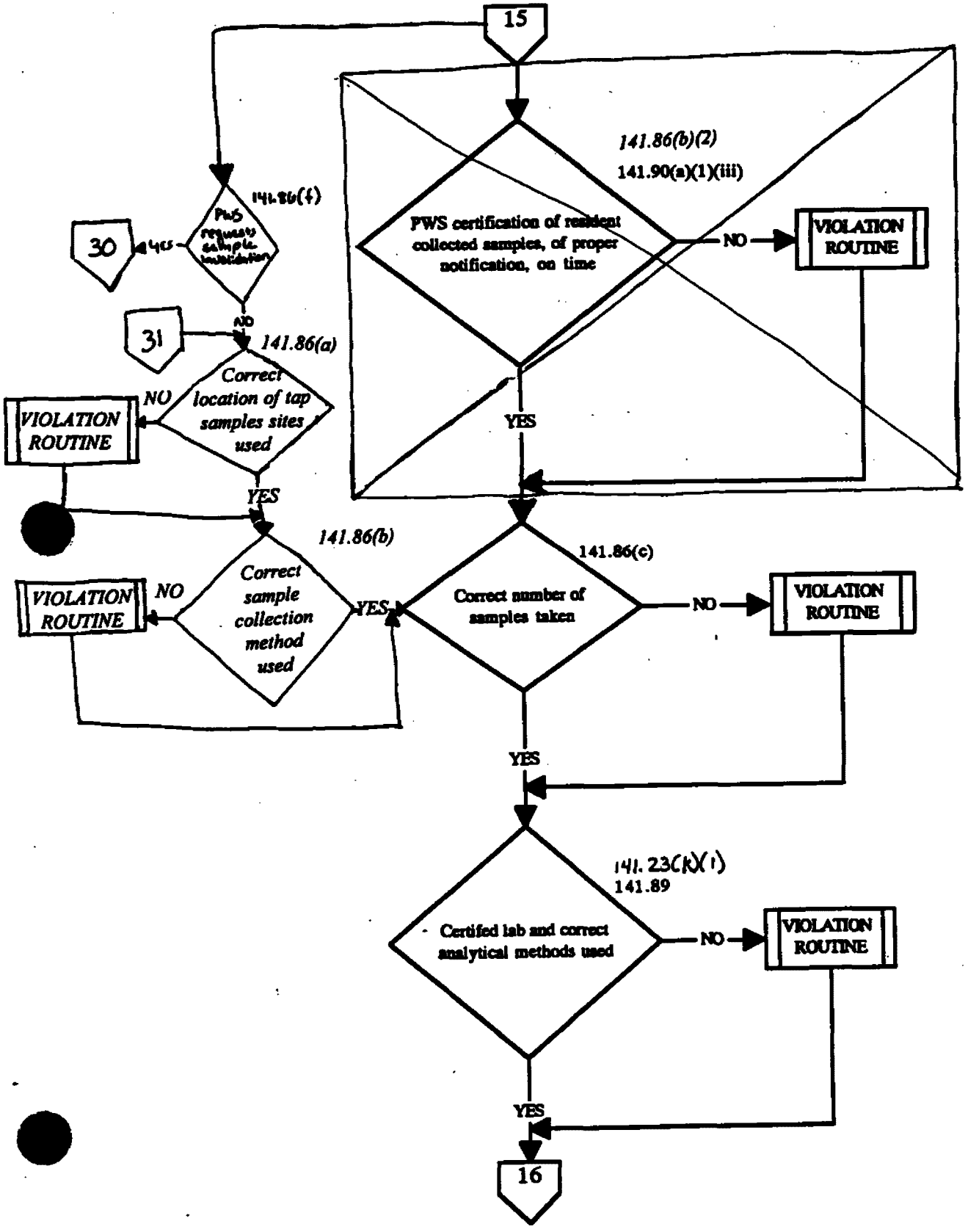
MEDIUM/SMALL SYSTEMS (population ≤ 50,000)



LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

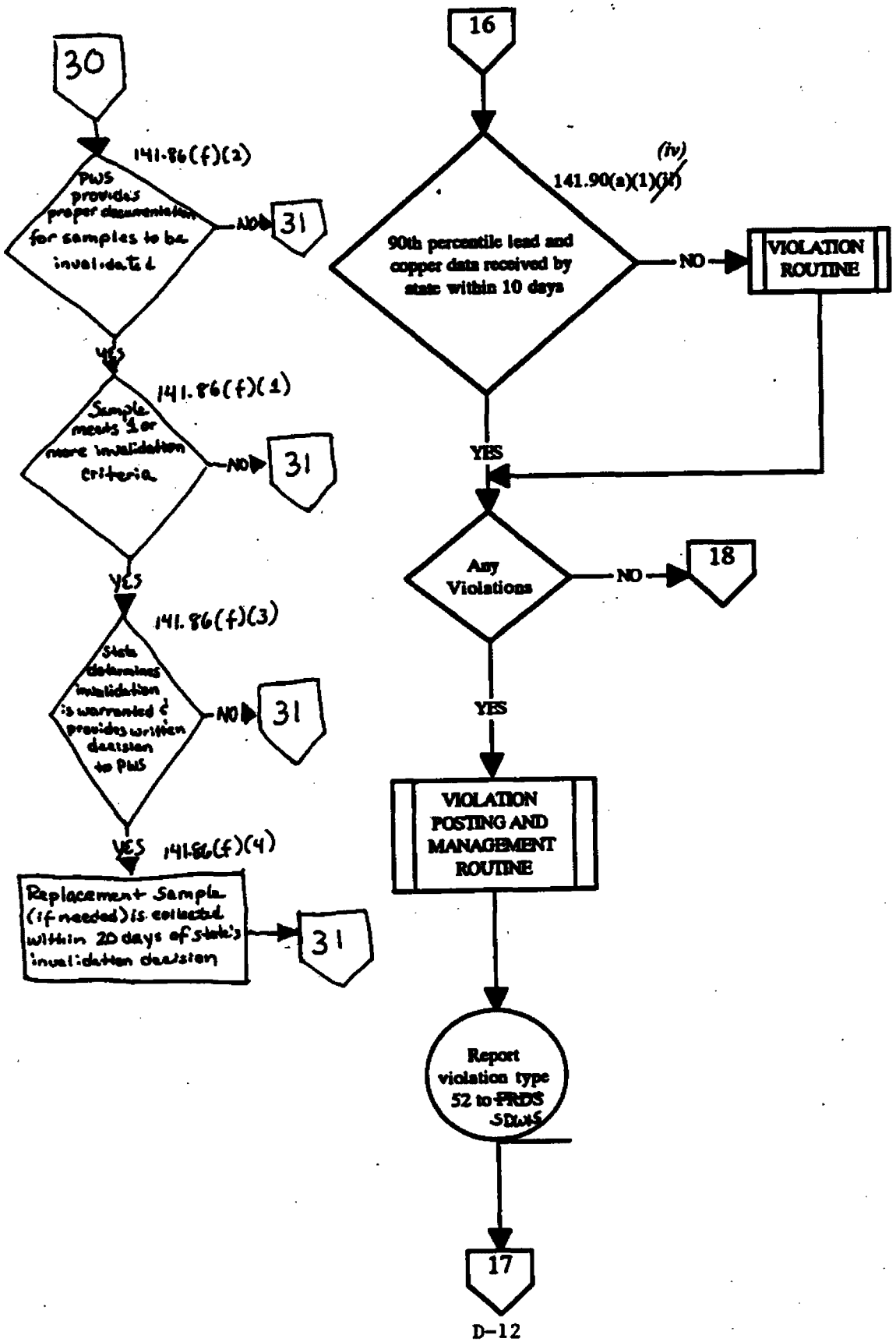
MEDIUM/SMALL SYSTEMS (population ≤ 50,000)



LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

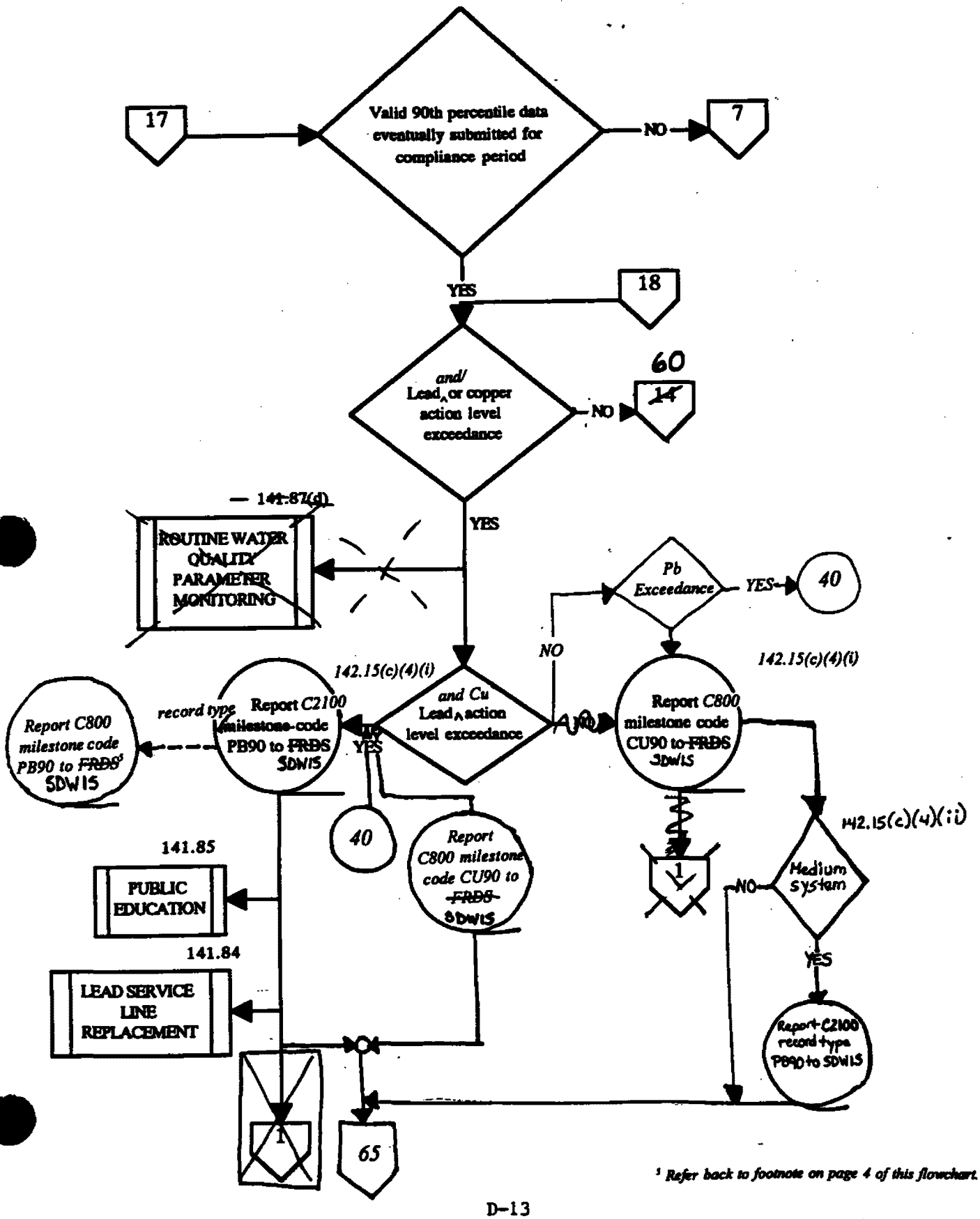
MEDIUM/SMALL SYSTEMS (population ≤ 50,000)



LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

MEDIUM/SMALL SYSTEMS (population ≤ 50,000)

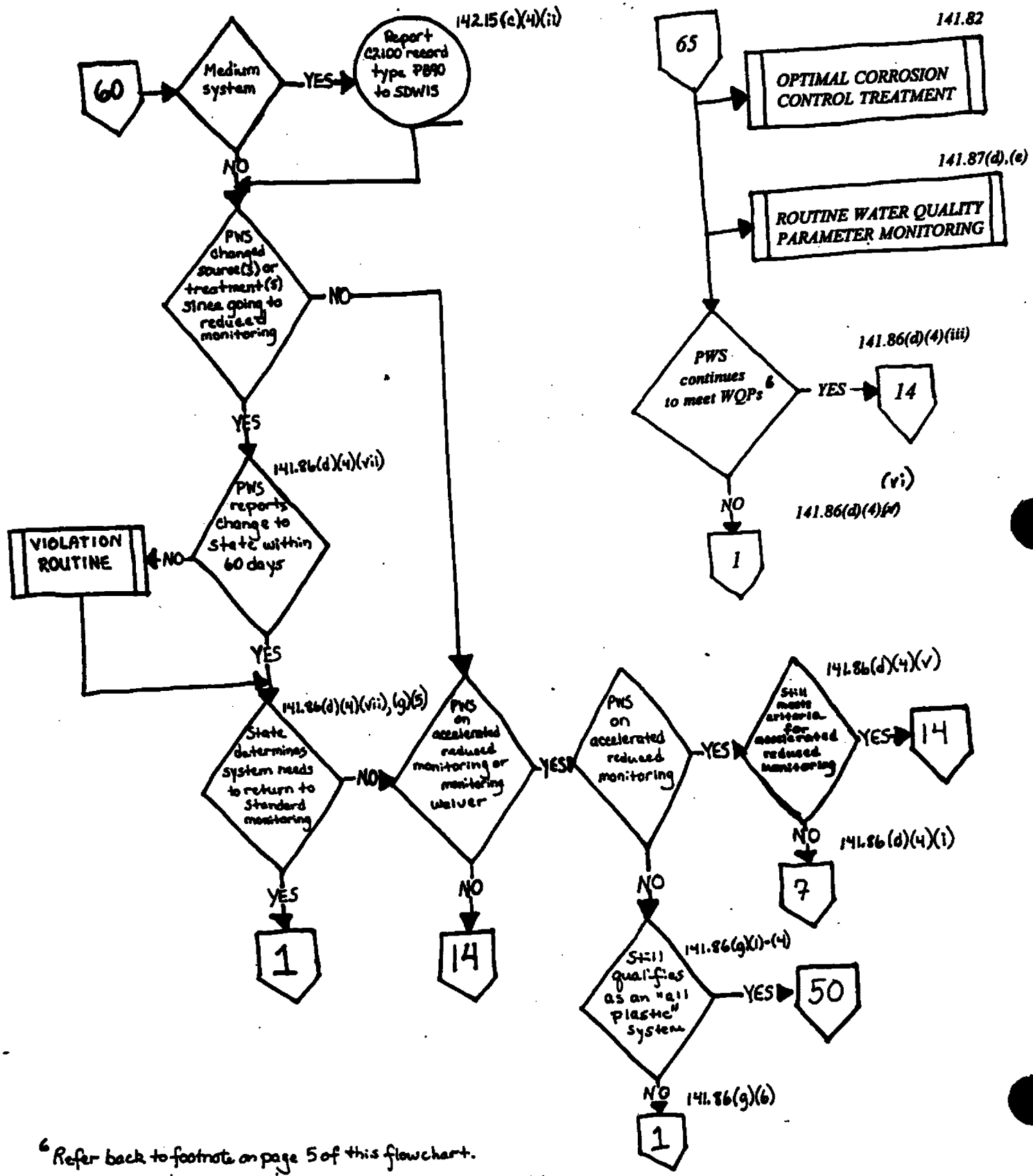


[1] *Refer back to footnote on page 4 of this flowchart.*

LEAD AND COPPER RULE - FLOW CHART

ROUTINE LEAD AND COPPER TAP MONITORING (141.86(d)(3),(4))

MEDIUM/SMALL SYSTEMS (population ≤ 50,000)



[6] Refer back to footnote on page 5 of this flowchart.

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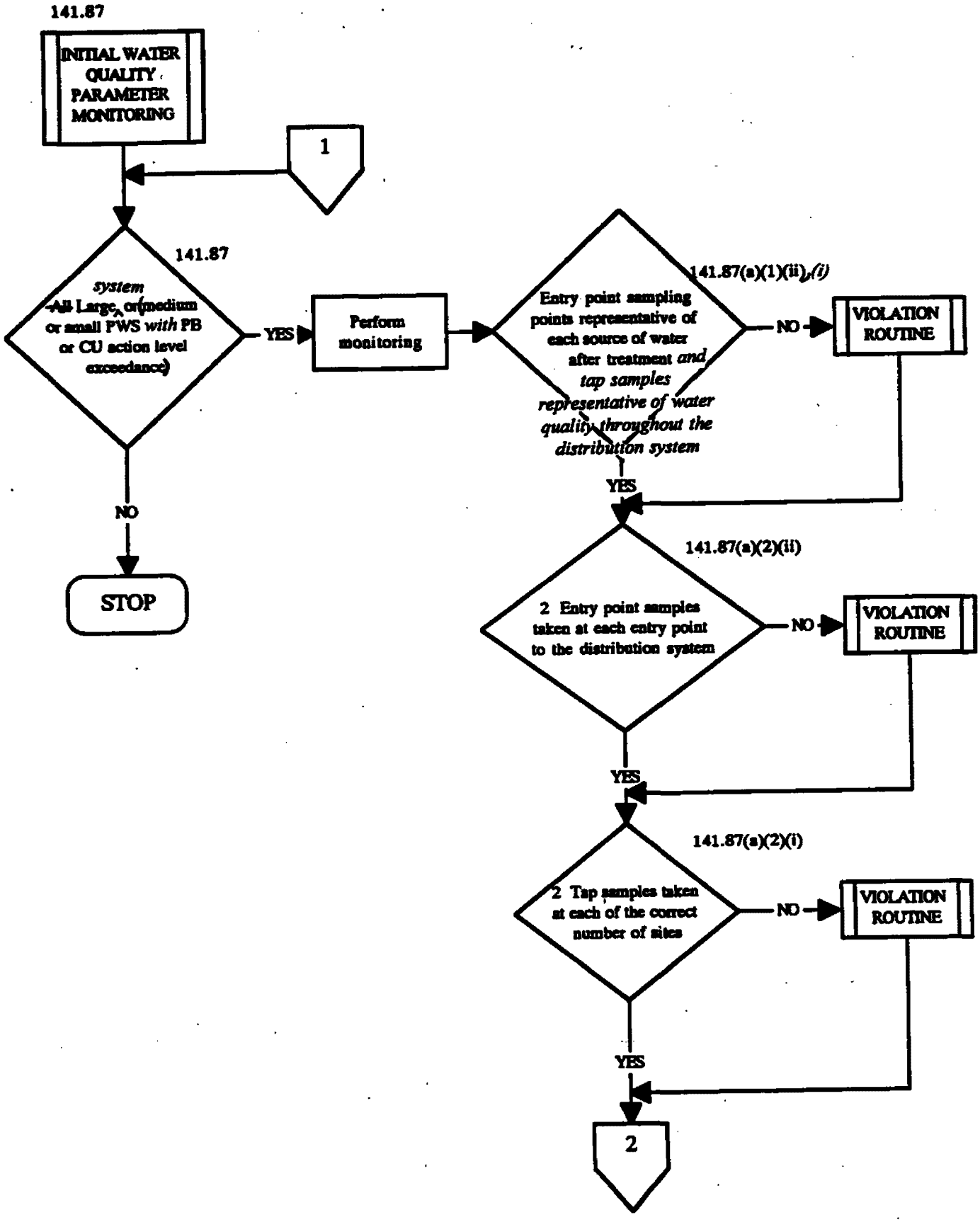
LEAD AND COPPER RULE - FLOW CHART

INITIAL WATER QUALITY PARAMETER MONITORING (141.87)

