

Environmental Response and Recommendations Report

Coats American, Inc.

July 20, 2015

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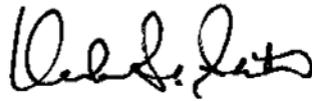
Coats American-Sevier Plant

Marion, NC

Environmental Response and Recommendations Report

July 20, 2015

Project No. 0308943



Hunter S. Sartain

Partner-in-Charge



Alan Martin, P.G.

Project Manager

ERM NC, Inc.

15720 Brixham Hill Avenue, Suite 120

Charlotte, North Carolina 28277

T: 704-541-8345

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Coats American, Inc. (Coats American) owns and operates a thread making operation at 630 American Thread Road, in Marion, McDowell County, North Carolina at the location shown in Figure 1 (“Site”). On July 2, 2015 ERM was contacted by Coats American to provide technical support for an emergency response involving fish kills (“Event”) that occurred on the North Fork of the Catawba River, downstream of the site. Figure 2 presents a map showing locations of documented fish kills. ERM provides this report to the North Carolina Department of Environment and Natural Resources (NCDENR) pursuant to undertakings by Coats American and ERM as part of an agreement between Coats American and DENR effecting transfer of oversight of incident response from NCDENR to Coats American (see Appendix A). Coats American is working actively with ERM to ensure that all appropriate actions are taken in close cooperation with NCDENR to address the Event, including taking steps to prevent any potential recurrence.

Coats American has an on-site waste water treatment plant that operates pursuant to a National Pollution Discharge Elimination System (NPDES) Permit. The facility also has a storm water permit and Storm Water Pollution Prevention Plan (SWPPP). It is ERM’s understanding that the facility has consistently sought to conduct its operations in full compliance with environmental requirements, that it has conducted regular internal compliance reviews, and that it has promptly corrected any noted deficiencies to maintain a high level of compliance. Coats American employs an on-site Environment, Health and Safety Coordinator and two certified wastewater treatment operators at the facility. Further, Coats North America, Inc., an affiliate of Coats American, employs a corporate Environment, Health and Safety director based in Toccoa, GA who monitors the status of environmental issues and provides higher level advice and assistance. This management structure, and Coats American’s corporate culture, emphasizes continuous improvement and proactive management of compliance issues.

A summary of the initial incident response as reported by the US EPA is provided below.

“Local emergency management officials received a report of numerous dead fish that were discovered the night of July 1 in the North Fork of the Catawba River (North Fork River). McDowell County Emergency Management, North Carolina Department of Environment and Natural Resources (NCDENR) and Asheville Regional Response Team began investigating the cause and source of the fish kill the night of July 1. Dead fish were observed for 2 miles downstream of the confluence of Limekiln Creek and the North Fork River. NCDENR Division of

Water Resources followed the dead fish up Limekiln Creek to an unnamed tributary that flows adjacent to the Coats American waste water treatment lagoons. NCDENR Water Resources observed dead fish just downstream of the waste water treatment lagoons in the unnamed tributary. No dead fish were observed upstream of the waste water treatment lagoons in the unnamed tributary. A beaver dam was also observed that appeared to have ruptured within recent days. A dark black substance was also noted behind the beaver dam. Water quality monitoring conducted by NCDENR in the dark black substance indicated that the substance had a very low dissolved oxygen concentration and a high pH (11.7). Elevated pH and low dissolved oxygen conditions were also observed in Limekiln Creek and the North Fork River downstream of the unnamed tributary in the "fish kill" area. No dead fish were observed in Limekiln Creek upstream of the confluence with the unnamed tributary from the Coats site. "

At the request of local emergency management officials, US EPA initiated an Emergency Response to assist with sampling and analytical support on July 2. Public Health officials issued a "Swim and No Fish Advisory" for the North Fork River.

US EPA, NCDENR and Coats American conducted water quality monitoring in the unnamed tributary, Limekiln Creek, North Fork River and Lake James. Surface water and sediment samples were collected for laboratory analysis from July 2 through July 6. Investigation by ERM on behalf of Coats American to identify the precise sources and causes of the fish kill is ongoing. Coats American has taken several precautionary actions based on the findings thus far, and plans to take additional actions based on continued examination of any potential causes of the Event.

Figure 3 presents a watershed map depicting EPA's sample locations along the North Fork of the Catawba River. Figure 4 provides a Facility Drainage map, showing the local drainage to the North Fork of the Catawba River, and notes sample locations on-site critical to the ongoing investigation.

The remainder of the report is organized into the following sections

- 2.0 Emergency Response Actions
- 3.0 Source Analysis
- 4.0 Completed and Ongoing Actions
- 5.0 Planned Future Actions

The primary purpose of the report is 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.

ERM's most significant findings to date are:

- No single event or release has been identified with certainty as the sole cause of the Event;
- ERM has identified certain conditions at the facility that , it is reasonable to believe, could have contributed to the Event;
- Containment measures have been implemented to prevent releases to the environment that could result from such identified conditions;
- Certain natural conditions that are believed to have contributed to the Event (the beaver dam) will be removed with NCDENR oversight; and
- Additional steps are being taken and will be taken by Coats American to prevent future releases and to advance Coats American's ongoing efforts to continually improve its operations and promote the highest standards of environmental stewardship. All such actions will be taken in close coordination with NCDENR.

Coats American directed ERM to mobilize to the site on the evening of July 2, 2015. ERM began prompt implementation of the following emergency response actions, in support of the work of Coats American and the Incident Management Team, and to limit the potential for additional impacts:

- Conducted initial site inspections;
- Conducted Field Monitoring to guide initial Response Actions;
- Conducted collection of dead fish, including storage and disposal;
- Provided immediate containment of seepage from the wastewater treatment (WWT) area;
- Coats American arranged for clearing of underbrush, trees and grass along the unnamed tributaries to the Limekiln Creek on company property, along Limekiln Creek, around the wastewater treatment ponds, and along American Thread Road to allow easy observation by Coats American personnel, ERM, governmental officials, and the public, of the creeks and berms in the vicinity;
- Engaged in Incident Management team briefings; and
- Provided a Transition Plan, to transfer Response Actions from EPA and NCDENR to provide ongoing protection to the watershed.

