



Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	07/09-10/2024	
Media Program:	Water	
Regulatory Program(s)	NPDES CAFO	
Company Name:	W.H.B. Cattle, LP	
Facility Name:	Braum's Dairy	
Facility Physical Location:	491 County Street 2880 (35.32113, -97.86462)	
(city, state, zip code)	Tuttle, OK 73089	
Mailing address:	P.O. Box 725	
(city, state, zip code)	Tuttle, OK 73089	
County/Parish:	Grady	
Facility Phone Number		
Facility Contact:	Brian Warren brian.warren@braums.com	Operations Manager
FRS Number:	110000709993	
Identification/Permit Number:	OKG010029	
Media Identifier Number:		
NAICS:	112120	
SIC:	0241	
Personnel participating in inspection:		
Brian Warren	Braum's	Operations Manager
Drew Braum, Jr.	Braum's	Owner/Family
Jay Lowe	Braum's	Project Manager
Keith Smith	ODAFF	Inspector Supervisor
Dakota Turpin	ODAFF	Inspector
Ada Pfeiffer	ODAFF	Inspector Supervisor
Marissa Lippincott	ODAFF	Environmental Programs Manager
Juan Ibarra	EPA	Inspector
Lucas Bomar	EPA	Inspector
Juan Ibarra	EPA	Inspector
EPA Lead Inspector Signature/Date	 Juan Ibarra	9/6/2024
		Date
Supervisor Signature/Date	ANTHONY LOSTON Digitally signed by ANTHONY LOSTON Date: 2024.09.06 08:42:18 -05'00' Anthony Loston	
		Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspectors Juan Ibarra, Lucas Bomar and Paul Juarez arrived at Braum's Dairy at 0837 on 07/09/2024, for an unannounced inspection. We were accompanied by the Oklahoma Department of Agriculture, Food, and Forestry (ODAFF) inspector supervisors Keith Smith and Ada Pfeiffer, and inspector Dakota Turpin. On the second day of the inspection, ODAFF Environmental Programs Manager Marissa Lippincott also joined the inspection. We met with Braum's Dairy Operations Manager Brian Warren at the Opening Conference. During the Opening Conference, the owner, Mr. Drew Braum, stopped by to introduce himself to the group of inspectors, but he did not participate in the inspection. I presented my credentials to Mr. Warren and informed him that this was an EPA inspection to evaluate the facility's compliance with their CAFO License (No. 1396-000) and the Concentrated Animal Feeding Operations (CAFO) requirements as found in the Clean Water Act (CWA). The scope of the inspection was a full compliance evaluation and included an evaluation of the facility's compliance with their nutrient management plan (NMP).

The sequence for the inspection, following the opening conference, was a site tour of the dairy production area and land application sites. The EPA and ODAFF inspection personnel separated into two teams which were comprised of both EPA and ODAFF staff. I lead one team which documented site conditions and took discharge samples, while the other team scouted ahead with the ODAFF aerial drones looking for potential areas of concern. Mr. Warren accompanied my team and requested split samples. ODAFF used drones to evaluate site conditions because the production area and the center pivot land application sites surrounding the production area comprise approximately 6,400 acres (total acreage at this location is approximately 16,500 acres), and the drones provided rapid visualization of vast areas which would otherwise be hidden by the corn crops.

On day two of the inspection, I took my team (now consisting of Keith Smith and me) into the production area and land application sites to follow-up on the ODAFF drone scouting from the previous day of the inspection. Dakota Turpin and Ada Pfeiffer continued to scout with their aerial drone, while Paul Juarez, Lucas Bomar and Marissa Lippincott worked with Mr. Warren to review the nutrient management plan (NMP) paperwork. Later that morning, we regrouped with the team conducting a paperwork review at the Historic Safety Pond (along with Mr. Warren) where I gave Mr. Warren his split samples from the three locations sampled that morning. Dakota Turpin and Ada Pfeiffer joined the rest of the group just after noon when we visited the Dry Creek confluence with the Canadian River. After the site inspection, we left the site and delivered that day's samples to the contract laboratory to meet holding times.

Biosecurity protocols were reviewed with the ODAFF State Veterinarian (Dr. Alicia Gorczyca-Southerland) prior to the inspection and were strictly followed. These procedures included spraying the wheels of the GSA vehicle with Virkon S and Synergy disinfectant upon arrival at the dairy on each day of the inspection, along with the wheels of the trailer and Kawasaki four wheeled vehicle which was used

to help navigate the site on day-one. We wore disposable overboots, clean clothes, and left the GSA vehicle at the office parking lot during the day while the inspection was being conducted.

FACILITY DESCRIPTION

License and General Operation:

The annual ODAFF CAFO License (No. 1396-000) was reissued to Braum's Dairy on 5/15/2024 and it expires on 6/30/2025. The dairy is permitted for a maximum of 13,000 milking cows, but currently has about 10,200 milking cows that are milked twice per day, 700 dry cows and 388 heifers. Most on-site heifers and dry cows are kept on about 3,000 acres of pasture, away from the production area while 6-month-old heifers are sent out-of-state to Kansas. Young calves are kept in calf hutches on-property. To minimize the impact that calf hutches create they are either move one location northeast or one location to the southwest.

Braum's uses the dairy lagoon for two different operational purposes. The single lagoon receives both dairy production wastewater from the CAFO operation, and industrial process wastewater from the bakery and dairy processing plant that is co-located with the dairy. The average amount of industrial process wastewater going to the CAFO lagoon in all of April 2024 was 11.77% (approximately 8,382,418 gallons) of the total combined discharge to the lagoon (approximate total April 2024 discharge to the lagoon was 71,219,410 gallons). And for the first 9 days of July 2024, approximately 11 to 21.6% of the daily total amount of the wastewater going to the CAFO lagoon is comprised of industrial process wastewater. EPA, ODAFF, and the Oklahoma Department of Environmental Quality are having discussions regarding the joint use of the lagoon and issues related to permitting and operation of the wastewater systems. Aside from the mention of industrial process wastewater going into the CAFO lagoon in Observations and Areas of Concern below, further discussion of this issue will not be covered within this report but will be addressed in a separate report that will follow later.

Cattle Freestalls and Milking Parlor:

The facility houses the milking cows within 16 freestall barns which are flushed for 12 seconds every two hours with either recycled reuse water from the concrete holding basin, or freshwater from either the Reverse Osmosis Pond (RO Pond) or Buggy Creek. The flush water is collected in a large trough that is undercover of the roof and spans the length of the 16 freestalls and is located on the north end of the freestalls (see Photo 9). The trough directs the flush water to one of two slurry tanks located on the north side of the freestalls. The east and west slurry tanks each receive about half of the freestall flush water, which is then pumped to the eleven manure screens (photo 10 shows the three slurry pumps at the west slurry tank, the farm's eleven manure screens, and the concrete holding basin). Following the manure screens, wastewater is then pumped to either the single lagoon which has an additional three manure screens for a second round of screening, or to the concrete holding basin all dependant on water needs. The concrete holding basin is located on the northwest side of the eleven manure screens. The milk parlor is flushed every 10 minutes between groups of milked cows. Flush water for the milking parlor comes from the RO Pond or well water.

Land Application Sites / Center Pivots:

The dairy land applies all generated wastewater, manure solids and composted mortalities onto its center pivot (CP) land application sites contained within approximately 6,400 acres of land that comprise the production area and the contiguous CPs. All wastewater is land applied via irrigation CPs, but not all CPs receive wastewater. There are four main CP areas (see the site map attached in Appendix 2, Site Aerial and Facility Map). Looking from west to east, there are 6 W-named CPs, 23 D-named CPs, 20 M-named CPs, and 12 E-named CPs, for a total of 61 CPs. CPs that do not receive irrigated CAFO wastewater, such as the E CPs and the southwesterly located D CPs (CPs D6, D8, D9, D12, D13, and D14) are only irrigated with freshwater from Snake Creek Pond (which itself receives supplemented river or well water), while other pivots such as W5 (which last received CAFO wastewater on 5/9/2024 and has since only received fresh- water from Buggy Creek) rotate between periods of blended wastewater application or freshwater application depending on crop needs or preventative maintenance issues (i.e., nozzle clogging). CPs not receiving blended wastewater are occasionally fertilized using a liquid nitrogen fertilizer (containing 28-0-0 plus Sulphur) that is applied thru the CP.

Mortality Composting and Commodities:

Manure screenings and straw are used to compost animal mortalities on one of the land application sites. Currently, all composting windrows are on located on the east side of CP M3. Composted mortalities are then land applied onto the same field where the composting occurred. Afterward, according to Mr. Warren, composting is moved onto another field which has low nutrients so that composting rotates from land application field to land application field based on nutrient needs. Commodities are stored in two separate covered silage bunker areas, a covered commodities area, hay barns and a feed mill. Only the working end of the silage bunker used to make the daily ration feed mix is exposed, while other daily ration commodities are stored in a barn under roof.

Dairy Freshwater Ponds:

The dairy has two large freshwater ponds that supply much of the water used by the farm. They also utilize water from several other sources, some of which are used to supplement the two freshwater ponds. The two primary freshwater source ponds are the RO and the Snake Creek. The RO Pond receives water primarily from Buggy Creek, but also the Canadian River, Snake Creek Pond and water from the 18 reported operable ground water wells. Snake Creek Pond receives about half its water from the Canadian River, but also from rain and ground water wells. Overflow from the RO Pond goes down a concrete chute to a bar ditch, thence along the asphalt road bar ditch until it reaches a roadside pond located below several cow pens shown in Photos 25-27. Snake Creek Pond also overflows into Snake Creek, which then discharges into the Canadian River.

Unpermitted Poned Structures:

The large Historic Safety Pond (HSP), located on the north and northeast side of CP D7, is not a certified wastewater lagoon structure. The HSP receives runoff from some of the CPs D1, D3, D5, and D7 land application sites, as well as supplemented freshwater from Buggy Creek and the Canadian River. The HSP has two sets of pumps that send wastewater (comingled freshwater and runoff from the land

application sites) to either the land application sites or the wastewater lagoon. The pumps that send wastewater back to the land application sites are located on the south center part of the HSP, and the pumps that send wastewater to the lagoon are located at the far northeast side of the HSP. Mr. Warren reported that they like to blend freshwater into the single wastewater lagoon and HSP so that they have a diluted wastewater to apply to the land application fields. The dairy stated that they do not pump full strength dairy wastewater onto the fields without first blending it with freshwater at a desired rate of around 50:50.

The dairy also has numerous smaller ponded wastewater locations haphazardly scattered throughout the production area and land application CP sites. These ponded locations collect runoff from commodity storage areas, cattle pens, or from excess irrigated wastewater which impounds onto or adjacent to the CP sites. This ponding is also affected by accumulated storm water by design. Additionally, the ponding accumulates in several recently constructed "emergency holding ponds" that are constructed of native sandy soils. Examples of other types of ponded areas consisting of various wastewater sources occurring throughout the dairy property and production area include, but are not limited to the following:

- 1) A created "wetlands" area located near the daily ration make ready area (see Photos 14-18);
- 2) Ponding adjacent to the two-silage storage bunker areas comprised of silage liquor (see Photos 14-18 and 42);
- 3) Discharges of cattle pens and nursery pen runoff located on the west side of the freestalls going into an unpermitted pond, which then flows into an area around and including CPs D1 and D3 (see Photos 3-8). A second heifer pen area discharges into a roadside pond located on the northeast side of CP D14. This roadside pond also receives RO Pond discharge via a paved road bar ditch (see Photos 25-27, and Photos 33 & 34) and runoff from CP D14 via a concrete drainage channel (see Photos 28 & 29); and
- 4) A large, ponded area within land application area CP M11 (see Photos 50 & 51). Apparently, M11 developed this sizeable ponding issue after the facility filled-in a previously created CP drainage channel in April or May of this year that had been constructed to channel wastewater irrigation overflow in the M CP areas toward Dry Creek. This haphazard ponding is a chronic occurrence that was noted at this location, but also occurs in other areas throughout the facility. These accumulating ponds are not properly designed, constructed, operated, and maintained to operate as lagoon or wastewater structures as per NRCS standards.

Section II – OBSERVATIONS

Cattle Freestalls:

Reuse wastewater from the concrete holding basin (located on the northwest side of the eleven manure screens) is being used to flush the sixteen freestall barns which house the milking cows. Other source

options for flush water include the RO Pond or Buggy Creek. At the time of the inspection, some reuse flush water was observed to be going around the far west freestall, down the concrete pavement and into an area near the 0.8-mile-long concrete drainage channel that leads to the wetland shown in Photos 11, & 14-18.

Ponding on the Land Application / CP Fields:

The dairy has numerous ponded wastewater locations haphazardly scattered throughout the production area and land application CP sites. These ponded locations collect runoff from commodity storage areas, cattle pens, or from excess irrigated wastewater which impounds onto or adjacent to the CP sites. This ponding is also affected by accumulated storm water. Also, the ponding accumulates in several recently constructed "emergency holding ponds" that have been constructed out of the native sandy soils. See the above Facility Description – Unpermitted Ponded Structures for a description of the haphazardly located wastewater ponded areas in the production area and land application CP areas. Additionally, the HSP, located on the north and northeast side of CP D7, receives runoff from some of the CP D1, D3, D5, and D7 land application sites, as well as supplemented freshwater from Buggy Creek and the Canadian River.

Process Wastewater Discharges into the Dairy Freshwater RO and Snake Creek Ponds:

The dairy's two large freshwater ponds that supply much of the water used by the farm are the RO Pond and the Snake Creek Pond. These two impounded water bodies are each the size of a small lake (see the site aerial attached in Appendix 2 Site Aerial and Facility Map), and each had cattle pens located immediately upslope of the ponds that would discharge storm water runoff into these ponds during a rain event. The RO Pond upslope cattle pens are located on the southwest side the pond (see Photo 41). The Snake Creek Pond upslope cattle pens are located on the west side of that pond (see Photo 30).

Agricultural Discharge into the RO Pond:

An agricultural discharge (not process wastewater) was observed and sampled coming from CPs D6 and D8, going into the RO Pond. Braum's reported to the inspector that these CP fields (including D6, D8, D9, D12, D13 and D14) have only receive_fresh-water irrigation for over 15 to 20 years. See the attached analytical sample results found in Appendix 5, Site Sampling Analytical Data for the D6 CP discharge that was sampled prior to entering the RO Pond.

Process Wastewater Discharges into Buggy Creek:

Additionally, a discharge from CP W5 into Buggy Creek was occurring at the time of the inspection on 07/09/2024. This discharge was sampled, and the analytical sample results are found in Appendix 5, Site Sampling Analytical Data identified as W5 at E. Road, and Confluence at Buggy Creek. Although this sampled discharge was from a CP that currently only receives freshwater, it has historically received CAFO wastewater for all of 2024 up to 05/19/2024. See Section 3, Areas of Concern number 3.

Agronomic Rates of Nutrient Application:

Lucas Bomar, Paul Juarez, and Marissa Lippincott (ODAFF) conducted a brief review of the NMP's nutrient calculations for wastewater land application. They found that the facility was not monitoring for

nitrate or total nitrogen on CP W5 for a soil sample taken on 02/13/2024. CP W5 was chosen for review because this field was discharging into Buggy Creek on 07/09/2024. The nutrient agronomic rate calculations will be further evaluated during a follow-up inspection that will be conducted later in the summer of 2024. Additionally, a detailed review of the facility's NMP will be performed at that time.

