Subch. BB Requirements for Equipment Leaks Inspection Report

Section A: Inspection Information		
Inspection Date(s)	DNR Region	DNR Inspector(s)

Section B: Facility Information		
Facility Name	EPA ID Number	Facility ID (FID) Number
Street Address	City	ZIP Code

All "NR" references are to the Wisconsin Administrative Code. When entering information into the Field Investigator Site Tracking (FIST) database, only enter the **bold** citation into the Code or Statute Citation field. Use NR 664 citations for licensed facilities. For large quantity generators, use NR 662.034(1)(a) which requires LQGs to comply with subch. BB standards in ch. NR 665 (interim licensed facility standards).

Use this inspection form for equipment that contains or contacts hazardous waste with organic concentrations of ≥ 10% that operates for more than 300 hours per year or is not in vacuum service. This inspection report includes the following subch. BB requirements:

Section C: Standards for Pumps in Light Liquid Service
Section D: Standards for Compressors
Section E: Standards for Pressure Relief Devices in Gas or Vapor Service
Section F: Standards for Sampling Connection Systems
Section G: Standards for Open-Ended Valves or Lines
Section H: Standards for Valves in Gas or Vapor Service or in Light Liquid Service
Section I: Standards for Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service and Flanges and Other Connectors
Section J: Alternative Standards for Valves in Gas or Vapor Service or in Light Liquid Service: Percentage of Valves Allowed to Leak
Section K: Alternative Standards for Valves in Gas or Vapor Service or in Light Liquid Service, Skip Period Leak Detection and Repair
Section L: Test Methods and Procedures
Section M: Recordkeeping and Reporting Requirements

Section C: Standards for Pumps in Light Liquid Service		
	1. Are pumps in light liquid service used at the facility? If NO, go to Section D.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1050(4)** NR 665.1050(3)	2. Has the facility marked each pump subject to subch. BB standards in a way that distinguishes them readily from other pieces of equipment?	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1052(6)** NR 665.1052(6)	3. Are all pumps equipped with a closed-vent system capable of capturing and transporting leakage from seals to a control device? If YES, go to section D and complete the inspection form, "Standards for Closed Vent Systems and Control Devices for subch. AA and BB".	☐ Yes ☐ No

NR 662.034(1)(a) **NR 664.1052(4)** NR 665.1052(4)	4. Does each pump equipped with a dual mechanical seal system that includes a barrier fluid system comply with all of the following requirements? If YES, go to Section D. ☐ Each dual mechanical seal system is one of the following: ___ Operated with the barrier fluid at a pressure that is always greater than the pump stuffing box pressure. ___ Equipped with a barrier fluid degassing reservoir connected by a closed-vent system to a control device. ___ Equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to the atmosphere. ☐ The barrier fluid system is not a hazardous waste with organic concentrations of 10% or greater by weight. ☐ Each barrier fluid system is equipped with a sensor to detect failure of the seal system, the barrier fluid system or both. ☐ Each pump is checked by visual inspection each calendar week for liquids dripping from the pump seal. ☐ Each sensor for detecting failure is checked daily or equipped with an audible alarm that is checked monthly to ensure it is functioning properly. ☐ A criterion to indicate failure of the seal system, the barrier fluid system, or both has been determined based on design considerations and operating experience. ☐ When a leak is detected (liquid dripping from the pump seal or a sensor indicates failure of the seal system or barrier fluid system), the first attempt at repair is made within 5 days of it being detected and the leak is repaired as soon as practicable, but no later than within 15 days of detecting the leak except when the repair is technically infeasible without equipment shutdown.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1052(5)** NR 665.1052(5)	5. Does a pump designated in the operating log as operating with no detectable emissions (instrument reading <500 ppm above background) meet all of the following? If YES, go to Section D. ☐ The pump has no externally actuated shaft penetrating the pump housing. ☐ The pump is tested initially upon designation and annually thereafter to assure it operates with no detectable emissions (<500 ppm above background). ☐ Equipment measuring nondetectable emissions meets all of the following: ___ Monitoring complies with Method 21 in appendix A, 40 CFR part 60. ___ The detection instrument meets the performance criteria of Method 21. ___ The detection instrument is calibrated before each day of use. ___ Calibration gases consist of zero air (<10 ppm hydrocarbon in air) and a mixture of <10,000 ppm methane or n-hexane in air. ___ The background level is determined according to Method 21 in appendix A of 40 CFR part 60. ___ The instrument probe is traversed around all potential leak interfaces as closely as possible. ___ The arithmetic difference between the max. conc. indicated by the instrument and the background level is compared with 500 ppm.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1052(1)(a)** NR 665.1052(1)(a) NR 664.1063(2) NR 665.1063(2)	6. Is each pump monitored monthly according to all of the following? ☐ Monitoring complies with Method 21 in appendix A of 40 CFR part 60. ☐ The detection instrument meets the performance criteria of Method 21. ☐ The detection instrument is calibrated before each day of use. ☐ Calibration gases consist of zero air (<10 ppm hydrocarbon in air) and a mixture of <10,000 ppm methane or n-hexane in air. ☐ The instrument probe is traversed around all potential leak interfaces as closely as possible.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1052(1)(b)** NR 665.1052(1)(b)	7. Is each pump checked each calendar week by visual inspection for indications of liquids dripping from the pump seal?	☐ Yes ☐ No ☐ N/A

