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Texas Commission on Environmental Quality

CHECKLIST WORKSHEET

AFO ONLY

Reg Ent Name : _____

Date : _____

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Investigator Name _____

Item No	Description	Answer	Citations	Notes
1	If a new AFO which confines a number of animals that fall within the range of the medium CAFO, did the operator notify the executive director of their legal entity name, physical location including a map or hand drawn sketch, mailing address, and number of head in confinement?			
2	If a new AFO which confines a number of animals that fall within the range of the medium CAFO, was the notification signed by the operator and submitted not later than 180 days after commencement of operation?			
3	Did the AFO expand operations, either in size or numbers of animals, before amending or enlarging the waste handling procedures and structures to accommodate all additional wastes that were generated by the expanded operations?			
4	Did the AFO operator minimize entry of non-process wastewater into the RCS(s) by the construction of berms, embankments, or similar structures?			
5	If the AFO has constructed a new or modified an existing RCS, did the operator ensure that all construction and design was certified by a licensed TX P.E., and that any site-specific variations and their appropriateness were documented by the P.E.?			
6	For existing facilities, have the structures been maintained without any modification and show no signs of leakage and/or were the structures built in accordance with site-specific NRCS plans and conditions are still the same as those used to develop the plan?			
7	Were the embankments and liners designed and constructed in accordance with the requirements of §321.38 of this title?			
8	Has the AFO maintained copies of documentation of the sources of information, assumptions, and calculations used in determining the appropriate volume capacity of the retention facilities?			
9	Was the RCS equipped with either irrigation, evaporation, or liquid removal systems capable of dewatering the RCS?			
10	Was the sludge removed from the RCS(s) in accordance with the design schedule for clean-out to prevent the accumulation of sludge from exceeding the designed sludge volume of the structure?			
11	Did the operator restore capacity within the RCS after each rainfall event or accumulation of manure, sludge, or process-generated wastewater that reduced such capacity, when the soil moisture level decreased so that irrigation would not cause runoff?			
12	If the water level in the RCS encroached into the designed rainfall storage, did the operator document the conditions that caused this, and as soon as not prohibited, did the operator irrigate until the water level was at or below the designed rainfall level?			

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13	Was adequate equipment available and maintained in good working order to remove such waste and wastewater as required to maintain the retention capacity of the facility?			
14	Was a permanent pond marker, with the markings visible from the top of the levee, maintained in the RCS to show the volume for the designed rainfall event and the predetermined minimum treatment volume within any treatment lagoon?			
15	If the RCS was in danger of imminent overflow from chronic or catastrophic rainfall or catastrophic conditions, did the operator take reasonable steps to irrigate wastewater to LMUs only to the extent necessary to prevent overflow from the RCS?			
16	Did the AFO operator properly close the AFO and RCS within one year of inactivity or ceasing of operations at the facility, and did the AFO maintain compliance with the requirements of this subchapter until the facility had been properly closed?			
17	For non-sole-source AFOs using irrigation systems, does the volume meet or exceed the capacity required to contain the runoff and direct precipitation from a 25-year, 24-hour rainfall event including the requirements in 321.38(e)(7)(B)?			
18	Was the liner protected from animals by protective devices and no trees allowed to grow so that the root zone would compromise the liner, and was any mechanical or structural damage to the liner evaluated by a licensed TX P.E. within 30 days of the damage?			
19	Did the records include site-specific documentation that no significant hydrologic connection exists between the wastewater in the RCS and water in the state?			
20	Did the operator have a NRCS engineer, licensed TX P.E., or licensed TX professional geoscientist review the documentation of liner maintenance and do a site evaluation every five years?			
21	If groundwater samples are required, did the operator sample for nitrate, chloride, and total dissolved solids, submit the data to the ED and keep results for five years (first year's retained for the life of the AFO) and notify the ED if a 10% deviation was found?			
22	Were all control facilities, including holding pens and RCS, located outside of the 100-year flood plain unless protected from inundation and damage that may occur during the flood event?			
23	If the operation is using a playa as a RCS, did the production area of a new or expanding AFO comply with the requirements of §321.41 of this title?			
24	Did the records include the groundwater monitoring plan associated with the use of a playa, if applicable?			
25	Did the AFO operator adhere to the well buffer requirements in §321.38 of this title?			
26	If the AFO is introducing wastewater or chemicals to water wellheads for the purpose of irrigation, were back-flow prevention devices installed in accordance with requirements contained in 16 TAC Chapter 76?			
27	Was a rain gauge capable of measuring the required rainfall event installed on site and properly maintained?			