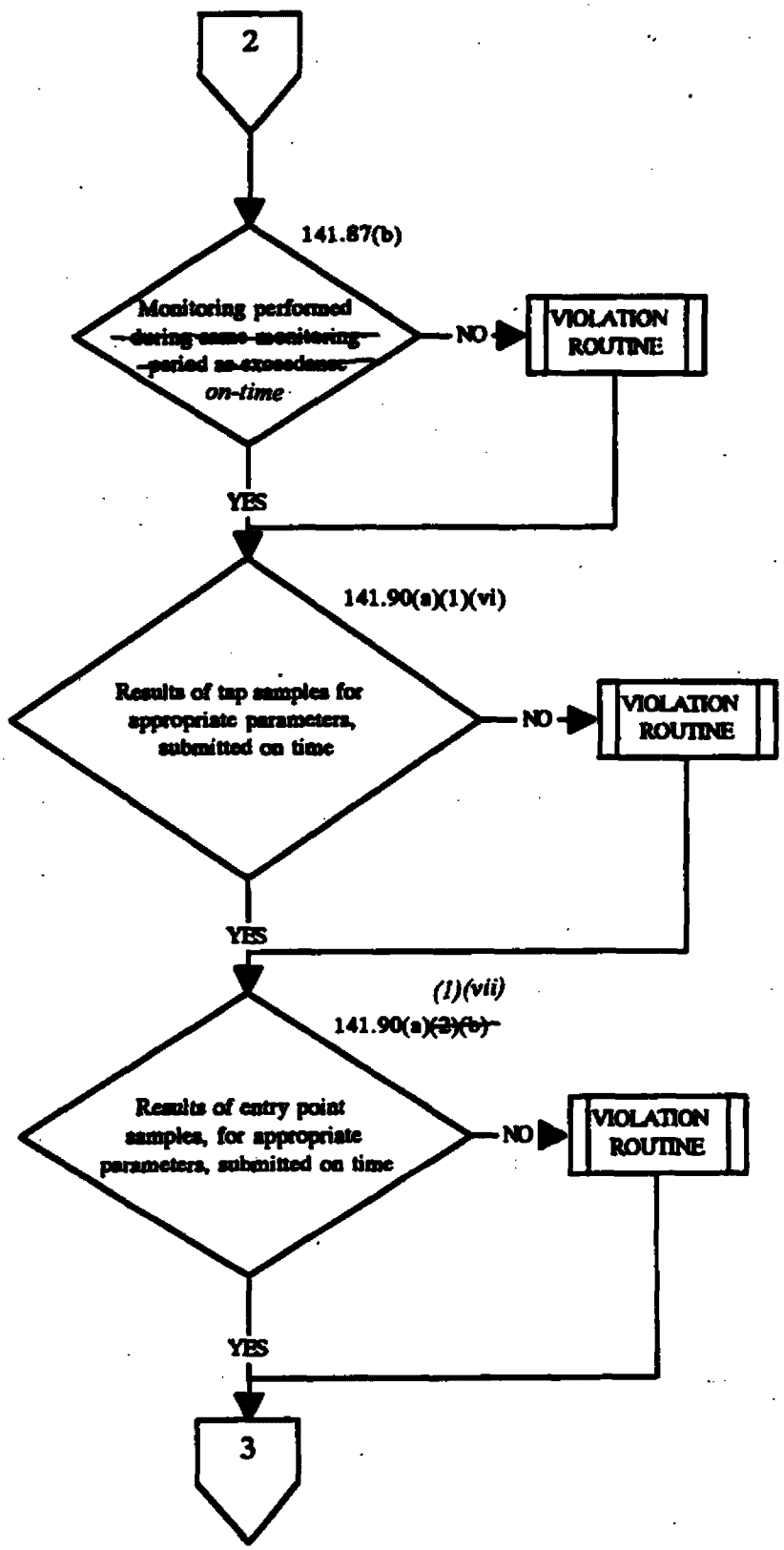
ALL SYSTEMS SIZES



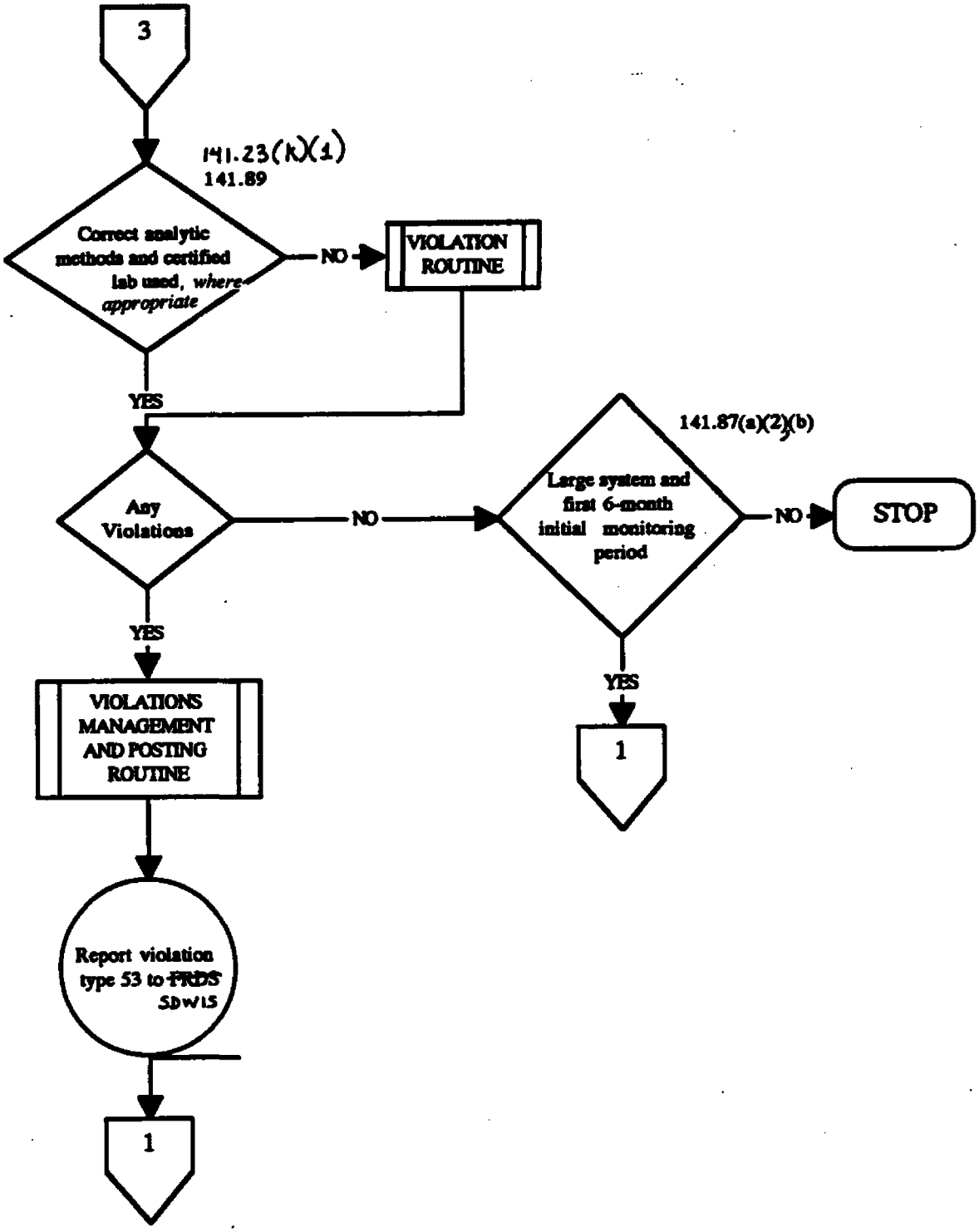
LEAD AND COPPER RULE - FLOW CHART

INITIAL WATER QUALITY PARAMETER MONITORING (141.87)

ALL SYSTEMS SIZES



LEAD AND COPPER RULE - FLOW CHART
INITIAL WATER QUALITY PARAMETER MONITORING (141.87)
ALL SYSTEMS SIZES



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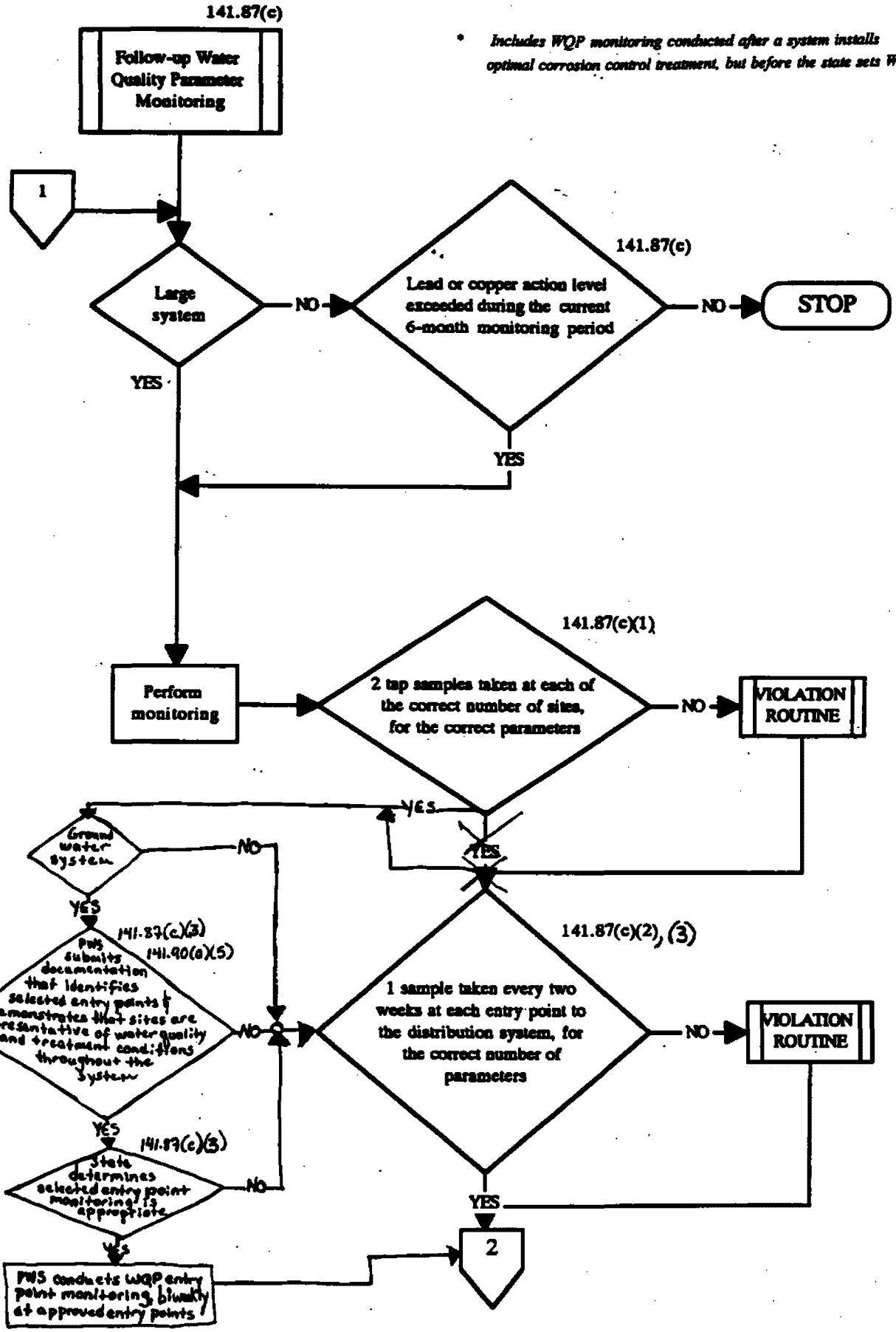
LEAD AND COPPER RULE - FLOW CHART

*FOLLOW-UP WATER QUALITY PARAMETER MONITORING (141.87(c))**

ALL SYSTEMS SIZES

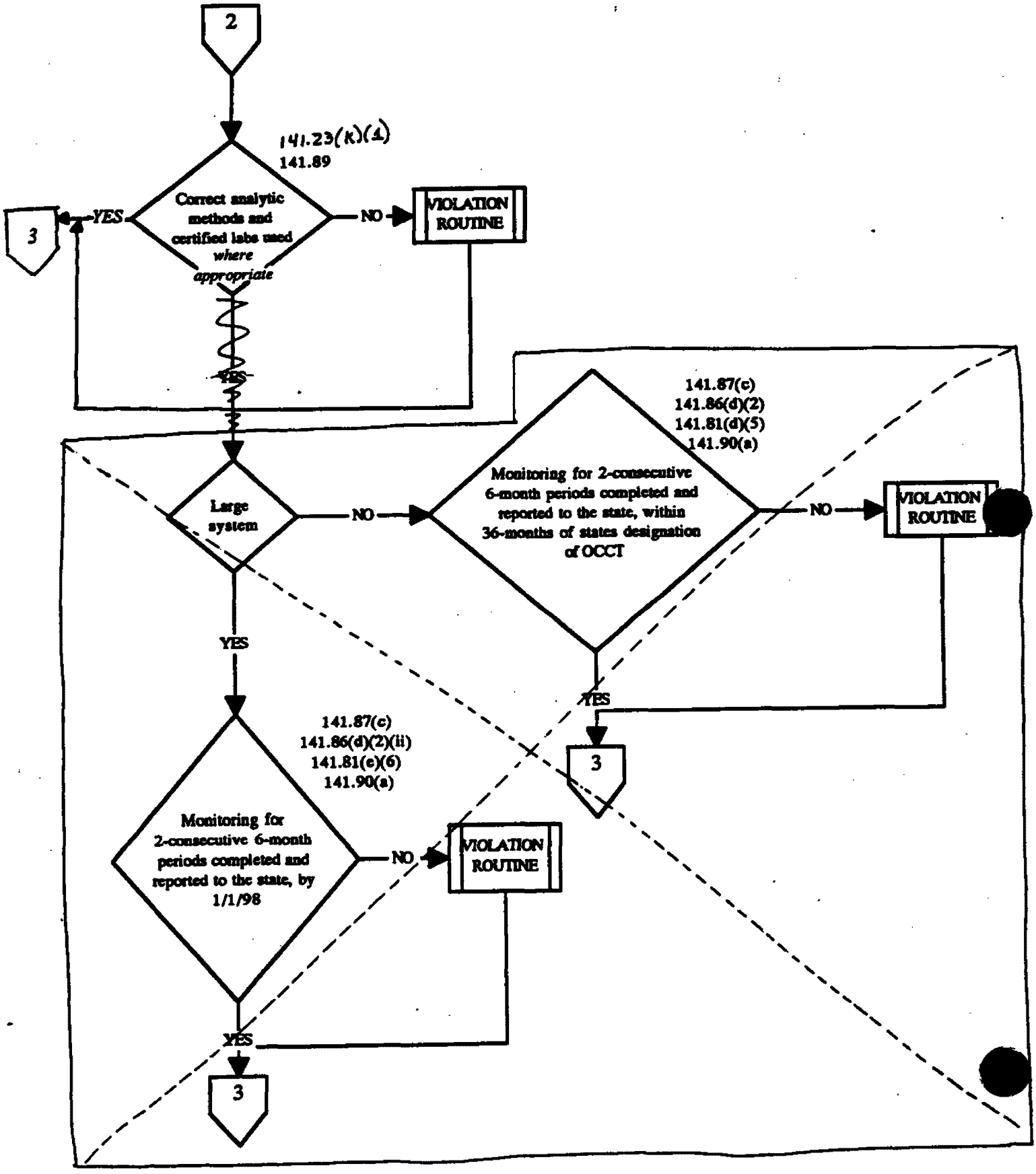


* *Includes WQP monitoring conducted after a system installs optimal corrosion control treatment, but before the state sets WQPs.*

LEAD AND COPPER RULE - FLOW CHART

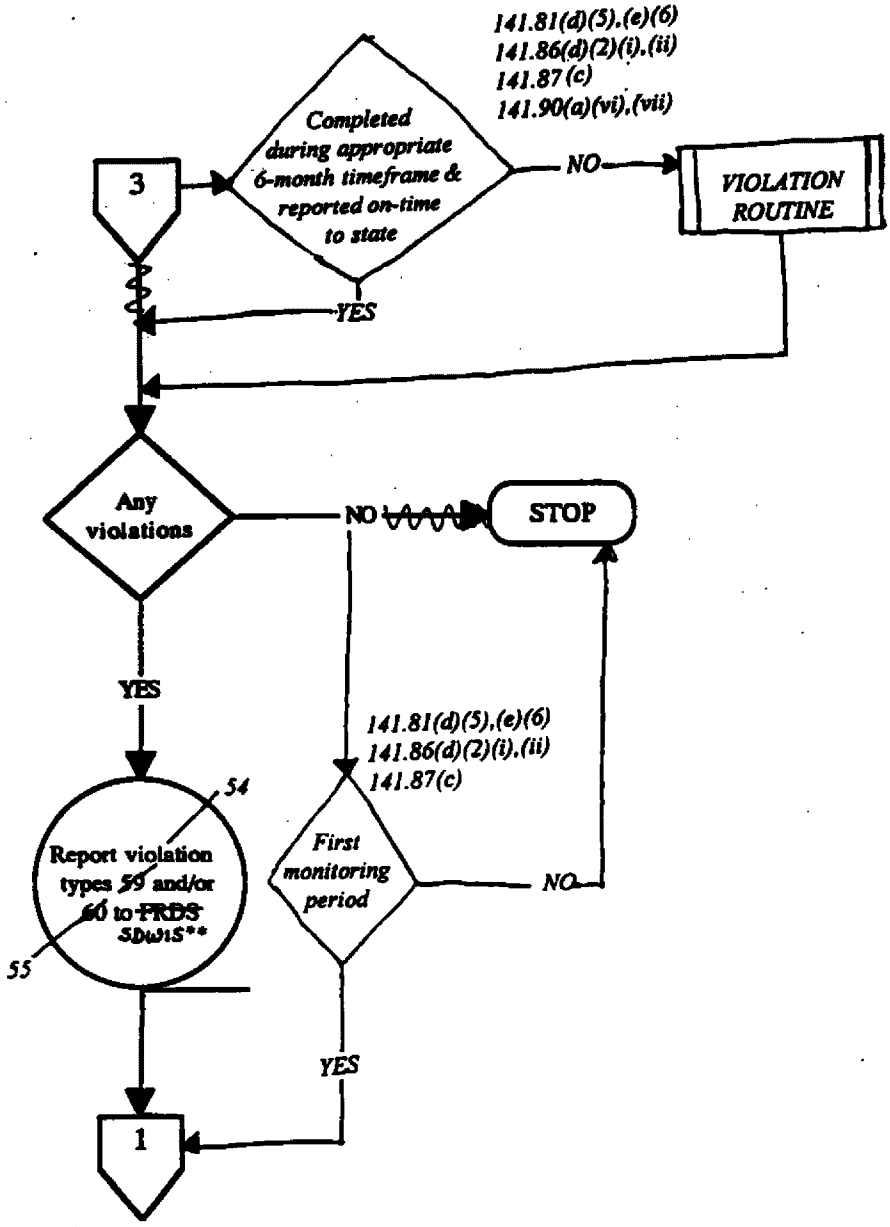
FOLLOW-UP WATER QUALITY PARAMETER MONITORING (141.87(c))

ALL SYSTEMS SIZES



FOLLOW-UP WATER QUALITY PARAMETER MONITORING (141.87(c))

ALL SYSTEMS SIZES



**Although entry point monitoring violations are aggregated and reported quarterly, compliance is determined every 2 weeks.

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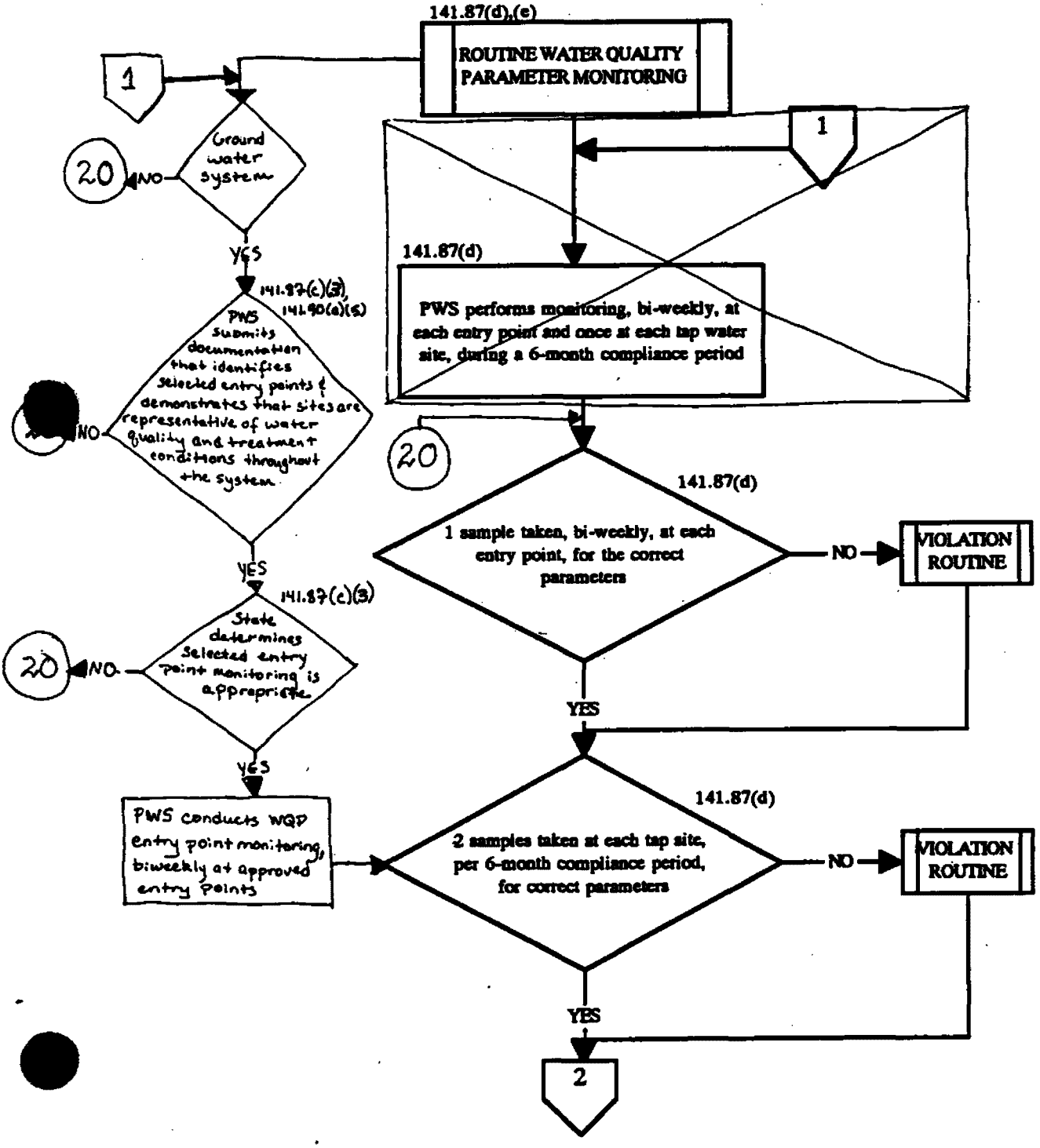
LEAD AND COPPER RULE - FLOW CHART

ROUTINE WATER QUALITY PARAMETER MONITORING (141.87(d),(e))

ALL SYSTEMS SIZES

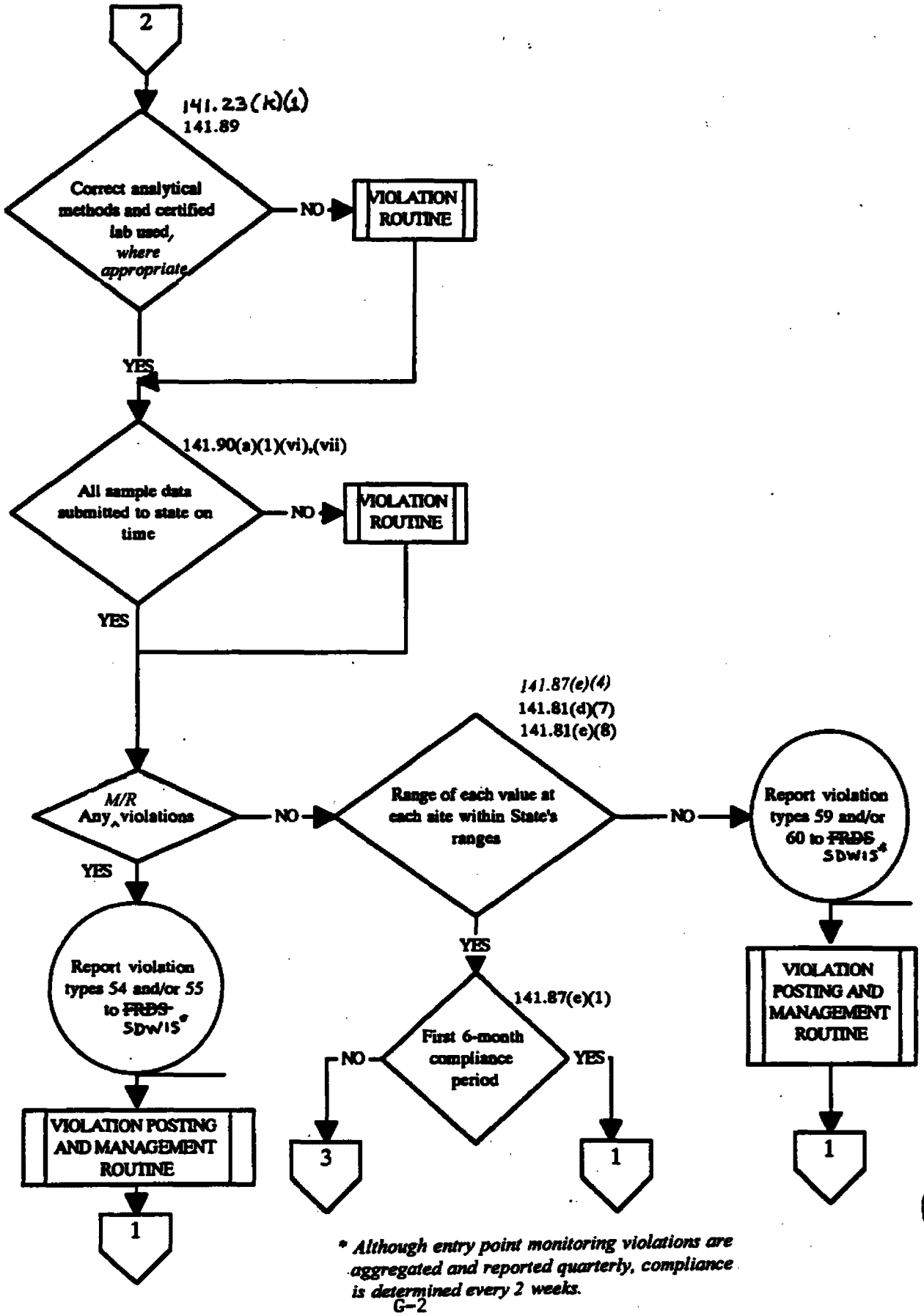
NOTE:
Medium and small systems need only perform this during compliance periods in which there is a Lead or Copper action level exceedance. If a system continues to exceed either action level, it still may qualify for reduced WQP monitoring.



