

September 4, 2015

NCDENR - Division of Water Resources
Water Quality Regional Operations Section
Asheville Regional Office
2090 U.S. 70 Highway
Swannanoa, NC 28778
Attn: Tim Heim, P.E.



Via E-mail and Overnight Mail

Reference: Response to NCDENR Comments
ERM Report: Environmental Response and Recommendations Report
Sevier Plant/ Coats American WWTP
NPDES Permit No. NC0004243
McDowell County, N.C.

Dear Tim:

On behalf of Coats North America (Coats American), ERM NC, Inc. (ERM) is providing responses to NCDENR's August 7, 2015 comments to the *Environmental Response and Recommendations Report* by ERM (July 20, 2015). Responses are also provided regarding NCDENR's August 24, 2015 request to Coats American for additional information about the active sewer configuration and inactive septic tank/sludge drying beds at the subject site. Responses provided below are presented in order corresponding to NCDENR's August 7 letter to Coats American. Additional responses to NCDENR's August 24 request for information follow.

NCDENR August 7 comments in italics for reference followed by ERM/Coats American response

- 1) *Page 2, Paragraph 1, Line 4: Clarification - DENR field staff observed no dead fish, but did observe dead amphibians upstream of the confluence of the UT with Limekiln Creek.*
Response: Acknowledged.

- 2) *Page 2, Paragraph 1, Lines 9 & 10: Clarification - indicated that the substance had no dissolved oxygen and a high pH (11.4).*
Response: Acknowledged.

- 3) *Page 2, Paragraph 1, Line 10: DENR field staff did not observe elevated pH and low dissolved oxygen in Limekiln Creek and the North Fork River, otherwise known as the "fish kill" area. The only anomalous readings were within the water impounded immediately above the beaver dam.*
Response: Acknowledged. Per EPA's incident website, EPA observed elevated pH/low DO in North Fork River.

- 4) *Page 6, Paragraph 3, Lines 3 & 4: Clarification - DENR field staff observed dead frogs (not fish) upstream of the beaver dam.*
Response: Acknowledged.

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- 5) *Page 6, paragraph 5, Line 1: Seepage was observed on the west and south sides of the aeration basin and equalization basin. What assessment activities and corrective action are being proposed for the seepage associated with the wastewater treatment lagoons?*

Response: Proposed assessment activities are described in the attached assessment plan and include mapping, sampling, chemical characterization, and estimates of flow of the seeps from the south and west sides of the aeration and equalization basins. In addition, flow estimates will be obtained. A plan for corrective actions will be developed following review of the sampling results.

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- 6) *Page 7, Paragraph 2, Line 1: Verify the status and origin of the abandoned pipes on the footbridge and include this information in the forthcoming report from ERM.*

Response: The abandoned (broken) 2" diameter PVC pipe is associated with a former wastewater chlorination process. This pipe has been inactive since Coats American's transition from chlorine storage in gas cylinders to liquid phase. This transition occurred in the early 1980s. This pipe was disconnected from all chemical sources at the Pump/Chlorinator Building 175 feet west of the footbridge at that time. The remaining conduits associated with the footbridge crossing contain electricity and communication wiring for the wastewater treatment basin equipment.

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- 7) *Page 7, Paragraph 5, Line 8: Make reducing the potential for confusion amongst facility personnel regarding floor and other potentially applicable drains a focus in future updates to the Storm Water Pollution Prevention Plan (SWPPP). During the emergency response, DENR field staff questioned plant personnel about the number of storm water drains connected to outfall SW-007. Plant personnel erroneously indicated only two storm drains in the east parking lot were connected to SW-007. Figure 5 of the ERM report indicates 13 external storm drains connected to Outfall SW-007. Identify opportunities to improve facility personnel's knowledge and understanding of the drain system and applicable components.*

Response: ERM has completed an audit of stormwater regulatory compliance at the facility, and Coats American will update its SWPPP to include the recommendations resulting from such audit. The update will include identification of all storm drains and the outfalls to which they are connected. Facility personnel involved in environmental, stormwater and wastewater management will receive all required training with respect to the SWPPP. Coats American will provide recommendations to the personnel training in the upcoming multi-media audit.

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- 8) *Page 8, Paragraph 2, Line 2: Include any additional findings on the use of water treatment chemicals (biocides, etc.) in the water storage pond area in the forthcoming report from ERM.*

Response: Interviews with Coats employees indicate that only chemicals are used to neutralize water at the water storage pond. Both are manually transported from chemical storage area(s) to the storage pond. Approximately 75 gallons of sodium hypochlorite are manually added via 15 gallon totes each weekend. Sulfuric acid is added via five gallon container. Approximately six gallons of sulfuric has been used in the first eight months of 2015.

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- 9) *Page 8, Paragraph 3, Line 2: The ash pond retains storm water and water filtration backwash water. The discharge of water filtration backwash into the coal ash basin is not authorized under the current permit (closed-loop recycle system). The practice of discharging backwash water to the coal ash basin must be eliminated immediately.*

Response: Coats American is in the process of designing the relocation of the backwash line from the ash pond and rerouting to wastewater treatment. Field work on the relocation and rerouting will begin within the next two weeks. Coats American will provide NCDENR an estimated time for completion of the work once the work has begun.

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- 10) *Page 9, Paragraph 2, Line 1: How was it determined that the grass "burns" were not chemical in nature? Can photos be provided? How will ERM confirm that the area was not impacted by a "spill"?*
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Response: The brown vegetation was the result of recent “routine cutting and maintenance” activities at the headwall of the Outfall 007 resulting in dead and dying vegetation. Subcontract landscapers are prohibited from using any type of chemical herbicide on the Coats American property. ERM will collect a soil sample from this area to evaluate if a spill has occurred, during the upcoming assessment activities.



- 11) *Page 9, Paragraph 3, Line 3: Chiller blow-down and cooling water should be routed to the WWTP or permitted under wastewater discharge pursuant to the NOV/NRE. All cooling water {cooling tower, chiller room, boiler room, etc.} shall be directed to the wastewater treatment plant or permitted under NCG500000. All water treatment water (plant filtration, water storage pond, backwash, etc.) shall go to WWTP or be permitted under NCG590000.*

Response: Coats American has re-routed the cooler blowdown and chiller blowdown to WWTP. The activities were completed on August 8, 2015.

- 12) *Page 10, Paragraph 4, Line1: Provide further detail on what chemicals are being stored in the external chemical storage area. Are there any containment measures currently in place for the external chemical storage area? Does natural site topography in the external chemical storage area allow water to drain towards a nearby storm water discharge?*

Response: No. 2 Fuel Oil, diesel fuel, used oil, hydrogen peroxide (50%), alum, sodium hexa-meta-phosphate and silicon are stored in the external chemical storage area. The external storage area is bermed, and each tank is located within a containment area. Each dike has a drain pipe with a locked valve. Discharge of uncontaminated accumulated water is conducted by authorized personnel only, who log the activity. Not less than weekly inspections of the area are performed. Personnel involved in using or transporting these materials are trained to alert emergency response personnel immediately upon observing any leakage. Sorbent materials are located within fifty feet of the unloading area to divert any accidental leaks which may occur during filling of tanks. Coats American believes the site topography could allow water from the external chemical storage area to drain to any nearby storm water discharge.