Irrigation During Rain Events:

Land application records for April 2024 showed that the dairy land applied CAFO wastewater on two days which received rain. On April 3 and 11, 2024, the dairy received 1.2 and 0.5 inches of rain, respectively, yet they applied wastewater to CPs D5 and M5 on April 3, and to CPs M12 and M17 on April 11, 2024.

EPA Sample Results:

EPA sampled four locations at the dairy over a two-day period on 7/9/2024 and 7/10/2024. We sampled for E. coli, Nitrate-N, and Total Phosphorus, and we also collected an E. coli blank on each of the two sampling days. Sampling was conducted according to an approved Quality Assurance Project Plan (QAPP) which is found in Appendix 4, Quality Assurance Project Plan. The sample results, which are listed in the table below, are found in Appendix 5, Site Sampling Analytical Data. Braum's requested split samples at the beginning of the two-day inspection, which EPA provided. Braum's utilized the same Accurate Labs contractor as did EPA, and they followed us to the lab on each of the two sampling days to deliver their samples at the same time as EPA.

The first sample location, taken on 07/09/2024, is of the CP irrigation runoff from CP W5. It has two sample locations of the same discharge flow. The first location, called W5 at E. Road, was taken as the discharge flowed off the east side of CP W5, just after it crossed under the dirt road via a drainage pipe, and the second sample was taken as the discharge entered Buggy Creek just before the discharge commingled with the creek. See the attached analytical sample results found in Appendix 5, Site Sampling Analytical Data identified as W5 at E. Road, and Confluence at Buggy Creek. Although this sampled discharge was from a CP that currently only receives freshwater, it has historically received CAFO wastewater for all of 2024 prior to 05/19/2024. See Section 3, Areas of Concern number 3.

The second sample location, taken on 07/10/2024, is of the CP irrigation runoff from CP D6 taken as the discharge flowed into a drainage pipe which then enters the RO Pond within approximately 40 feet from the sample location. After this sample was taken, we were told during the Closing Conference that this field (CP D6) only receives freshwater irrigation. See the attached analytical sample results found in Appendix 5, Site Sampling Analytical Data identified as D6 runoff into RO Pond.

The third sample location, taken on 07/10/2024, is of the wetlands located at the northwest corner of the silage bunker used to make the daily feed ration. This area of the wetlands, located next to a dirt road, is receiving silage liquor runoff (which is typically very high in BOD) from the silage bunkers as well as other CAFO wastewaters. See the attached analytical sample results found in Appendix 5, Site Sampling Analytical Data identified as Wetland at Silage Bunkers.

The fourth sample location, taken on 07/10/2024, is of the HSP located at the north-northwest corner of CP D7. The HSP receives CP runoff that is blended with Buggy Creek or Canadian River water. See the attached analytical sample results found in Appendix 5, Site Sampling Analytical Data identified as HSP NNW of D7.

Sample Location	E. coli MPN/100 ml	E. coli blank MPN/100 ml	Nitrate-N mg/l	Total Phosphorus mg/l
W5 at E. Road	16.9	BPQL	BPQL	0.881
Confluence at Buggy Creek	43.7	-	BPQL	0.668
D6 runoff into RO Pond	2420	BPQL	BPQL	9.79
Wetland at Silage Bunkers	2420	-	BPQL	7.62
HSP NNW of D7	517	-	BPQL	2.78

BPQL - Below Practical Quantitation Limit

Industrial Process Wastewater Discharge to the CAFO Lagoon:

The single lagoon receives both dairy production wastewater from the CAFO operation, and industrial process wastewater from the bakery and dairy processing plant that is co-located with the dairy. The average amount of industrial process wastewater going to the CAFO lagoon in all of April 2024 was 11.77% (approximately 8,382,418 gallons) of the total combined discharge to the lagoon (approximate total April 2024 discharge to the lagoon was 71,219,410 gallons). And for the first 9 days of July 2024, approximately 11% to 21.6% of the daily total amount of the wastewater going to the CAFO lagoon is comprised of industrial process wastewater.

Section III – AREAS OF CONCERN

- 1) At the time of the inspection, some reuse flush water was observed going around the far west freestall, down the concrete pavement and into an area near the 0.8-mile-long concrete drainage channel (see Photos 1 & 2 and 11) that leads to the wetland shown in Photos 14-17. Reuse water overflow from the freestall flushing system is contributing to the wastewater ponding issues seen near the 0.8-mile-long concrete channel that leads to the wetlands area. These issues must be corrected as per ODAFF CAFO Regulation 35: 17-4-12 (b)(3)(A) "Runoff from animal waste is prohibited where it results in a discharge to surface or groundwaters of the State. The owner shall provide controls for runoff and erosion as appropriate for site conditions." and per 35: 17-4-12(b)(3)(D) "Land application practices shall be managed so as to reduce or minimize the following: (i) Ponding or puddling of wastewater on the site."
- 2) The dairy has numerous ponded wastewater locations haphazardly scattered throughout the production and land application CP sites. These ponded locations collect runoff from commodity storage areas, cattle pens, or from excess irrigated wastewater which impounds onto or adjacent to the CP sites. This ponding often results from excess irrigated wastewater runoff as well as accumulated storm water. Per ODAFF CAFO

Regulation 35: 17-4-12(b)(3)(D) "Land application practices shall be managed so as to reduce or minimize the following: (i) Ponding or puddling of wastewater on the site."

- a. The large HSP receives runoff from some of the CPs D1, D3, D5, and D7 land application sites, as well as supplemented freshwater from Buggy Creek and the Canadian River. The HSP has not been designed and constructed to meet NRCS lagoon design standards. Design standards for a lagoon are found in liner requirements section of the ODAFF CAFO Regulation 35:17-4-11 (a) which includes the liner requirements, and per the ODAFF CAFO Act Section 20-50 Wastewater Retention Structures Part (B) which states "Site-specific conditions shall be considered in the design and construction of liners. Liners for retention structures shall be designed and constructed in accordance with the provisions of this section and generally accepted engineering practices established by rules of the Board or as required by the federal Environmental Protection Agency."
- b. Various areas in multiple CP fields have ponded CAFO wastewater and include CP areas such as CP M11 (see Photos 50 & 51), and CPs D1 and D3 (see Photos 3-8). Per the ODAFF CAFO Regulation 35: 17-4-12 (b)(3)(D), the Animal Waste Management Plan (AWMP) or its equivalent requires that the "Land application practices shall be managed so as to reduce or minimize the following: (i) Ponding or puddling of wastewater on the site."
- c. Cattle Pen runoff from areas such the cattle pens and nursery pen on the west side of the freestalls are discharging into an unpermitted pond which then flows into an area around and including CPs D1 and D3 (see Photos 3-8). A second heifer pen area was discharging into a roadside pond located on the northeast side of CP D14. This roadside pond also receives RO Pond discharge via an asphalt paved road bar ditch (see Photos 25-27, and Photos 33 & 34). Design standards for a lagoon are found in the liner requirements section of the ODAFF CAFO Regulation 35:17-4-11 (a) which lists the requirements, and per the ODAFF CAFO Act Section 20-50 Wastewater Retention Structures Part B which states "Site-specific conditions shall be considered in the design and construction of liners. Liners for retention structures shall be designed and constructed in accordance with the provisions of this section and generally accepted engineering practices established by rules of the Board or as required by the federal Environmental Protection Agency."
- d. Runoff from CP D14 via a concrete drainage channel (see Photos 28-29) also enters the roadside pond described above in Section 2.c. Per the ODAFF CAFO Regulation 35: 17-4-12 (b)(3)(D), the Animal Waste Management Plan (AWMP) or its equivalent requires that the "Land application practices shall be managed so as to reduce or minimize the following: (i) Ponding or puddling of wastewater on the site."
- e. A contributor to the wetlands ponding is silage liquor discharge from silage bunkers located next to the daily cattle feed make ready area. BMPs required for the dairy shall include but not be limited by the following per the ODAFF CAFO Regulation 35:17-4-16(3) "Solids, sludges, manure, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a

manner designed to prevent pollutants from being discharged to surface or groundwaters of the State.”

- f. Additional ponding adjacent to the east silage storage bunker is comprised of silage liquor discharge. The discharge, which again is required to meet the requirements of the ODAFF CAFO Regulation 35:17-4-16(3) listed above, enters a small, ponded area and discharges into an area that parallels Snake Creek just before the creek enters the Canadian River. This observation was made from a DigitalGlobe aerial photograph.
- 3) A discharge from CP W5 into Buggy Creek was occurring at the time of the inspection on 07/09/2024 (see photos 20-24). This discharge was sampled, and the analytical sample results (found in Appendix 5, Site Sampling Analytical Data) are identified as W5 at E. Road, and Confluence at Buggy Creek. Although this sampled discharge was from a CP that currently only receives freshwater, it has historically received CAFO wastewater for all of 2024 prior to 05/19/2024.

Additionally, an ODAFF aerial drone video from 02/28/2024 shows a wastewater irrigated discharge coming off W5, going into Buggy Creek at the same location where EPA took a sample on 07/09/2024. This drone video is found within an ECAD SharePoint site named “Analysis and Assessment Section (ECDWA)”, folder name “02-28-24 Braums”, file name “2-28-24 Historic Safety pond area D-7 D-5 adjacent...MP4”. Braum’s had last applied CAFO wastewater to W5 on 02/17/2024, prior to this video being taken. Per the ODAFF CAFO Regulation 35:17-4-12 (b)(3)(A) which regulates the land application of animal waste “Runoff from animal waste is prohibited where it results in a discharge to surface or groundwaters of the State. The owner shall provide controls for runoff and erosion as appropriate for site conditions.”

- 4) The dairy’s two large fresh-water ponds (the RO Pond and the Snake Creek Pond) each had cattle pens located immediately upslope of the ponds that would discharge contaminated production area storm water runoff into the ponds during a rain event. The RO Pond upslope cattle pens are located on the southwest side the pond (see Photo 41). The Snake Creek Pond upslope cattle pens are located on the southwest side of that pond (see Photos 30-32). During the inspection, the RO Pond and Snake Creek Pond were both discharging, with Snake Creek Pond having a small (trickle) direct discharge to Snake Creek, thence the Canadian River. Per the ODAFF CAFO Act Section 20:48 Best Management Practices Part (B)(1) “There shall be no discharge of process wastewater to waters of the state except in accordance with the provisions of the Oklahoma Concentrated Animal Feeding Operations Act”.
- 5) The facility was not tracking nitrate or total nitrogen for soils analysis conducted on CP W5 for a sample taken on 02/13/2024. Per the ODAFF CAFO Act Section 20-48 Best Management Practices Part (E) “Soils in areas in which animal waste is applied shall be analyzed, annually, for phosphates, nitrates and soil pH prior to the first application of the animal waste in the calendar year.”

- 6) Land application records for April 2024 showed that the dairy land applied CAFO wastewater on two days which received rain. On April 3 and 11, 2024, the dairy received 1.2 and 0.5 inches of rain, respectively, yet applied wastewater to CPs D5 and M5 on April 3, and to CPs M12 and M17 on April 11. Per the ODAFF CAFO Regulation 35:17-4-12 (b)(3)(B) Animal wastes shall not be applied when the ground is frozen or saturated or during rainfall events.”
- 7) Two EPA samples taken from the Wetland at Silage Bunkers and HSP NNW of D7, which both receive CAFO wastewaters, both showed that contaminants such as E. coli and Total Phosphorus were elevated. Per the ODAFF CAFO Regulation 35:17-4-12 (b)(3)(A) which regulates the land application of animal waste “Runoff from animal waste is prohibited where it results in a discharge to surface or groundwaters of the State. The owner shall provide controls for runoff and erosion as appropriate for site conditions.”
- 8) The single lagoon receives both dairy production wastewater from the CAFO operation, and industrial process wastewater from the bakery and dairy processing plant that is co-located with the dairy. The average amount of industrial process wastewater going to the CAFO lagoon in all of April 2024 was 11.77% (approximately 8,382,418 gallons) of the total combined discharge to the lagoon (approximate total April 2024 discharge to the lagoon was 71,219,410 gallons). And for the first 9 days of July 2024, approximately 11 to 21.6% of the daily total amount of the wastewater going to the CAFO lagoon is comprised of industrial process wastewater. Per the ODAFF CAFO Act Section 20:50 Wastewater Retention Structures Part (D) “) All substances entering the retention structures shall be composed entirely of wastewaters from the proper operation and maintenance of an animal feeding operation and the runoff from the animal feeding operation area. The disposal of any materials, other than substances associated with proper operation and maintenance of the facility into the containment structures, including but not limited to human waste, is prohibited.”

Closing Conference:

EPA Region 6 and ODAFF inspectors (listed above in Purpose of the Inspection) conducted a closing conference at Braum's Dairy at 1313 on 07/10/2024 with Mr. Drew Braum, Jr/Owner, Mr. Jay Lowe/Braum's Project Manager and Mr. Brian Warren. During the closing conference, EPA and ODAFF reviewed the above listed Areas of Concern and EPA's sampling activities.

Section IV – FOLLOW UP

A follow-up inspection will be conducted later this summer to complete the necessary site inspection (as the production area and land application site is approximately 6,400 acres in size, and the entire dairy is approximately 16,500 acres). Additionally, nutrient application rates to the land application sites will be completed.

Section V – LIST OF APPENDICES

Appendix 1 – Photo Log – 51 photos taken over two days on 07/09/2024 and 07/10/2024

Appendix 2 – Site Aerial and Facility Map

Appendix 3 – Still Photo taken from ODAFF Aerial Footage of 02/28/2024 Discharge off CP W5 into Buggy Creek: ECAD SharePoint Site [2-28-24 Historic Safety pond area D-7 D-5 adjacent..MP4](#)