NR 662.034(1)(a) **NR 664.1064(3)** NR 665.1064(3)	8. When a leak is detected (an instrument reading of ≥10,000 ppm or liquids dripping from the pump seal), are all of the following actions taken? ☐ A weatherproof and readily visible identification marked with the following information is attached to the leaking pump: ___ Equipment ID number. ___ Date evidence of a potential leak was found. ___ Date the leak was detected. ☐ The identification on the pump is removed after repair.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1052(3)** NR 665.1052(3)	9. If a leak is detected, is the following repair schedule met? ☐ First attempt at repair (tightening the packing gland) is made within 5 calendar days of detecting the leak. ☐ Repair is made as soon as practicable, but no later than 15 calendar days after detecting the leak, except when the repair is technically infeasible without equipment shutdown.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1059(1)** NR 665.1059(1)	10. If repair is technically infeasible without equipment shutdown, is the pump repaired before the end of the next hazardous waste management unit shutdown?	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1059(2)** NR 665.1059(2)	11. Has repair been delayed because of both of the following? ☐ The pump is isolated from the hazardous waste management unit. ☐ The pump does not continue to contain or contact hazardous waste with organic concentrations of ≥10% by weight.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1059(4)** NR 665.1059(4)	12. Has repair of the pump been delayed because of any of the following? ☐ The repair requires use of a dual mechanical seal system that includes a barrier fluid system. ☐ The repair is completed as soon as practicable, but within 6 months of detecting the leak.	☐ Yes ☐ No ☐ N/A
Section D: Standards for Compressors		
	1. Is a compressor used at the facility? If NO, go to Section E.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1050(4)** NR 665.1050(3)	2. Has the facility marked each compressor subject to subch. BB standards in a way that distinguishes it readily from other pieces of equipment?	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1053(9)** NR 665.1053(9)	3. Does the compressor comply with all of the following? If YES, go to Section E. ☐ The compressor is designated in the operating log for no detectable emissions. ☐ The compressor operates with no detectable emissions (instrument reading of <500 ppm above background). ☐ Equipment measuring nondetectable emissions meets all of the following: ___ Monitoring complies with Method 21 in appendix A, 40 CFR part 60. ___ The detection instrument meets the performance criteria of Method 21. ___ The detection instrument is calibrated before each day of use. ___ Calibration gases consist of zero air (<10 ppm hydrocarbon in air) and a mixture of <10,000 ppm methane or n-hexane in air. ___ The background level is determined according to Method 21 in appendix A of 40 CFR part 60. ___ The instrument probe is traversed around all potential leak interfaces as closely as possible. ___ The arithmetic difference between the max. conc. indicated by the instrument and the background level is compared with 500 ppm. ☐ Testing of emissions is done initially upon designation, annually thereafter and at other times specified by the department.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1053(8)** NR 665.1053(8)	4. Are all compressors equipped with a closed-vent system that captures and transports leakage from the compressor seal to a control device? If YES, go to Question 11 and complete the inspection form, "Standards for Closed Vent Systems and Control Devices for subch. AA and BB".	☐ Yes ☐ No