13) Page 10, Paragraph 5, Line 1: Describe what chemicals (and quantity) are being stored in the internal chemical storage area.

Response: Below is a summary of chemicals and maximum quantities stored typically stored in the internal chemical storage area.

CHEMICAL NAME	MAXIMUM STORED	CHEMICAL NAME	MAXIMUM STORED
Acetic Acid 56%	330 gal	Eganal PS Liq	55 gal
Alkon 1563	330 gal	Lyogen NH Liq	330 gal
Alum	5,300 gal	Nalan GN	240 gal
Benz. Alcohol	330 gal	Rucostar	55 gal
Bleach (Sodium Hypochlorite)	24 gal	Salt (Sodium Chloride)	25 tons
Buffer ADB	330 gal	Sera Gal C-Vat	330 gal
Caustic 50%	13,000 gal	Setamol WS	55 gal
Cekalube TMR	330 gal	Setavinas	330 gal
Dextralube	330 gal	Silicon 1000	240 gal
Dohmen Mach. Cleaner HF-CS	330 gal	Sodium Hexametaphosphate	50 gal
Dohmen Stabilizer H-1 New	330 gal	Sulfuric Acid	275 gal
Domolev CTB Conc	330 gal	Vircolye TSPP	330 gal
Doolex FS2	55 gal		

14) Page 10, Paragraph 5, Line 10: Include additional detail on the vertical caustic storage tank, caustic transfer station, and associated piping in the forthcoming report from ERM. Has the integrity of the caustic piping been verified?

Response: The tank is a vertical carbon steel tank with 15,000 gallon capacity and was installed at the time of the original plant construction. The tank is located inside and within a diked containment area. Drainage from this containment area is routed to the WWTP. Caustic piping integrity has not been confirmed. The caustic transfer occurs from tanker vehicle over secondary containment and is pumped directly into the caustic storage tank.

15) Page 10, Paragraph 6, Line 1: Please explain the location and function of the water settling basins. What chemicals are used for this process? How are these basins cleaned and maintained?

Response: Raw water is obtained from Armstrong Creek and pumped to the mix basin, where caustic and alum are injected. Water flows by gravity from the mix tank into the settling basins. Water from the settling basins is routed through the filtration plant and distributed throughout the Coats American water system. Alum and caustic are used in this process at a rate of 25 mL/min and 10 mL/min, respectively. The mix basin and two settling basins are drained and washed out with clean process water typically twice per year and the filter beds are rinsed and drained with clean water weekly. The wash water has historically been transferred to the ash basin (See response to #9). The discharge of these wash water is being re-routed to the WWTP. The clean water used for cleaning these basins is typically pH 6-7.

16) Page 10, Paragraph 7, Line 1: Is there potential for an internal plant spill to migrate underneath the external walls and be conveyed through the roof drains (at ground level) to the storm-drainage system?

Response: A chemical spill in the water filtration plant would flow into nearby floor drains due to the slope of the floor. These floor drains will limit accumulation of a potential spill and its potential migration beneath the external walls. The floor drain plumbing was modified in July 2015 to discharge into the process sewer system instead of the storm sewer system. Additionally, the external roof drains typically discharge into the storm drainage system via pipes that are elevated by one to two feet above the surrounding ground surface. This elevated receiving pipe limits intrusion of fluids from any source other than the roof drain. See photos below.



- 17) Page 11, Paragraph 3, Bullet 3: What approximate quantities of the listed chemicals are stored in the water filtration plant? Provide a narrative describing in detail the chemicals and processes used in the filtration plant. Include the measured or estimated quantities of water being used for processing and that being sent to the storage ponds? What is the estimated yield of the supply well?

Response: Three day tanks are present in the water filtration plant; each approximately 100 gallons. Chemicals stored in the tanks include caustic, alum, and AQUA MAG® (sodium hexametaphosphate for piping protection). The chemicals are pumped from storage tanks in the storage tank area to day tanks in the filtration plant. Such pumping is manually controlled. Coats American utilizes an estimated 500,000 gpd of treated process water. Excess water (not used in process) is automatically pumped to the water storage pond. The water supply well pump is rated for 85 gpm and operates 24 hrs/day but is not connected to the water storage pond. The yield of the supply well is 400 gpm according to the well tag completed by the driller at the time of well installation.

- 18) Page 11, Paragraph 5, Bullet 1: What cleaning chemicals are stored/used in this area? Describe in detail the process used for cleaning the bird droppings. Your description is to include, but not be limited to, names of staff involved in cleaning, chemicals used, amounts of chemicals used, time of the event, duration of the event, amount of water used, etc.

Response: The bird droppings are routinely cleaned using domestic water and manual sweeping. This wash water is now routed to WWTP through the filtration plant floor drains. No chemicals are used for this process. The floor cleanings are not documented and occur on an as-needed basis.

- 19) Page 12, Paragraph 2, Line 7: What is the status of the floor drain connection project? Do any additional areas of the facility have floor drains with the potential for connections to areas other than the WWTP? Confirm that an updated floor drain plan will be produced as part of the SWPPP.

Response: Coats American has rerouted the floor drains in the filter plant to wastewater treatment as of July 23, 2015. Coats American will complete a floor drain dye test protocol (for all suspect drains) as part of the ongoing plant improvement processes prior to the end of October. An updated floor drain plan will be included in the revised SWPPP.

- 20) N/A- General Comment: How are caustic chemicals introduced and used in production? For example, how are the caustic chemicals delivered to the plant (including quantities); how and where are they off-loaded; and how are they (chemicals) introduced into the various production processes (i.e. piping or by hand)? In addition, what is the estimated daily use (volume) of caustic chemicals in the production process?

Response: Caustic used for textile production in the dye area is transferred via stainless steel piping to a batch process that is automatic for certain dyeing processes and is manually controlled by the operator for other dyeing processes. The amount of caustic varies depending on the type of dyeing operation. Typically 260 gallons of 50% caustic are utilized weekly by the Coats American operations (approximately 170,000 lbs/year). Typical plant deliveries are in the form of a tanker truck (roughly 40,000+ lbs/tanker). The caustic is offloaded on the south side of the plant via manual connections, and transferred directly to the caustic storage tank. Daily usage can vary widely depending on production runs.

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- 21) *N/A - General Comment: In the forthcoming ERM report, you are to include an estimate of the amount of caustic that would have potentially caused an event of this magnitude?*

Response: ERM conducted a dilution analysis to simulate surface water quality and calculate the estimated volume of caustic (sodium hydroxide - 50% solution) required to impact aquatic life within the affected reach the North Fork River. This screening level model indicates that approximately 400 to 500 gallons of caustic would have been necessary to cause the fish kill over the two to three miles of river. The model is attached. Although not a definitive model, we believe it of sufficient quality to establish the amount of caustic that would have been necessary to cause the event in question.

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- 22) *N/A - General Comment: Provide a schedule for the Inventory Loss Evaluation and forthcoming report from ERM.*

Response: As part of this assessment, Coats American has discovered that the gauge on its caustic storage tank is not accurate or reliable when volume in the tank drops below 4,000 gallons. The volume in the tank was below 4,000 gallons in the beginning of July. Coats American cannot accurately calculate, therefore, its inventory at that time, and so cannot produce an accurate inventory loss evaluation. Coats American is in the process of installing a sonar type level control on the caustic tank due to problems associated with the accuracy of the mechanical system currently in place. The new level control is estimated to be operational by the end of September.