Appendix 4 – Quality Assurance Project Plan

Appendix 5 – Site Sampling Analytical Data

Appendix 1

Photo Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma

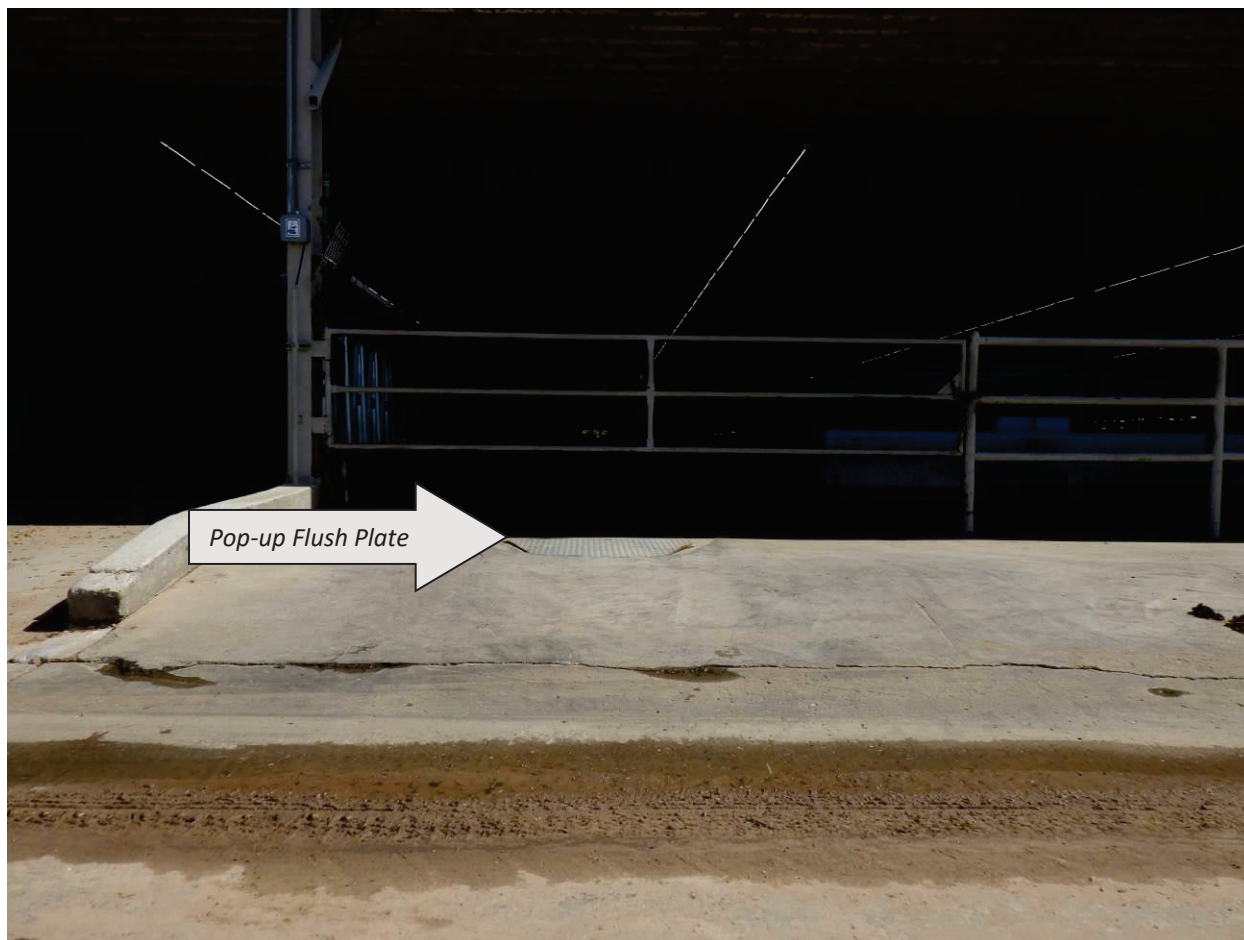


Photo File Name: R0010052.JPG

Date of Photo: 07/09/2024

Time of Photo: 1004

GPS Lat/Long: 35°19'55.0"N 97°54'22.0"W

Photographer: Paul Juarez

Description: Far west freestall barn 16 (16 of 16) showing the metal pop-up flush plate at the top of the concrete apron. Some overflow from the barn's reuse flush water (coming from the concrete holding basin) discharges toward the sloped front of the concrete apron and goes around the left side of the freestall, toward the 0.8-mile-long concrete ditch located on the north side of the freestalls. This overflow of reuse flush water ponds on the north side of the freestalls and terminates in a "wetlands" area near the daily ration make-ready area. View is toward the north.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010053.JPG

Date of Photo: 07/09/2024

Time of Photo: 1007

GPS Lat/Long: 35°19'55.0"N 97°54'23.0"W

Photographer: Paul Juarez

Description: Far west freestall concrete drainage channel that directs flush water runoff toward the north side of the freestalls. View is toward the north.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010054.JPG

Date of Photo: 07/09/2024

Time of Photo: 1017

GPS Lat/Long: 35°19'54.0"N 97°54'29.0"W

Photographer: Paul Juarez

Description: Far west freestall concrete channel directing runoff toward a pond located on the east side of the calving pen, along with other runoff from the cattle pens located on the southwest side of freestall 16. View is toward the east.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 4

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010055.JPG

Date of Photo: 07/09/2024

Time of Photo: 1019

GPS Lat/Long: 35°19'53.0"N 97°54'30.0"W

Photographer: Paul Juarez

Description: Erosion channels direct runoff from the above (Photo 3) cattle pens into a holding pond located on the east side of the calving pen. The calving pen also discharges into the pond. This holding pond is not constructed as a lagoon as per NRCS standards. View is toward the northwest.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 5

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010056.JPG

Date of Photo: 07/09/2024

Time of Photo: 1026

GPS Lat/Long: 35°19'58.0"N 97°54'33.0"W

Photographer: Paul Juarez

Description: Ruoff from the calving pen enters the pond shown in Photo 4. The view is toward the west.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 6

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010057.JPG

Date of Photo: 07/09/2024

Time of Photo: 1028

GPS Lat/Long: 35°19'59.0"N 97°54'32.0"W

Photographer: Paul Juarez

Description: Runoff from the calving pen enters the pond shown in Photo 4. View is toward the east.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 7

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010058.JPG

Date of Photo: 07/09/2024

Time of Photo: 1028

GPS Lat/Long: 35°19'59.0"N 97°54'33.0"W

Photographer: Paul Juarez

Description: The discharge from the above pond shown in Photo 4 down a concrete drainage channel toward the field between Center Pivot (CP) D1 and D3. There is significant ponding in D1 and D3. View is toward the northwest.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 8

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010059.JPG

Date of Photo: 07/09/2024

Time of Photo: 1031

GPS Lat/Long: 35°19'59.0"N 97°54'34.0"W

Photographer: Paul Juarez

Description: The discharge from the pond shown in Photo 4 accumulates and ponds in CP D1 and D3 fields. This photo shows the ponding on the southeast side of CP D1. Buggy Creek is located at the tree line in the distance. View is toward the northwest.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 9

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010060.JPG

Date of Photo: 07/09/2024

Time of Photo: 1037

GPS Lat/Long: 35° 19' 59.6922"N 97° 54' 22.6368"W (Location via Bing Map)

Photographer: Paul Juarez

Description: The 16 freestalls collect flush water in a trough which spans the northern length of the 16 barns. The flush water is directed to two slurry tanks which then pump the wastewater to the 11 manure screens. View is toward the east and was taken from the 16th freestall.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 10

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010061.JPG

Date of Photo: 07/09/2024

Time of Photo: 1041

GPS Lat/Long: 35°20'0.0"N 97°54'12.0"W

Photographer: Paul Juarez

Description: The freestall flush water trough directs the wastewater toward two slurry tanks. This slurry tank (foreground) is equipped with three pumps and is located on the west side of the 16 freestalls, while another slurry tank is located on the east side of the freestalls. Each slurry tank receives about half of the freestall flush water. Note that the concrete holding tank (it receives screened flush water) is in the background left. The concrete holding tank is the source of re-use flush water. View is toward the northeast and the photo was taken from the northwest corner of freestall 12.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 11

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma

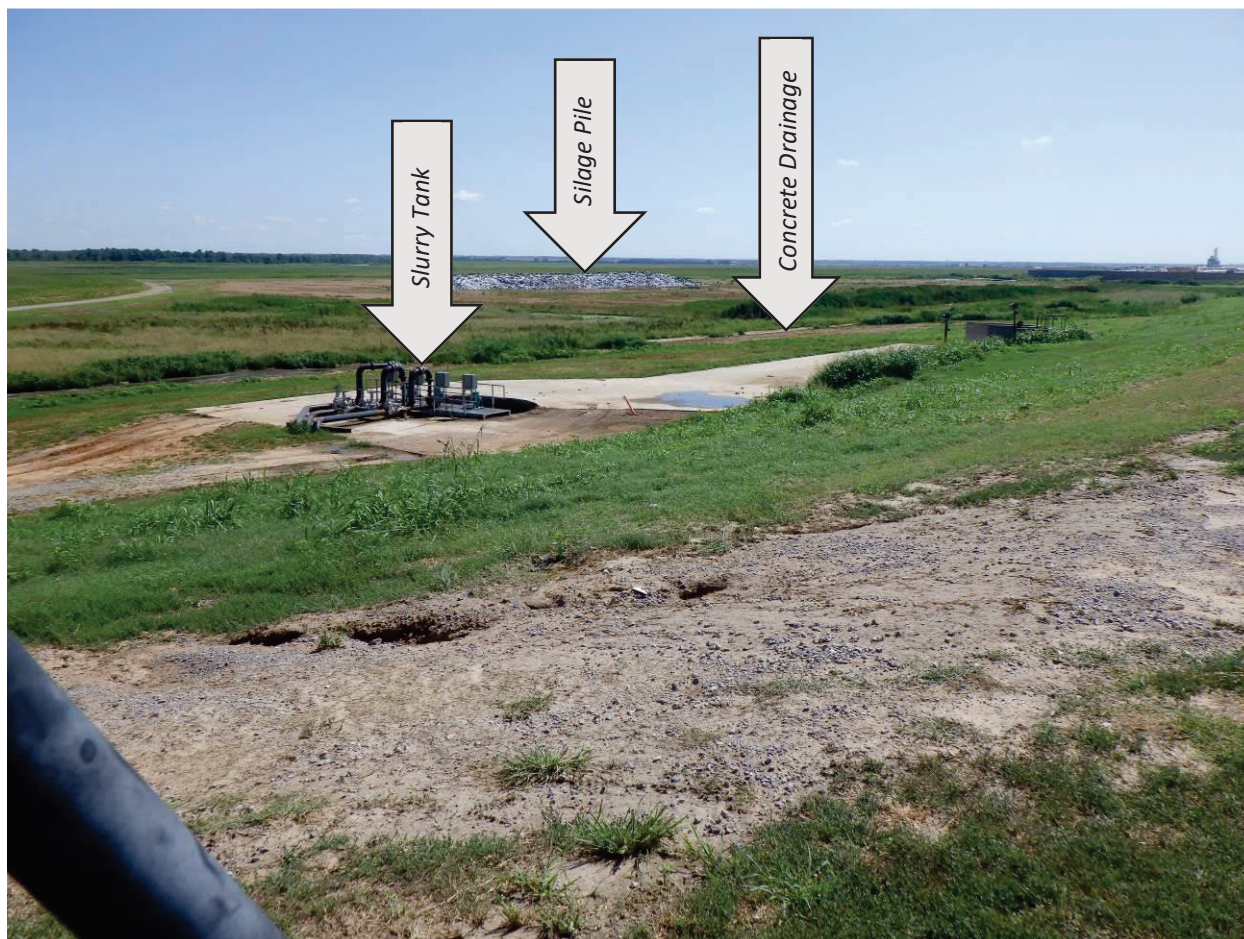


Photo File Name: R0010062.JPG

Date of Photo: 07/09/2024

Time of Photo: 1048

GPS Lat/Long: 35° 20' 0.0774"N 97° 53' 53.4114"W (Location Corrected via Bing Map)

Photographer: Paul Juarez

Description: The east slurry tank equipped with three pumps captures the east side of the freestall flush wastewater and directs it to the 11manure screens. Note that a covered silage pile is stored in a pasture area located southwest of D7, and that the narrow 0.8-mile-long concrete drainage ditch (recently constructed) is in the background and somewhat covered by vegetative growth. View is toward the northeast and the photo was taken from the northwest corner of freestall 5.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 12

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010063.JPG

Date of Photo: 07/09/2024

Time of Photo: 1053

GPS Lat/Long: 35° 20' 2.0394"N 97° 53' 52.4502"W (Location Corrected via Bing Map)

Photographer: Paul Juarez

Description: The east slurry tank receiving freestall flush water.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 13

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010064.JPG

Date of Photo: 07/09/2024

Time of Photo: 1100

GPS Lat/Long: 35° 20' 2.2596"N 97° 53' 50.8056"W (Location Corrected via Bing Map)

Photographer: Paul Juarez

Description: The 11 manure screens that receive flush water from the two slurry tanks. The slurry water then flows to the facility's primary lagoon or concrete holding tank. View is toward the southwest.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 14

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010065.JPG

Date of Photo: 07/09/2024

Time of Photo: 1105

GPS Lat/Long: 35° 20' 1.8774"N 97° 53' 36.7686"W (Location Corrected via Bing Map)

Photographer: Paul Juarez

Description: A wetland has formed from the accumulated wastewater and storm water runoff that has collected at the far east end of the 0.8-mile-long concrete drainage channel shown in Photo 11. Adding to the wetland is silage leachate from the silage bunkers seen at the right side of the photo. A wastewater sample was taken from the northwest corner of the silage bunker on 07/10/2024, at the location where it entered the wetland called Wetland at Silage Bunkers. A photo of the sample collection point is below in Photo 34. View is toward the northeast.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 15

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma

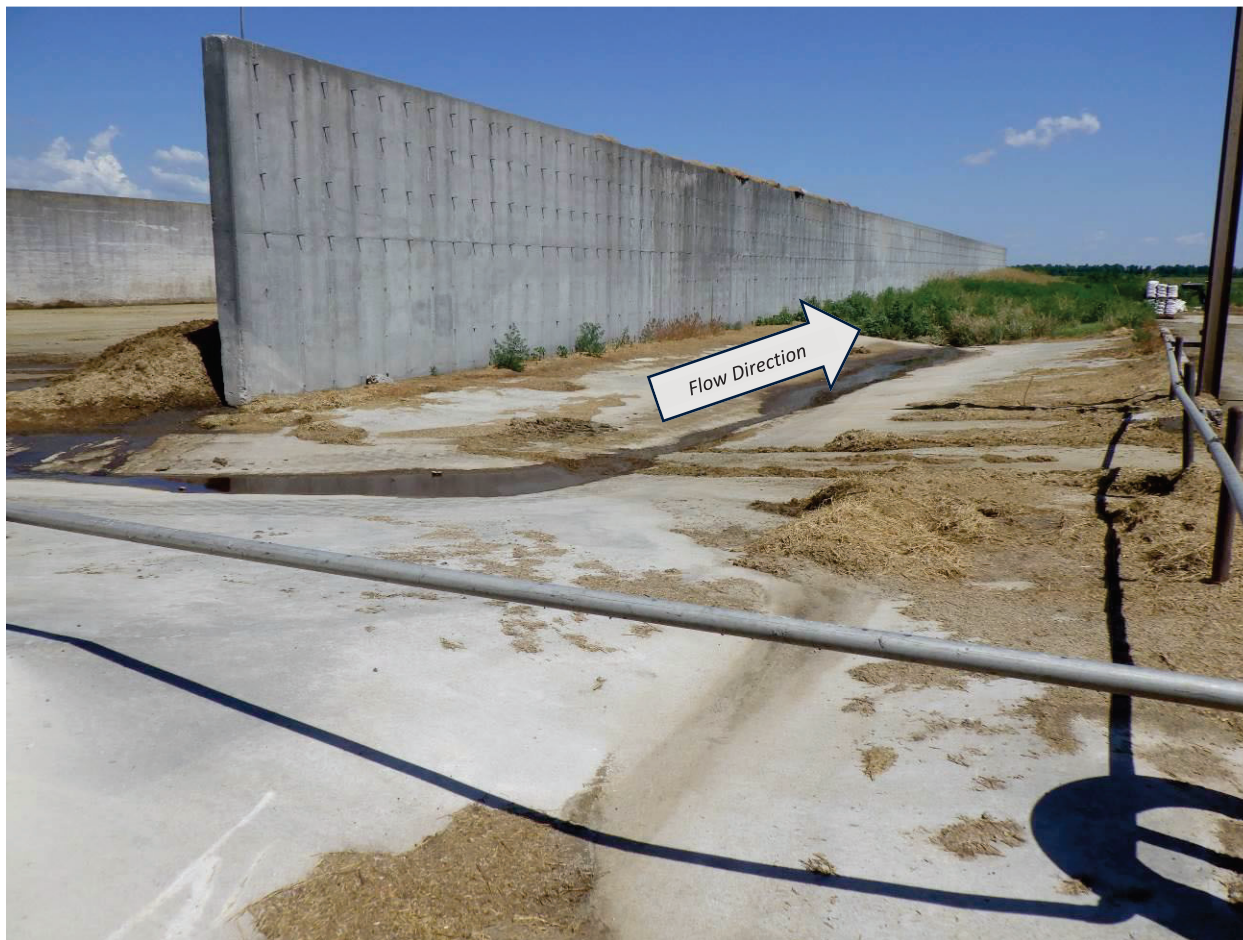


Photo File Name: R0010066.JPG

Date of Photo: 07/09/2024

Time of Photo: 1133

GPS Lat/Long: 35°20'03.0"N 97°53'22.0"W

Photographer: Paul Juarez

Description: Silage liquor runoff seen at the east side of the silage bunkers located at the wetlands shown in Photo 14. Also adding to the potential for contaminated runoff is the exposed feed at the daily ration make ready area to the left of this photo. View is toward the north.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 16