LEAD AND COPPER RULE - FLOW CHART

ROUTINE WATER QUALITY PARAMETER MONITORING (141.87(d),(e))

ALL SYSTEMS SIZES

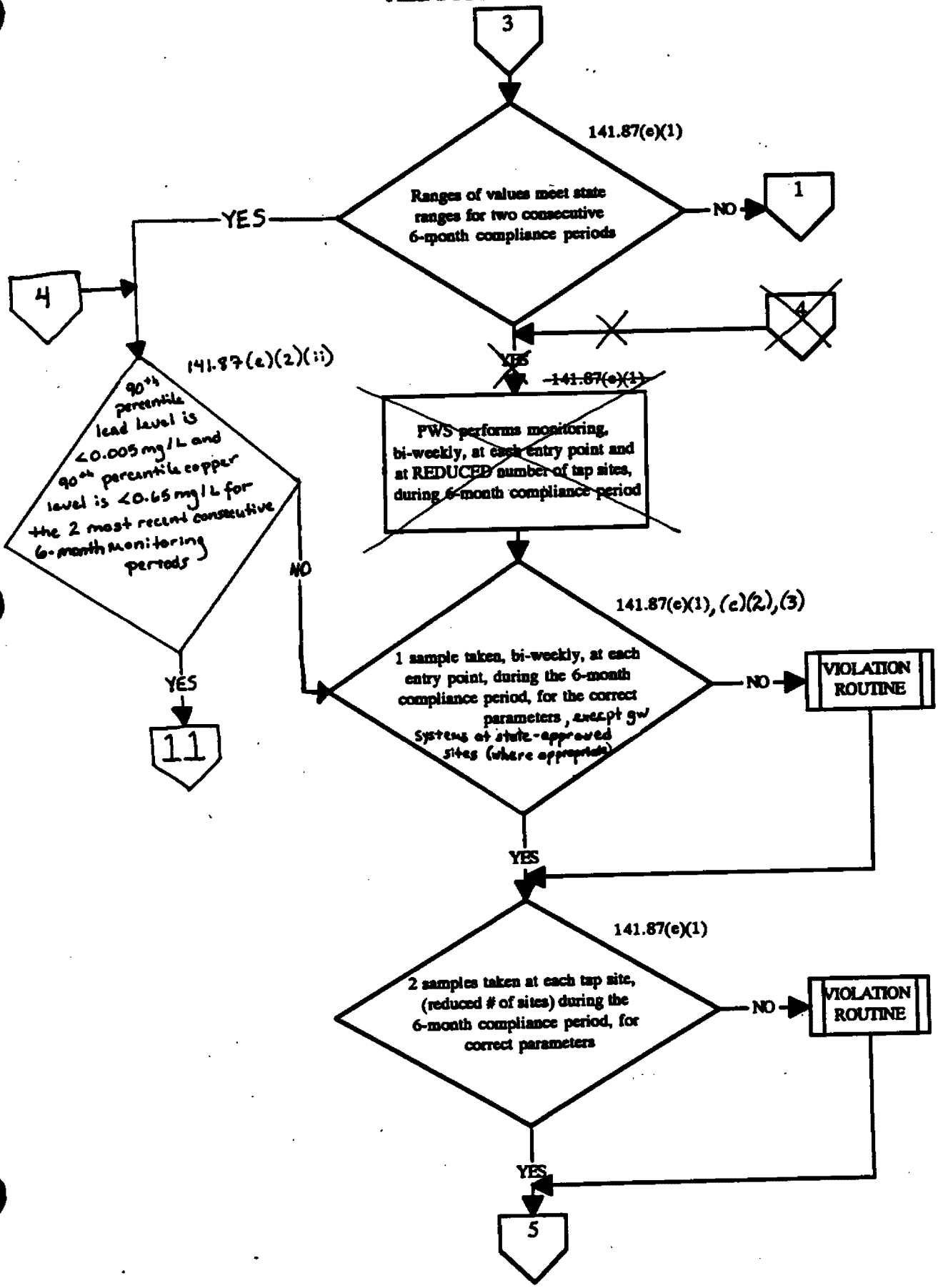


* *Although entry point monitoring violations are aggregated and reported quarterly, compliance is determined every 2 weeks.*

LEAD AND COPPER RULE - FLOW CHART

ROUTINE WATER QUALITY PARAMETER MONITORING (141.87(d),(e))

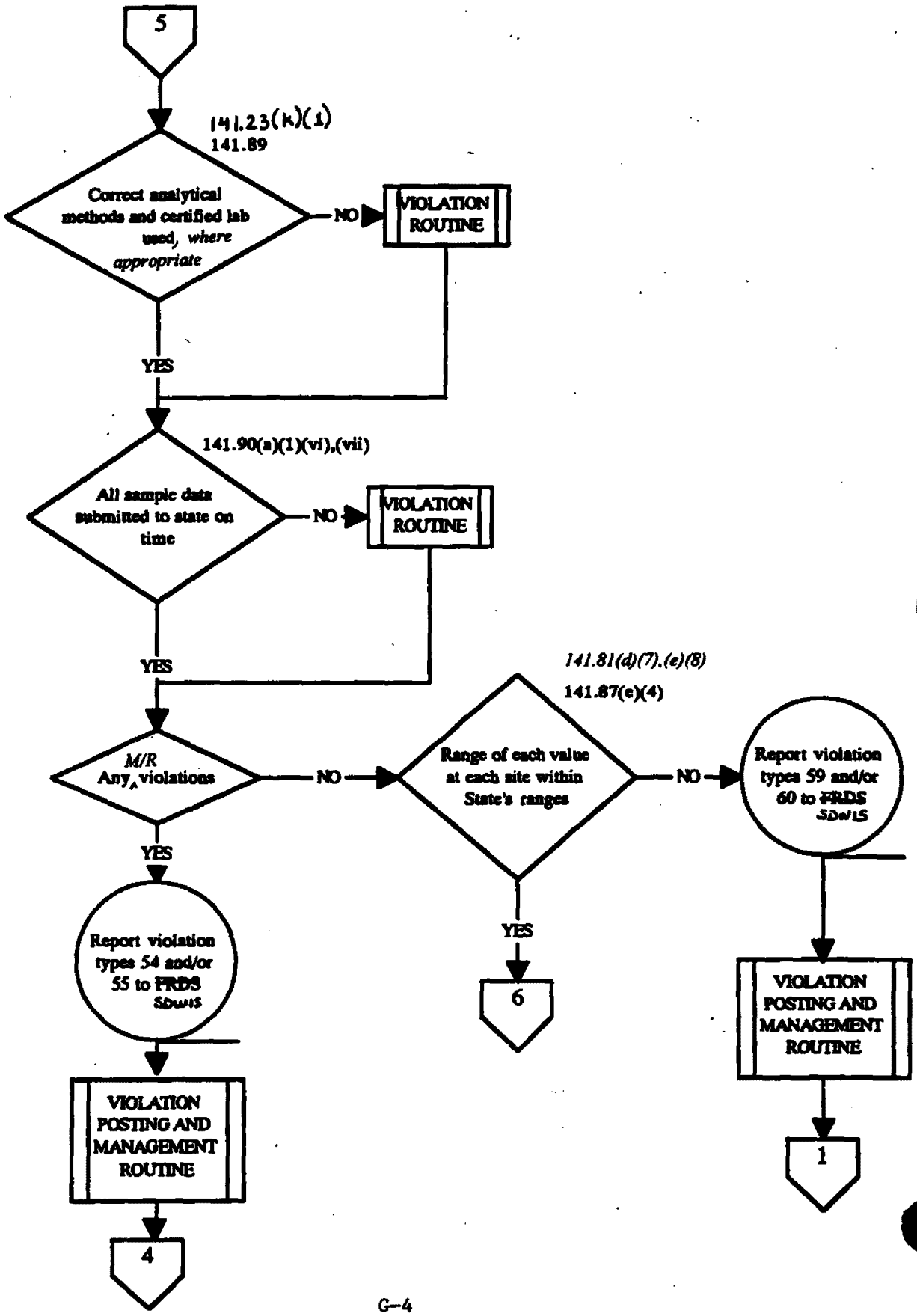
ALL SYSTEMS SIZES



LEAD AND COPPER RULE - FLOW CHART

ROUTINE WATER QUALITY PARAMETER MONITORING (141.87(d),(e))

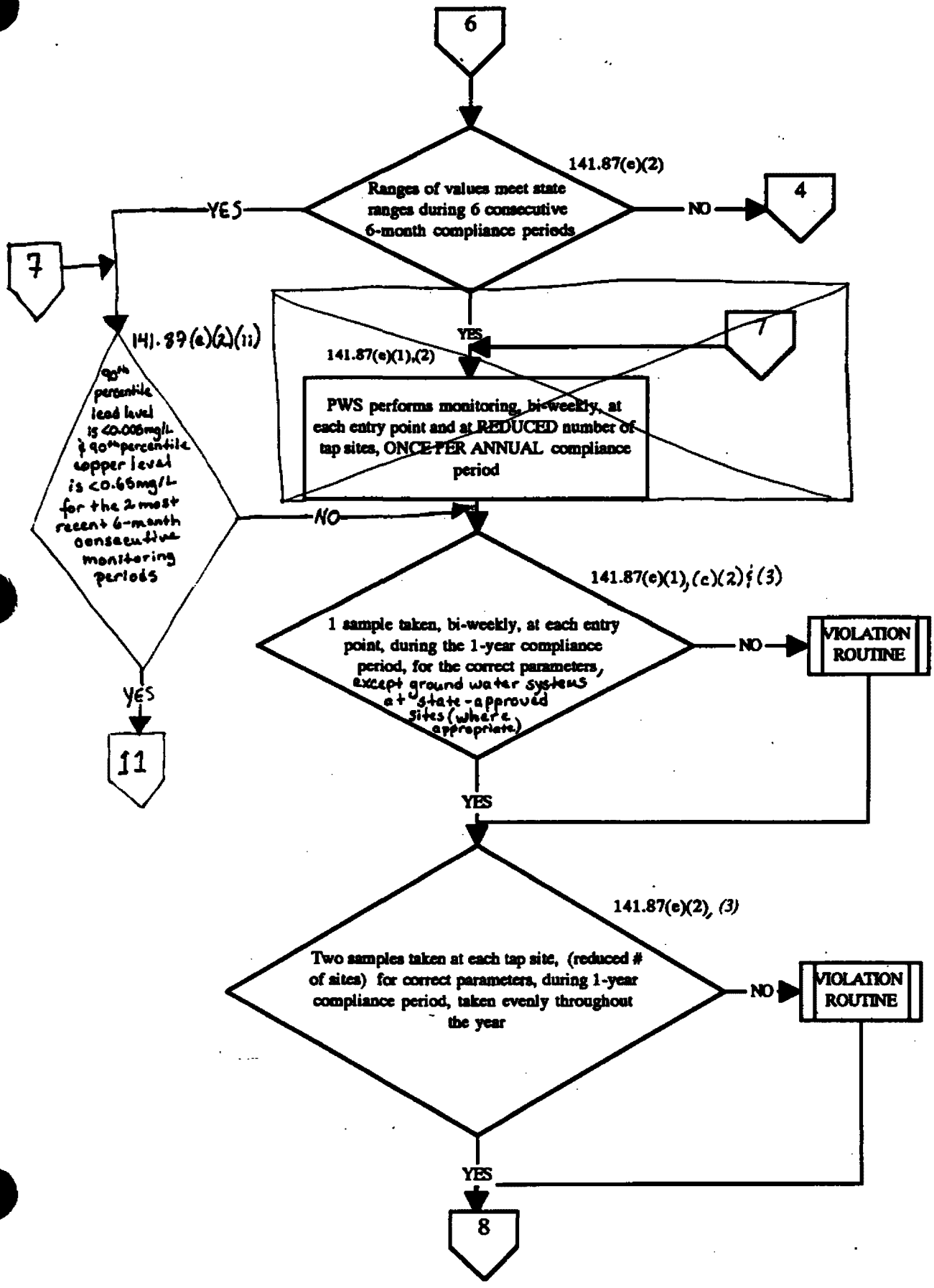
ALL SYSTEMS SIZES



LEAD AND COPPER RULE - FLOW CHART

ROUTINE WATER QUALITY PARAMETER MONITORING (141.87(d),(e))

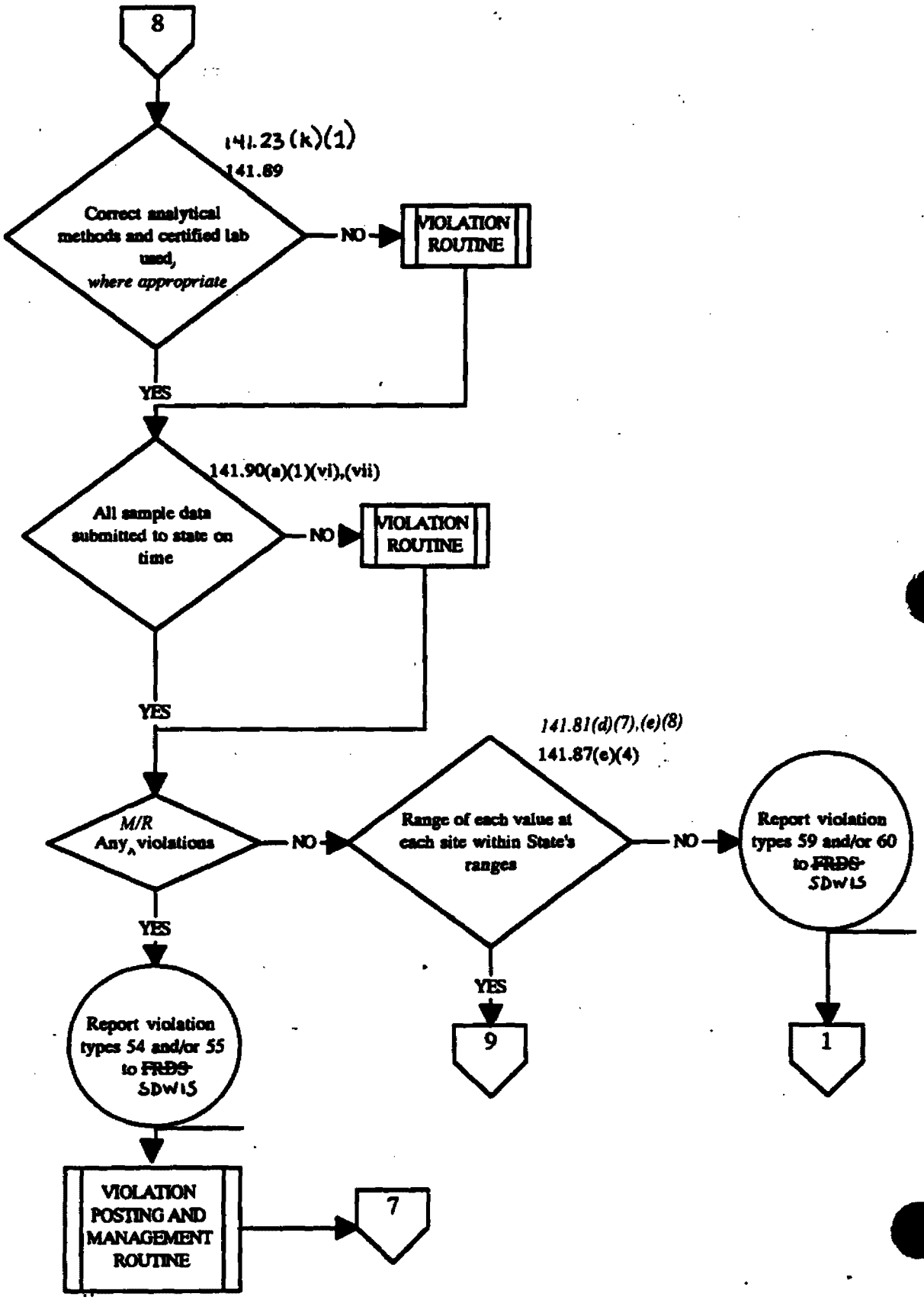
ALL SYSTEMS SIZES



LEAD AND COPPER RULE - FLOW CHART

ROUTINE WATER QUALITY PARAMETER MONITORING (141.87(d),(e))

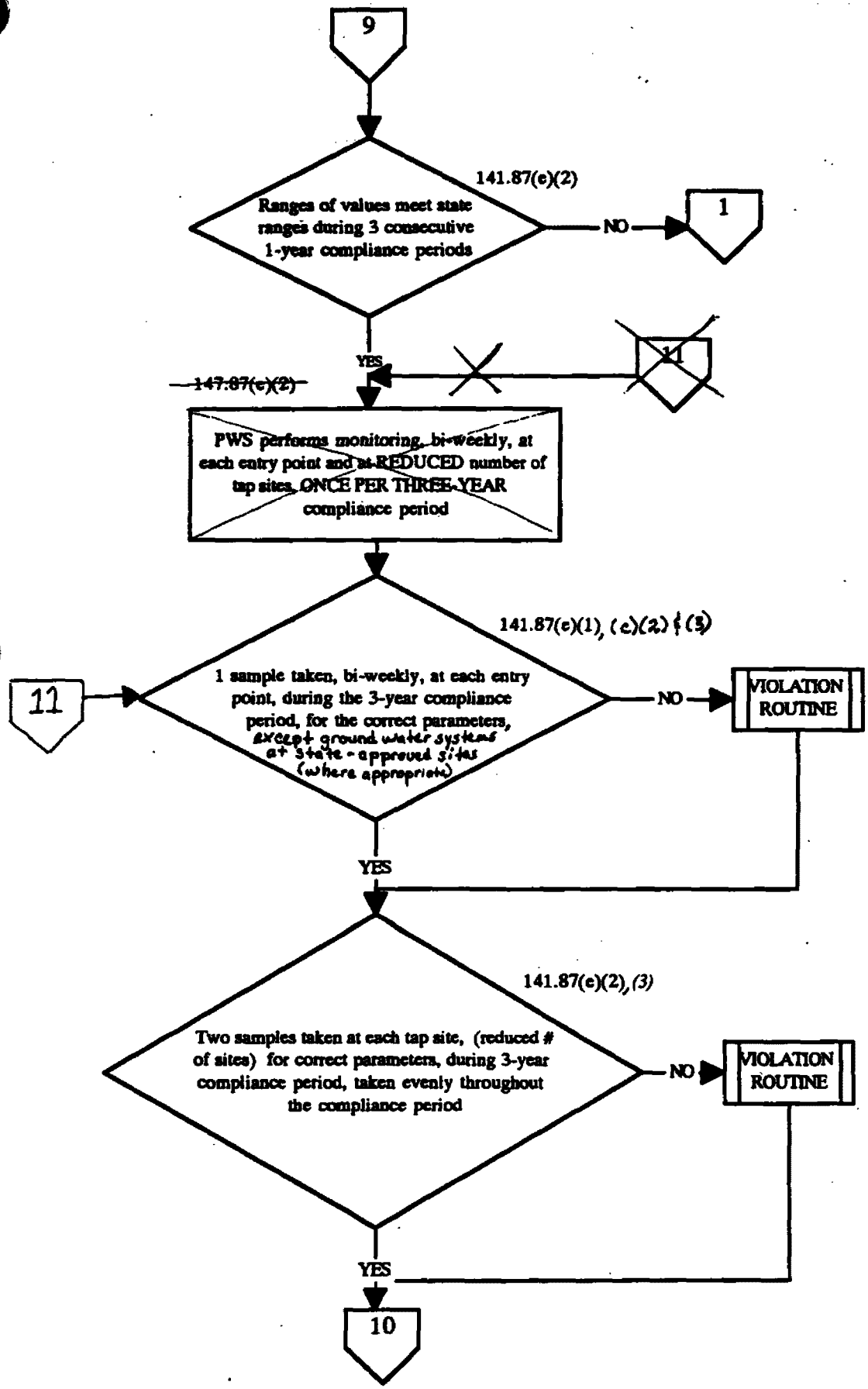
ALL SYSTEMS SIZES



LEAD AND COPPER RULE - FLOW CHART

ROUTINE WATER QUALITY PARAMETER MONITORING (141.87(d),(e))

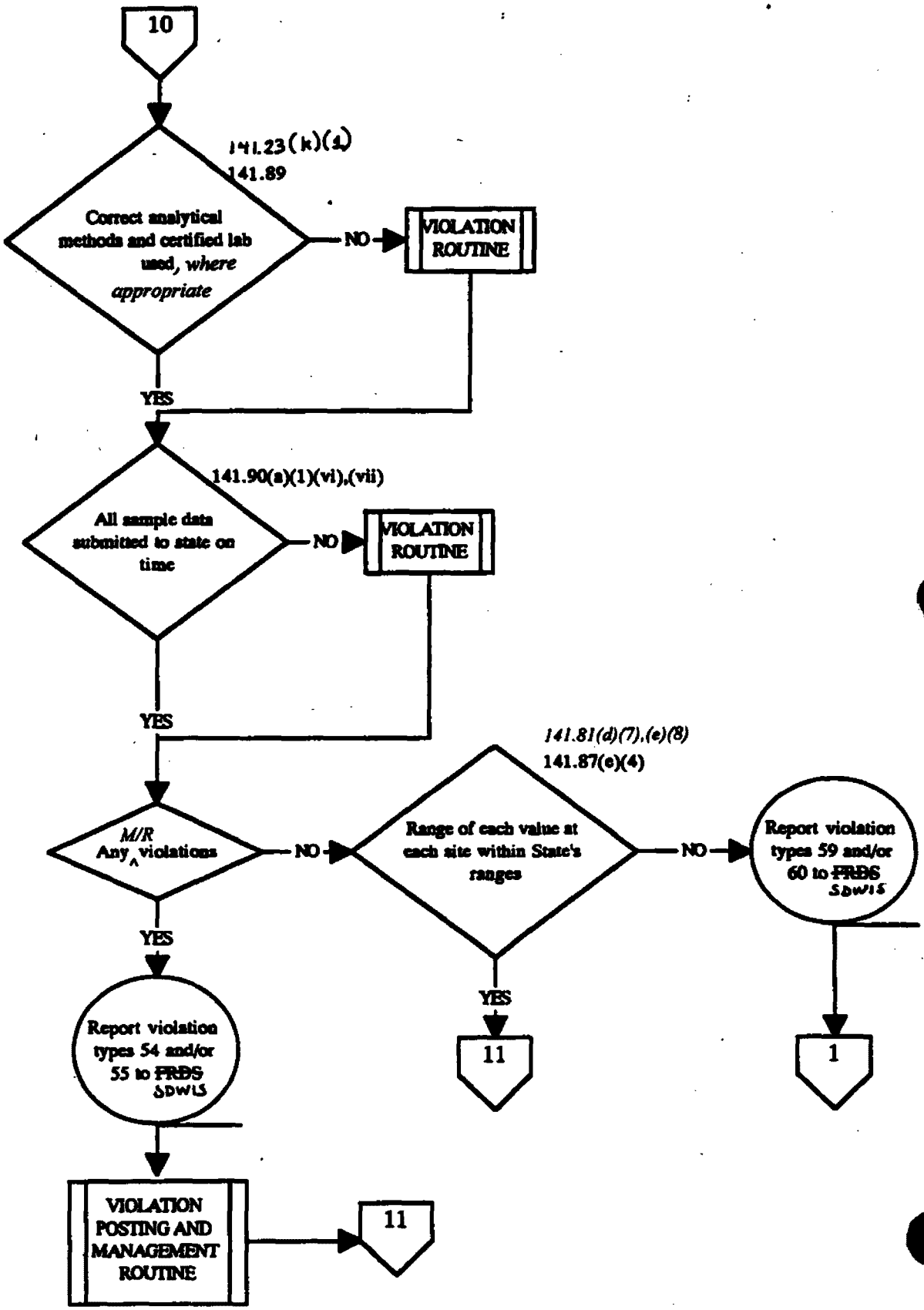
ALL SYSTEMS SIZES



LEAD AND COPPER RULE - FLOW CHART

ROUTINE WATER QUALITY PARAMETER MONITORING (141.87(d),(e))