Coats American provided its transition plan to EPA and NCDENR on July 5, 2015 (provided as [Appendix A](#)). The commitments in the Transition Plan were to:

- Continue Seep Containment
- Continue Field Monitoring for a Period of 5 days
- Evaluate Analytical Data from the initial sampling events (EPA and ERM data) to support future action plans
- Prepare an Assessment Plan and provide to NCDENR by July 20, 2015.

At the time the Transition Plan was developed, the causes of the Event were suspected to be associated with the WWT area, where seepage near a WWT berm was observed in conjunction with the beaver dam that apparently provided retention of impacted surface waters. The two primary contributing contaminants to the event were noted during early field monitoring as low dissolved oxygen (D.O.) and high pH (>9 standard units [s.u.]).

Emergency response data and information will be provided under separate cover, as required by NCDENR. This report focuses on the investigation of the sources of the release and subsequent actions and recommendations.

Following the initial emergency response actions, Coats American initiated an analysis to determine the source or sources of the Event. The potential sources of the Event Coats American identified are shown on Figure 3. Coats American and ERM investigated potential sources as follows.

- Evaluation of Surface Water Conditions, including Limekiln Creek Up-gradient of the Coats American Drainage Confluence, Armstrong Creek Up-gradient of the Confluence with North Fork of Catawba River and North Fork River Up-gradient of the Confluence with Armstrong Creek;
- Coats American WWT Area, including NPDES Outfall 001 and the location of the beaver dam described below;
- Coats American Storm Water Drainage.

At Coats American's direction, ERM conducted physical observations, continuously evaluated the field monitoring data that was being collected, routinely reviewed and evaluated the EPA's surface water and sediment analytical data (as the data became available) and rigorously reviewed site operations with Coats American management and facility personnel. Coats American's management provided full access to all relevant company facilities, records and personnel during the course of this response.

In summary, the source analysis showed the following:

- A release (either "slow or fast") of caustic water treatment chemicals from the filtration plant area, through Outfall 007, was a likely cause due to the observed impact of elevated pH in the sludge at the beaver dam;
- Seeps from the wastewater treatment plant lagoons may have contributed to conditions in the creek;
- The beaver dam would tend to retain contaminants, until breached, and was a contributing factor to the magnitude of the impact of the release.

This summary is explained in greater detail below.

3.1 SURFACE WATER EVALUATIONS

Field monitoring of the streams on and around the facility by ERM occurred from July 7th through July 12th, 2015 to monitor surface water quality post emergency response and to support the source evaluation. The field monitoring consisted of measuring field parameters (temperature, conductivity, pH, dissolved oxygen and oxidation-reduction potential) at multiple locations on an unnamed tributary on the Coats American site ("Coats American tributary") and on Limekiln Creek downstream of the confluence of the Coats American

tributary. Table 1 provides the summary of the primary constituents (DO and pH) from the field monitoring events. The routine field monitoring indicated that the surface water quality of the Coats American tributary and the downstream segment of Limekiln Creek were within normal range, with no significantly anomalous data (i.e. no low DO or high pH). Visual inspections of surface waters on and around the plant did not yield any indications that further damage to the fish population was occurring. These data, as well as the concurrent EPA surface water sampling results, supported the view that the release was a “singular event” as opposed to an ongoing condition.

During the emergency response activities, a beaver dam was identified in the Coats American tributary at the western end of the WWT aeration basin. The “post incident” observations indicate that the beaver dam was breached so that water was no longer ponded behind the dam. It is not known when the beaver dam breach occurred. Beaver dams generally create conditions that can have an adverse impact to downstream aquatic environments when they are breached. However, calculations of the mass of “low DO and high pH sediments” potential impact to the North Fork of the Catawba River (flowing at or near 60 cubic feet per second [cfs]) support the conclusion that the beaver dam was not the sole cause of the incident. Accordingly, although the beaver dam pond is not considered to be the sole source of the incident, its presence and potential role as an impoundment of affected water is believed to be a contributing factor that likely magnified the impact of the release.

Fish kills were noted along the North Fork of the Catawba River and on Limekiln Creek (down-gradient of the Coats American Outfalls 7 and 8). Figure 2 provides the location of documented fish kills. A verbal report was provided (on July 10th, 2015) that NCDENR personnel also observed fish kills up-gradient of the beaver dam along the unnamed tributary on the Coats American property. As a result of these evaluations and observations, the source analysis focused initially on the location of the WWT basin and the beaver dam. However, ERM also investigated up-gradient of the beaver dam, as is set forth more fully below.

3.2 WWT BASIN OBSERVATIONS

Because of the identified location of the potential release (e.g. sludge deposits upstream of the beaver dam and low DO measurements) the wastewater basins became the early focus of the investigations. During that evaluation the wastewater treatment operations were inspected. Records of the Outfall 001, the permitted discharge point of treated effluent from the WWT operations, were reviewed. There were no indications, based on visual observations or records review, that the discharge from Outfall 001 was a cause of the event.

Seepage from the soil berms of the wastewater lagoons was observed on the west and south sides of the aeration basin and the equalization basin. The seepage

was observed to be slow flowing (estimated at <20 gpm total). The DO concentration of the aeration basin was elevated, however, low DO sludge was observed at the base of the lagoon. The pH measurements of the sludge did not indicate elevated pH readings. Because the flow in Limekiln Creek (the first downstream mixing location) was visually observed to be an estimated 10 times greater than the up-gradient flow from the plant and the WWT area, ERM judged that the low dissolved oxygen would not have likely been the primary cause of the event. More importantly, once mixing from Limekiln occurred in North Fork of the Catawba River (flowing at an estimated rate of 60 cubic feet per second [cfs]) the impact of the low DO in the small flow from the plant wastewater basins would be expected to rapidly normalize to acceptable DO concentration that would not cause harm to fish within the watershed.