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010067.JPG

Date of Photo: 07/09/2024

Time of Photo: 1137

GPS Lat/Long: 35° 20' 2.1372"W 97° 53' 29.655"N (Location Corrected via Bing Map)

Photographer: Paul Juarez

Description: Silage liquor runoff seen at the west side of the silage bunkers located at the wetlands shown in Photo 14. The silage liquor runs down the dirt road to the north and into the wetland which is sampled on 07/10/2024, as described in Photo 14. View is toward the north.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 17

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010068.JPG

Date of Photo: 07/09/2024

Time of Photo: 1139

GPS Lat/Long: 35°20'06.0"N 97°53'30.0"W

Photographer: Paul Juarez

Description: Silage liquor runoff seen at the north side of the silage bunkers where it has entered the wetlands shown in Photo 14. The silage liquor that has run down the dirt road into the wetland at the north side of the silage bunkers is sampled on 07/10/2024, as described in Photo 14. View is toward the east.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 18

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010069.JPG

Date of Photo: 07/09/2024

Time of Photo: 1139

GPS Lat/Long: 35°20'05.0"N 97°53'30.0"W

Photographer: Paul Juarez

Description: Silage liquor runoff seen at the west side of the silage bunkers located at the wetlands shown in Photo 14. The silage liquor runs down the dirt road to the north and into the wetland which is sampled as described in Photo 14. This photo shows the point where the silage liquor is entering the wetland. View is toward the northeast.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 19

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010070.JPG

Date of Photo: 07/09/2024

Time of Photo: 1148

GPS Lat/Long: 35° 20' 30.3432"N 97° 54' 2.991"W (Location Corrected via Bing Map)

Photographer: Paul Juarez

Description: A berm along the north side of CP D5 (the road sits on top of the berm) channels runoff from the land application site (the drainage channel is located immediately next to the corn) to the Historic Safety Pond (HSP). View is toward the west.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 20

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010071.JPG

Date of Photo: 07/09/2024

Time of Photo: 1249

GPS Lat/Long: 35°20'31.3296"N 97°54'18.7056"W

Photographer: Paul Juarez

Description: Sample 1 is taken from the discharge coming off "W5 at E. Road". This sample is taken at this point of the discharge (on the east side of a dirt road) coming off the southeast corner of CP W5 on 07/09/2024, between 1234 and 1243. This discharge will enter Buggy Creek a short distance downstream and another sample and photo will be taken at that point as well. The discharge was sampled for Nitrates, Total Phosphorus and E. coli. An E. coli blank was also taken at this location. View is toward the east.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 21

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010072.JPG

Date of Photo: 07/09/2024

Time of Photo: 1249

GPS Lat/Long: 35°20'31.3296"N 97°54'18.7056"W

Photographer: Paul Juarez

Description: Expanded view of Sample 1 ("W5 at E. Road") was taken at this point of the discharge (on the east side of a dirt road) coming off the southeast corner of CP W5 on 07/09/2024, between 1234 and 1243. The discharge route to Buggy Creek is shown in this photo where the confluence with Buggy Creek is seen in the background. See Photo 23 where the confluence is shown. View is toward the east.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 22

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010073.JPG

Date of Photo: 07/09/2024

Time of Photo: 1250

GPS Lat/Long: 35°20'31.3296"N 97°54'18.7056"W

Photographer: Paul Juarez

Description: Sample 1 ("W5 at E. Road") is taken from the discharge coming off the large impoundment of irrigation water located within the southeast corner of CP W5. This large impoundment of irrigation water is standing in W5. Currently Braum's is land applying fresh water onto W5 (taken from Buggy Creek), however, up to 05/19/2024, Braum's was land applying CAFO wastewater onto W5. At this point the discharge goes under the dirt road where I am standing and into Buggy Creek. An ODAFF aerial image taken on 02/28/2024, shows the same accumulation of CAFO irrigated wastewater discharging into Buggy Creek (which then discharges to the Canadian River) during a period of time when Braum's was land applying CAFO wastewater to W5.

See Photo 45 which shows the confluence of Buggy Creek with the Canadian River, a Water of the U.S.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 23

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010074.JPG

Date of Photo: 07/09/2024

Time of Photo: 1350

GPS Lat/Long: 35°20'30.1416"N 97°54'13.449"W

Photographer: Paul Juarez

Description: Sample 2 is the W5 runoff at the "Confluence at Buggy Creek"). The sample was taken at the point that the discharge from CP W5 enters Buggy Creek, just where there are still visible ripples of flow from the discharge prior to entering the creek. The sample was taken on 07/09/2024, between 1331 and 1246. The discharge was sampled for Nitrates, Total Phosphorus and E. coli. View is toward the east.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 24

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010075.JPG

Date of Photo: 07/09/2024

Time of Photo: 1350

GPS Lat/Long: 35°20'30.1416"N 97°54'13.449"W

Photographer: Paul Juarez

Description: View of the Sample 2 collection point ("Confluence at Buggy Creek") with Buggy Creek in the background. View is toward the east.

This is the last photo taken on 07/09/2024. The following photos were taken on 07/10/2024.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 25

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010076.JPG

Date of Photo: 07/10/2024

Time of Photo: 0859

GPS Lat/Long: 35°20'00.0"N 97°52'19.0"W

Photographer: Juan Ibarra

Description: A cattle pen runoff collection point in the foreground that discharges via a culvert pipe into the Large Pond seen in the background. A covered hay barn is located on the south side of the pond. This pond also receives overflow from the RO Pond. View is toward the northeast.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 26

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010077.JPG

Date of Photo: 07/10/2024

Time of Photo: 0900

GPS Lat/Long: 35°20'00.0"N 97°52'19.0"W

Photographer: Juan Ibarra

Description: A cattle heifer pen that discharges runoff into the collection point on the left side of the photo. This collection point discharges via a culvert pipe into the large pond seen in photo 25. View is toward the east.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 27

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010078.JPG

Date of Photo: 07/10/2024

Time of Photo: 0904

GPS Lat/Long: 35°20'03.0"N 97°52'15.0"W

Photographer: Juan Ibarra

Description: This is the Large Pond shown in Photo 25 that receives cattle heifer pen runoff as seen in Photo 26 and overflow from the RO Pond via the asphalt road drainage ditch. The inlet to the pond from the collection point shown in Photo 25 is the eroded area in the foreground. This pond also receives over application irrigation water from CP D14 via a concrete drainage ditch located within the CP that is a few hundred feet to the south. The largest part of D14 is to the southwest of this pond. The southerly located D CPs (CPs D6, D8, D9, D12, D13, and D14) are only irrigated with freshwater from Snake Creek Pond. View is toward the northeast.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 28

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010079.JPG

Date of Photo: 07/10/2024

Time of Photo: 0911

GPS Lat/Long: 35° 19' 54.897"N 97° 52' 11.5572"W (Location Corrected via Bing Map)

Photographer: Juan Ibarra

Description: The concrete drainage ditch located within CP D14 that channels overapplied irrigation water toward the Large Pond shown in Photo 25. The southwesterly located D CPs (CPs D6, D8, D9, D12, D13, and D14) are only irrigated with freshwater from Snake Creek Pond. View is toward the south.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 29

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010080.JPG

Date of Photo: 07/10/2024

Time of Photo: 0912

GPS Lat/Long: 35° 19' 54.897"N 97° 52' 11.5572"W

Photographer: Juan Ibarra

Description: The concrete drainage ditch located within CP D14 that channels overapplied irrigation water toward the Large Pond shown in Photo 25. The southwesterly located D CPs (CPs D6, D8, D9, D12, D13, and D14) are only irrigated with freshwater from Snake Creek Pond. View is toward the northeast.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 30

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010081.JPG

Date of Photo: 07/10/2024

Time of Photo: 0919

GPS Lat/Long: 35° 19' 48.5832"N 97° 52' 2.7804"W (Location Corrected via Bing Map)

Photographer: Juan Ibarra

Description: Two cattle/heifer pens are located upslope of the southwest side of Snake Creek Pond. These two cattle/heifer pens (the most eastern of the two pens is seen in this photo) discharge storm water runoff into Snake Creek Pond, which then overflows into Snake Creek, and thence the Canadian River, a Water of the U.S. The second pen is located immediately to the northwest of this pen. View is toward the southwest.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 31

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010082.JPG

Date of Photo: 07/10/2024

Time of Photo: 0919

GPS Lat/Long: 35° 19' 48.1044"N 97° 52' 2.946"W (Location Corrected via Bing Map)

Photographer: Juan Ibarra

Description: The cattle/heifer pens discharge route into Snake Creek Pond, with Snake Creek Pond in the background. The distance from the pens to Snake Creek Pond is estimated to be approximately 200'. Two cattle/heifer pens are located upslope of the southwest side of Snake Creek Pond. Snake Creek Pond overflows into Snake Creek, and thence the Canadian River, a Water of the U.S. View is toward the southeast.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 32

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010083.JPG

Date of Photo: 07/10/2024

Time of Photo: 0920

GPS Lat/Long: 35°19'47.0"N 97°52'02.0"W

Photographer: Juan Ibarra

Description: A close-up of the cattle/heifer pens discharge route into Snake Creek Pond. View is toward the southeast.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 33

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010084.JPG

Date of Photo: 07/10/2024

Time of Photo: 0940

GPS Lat/Long: 35° 19' 58.5804"N 97° 53' 20.6736"W (Location Corrected via Bing Map)

Photographer: Juan Ibarra

Description: RO Pond discharge route, located at the northeast corner of the pond, goes thru a 36" tin horn (approximate size) which then would flow down a concrete channeled slope to a roadside bar ditch and into the pond shown in Photo 25. View is toward the southwest.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 34

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010085.JPG

Date of Photo: 07/10/2024

Time of Photo: 0941

GPS Lat/Long: GPS coordinates were not recorded on the camera. 35° 19' 58.7748"N 97° 53' 19.7118"W
(Location via Bing Map)

Photographer: Juan Ibarra

Description: RO Pond discharge route, located at the northeast corner of the pond, goes thru a 36" tin horn (approximate size), which then would flow down this concrete channeled slope to a roadside bar ditch, then east and into the Large Pond shown in Photo 25. View is toward the north.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 35

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010086.JPG

Date of Photo: 07/10/2024

Time of Photo: 0949

GPS Lat/Long: 35° 19' 49.7784"N 97° 53' 24.9324"W (Location Corrected via Bing Map)

Photographer: Juan Ibarra

Description: This is a photo of the RO Pond. A rusty pipe on the right side of the photo is used to fill the RO Pond on the east side of the pond with water from Snake Creek Pond. View is toward the west-northwest.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 36

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010087.JPG

Date of Photo: 07/10/2024

Time of Photo: 0950

GPS Lat/Long: 35° 19' 49.7784"N 97° 53' 24.9324"W (Location Corrected via Bing Map)

Photographer: Juan Ibarra

Description: A concrete drainage channel is used to move excess irrigation water from CPs D9 and a portion of D12 into the RO Pond. The southwesterly located D CPs (CPs D6, D8, D9, D12, D13, and D14) are only irrigated with freshwater from Snake Creek Pond. View is toward the east-southeast.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 37

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010088.JPG

Date of Photo: 07/10/2024

Time of Photo: 0957

GPS Lat/Long: 35° 19' 38.5566"N 97° 53' 36.5208"W (Location Corrected via Bing Map)

Photographer: Juan Ibarra

Description: A concrete drainage channel is used to move excess irrigation water from CP D6 into the RO Pond via the large white PVC pipe that goes under the road. The southwesterly located D CPs (CPs D6, D8, D9, D12, D13, and D14) are only irrigated with freshwater from Snake Creek Pond. View is toward the south.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 38

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010089.JPG

Date of Photo: 07/10/2024

Time of Photo: 0958

GPS Lat/Long: 35° 19' 38.5566"N 97° 53' 36.5208"W (Location Corrected via Bing Map)

Photographer: Juan Ibarra

Description: The concrete drainage channel coming off CP D6 discharges into the RO Pond via a white PVC pipe on the left that protrudes into the pond. The PVC pipe is approximately 40 feet long. The drainage system is used to move excess irrigation water from CP D6 into the RO Pond. The southwesterly located D CPs (CPs D6, D8, D9, D12, D13, and D14) are only irrigated with freshwater from Snake Creek Pond. View is toward the northwest.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 39

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010090.JPG

Date of Photo: 07/10/2024

Time of Photo: 0958

GPS Lat/Long: 35° 19' 38.352"N 97° 53' 36.549"W (Location Corrected via Bing Map)

Photographer: Juan Ibarra

Description: The discharge coming off D6 before it goes under the road and into the RO Pond. The discharge flow is entering the pipe from the right side. This is the site of sample location of Sample 3 - "D6 runoff into RO Pond". View is toward the south.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 40

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010091.JPG

Date of Photo: 07/10/2024

Time of Photo: 1025

GPS Lat/Long: 35° 19' 38.352"N 97° 53' 36.549"W (Location Corrected via Bing Map)

Photographer: Juan Ibarra

Description: Sample 3 is taken from "D6 runoff into RO Pond" as the discharge comes off D6 before it goes under the road and into the RO Pond between 1016 and 1018. The discharge was sampled for Nitrates, Total Phosphorus and E. coli. An E. coli blank was also taken at this location. View is toward the south.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 41

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010092.JPG

Date of Photo: 07/10/2024

Time of Photo: 1033

GPS Lat/Long: 35°19'37.0"N 97°53'37.0"W

Photographer: Juan Ibarra

Description: Cattle pens located on the opposite shore as the discharge seen in Photos 38-41. These pens are located west of the Sample 3 location. The pens are sloped toward the RO Pond and will discharge storm water runoff into the RO Pond. Note the stained discharge channels coming off the cattle pens. View is toward the west-northwest.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 42

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010093.JPG

Date of Photo: 07/10/2024

Time of Photo: 1103

GPS Lat/Long: 35°20'06.0"N 97°53'30.0"W

Photographer: Juan Ibarra

Description: Sample 4 is taken from the "Wetlands at Silage Bunkers" area just a few feet (maybe 10') to the north of where the silage liquor runoff had entered the wetland area at 1058. Sample 4 was analyzed for Nitrates, Total Phosphorus and E. coli. View is toward the east.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 43

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010094.JPG

Date of Photo: 07/10/2024

Time of Photo: 1119

GPS Lat/Long: 35° 20' 39.6024"N 97° 53' 39.8184"W (Location Corrected via Bing Map)

Photographer: Juan Ibarra

Description: A PVC pipe that is used to fill the Historic Safety Pond (HSP) with fresh water from either Buggy Creek or the Canadian River. View is toward the northwest.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 44

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010095.JPG

Date of Photo: 07/10/2024

Time of Photo: 1141

GPS Lat/Long: 35°20'37.0"N 97°53'34.0"W

Photographer: Juan Ibarra

Description: Sample 5 is taken from the "HSP NNW of D7" at 1136. Sample 5 was analyzed for Nitrates, Total Phosphorus and E. coli. View is toward the north.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 45