NR 662.034(1)(a) **NR 664.1053(1)** NR 665.1053(1)	5. Is the compressor equipped with a seal system, including a barrier fluid system, which prevents leakage of total organic emissions to the atmosphere?	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1053(2)** NR 665.1053(2)	6. Is the compressor seal system one of the following? ☐ Operated with the barrier fluid at a pressure that is always greater than the compressor stuffing box pressure. ☐ Equipped with a barrier fluid system that is connected by a closed vent system to a control device. Note: Complete the inspection form, "Standards for Closed Vent Systems and Control Devices for subch. AA and BB". ☐ Equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to the atmosphere.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1053(3)** NR 665.1053(3)	7. If the barrier fluid is a hazardous waste, are organic concentrations <10%?	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1053(4)** NR 665.1053(4)	8. Is each barrier fluid system equipped with a sensor that detects failure of the seal system, barrier fluid system or both?	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1053(5)(a)** NR 665.1053(5)(a)	9. Is each sensor for the barrier fluid system checked according to one of the following? ☐ Checked daily OR equipped with an audible alarm which is checked monthly to ensure it is functioning properly. ☐ Checked daily if the compressor is located within the boundary of an unmanned plant site.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1053(5)(b)** NR 665.1053(5)(b)	10. Has criterion to indicate failure of the seal system, barrier fluid system or both been determined with consideration of design and operating experience?	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1064(3)** NR 665.1064(3)	11. When a leak is detected in a compressor, are all of the following actions taken? ☐ A weatherproof and readily visible identification marked with the following information is attached to the leaking compressor: ___ Equipment ID number. ___ Date evidence of a potential leak was found. ___ Date the leak was detected. ☐ The identification on the compressor may be removed after repair.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1053(7)** NR 665.1053(7)	12. When a leak is detected, is the following repair schedule met? ☐ First attempt at repair (e.g., tightening the packing gland) is made within 5 calendar days of detecting the leak. ☐ Repair is made as soon as practicable, but no later than 15 calendar days after detecting the leak, except when the repair is technically infeasible without equipment shutdown.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1059(1)** NR 665.1059(1)	13. If the repair is technically infeasible without equipment shutdown, is the equipment repaired before the end of the next hazardous waste management unit shutdown?	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1059(2)** NR 665.1059(2)	14. Has repair been delayed because of both of the following? ☐ The compressor is isolated from the hazardous waste management unit. ☐ The compressor does not continue to contain or contact hazardous waste with organic concentrations of ≥10% by weight.	☐ Yes ☐ No ☐ N/A
Section E: Standards for Pressure Relief Devices in Gas or Vapor Service		
	1. Are pressure relief devices used at the facility? If NO, go to Section F.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1050(4)** NR 665.1050(3)	2. Has the facility marked each pressure relief device subject to subch. BB standards in a way that distinguishes it readily from other pieces of equipment?	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1054(3)** NR 665.1054(3)	3. Are all pressure relief devices equipped with a closed-vent system capable of capturing and transporting leakage to a control device? If YES, go to Section F and complete the inspection form, "Standards for Closed Vent Systems and Control Devices for subch. AA and BB".	☐ Yes ☐ No

NR 662.034(1)(a) **NR 664.1054(1)** NR 665.1054(1)	4. Is each pressure relief device operated with no detectable emissions (instrument readings <500 ppm above background) except during pressure releases?	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1054(1)** NR 665.1054(1) NR 664.1063(3) NR 665.1063(3)	5. Does the equipment measuring nondetectable emissions meet all of the following? ☐ Monitoring complies with Method 21 in appendix A of 40 CFR part 60. ☐ The detection instrument meets the performance criteria of Method 21. ☐ The detection instrument is calibrated before each day of use. ☐ Calibration gases consist of zero air (<10 ppm hydrocarbon in air) and a mixture of <10,000 ppm methane or n-hexane in air. ☐ The background level is determined according to Method 21 in appendix A of 40 CFR part 60. ☐ The instrument probe is traversed around all potential leak interfaces as closely as possible. ☐ The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1054(2)(a)** NR 665.1054(2)(a)	6. After each pressure release, is the pressure relief device returned to a condition of no detectable emissions (instrument reading <500 ppm above background) as soon as practicable, but no later than 5 calendar days after each pressure release, except when the repair is technically infeasible without equipment shutdown?	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1059(1)** NR 665.1059(1)	7. If the repair is technically infeasible without equipment shutdown, is the pressure release device repaired before the end of the next hazardous waste management unit shutdown?	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1059(2)** NR 665.1059(2)	8. Has repair been delayed because of both of the following? ☐ The pressure relief device is isolated from the hazardous waste management unit. ☐ The pressure relief device does not continue to contain or contact hazardous waste with organic concentrations of ≥10% by weight.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1054(2)(b)** NR 665.1054(2)(b)	9. Within 5 calendar days of each pressure release, is the pressure relief device monitored using Method 21 in appendix A of 40 CFR part 60 to confirm the device has been returned to a condition of no detectable emissions (instrument readings <500 ppm above background)?	☐ Yes ☐ No ☐ N/A
Section F: Standards for Sampling Connection Systems		
	1. Does the facility use a sampling connection system? If NO, go to Section G.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1050(4)** NR 665.1050(3)	2. Has the facility marked each sampling connection system subject to subch. BB standards in a way that distinguishes it readily from other pieces of equipment?	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1054(2)(b)** NR 665.1055(3)	3. Is an in-situ sampling system or sampling system without purging used? If YES, go to Section G.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1055(1)** NR 665.1055(1)	4. Is each sampling connection system equipped with one of the following? ☐ A closed-purge system. ☐ A closed-loop system. ☐ A closed-vent system.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1055(1)** NR 665.1055(1)	5. Does the closed purge, closed-loop or closed-vent system collect the sample purge and direct it to one of the following? ☐ Returns the sample purge to the process. ☐ Routes the sample purge to a treatment system.	☐ Yes ☐ No