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AFO ONLY (Cont)

28	If there was runoff to water in the state as the result of the application of manure, litter, or wastewater from an AFO, was the land application activity implemented in accordance with a detailed plan for nutrient management?			
29	Did the operator apply manure, litter, and wastewater uniformly to suitable land at appropriate times and at agronomic rates in response to crop needs, assuming usual nutrient losses, expected precipitation, and soil conditions?			
30	Has a NMP been developed, implemented, and followed for land application?			
31	Were application rates of manure and wastewater based on the available nutrient content and applied so as to not exceed the crop requirement of the crop or planned crop planting with any land application of wastewater and/or manure?			
32	Did any land application occur when the ground was frozen or saturated or during rainfall events, unless in danger of imminent overflow?			
33	Were irrigation practices managed so as to minimize ponding or puddling of wastewater on the site, prevent discharge of tailwater to waters in the state, prevent pollution of waters in the state, and prevent the occurrence of nuisance conditions?			
34	Was all manure, litter, or wastewater applied to the areas in the 100-year flood plain done at agronomic rates not to exceed the hydrologic needs of the crop?			
35	Were vegetative buffer strips with no less than 100 feet of vegetation maintained in accordance with NRCS guidelines between waste or wastewater application areas and surface water and watercourses?			
36	If a dairy in a major sole-source impairment zone, did the operator provide for management and disposal of waste in accordance with §321.42(i) of this title?			
37	If results of the soil analysis for phosphorus are greater than 200 ppm phosphorus in Zone 1, did the operator apply waste or wastewater to the LMU only in accordance with a detailed NUP?			
38	If results of the phosphorus analysis are greater than 350 ppm in Zone 1, annual rainfall is 25 inches or less, erosion is at the soil loss tolerance, and the closest LMU edge is 1 mile from a named stream, did the operator apply only in accordance with a detailed NUP?			
39	If ordered by the commission to do so in order to protect the quality of waters in the state, did the operator land apply any waste or wastewater to the LMU only in accordance with a detailed NUP?			
40	If the AFO did not have a detailed NUP, did the AFO apply any waste or wastewater to the previously described LMU only in accordance with a NMP which was based on crop removal and certified in accordance with NRCS Practice Standard Code 590?			
41	If the AFO has a NUP, was it developed by the NRCS, a certified nutrient management specialist, an agronomist or soil scientist on staff at a Texas university, or a certified agronomist or certified soil scientist, after approval by the executive director?			

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AFO ONLY (Cont)

42	If the AFO has developed a NUP and it has been implemented, did the operator conduct all land application in accordance with the NUP until soil phosphorus was reduced below 200 ppm and thereafter apply at agronomic rates according to the requirements of this section?			
43	Did the operator annually analyze at least one representative sample of irrigation wastewater, if applicable, and one representative sample of manure/litter for total nitrogen, total phosphorus, and total potassium?			
44	Did the operator collect and analyze representative soil samples from each of the LMUs prior to commencing wastewater irrigation or manure, litter application on land owned, operated, controlled, rented, or leased by the AFO operator?			
45	Did the AFO use sampling procedures that employed accepted techniques of soil science for obtaining representative samples and analytical results using approved procedures?			
46	Were samples collected within the same 45-day time frame each year?			
47	Did the AFO collect one composite sample for each soil depth zone per LMU and per uniform soil type (soils with the same characteristics and texture) within the LMU?			
48	Were the composite samples comprised of 10 to 15 randomly sampled cores obtained from each of the appropriate soil depth zones?			
49	Was a sample taken from zero to six inches for LMUs where waste is incorporated or zero to two inches for LMUs where the waste is not incorporated, and if a zero to two-inch sample is required, was a sample from the two to six-inch soil depth zone taken?			
50	Was a sample taken from six to 24 inches?			
51	Were soil samples submitted to a soil testing laboratory along with a previous crop history of the site, intended crop use, and yield goal, and did the soil test reports include nutrient recommendations for the crop yield goal?			
52	Did the parameters and analytical procedures for analysis of the soil samples include N (ppm); P (ppm) - Mehlich III, using Inductively Coupled Plasma; K (ppm); Na (ppm); Mg (ppm); Ca (ppm); soluble salts/electrical conductivity (dS/m); and pH?			
53	Did the records include a copy of the results of initial and annual soils, manure, litter, and wastewater analyses?			
54	If the AFO applies manure, litter, or wastewater applied on property owned, operated, controlled, rented, or leased by the operator, do the records include the date of manure, litter, or wastewater application to each field?			
55	If the AFO applies manure, litter, or wastewater on property owned, operated, controlled, rented, or leased by the operator, do the records include the location of the specific application site and the number of acres utilized during each application event?			
56	If the AFO applies manure, litter, or wastewater applied on property owned, operated, controlled, rented, or leased by the operator, do the records include the acreage of each individual crop on which manure, litter, or wastewater is applied?			

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AFO ONLY (Cont)