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma

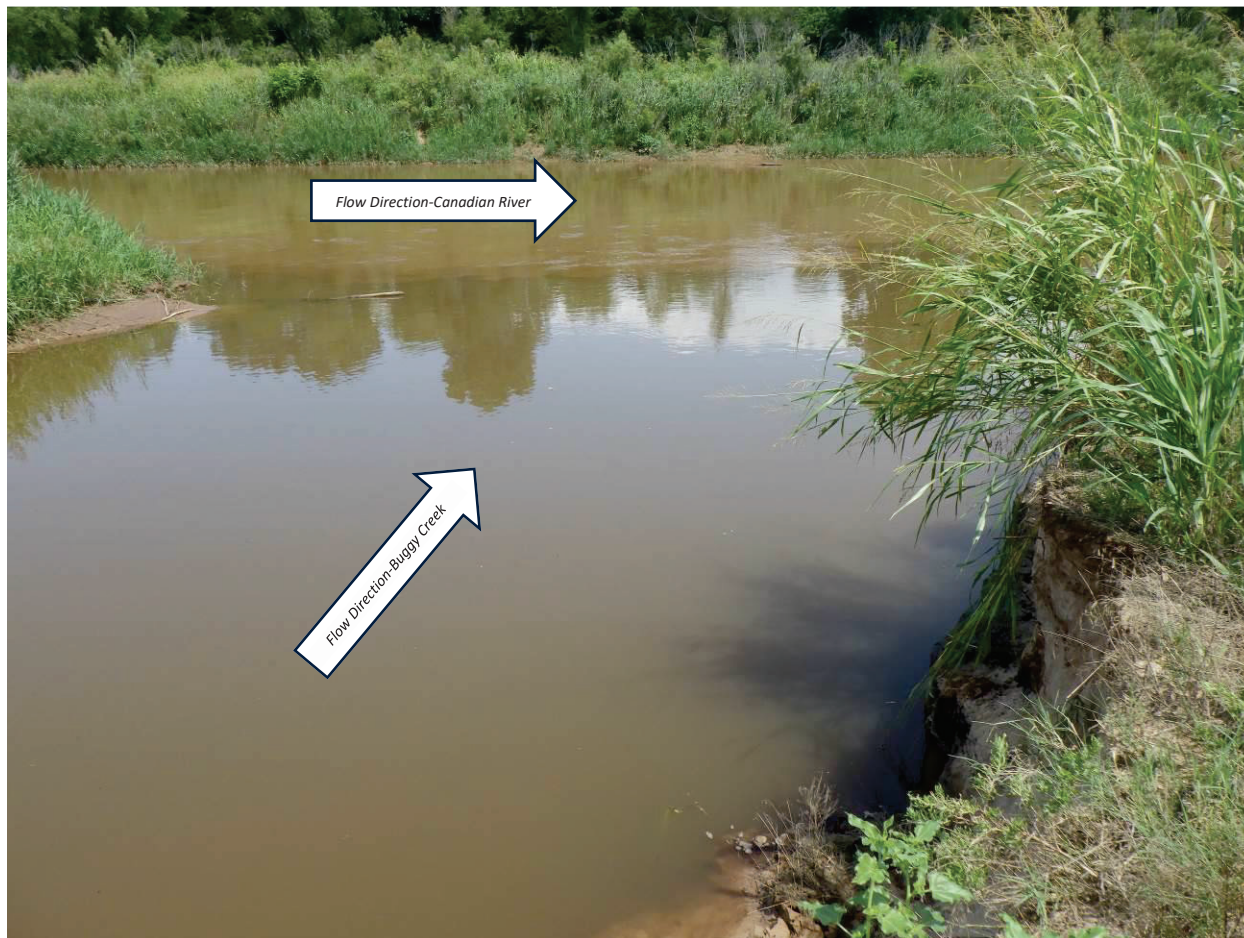


Photo File Name: R0010096.JPG

Date of Photo: 07/10/2024

Time of Photo: 1154

GPS Lat/Long: 35° 20' 52.1376"N 97° 53' 28.8306"W (Location Corrected via Bing Map)

Photographer: Juan Ibarra

Description: The confluence of Buggy Creek at the Canadian River. Buggy Creek is in the foreground, and the Canadian River is in the background flowing from west to east (left to right). View is toward the north.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 46

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010097.JPG

Date of Photo: 07/10/2024

Time of Photo: 1217

GPS Lat/Long: GPS coordinates were not recorded on the camera 35° 21' 20.142"N 97° 50' 55.4892"W
(Location via Bing Map)

Photographer: Juan Ibarra

Description: The mortality compost piles on CP M3. The photo was taken near the oil battery located on the north side of M3. View is toward the southeast.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 47

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010098.JPG

Date of Photo: 07/10/2024

Time of Photo: 1235

GPS Lat/Long: 35° 20' 43.9836"N 97° 48' 16.9842"W (Location Corrected via Bing Map)

Photographer: Juan Ibarra

Description: A dam has been constructed by Braum's across Dry Creek, about 150' upstream of the confluence with the Canadian River. This issue will be further evaluated with ODAFF, and the EPA Wetlands team after the follow-up inspection in September 2024. A second dam was also constructed about 2100' further upstream on Dry Creek. View is toward the north.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 48

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010099.JPG

Date of Photo: 07/10/2024

Time of Photo: 1236

GPS Lat/Long: 35° 20' 43.9836"N 97° 48' 16.9842"W

Photographer: Juan Ibarra

Description: A dam has been constructed by Braum's across Dry Creek, about 150' upstream of the confluence with the Canadian River. This issue will be further evaluated with ODAFF, and the EPA Wetlands team after the follow-up inspection in September 2024. View is toward the south.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 49

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010100.JPG

Date of Photo: 07/10/2024

Time of Photo: 1236

GPS Lat/Long: 35° 20' 43.9836"N 97° 48' 16.9842"W

Photographer: Juan Ibarra

Description: A small flow of water is seeping thru the dam that Braum's constructed and it's flowing into the Canadian River. Ripples of the flow is shown in this photo. View is toward the south.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 50

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010101.JPG

Date of Photo: 07/10/2024

Time of Photo: 1245

GPS Lat/Long: 35°21'06.0"N 97°49'17.0"W

Photographer: Juan Ibarra

Description: A large, ponded area of overapplied irrigation wastewater on CP M11. View is toward the northwest.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 51

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Photo File Name: R0010102.JPG

Date of Photo: 07/10/2024

Time of Photo: 1250

GPS Lat/Long: 35°21'06.0"N 97°49'18.0"W

Photographer: Juan Ibarra

Description: Another view of the large, ponded area of overapplied irrigation wastewater on CP M11.
View is toward the northwest.

Appendix 2

Site Aerial and Facility Map

W.H.B. Cattle, LP / Braum's Dairy
Inspection Date 07/9-10/2024

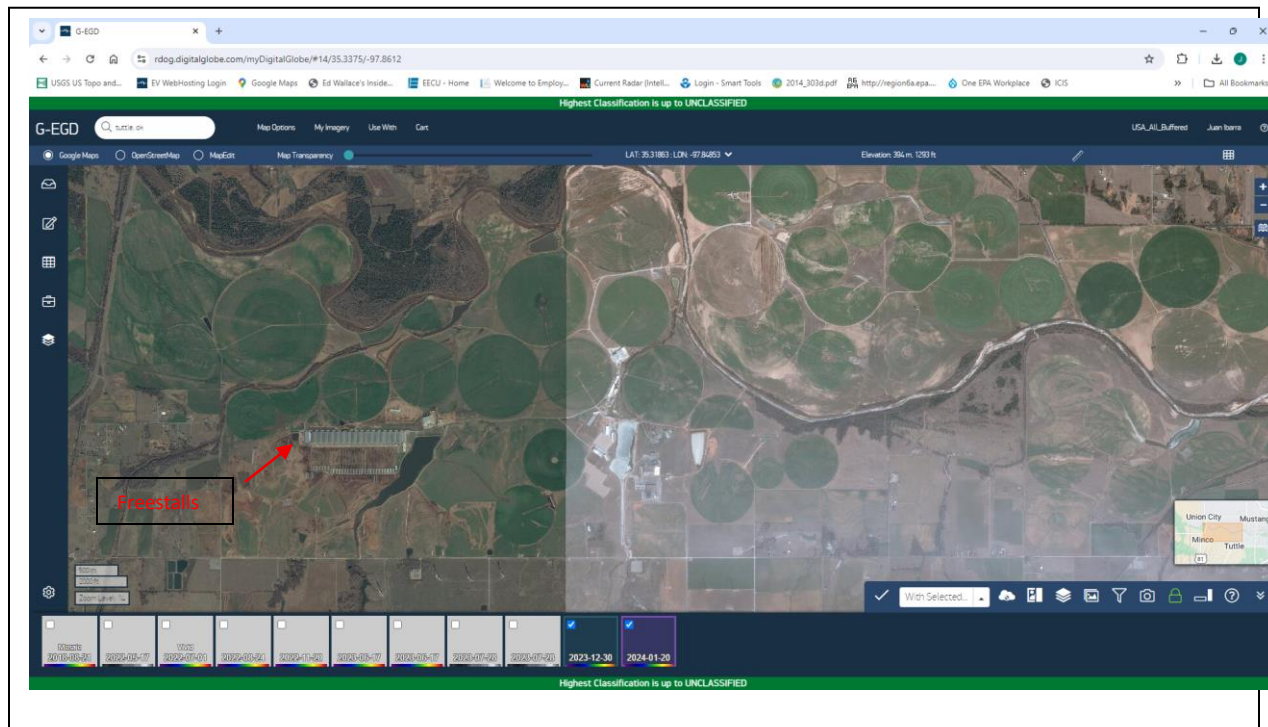


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Site Aerial

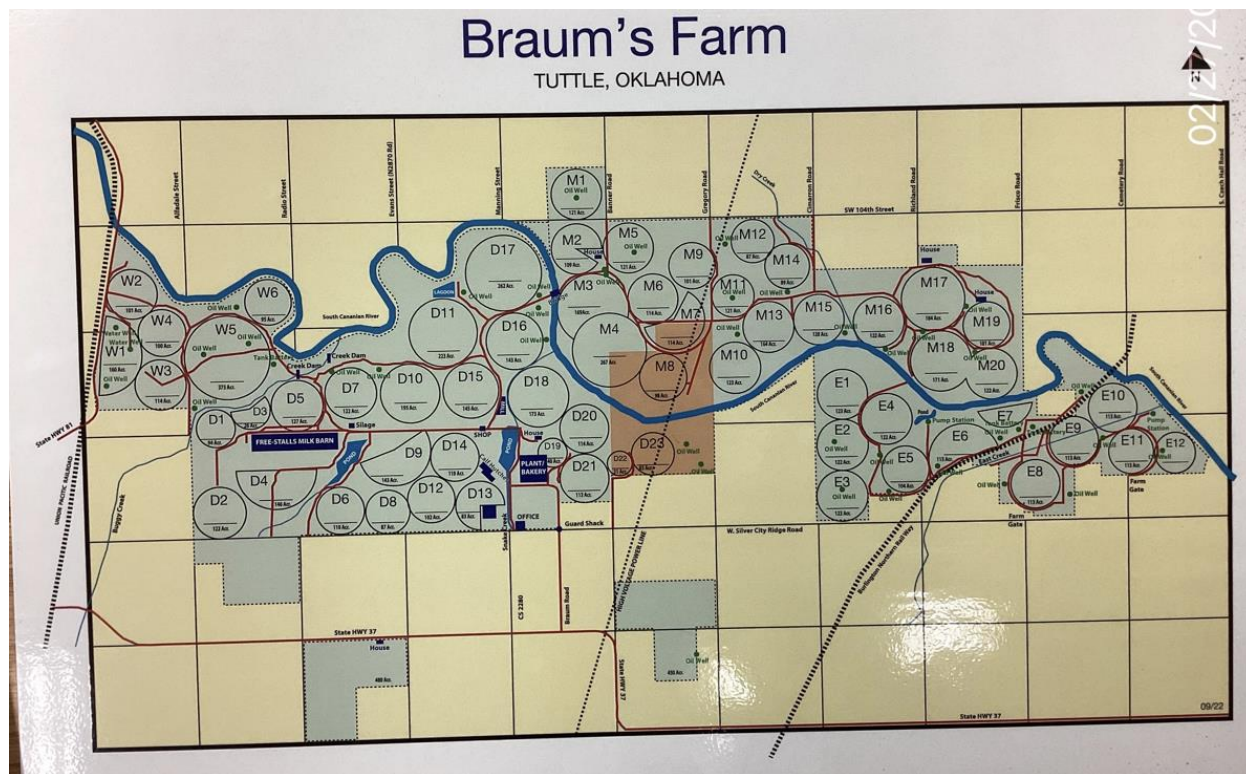
Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Photograph Log

Facility Map

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Appendix 3

Still Photo taken from ODAFF Aerial Footage of 2/28/2024

Discharge off CP W5 into Buggy Creek: ECAD

SharePoint Site [2-28-24 Historic Safety pond area D-7
D-5 adjacent..MP4](#)

W.H.B. Cattle, LP / Braum's Dairy
Inspection Date 07/9-10/2024



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Still Photo taken from ODAFF Aerial Footage of 2/28/2024 Discharge off CP W5 into Buggy Creek

Location: Braum's Dairy		
City: Tuttle	County: Grady	State: Oklahoma



Appendix 4

Quality Assurance Project Plan

Region 6 - Enforcement & Compliance Assurance Division

QUALITY ASSURANCE PROJECT PLAN

Braum's Dairy and Processing Plant

491 County Street 2880. Tuttle, OK 73089

Project Identifier: OKG010029

Prepared by:

Carl E. Wills

R6-ECDWT

Prepared for:



U.S. Environmental Protection Agency, Region 6
Enforcement & Compliance Assurance Division
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

July 3, 2024

SECTION A – PROJECT MANAGEMENT

A.1 Title of Plan and Approval

Braum's Dairy and Processing Plant Quality Assurance Project Plan

Prepared by:

CARL WILLS

Digitally signed by CARL WILLS
Date: 2024.07.03 11:14:42 -05'00'

Date: July 3, 2024

Carl E. Wills, Environmental Geologist, (R6-ECDWT)

Approvals:

ANTHONY LOSTON

Digitally signed by ANTHONY LOSTON
Date: 2024.07.03 11:28:29 -05'00'

Date: July 3, 2024

Anthony Loston, Section Chief, (R6-ECDWT)

**Paul D. James, Jr.,
P.G.**

Digitally signed by Paul D. James,
Jr., P.G.
Date: 2024.07.03 12:35:52 -05'00'

Date: July 3, 2024

Paul James, Delegated Regional Field Quality Manager (R6-LAS)