ALL SYSTEMS SIZES



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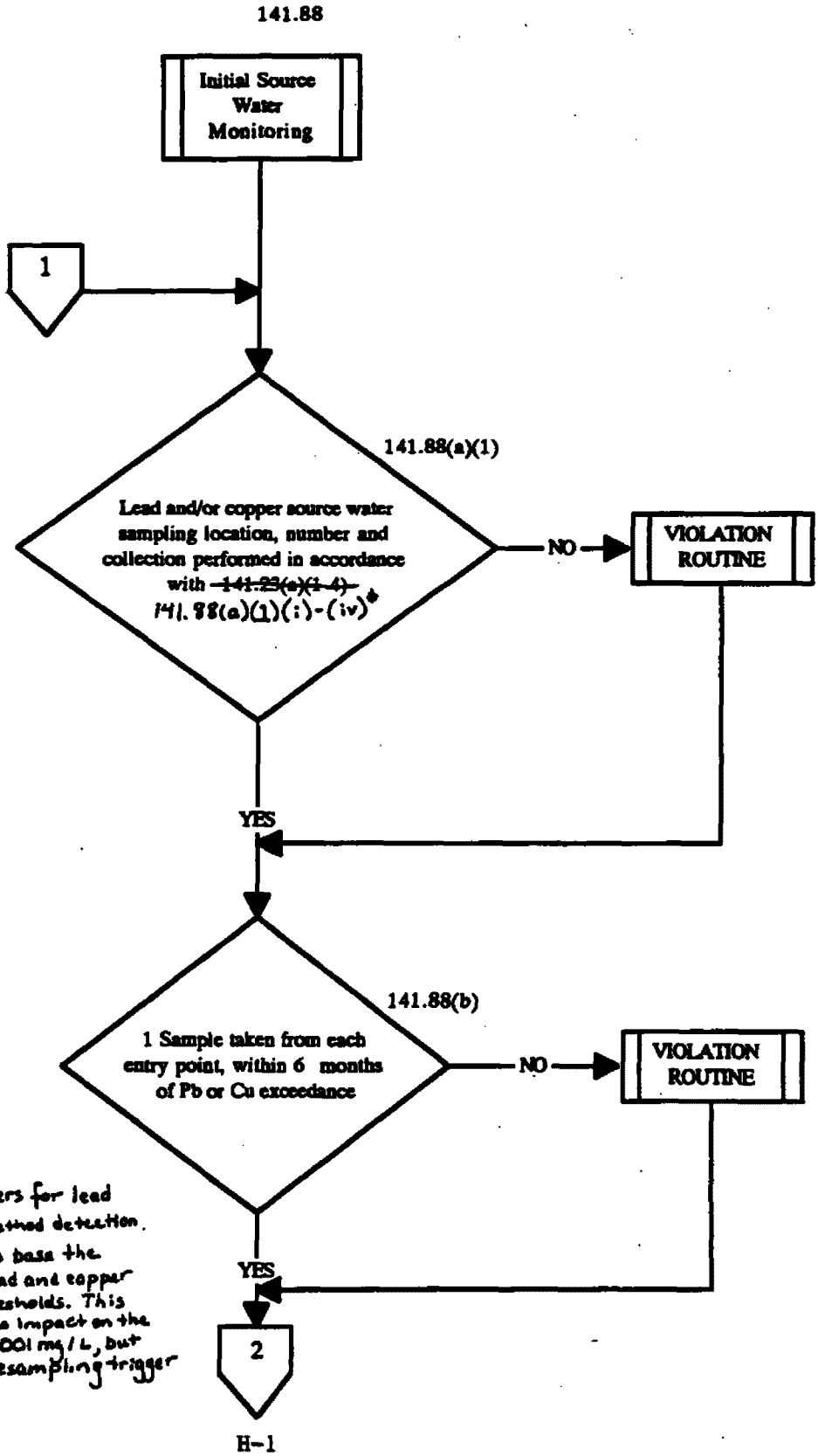
LEAD AND COPPER RULE - FLOW CHART

INITIAL SOURCE WATER MONITORING (141.88)

ALL SYSTEM SIZES

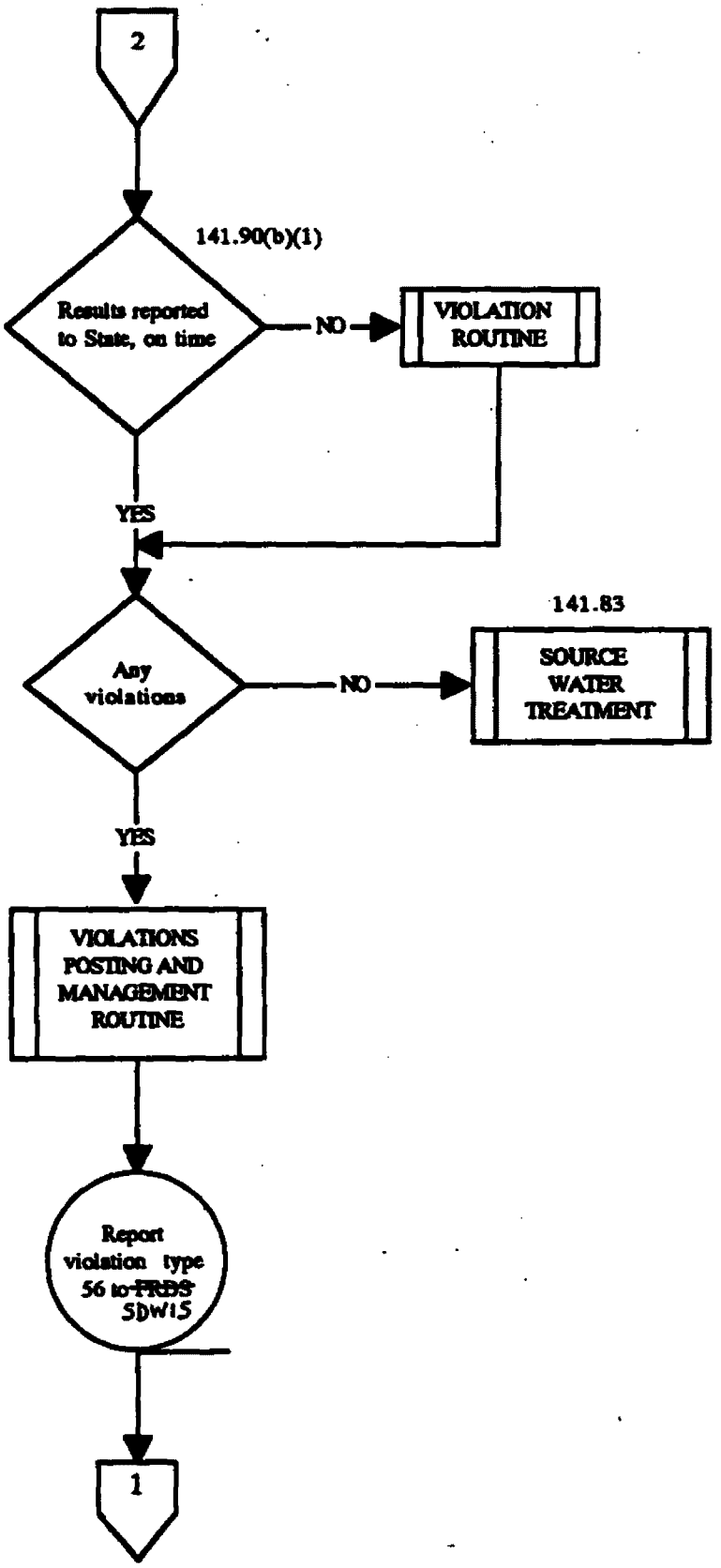


* The current resampling triggers for lead and copper are based on the method detection limit. The proposed revisions base the resampling triggers on the lead and copper source water treatment thresholds. This proposed change would have no impact on the lead resampling trigger of 0.001 mg/L, but would increase the copper resampling trigger to 0.16 mg/L.

LEAD AND COPPER RULE - FLOW CHART

INITIAL SOURCE WATER MONITORING (141.88)

ALL SYSTEM SIZES

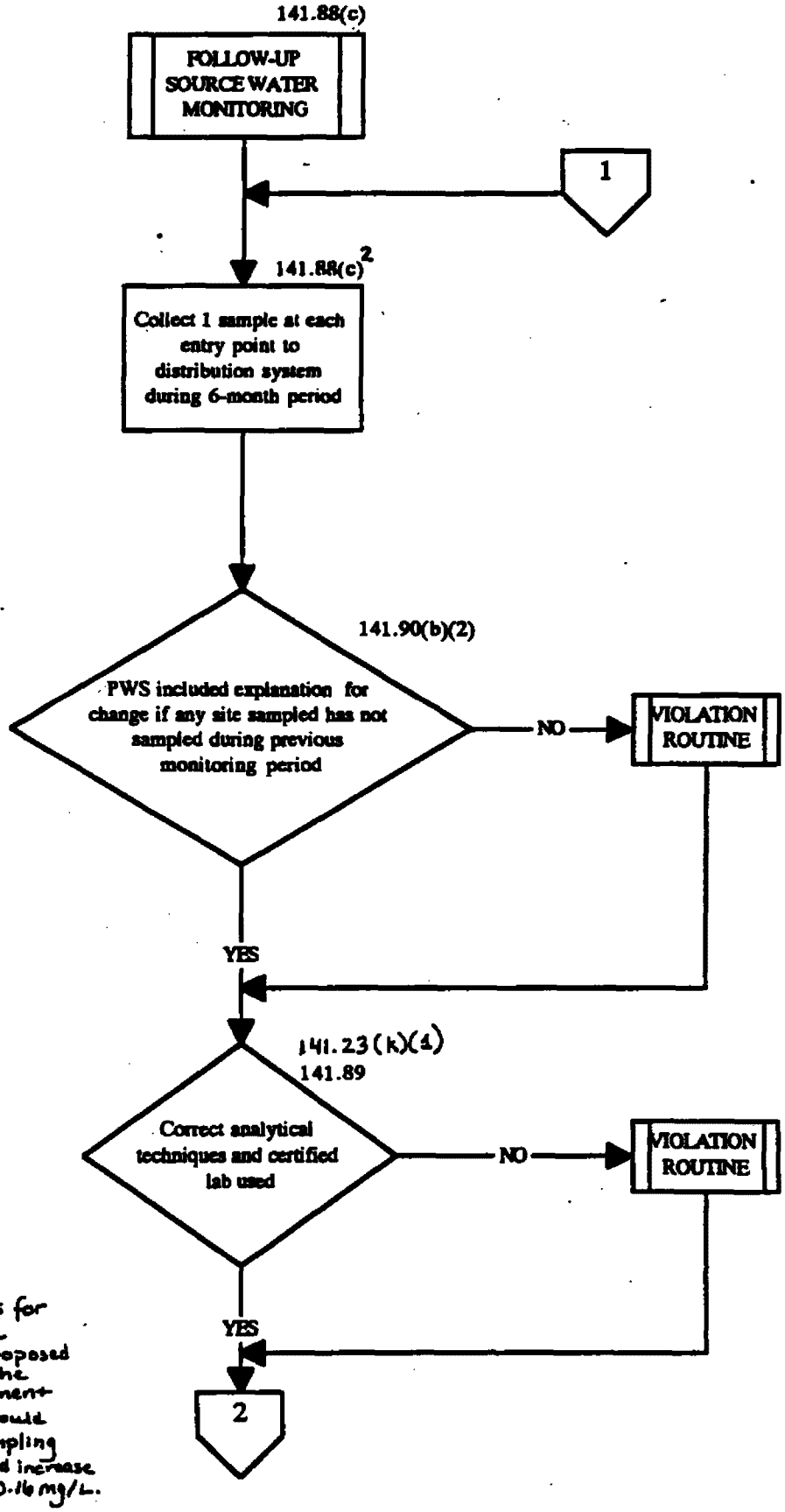


1/31/96

LEAD AND COPPER RULE - FLOW CHART

FOLLOW-UP SOURCE WATER MONITORING (141.88(c)) [1]

ALL SYSTEMS SIZES



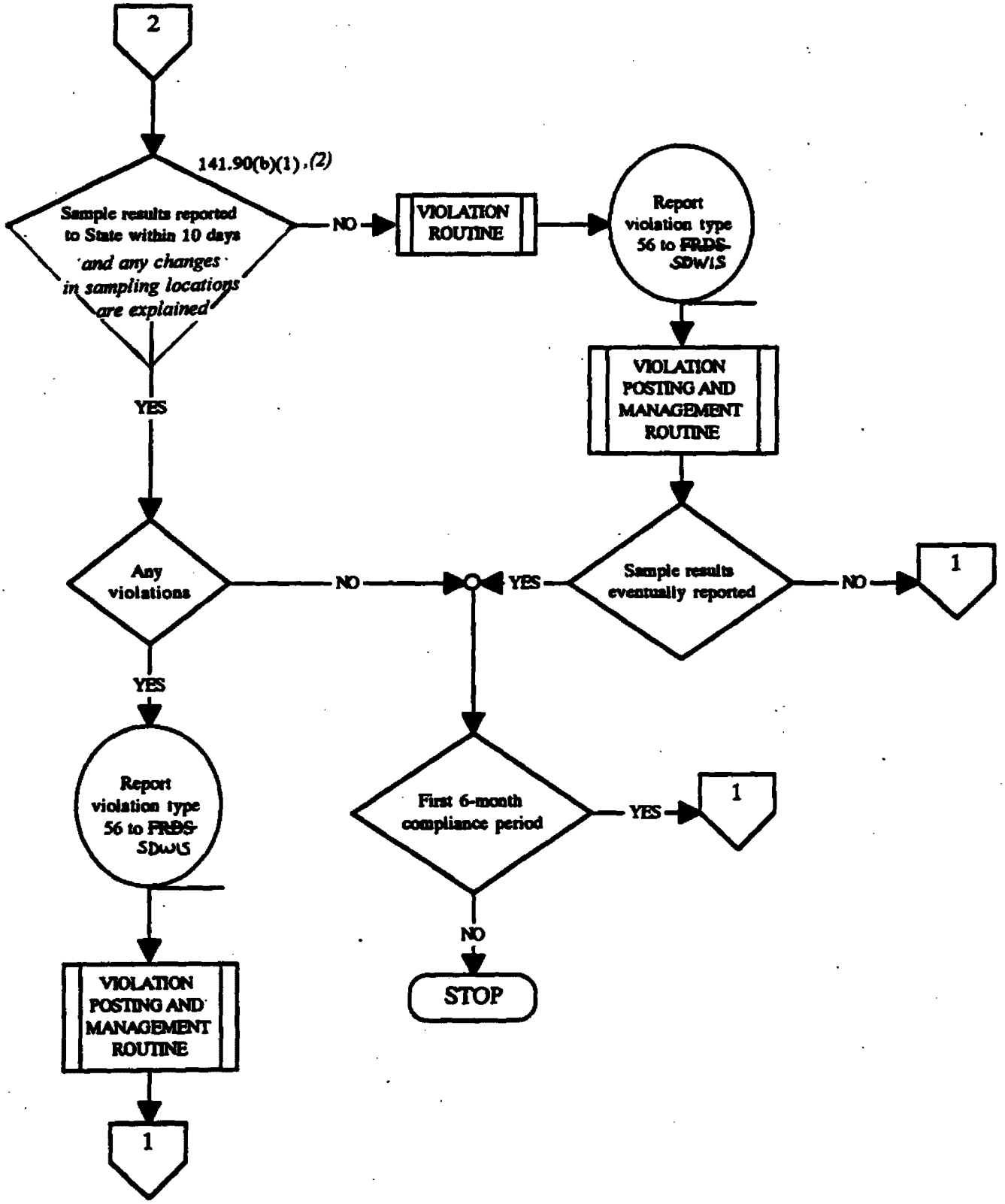
[1] *Includes source water monitoring conducted after the installation of SOWT but before the state sets MPLs for lead and copper in source water.*

[2] The current resampling triggers for lead and copper are based on the method detection limit. The proposed revisions base these triggers on the lead and copper source water treatment thresholds. This proposed change would have no impact on the lead resampling trigger of 0.001 mg/L, but would increase the copper resampling trigger to 0.16 mg/L.

LEAD AND COPPER RULE - FLOW CHART

FOLLOW-UP SOURCE WATER MONITORING (141.88(c))

ALL SYSTEMS SIZES

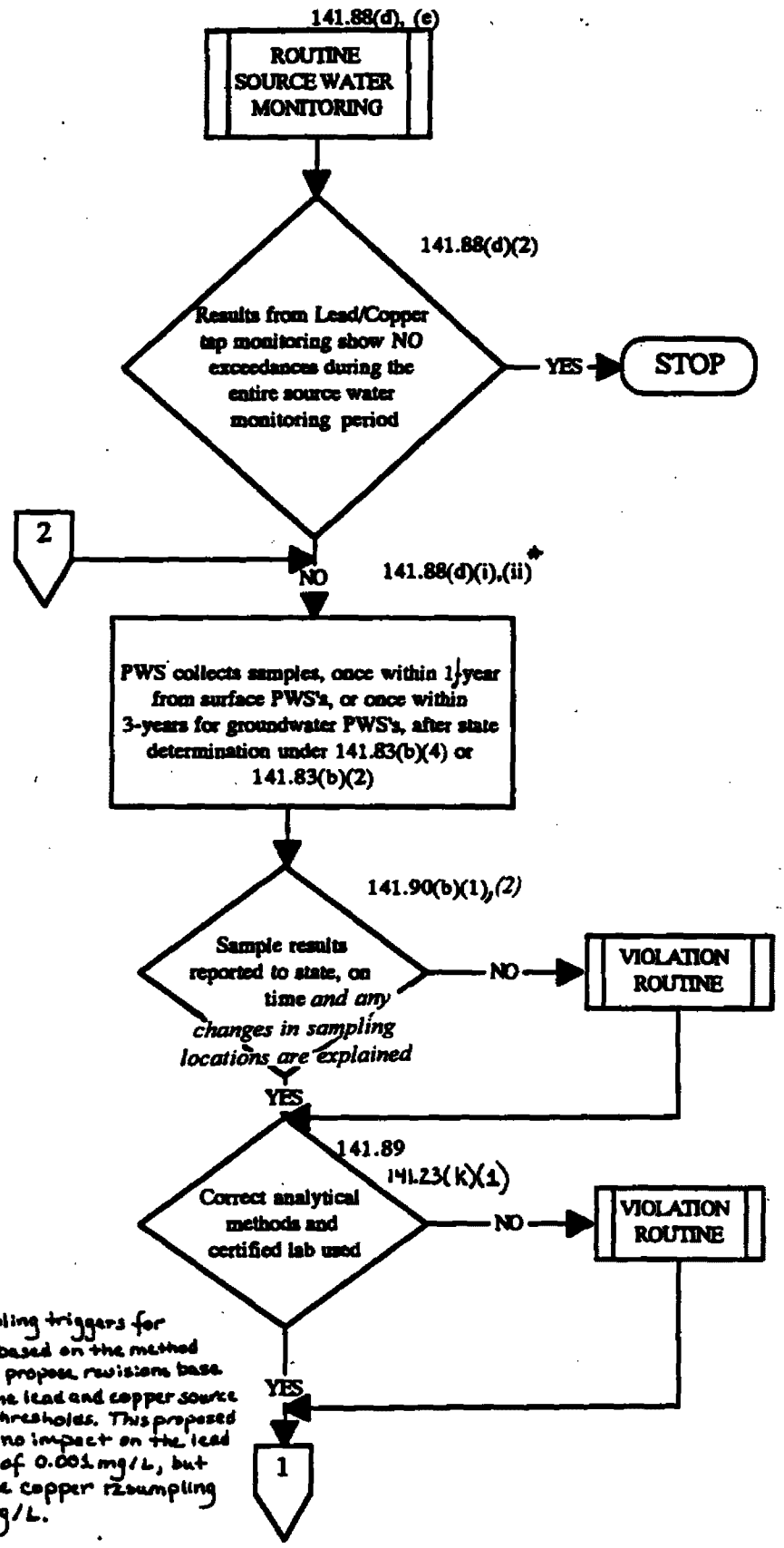


1/31/96

LEAD AND COPPER RULE - FLOW CHART

ROUTINE SOURCE WATER MONITORING (141.88(d), (e))

ALL SYSTEMS SIZES

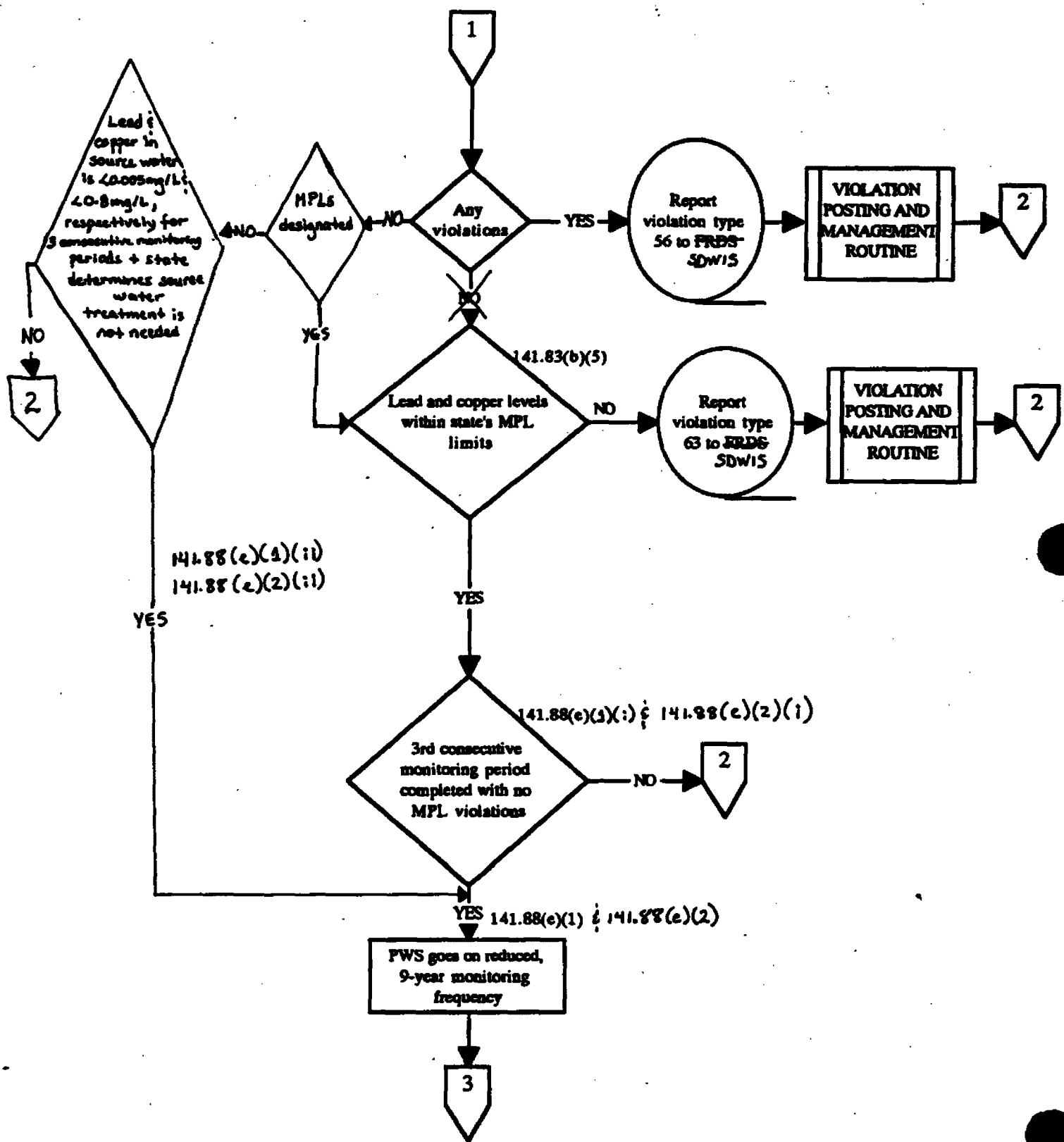


* The current resampling triggers for lead and copper are based on the method detection limit. The proposed revisions base these triggers on the lead and copper source water treatment thresholds. This proposed change would have no impact on the lead resampling trigger of 0.001 mg/L, but would increase the copper resampling trigger to 0.16 mg/L.