NR 662.034(1)(a) **NR 664.1055(2)** NR 665.1055(2)	6. Does the closed-purge, closed-loop or closed-vent system meet one of the following requirements? ☐ The purged process fluid is returned directly to the process line. ☐ The purged process fluid is collected and recycled. ☐ All of the purged process fluid is captured and transported to a control device or a waste management unit in compliance with subch. CC requirements. Note: If transported to a control device, complete the inspection form, "Standards for Closed Vent Systems and Control Devices for subch. AA and BB".	☐ Yes ☐ No
Section G: Standards for Open-Ended Valves or Lines		
	1. Are open-ended valves or lines in service at the facility? If NO, go to Section H.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1050(4)** NR 665.1050(3)	2. Has the facility marked each open-ended valve or line subject to subch. BB standards in a way that distinguishes it readily from other pieces of equipment?	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1056(1)(a)** NR 665.1056(1)(a)	3. Is each open-ended valve or line equipped with any of the following? ☐ A cap. ☐ A blind flange. ☐ A plug. ☐ A second valve.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1056(1)(b)** NR 665.1056(1)(b)	4. Does the cap, blind flange, plug or second valve seal the open end at all times, except when operations require hazardous waste to flow through the open-ended valve or line?	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1056(2)** NR 665.1056(2)	5. If the open-ended valve or line is equipped with a second valve, is the valve on the hazardous waste stream end closed before the second valve is closed?	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1056(3)** NR 665.1056(3)	6. If a double block and bleed system is used, does the bleed valve or line only remain open when the line between the block valves is vented?	☐ Yes ☐ No ☐ N/A
Section H: Standards for Valves in Gas or Vapor Service or in Light Liquid Service		
	1. Are valves in gas or vapor service or in light liquid service at the facility? If NO, go to Section I.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1050(4)** NR 665.1050(3)	2. Has the facility marked each valve subject to subch. BB standards in a way that distinguishes it readily from other pieces of equipment?	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1057(6)** NR 665.1057(6)	3. Does each valve designated in the operating log for no detectable emissions (instrument reading <500 ppm above background) comply with all of the following? If YES and no other valves are subject to subch. BB, go to Question 13. ☐ The equipment measuring nondetectable emissions meets all of the following: ___ Monitoring complies with Method 21 in appendix A, 40 CFR part 60. ___ The detection instrument meets performance criteria of Method 21. ___ The detection instrument is calibrated before each day of use. ___ Calibration gases consist of zero air (<10 ppm hydrocarbon in air) and a mixture of <10,000 ppm methane or n-hexane in air. ___ The background level is determined according to Method 21 in appendix A of 40 CFR part 60. ___ An instrument probe is traversed around all potential leak interfaces as closely as possible. ___ The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm. ☐ The valve has no external actuating mechanism in contact with the hazardous waste stream. ☐ Testing of emissions is done initially upon designation, annually thereafter and at other times specified by the department.	☐ Yes ☐ No ☐ N/A