Coats American and ERM identified several pipes and conduits of varying materials and in varying condition crossing the Coats American tributary, including what appeared to be abandoned lines under a former footbridge. Further investigation by Coats American and ERM found no evidence of any release of materials from any of those pipes, conduits and lines. Accordingly, they are not considered to be a likely source. As part of its continued response, however, Coats American has asked ERM to conduct further evaluation of these pipe, conduits and lines to assess their long term integrity and recommend any additional steps based on that evaluation.

Because Coats American and ERM could not identify with reasonable certainty a definitive sole source of the conditions resulting in the Event at the site of the WWT basin and the beaver dam, Coats American asked ERM to investigate storm water drainage as a potential additional source.

3.3 STORM DRAINAGE

In order to assess potential contributing causes to the Event, ERM examined whether storm water drainage could have had an impact on the beaver dam area. It appears that only Stormwater Outfalls 007, 008 and 009 are up-gradient or down-gradient of the beaver dam area. Accordingly, the source analysis focused on those Outfalls.

On July 10, 2015 ERM reviewed original 1951 plant drawings for the storm water drainage systems. In addition, ERM conducted a local area review and found continuous discharge occurring from Fire Water Pond overflow. **Figure 5** presents a graphic showing possible inputs into the storm drainage system up-gradient of the WWT area from Coats American property. The map indicated numerous surface water inputs in the form of local area catch basins. In addition, the 1951 map indicated numerous floor drain connections from within the plant. Facility personnel reported their understanding that all floor drains within the plant had been connected to the waste water treatment system within

the last 20-30 years as part of ongoing plant improvements. ERM conducted inspections of each of these areas between Friday July 7th and Thursday, July 16, 2015.

3.3.1 External Storm Drainage Sources

The water storage pond area was reviewed as a potential source of the event. Water from either the North Fork River or an onsite groundwater well is pumped and stored in the water storage pond at the site. The water is treated in the plant water filtration plant and used for domestic, process, and fire water uses. 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 to the Coats American storm drainage system as shown on Figure 5. This groundwater likely contains naturally-occurring elevated iron and other cations. Iron rich deposits (ferrous oxide) were noted at the point of discharge of the water storage pond during the inspections. No chemicals or other inputs were noteworthy from the water storage pond area. Coats American has requested that ERM confirm through sampling that this area is not a potential source.

The inactive Coal Ash Pond was considered as a potential source due to its location adjacent to the WWT area, and proximity to the Beaver Dam. The ash pond retains storm water and water filtration backwash water. The ash pond contains an overflow pipe allowing water to discharge east ward toward the unnamed tributary. However, the water elevation within the ash pond must rise approximately 6-7 ft. to overflow and discharge. No evidence of recent high water was indicated. Coats American monitors groundwater quality conditions down gradient of the pond, and existing groundwater data do not indicate any groundwater quality standard exceedances associated with the pond. In addition, ERM viewed the backwash at the water filtration plant and observed discharge into this area. The water tested normal with respect to DO and pH. As a result of these observations the ash pond was ruled out as a potential cause of the event. ERM is evaluating whether additional sampling should be conducted to confirm this conclusion.

A former burn area is located within the general watershed. This area has been evaluated by Coats American with NCDENR oversight. ERM reviewed the available information and concluded that the burn area was not a likely source. However, at the request of Coats American ERM is assessing whether further sampling should be undertaken to confirm that conclusion.

Outfall 007 is the storm water discharge from the southeast portion of plant operations, and is located immediately up-gradient of the WWT area, the beaver dam, and Outfall 008. The discharge at Outfall 007 was observed to be a continuous flow discharge on the order of 20-50 gpm. Rainfall during the

observation period did not occur. As a result, ERM concluded that a continuous flow discharge was occurring from up-gradient sources.

Grass immediately up-gradient of Outfall 7 is discolored and shows evidence of burning. Coats American has requested that ERM confirm through sampling that this area has not been impacted by a spill, although it appears based on visual observations that the impacts are non-chemical in nature. Although the investigation to date has not suggested trespass in this area, one of the longer term actions being reviewed by Coats American is additional site control in and around the storm water drainage.

The 1951 facility map showed the storm drainage system layout up-gradient of Outfall 007. External plant areas were observed where local storm water could enter the storm drain system. Flow was occurring in each of the storm drains leading up to the chiller discharge storm drain. See Storm Drainage system map Figure 5. The observations external to the plant did not produce evidence of a recent spill or other condition that could be a likely cause of the event. Once the external observations were completed ERM conducted inspections of internal plant sources that could explain a potential release from the storm drainage system.

3.3.2 Internal Plant Drain Sources

Numerous locations were noted on the 1951 drawing that indicate connections to the plant floor drains or plant areas, as well as roof drains, as follows:

- External Cooling Tower
- Chiller Room
- Caustic Transfer Station
- External Chemical Storage Area
- Boiler House (with internal Chemical Storage)
- Water Filtration Plant
- Water Settling Basins
- Roof Drains
- Toilet on southeast corner of plant.

As noted, plant personnel reported that subsequent work had been conducted to connect floor drains within the plant to the waste water treatment system. ERM undertook visual inspections and dye testing to assess whether any of these areas could have been sources of the Event.

The cooling tower located at the westernmost extent of the storm drain associated with Outfall 007 was visually inspected. Minor water blowdown occurs from this area, but no chemicals were observed within the area.

Additional assessment of this area is ongoing at the request of Coats American to confirm that blowdown from this area is not a potential source of impacts.

The chiller room was initially observed due to the continuous flow discharge. The chiller room is designated as connecting to the storm drain system. However, physical observations in the chiller room blowdown indicated no substantial chemicals stored or potentially released. At the request of Coats American, additional assessment of this area is ongoing to confirm that it is not a potential source of impacts.

The caustic transfer station was reviewed as a potential for chemical spills to enter the storm drain system. No physical evidence was obtained that would indicate a caustic spill to the ground leading to the storm drain system. At the request of Coats American, additional assessment of this area is ongoing to confirm that it is not a potential source of impacts.

The external chemical Storage Area was reviewed as a potential source. No physical evidence of recent spills leading to the storm drainage system was identified. At the request of Coats American, this area is also subject to ongoing assessment.