LEAD AND COPPER RULE - FLOW CHART

ROUTINE SOURCE WATER MONITORING (141.88(d), (e))

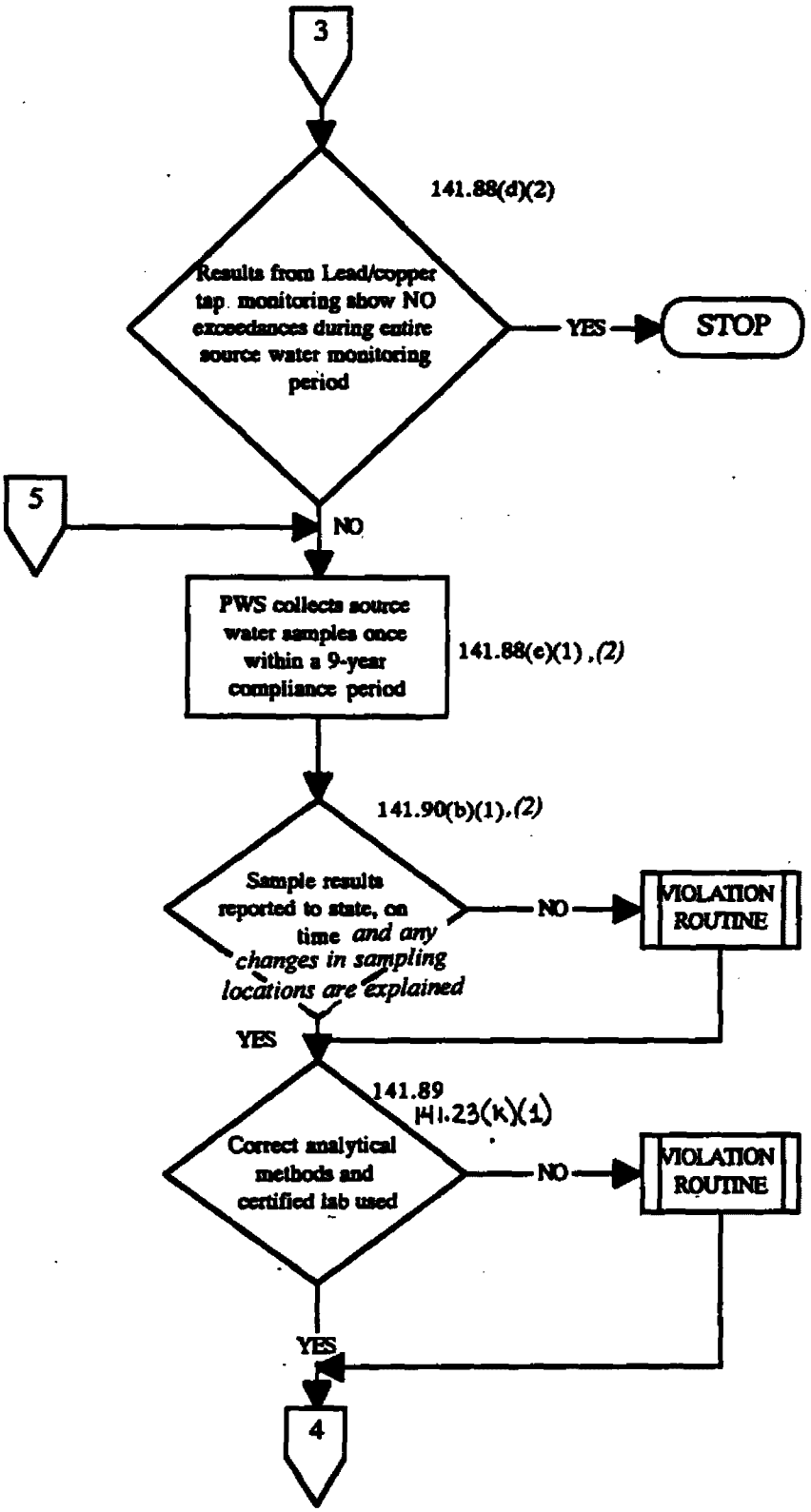
ALL SYSTEMS SIZES



LEAD AND COPPER RULE - FLOW CHART

ROUTINE SOURCE WATER MONITORING (141.88(d), (e))

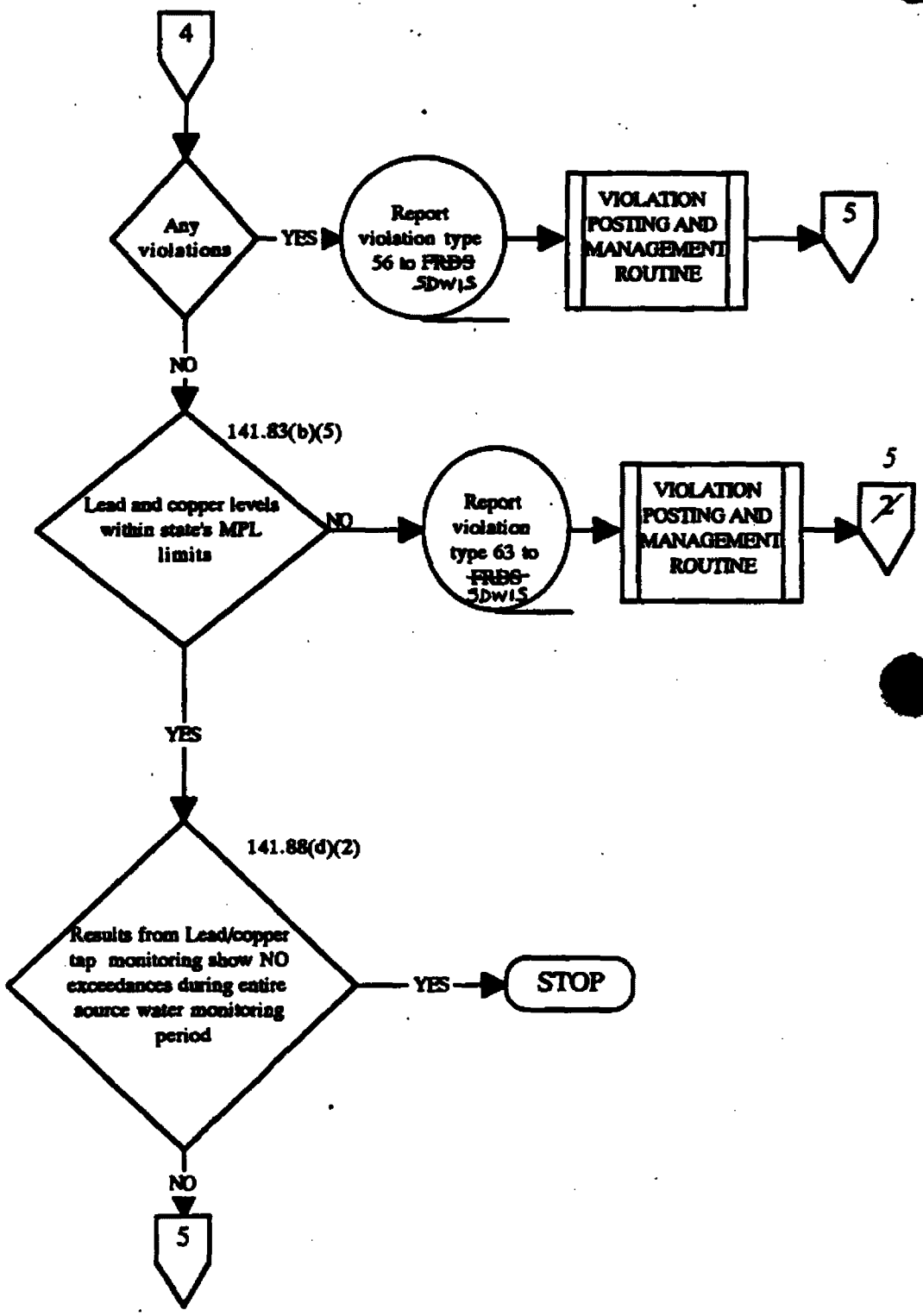
ALL SYSTEMS SIZES



LEAD AND COPPER RULE - FLOW CHART

ROUTINE SOURCE WATER MONITORING (141.88(d), (e))

ALL SYSTEMS SIZES



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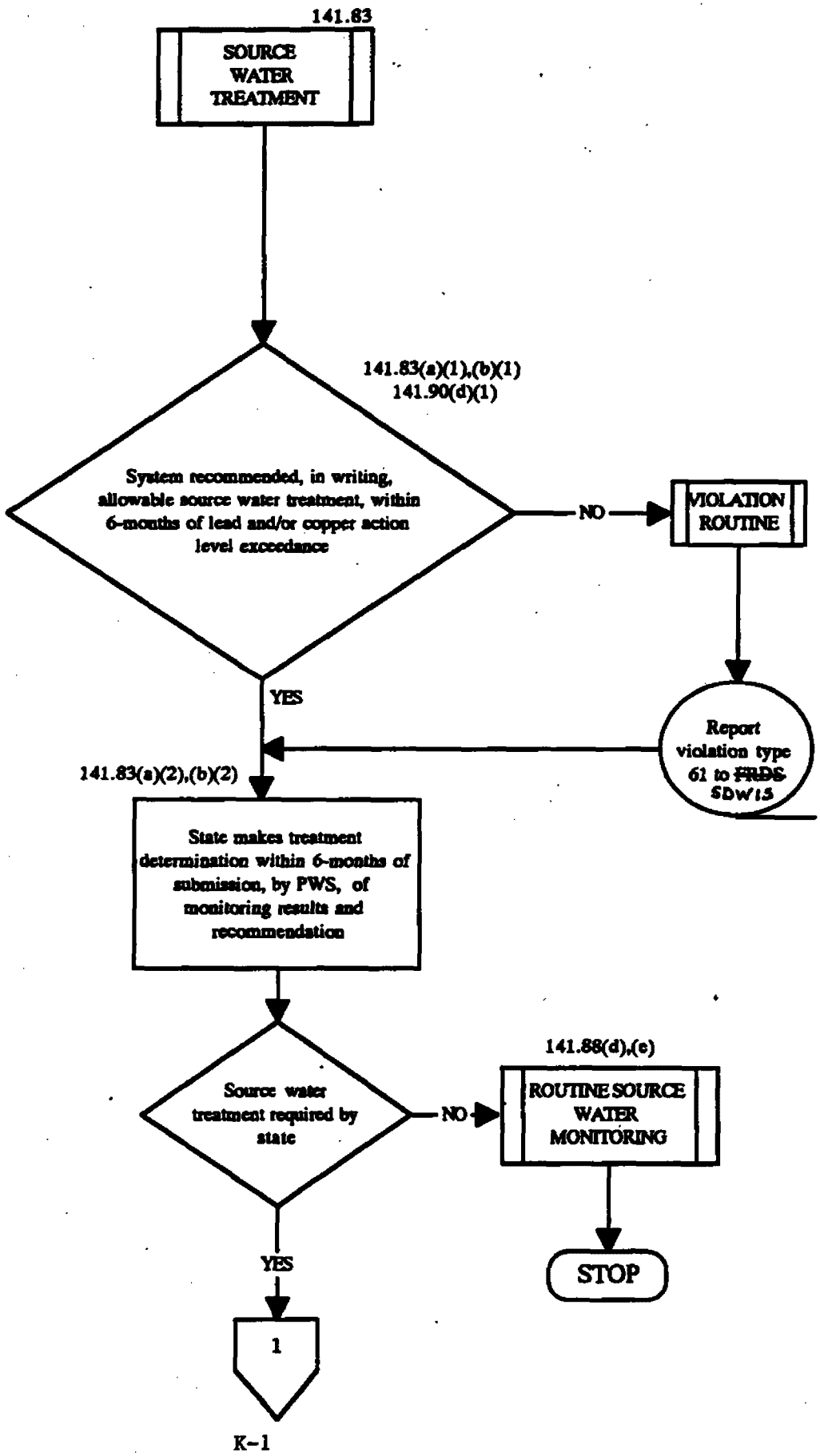
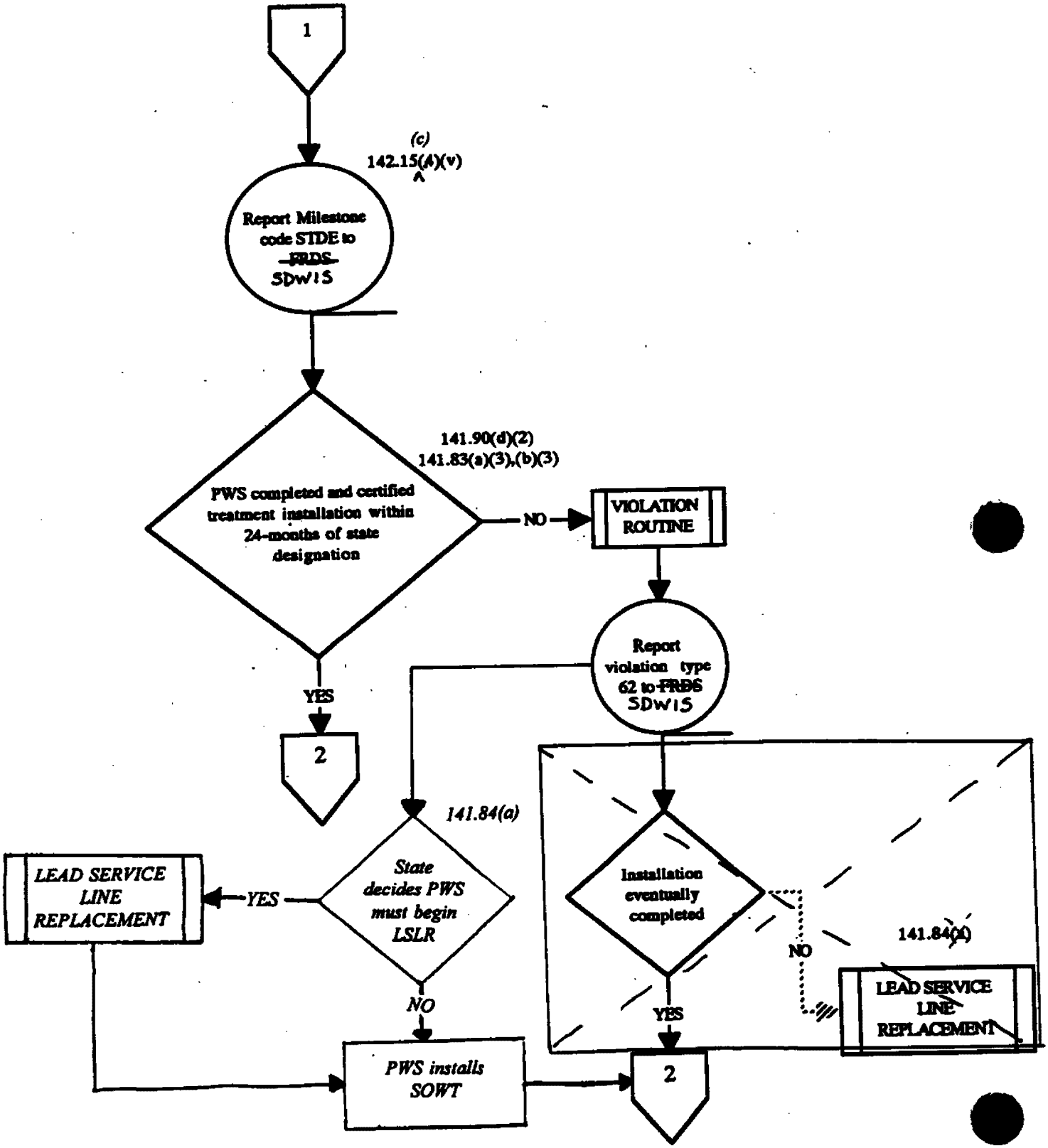
LEAD AND COPER RULE - FLOW CHART

SOURCE WATER TREATMENT (141.83)

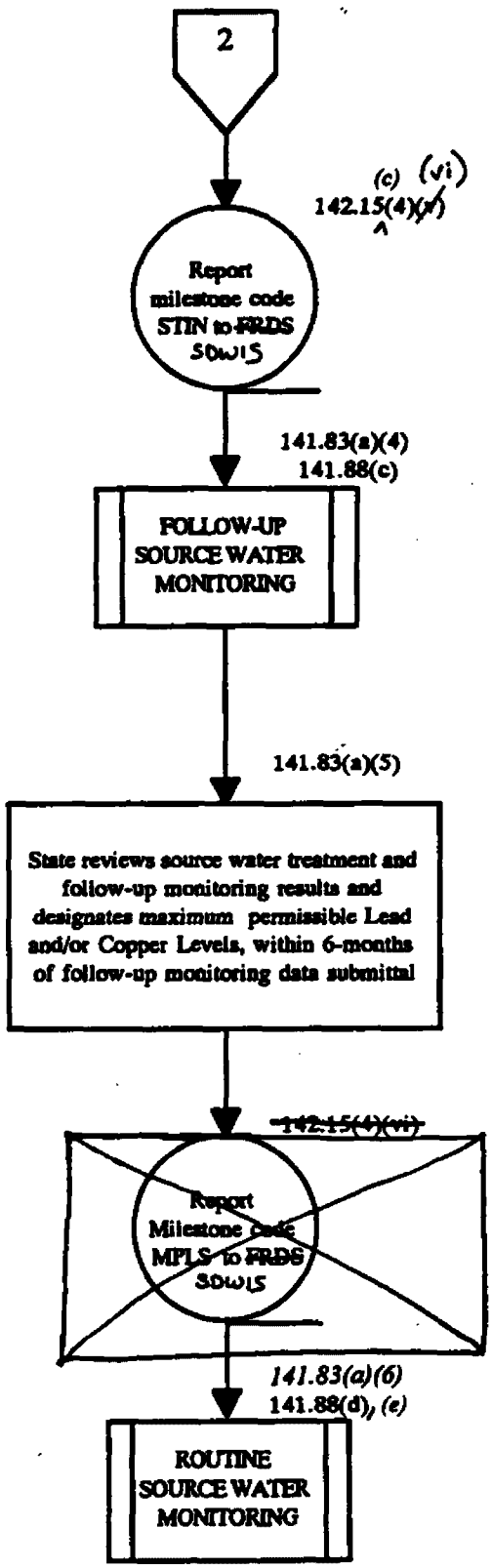
ALL SYSTEMS SIZES



LEAD AND COPER RULE - FLOW CHART
SOURCE WATER TREATMENT (141.83)
ALL SYSTEMS SIZES



LEAD AND COPER RULE - FLOW CHART
SOURCE WATER TREATMENT (141.83)
ALL SYSTEMS SIZES



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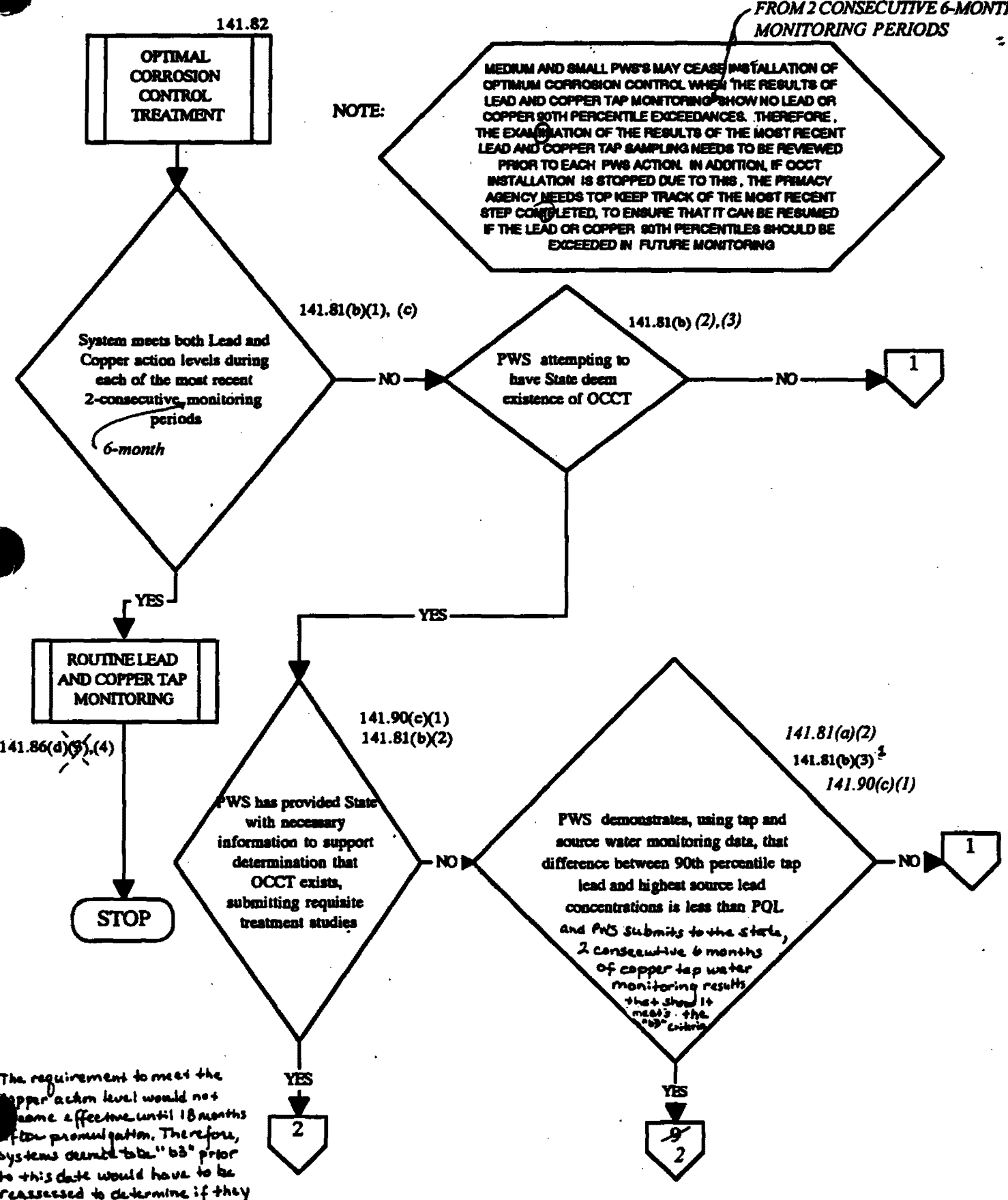
LEAD AND COPPER RULE - FLOW CHART