NR 662.034(1)(a) **NR 664.1057(7)** NR 665.1057(7)	4. Does each valve designated as unsafe-to-monitor meet both of the following? If YES and no other valves are subject to subch. BB, go to Question 13. ☐ A determination was made that monitoring personnel would be exposed to an immediate danger as a consequence of monitoring by Method 21. ☐ A written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times is followed.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1057(8)** NR 665.1057(8)	5. Does each valve designated as difficult-to-monitor meet any of the following? If YES, go to Question 13. ☐ The valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface. ☐ The valve is part of a hazardous waste management unit in operation before June 1, 1995. ☐ A written plan that requires monitoring of the valve at least once per calendar year is followed.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1057(1)** NR 665.1057(1) NR 664.1063(2) NR 665.1063(2)	6. Is each valve monitored monthly to detect leaks according to all of the following? ☐ Monitoring complies with Method 21 in appendix A of 40 CFR part 60. ☐ The detection instrument meets the performance criteria of Method 21. ☐ The detection instrument is calibrated before each day of use. ☐ Calibration gases consist of zero air (<10 ppm hydrocarbon in air) and a mixture of <10,000 ppm methane or n-hexane in air. ☐ The instrument probe is traversed around all potential leak interfaces as closely as possible. **Note:** The monthly monitoring requirement does not apply to valves subject to alternative standards.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1057(3)(a)** NR 665.1057(3)(a)	7. If a leak (instrument reading ≥10,000 ppm) has not been detected for 2 successive months, is the valve monitored during the first month of the next quarter until a leak is detected? **Note:** Does not apply to valves subject to alternative standards.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1057(3)(b)** NR 665.1057(3)(b)	8. If a leak is detected, is the valve monitored monthly until a leak is not detected for 2 successive months? **Note:** Does not apply to valves subject to the alternative standards.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1057(4)** NR 665.1057(4)	9. If a leak is detected, are repairs made according to all of the following? ☐ First attempt at repair is made in 5 calendar days of detecting the leak. ☐ Repair is made as soon as practicable, but no later than 15 calendar days after detecting the leak, except when the repair is technically infeasible without equipment shutdown.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1057(5)** NR 665.1057(5)	10. If a leak is detected, does the first attempt at repair include best practices such as, but not limited to the following? ☐ Tightening of bonnet bolts. ☐ Replacement of bonnet bolts. ☐ Tightening of packing gland nuts. ☐ Injection of lubricant into lubricated packing.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1059(1)** NR 665.1059(1)	11. If the repair is technically infeasible without equipment shutdown, is the valve repaired before the end of the next hazardous waste management unit shutdown?	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1059(2)** NR 665.1059(2)	12. Has repair been delayed because of both of the following? ☐ The valve is isolated from the hazardous waste management unit. ☐ The valve does not continue to contain or contact hazardous waste with organic concentrations of ≥10% by weight.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1059(3)** NR 665.1059(3)	13. Has valve repair been delayed because of all of the following? ☐ The emissions of purged material resulting from immediate repair are greater than the emissions likely to result from delay of repair. ☐ When repaired, the purged material is collected and destroyed or recovered in a control device. Note: Complete the inspection form, "Standards for Closed Vent Systems and Control Devices for subch. AA and BB".	☐ Yes ☐ No ☐ N/A

NR 662.034(1)(a) **NR 664.1059(5)** NR 665.1059(5)	14. Has repair of the valves been delayed beyond a hazardous waste management unit shutdown for both of the following? ☐ Valve assembly supplies were sufficiently stocked, but depleted at the time of the shutdown. ☐ Repair is not delayed beyond the next hazardous waste management unit shutdown unless it occurred within 6 months of the first shutdown.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1064(3)** NR 665.1064(3)	15. When a leak in a valve is detected by an instrument reading of ≥10,000 ppm, are all of the following actions taken? ☐ A weatherproof and readily visible identification marked with the following information is attached to the leaking valve: ___ Equipment ID number. ___ Date evidence of a potential leak was found. ___ Date the leak was detected. ☐ The identification on the valve may be removed after it has been monitored for two successive months and found to be leak-free.	☐ Yes ☐ No ☐ N/A
Section I: Standards for Pumps and Valves in Heavy Liquid Service; Pressure Relief Devices in Light Liquid or Heavy Liquid Service; Flanges; and, Other Connectors		
	1. Are pumps or valves in heavy liquid service; pressure relief devices in light liquid or heavy liquid service; flanges; or, other connectors used at the facility? If NO, go to Section J.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1050(4)** NR 665.1050(3)	2. Has the facility marked each piece of equipment subject to subch. BB standards in a way that distinguishes it readily from other pieces of equipment?	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1058** NR 665.1058	3. Except if the connector is inaccessible or is ceramic or ceramic-lined, is monitoring conducted according to all of the following within 5 days if evidence of a potential leak is found by visual, audible, olfactory or some other detection method? ☐ Monitoring complies with Method 21 in appendix A of 40 CFR part 60. ☐ The detection instrument meets the performance criteria of Method 21. ☐ The detection instrument is calibrated before each day of use. ☐ Calibration gases consist of zero air (<10 ppm hydrocarbon in air) and a mixture of <10,000 ppm methane or n-hexane in air. ☐ The instrument probe is traversed around all potential leak interfaces as closely as possible.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1064(3)** NR 665.1064(3)	4. When a leak is detected in a pump or valve by an instrument reading of ≥10,000 ppm, are all of the following actions taken? ☐ A weatherproof and readily visible identification marked with the following information is attached to the leaking equipment: ___ Equipment ID number. ___ Date evidence of a potential leak was found. ___ Date the leak was detected. ☐ The identification on the pump may be removed after repair. ☐ The identification on a valve can be removed after it has been monitored for two successive months and found to be leak-free.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1058(3)** NR 665.1058(3)	5. If a leak is detected, are repairs made according to all of the following? ☐ First attempt at repair is made in 5 calendar days of detecting the leak. ☐ Repair is made as soon as practicable, but no later than 15 calendar days after detecting the leak, except when the repair is technically infeasible without equipment shutdown.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1058(4)** NR 665.1058(4)	6. If a leak is detected, does the first attempt at repair include best practices such as, but not limited to the following? ☐ Tightening of bonnet bolts. ☐ Replacement of bonnet bolts. ☐ Tightening of packing gland nuts. ☐ Injection of lubricant into lubricated packing.	☐ Yes ☐ No ☐ N/A