The boiler house and internal chemical storage area was observed. Numerous textile chemicals (dyes, etc.) were observed within this storage area. In addition, a 15,000 gallon vertical storage tank with 50% caustic was observed. No leaks, drips, or spills were observed in these areas. Continuous discharge from wash down was noted within the caustic storage area and a floor drain system was observed that appeared to flow northward (away from the storm drain). The floor drain in the caustic storage tank area and another floor drain in the boiler house area were dye tested and confirmed to go to waste treatment, and not to storm drains. Accordingly, this area is not considered a likely cause of the event. However, due to the age of the caustic tank and associated piping, additional assessment of this storage tank and associated containment is being undertaken at the request of Coats American to address options for implementing additional protections.

The water settling basins were briefly reviewed as a potential source of the event. A visual inspection of the water settling basins indicated that overflow from the basins would flow to an overflow sump and potentially discharge to the storm drains. No visual observations were conducted that indicated a recent overflow. In addition, no chemicals were stored in this area.

Numerous roof drains were shown that would connect to the storm drainage system. At the time of this report, the roof was not inspected. At Coats American's request, ERM will conduct such an inspection.

The 1951 map indicated that the toilet on southeast corner of plant may be connected to the storm drainage system. Subsequent inspections showed that this had subsequently been connected to the wastewater treatment plant.

Next, observations of the water filtration plant were conducted. A total of ten floor drains were observed within the filtration plant, and a drain from the laboratory sink. In addition, two process water sumps were identified in the area. The 1951 map indicated that all floor drains were originally connected to the storm drain system. However, as noted previously, facility personnel reported their understanding that, within the last 20-30 years, a project had been undertaken to connect all floor drains in this area as well as drains in the parking lot in the vicinity of the filtration plant to the wastewater treatment plant.

There are three levels of the water filtration plant, as follows;

- Lower level where wastewater piping and general storage is conducted (3 floor drains).
- Main Level where filtration plant pumps and piping are housed (6 floor drains)
- Upper level where the Filtration plant “controls” and laboratory are located. This level also contains water treatment area chemical storage (alum, caustic, and sodium hexametaphosphate) where the chemicals are fed to the water filtration plant.

Observations at the time include the following:

- Dripping from overhead cast iron pipe from upper level floor drain
- Recent cleanup activities
- Chalky substance and brown staining on floor
- Piping repairs associated with the water treatment chemical storage tanks.

Interviews with employees responsible for the water filtration plant area indicated the following:

- Recent cleanup activities were related to the removal of bird droppings as a result of birds nesting in the filtration plant area. Bird droppings were visually observed by ERM as well as nesting activities.
- Coats American employees, based on their understanding of the drain connection project identified above, believed that the floor drains from the area led to wastewater plant influent as opposed to the storm drains.

ERM conducted dye testing that showed the following:

- The three floor drains on the lower level of the filtration plant are routed to wastewater treatment and not to storm drainage;

- The laboratory sink on the upper level of the filtration plant is routed to wastewater treatment and not to storm drainage ;
- The six floor drains on the mid level of the filtration plant are routed to the storm drain, even though facility personnel believed that these floor drains had been re-routed to the waste water treatment plant; The floor drain on the upper level of the filtration plant adjacent to the chemical storage tanks is routed to storm drain, even though facility personnel believed that this drain also had been re-routed to the waste water treatment plant.

Because of the connection of certain floor drains in the filter plant area to the storm drain (previously thought to connect to waste water treatment), the observed piping repairs in the filter plant area, and floor cleanup activities, this area (water filtration plant) was identified on July 11th, 2015 as a potential cause area requiring additional follow up. Based on these findings, immediate steps were taken to interrupt potential discharges to these floor drains. In addition, Coats American has retained contractors to promptly connect all of the floor drains in the filter plant to the wastewater treatment system.

3.4 SUMMARY OF CONCLUSIONS

In summary, ERM has to date identified three primary potential contributors to the cause of the incident, as follows:

- A release (either “slow or fast”) of water treatment chemicals from the filtration plant area, through Outfall 007, due to the impact of elevated pH suggesting a caustic release;
- Seeps from the wastewater treatment plant lagoons may have contributed to conditions in the creek;
- The beaver dam would tend to retain contaminants, until breached, and is believed to be a contributing factor to the magnitude of the impact of the release.

These contributors, and actions being taken to address them, are addressed more fully in the following sections of this report.

The following actions have been conducted or initiated by Coats American to further support the ongoing source analysis of the Event and to eliminate the potential for future releases from the sources identified in the source analysis into the storm drainage system and down-gradient watershed:

- Ongoing Monitoring and Inspections
- Ongoing Vegetation Removal
- WWT Area Basin Initial Geotechnical Screening
- Dye Testing
- Floor Drain Disconnect
- Storm Water Audit
- Inventory Loss Evaluation

Coats American has continued its ongoing investigation, monitoring and containment activities as part of the Transition Plan in an ongoing effort to prevent a potential future release. Coats American will continue to take all appropriate steps to address this incident, including further inspections, monitoring and preventive actions, until it and NCDENR are comfortable that further response actions are no longer warranted.

Coats American continues to conduct ongoing vegetation removal to facilitate visual inspections around the WWT area ponds, to visually inspect areas downstream of Outfall 007, and to eliminate the presence of the residuals of the beaver dam at or near the WWT area.

On Tuesday July 14th, 2015, Coats American directed ERM to conduct an initial screening of the WWT area ponds to provide recommendations for Coats American for further consideration. Initial observations indicate that, although slight seepage is occurring, the potential for berm failure is low. The berms are substantial in width and are unlikely to fail due to soil friction. In addition, limited head conditions are present minimizing the potential for base failure.

On July 14th, 2015 Coats American maintenance staff re-routed the floor drain in the upper level of the water filtration plant to a 55 gallon drum, to eliminate the potential for discharge from the chemical storage to storm drainage.

Containment vessels have been installed beneath the chemical storage tanks. In addition, Coats American has retained contractors to connect all floor drains in the filtration plant to the wastewater treatment plant.