OPTIMAL CORROSION CONTROL TREATMENT (141.82)

MEDIUM AND SMALL SYSTEMS ONLY (population < 50,001)



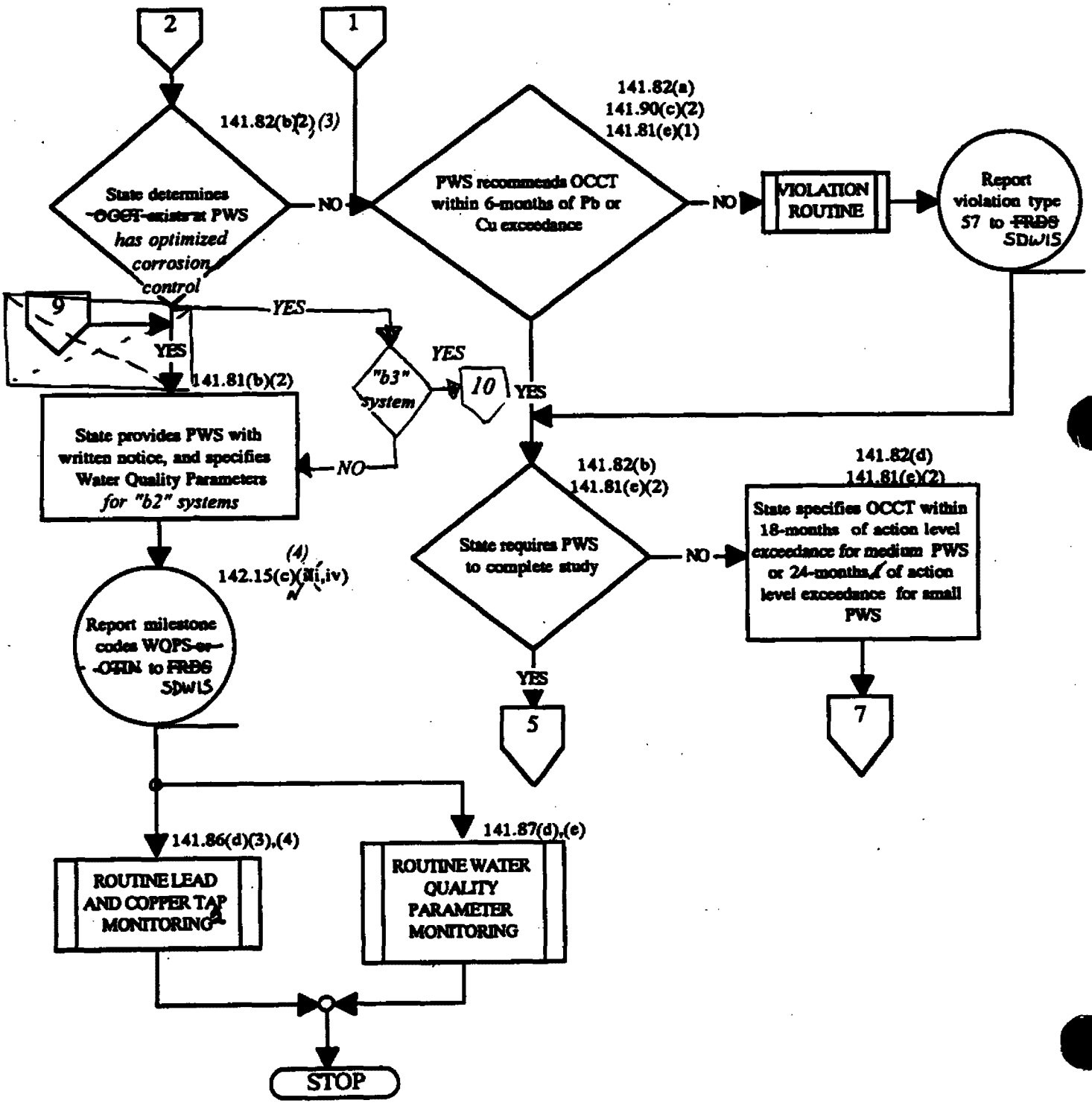
1 The requirement to meet the copper action level would not become effective until 18 months after promulgation. Therefore, systems deemed to be "b3" prior to this date would have to be reassessed to determine if they meet the copper criterion.

LEAD AND COPPER RULE - FLOW CHART

OPTIMAL CORROSION CONTROL TREATMENT (141.82)

MEDIUM AND SMALL SYSTEMS ONLY (population < 50,001)

Note: *This flowchart shows the intention of the current rule that systems optimizing corrosion control under 141.(b)(2) and 141.(b)(3) (i.e., "b2" and "b3" systems) conduct lead and copper tap monitoring after initial monitoring, and that "b2" systems continue WQP monitoring (if appropriate); however, the rule language did not explicity require this. The proposed revisions included language which specifically requires this continued monitoring.*

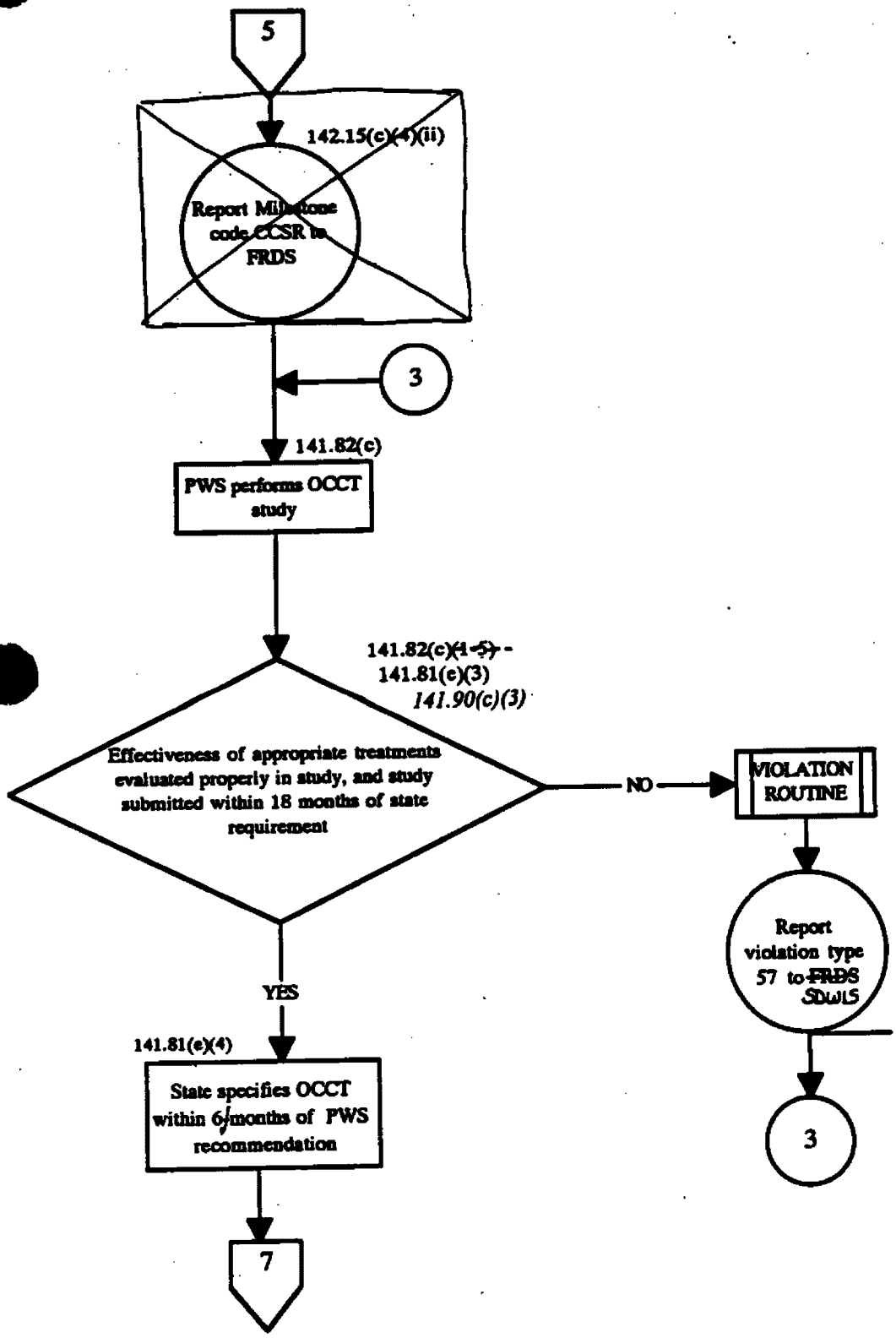


* The proposed LCR revisions add a new 141.86(d)(4)(v) that would allow accelerated lead and copper tap monitoring. For more details, refer to the Routine Lead and Copper Tap Monitoring ≤ 50,000 flowchart.

LEAD AND COPPER RULE - FLOW CHART

OPTIMAL CORROSION CONTROL TREATMENT (141.82)

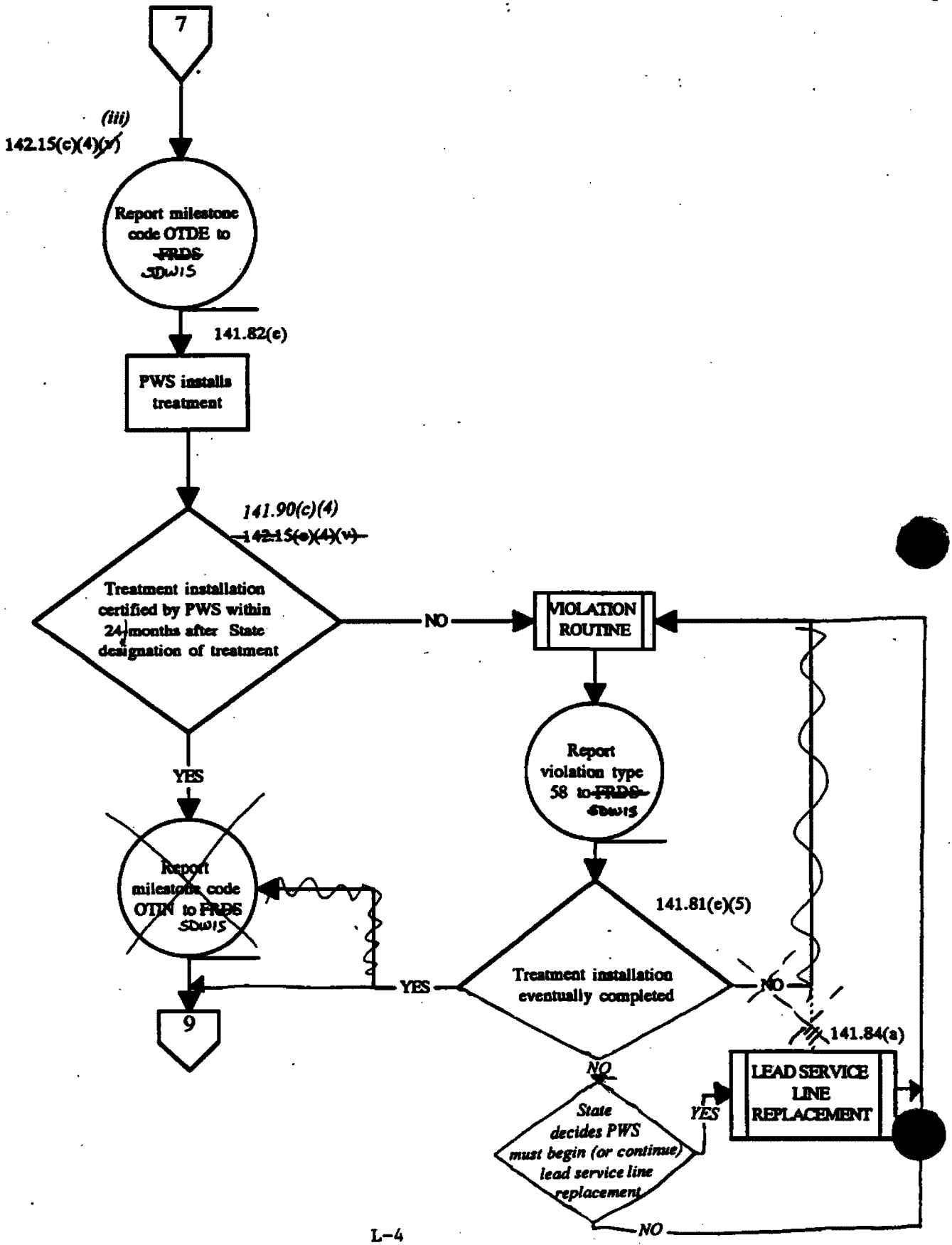
MEDIUM AND SMALL SYSTEMS ONLY (population < 50,001)



LEAD AND COPPER RULE - FLOW CHART

OPTIMAL CORROSION CONTROL TREATMENT (141.82)

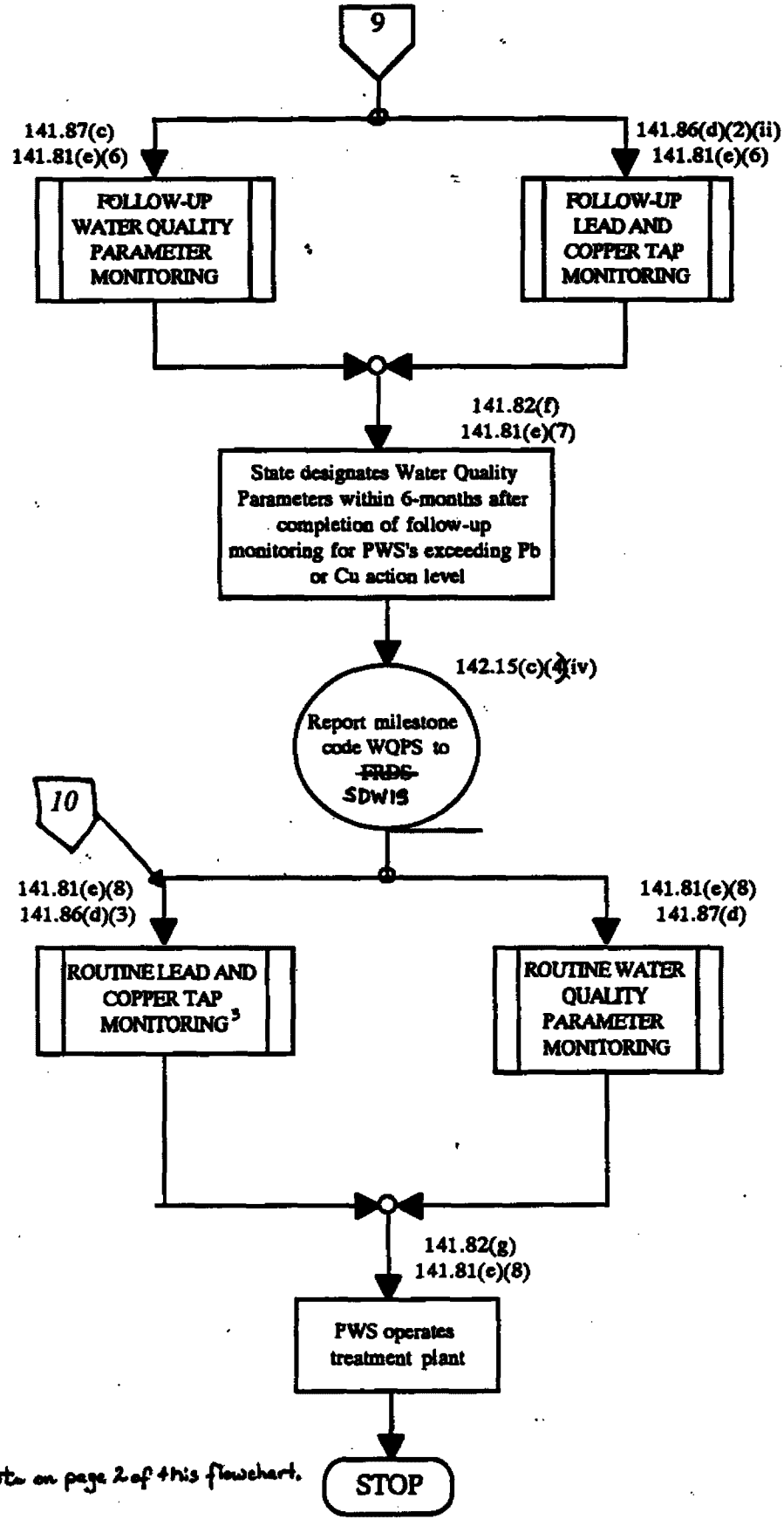
MEDIUM AND SMALL SYSTEMS ONLY (population < 50,001)



LEAD AND COPPER RULE - FLOW CHART

OPTIMAL CORROSION CONTROL TREATMENT (141.82)

MEDIUM AND SMALL SYSTEMS ONLY (population < 50,001)



[3] Refer back to the footnote on page 2 of 4 this flowchart.

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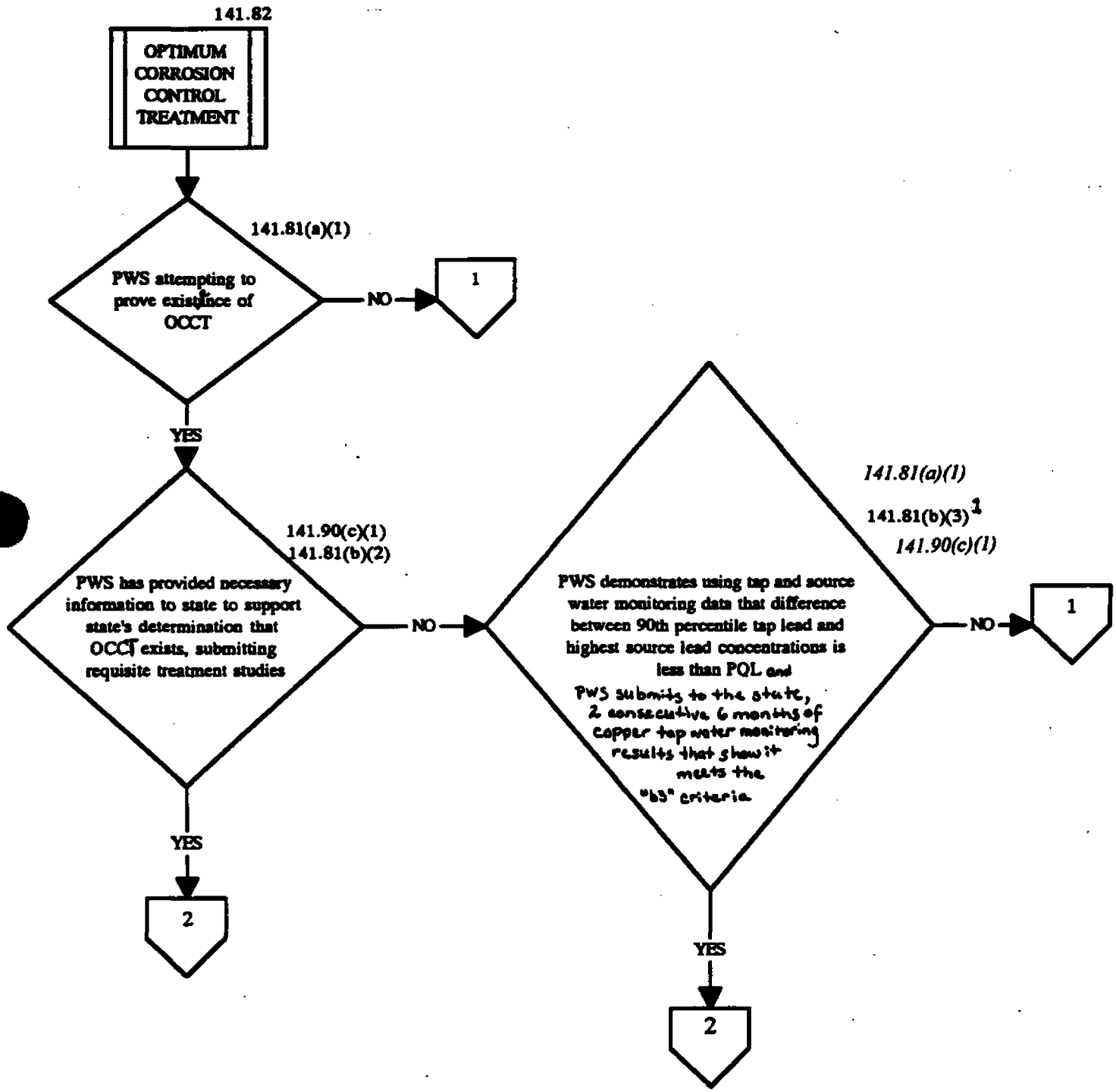
LEAD AND COPPER RULE - FLOW CHART

OPTIMAL CORROSION CONTROL TREATMENT (141.82)

LARGE SYSTEMS ONLY (population > 50,000)



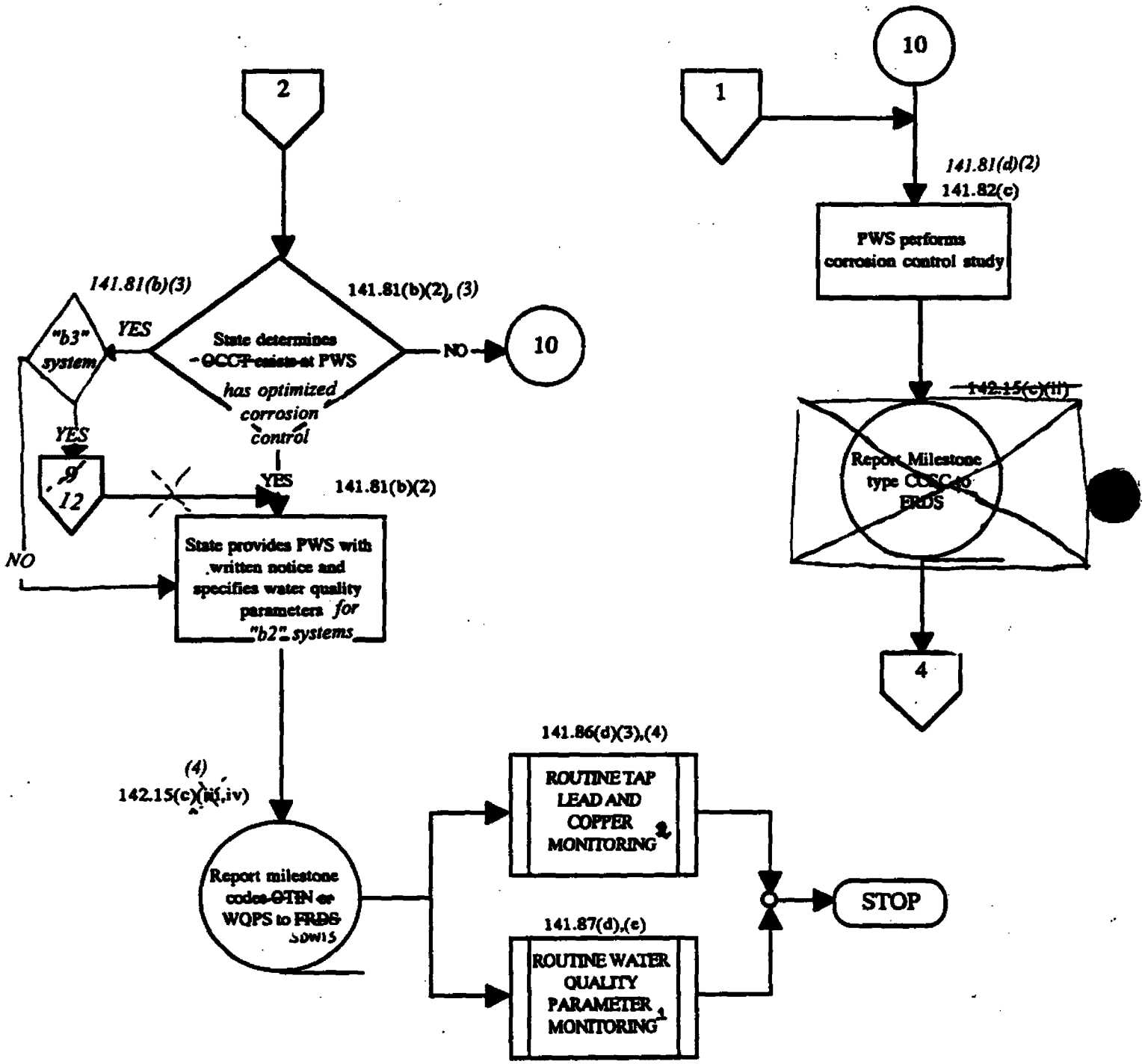
The requirement to meet the copper action level would not become effective until 18 months after promulgation. Therefore, systems deemed to be "b3" systems prior to this date would have to be reassessed to determine if they meet the copper criterion.