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- 23) *Page 13, Paragraph 4, Line 4: Report states that potential for berm failure is low (wastewater treatment), yet numerous large tree roots are assumed to penetrate the berm and could compromise structural integrity if they die/rot etc. Has this been considered as a failure mechanism? Remove all woody vegetation from the slopes of the berm. Visually inspect the entire impoundment daily.*

Response: Brushy vegetation has been cut back on and near the slopes of the wastewater berms to allow for visual inspection. Coats American is considering cutting large trees to ground level to prevent further root penetration to the berms. Coats American is concerned, though, that such action would also result in killing of tree roots, which could in turn result in creation of additional seepage pathways. Coats American is evaluating methods and mechanisms to manage any such additional seepage. Coats American will work in consultation with NCDENR to determine whether tree cutting is appropriate, and, if so, what, if any, additional actions should be taken. Regular maintenance of the berm systems will be implemented that includes vegetation control to allow inspection and prevention of future root penetration of the berms. Maintenance will also include any repair of the berms as needed.

Weekly inspections of the berm conditions will be conducted to identify and characterize potential areas of concern including existing or new seepage locations, areas of damage due to burrowing or digging animals or storm damage. Documentation of the inspections will be maintained by Coats American for review.

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- 24) *N/A - General Comment: Has the former sludge drying bed area been assessed as a potential contributing factor for this event? Please provide a narrative of the historical use of this area including dates of active use, and an estimate of remaining sludge material.*

Response: The sludge drying beds and septic tank were out of service prior to 1973 according to facility construction drawings for modifications to the wastewater treatment infrastructure which were reviewed by ERM. Further details of the operation and the amount of remaining sludge material are not available. Evaluation of the inactive sludge drying bed and the nearby septic tank is proposed in the enclosed assessment plan. The proposed assessment activities include visual inspections, test pit excavation to determine the extent and amount of remaining sludge, sampling and chemical characterization of the residual sludge material and groundwater sampling and analysis. Results of the sampling activities in these areas will assist with determining if these features contributed to the event.

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- 25) *N/A - General Comment: Provide a timeline for proposed future assessments and reports.*

Response: A schedule for future reports is provided below:

- o Completion of Multi-Media Compliance Audit by October 16, 2015 and delivery of summary report with recommendations to NCDENR by November 20, 2015; and,
 - o Assessment Report with summary of analytical results by November 20, 2015.
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26) *Page 15, Bullet 6: Evaluate ponds to verify if the discharge complies with both storm water and wastewater regulations.*

Response: The water storage pond will be evaluated for compliance with stormwater and wastewater regulations as part of the upcoming multi-media environmental compliance audit and as part of the attached assessment plan.

27) *Page 15, Bullet 7: How will inspections be performed, and what is the proposed mechanism for triggering less frequent inspections?*

Response: Inspections of the SWPPP outfalls are performed and logged by wastewater treatment operators on a monthly basis in accordance with the Stormwater Permit. Daily inspection and field monitoring (pH and dissolved oxygen) of seven surface water locations near the aeration basin was initiated by Coats American on July 12. These activities were conducted in conjunction with operation of the seep containment pump system. A summary of the inspection/monitoring results is presented as Exhibit C. On August 6 NCDENR authorized Coats to suspend surface water inspection and monitoring activities at six of the seven locations along with termination of the seep containment pumping operation. Coats American elected to continue to monitor two surface water locations instead of the single location authorized by NCDENR. As requested, Coats American contacted NCDENR on September 3 after four weeks of monitoring to request further guidance regarding ongoing surface water inspections and field monitoring. In accordance with NCDENR direction, Coats American will suspend surface water inspections and field monitoring over the Labor Day weekend and will wait for further guidance from NCDENR regarding permanently terminating the surface water inspection and monitoring program.

28) *N/A - General Comment: According to Figure 5, Outfall SW-007 runs underneath the plant at two locations. Is there any evidence of spills in these areas? Are there any operations involving caustic chemicals present in these two locations? Is there any evidence of potential connections between these two internal locations and Outfall SW-007? Is a camera evaluation of the pipe leading to Outfall SW-007 where it runs under the facility being considered?*

Response: The area at the southeast corner of the plant, constructed above the storm drainage system leading to Outfall 007 was reviewed on 8/31/2015 by Coats American and ERM staff. This area is known as solution dyed room (SDR). No floor drains are present in this area. In addition no liquids (including caustic) were observed in this area. All raw materials used in this area have been previously dyed. The second area overlying the storm drain system is the maintenance area (constructed prior to 1985). Roof drains were observed in this area leading to the storm drain system. Floor drains associated with domestic use and one floor drain in the maintenance area are present with unknown connectivity. Coats American will make observations regarding connections via dye testing as part of ongoing plant process improvements. No chemicals (including caustic) were observed in this area.

29) *N/A - General Comment: In the forthcoming report, you are to summarize all existing analytical data (e.g., PAHs, metals, etc.) collected since the fish kill event initiation, provide maps as needed to represent data locations, and provide a narrative evaluating the results. The narrative is to include an evaluation of the source of constituents detected, a comparison to applicable regulatory cleanup levels, an evaluation of the potential for impact to groundwater and/or surface water and recommendations with regard to additional sampling or corrective measure.*

Response: Acknowledged.

30) *N/A - General Comment: Provide a narrative as an addendum*

Response: ERM has requested NCDENR provide clarification for this comment.

Below are responses to NCDENR's August 24, 2015 questions to Coats American regarding the wastewater treatment features south of the existing clarifiers.

NCDENR August 24 comments in italics for reference followed by ERM/Coats American response

- 1) *Where is the process wastewater in the manhole coming from? What is the typical pH range of the process wastewater? How is debris (i.e. rags) entering the wastewater piping system? Is there any evidence of recent overflows at this particular manhole? How would plant staff be aware that an overflow event is taking place? Has this manhole ever overflowed in the past? Is there any evidence that the process wastewater line is leaking, particularly near the junction with the 26-inch wastewater line?*

Response: Wastewater observed in the manhole is from dyehouse operations within the Coats American facility. Rags entering the system happen infrequently and have not historically caused a significant issue, however, one overflow was known to have occurred in the early 1970s. Process wastewater from the facility typically exhibits a pH of 7-8.5 (as measured on 08/31/2015). Both of the manhole lids were intact when they were originally identified which indicated that significant wastewater discharge (i.e. surcharge) had not occurred at these manholes. In addition, visual observations of the area indicate no physical evidence local to the manholes suggesting overflow has occurred (no sludge, no colored area suggesting dye release). To confirm that no release has occurred, the attached assessment plan includes sampling and analysis of soil samples near the manhole to evaluate for potential wastewater releases.

- 2) *Has the septic tank vault been assessed? Is there any sludge or liquids remaining in the vault? Are there any active connections between the plant and the vault? Was there a drain field associated with this septic tank vault?*

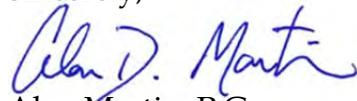
Response: There are no active connections to the septic vault. It is believed that the wastewater was rerouted to WWT influent when the basins were originally constructed. A plan for evaluation of the septic tank vault is presented in the attached assessment plan and includes determining the presence of residual liquids or sludge and sampling and analysis of residuals. During sampling, when the tank is opened, confirmation will be made that no active inputs into to septic tank are occurring. Available information on the design and past operation of the septic vault will be provided in the assessment report.