On Tuesday, July 14th Coats American directed ERM to commence a Storm Water Audit to evaluate compliance with the storm water permit and to continue evaluations relating to all potential sources that could potentially affect storm

water quality at the site. Coats American will take additional steps to strengthen its stormwater pollution prevention practices based on the results of that audit, which are expected within the next 30 days.

Coats American employees continue to evaluate the potential for inventory loss through a review of plant records, although it appears that current records may not permit a definitive assessment. Coats American is evaluating whether improvements can be made to its chemical inventory recordkeeping process.

Finally, Coats American has indicated that, after investigation of this Event has been completed and further steps have been taken to prevent any discharge to the storm water system, it will be retaining ERM to conduct a full multi-media compliance audit of all environmental compliance issues at the facility.

Coats American and ERM look forward to working closely with NCDENR in connection with these future actions to ensure that redundant protections are put in place to ensure the highest level of compliance and to augment best practices going forward.

In addition to addressing issues identified in the source analysis, Coats American plans to conduct the following actions to continue and complete the investigations associated with the Event described in the introduction of this report, and to assess fully environmental compliance at the facility:

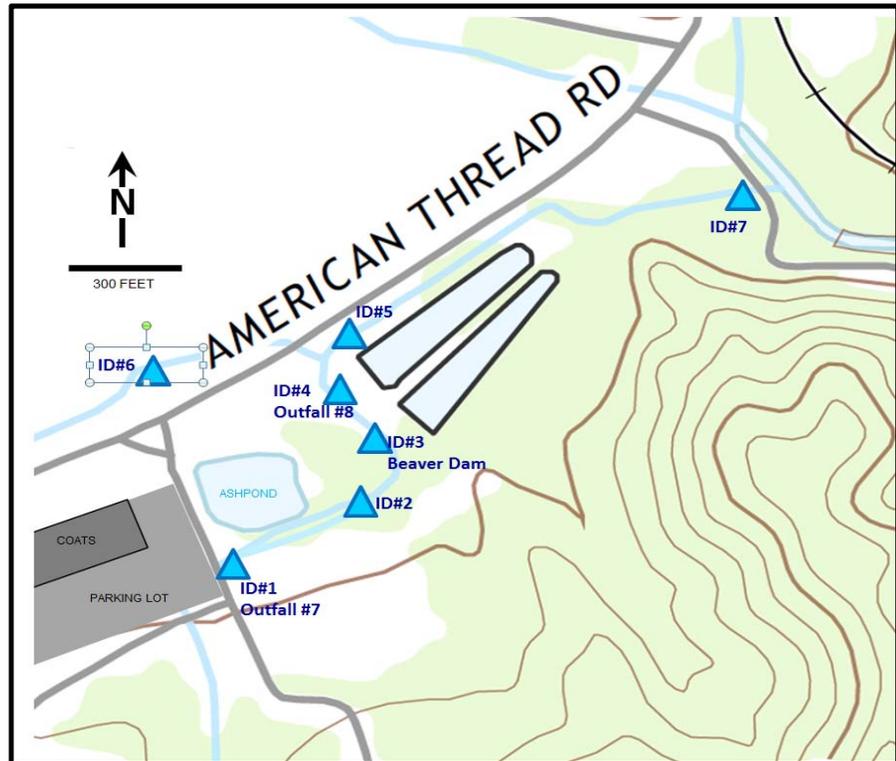
- Complete and submit the Emergency Response Report to NCDENR, as needed.
- Complete its compliance assessment for the facility's stormwater discharge permit within the next 30 days, and promptly address any identified issues.
- Within the next 60 days, conduct a full multi-media compliance audit of all activity at the facility (with the assistance of ERM) related to all environmental issues, including (but not limited to) hazardous and solid waste management, air emissions, water use and discharge, environmental management systems and employee training. Coats will promptly address any identified issues.
- Restock fish in the affected waterways. Coats will work cooperatively with state fish and wildlife officials to effectuate this commitment.
- Connect all floor drains that have the potential to transfer spills, leaks, or drips of chemical substances and/or other materials to wastewater treatment.
- Evaluate the water storage pond overflow to determine if the discharge complies with storm water regulations or if alternate discharge locations are more acceptable.
- Continue weekly inspections of the storm water outfalls until Coats and NCDENR mutually agree that less frequent inspections would be appropriate based on implementation of further controls.
- Evaluate with NCDENR the need for further evaluation of the WWT area ponds and berms, as well as additional sampling down-gradient of the ash pond and the burn area.
- Discuss and evaluate any further steps that NCDENR may determine to be appropriate or advisable after it has reviewed the information developed by Coats American and ERM based on its investigation to date.

Tables

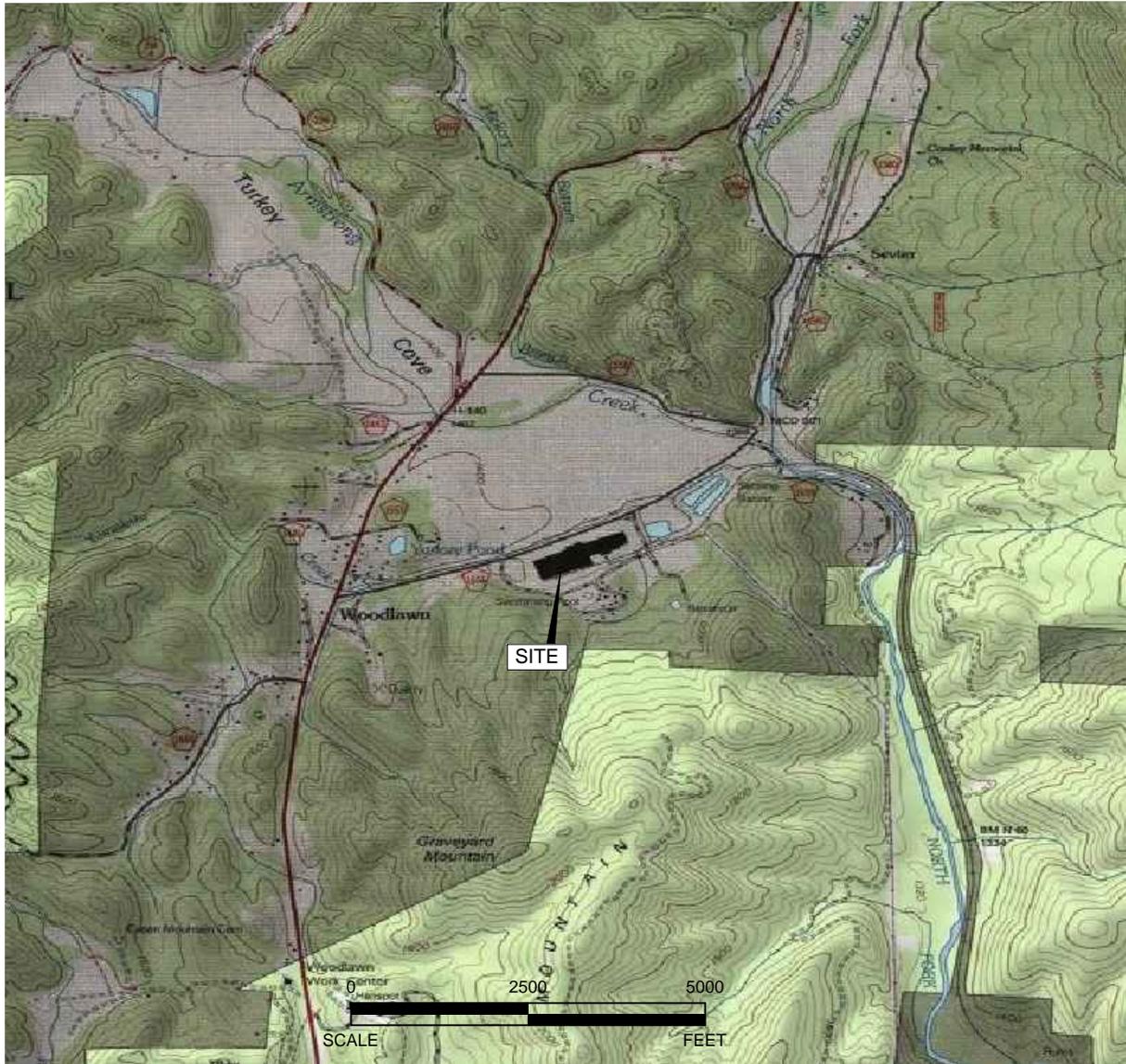
Table 1
Field Monitoring Summary - pH and Dissolved Oxygen
Coats North America
Sevier Plant
Marion, NC

Inspector	Date	LOCATION														Comments
		ID# 1		ID# 2		ID# 3		ID# 4		ID# 5		ID# 6		ID# 7		
		Coats Drainage - Outfall #7		Coats Drainage - Downstream of Outfall #7		Coats Drainage - Beaver Dam		Coats Drainage - Outfall #8		Limekiln Crk Downstream of American Thread Rd		Limekiln Crk Upstream of American Thread Rd		Limekiln Crk Discharge into North Fork River		
	pH	DO	pH	DO	pH	DO	pH	DO	pH	DO	pH	DO	pH	DO		
ERM	7/6/15	--	--	--	--	--	--	6.85	6.99	--	--	--	--	--	--	
ERM	7/7/15	7.43	8.88	--	--	7.68	6.90	7.44	7.60	7.67	8.57	7.70	8.40	7.29	9.51	
ERM	7/8/15	6.60	8.42	7.07	8.31	7.12	8.10	--	--	7.22	8.86	7.24	9.70	7.32	8.90	
ERM	7/9/15	7.00	8.63	7.06	8.47	7.14	8.20	7.19	7.77	7.26	8.46	7.19	8.66	7.18	9.05	
ERM	7/10/15	7.25	8.87	7.23	8.44	7.39	7.75	7.42	7.54	7.28	8.03	7.13	8.13	7.22	8.62	
ERM	7/11/15	7.01	10.47	7.12	9.43	7.26	8.73	7.31	8.23	7.55	9.87	7.18	8.34	7.55	10.17	
Coats (SH)	7/12/15	7.47	8.64	7.46	7.85	7.44	7.82	7.55	6.52	7.50	7.28	7.36	7.53	7.55	8.25	
Coats (SH)	7/13/15	6.87	8.27	7.04	7.80	7.17	7.65	7.28	6.82	7.28	7.15	7.25	7.78	7.43	8.28	Heavy rain this am
Coats (SH)	7/14/15	6.89	7.65	6.94	7.54	7.09	7.20	7.27	6.64	7.26	7.25	7.23	7.64	7.39	7.28	Heavy rain this am/muddy water
Coats (SH)	7/15/15	6.87	7.38	6.94	6.84	7.15	6.50	7.29	6.50	7.49	7.24	7.44	7.43	7.58	7.94	Normal flow
Coats (SH)	7/16/15	7.51	7.99	7.41	7.01	7.41	6.75	7.41	6.72	7.62	7.65	7.38	7.85	7.56	8.28	Low flow
Coats (SH)	7/17/15	7.42	7.63	7.49	6.91	7.05	6.83	7.17	6.46	7.48	6.99	7.37	7.41	7.49	8.10	Low to normal flow
Coats (SH)	7/18/15	7.40	7.70	7.42	7.37	7.34	6.74	7.41	6.57	7.56	6.85	7.57	7.33	7.60	7.76	Normal flow
Coats (SH)	7/19/15	7.36	10.20	7.35	10.13	7.41	9.72	7.47	9.67	7.55	8.48	7.56	9.83	7.58	11.60	Normal flow
Coats (SH)	7/20/15	7.09	9.57	7.17	8.54	7.34	9.52	7.43	7.60	7.52	9.61	7.52	8.93	7.58	11.20	Normal flow

NOTES:
 pH - Standard Units
 DO - Dissolved Oxygen in milligrams per liter



Figures



SOURCE:
 TETRA TECH
 Date: 7/6/2015
 Analyst: caleb.vorbusch

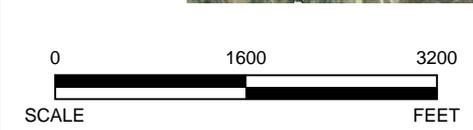
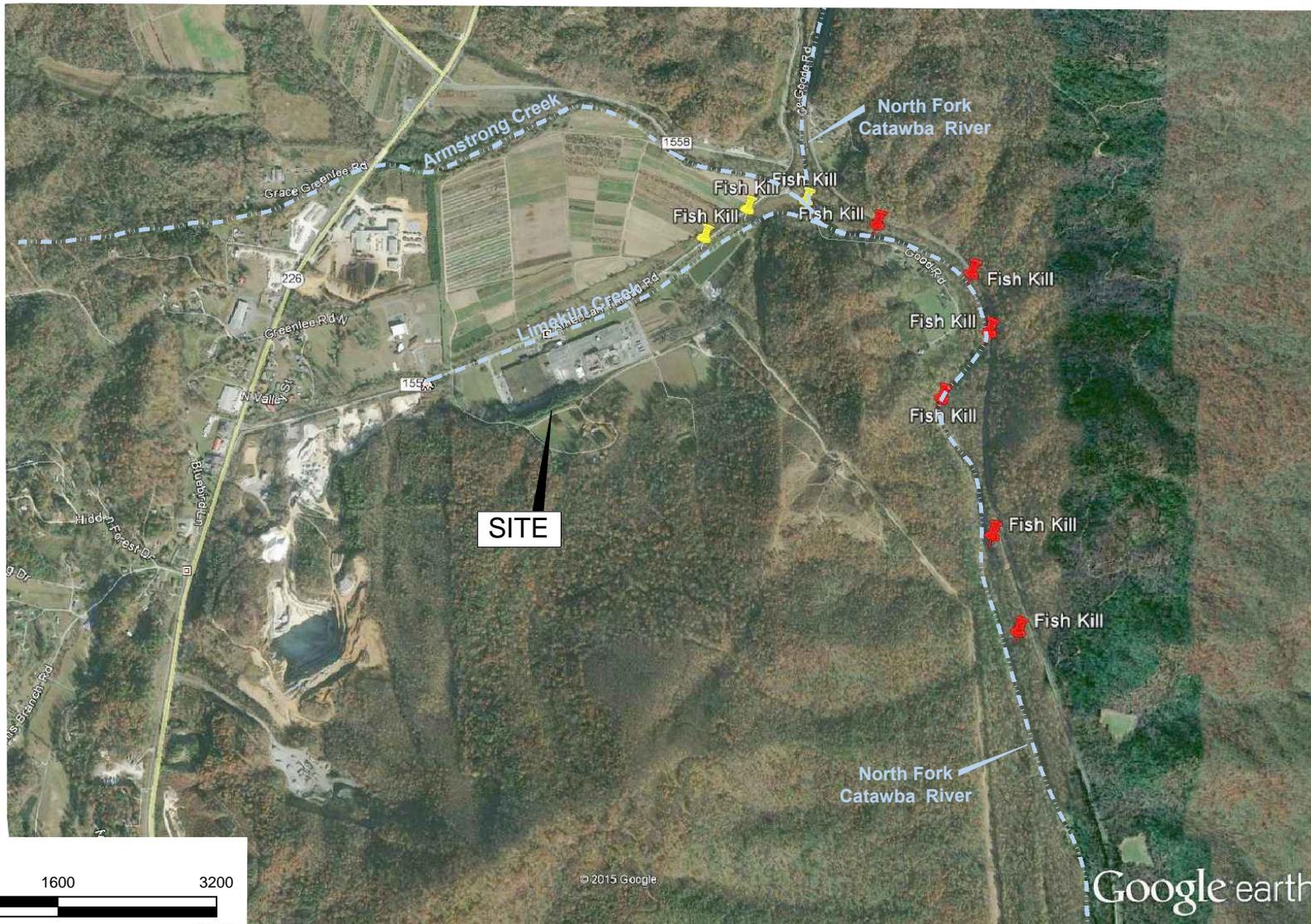
Environmental Resources Management

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DATE: 7/20/2015	SCALE: AS SHOWN	REV.:

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FIGURE 1
 SITE LOCATION MAP
 Environmental Response and Recommendations Report
 Coats Sevier Plant
 Marion, North Carolina





Environmental Resources Management

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FIGURE 2
 LOCATION OF DOCUMENTED FISH KILLS
 Environmental Response and Recommendations Report
 Coats Sevier Plant
 Marion, North Carolina

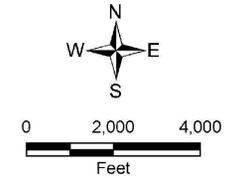


ERM-Southwest, Inc. TX PE Firm No. 23993

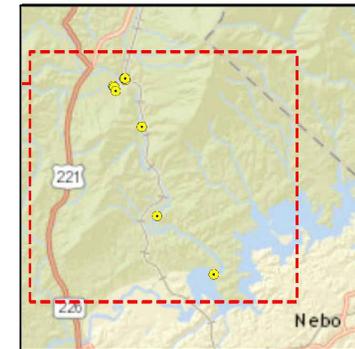


Legend

- Sampling and/or Screening Location



Map Sources:
 Bing Maps Aerial Imagery, 2010-2012.
 National Hydrography Dataset, 2015.



SOURCE:



Date: 7/6/2015
 Analyst: dale.vonbusch

File: L:\T\coxxx_MidDown_L_Fin_Fill\end\Sample_Locations_ER-MAP2_0708151.mxd

Environmental Resources Management

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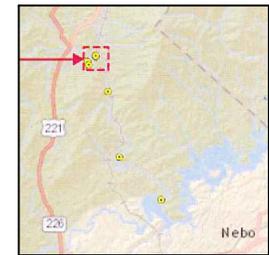
FIGURE 3
 WATERSHED MAP
 Environmental Response and Recommendations Report
 Coats Sevier Plant
 Marion, North Carolina