NR 662.034(1)(a) **NR 664.1059(1)** NR 665.1059(1)	7. If the repair is technically infeasible without equipment shutdown, is the valve or pump repaired before the end of the next hazardous waste management unit shutdown?	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1059(2)** NR 665.1059(2)	8. Has repair been delayed because of both of the following? ☐ The valve or pump is isolated from the hazardous waste management unit. ☐ The valve or pump does not continue to contain or contact hazardous waste with organic concentrations of ≥10% by weight.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1059(3)** NR 665.1059(3)	9. Has the valve repair been delayed because of all of the following? ☐ The emissions of purged material resulting from immediate repair are greater than the emissions likely to result from delay of repair. ☐ When repaired, the purged material is collected and destroyed or recovered in a control device. Note: Complete the inspection form, "Standards for Closed Vent Systems and Control Devices for subch. AA and BB".	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1059(4)** NR 665.1059(4)	10. Has repair of the pump been delayed because of both of the following? ☐ Repair requires use of a dual mechanical seal system that includes a barrier fluid system. ☐ Repair is completed as soon as practicable, but within 6 months of detecting the leak.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1059(5)** NR 665.1059(5)	11. Has repair of the valves been delayed beyond a hazardous waste management unit shutdown because of both of the following? ☐ Valve assembly supplies were sufficiently stocked, but depleted at the time of the shutdown. ☐ Repair is not delayed beyond the next hazardous waste management unit shutdown unless it occurred within 6 months of the first shutdown.	☐ Yes ☐ No ☐ N/A
Section J: Alternative Standards for Valves in Gas or Vapor Service or in Light Liquid Service: Percentage of Valves Allowed to Leak		
NR 662.034(1)(a) **NR 664.1061(1)** NR 665.1061(1)	1. Has the owner or operator elected to comply with the alternative standard of allowing 2% or less of the valves to leak? If NO, go to Section K.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1061(2)(a)** NR 665.1061(2)(a)	2. Has the owner or operator notified the department that they have elected to comply with the alternative standard?	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1061(3)(a)** NR 665.1061(3)(a) NR 664.1063(2) NR 665.1063(2)	3. Except for valves that have no detectable emissions or valves that are designated as unsafe-to-monitor or difficult-to-monitor, was a performance test conducted by monitoring each valve in gas, vapor or light liquid service according to all of the following? ☐ Monitoring complies with Method 21 in appendix A of 40 CFR part 60. ☐ The detection instrument meets the performance criteria of Method 21. ☐ The detection instrument is calibrated before each day of use. ☐ Calibration gases consist of zero air (<10 ppm hydrocarbon in air) and a mixture of <10,000 ppm methane or n-hexane in air. ☐ The instrument probe is traversed around all potential leak interfaces as closely as possible.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1061(3)(c)** NR 665.1061(3)(c)	4. Was the leak percentage determined by dividing the number of valves for which leaks are detected (instrument reading of ≥10,000 ppm) by the total number of valves within the hazardous waste management unit during the performance test? **Note:** Only valves with detectable emissions or valves that are not designated as unsafe-to-monitor or difficult-to-monitor should be included in the calculations.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1061(2)(b)** NR 665.1061(2)(b)	5. Is the performance test conducted initially upon designation, annually and at other times requested by the department?	☐ Yes ☐ No