- 3) *What is the extent of the sludge drying beds? Are there any biosolids remaining in the drying beds? If so, what is the volume of the biosolids? Is there any evidence that the sludge drying beds may have impacted the unnamed tributary, particularly near the beaver dam?*

Response: See response to Comment #24 above.

Please contact me or John Moss of Coats American if you have questions.

Sincerely,



Alan Martin, P.G.
Project Manager



Thomas M. Wilson, P.G.
Principal

Attachments

A – Proposed Assessment Plan

B – Dilution Simulation – Sodium Hydroxide

C – Surface Water Inspection and Monitoring Results Summary

cc: John Moss – Coats American

Attachment A
Proposed Assessment Plan

ERM NC, Inc.

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(704) 624-7928 (fax)

September 3, 2015

Timothy Heim
NCDENR - Division of Water Resources
Asheville Regional Office
2090 U.S. Highway 70
Swannanoa, North Carolina 28778



Reference: Site Assessment Plan
Coats American Inc. - Sevier Plant
NPDES Permit No. NC0004243
McDowell County, North Carolina

Dear Mr. Heim:

On behalf of Coats North America (Coats American), ERM NC, Inc. (ERM) is transmitting this Site Assessment Plan for the referenced Coats American facility located in Marion, North Carolina. The plan describes proposed additional sampling and other assessment activities at the site relevant to the July 2015 fish kill event.

Background and Rationale for Work

Coats American owns and operates a thread making operation at 630 American Thread Road, in Marion, McDowell County, North Carolina ("Site"). On July 2, 2015, Coats American responded to a request by NCDENR regulatory officials to assist in the investigation of a fish kill ("Event") that occurred on the North Fork of the Catawba River, downstream of the site. ERM was retained by Coats American to provide technical support for the response actions and investigative activities. Coats American and ERM performed response actions, conducted water quality sampling and additional investigation activities to determine the potential causes of the event and prevent a potential recurrence. On July 20, 2015, ERM submitted an *Environmental Response and Recommendation Report* to provide a summary of response actions taken, to describe the investigation to date into the causes of the Event, to describe proposed future investigations, and to address any issues identified and eliminate conditions that could potentially lead to future incidents. The NCDENR provided review comments to the *Environmental Response and Recommendation Report* in a letter to Coats American dated August 7, 2015. In the comments letter, the NCDENR requested additional information on site operations and additional site assessment activities. Other assessment activities were also requested in an NCDENR letter dated August 24, 2015. This Site Assessment Plan is submitted in response to NCDENR's requests for additional assessment activities at the site.

Proposed Site Assessment Activities

The proposed site assessment tasks are described in the following sections. A summary of the assessment sampling activities are presented in [Table 1](#). Sampling methods and decontamination procedures will be conducted in accordance with the applicable EPA guidance and ERM's standard protocol. The proposed sampling locations are shown on [Figure 1](#).

Wastewater Treatment Basins - Seeps (Comment No. 6 of 8-7-15 DENR letter)

Seeps were observed on the west and south sides of the soil berms around the aeration basin and the equalization basin. The seep locations will be mapped a scaled site drawing by visual inspection and photo-documented. The inspection and mapping will be conducted for the berms of the three wastewater treatment basins (aeration, equalization and polishing). The approximate seepage flow rates will be assessed in the field based on visual estimates.

Seep samples will be collected for analysis at three locations as shown on [Figure 1](#). The seep samples will be submitted for laboratory analyses for pH, metals, polycyclic aromatic hydrocarbons (PAHs), nitrate, sulfates and six other selected inorganic parameters (phenols, total nitrogen, ammonia as nitrogen, chlorides, total phosphorus and sulfides) that are listed for effluent limits in the facility's NPDES permit for pretreated wastewater discharge (see [Table 1](#)). Collectively, these analytical parameters are considered to be the primary potential constituents of concern (COCs) related to facility operations for water quality assessment purposes. In addition, field parameters (pH, dissolved oxygen (DO), oxidation reduction potential (ORP), conductivity & temperature) will be measured on-site using calibrated instruments.

Process Wastewater Sewer Manhole – Soils (First bullet comment of 8-24-15 DENR letter)

Soil sampling will be conducted around a manhole (red) for a 8-inch process wastewater sewer located approximately 150 feet west of the wastewater treatment basins and the unnamed tributary (see [Figure 1](#)). A soil boring will be advanced adjacent to the manhole by hand auger method. Soil samples will be collected from approximate depths of 0 - 0.5 feet and 2 - 3 feet below ground level (bgl). In addition, two background soil samples will be collected. The soil samples will be analyzed for the primary potential COCs ([Table 1](#)). The soil analytical results will be used to assess for potential soil impacts from past releases from possible overflows from the sewer manhole.

A soil boring will also be advanced by hand auger method at the junction of the 8-inch process sewer and the main 26-inch process sewer line located near the manhole. The

soil boring will be advanced to an approximate depth of 4 feet bgl, below the bottom depth of the main process sewer. The soil boring will be used to evaluate for evidence of potential sewer line leakage based on visual observation of wet soils or process wastewater accumulation.

Inactive Sludge Drying Bed – Soil and Groundwater (Comment No. 24 of 8-7-15 DENR letter; First bullet comment of 8-24-15 DENR letter)

The extent and volume of the Inactive Sludge Drying Bed area, located approximately 100 feet west of the wastewater aeration basin and the unnamed tributary (see [Figure 1](#)) will be assessed as a potential contributing factor to the Event. Exploratory borings or trenches will be excavated in the general vicinity of the Inactive Sludge Drying Bed area to assess the lateral and depth limits of residual sludge material based on visual observation. The field data will be used to calculate an estimated volume of residual material. A composite sample of residual sludge will be collected from the excavations for laboratory analyses of the primary potential COCs ([Table 1](#)).

In order to evaluate potential groundwater quality impacts at the Inactive Sludge Drying Bed area, a monitor well will be installed in the area between the sludge bed area, as determined by the exploratory excavations, and the unnamed tributary to the east. The proposed monitor well location is shown on [Figure 1](#).

ERM will contract with a licensed North Carolina driller to install the monitor well. Monitor well installation will be accomplished by hollow-stem auger (HSA) or direct – push drilling methods. The monitor well will be completed to an estimated total depth of 15 feet bgl and constructed of 10 feet of 0.005-inch slotted 2-inch PVC well screen and the appropriate amount of 2-inch PVC riser to bring the well above land surface. The monitor wells will be completed with a locking, stick-up protective well box within a 2-foot square concrete pad.

Upon completion, the monitor well will be developed by bailing or pumping until turbidity is significantly reduced. Once developed, the newly installed well will be sampled using low-flow methods and the samples will be analyzed by a certified laboratory for the primary potential COCs ([Table 1](#)). In addition, field parameters (pH, DO, ORP, conductivity & temperature) will be measured in the field using calibrated instruments.