LEGEND

- SURFACE WATER SAMPLE
- DIRECTION OF RIVER FLOW
- - - SPILLWAY PATH
- ▲ ID#1 ph/D.O. FIELD MONITORING LOCATION



SOURCE: GOOGLE EARTH

Environmental Resources Management

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DATE: 7/20/2015	SCALE: AS SHOWN	REV.:
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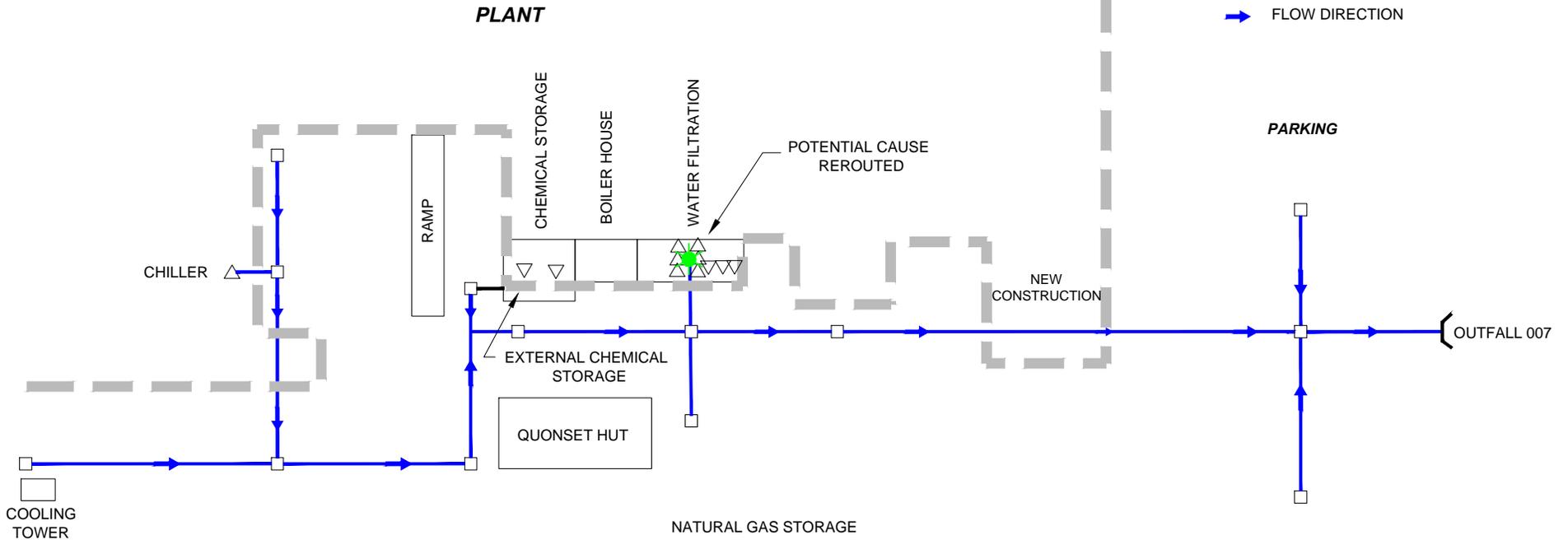
FIGURE 4
FACILITY DRAINAGE MAP
Environmental Response and Recommendations Report
Coats Sevier Plant
Marion, North Carolina





LEGEND

- STORM DRAIN
- △ FLOOR DRAIN (X TO STORM)
- ▽ FLOOR DRAIN (X TO WW)
- ★ DRAIN FROM CHEMICAL STORAGE REMOVED FROM X TO STORM DRAIN
- EXTERIOR WALL
- FLOW DIRECTION



Environmental Resources Management

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FIGURE 5
 STORM DRAINAGE SYSTEM (OUTFALL 007)
 Environmental Response and Recommendations Report
 Coats Sevier Plant
 Marion, North Carolina



Appendix A
Transition Plan

July 5, 2015

Transition Plan

Coats American
630 American Thread Road
Marion, McDowell County, North Carolina

On behalf of Coats American (Coats), ERM has developed this Transition Plan for the referenced Coats facility located near Marion, North Carolina. The plan describes the proposed actions to be taken by Coats to manage seepage from the wastewater aeration basin at the Coats site, monitor surface water quality and conduct additional assessment activities. The proposed actions are in follow-up to the July 2015 emergency response incident involving surface water quality impacts and a fish kill in the North Fork Catawba River downstream of the Coats site.

Seep Containment

- Continue containment of berm seepage by pumping marsh area west of aeration basin (west tributary). Pump recovered water into polishing pond.

Surface Water Monitoring

- Monitor surface water quality by daily field parameter measurements (temperature, conductivity, pH, DO and ORP) in the west tributary (1 monitoring location downstream of seep) and in Limekiln Creek (2 monitoring locations). Limekiln Creek will be monitored upstream and immediately downstream of the confluence of the west tributary and immediately upstream of the confluence with the North Fork Catawba River. The daily monitoring will be conducted for five days to confirm no surface water quality impacts. The data will be evaluated to determine the need for, nature and frequency of additional monitoring.
- The ongoing 3-day surface water sampling in Lake James, being conducted by ERM concurrent with emergency response, will be conclude after the 3rd sampling event scheduled for July 6. The field parameter results from the sampling indicate no surface water impacts to Lake James.

Transition Plan

Data Evaluation – EPA and ERM Sampling

- ERM will review the sampling data collected by EPA for the North Fork Catawba River and Limekiln Creek, and the sampling data collected by ERM for Lake James.
- Based on the sampling data review, ERM will evaluate the need for additional monitoring.

Site Assessment Work Plan

- A site assessment work plan will be prepared to evaluate the nature and extent of the apparent seepage from the wastewater aeration basin. It is anticipated that the assessment will include characterization of groundwater quality and characterization of the aeration pond sludge layer. The assessment results will also be used to evaluate potential remedial alternatives.

Schedule

<i>Activity</i>	<i>Target Date</i>
Containment of seepage	Ongoing
Surface Water Monitoring	Implement by July 7
Data Evaluation – EPA & ERM Sampling – N Fork Catawba & Lake James	Ongoing and to continue as data provided
Site Assessment Work Plan	Submit to NCDENR for review by July 20

Status Reporting

The status of the proposed actions will be reported during the daily incident management meetings driven by Coats Management Team, led by John Moss.

Transition Plan

Organization