LEAD AND COPPER RULE - FLOW CHART

OPTIMAL CORROSION CONTROL TREATMENT (141.82)

LARGE SYSTEMS ONLY (population > 50,000)

***Note:** This flowchart shows the intention of the current rule that systems optimizing corrosion control under 141.81(b)(2) and 141.81(b)(3) (i.e., "b2" and "b3" systems) conduct lead and copper tap monitoring after initial monitoring, and that "b2" systems continue WQP monitoring; however, the rule language did not explicitly require this. The proposed revisions include language which specifically requires this continued monitoring.*

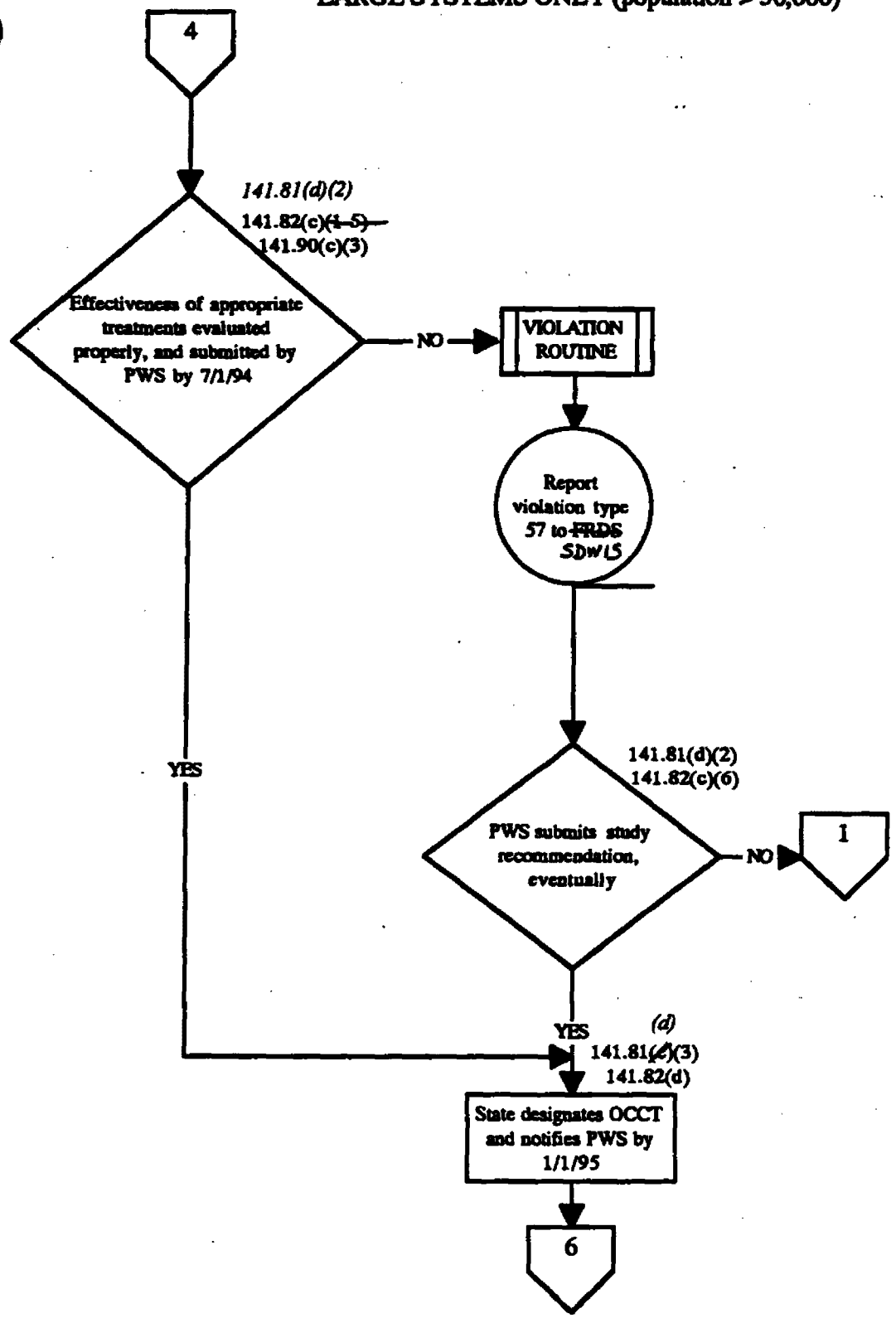


2 The LCR revisions propose to add a new 141.86(d)(4)(v) and 141.87(e)(2)(ii) that would allow accelerated reduced lead and copper tap monitoring and WQP monitoring, respectively. For more detail, refer to the Routine Lead and Copper Tap Water Monitoring and Routine WQP Monitoring flowcharts.

LEAD AND COPPER RULE - FLOW CHART

OPTIMAL CORROSION CONTROL TREATMENT (141.82)

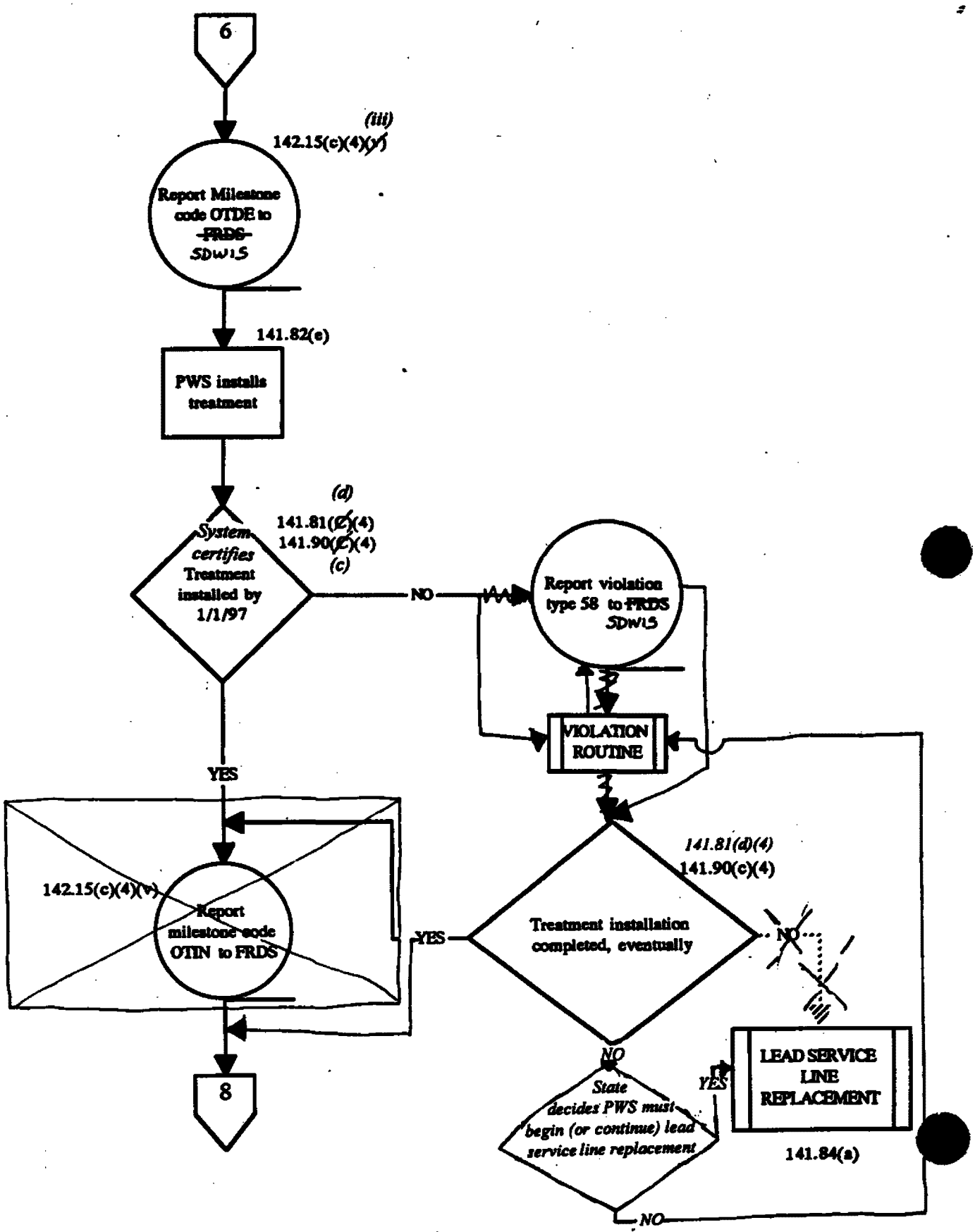
LARGE SYSTEMS ONLY (population > 50,000)



LEAD AND COPPER RULE - FLOW CHART

OPTIMAL CORROSION CONTROL TREATMENT (141.82)

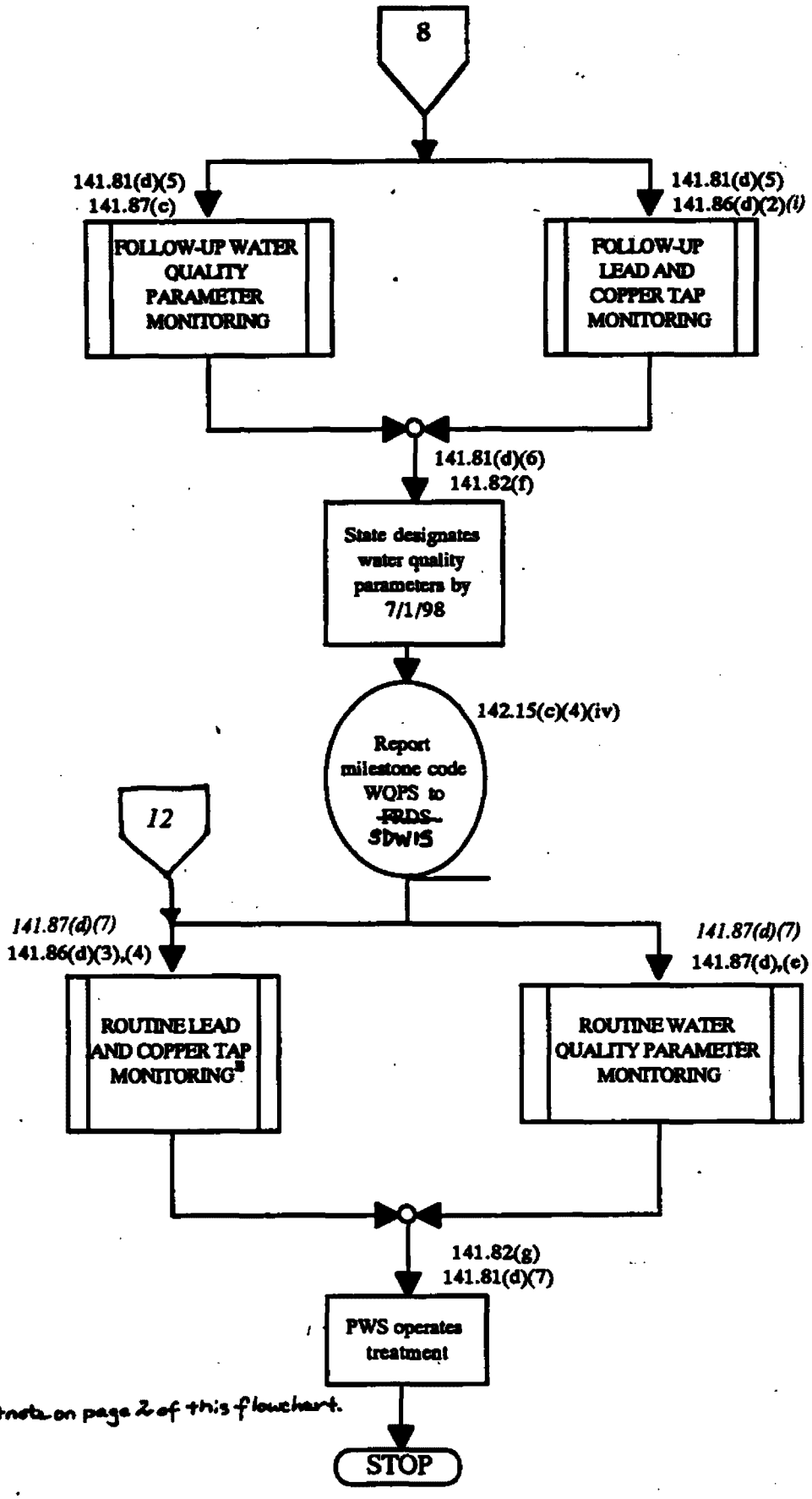
LARGE SYSTEMS ONLY (population > 50,000)



LEAD AND COPPER RULE - FLOW CHART

OPTIMAL CORROSION CONTROL TREATMENT (141.82)

LARGE SYSTEMS ONLY (population > 50,000)



back to footnote on page 2 of this flowchart.

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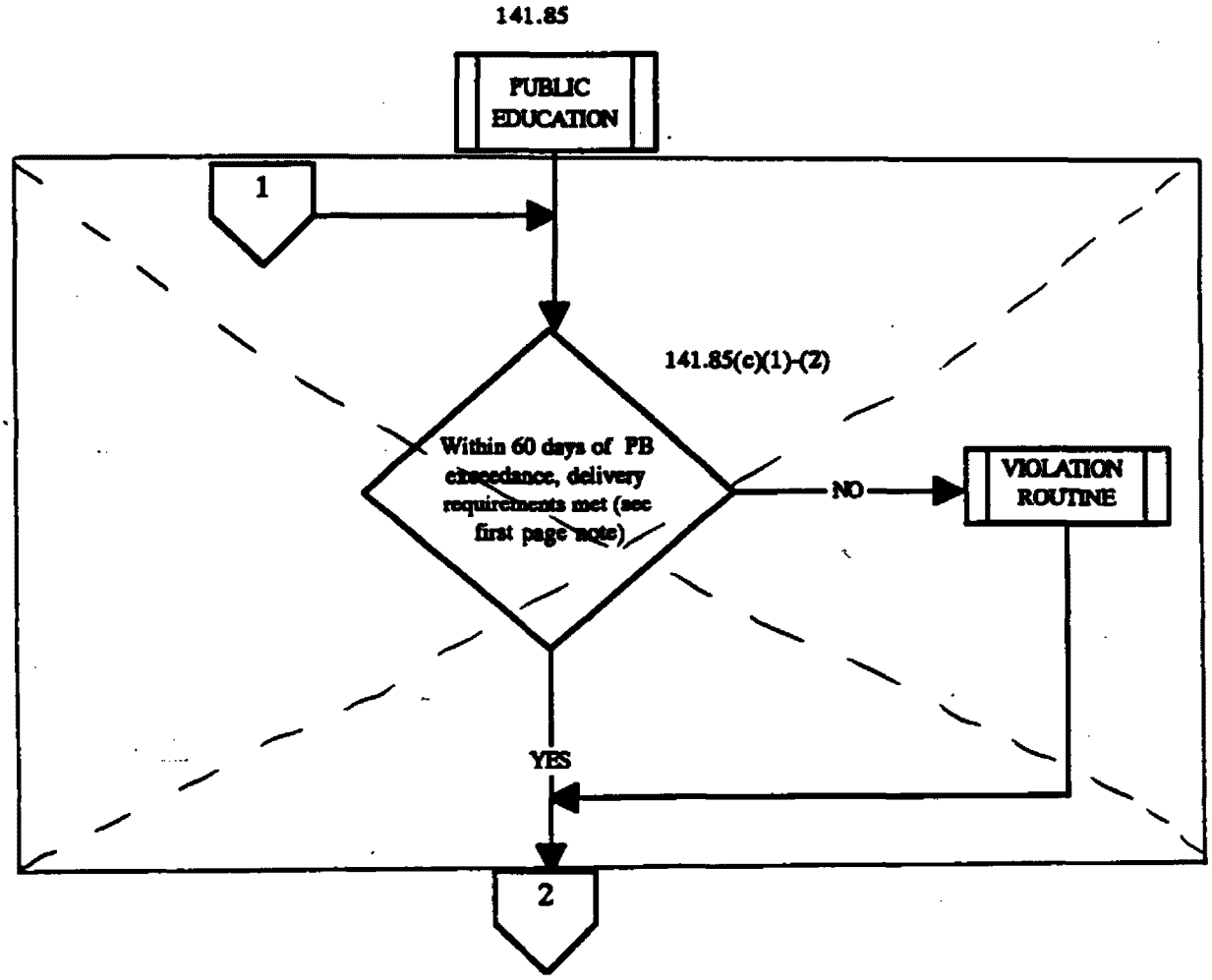
LEAD AND COPPER RULE - FLOW CHART

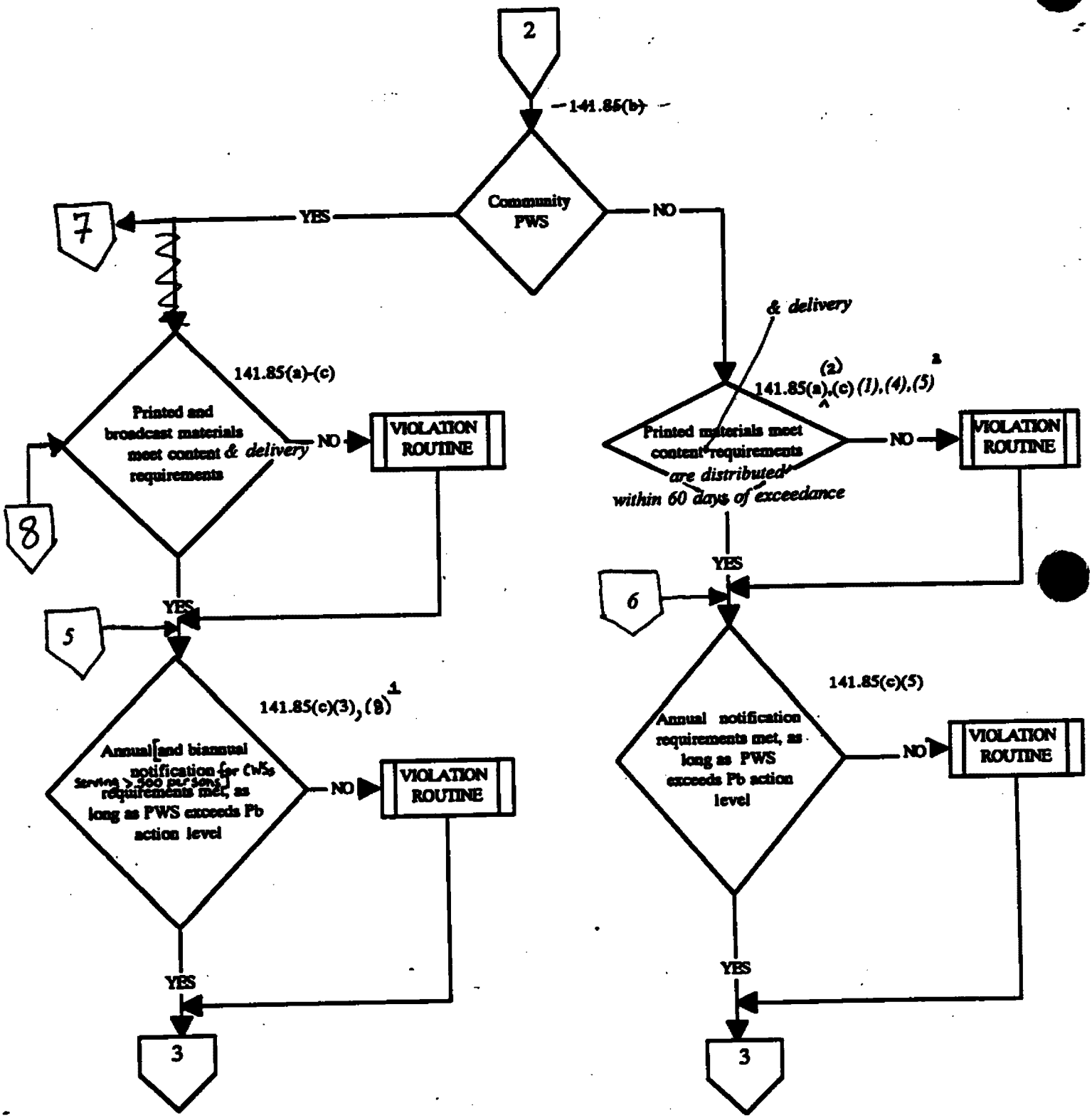
PUBLIC EDUCATION (141.85)

ALL SYSTEMS SIZES

NOTE:
The effective date of the treatment technique of the rule is 12/7/92. As a result, it is NOT mandatory for large PWS's that have Lead 90th percentile exceedances during the first 6-month monitoring period (1/1/92 - 6/30/92)) to implement the public education requirements of the rule within 60-days of the exceedance. Supplementary guidance issued by OGWDW on 9/11/92 identified the time frame for the delivery of public education. In summary, a PWS that exceeds the lead action level during the 1/1/92 - 6/30/92 monitoring period, and A) knows prior to 12/7/92 that the 90th percentile is below the action level for the 7/1/92 - 12/30/92 monitoring period does NOT need to implement the program unless future monitoring results in an exceedance; B) does NOT know prior to 12/7/92 whether the action level is exceeded during the 7/1/92 - 12/30/92 monitoring period, or finds that the new 90th percentile exceeds the action level, before 12/7/92, MUST deliver public education in conformance with the rules BY 12/7/92, or a public education violation, possibly leading to the PWS's becoming a SNC, will be incurred



LEAD AND COPPER RULE - FLOW CHART
PUBLIC EDUCATION (141.85)
ALL SYSTEMS SIZES



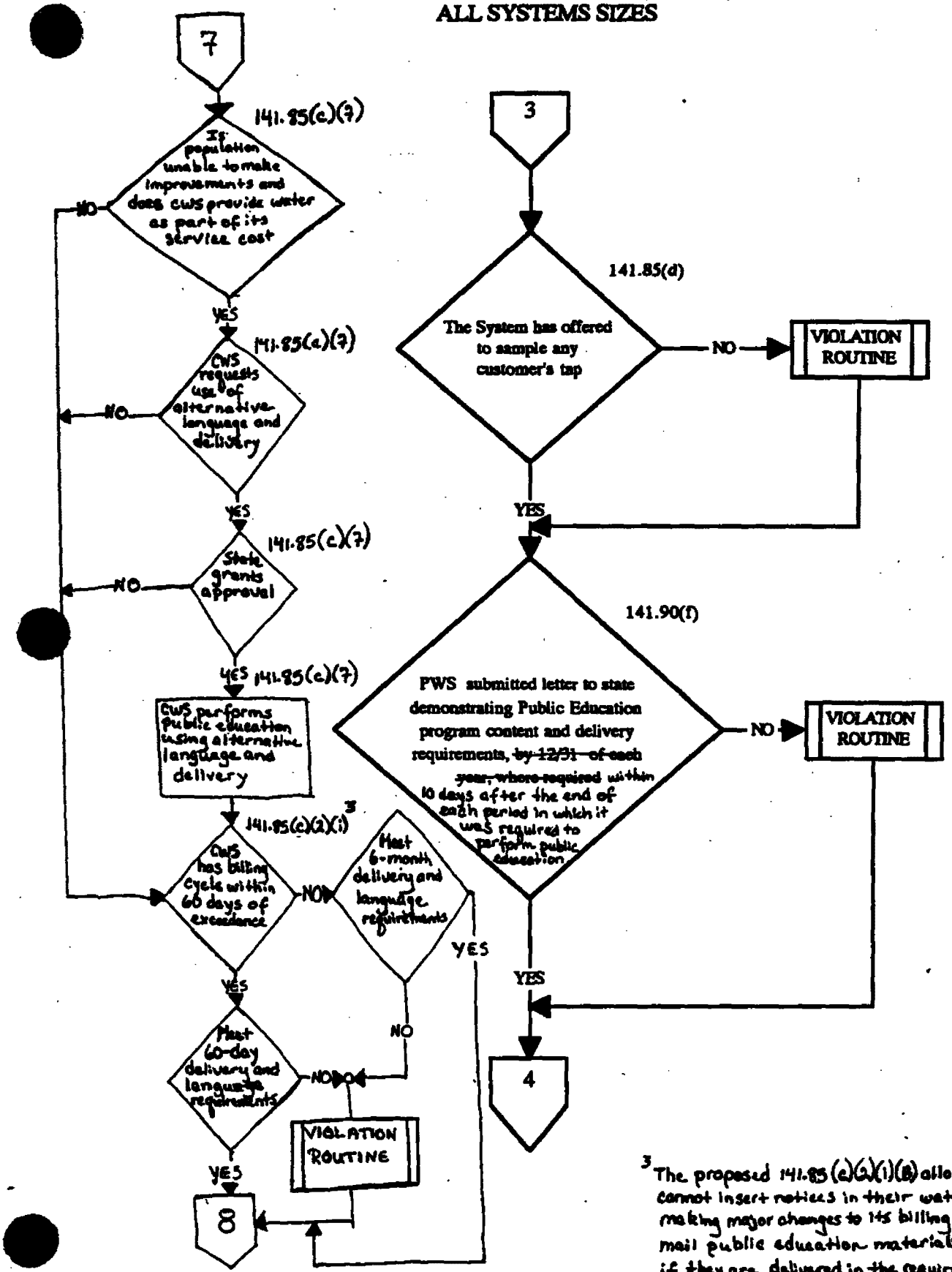
1 The proposed requirements under 141.85(c)(8) apply only to CWSs serving ≤ 500 people.