57	If the AFO applies waste or wastewater, do the records include the basis for and the total amount of N and P applied per acre per LMU, including other sources of nutrients and the number of dry tons and the percentage of nitrogen/phosphorus based on a dry basis?			
58	If the AFO applies manure, litter, or wastewater applied on property owned, operated, controlled, rented, or leased by the operator, do the records include the percentage of moisture content of the manure?			
59	If the AFO applies manure, litter, or wastewater applied on property owned, operated, controlled, rented, or leased by the operator, do the records include the actual annual yield of each harvested crop?			
60	If the AFO removes manure or wastewater from the facility, did the records include the date, the name of hauler; and the amount, in wet tons, dry tons, or cubic yards, of waste removed, and was the nutrient sample analysis of the manure available to the hauler?			
61	Were equivalent measures from the NRCS, TSSWCB regulations, a certified water quality management plan, or a certified CNMP, contained in a site-specific plan substituted for applicable best management practices or portions of the technical requirements?			
62	If no NMP has been implemented, did the AFO have a site map showing the location of any LMUs, either on site or off site which are owned, operated, controlled, rented, or leased by the operator which were utilized for land application of waste or wastewater?			
63	If no NMP has been implemented, did the AFO have the location, description, and limitations of the major soil types within the identified LMUs, and a plan to address the soil limitations?			
64	If no NMP has been implemented, did the AFO have a description of the crop types and rotations to be implemented on an annual basis?			
65	If no NMP has been developed and implemented, did the AFO have a list of the predicted yield goals based on the major soil types within the identified LMUs?			
66	If no NMP has been developed and implemented, did the AFO have a description of the procedures that were used for calculating nutrient budgets to be used to determine application rates?			
67	If no NMP has been developed and implemented, did the AFO have a detailed description of the type of equipment and method of application to be used in applying the waste or wastewater?			
68	If no NMP has been developed and implemented, did the AFO have a description of the projected rates and timing of application of the manure and wastewater as well as other sources of nutrients that will be applied to the LMUs?			
69	Did the operator develop and maintain the calculations and assumptions used for determining land application rates and all nutrient analysis data?			
70	Did the operator develop and maintain the calculations and assumptions used for determining land application rates and all nutrient analysis data?			
71	Were the records required under this subsection kept on site for a minimum of five years from the date the record was created?			

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AFO ONLY (Cont)

72	If the AFO uses a RCS, did the records include a schedule for liquid waste removal?			
73	If the AFO uses a RCS, did the records include a date log indicating weekly inspection of the wastewater level in the RCS?			
74	If the AFO uses a RCS, did the records include a log of all measurable rainfall events?			
75	If the AFO uses a RCS, did the records include records of the dates of inspection of the RCS, and a log of the findings of such inspections as required under subsection (l)(2) of this section?			
76	Did the operator conduct visual inspections and equipment testing at the control facility, LMUs, and the material handling areas for evidence of, and potential for, pollutants entering the drainage system and conditions that could cause failures?			
77	Was inspection of the control facility and LMUs conducted to verify the potential pollutant sources are accurate and adequate controls to reduce pollutants and nuisance conditions are implemented, and a report made annually and kept for five years?			
78	If the AFO does not use a control facility to manage manure, litter, or wastewater generated on site, did the operator ensure that waste and wastewater were stored, beneficially used, or disposed of in a manner that would protect surface and groundwater quality?		321.47(b)(3)(A)	
79	If the AFO is not defined or designated as a CAFO and does not use a control facility to manage manure, litter, or wastewater generated on site, did the operator prevent nuisance conditions and minimize odor conditions?			
80	Did the AFO operator locate, construct, and manage the control facility and LMU(s) in a manner that protected surface and groundwater quality?			
81	Did the AFO operator prevent nuisance conditions and minimize odor conditions?			
82	Were earthen pen areas maintained to ensure good drainage by scraping uncompacted manure and shaping pen surfaces as necessary to minimize odors and ponding and to minimize the entrance of uncontaminated storm water to the RCS?			
83	Did the AFO operator maintain ponds, pipes, ditches, pumps, and diversion and irrigation equipment to ensure ability to fully comply with the terms of this subchapter?			
84	Did the AFO operator using a liquid manure handling system scrape or flush accumulated manure at least once per week or in accordance with proper design and maintenance of the facility?			
85	If the AFO has composting on site, did it contain only manure, litter, bedding, feed, dead animals, and agricultural products, and was it either roofed or otherwise protected, bermed in case of the design rainfall event, or within the drainage of the RCS?			
86	If the AFO maintains animals in pastures, did the operator maintain crops, vegetation, forage growth, or post harvest residues in the normal growing season, excluding the feed and water trough areas and designated open lots?			
87	Was all litter/manure removed from operation and not temporarily stored located within the drainage of the RCS, in a well-drained area with no ponding of water, and where the top and sides of stockpiles are adequately sloped to ensure proper drainage?			

CHECKLIST WORKSHEET

AFO ONLY (Cont)

88	Was all temporary storage of manure done in LMUs for less than 30 days, with storage in the 100-year flood plain, near water courses or recharge features protected sufficiently to prevent inundation during a 100 -year storm and all runoff retained on site?			
89	Were the animals confined at the AFO restricted from coming into direct contact with surface water in the state through the use of fences or other controls?			
90	If a discharge has occurred from the production area, was it the result of chronic or catastrophic rainfall event, or catastrophic condition which exceeded the design capacity of a RCS that has been properly designed, constructed, operated, and maintained?			
91	Did the records include a list of any significant spills of pollutants with the potential to reach water in the state?			
92	If a LMU receiving application has an occupied residence within 1/4 mile of the outer boundary, was all application done between 1 hour after sunrise and 1 hour before sunset, or the AFO has a written agreement to nighttime application from the current occupants?			
93	Did the records include any written agreement with a landowner which documents the allowance of nighttime application of manure, litter, or wastewater?			