Inactive Septic Vault – Sludge (Second bullet comment of 8-24-15 DENR letter)

An inactive concrete septic vault/tank is located approximately 100 feet west of the wastewater basins and unnamed tributary. Recent inspection by Coats American personnel indicate that there is approximately 6 inches of residual sludge material in the septic vault. There was no apparent influent wastestream discharge into the septic vault. A grab sample of residual sludge will be collected from the inactive septic vault for laboratory analyses of the primary potential COCs (Table 1).

Water Storage Pond – Surface Water (Comment No. 26 of 8-7-15 DENR letter)

Water from Armstrong Creek and an onsite groundwater well is pumped and stored in the Water Storage Pond located on the south central portion of the Coats American property. The groundwater pump remains in continuous operation to prevent siltation that occurs once the pump is turned off. As a result, water that is not used by the plant is allowed to overflow the pond and is conveyed by a drainage ditch that discharges to the unnamed tributary as shown on Figure 1.

A sample of the overflow from the Water Storage Pond will be collected from the drainage ditch at a location immediately upstream of the confluence with the unnamed tributary. The surface water sample will be analyzed for the primary potential COCs (Table 1). In addition, field parameters (pH, DO, ORP, conductivity & temperature) will be measured in the field using calibrated instruments.

Stream Sediment - (Comment No. 29 of 8-7-15 DENR letter)

Additional sampling of stream sediments is proposed to further evaluate potential impacts to the unnamed tributary and Limekiln Creek. A total of five sediment samples will be collected. Two sediment samples will be collected from the unnamed tributary: one at Outfall 7 and one from the area of the former beaver pond basin. Three sediment samples will be collected from Limekiln Creek: one upstream from the Coats American property, one downstream of the unnamed tributary confluence and one upstream of the Good Road culvert and the confluence of the North Fork River. The sediment samples will be analyzed for the primary potential COCs (Table 1).

Reporting

Upon receipt of analytical results, ERM will review the data and incorporate the results into a summary report to include tabulated analytical data, sample and assessment activity location maps, laboratory reports and a narrative evaluating the results.

Schedule

Following receipt of written approval of the site assessment plan by NCDENR, the preliminary schedule for implementing the proposed assessment tasks is provided below. An updated schedule will be provided to NCDENR after approval of the plan.

<i>Activity</i>	<i>Target Completion Date</i>
NCDENR Approval of Site Assessment Plan	Mid-September 2015
Complete Field Activities	Late- October
Receive All Laboratory Reports	Mid November
Draft Site Assessment Report to Coats	Early- December
Final Site Assessment Report to NCDWR	Late December 2015

Coats American and ERM look forward to working cooperatively with the NCDENR to continue the site assessment.

Sincerely,


Alan Martin, P.G.
Project Manager


Thomas Wilson, P.G.
Principal

Attachments:

Figure 1 - Proposed Site Assessment Locations Map

Table 1 - Sample Analysis Plan

cc: John Moss - Coats American
Sean Alvarez - Coats American



July 2015

LEGEND

-  EXISTING MONITORING WELL
-  ABANDONED MONITORING WELL
-  PROPOSED MONITORING WELL
-  PROPOSED SOIL SAMPLE
-  PROPOSED SLUDGE/ LIQUID SAMPLE
-  PROPOSED SURFACE WATER/ SEEP SAMPLE
-  PROPOSED SEDIMENT SAMPLE



PROPOSED SITE ASSESSMENT LOCATIONS - UNNAMED TRIBUTARY AREA
 COATS AMERICAN FACILITY
 630 AMERICAN THREAD ROAD
 MARION, NORTH CAROLINA

FIGURE
1

0 150 FT
 APPROXIMATE SCALE
 BASE MAP FROM GOOGLE EARTH
 DATE OF AERIAL PHOTO: NOV. 7, 2013

TABLE 1. SAMPLE ANALYSIS PLAN - COATS FACILITY, MARION, NC

Sample ID/ Location	Media	Field Parameters					Inorganics by SW-846/ Std Methods								6010/ 6020	8270D (SIM)		
		Temp. deg C	Conductivity (us/cm)	Dissolved Oxygen (mg/l)	pH	ORP	pH (lab)	Phenols	Total Nitrogen	Nitrate as N	NH3 as N	Chlorides	Total Phosphorus	Sulfates	Sulfides	Metals ¹	PAHs ²	
Seep 1 - WW Treatment Basins	Aqueous	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Seep 2 - WW Treatment Basins	Aqueous	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Seep 3 - WW Treatment Basins	Aqueous	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Surface Water - Water Storage Pond Overflow	Aqueous	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater - Inactive Sludge Drying Bed - MW-18 (proposed)	Aqueous	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sludge - Inactive Sludge Drying Bed	Sludge	--	--	--	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Sludge - Septic Vault	Sludge	--	--	--	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Soil (0-0.5 ft) - Process Wastewater Sewer Manhole	Soil	--	--	--	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Soil (2-3 ft) - Process Wastewater Sewer Manhole	Soil	--	--	--	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Background Soil 1	Soil	--	--	--	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Background Soil 2	Soil	--	--	--	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Unnamed Tributary - Outfall 7 - Sediment	Sediment	--	--	--	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Unnamed Tributary - Former Beaver Pond - Sediment	Sediment	--	--	--	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Limekiln Creek - Upstream - Sediment	Sediment	--	--	--	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Limekiln Creek - Below Confluence with UT - Sediment	Sediment	--	--	--	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Limekiln Creek - Downstream - Sediment	Sediment	--	--	--	X	--	X	X	X	X	X	X	X	X	X	X	X	X
Totals		5	5	5	16	5	16	16	16	16	16	16	16	16	16	16	16	16

1 - Metals includes aluminum, arsenic, barium, beryllium, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, selenium, silver & zinc.