A.2 Table of Contents

SECTION A – PROJECT MANAGEMENT	2
A.1 Title of Plan and Approval	2
A.2 Table of Contents	3
A.3 / A.4 Project Organization and Distribution List	4
Table A.1: Roles & Responsibilities/Distribution List	4
Figure A.1: Project Organization Chart	4
A.5 Problem Definition and Background	5
A.6 Project/Task Description	5
A.7 Quality Objectives & Criteria	6
A.8 Special Training/Certification	7
A.9 Documents and Records	7
SECTION B – DATA GENERATION & ACQUISITION	8
B.1 Sampling Process Design (Experimental Design)	8
Table B.1 Samples by Matrix	9
B.2 Sampling Methods	10
B.3 Sampling Handling & Custody	11
Figure B.3. Official Chain of Custody Example	12
B.4 Analytical Methods	13
Table B.4 – Analytical Methods, Preservatives and Containers for Samples	14
B.5 Quality Control	15
B.6 Instrument/Equipment Testing, Inspection, and Maintenance	16
B.7 Instrument/Equipment Calibration and Frequency	16
B.8 Inspection/Acceptance of Supplies & Consumables	16
B.9 Data Acquisition Requirements for Non-Direct Measurements	16
B.10 Data Management	16
SECTION C – ASSESSMENT AND OVERSIGHT	17
C.1 Assessments and Response Actions	17
C.2 Reports to Management	17
SECTION D – DATA VALIDATION AND USABILITY	17
D.1 Data Review, Verification, and Validation	17
D.2 Verification and Validation Methods	18
D.3 Reconciliation with User Requirements	18
APPENDIX A: FACILITY MAP	19

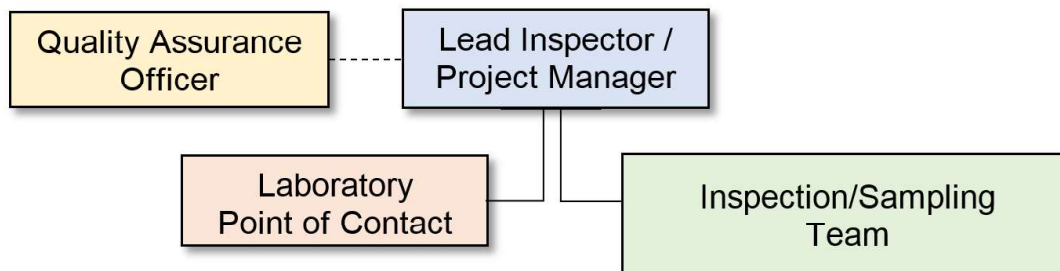
A.3 / A.4 Project Organization and Distribution List

The individuals participating in the project and their specific roles and responsibilities are shown below. These individuals will receive copies of the approved Quality Assurance Project Plan (QAPP) and subsequent revisions:

Table A.1: Roles & Responsibilities/Distribution List

Individual(s) Assigned:	Responsible for:	Authorized to:
Juan Ibarra R6-ECDWT 214-665-8493	Lead Inspector / Project Manager	Project Decisions, Lead and Assist Team Member(s), Collect and Assess Data
Paul James R6-LSDLS 214-665-6445	Delegated Quality Assurance Officer	Review and Approve QAPP
Danny Chance Accurate Labs 800-516-5227, Ext. 113	Laboratory Point of Contact	Lab coordination for scheduling, analyses, validation, and deliverables.
Lucas Bomar R6-ECDWT 214-665-2182	Inspection/Sampling Team Member(s)	Inspect / Sample / Collect Data
Paul Juarez R6-ECDWT 214-665-7247		
Click here to enter name. Organization Contact Number		
Click here to enter name. Organization Contact Number		

Figure A.1: Project Organization Chart



For current R6 Organization Chart, click on the following link:

[https://usepa.sharepoint.com/sites/R6_Development/r6app/keypers/Lists/Organization%20List/AllItems.aspx?_utma=172919287.230895279.1551278682.1560952790.1560952937.338&_utmb=172919287.6.9.1560956460225&_utmc=172919287&_utmx=-&_utmz=172919287.1527106362.1.1.utmcsr=\(direct\)|utmccn=\(direct\)|utmcmd=\(none\)&_utmv=-&_utmk=55076843](https://usepa.sharepoint.com/sites/R6_Development/r6app/keypers/Lists/Organization%20List/AllItems.aspx?_utma=172919287.230895279.1551278682.1560952790.1560952937.338&_utmb=172919287.6.9.1560956460225&_utmc=172919287&_utmx=-&_utmz=172919287.1527106362.1.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none)&_utmv=-&_utmk=55076843)

A.5 Problem Definition and Background

Problem(s) to be resolved, decision(s) to be made and/or hypothesis to be tested:

The purpose of this QAPP will evaluate the potential for possible ground and surface water contamination. Review the pre-inspection plan for additional details.

Historical & background information:

In 1968, the Braum's family started their operation in Tuttle, Oklahoma. From there, Braum's grew the business today with stores in 5 states, and with the Braum's dairy farm and processing plant in Tuttle, Oklahoma, at the heart of the operation. Braum's continues to be a family business to this day. In 1993, Braum's construct crews built what is one of the largest milking operations of its kind in the world. This facility consists of a milk barn and 17 freestall barns (covering 35 acres) that house the Braum's private dairy herd of 10,000 cows on approximately 16,500 acres. In 2010, Braum's built a new 240,000 square-foot bakery and warehouse distribution facility adjacent to the processing plant on the Tuttle Farm.

A.6 Project/Task Description

All sampling efforts will begin the week of July 8 through July 10, 2024. Due to holding times, laboratory sample preparations and travel logistics, the field team will be dropping off samples at the laboratory located in Oklahoma City, OK no later than 2:00 PM of the day of collection. The laboratory will be contacted each morning the day of collection to notify them that samples will be arriving that afternoon, as well as another call when leaving the site of the total number of samples to be delivered.

This QAPP has been prepared to address:

These samples will provide information to aid in determining if lagoon mismanagement, land application or any other operation at this facility could or have adversely affected ground or surface water quality within Waters of the U.S. The results of the sampling and inspection maybe used to compel the operator into compliance agreement and compliance assistance by the EPA, in cooperation with other State and Federal partners. The potential for future enforcement action is also possible.

The work to be performed includes:

Objectives include the collection of surface water samples from land application areas, drainage ways, and emergency runoff lagoons, at points that the discharge would potentially impact Waters of the U.S. with nutrients (i.e., nitrogen components and phosphorus) or bacteria. We may also collect contaminated runoff samples that enter a waterway from areas to which manure or wastewater has been improperly applied or improperly stored.

All enforcement wastewater or potentially impacted wastewater samples will be hand delivered by EPA Region 6 staff to Accurate Environmental Laboratories (Lab) 12036 North Pennsylvania Ave, Oklahoma City, OK 73120, 405-751-3132. The Lab will provide proper storage, extraction, analysis, reporting and disposal of the samples provided.

List samples/measurements to be collected/made and data to be obtained:

All potentially impacted water samples will be performed per the requirements as described in the following: Nitrate as Nitrogen via EPA Method 300.0, Total Phosphorus via EPA Method 365.1, and E coli via SM9223B. During this EPA field mobilization, it is assumed that no more than 10 total samples will be collected and analysed for all three parameters. There will be no more than two E. coli samples submitted for a QA check with one per day of sampling.

Special personnel or equipment requirements:

Equipment used for sample collection will be EPA sterile bacteria bottles and certified clean containers, or containers provided by the laboratory. Personnel will be Credentialed Inspectors that meet the training requirements for CAFO Inspections, and the Safety Requirements required for field inspection work.

Proposed work schedule (dates and time of sample collection):

0700-1400 during the week of July 8 thru 11, 2024.

Products to be produced:

Laboratory data that is supported by appropriate QA/QC, which will be included into a facility inspection report.

A.7 Quality Objectives & Criteria

This inspection will be conducted under the authority of Section 308 of the Clean Water Act, and in accordance with 40 CFR 136 40 CFR Part 136 - Guidelines Establishing Test Procedures for the Analysis of Pollutants.

To support this requirement, EPA has developed a systematic planning process based on a graded approach for environmental decision making called the Data Quality Objectives (DQO) Process. The DQO Process is the Agency's preferred planning process and provides quality objectives and performance criteria based on the user's determination of tolerable error in the results. For details on the DQO Process and guidance on how and when it may be used, see the "[Guidance on Systematic Planning Using the Data Quality Objectives Process \(EPA QA/G-4\) \(EPA, February 2006\)](#)." This process has limited applicability to most enforcement inspection activities, since generally only Special Projects lend themselves to development of formal DQOs and defining of error limits, hypothesis testing, etc.

All data collected shall be in accordance with the appropriate EPA methodologies and protocols found in the appropriate regulatory guidance. The data shall be used to determine the following:

1. The potential water quality impact by a CAFO on that is discharging process wastewater to a Water of the U.S.

The data must meet the approved method accuracy requirements such as those found in Industry-specific methods (40 CFR 136). All supporting QA/QC information shall be provided. The data may be used to support any future enforcement actions.

A.8 Special Training/Certification

At a minimum, field personnel have completed the required Health and Safety 24-hour initial and 8-hour annual training that is mandatory under OSHA 29 CFR 1910.120(e)(8) and EPA Order 3500.1 requirements. Under various programs, this training is mandatory to maintain inspector credentials. All non-credentialed personnel (e.g. inspectors in training) must meet the 29 CFR 1910.120(e)(8) requirements, and should be in accompanied by credentialed personnel while inspecting/sampling at the facility/site. Inspection personnel must be familiar with and follow bio-security procedures.

Additional Special Training:

EPA course on Defensible Sampling and on the job training with senior inspectors.

A.9 Documents and Records

The records for this project will include miscellaneous correspondence, field notes, laboratory analytical reports, photo logs, and inspection reports. All laboratory reports will be submitted to the EPA Lead Inspector/Project Manager. Field notes will include observations about facility conditions at the site(s) where samples are collected. Any noteworthy deviation from the procedures specified in the QAPP will be recorded in the field activity logs. Laboratory analytical reports will be generated for all the samples received by the laboratory. Each set of samples will include a chain of custody form signed by the samplers and the laboratory recipient. All samples will be delivered by an EPA Field Team Member.

The EPA Project Manager will disseminate copies of the QAPP to the people listed in the distribution list once it is approved. Any revisions to the QAPP will be numbered sequentially. It will be the responsibility of the EPA Project Manager to ensure that each person on the distribution list receives copies of any revisions. See Table B.1.

All EPA records and documents from this project will be handled according to the following [EPA Region 6 Field Activities Quality System Procedures](#):

- Records Management - R6PROC-003
- Management of Sampling and Environmental Data - R6PROC-004
- Field Documentation - R6PROC-005
- Field Equipment Inventory and Management - R6PROC-006
- Field Inspections and Investigations - R6PROC-007
- Field Activities Report Preparation and Distribution- R6PROC-008

The designated and/or contracted laboratory will manage the testing and original raw data from this project (both hard copy and electronic) in accordance with their established and accredited procedures. Any deviations from these procedures shall be approved by the EPA Project Manager before implementation.

SECTION B – DATA GENERATION & ACQUISITION

B.1 Sampling Process Design (Experimental Design)

Describe the experimental data generation or data collection design for the project:
The decision on whether or not to collect a sample will be contingent upon the following factors:

1. The potential water quality impact by a CAFO that is discharging process wastewater to a Water of the U.S.

Because these samples are to be the result of an inspection and/or a one-time inspection/sampling event, a detail process design is not feasible or appropriate. However, the procedures to be followed from initiation to final report could be described as followed:

- Step 1: Lead Inspector assembles sampling equipment, chain of custody forms, pre-inspection plan, QAPP, sampling equipment/containers, ice chests, etc. and notifies laboratory to expect samples of a particular matrix for a specific analysis (see Table B.1).
- Step 2: Inspection Team proceeds to field for observation, data gathering, and sample collection, if the situation warrants.
- Step 3: Inspection Team transports/ships sample(s) along with chain of custody forms to the laboratory for analytical testing.
- Step 4: Analytical results received from laboratory, inspector evaluates data, attaches to report along with a QA/QC review, and takes any required action.

Types and number of samples required:

Sampling network design & rationale for design: To be determined in the field.

Table B.1 Samples by Matrix

Matrix	# of Matrix Samples	# of Field Blank**	# of Trip Blank*	# of Blind Duplicate	# of MS/MSD	Total # of Samples	Analysis <i>Example:</i> TCLP RCRA 8 Metals SW846 6010C/7471
Water	≤10	2	0	0	***	≤12	E coli (SM9223B)
Water	≤10	0	0	0	***	≤10	Nitrate-N (EPA 300.0)
Water	≤10	0	0	0	***	≤10	Total Phosphorous (EPA 365.1)
Choose an item.							
Choose an item.							
Choose an item.							
Choose an item.							
Choose an item.							
Choose an item.							
Choose an item.							

Note: *Trip blanks are for VOC analyses only. ** Field blanks column may also include rinsate blanks.
 *** Lab will perform MS/MSD as part of their required QA/QC.

Typical Analytical Method No.

Volatiles Organics by GC/MS

SW846 - 8260B
 EPA500 - 524.2
 EPA600 - 624
 CLP - VOA - MC
 CLP - VOA - LC
 Std. Methods 6210B
 Std. Methods 6210C
 Std. Methods 6210D

Volatiles Organics by GC

SW-846 - 8021B
 EPA500 - 502.2
 EPA600 - 601
 EPA600 - 602
 Std. Methods 6220B
 Std. Methods 6220C
 Std. Methods 6230B
 Std. Methods 6230C
 Std. Methods 6230D

Semi-Volatile Organics by GC/MS

SW846 - 8270D
 EPA500 - 525.2
 EPA600 - 625
 CLP - SVOA - MC
 CLP - SVOA - LC
 CLP - PEST - LC
 Std. Methods 6410

PAH

SW846 - 8310 (HPLC)

Inorganic Analytes

SW- 846 7000 Series (AA)
 SW- 846 6010C (ICP)
 SW- 846 6020A (ICP-MS)
 EPA 200 Series (AA)
 EPA 200.7 (ICP)
 EPA 200.8 (ICP-MS)
 CLP Inorganic Method (ICP)
 CLP Inorganic Method (AA)
 Std. Methods 3000 Series (AA)
 Std. Method 3120 (ICP)

Herbicides

SW846 - 8151A
 EPA 500 - 515.4
 EPA 500 - 515.2
 Std. Methods 6640

Pesticides & PCBs

SW846 - 8081B
 SW846 - 8082A
 EPA500 - 508
 EPA600 - 608
 CLP-PEST- MC
 Std. Methods 6630

Sampling locations & frequency of sampling: The analytical methods, sample containers, holding times, and sample preservation requirements are presented in Table B.4 and apply to EPA Sampling Methods: 40 CFR 136.

Sample matrices:
See Table B.1.

Classification of measurement parameters:
Critical – For enforcement case development.

Validation study information, for non-standard situations:
N/A: Standard laboratory validation is required.

B.2 Sampling Methods

Identify sample collection procedures:

Samples will be collected from the production area discharge point into the waterway or location(s) to be determined by EPA Project Manager. Samples will be collected directly into the sample container.

Identify sampling methods and equipment:

Sampling methods and regulatory citation: The analytical methods, sample containers, holding times, and sample preservation requirements are presented in Table B.4 and apply to EPA Sampling Methods: 40 CFR 136.

Sampling equipment available during the inspection/sampling event:
None required, as samples will be collected directly into the sample containers at the point of the production area discharge into the waterway (creek, stream, or river).

Implementation requirements: Will be based on based on the Lead Inspector's field observations, field conditions, facility operations and/or timing.

Sample preservation requirements: See Table B.4 – Analytical Methods, Preservatives and Containers for Samples.

Decontamination procedures: Decon not required, as we will use disposable PPE and dedicated (One-Time-Use) sampling containers.

Any support facilities needed: At this time, no support appears to be needed.

Specific performance requirements for the sampling methods:

Detection limits are defined in contract laboratory's QA manual.

Reporting limits are defined in contract laboratory's QA manual.

These limits will be verified to assure that they will not exceed the regulatory limit of no discharge for CAFOs.

If a failure in the sampling or measurement system occurs, the Lead Inspector/Project Manager must be notified. The Quality Assurance Officer and/or Laboratory Point of Contact will act as advisors to the Lead Inspector/Project Manager. The Lead Inspector/Project Manager will be responsible for any decision concerning corrective action. Corrective action in the field or in the laboratory will be documented in the field notes and/or in the final laboratory analytical report based on the action(s) required.

B.3 Sampling Handling & Custody

The date and time of sample collection will be recorded on the field activity log and on all samples: additionally, that information will be recorded on the Chain of Custody (COC) form. The desired analytical tests to be performed and any preservatives used will also be noted on the COC form. An example COC format is attached in Figure B.3.

Prior to shipment, all samples shall be in custody with the inspection/sampling team. Sample team shall keep all samples in an environment that maintain its preservation (e.g., inside cooler(s) with double bagged ice and packing material). In lieu of tied on tags, stick on sample labels may be used if they contain the following information: sampler name, date, time, station location, sampler signature, sample # and analysis requested. Custody seals shall be used on each sample container and sample coolers, unless samples are hand delivered to the designated laboratory by a member of the inspection/sampling team along as the custody chain is not breached.

Figure B.3. Official Chain of Custody Example

[illegible]

B.4 Analytical Methods

Identify analytical methods to be followed (with all options) & required equipment:

See Table B.4 – Analytical Methods, Preservatives and Containers for Samples.

Specify any specific method performance criteria:

The laboratory's NELAC Certification defines all sample parameter performance criteria, as well as the laboratory's QA manual.

Provide validation information for non-standard methods:

N/A

Identify procedures to follow when failures occur:

If failure(s) occur during the analysis, the Laboratory Point of Contact will contact the Lead Inspector/Project Manager within 24-hours, and communicate the failure and identify potential corrective remedies. The Lead Inspector/Project Manager will make the determination on the remedy. The failure(s) and corrective remedies will be document via email and cc: the first-line supervisor and the QA Officer.

Identify individuals responsible for corrective action and appropriate documentation:

Juan Ibarra (EPA Project Manager), and Danny Chance (Laboratory Technical Director).

Table B.4 – Analytical Methods, Preservatives and Containers for Samples

Sample Matrix	# of Samples	Analyte / Analyte Sweep	Analytical Method No.	Holding Time (Days)	TCLP	Size and Type of Containers	# of Containers per Sample	Preservatives
Water	≤10	E. coli	SM9223B	8-hours		100-mL sterile coliform bottle	1	Sodium Thiosulfate/Ice (≤6°C)
Water	≤2	E. coli (blank)	SM9223B	8-hours		100-mL sterile coliform bottle	1	Sodium Thiosulfate/Ice (≤6°C)
Water	≤10	Nitrate-N	EPA 300.0	48-hours		500-mL polyethylene	1	Ice (≤4°C)
Water	≤10	Total Phosphorus	EPA 365.1	28		500-mL polyethylene	1	H2SO4/Ice (≤4°C)
Choose an item.						Choose an item.		Choose an item.
Choose an item.						Choose an item.		Choose an item.
Choose an item.						Choose an item.		Choose an item.
Choose an item.						Choose an item.		Choose an item.
Choose an item.						Choose an item.		Choose an item.
Choose an item.						Choose an item.		Choose an item.

Typical Analytical Method No.

Volatiles Organics <u>by GC/MS</u> SW846 - 8260B EPA500 - 524.2 EPA600 - 624 CLP - VOA - MC CLP - VOA - LC Std. Methods 6210B Std. Methods 6210C Std. Methods 6210D	Volatiles Organics <u>by GC</u> SW846 - 8021B EPA500 - 502.2 EPA600 - 601 EPA600 - 602 Std. Methods 6220B Std. Methods 6220C Std. Methods 6230B Std. Methods 6230C Std. Methods 6230D	Semi-Volatile Organics <u>by GC/MS</u> SW846 - 8270D EPA500 - 525.2 EPA600 - 625 CLP - SVOA - MC CLP - SVOA - LC CLP - PEST - LC Std. Methods 6410 PAH (HPLC) SW846 - 8310	Inorganic Analytes SW- 846 7000 Series (AA) SW- 846 6010C (ICP) SW- 846 6020A (ICP-MS) EPA 200 Series (AA) EPA 200.7 (ICP) EPA 200.8 (ICP-MS) CLP Inorganic Method (ICP) CLP Inorganic Method (AA) Std Methods 3000 Series (AA) Std. Method 3120 (ICP)	Herbicides SW846 - 8151A EPA 500 - 515.4 EPA 500 - 515.2 Std. Methods 6640	Pesticides & PCBs SW846 - 8081B SW846 - 8082A EPA500 - 508 EPA600 - 608 CLP-PEST- MC Std. Methods 6630
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B.5 Quality Control

Identified below are a few quality control samples that will be collected.

Trip Blanks

Number of Blank(s): Example: A field blank will be collected each day of sampling in lieu of any trip blanks.

Trip Blank Type: NA

Describe Preparation: NA

Field Blanks

Number of Blank(s): Example: One field blank per day of sampling with a maximum of two. Field Blank Type: E coli will be evaluated on the sample(s) collected. The sample will consist of deionized (DI) water from the DI dispenser located in Room 104 at the Addison COOP location.

Describe Preparation: Type II reagent grade water from the R6-Addison sample prep room (104) and will be placed in sample containers appropriate for the analytes of interest with appropriate preservation.

Equipment Rinsate Blanks

NA

Rinsate Type: NA

Describe Preparation: NA

Blind Replicate or Duplicate Samples

NA

Sample Matrix: NA

Location: NA

Matrix Spike (MS) / Matrix Spike Duplicate (MSD) Samples

MS/MSD samples will be selected by the laboratory for their QC analysis as required by their QA program and protocols and selected at their choosing.

Sample Matrix: Water

Location: To be determined by the laboratory QA Manager.

B.6 Instrument/Equipment Testing, Inspection, and Maintenance

EPA field personnel will not utilize any field instruments during this inspection.

B.7 Instrument/Equipment Calibration and Frequency

Identify all tools, gauges, instruments, and other sampling, measuring, and test equipment used for data generation or collection activities affecting quality that must be controlled and calibrated: None.

Describe or reference how calibration will be conducted using certified equipment and/or standards with known valid relationships to nationally recognized performance standards. If no such nationally recognized standards exist, document the basis for the calibration: None.

B.8 Inspection/Acceptance of Supplies & Consumables

The EPA Project Manager will be responsible for inspecting sample containers prior to leaving for the inspection. Only new sample containers accompanied by the manufacturer's certification of pre-cleaning will be used. The sample containers will be inspected for cracks, ill-fitting lids, or other defects prior to use and will be discarded if defects are found.

B.9 Data Acquisition Requirements for Non-Direct Measurements

Records may be collected during the inspection/sampling event to document activities at the facility. Documents may be requested for a period of up to five years prior to the inspection/sampling event. These records will be used for determining the facility's compliance with the requirements of CWA.

B.10 Data Management

Data for this project will be produced both onsite and at the designated/approved Laboratory. Laboratory data will be submitted to the EPA Project Manager and will be included in the subsequent inspection report. Data collected during the inspection may be designated as Confidential Business Information (CBI) by representatives of CRS. For any information for which a CBI claim is made that information will be handled in accordance with the provisions specified for CWA CBI. All records and documents generated during this project will be handled in accordance with EPA's "Standard Operating Procedures for Record and Information Management."

SECTION C – ASSESSMENT AND OVERSIGHT

C.1 Assessments and Response Actions

Documentation and analytical results collected during this project will be evaluated to determine the compliance status as it applies to the facility's requirements under CWA. Results of this evaluation will determine what action, if any, the Agency should take in response to any Areas of Concern identified during the inspection. The magnitude and breadth of any concerns identified will determine the appropriate response on the part of the Agency which includes but is not limited to the issuance of administrative orders, administrative penalty orders, or judicial referral.

C.2 Reports to Management

This project will result in the generation of an inspection report which will include an inspection narrative, a photographic log, documents collected during the inspection, and analytical reports for all samples collected, if any.

SECTION D – DATA VALIDATION AND USABILITY

D.1 Data Review, Verification, and Validation

Data will be accepted if they meet the following criteria:

1. Field logs are complete.
2. Prior to releasing the analytical data, the laboratory staff will review both the sample and QC data to verify sample identity, instrument calibration, quantitation limits, dilution factors, numerical computations, accuracy of transcriptions, and chemical interpretations. In addition, the QC data are tabulated, and the results reviewed to ascertain whether they were within the project-required limits for accuracy and precision. Any non-conforming data will be discussed in the data package case narrative. If necessary, qualifiers are applied based on this information. The laboratory staff review will consist of a Peer review, a Senior Chemist review, a Point of Contact review, and a QA Officer review. The review will follow the US EPA National Functional Guidelines for Organic Methods Data Review (SOM02.2), US EPA National Functional Guidelines for Inorganic Data Review (ISM02.2).
3. Field data is reviewed to ensure that they are complete; that sample collection information is thoroughly documented; and that any deviations from the QAPP are noted.

4. Actual sampling locations is documented in the inspection logbook. Locations were determined using GPS instrumentation, linear measurements, and/or photographic references.
5. Sample handling procedures are documented on chain of custody forms.

Any deviations from the QAPP are to be reported in the field logs. The Lead Inspector/Project Manager will verify the contents of these logs. If the data fails to meet the criteria, they will be flagged as estimated. Any flagged data will be discussed with management to determine if the data point will be rejected, and re-sampling done.

D.2 Verification and Validation Methods

Field data will be validated by the Lead Inspector/Project Manager, and any problems identified during this project will be documented in the field logs. The laboratory supervisor will validate laboratory data according to methods established in their QA Plan.

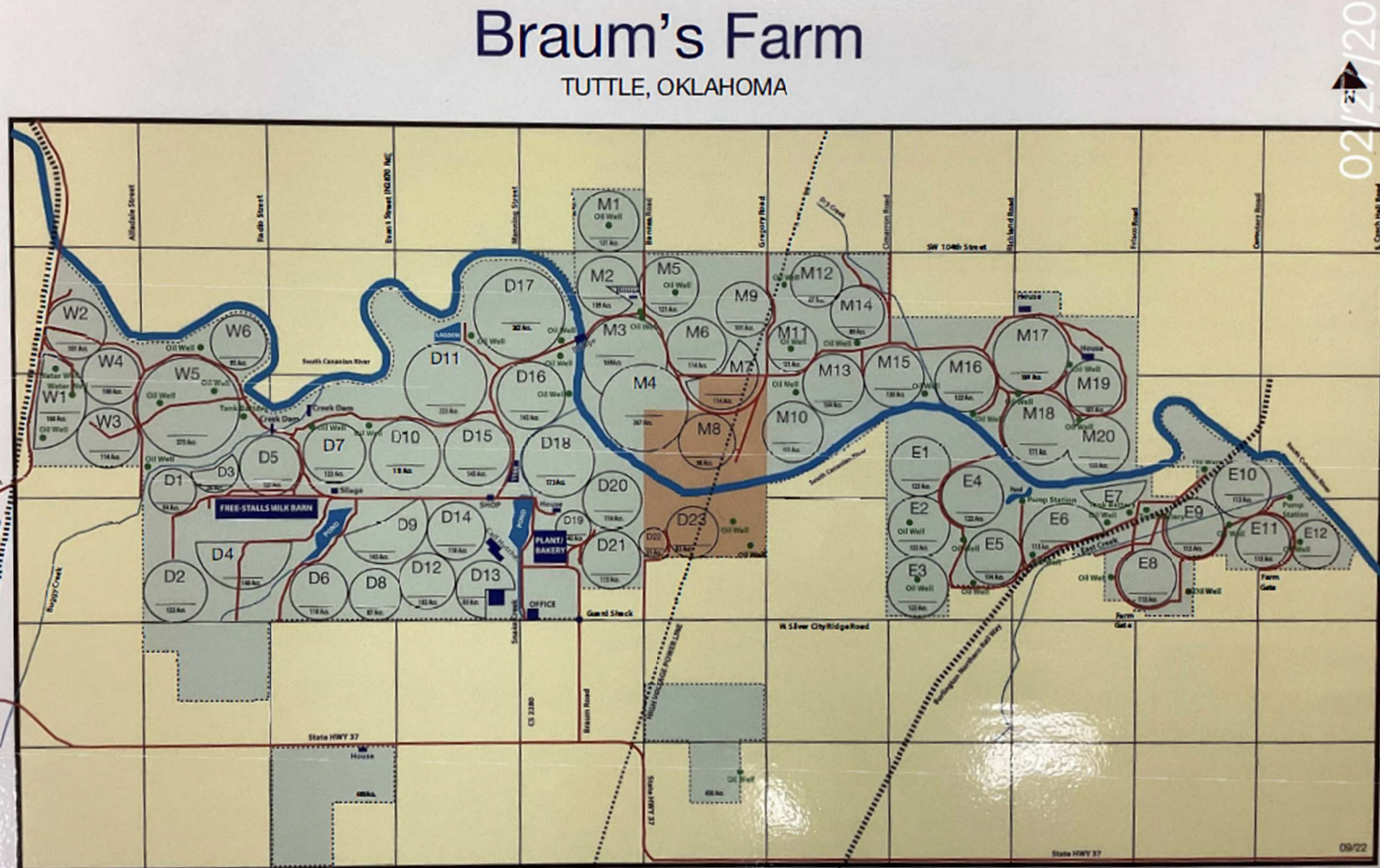
The Lead Inspector/Project Manager will review and verify field logs and analytical data reports. Any problems or deviations identified will be discussed with the project team and the first-line supervisor to determine corrective action measures.

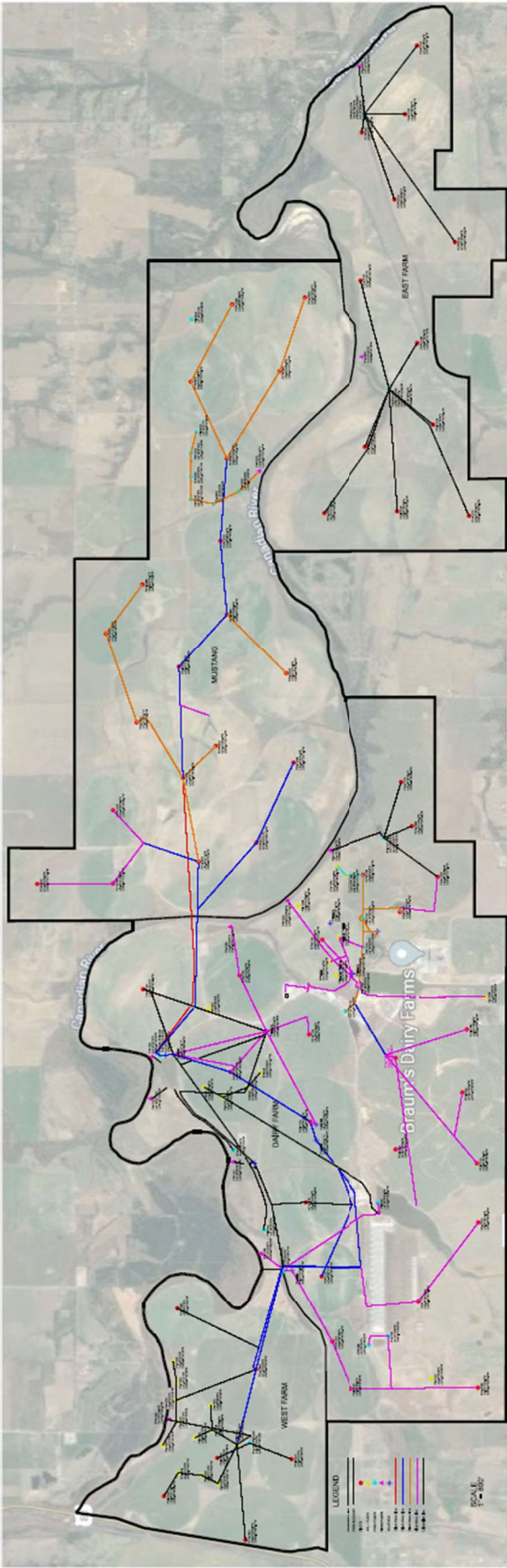
D.3 Reconciliation with User Requirements

The designated laboratory will provide a final laboratory report along with the supporting electronic data in a usable spreadsheet format. All laboratory bench sheets, and equipment calibrations will be maintained by the designated laboratory and will be available upon request. The data will be used to support any future enforcement actions or litigation.