NR 662.034(1)(a) **NR 664.1061(2)(c)** NR 665.1061(2)(c) NR 664.1057 NR 665.1057	6. If a leak is detected, are repairs made according to all of the following? ☐ First attempt at repair is made within 5 calendar days of detecting the leak. ☐ First attempt at repair includes best practices such as, but not limited to: ___ Tightening of bonnet bolts. ___ Replacement of bonnet bolts. ___ Tightening of packing gland nuts. ___ Injection of lubricant into lubricated packing. ☐ Repair is made as soon as practicable, but no later than 15 calendar days after detecting the leak, except when the repair is technically infeasible without equipment shutdown.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1061(4)** NR 665.1061(4)	7. If the owner or operator no longer complies with the alternative standards, have they notified the department in writing that they will comply with the subch. BB standards for valves?	☐ Yes ☐ No ☐ N/A
Section K: Alternative Standards for Valves in Gas or Vapor Service or in Light Liquid Service, Skip Period Leak Detection and Repair		
NR 662.034(1)(a) **NR 664.1062(1)(a)** NR 665.1062(1)(a)	1. Has the owner or operator elected to comply with alternative leak detection and repair standards for all valves in a hazardous waste management unit? If NO, go to Section L.	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1062(1)(b)** NR 665.1062(1)(b)	2. Has the owner or operator notified the department that they have elected to comply with the alternative standards?	☐ Yes ☐ No
NR 662.034(1)(a) **NR 664.1062(2)** NR 665.1062(2)	3. Does the facility monitor for leaks according to either of the following schedules? ☐ Valves are monitored for leaks once every 6 months after 2 consecutive quarterly leak detection periods have 2% or less of the valves leaking. ☐ Valves are monitored for leaks once every year after 5 consecutive quarterly leak detection periods have 2% or less of the valves leaking. **Note:** Only applies to valves with detectable emissions or valves that are not designated as unsafe-to-monitor or difficult-to-monitor.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1062(2)(d)** NR 665.1062(2)(d)	4. If the percentage of leaking valves is 2% or greater, does the facility return to more frequent monitoring as described below? ☐ Monthly monitoring has been resumed. ☐ When a leak is not detected for 2 successive months, the valve is monitored quarterly. ☐ The facility has resumed monitoring every 6 months or every year according to the alternative standards. **Note:** Applies to valves with detectable emissions or valves that are not designated as unsafe-to-monitor or difficult-to-monitor in the calculations.	☐ Yes ☐ No ☐ N/A
Section L: Test Methods and Procedures		
NR 662.034(1)(a) **NR 664.1063(4)** NR 665.1063(4)	1. Has a treatment, storage or disposal facility with a final operating license made a determination in their waste analysis plan whether each piece of equipment contains or contacts a hazardous waste with an organic concentration of ≥ 10% by weight using any of the following? ☐ ASTM method D2267-88, E169-87, E168-88 or E260-85. ☐ SW-846 method 9060 or 8260. ☐ Applying knowledge of the nature of the hazardous waste stream or the process by which it was produced.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1063(5)** NR 665.1063(5)	2. If the owner or operator initially made a determination that a piece of equipment contained or contacted hazardous waste with organic concentrations of ≥ 10%, is that determination revised only after analysis by the ASTM or SW-846 methods stated in Question 1 above?	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1063(7)** NR 665.1063(7)	3. Are the samples used to determine the percent organic content representative of the highest total organic content hazardous waste expected to be contained or in contact with the equipment?	☐ Yes ☐ No