2 NTNCWSs have the option of using the public education language found at 141.86(a)(2)(i), (ii), & (iv).

LEAD AND COPPER RULE - FLOW CHART

PUBLIC EDUCATION (141.85)

ALL SYSTEMS SIZES

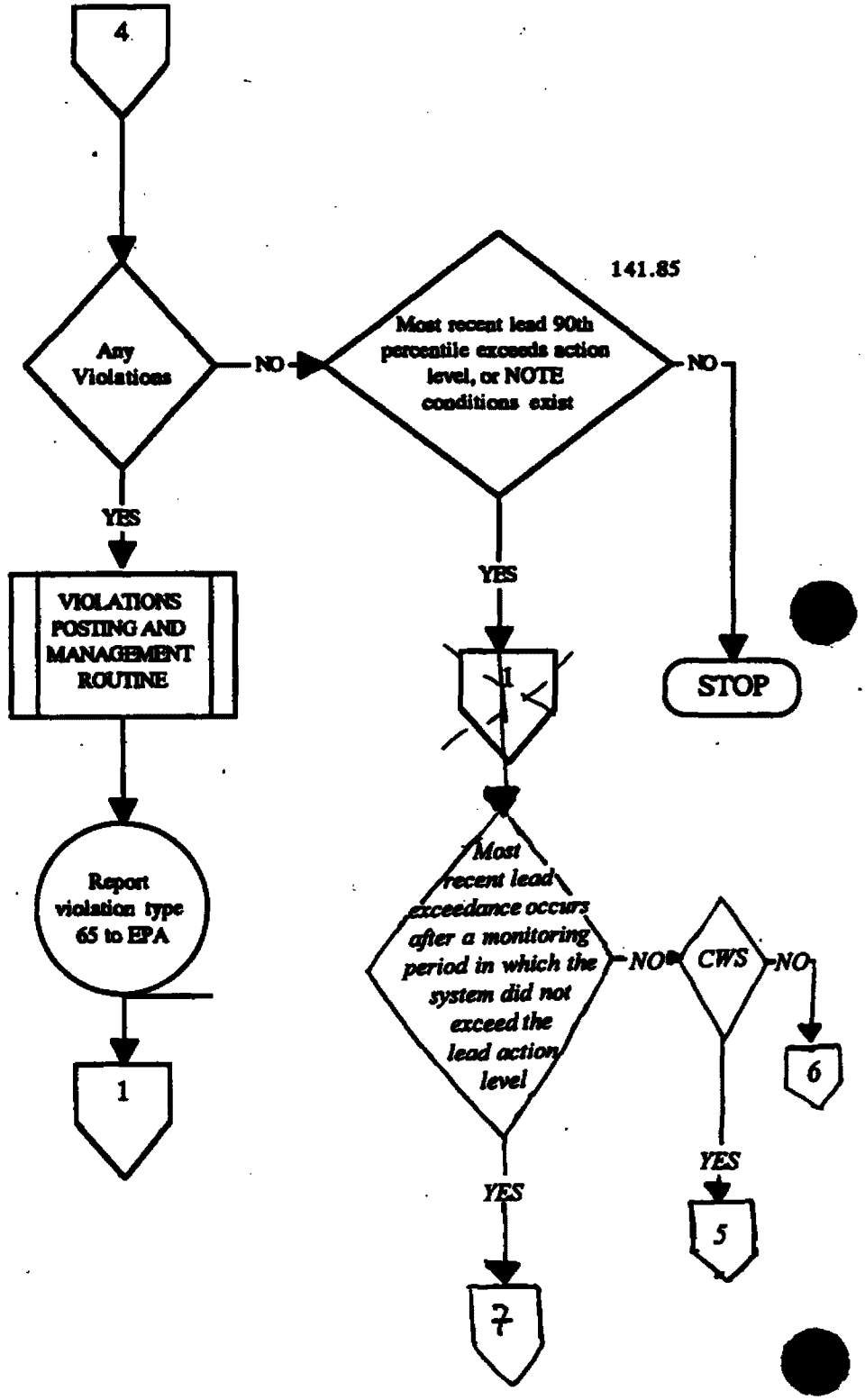


[3] The proposed 141.85(c)(2)(i)(B) allows CWSs that cannot insert notices in their water bill without making major changes to its billing system to mail public education materials separately, if they are delivered in the required timeframe, achieve equal coverage, and include an alert.

LEAD AND COPPER RULE - FLOW CHART

PUBLIC EDUCATION (141.85)

ALL SYSTEMS SIZES



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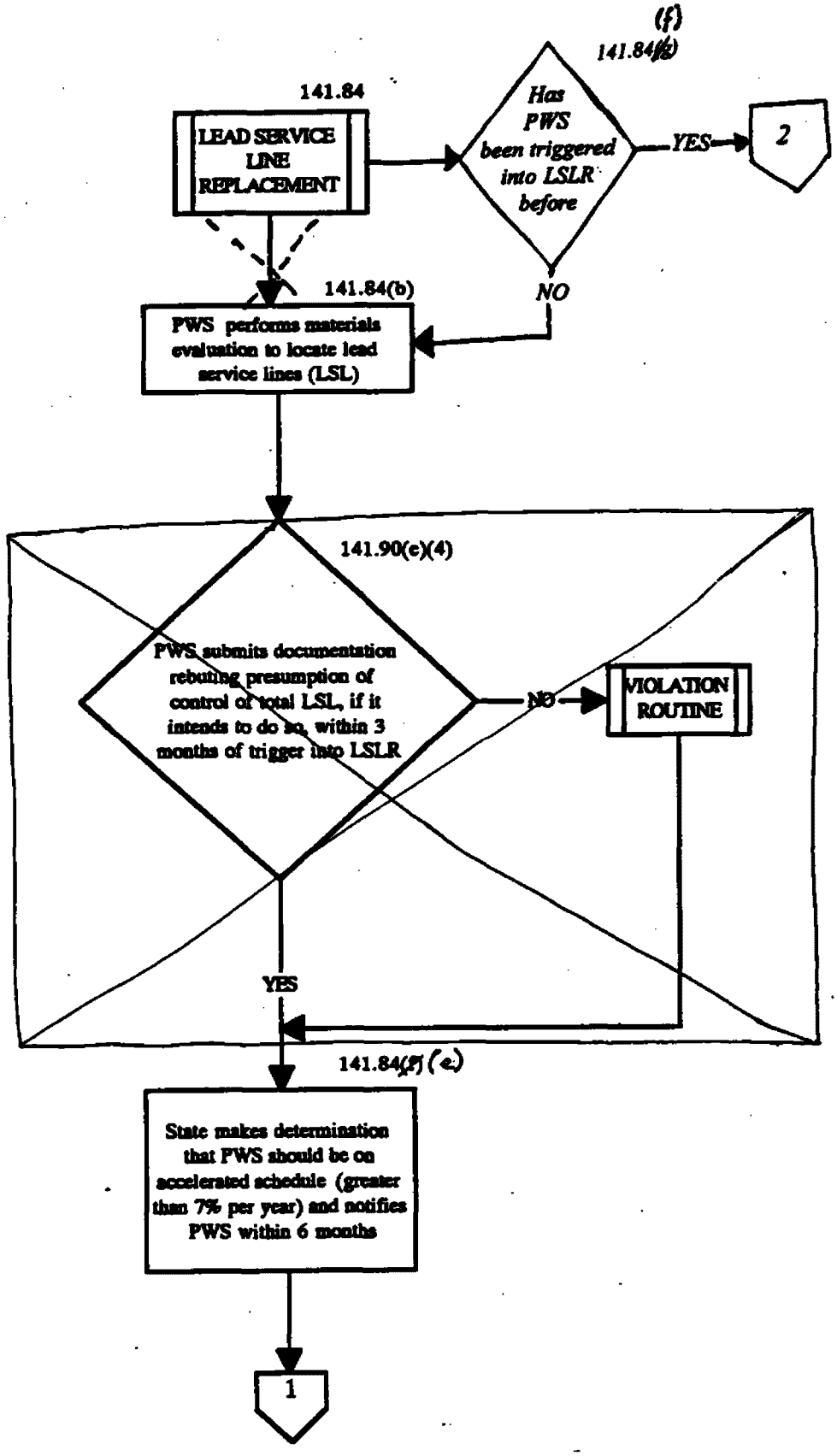
LEAD AND COPPER RULE - FLOW CHART

LEAD SERVICE LINE REPLACEMENT (141.84)

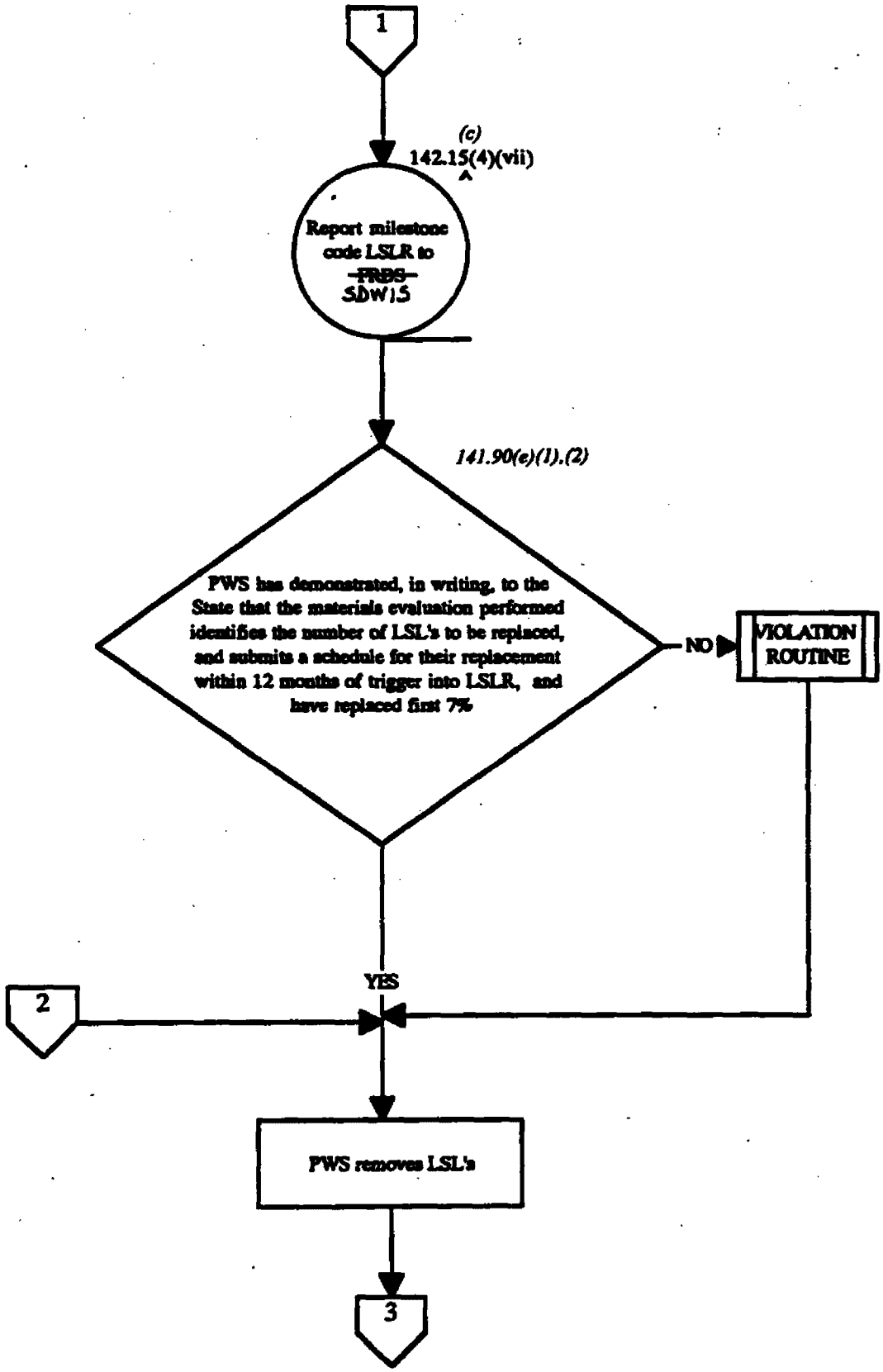
ALL SYSTEM SIZES



LEAD AND COPPER RULE - FLOW CHART

LEAD SERVICE LINE REPLACEMENT (141.84)

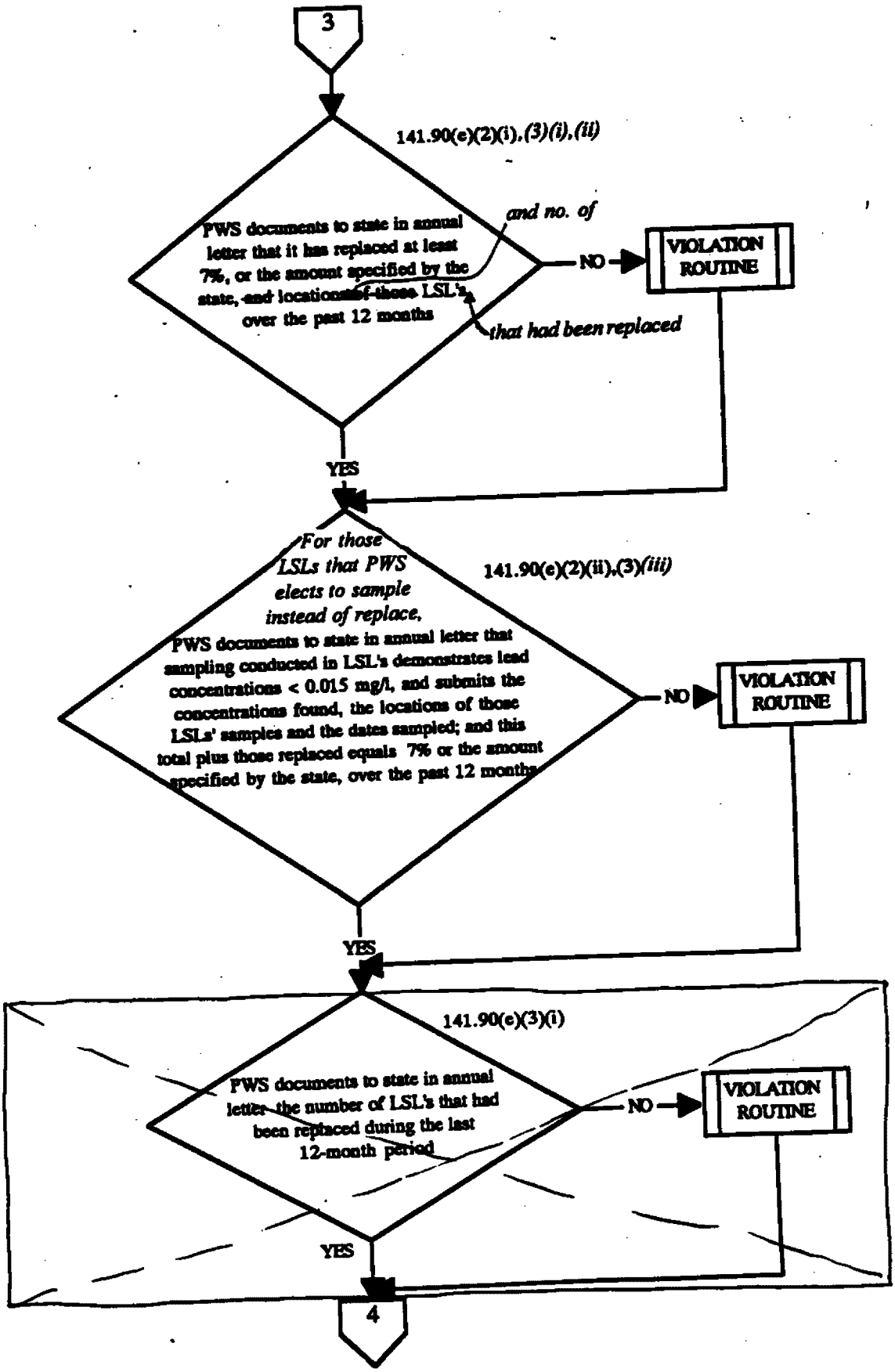
ALL SYSTEM SIZES



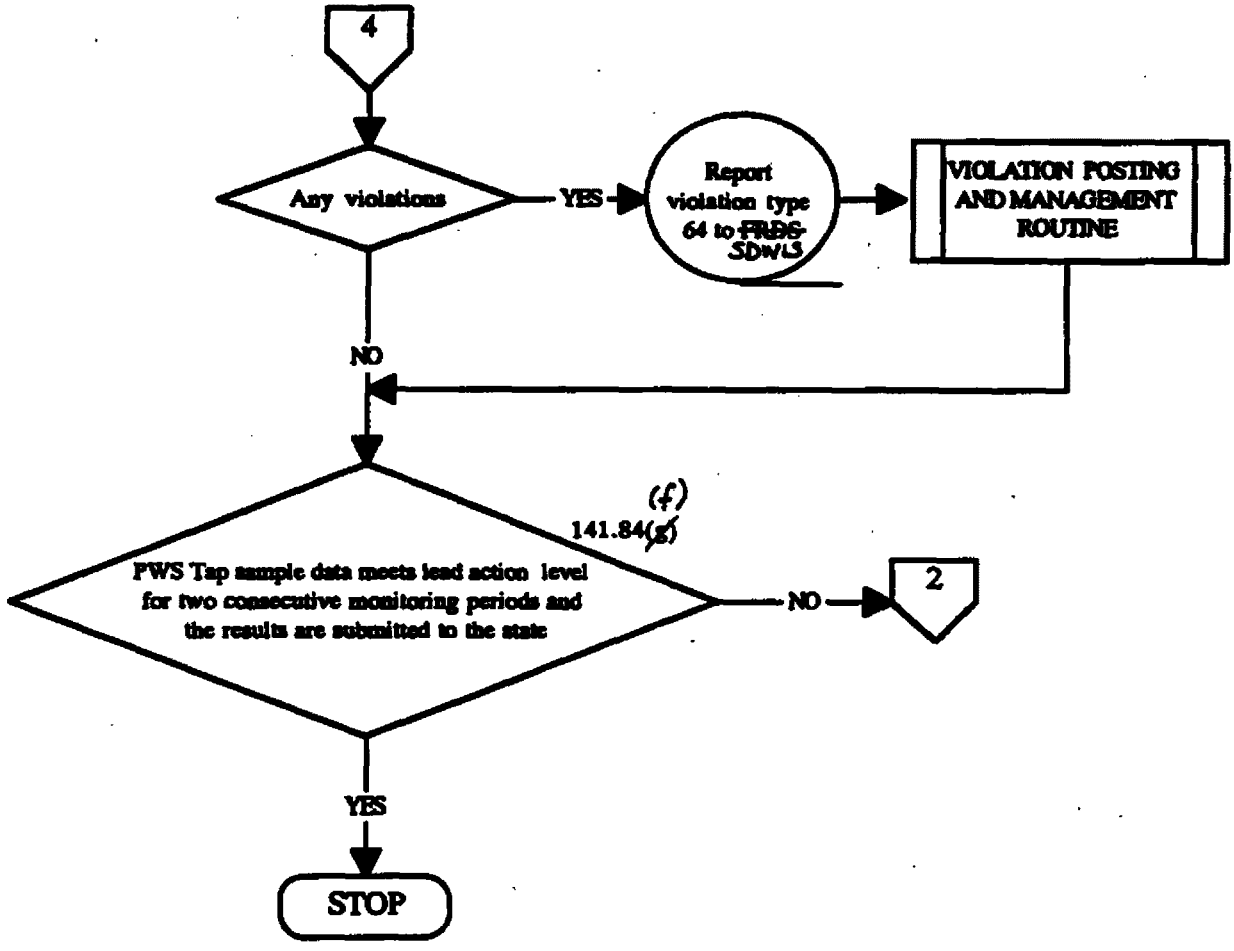
LEAD AND COPPER RULE - FLOW CHART

LEAD SERVICE LINE REPLACEMENT (141.84)

ALL SYSTEM SIZES



LEAD AND COPPER RULE - FLOW CHART

LEAD SERVICE LINE REPLACEMENT (141.84)

ALL SYSTEM SIZES