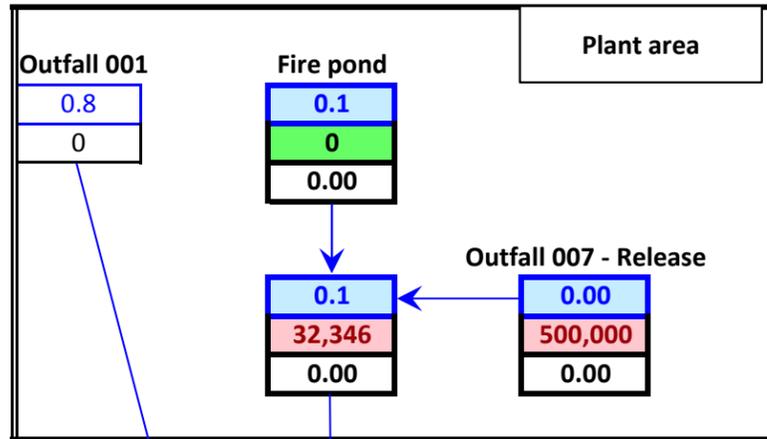
2 - PAHs = Poly Aromatic Hydrocarbons

-- = No analysis proposed

Attachment B
Dilution Simulation –
Sodium Hydroxide

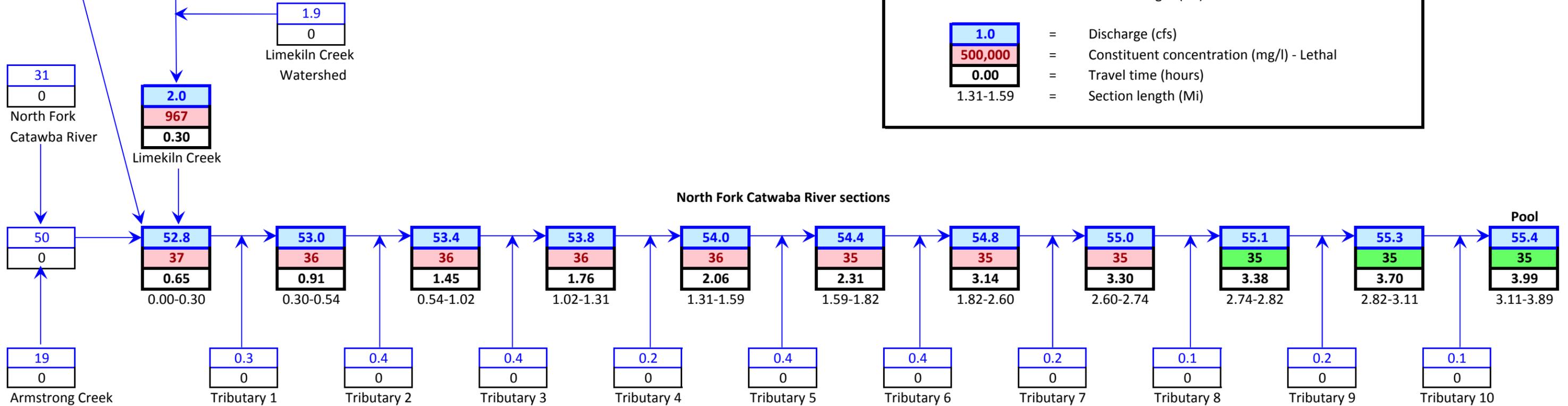
**DILUTION SIMULATION
COATS AMERICAN
NORTH FORK RIVER BASIN
MARION, McDOWELL COUNTY, NORTH CAROLINA**

SODIUM HYDROXIDE RELEASE SIMULATION



NaOH - Input data	Dim	Value
Flow upstream of project	cfs	50
Background Caustic	mg/l	0
Fire pond	gpm	25
Outfall 001	mgd	0.5
Volume of release	gal	415
Duration of release	hours	4
Concentration of release	mg/l	500,000
Concentration of fire pond	mg/l	0
Concentration of Outfall 001	mg/l	0
Lethal dose fish LD ₅₀	mg/l	35

Legend					
Dilutions:					
<table border="1"><tr><td>0.4</td></tr><tr><td>0</td></tr></table>	0.4	0	=	Discharge (cfs)	
0.4					
0					
<table border="1"><tr><td>0</td></tr></table>	0	=	Background concentration (mg/l)		
0					
Tributary	=	Name			
River section:					
<table border="1"><tr><td>1.0</td></tr><tr><td>0</td></tr><tr><td>0.00</td></tr></table>	1.0	0	0.00	=	Discharge (cfs)
1.0					
0					
0.00					
	=	Constituent concentration (mg/l) - Harmless			
	=	Travel time (hours)			
1.31-1.59	=	Section length (Mi)			
<table border="1"><tr><td>1.0</td></tr><tr><td>500,000</td></tr><tr><td>0.00</td></tr></table>	1.0	500,000	0.00	=	Discharge (cfs)
1.0					
500,000					
0.00					
	=	Constituent concentration (mg/l) - Lethal			
	=	Travel time (hours)			
1.31-1.59	=	Section length (Mi)			



**DILUTION SIMULATION
COATS AMERICAN
NORTH FORK RIVER BASIN
MARION, McDOWELL COUNTY, NORTH CAROLINA**

HYDROLOGY PARAMETER ESTIMATES

	Drainage Area Km ²	Reach Length ft	Cumulative Reach Length mi	Main Stem Width ft	Discharge cfs	Flow Depth ft	Flow Velocity ft/s	Travel Time min	Cumulative Travel Time hours
Total	205.84								
North Fork Catawba River	115.50				30.5				
Armstrong Creek	73.81				19.5				
Limekiln Creek-HW	7.32	1730	0.00	5	2.0	0.25	1.6	18	0.30
Upstream of project - Tributary 1	189.31	1580	0.30	40	50	1.00	1.3	21	0.65
Tributary 1 - Tributary 2	1.06	1247	0.54	40	53.0	1.00	1.3	16	0.91
T2-T3	1.40	2559	1.02	40	53.4	1.00	1.3	32	1.45
T3-T4	1.52	1509	1.31	40	53.8	1.00	1.3	19	1.76
T4-T5	0.60	1476	1.59	40	54.0	1.00	1.3	18	2.06
T5-T6	0.83	1214	1.82	40	54.4	1.00	1.4	15	2.31
T6-77	1.61	4117	2.60	40	54.8	1.00	1.4	50	3.14
T7-78	0.61	771	2.74	40	55.0	1.00	1.4	9	3.30
T8-T9	0.35	394	2.82	40	55.1	1.00	1.4	5	3.38
T9-10	0.70	1575	3.11	40	55.3	1.00	1.4	19	3.70
T10-Pool with dead fish	0.53	1444	3.39	40	55.4	1.00	1.4	17	3.99

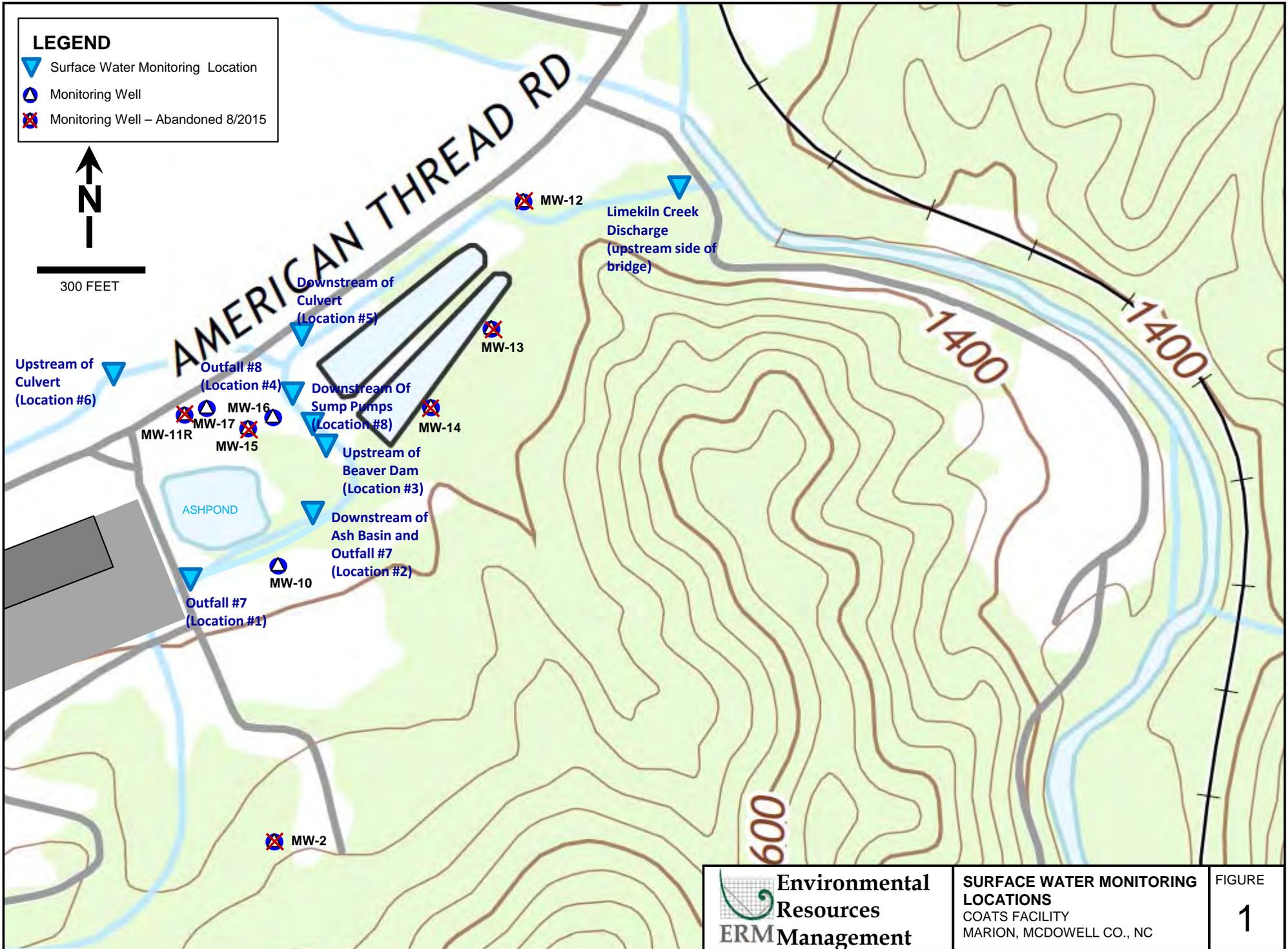
Attachment C
Surface Water Inspection and
Monitoring Results Summary

LEGEND

- Surface Water Monitoring Location
- Monitoring Well
- Monitoring Well – Abandoned 8/2015



300 FEET



ROUTINE MONITORING FORM
COATS SEVIER PLANT
MARION, NC

LOCATION #4
OUTFALL #8

DATE	TIME	INSPECTOR	LOCATION	TEMP (deg C)	COND (mS)	DO (mg/L)	pH (su)	ORP (mV) (+/-)	COMMENTS/OBSERVATIONS
7/12/2015	8:11 AM	SARA	#4	17.07	0.361	6.52	7.55	80.7	
7/13/2015	8:57 AM	SARA	#4	19.18	0.259	6.82	7.28	73.6	HEAVY RAIN THIS AM
7/14/2015	9:01 AM	SARA	#4	19.90	0.228	6.64	7.27	42.9	HEAVY RAIN THIS AM/MORE FLOW
7/15/2015	8:55 AM	SARA	#4	18.53	0.352	6.50	7.29	53.3	NORMAL FLOW
7/16/2015	9:52 AM	SARA	#4	17.07	0.364	6.72	7.41	50.9	NORMAL FLOW
7/17/2015	9:06 AM	SARA	#4	17.37	0.368	6.46	7.17	73.2	NORMAL FLOW
7/18/2015	7:25 AM	SARA	#4	18.56	0.302	6.57	7.41	64.1	NORMAL FLOW
7/19/2015	8:08 AM	SARA	#4	20.50	0.290	9.67	7.47	-	NORMAL FLOW
7/20/2015	9:00 AM	SARA	#4	20.50	0.300	7.60	7.43	-	NORMAL FLOW
7/21/2015	8:00 AM	SARA	#4	19.10	0.349	8.61	7.64	-	NORMAL FLOW
7/22/2015	8:23 AM	SARA	#4	17.12	0.383	5.93	7.45	61.2	NORMAL FLOW
7/23/2015	8:27 AM	SARA	#4	18.42	0.344	5.20	7.45	62.1	NORMAL FLOW
7/24/2015	8:15 AM	SARA	#4	18.52	0.337	5.95	7.31	43.8	NORMAL FLOW
7/25/2015	8:25 AM	SARA	#4	22.95	0.325	6.80	7.10	62.1	NORMAL FLOW
7/26/2015	8:40 AM	SARA	#4	20.50	0.290	6.77	7.10	60.0	NORMAL FLOW
7/27/2015	8:38 AM	SARA	#4	17.81	0.305	5.66	7.22	58.8	NORMAL FLOW
7/28/2015	8:23 AM	SARA	#4	17.07	0.375	5.72	7.34	73.3	NORMAL FLOW
7/29/2015	8:30 AM	SARA	#4	18.75	0.320	5.25	7.17	102.5	NORMAL FLOW
7/30/2015	8:19 AM	SARA	#4	18.15	0.317	5.31	7.19	94.6	NORMAL FLOW
7/31/2015	8:38 AM	SARA	#4	18.55	0.295	6.95	7.35	96.3	NORMAL FLOW
8/1/2015	8:20 AM	SARA	#4	19.90	0.201	7.10	7.21	72.5	NORMAL FLOW
8/2/2015	8:00 AM	SARA	#4	18.72	0.315	6.89	7.25	69.0	NORMAL FLOW
8/3/2015	8:13 AM	SARA	#4	17.36	0.334	6.52	7.41	57.7	NORMAL FLOW
8/4/2015	8:18 AM	SARA	#4	17.18	0.341	6.62	7.43	64.6	NORMAL FLOW
8/5/2015	8:49 AM	SARA	#4	17.17	0.335	5.21	7.19	89.9	NORMAL FLOW
8/6/2015	8:05 AM	PHILLIP	#4	17.40	0.361	8.10	7.27	65.0	NORMAL FLOW
8/7/2015	8:05 AM	PHILLIP	#4	18.24	0.285	7.69	7.35	55.5	NORMAL FLOW
8/8/2015	9:20 AM	PHILLIP	#4	18.04	0.261	8.21	7.41	49.5	NORMAL FLOW
8/9/2015	7:00 AM	PHILLIP	#4	17.75	0.283	8.09	7.56	49.2	NORMAL FLOW
8/10/2015	8:00 AM	PHILLIP	#4	17.68	0.281	7.75	7.39	50.2	NORMAL FLOW
8/11/2015	9:50 AM	PHILLIP	#4	17.37	0.28	7.29	7.54	47.5	LOW FLOW
8/12/2015	11:40 AM	PHILLIP	#4	17.30	0.201	6.88	7.49	50.2	LOW FLOW
8/13/2015	9:24 AM	PHILLIP	#4	19.64	0.289	6.36	7.19	-	NORMAL FLOW
8/14/2015	9:12 AM	PHILLIP	#4	18.79	0.267	8.90	7.16	-	NORMAL FLOW
8/15/2015	7:35 AM	SARA	#4	18.91	0.292	7.55	6.9	51.4	NORMAL FLOW
8/16/2015	7:30 AM	SARA	#4	18.81	0.288	6.99	7.01	48.3	NORMAL FLOW
8/17/2015	8:15 AM	PHILLIP	#4	18.37	0.285	7.75	7.11	50.7	NORMAL FLOW

ROUTINE INSPECTION FORM

COATS SEVIER

MARION, NC

PUMP INSPECTION

DATE	TIME	INPSECTOR	PUMPS OK?	SLUDGE OBSERVATIONS	WATER OBSERVATIONS	RAINFALL	COMMENTS/FOLLOWUP
7/12/2015	8:02 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/12/2015	12:00 PM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL/SAW SEVERAL FROGS
7/13/2015	8:45 AM	SARA	YES	NONE OBSERVED	DINGY-NORAML FLOW	HEAVY RAIN	ALL IS NORMAL
7/13/2015	1:30 PM	SARA	YES	NONE OBSERVED	DINGY-NORAML FLOW	RAIN IN THE AM	ALL IS NORMAL
7/13/2015	5:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/13/2015	9:30 PM	TUCKER	YES	NONE OBSERVED	DINGY-NORAML FLOW	RAIN	ALL IS NORMAL
7/14/2015	1:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/14/2015	5:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/14/2015	8:51 AM	SARA	YES	NONE OBSERVED	MUDDY-MORE FLOW	HEAVY RAIN	ALL IS NORMAL
7/14/2015	12:45 PM	SARA	YES	NONE OBSERVED	WATER CLEARING UP	LIGHT RAIN	ALL IS NORMAL
7/14/2015	4:45 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/14/2015	8:50 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/15/2015	12:45 AM	BRIAN	YES	NONE OBSERVED	DIRTY	RAIN	ALL IS NORMAL
7/15/2015	4:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/15/2015	8:28 AM	SARA	NO-SUMP FELL OVER...ONE SUMP CLOGGED UP CLEANED OUT	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/15/2015	12:30 PM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/15/2015	5:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/15/2015	9:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/16/2015	1:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/16/2015	5:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/16/2015	9:13 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/16/2015	2:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/16/2015	5:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/16/2015	9:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/17/2015	1:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/17/2015	5:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/17/2015	8:49 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/17/2015	1:00 PM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/17/2015	5:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/17/2015	9:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/18/2015	1:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/18/2015	5:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/18/2015	7:12 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/18/2015	11:00 AM	PHILLIP	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/18/2015	3:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/18/2015	7:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/18/2015	11:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL

ROUTINE INSPECTION FORM

COATS SEVIER

MARION, NC

PUMP INSPECTION

DATE	TIME	INPSECTOR	PUMPS OK?	SLUDGE OBSERVATIONS	WATER OBSERVATIONS	RAINFALL	COMMENTS/FOLLOWUP
7/19/2015	3:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/19/2015	7:59 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/19/2015	12:00 PM	PHILLIP	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/19/2015	4:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/19/2015	8:00 PM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/20/2015	12:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/20/2015	4:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/20/2015	8:53 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/20/2015	12:40 PM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/20/2015	4:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/20/2015	8:35 PM	TUCKER	YES	NONE OBSERVED	MUDDY-MORE FLOW	HEAVY RAIN	ALL IS NORMAL
7/21/2015	12:30 AM	BRIAN	YES	NONE OBSERVED	DINGY-NORAML FLOW	NONE	ALL IS NORMAL
7/21/2015	4:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/21/2015	7:50 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/21/2015	12:30 PM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/21/2015	4:30 PM	TUCKER	YES	NONE OBSERVED	VERY DINGY	HEAVY RAIN	ALL IS NORMAL
7/21/2015	8:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/22/2015	12:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/22/2015	4:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/22/2015	8:15 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/22/2015	12:30 PM	PHILLIP	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/22/2015	4:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/22/2015	8:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/23/2015	12:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/23/2015	4:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/23/2015	8:15 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL/DISCHARGE HOSES HAVE BEEN RUN OVER AND MASHED
7/23/2015	12:45 PM	SARA	YES	NONE OBSERVED	DINGY-NORAML FLOW	NONE	
7/23/2015	4:30 PM	TUCKER	YES	NONE OBSERVED	MUDDY-MORE FLOW	RAIN	NORMAL/CLEARING BRUSH
7/23/2015	8:30 PM	TUCKER	YES	NONE OBSERVED	DINGY-NORAML FLOW	NONE	ALL IS NORMAL
7/24/2015	12:30 AM	BRIAN	YES	NONE OBSERVED	DINGY-NORAML FLOW	NONE	ALL IS NORMAL
7/24/2015	4:30 AM	BRIAN	YES	NONE OBSERVED	DINGY-NORAML FLOW	NONE	ALL IS NORMAL
7/24/2015	8:08 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/24/2015	12:15 PM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/24/2015	4:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/24/2015	8:45 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/25/2015	12:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/25/2015	4:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/25/2015	8:00 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL

ROUTINE INSPECTION FORM

COATS SEVIER

MARION, NC

PUMP INSPECTION

DATE	TIME	INPSECTOR	PUMPS OK?	SLUDGE OBSERVATIONS	WATER OBSERVATIONS	RAINFALL	COMMENTS/FOLLOWUP
7/25/2015	12:00 PM	PHILLIP	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/25/2015	4:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/25/2015	8:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/26/2015	12:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/26/2015	4:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/26/2015	8:00 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/26/2015	12:00 PM	PHILLIP	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/26/2015	4:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/26/2015	8:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/27/2015	12:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/27/2015	4:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/27/2015	8:28 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/27/2015	12:15 PM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/27/2015	4:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/27/2015	8:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/28/2015	12:30 PM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/28/2015	4:30 PM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/28/2015	8:14 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/28/2015	12:00 PM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/28/2015	4:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/28/2015	8:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/29/2015	12:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/29/2015	4:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/29/2015	8:15 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/29/2015	12:30 PM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/29/2015	4:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/29/2015	8:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/30/2015	12:30 AM	BRIAN	YES	NONE OBSERVED	DINGY-NORAML FLOW	NONE	HEAVY RAIN 1 HOUR AGO
7/30/2015	4:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/30/2015	8:11 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/30/2015	12:30 PM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/30/2015	4:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/30/2015	8:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/31/2015	15:15 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/31/2015	4:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/31/2015	8:30 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/31/2015	12:45 PM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/31/2015	4:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
7/31/2015	8:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL

ROUTINE INSPECTION FORM

COATS SEVIER

MARION, NC

PUMP INSPECTION

DATE	TIME	INPSECTOR	PUMPS OK?	SLUDGE OBSERVATIONS	WATER OBSERVATIONS	RAINFALL	COMMENTS/FOLLOWUP
8/1/2015	12:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/1/2015	4:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/1/2015	8:00 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/1/2015	12:00 PM	PHILLIP	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/1/2015	4:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/1/2015	8:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/2/2015	12:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/2/2015	4:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/2/2015	7:40 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/2/2015	12:00 PM	PHILLIP	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/2/2015	4:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/2/2015	8:00 PM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/3/2015	12:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/3/2015	4:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/3/2015	7:58 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	TAKING BEAVER DAM DOWN
8/3/2015	12:00 PM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/3/2015	4:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/3/2015	8:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/4/2015	12:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/4/2015	4:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/4/2015	8:08 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/4/2015	12:00 PM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/4/2015	4:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/4/2015	8:00 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/5/2015	12:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/5/2015	4:00 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/5/2015	8:41 AM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/5/2015	12:30 PM	SARA	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/5/2015	4:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/5/2015	8:30 PM	TUCKER	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/6/2015	12:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/6/2015	4:30 AM	BRIAN	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
8/6/2015	7:56 AM	PHILLIP	YES	NONE OBSERVED	CLEAR-NORMAL FLOW	NONE	ALL IS NORMAL
Berm seep collection and pumping terminated following NCDENR authorization on 8/6/2015							