NR 662.034(1)(a) **NR 664.1063(8)** NR 665.1063(8)	4. To determine if pumps or valves are in light liquid service, are the vapor pressures of constituents obtained by either of the following? ☐ Standard reference texts. ☐ ASTM method D2879-86.	☐ Yes	☐ No	
Section M: Recordkeeping and Reporting Requirements				
NR 662.034(1)(a) **NR 664.1064(1)(b)** NR 665.1064(1)(b)	1. If more than one hazardous waste management unit is subject to subch. BB, are records for the different units kept in one record keeping system in a way that each hazardous waste management unit record is identified? **Note:** Connectors that are inaccessible or ceramic are exempt from all recordkeeping and reporting requirements, per NR 664.1058(5).	☐ Yes	☐ No	☐ N/A
NR 662.034(1)(a) **NR 664.1064(2)(a)** NR 665.1064(2)(a)	2. Is all of the following information recorded into the facility operating record for each piece of equipment subject to subch. BB? ☐ Equipment ID number and hazardous waste management unit ID. ☐ Approximate locations within the facility, such as on a facility plot plan. ☐ Type of equipment (e.g. pump or valve). ☐ Percent-by-weight total organics in the hazardous waste stream at the equipment. ☐ State of the hazardous waste at the equipment (e.g. gas, vapor, liquid). ☐ Method of compliance with the standard (e.g., monthly leak detection and repair).	☐ Yes	☐ No	
NR 662.034(1)(a) **NR 664.1064(4)** NR 665.1064(4)	3. When a leak is detected in a pump, compressor or valve, is all of the following information recorded in an inspection log? ☐ Instrument and operator ID numbers and the equipment ID number. ☐ Date evidence of a potential leak was found. ☐ Date the leak was detected ☐ Dates of each attempt to repair the leak. ☐ Repair methods used in each repair attempt. ☐ "Above 10,000" if that is the maximum instrument reading measured after the repair attempt. ☐ "Repair delayed" and the reason for the delay if the leak is not repaired within 15 calendar days from discovery of the leak. ☐ Documentation supporting the delay of repair of a valve. ☐ The signature of the owner or operator who decides the repair could not be effected without a hazardous waste management unit shutdown. ☐ The expected date of successful repair if the leak is not repaired within 15 calendar days. ☐ The date of successful repair of the leak.	☐ Yes	☐ No	☐ N/A
NR 662.034(1)(a) **NR 664.1064(12)** NR 665.1064(12)	4. Is the information regarding leaks in pumps, compressors or valves kept for at least 3 years?	☐ Yes	☐ No	
NR 662.034(1)(a) **NR 664.1064(7)** NR 665.1064(7)	5. Is all of the following information for all equipment subject to subch. BB kept in the operating log? ☐ List of ID #'s for all equipment, except welded fittings, subject to subch. BB. ☐ A list of ID #'s for pumps in light liquid service, compressors, or valves in gas or vapor service or in light liquid service designated for no detectable emissions (instrument reading of <500 ppm above background). ☐ Designation of the equipment as having no detectable emissions is signed by the owner or operator. ☐ List of equipment ID #'s for pressure relief devices operated with no detectable emissions. ☐ Dates of each compliance test for no detectable emissions. ☐ Background level measured during each compliance test. ☐ Maximum instrument reading measured at the equipment during each compliance test.	☐ Yes	☐ No	☐ N/A

NR 662.034(1)(a) **NR 664.1064(8)** NR 665.1064(8)	6. Is all of the following information for valves designated as unsafe-to-monitor or difficult-to-monitor recorded in the operating log? ☐ For valves that are designated as unsafe-to- monitor: ___ List of ID #'s. ___ Explanation for each valve stating why the valve is unsafe to monitor. ___ Plan for monitoring each valve. ☐ For valves that are designated as difficult-to-monitor: ___ List of ID #'s. ___ Explanation for each valve stating why the valve is difficult to monitor. ___ Planned schedule for monitoring each valve.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1064(9)** NR 665.1064(9)	7. Is all of the following information for valves complying with the alternative standards for skip period leak detection and repair recorded in the operating record? ☐ Monitoring schedule. ☐ Percent of valves found leaking during each monitoring period.	☐ Yes ☐ No ☐ N/A
NR 662.034(1)(a) **NR 664.1064(10)** NR 665.1064(10)	8. Is all of the following information recorded in the operating record for pumps and compressors? ☐ The criteria that indicates failure of the seal system, the barrier fluid system or both. ☐ An explanation of the design criteria. ☐ Any changes to these criteria and the reasons for the changes.	☐ Yes ☐ No ☐ N/A
NR 664.1065(1)	9. If the facility has a final operating license and does not repair leaks from valves, pumps and compressors as required; or, operates the control device in exceedance of the design specifications for more than 24 hours, has a semiannual report been submitted to the department by the specified date that includes all of the following information? ☐ The EPA ID #, name and address of the facility. ☐ For each month during the semiannual reporting period, the equipment ID number for each valve, pump and compressor for which a leak was not repaired. ☐ Dates of hazardous waste management unit shutdowns. ☐ For each month that the control device operated outside design specifications and was not corrected within 24 hours, the duration, cause of each exceedance and any corrective measures taken.	☐ Yes ☐ No ☐ N/A
DNR Inspector Signature:		Date: