STANDARDIZED DEFICIENCY LIST

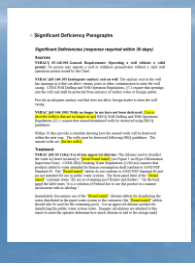
How to save time Writing Reports

DEFINITION OF SIGNIFICANT DEFICIENCY

- §142.16 Special primacy requirements (continued)…
- (o)(iv)…**Significant deficiencies** include, but are not limited to, defects in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that the State determines to be causing, or have the potential for causing, the introduction of contamination into the water delivered to consumers

WORD DOCUMENT (12 PGS)

- Significant Deficiency Paragraphs
  1. Sources
  2. Treatment
  3. Distribution
  4. Storage
  5. Pumps
  6. Monitoring
  7. Mangement
  8. State requirements
- Other Deficiencies
- Additional Recommendations



SIGNIFICANT DEFICIENCIES – 1. SOURCES

NMIAC §65-140-105 Inadequate sanitary seal on well: The sanitary seal on the well has openings in it that can allow vermin, pests or other contamination to enter the well casing. CNMI Well Drilling and Well Operation Regulations, §7.2 require that openings into the well seal shall be protected from entrance of surface water or foreign matter.

Provide an adequate sanitary seal that does not allow foreign matter to enter the well casing.

SIGNIFICANT DEFICIENCIES – 1. SOURCES

NMIAC §65-140-1901 Wells no longer in use have not been destroyed: [List or describe well(s)s that are no longer in use] BECQ Well Drilling and Well Operations Regulations §22.1 require that unused/abandoned wells be destroyed using BECQ guidelines.

Within 30 days provide a schedule showing how the unused wells will be destroyed within the next year. The wells must be destroyed following DEQ guidelines. The unused wells are: [list the wells].

SIGNIFICANT DEFICIENCIES – 2. TREATMENT

NMIAC §65-20-114(a) Use of non-approved chlorine: The chlorine used to disinfect the water in [insert location] is "[insert brand name] (see Figure 1 on Hypo-Chlorination Inspection Form). CNMI-DEQ Drinking Water Regulations §1200.4(a) requires that products added to water intended for human consumption shall conform to ANSI/NSF Standard 60. The "[brand name]" tablets do not conform to ANSI/NSF Standard 60 and are not intended for use in public water systems. The front panel label of the "[brand name]" container states "for use in swimming pool floaters and feeders." On the back panel the label states "it is a violation of Federal law to use this product in a manner inconsistent with its labeling."

Immediately discontinue use of the "[brand name]" chlorine tablets for disinfecting the water distributed in the piped water system to the customers (the "[brand name]" tablets should only be used for the swimming pool). Use an approved chlorine product for disinfecting the public water system water. [Sample calculations are attached to this report to assist the operator determine how much chlorine to add to the storage tank]

SIGNIFICANT DEFICIENCIES – 2. TREATMENT

NMIAC §65-20-114(a) Use of non-approved chemicals: The [insert name of chemical] added to the water as part of the [insert name of treatment process, i.e. reverse-osmosis] process are [insert problem with chemicals, i.e. not labeled, not labeled in English, not NSF certified]. CNMI-DEQ Drinking Water Regulations §1200.4(a) requires that products added to water intended for human consumption shall conform to ANSI/NSF Standard 60. It is no apparent that the chemical conforms to ANSI/NSF Standard 60.

Immediately discontinue use of the [insert name of chemical] and acquire and begin using a product that does conform to ANSI/NSF Standard 60; or within 30 days of receipt of this letter, provide BECQ with documentation that the product you are currently using does conform with ANSI/NSF Standard 60.

SIGNIFICANT DEFICIENCIES – 2. TREATMENT

Treatment requirements of the Surface Water Treatment Rule not being met:

Disinfection requirements of the Surface Water Treatment Rule not being met:

SIGNIFICANT DEFICIENCIES – 3. DISTRIB'N

NMIAC §65-20-102(c) Cross connection in distribution system: An uncontrolled cross connection was observed in the distribution system on [insert date]. The uncontrolled cross connection [describe uncontrolled cross connection: location; what was connected to what; why it was considered a cross connection]. CNMI-DEQ Drinking Water Regulations §1100.5(c) requires that public water systems have no uncontrolled connections that allow foreign substances to enter the water system.

Either disconnect [describe the connection] or provide an appropriate backflow prevention device to control the uncontrolled cross connection.

SIGNIFICANT DEFICIENCIES – 3. DISTRIB'N

NMIAC §65-20-222(c) *E. coli* detected in the water: *E. coli* bacteria was detected in water from the distribution system on [insert date] and confirmed by repeat samples on [insert date]. CNMI-DEQ Drinking Water Regulations §2141.63 states that any *E. coli* positive repeat sample is a violation of the Maximum Contaminant Level (MCL) for total coliforms, and is a violation that that may pose an acute risk to health.

DEQ shall be issuing a Notice-of-Violation (NOV) for exceeding the MCL for total coliform. In the NOV will be instructions for providing public notice and taking additional bacteriological monitoring samples during the next monitoring period ([insert name of next monitoring period – like August 2007]).

SIGNIFICANT DEFICIENCIES – 4. STORAGE

NMIAC §65-20-144(b)(1)(i) Unlocked hatches on water tank: The access hatch on [name of tank] is not [locked/lockable]. CNMI-DEQ Drinking Water Regulations, §1700.4(b)(1)(i) requires public water systems to minimize the potential for tampering of its facilities by locking direct openings to water storage tanks.

Provide a locking access hatch cover for this water storage tank.

SIGNIFICANT DEFICIENCIES – 4. STORAGE

NMIAC §65-20-102 Unscreened opening in tank: [Describe opening in tank] Vermin/pests and contaminants may be able to enter the tank through this opening. CNMI-DEQ Drinking Water Regulations §1100.5(c) require that public water systems have no uncontrolled connections that allow foreign substances to enter the water system. Unscreened openings in tanks are uncontrolled connections that allow foreign substances into the water system.

[explain what to do to correct the deficiency].

SIGNIFICANT DEFICIENCIES – 5. PUMPS

NMIAC §65-20-102 Pump packing gland leaking: [Describe pump and where the leak is coming from]. If water can leak out of the pump, it is also possible for contaminants to enter the pump via the same pathway. CNMI-DEQ Drinking Water Regulations §1100.5(c) require that public water systems have no uncontrolled connections that allow foreign substances to enter the water system. Leaking packing glands on pumps are uncontrolled connections that allow foreign substances into the water system.

Within five (5) days of receiving this notice, tighten the packing gland, or repair or replace the packing material or mechanical seal to prevent leaks from around the packing gland.

SIGNIFICANT DEFICIENCIES – 5. PUMPS

NMIAC §65-20-114(a) Pump lubricating oil is not intended for potable water use: [Describe what kind of oil was found to be used for lubricating the potable water pump shaft]. It is possible for the lubricating oil used on a pump shaft to come into contact with the water inside the pump and enter the distribution system. CNMI-DEQ Drinking Water Regulations §1200.4(a) requires that products added to water intended for human consumption shall conform to ANSI/NSF Standard 60. The lubricating oil used for this pump does not conform to ANSI/NSF Standard 60.

Within thirty (30) days of receiving this notice, replace the lubricating oil used for this pump with oil that is intended for use with potable water pumps and meets ANSI/NSF Standard 60.

SIGNIFICANT DEFICIENCIES – 6. MONITOR'G

NMIAC §65-20-214 No Coliform Monitoring Plan: The [choose one: owner/operator/PWS] does not have a coliform monitoring plan. CNMI-DEQ Drinking Water Regulations, §2141.21 requires that coliform samples be collected in accordance with a written sampling plan developed using the guidance provided by the Division. [use if needed: Coliform samples have been collected monthly, however, all samples were collected from the same location; or explain where samples are being collected from if any are being collected].

Use the CNMI Guidance Manual for Preparing Coliform Monitoring Plans that is enclosed with the letter to develop a Coliform Monitoring Plan. If you need assistance with developing you Coliform Monitoring Plan please contact the BECQ Safe Drinking Water Program. Submit the Coliform Monitoring Plan to BECQ within 30 days of receipt of this letter.

SIGNIFICANT DEFICIENCIES – 6. MONITOR'G

NMIAC Part 1000 §65-140-1001 Semi-annual routine water quality analysis not completed: The most recent well file records indicated that the well operation permits have not been issued due to failure to complete the required semi-annual routine water quality testing of the wells. Section13 of the CNMI Well Drilling and Well Operations Regulations states that "All owners of projects with a total well discharge capacity requirement greater than 20 gpm shall, on a semi-annual basis, perform *routine water quality* analysis on the water from each well".

Within 30 days of receipt of this letter, provide DEQ with evidence that you have collected the samples from all operating wells and sent them to a BECQ certified lab for analysis.

SIGNIFICANT DEFICIENCIES – 6. MONITOR'G

NMAIC §65-20-246(d) Compliance monitoring requirements of the Ground Water Rule not being met: The system has been monitoring chlorine residual and recording it, but has not been consistent in monitoring and recording the chlorine residual every day that water is served to the public. This daily monitoring of disinfectant residual is referred to as "compliance monitoring" under the Ground Water Rule. The surveyors found [describe what the surveyors found]. The CNMI Drinking Water Regulations § 2141.403 [40 CFR § 141.403(b)(3)(i)(B)] require that ground water system serving 3,300 people or fewer, that have declared that they provide 4-log virus treatment using a disinfectant, must "monitor the residual disinfectant concentration …and record the residual disinfectant concentration each day that water from the ground water source is served to the public."

Effective immediately upon receipt of this letter, monitor and record the disinfectant residual concentration at [describe the location] every day that water is served to the public. Within 30 days of receipt of this letter, provide BECQ a copy of your most recent monitoring results showing that you have begun monitoring (on the date of the receipt of this letter or before) and have continued monitoring every day. Continue to monitor and record disinfectant residual every day that water is served to the public.

SIGNIFICANT DEFICIENCIES – 6. MONITOR'G

NMIAC §65-20-246(d) Follow-up disinfectant residual monitoring of the Ground Water Rule not being met: The system has been monitoring chlorine residual and recording it, but has not been conducting follow-up disinfectant residual readings when the disinfectant residual falls below the level necessary to provide 4-log virus treatment. The surveyors found that when the residual disinfectant concentration fell below [include the disinfectant concentration required by DEQ, which is usually 0.2 mg/l], which is the State-determined disinfectant residual level, the operator did not take follow-up chlorine residual readings. The CNMI Drinking Water Regulations § 2141.403 [40 CFR § 141.403(b)(3)(i)(B)] requires that "if any daily grab sample measurement falls below the State-determined residual disinfectant concentration, the ground water system must take follow-up samples every four hours until the residual disinfectant concentration is restored to the State-determined level."

Effective immediately upon receipt of this letter, when the chlorine residual falls below [include required disinfectant concentration, usually 0.2 mg/l], monitor and record the chlorine residual concentration every four hours until the chlorine residual is restored to the level stated previously.

SIGNIFICANT DEFICIENCIES – 6. MONITOR'G

Monitoring requirements of the Surface Water Treatment Rule not being met: The turbidity of the water from both the Main Water Cave and the Onan Water Cave are not currently being monitored.

SIGNIFICANT DEFICIENCIES – 7. MGMT

NMIAC §65-20-136(a) No chlorine test kit in use: The operator of the public water system does not measure the chlorine residual. CNMI-DEQ Drinking Water Regulations §1600.2(a) requires all water obtained from groundwater or rainwater sources to be disinfected. NMIAC §65-20-136(b), CNMI-DEQ Drinking Water Regulations §1600.2(b) requires residual disinfectant concentrations to be measured if chlorine is used as a disinfectant. §1600.2(e) requires public water systems to measure residual disinfectant concentration with one of the analytical methods listed at 40 CFR §141.74(a)(2).

Please acquire a chlorine residual test kit that uses a method listed in 40 CFR §141.74(a)(2). DPD colorimetric test kits are approved by BECQ for use by public water systems in the CNMI. BECQ will provide information on where to purchase appropriate test kits.

SIGNIFICANT DEFICIENCIES – 7. MGMT

NMIAC §65-20-1369(e) Use of non-approved chlorine test kit: An Ace Hardware chlorine test kit is being used to monitor chlorine residual. CNMI-DEQ Drinking Water Regulations, §1600.2(e) requires public water systems to measure residual disinfectant concentration with one of the analytical methods listed at 40 CFR §141.74(a)(2). The method used by the Ace test kit is not listed at 40 CFR §141.74(a)(2).

Please acquire a chlorine residual test kit that uses a method listed in 40 CFR §141.74(a)(2). DPD colorimetric test kits are approved by BECQ for use by public water systems in the CNMI. BECQ will provide information on where to purchase appropriate test kits.

SIGNIFICANT DEFICIENCIES – 7. MGMT

NMIAC §65-20-110(a) Chlorine stored next to other chemicals: Chlorine was found stored adjacent to paints. CNMI-DEQ Drinking Water Regulations §1200.2(a) states "Suppliers of water shall ensure that accepted engineering criteria and practices are used in the design and construction of all public water systems…" Storing chlorine next to other chemicals is considered to be unsafe practice which could lead to disastrous, if not fatal, catastrophe.

Relocate other chemicals away from chlorine storage. It is not recommended to mix chlorine and other chemicals (paint, oil, gas, etc.).

SIGNIFICANT DEFICIENCIES – 8. STATE

NMIAC §65-20-120(b) Designated water operator is not certified: Mr. [insert name], the designated operator-in-charge for this water system, is not currently a certified water treatment plant operator. CNMI-DEQ Drinking Water Regulations, §1300.1(b), states "owners of all public water systems must place the direct supervision of their water system, including each treatment facility and/or distribution system, under the responsible charge of an operator holding a valid certification equal to or greater than the classification of the treatment facility and/or distribution system." The [insert name of PWS] water system has been classified as a [insert Class: Class 1 or Class 2] Treatment and [insert Class: Class 1 or Class 2] Distribution.

Within 30 days of receipt of this letter, place the direct supervision of the water system under the responsible charge of an operator holding a valid [choose: Class 1 or Class 2] treatment and Class 1 distribution certification. If your designated operator in charge meets the education and experience requirements for certification but has not yet passed the water operator examination(s), contact the BECQ Drinking Water Program immediately to schedule an exam for the operator. Water treatment and distribution certification exams are available at the BECQ office each government workday. If your designated operator in charge does not meet the education and experience requirements for certification, then obtain the services of a certified water operator to supervise the water system.

SIGNIFICANT DEFICIENCIES – 8. STATE

NMIAC §65-20-120(b) Designated water operator is not certified at the required level: Mr. [insert name], the designated operator-in-charge for this water system, is not currently certified at the required level. CNMI-DEQ Drinking Water Regulations, §1300.1(b), states "owners of all public water systems must place the direct supervision of their water system, including each treatment facility and/or distribution system, under the responsible charge of an operator holding a valid certification equal to or greater than the classification of the treatment facility and/or distribution system." The [insert name of PWS] water system has been classified as a [insert Class: Class 1 or Class 2] Treatment and [insert Class: Class 1 or Class 2] Distribution. Mr. [insert name] is currently certified at …

Within 30 days of receipt of this letter, place the direct supervision of the water system under the responsible charge of an operator holding a valid [choose: Class 1 or Class 2] treatment and Class 1 distribution certification. If your designated operator in charge meets the education and experience requirements for certification but has not yet passed the water operator examination(s), contact the BECQ Drinking Water Program immediately to schedule an exam for the operator. Water treatment and distribution certification exams are available at the BECQ office each government workday. If your designated operator in charge does not meet the education and experience requirements for certification, then obtain the services of a certified water operator to supervise the water system.

SIGNIFICANT DEFICIENCIES – 8. STATE

NMIAC §65-20-120 Water operator is not certified: Mr. [insert name], the maintenance person that adjusts the addition of chlorine to the water system, is not currently a certified water treatment plant operator. CNMI-DEQ Drinking Water Regulations, §1300.1(c), states "All operating personnel making process control/system integrity decisions about water quality or quantity that affect public health must be certified."

Within 30 days of receipt of this letter, reassign duties such that the person that adjusts the addition of chlorine to the water system is a certified water operator. If Mr. [insert name] meets the education and experience requirements for certification but has not yet passed the water operator examination(s), contact the BECQ Drinking Water Program immediately to schedule an exam for the operator. Water treatment and distribution certification exams are available at the BECQ office each government workday.

OTHER DEFICIENCIES – 1. SOURCES

NMIAC §65-140-901 Well Operation Permit expired: The most recent well operation permit expired on [insert date]. Section 12 of the Well Drilling and Well Operation Regulations states that "No person may operate a well or withdraw groundwater without a valid well operation permit…"

Within 30 days of receipt of this letter, provide BECQ with evidence that you have initiated the necessary steps, including taking semi-annual water quality monitoring samples, to renew the well operations permit.

OTHER DEFICIENCIES – 1. SOURCES

NMIAC §65-140-415(c) No check valves at wellhead: There were no check valves present on the piping at the well heads to prevent water from returning down the well through the piping. Paragraph 7.4 of the Well Drilling and Well Operation Regulations requires that all water wells shall be equipped with check valves.

Install a check valve on the well head piping within 30 days of receipt of this letter.

OTHER DEFICIENCIES – 1. SOURCES

NMIAC §65-140-415(g) No flow meter at wellhead: [description of finding at wellhead] Paragraph 7.4 of the Well Drilling and Well Operation Regulations requires that all water wells shall be equipped with flow meters. Also in the NMIAC §65-140-1015 and CNMI Well Drilling and Well Operation Regulations Paragraph 13.4 requires total well production to be recorded monthly. Well production can not be recorded if there is no flow water to measure the well production.

Install a flow meter at the well head within 30 days of receipt of this letter.

OTHER DEFICIENCIES – 1. SOURCES

NMIAC §65-140-415(g) Flow meter at wellhead is not working: [description of finding at wellhead] Paragraph 7.4 of the Well Drilling and Well Operation Regulations requires that all water wells shall be equipped with flow meters. Also in the NMIAC §65-140-1015 and the CNMI Well Drilling and Well Operation Regulations Paragraph 13.4 requires total well production to be recorded monthly. Well production can not be recorded if the flow water does not work.

Repair the flowmeter or install a new flow meter at the well head within 30 days of receipt of this letter.

OTHER DEFICIENCIES – 1. SOURCES

NMIAC §65-140-415(d) No pressure gauge at wellhead: [description of finding at wellhead] Paragraph 7.4 of the Well Drilling and Well Operation Regulations requires that all water wells shall be equipped with a pressure gauge. A working pressure gauge will help the operator trouble shoot problems with the well pumps.

Install a pressure gauge at the well head within 30 days of receipt of this letter.

NMIAC §65-140-415(d) Pressure gauges at wellheads not working: [description of finding at wellhead] Paragraph 7.4 of the Well Drilling and Well Operation Regulations requires that all water wells shall be equipped with a pressure gauge. A working pressure gauge will help the operator trouble shoot problems with the well pumps.

Repair or replace the pressure gauge at the well head within 30 days of receipt of this letter.

OTHER DEFICIENCIES – 2. TREATMENT

- NONE

OTHER DEFICIENCIES – 3. DISTRIBUTION

- NONE

OTHER DEFICIENCIES – 4. STORAGE

- NONE

OTHER DEFICIENCIES – 5. PUMPS

Pumps, pump facilities and controls

NMIAC §65-20-110 Facility does not comply with appropriate standards: [description of finding: example – power panel/control panel are corroded and live electrical wires are exposed posing a safety hazard to operations personnel.] Section 65-20-110 of the NMIAC (the Drinking Water Regulations) requires that public water systems' facilities comply with applicable design/construction standards. The power panel/control panel does not comply with the electrical codes in their current condition. Repair or replace the power panel/control panel so that it complies with the appropriate codes and standards.

OTHER DEFICIENCIES – 6. MONITORING

NMIAC §65-20-214 Schematics and Sampling Plan need updating: The latest schematic and sampling plan is dated [insert date] and does not reflect recent modifications to the water system. CNMI-DEQ Drinking Water Regulations, § 2141.21 requires that coliform samples be collected in accordance with a written sampling plan developed using the guidance provided by the Division.

Use the CNMI Guidance Manual for Preparing Coliform Monitoring Plans that is enclosed with this letter to develop a Coliform Monitoring Plan. If you need assistance with developing you Coliform Monitoring Plan please contact the BECQ Safe Drinking Water Program. Submit the Coliform Monitoring Plan to BECQ within 30 days of receipt of this letter.

OTHER DEFICIENCIES – 7. MANAGEMENT

Treatment facility is not enclosed or fenced and securely locked: [The name of facility/s is/are not fenced and securely locked or the fence is in disrepair. CNMI-DEQ Drinking Water Regulations, §1700.4(b)(1)(ii) requires public water systems to minimize the potential for tampering of its facilities by fencing and securely locking drinking water treatment facilities.

Provide/repair a fence around the facility and securely lock the gate within 90 days of receipt of this letter.

Facility (wellhead, storage tank, pump station, etc.) not fenced and securely locked: [The name of facility/s is/are not fenced and securely locked or the fence is in disrepair. CNMI-DEQ Drinking Water Regulations, §1700.4(b)(1)(iii) requires public water systems to minimize the potential for tampering of its facilities by fencing and securely locking vulnerable areas like wellheads, storage tanks, and pump stations.

Provide/repair a fence around the facility and securely lock the gate within 180 days of receipt of this letter.

OTHER DEFICIENCIES – 7. MANAGEMENT

Flooded valve vault: The valve vault [at location] is flooded, preventing access to the gate valves and automatic control valve. CNMI-DEQ Drinking Water Regulations, §1200.2(a) requires that accepted engineering criteria and practices be used in the design and construction of all PWS. Inaccessible or unserviceable valves are not considered accepted practices. Access to these valves is essential for the proper operation and maintenance of the storage tank.

Repair the valve vault drain so that water does not accumulate in the vault.

OTHER DEFICIENCIES – 7. MANAGEMENT

Overgrown valve vault: The valve vault [at location] is overgrown with small trees and high grass, preventing access to the gate valves and automatic control valve. CNMI-DEQ Drinking Water Regulations, § 1200.2(a) requires that accepted engineering criteria and practices be used in the design and construction of all PWS. Inaccessible or unserviceable valves are not considered accepted practices. Access to these valves are essential for the proper operation and maintenance of the storage tank.

Remove the vegetation from the valve vault.

OTHER DEFICIENCIES – 8. STATE

- NONE

RECOMMENDATIONS – 1. SOURCE

- NONE

RECOMMENDATIONS – 2. TREATMENT

- NONE

RECOMMENDATIONS – 3. DISTRIBUTION

- NONE

RECOMMENDATIONS – 4. STORAGE

Install pressure gauges to determine height/volume of water in the tank: Neither of the water level indicators at the Caan Water Storage Tank or the Sinapalo water storage tank are functional, so it is not possible to determine the water level in the tanks (unless the tank is overflowing or empty). Install a pressure gauge at ground level (or repair the existing level indicators) at each water storage tank so that the operator can determine the level of water in the tank.

RECOMMENDATIONS – 4. STORAGE

Tanks cleaned and inspected once every 3 years: The water storage tank has not been cleaned or inspected since it was originally constructed. AWWA recommends that water storage tanks be cleaned and inspected at least once every 3 years[1]. The cathodic protection systems for the welded steel tanks should also be inspected and maintained on a regular basis to prevent/reduce corrosion to the interior of the tank(s).

RECOMMENDATIONS – 5. PUMPS

Water pump runs continuously: installation of a small pressure tank and a pressure switch to control the water pump will save electricity by turning off the pump when no water is being used.

RECOMMENDATIONS – 6. MONITORING

- NONE

RECOMMENDATIONS – 7. MANAGEMENT

Water tanks continuously overflow: Both the Caan Water Storage Tank and the Sinapalo Water Storage Tank overflow continuously (at rates possibly as high as a hundred gallons a minute). The overflowing water is chlorinated. Both tanks have control valves that can be used to regulate the water flow into the tank. The control valves should be repaired or adjusted so that water does not continually overflow.

RECOMMENDATIONS – 7. MANAGEMENT

Scales should be used for chlorine cylinders: It is not currently possible to determine how much chlorine is remaining in the active cylinders used at each chlorination station. The use of chlorine cylinder scales at each chlorine station will allow the operator to better monitor the use of the chlorine gas.

RECOMMENDATIONS – 8. STATE

- NONE

CLOSING PARAGRAPHS

Overall, the [insert name of PWS] water system is very well maintained and managed. The [job title] keeps excellent records and understands and abides by the CNMI-DEQ Drinking Water Regulations. Keep up the good work!

HAWAII EXAMPLES

- Hawaii Published Significant Deficiences

END STANDARDIZED DEFICIENCIES