APPENDIX A: FACILITY MAP

Braum's Farm Pivot Map





Appendix 5

Site Sampling Analytical Data



July 17, 2024

Client: EPA

1445 Ross Ave Suite 1200

Dallas, TX 75202

Requested By: Juan Ibarra



National
Environmental
Laboratory
Accreditation
Program
ODEQ TNI Certified

Sample Project Name: Braum's Dairy

Date Samples Received: July 09, 2024 Time: 15:59 sample temp upon arrival at lab = 10.20°C - On Ice

Matrix: Water

Lab Log Numbers: **GG09165-01** **GG09165-02** **GG09165-03** **GG09165-04**
 GG09165-05 **GG09165-06** **GG09165-07**

Work Order: GG09165

Report # GG09165-0717240958

EPA Lab ID#'s: **Stillwater OK00092** **Tulsa OK00983** **OKC OK00129** **ICR OK 001**

Oklahoma Certification: Stillwater NELAP WasteWater, ODEQ 8316/ Drinking Water, DEQ D9602
 NELAP Tulsa WasteWater, ODEQ 9905 / Drinking Water, DEQ D9901
 Oklahoma City NELAP WasteWater ODEQ 7202 / Drinking Water, DEQ D9937

Kansas Certification: Stillwater NELAP CERT # E-10219

Method Reference: 40 CFR 136, 141, and 261 Methods for Chemical Analysis of Water and Wastes
 EPA-600/4-79-020, March 1983. Test Methods for Evaluating Solid Wastes,
 SW-846, Final Update VI. Standard Methods 2005 (21st Edition), Standard
 Methods 2011 (22nd Edition), Standard Methods 2017 (23rd Edition) for the
 Examination of Water and Wastewater.

Analysis Reference: If qualifiers present in "Prep Info" or "Analysis Info", then analysis performed as
 follows: @= Tulsa Lab and * = OKC Lab. If no qualifiers present, then analysis
 performed at Stillwater Lab.

Accurate Environmental Laboratories certify that the test results performed meet
 all requirements of TNI. Any exceptions to this can be found in the report notes,
 Quality Control section, or Method/Parameter section of the report.

- No cert. = Laboratory does not carry certification for this method/analysis.
- Non-TNI = Laboratory has state certification but method does not fall under
 TNI certification.

This report is to only be replicated in its entirety.

Revised or Amended reports supersede all previous reports.

Accurate Environmental sampling protocol was followed for any sampling
 performed by Accurate Field Services.

Field accreditation certification only applies to wastewater analysis. Field analysis
 for drinking water methods are not offered as part of the ODEQ's field
 certification program.

Sample: W5 at E. Road**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/9/24 12:34

Lab Log# GG09165-01

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
E Coli IDEXX QuantiTray SM9223B	Escherichia Coliform	16.9	MPN/100mL	1.0	07/09/24 16:28 *BSW	07/10/24 16:40 *BSW

Sample: W5 at E. Road MPN Blank**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/9/24 12:34

Lab Log# GG09165-02

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
E Coli IDEXX QuantiTray SM9223B	Escherichia Coliform	BPQL	MPN/100mL	1.0	07/09/24 16:28 *BSW	07/10/24 16:40 *BSW

Sample: W5 at E. Road**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/9/24 12:39

Lab Log# GG09165-03

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
Phosphorus (P), Total - EPA 365.1	Phosphorus	0.881	mg/L	0.025	07/11/24 09:35 KRH2	07/16/24 15:41 KRH2

Sample: W5 at E. Road**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/9/24 12:43

Lab Log# GG09165-04

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
Nitrate EPA 300.0	Nitrate as N	BPQL	mg/L	0.50	07/11/24 11:00 KMK	07/11/24 13:35 KMK

Sample: Confl. at Buggy Creek**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/9/24 13:31

Lab Log# GG09165-05

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
E Coli IDEXX QuantiTray SM9223B	Escherichia Coliform	43.7	MPN/100mL	1.0	07/09/24 16:28 *BSW	07/10/24 16:40 *BSW

Sample: Confl. at Buggy Creek**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/9/24 13:46

Lab Log# GG09165-06

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
Phosphorus (P), Total - EPA 365.1	Phosphorus	0.668	mg/L	0.025	07/11/24 09:35 KRH2	07/16/24 15:42 KRH2

Sample: Confl. at Buggy Creek**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/9/24 13:42

Lab Log# GG09165-07

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
Nitrate EPA 300.0	Nitrate as N	BPQL	mg/L	0.50	07/11/24 11:00 KMK	07/11/24 13:58 KMK

Notes and Definitions

MCL	Analyte concentration may exceed Maximum Contaminant Limit (MCL) for EPA Primary or Secondary Drinking Water Regulations.
###	Analyte concentration may exceed regulatory limit.
PQL	Practical Quantitation Limit - the method reporting limit (MRL) adjusted for any dilutions or other changes made to the sample to deal with interferences/matrix effects
BPQL	Below Practical Quantitation Limit (if applicable).

The "Prep Date" of the QC analysis coincides with the characters of the appropriate QC Lab ID. (Example: 19 A 02 15 - BLK = 2019, Jan 2, Batch #15 - Blank)

Lab Manager

A handwritten signature in black ink on a light purple rectangular background. The signature appears to be 'Dg Cu'.

Quality Control Data

Test results performed meet all method and TNI requirements unless otherwise noted.

Blank Data

QC Lab #	Test Group	Test	Result	PQL	Flags
24G1142-BLK1	Phosphorus (P), Total - EPA 365.1	Phosphorus	BPQL mg/L	0.025	
24G0959-BLK1	E Coli IDEXX QuantiTray SM9223B	Escherichia Coliform	BPQL MPN/10 0mL	1.0	
24G1180-BLK1	Nitrate EPA 300.0	Nitrate as N	BPQL mg/L	0.50	

Laboratory Control Sample Data

Lab QC#	Test Group	Test Name	LCS Result	Spike Level	Units	% Rec.	Control Limits	Flags
24G1142-BS1	Phosphorus (P), Total - EPA 365.1	Phosphorus	0.490	0.5000	mg/L	98	90 - 110	
24G1180-BS1	Nitrate EPA 300.0	Nitrate as N	10.2	10.00	mg/L	102	90 - 110	

OFFICIAL CHAIN OF CUSTODY RECORD

[illegible]



July 19, 2024

Client: EPA

1445 Ross Ave Suite 1200

Dallas, TX 75202

Requested By: Juan Ibarra



National
Environmental
Laboratory
Accreditation
Program
ODEQ TNI Certified

Sample Project Name:

Date Samples Received: July 10, 2024 Time: 16:00 sample temp upon arrival at lab = 3.30°C - On Ice

Matrix: Water

Lab Log Numbers: **GG10199-01** **GG10199-02** **GG10199-03** **GG10199-04**
 GG10199-05 **GG10199-06** **GG10199-07** **GG10199-08**
 GG10199-09 **GG10199-10**

Work Order: GG10199

Report # GG10199-0719240935

EPA Lab ID#'s: **Stillwater OK00092** **Tulsa OK00983** **OKC OK00129** **ICR OK 001**

Oklahoma Certification: Stillwater NELAP WasteWater, ODEQ 8316/ Drinking Water, DEQ D9602
 NELAP Tulsa WasteWater, ODEQ 9905 / Drinking Water, DEQ D9901
 Oklahoma City NELAP WasteWater ODEQ 7202 / Drinking Water, DEQ D9937

Kansas Certification: Stillwater NELAP CERT # E-10219

Method Reference: 40 CFR 136, 141, and 261 Methods for Chemical Analysis of Water and Wastes
 EPA-600/4-79-020, March 1983. Test Methods for Evaluating Solid Wastes,
 SW-846, Final Update VI. Standard Methods 2005 (21st Edition), Standard
 Methods 2011 (22nd Edition), Standard Methods 2017 (23rd Edition) for the
 Examination of Water and Wastewater.

Analysis Reference: If qualifiers present in "Prep Info" or "Analysis Info", then analysis performed as
 follows: @= Tulsa Lab and * = OKC Lab. If no qualifiers present, then analysis
 performed at Stillwater Lab.

Accurate Environmental Laboratories certify that the test results performed meet
 all requirements of TNI. Any exceptions to this can be found in the report notes,
 Quality Control section, or Method/Parameter section of the report.

- No cert. = Laboratory does not carry certification for this method/analysis.
- Non-TNI = Laboratory has state certification but method does not fall under
 TNI certification.

This report is to only be replicated in its entirety.

Revised or Amended reports supersede all previous reports.

Accurate Environmental sampling protocol was followed for any sampling
 performed by Accurate Field Services.

Field accreditation certification only applies to wastewater analysis. Field analysis
 for drinking water methods are not offered as part of the ODEQ's field
 certification program.

Sample: D6 runoff into RO Pond**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/10/24 10:18

Lab Log# GG10199-01

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
E Coli IDEXX QuantiTray SM9223B	Escherichia Coliform	2420 MPN/100mL	A-05# ##	1.0	07/10/24 16:32 *BSW	07/11/24 17:22 *BSW

Sample: D6 Runoff into RO Pond MPN Blank**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/10/24 10:16

Lab Log# GG10199-02

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
E Coli IDEXX QuantiTray SM9223B	Escherichia Coliform	BPQL MPN/100mL		1.0	07/10/24 16:32 *BSW	07/11/24 17:22 *BSW

Sample: D6 runoff into RO Pond**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/10/24 10:18

Lab Log# GG10199-03

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
Phosphorus (P), Total - EPA 365.1	Phosphorus	9.79 mg/L		0.250	07/13/24 13:09 AJH	07/17/24 11:27 KRH2

Sample: D6 Runoff into RO Pond**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/10/24 10:18

Lab Log# GG10199-04

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
Nitrate EPA 300.0	Nitrate as N	BPQL mg/L		0.50	07/11/24 11:00 KMK	07/12/24 02:29 KMK

Sample: Wetland @ Silage Bunkers**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/10/24 10:58

Lab Log# GG10199-05

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
E Coli IDEXX QuantiTray SM9223B	Escherichia Coliform	2420 MPN/100mL	A-05# ##	1.0	07/10/24 16:32 *BSW	07/11/24 17:22 *BSW

Sample: Wetland @ Silage Bunkers**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/10/24 10:58

Lab Log# GG10199-06

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
Phosphorus (P), Total - EPA 365.1	Phosphorus	7.62 mg/L		0.250	07/13/24 13:09 AJH	07/17/24 11:28 KRH2

Sample: Wetland @ Silage Bunkers**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/10/24 10:58

Lab Log# GG10199-07

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
Nitrate EPA 300.0	Nitrate as N	BPQL mg/L		0.50	07/11/24 11:00 KMK	07/12/24 02:53 KMK

Sample: HSP NNW of D7**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/10/24 11:36

Lab Log# GG10199-08

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
E Coli IDEXX QuantiTray SM9223B	Escherichia Coliform	517 MPN/100mL	###	1.0	07/10/24 16:32 *BSW	07/11/24 17:22 *BSW

Sample: HSP NNW of D7**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/10/24 11:36

Lab Log# GG10199-09

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
Phosphorus (P), Total - EPA 365.1	Phosphorus	2.78 mg/L		0.250	07/13/24 13:09 AJH	07/17/24 11:29 KRH2

Sample: HSP NNW of D7**Location Code:****PWSID#:****Collection Type:** Grab

Sample Time: 7/10/24 11:36

Lab Log# GG10199-10

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
Nitrate EPA 300.0	Nitrate as N	BPQL mg/L		0.50	07/11/24 11:00 KMK	07/12/24 03:16 KMK

Notes and Definitions

A-05 The bacteria value is greater than 2419.6 MPN/100ml.

MCL Analyte concentration may exceed Maximum Contaminant Limit (MCL) for EPA Primary or Secondary Drinking Water Regulations.

Analyte concentration may exceed regulatory limit.

PQL Practical Quantitation Limit - the method reporting limit (MRL) adjusted for any dilutions or other changes made to the sample to deal with interferences/matrix effects

BPQL Below Practical Quantitation Limit (if applicable).

The "Prep Date" of the QC analysis coincides with the characters of the appropriate QC Lab ID. (Example: 19 A 02 15 - BLK = 2019, Jan 2, Batch #15 - Blank)

Lab Manager



Quality Control Data

Test results performed meet all method and TNI requirements unless otherwise noted.

Blank Data

QC Lab #	Test Group	Test	Result	PQL	Flags
24G1314-BLK1	Phosphorus (P), Total - EPA 365.1	Phosphorus	BPQL mg/L	0.025	
24G1041-BLK1	E Coli IDEXX QuantiTray SM9223B	Escherichia Coliform	BPQL MPN/100mL	1.0	
24G1180-BLK1	Nitrate EPA 300.0	Nitrate as N	BPQL mg/L	0.50	

Laboratory Control Sample Data

Lab QC#	Test Group	Test Name	LCS Result	Spike Level	Units	% Rec.	Control Limits	Flags
24G1180-BS1	Nitrate EPA 300.0	Nitrate as N	10.2	10.00	mg/L	102	90 - 110	
24G1314-BS1	Phosphorus (P), Total - EPA 365.1	Phosphorus	0.506	0.5000	mg/L	101	90 - 110	

OFFICIAL
CHAIN OF CUSTODY RECORD

PROJ. NO.		PROJECT NAME				NO. OF CON- TAINERS	REMARKS						
SAMPLERS: (Signature)													
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
013	7-10-24	1018		X	D6 runoff into RO Pond	X							
023	"	1016		X	" " " "		X						
033	"	1018		X	" " " "			X					
043	"	1018		X	" " " "				X				
054	"	1058		X	Wetland @ Silage Bunkers	X							
064	"	1058		X	" @ " "			X					
074	"	1058		X	" @ " "				X				
085	"	1136		X	HSP NNW of A7	X							
095	"	1136		X	" " of "			X					
105	"	1136		X	" " of "				X				
Relinquished by: (Signature)						Date / Time		Received by: (Signature)		Relinquished by: (Signature)		Date / Time	Received by: (Signature)
Juan Mena						7-10-24 1600		Ben Woodruff					
Relinquished by: (Signature)						Date / Time		Received by: (Signature)		Relinquished by: (Signature)		Date / Time	Received by: (Signature)
Relinquished by: (Signature)						Date / Time		Received for Laboratory by: (Signature)		Date / Time		Remarks	
Shipped by:								Airbill Number:				Ivan Ibarra cell rec. at. 817-888-5441 3.3°C	