

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES

REPORT OF COMMENTS RECEIVED
BASED ON PUBLIC POSTING OF
PROPOSED CONSENT ORDER OF COAL-FIRED FACILITIES:
ASHEVILLE STEAM ELECTRIC GENERATING PLANT
IN BUNCOMBE COUNTY,
AND
RIVERBEND STEAM STATION
IN GASTON COUNTY

September 13, 2013

BACKGROUND

The Asheville Steam Electric Generating Plant in Buncombe County and the Riverbend Steam Station in Gaston County are coal-fired electric generating facilities. Both facilities have state-issued National Pollutant Discharge Elimination System (NPDES) permits that address discharges to surface waters. In addition, both facilities are required to monitor groundwater in wells that surround their ash ponds. The Asheville plant discharges wastewater to the French Broad River, Lake Julian and an unnamed tributary of Powell Creek in the French Broad River basin under the authority of their NPDES Permit NC0000396. The Riverbend facility discharges wastewater to Mountain Island Lake under the authority of their NPDES permit NC0004961.

Over a period of several years, monitoring of groundwater at each plant's compliance boundary has revealed levels of chemical constituents that exceed requirements for groundwater protection. Also, state water quality inspectors now believe that seeps, or releases of liquids not authorized as part of the permitted discharges, have occurred at both plants.

On March 22, 2013, the Department of Environment and Natural Resources (DENR) filed a civil action for injunctive relief against Duke Energy Progress, Inc. in Wake County Superior Court alleging violations of North Carolina statutes and rules for water quality protection at the Asheville Steam Plant. On May 24, 2013, NC DENR filed a civil action for injunctive relief against Duke Energy Carolinas, LLC in Mecklenburg County Superior Court for the same types of violations at the Riverbend Station. Pursuant to settlement negotiations, DENR and the Duke Energy companies agreed upon a proposed Consent Order to settle the litigation. Public notice and comment on the proposed settlement of the injunction actions is required by federal rule since DENR has a delegated NPDES permitting program. Public comments were requested on July 15, 2013 concerning the proposed Consent Order, with a 30-day window for comments.

The proposed Consent Order establishes a process for dealing with the unpermitted discharges and violations at these two facilities in accordance with North Carolina law. The proposed Consent Order first requires Duke Energy Progress, Inc. and Duke Energy Carolinas, LLC to take a series of steps to identify the seeps and to determine the cause, significance and extent of exceedances of groundwater standards, including any imminent hazards to public health and safety. These steps must be outlined in plans that will be submitted to DENR's Division of Water Resources (DWR) for review and approval, including any changes to the plans determined by DWR to be necessary to achieve compliance with the State's rules.

To develop a corrective action plan to address known exceedances of groundwater standards, both facilities must first determine if the exceedances are caused by a possible contaminant source or if they are a result of naturally occurring conditions. A study of site geology and groundwater conditions, including areas surrounding the potential contamination source, will reveal characteristics of the natural rock and soil formations and their effect on the groundwater

resource. If natural conditions account for none or only a portion of the exceedance of groundwater standards, then it is reasonable to assume that there are impacts caused by activities at the facilities. The referenced study is needed to define the horizontal and vertical extent of the impacts to groundwater and to characterize how subsurface geological conditions influence the movement of the contamination and its impact on the environment over time and distance. It is only after those conditions are understood through completion of a site assessment, that the appropriate corrective action to address the contamination can be determined.

Applicable North Carolina rules offer the utilities corrective action options for dealing with groundwater contamination. These options may include, but not be limited to, pumping the contaminated groundwater and treating it, removing the contamination source to a containment area, or controlling the contamination source and impacted groundwater through some physical, mechanical or chemical means.

Before approving any corrective action plan and according to North Carolina law, the Division of Water Resources must consider several factors, including: the extent of any threat to human health or safety, the extent of damage or potential adverse impact to the environment, the technology available to accomplish the restoration, the time and costs estimated to achieve groundwater quality restoration, and the public and economic benefits to be derived from groundwater quality restoration. Once the proposed plans are approved, corrective action will then begin.

Surface water sampling and analysis, beyond what is already required by the NPDES permits, is also necessary to address areas where unpermitted engineered or non-engineered seeps from the ash ponds have the potential to discharge to surface waters. In addition, it may be necessary to add certain permit conditions to each facility's NPDES permit.

Under the proposed Consent Order, Duke Energy Progress, Inc. and Duke Energy Carolinas, LLC agree to implement the corrective action measures approved by DWR. The proposed Consent Order includes a timeline of required activities to address violations or threatened violations of state statutes and rules for water quality protection as alleged in the injunctive relief actions referenced above. The proposed Consent Order also imposes a total initial monetary fine of \$99,111.72. In addition, if the companies fail to comply in a timely manner with any provision of the proposed Consent Order (including the timely submission of any document or plan or the completion of any activity), they would be subject to fines of \$1,000 per day for the first 30 days, and \$5,000 per day thereafter for each violation.

SUMMARY OF PUBLIC COMMENTS RECEIVED

On July 15, 2013, the proposed Consent Order with attachments was posted on the Division of Water Resources website under the Water Quality Programs. A link was made available through the *Hot Topics* section of the website: http://portal.ncdenr.org/web/wq/hot-topics/asheville_riverbend_steamstadocs. On the same day, a press release inviting the public to comment on the proposed order was distributed to print and broadcast media statewide: http://portal.ncdenr.org/c/journal/view_article_content?groupId=4711509&articleId=14057642

Aside from DENR public affairs personnel contact with the public, this invitation for public comments appeared and was discussed in several publications including the Charlotte Observer, the Raleigh News and Observer, the Asheville Citizen-Times and Creative Loafing, and on various broadcast television and radio stations including WSOC, WFAE and WUNC.

A total of 4,939 comments were received before the deadline that was posted; a vast majority of the comments (about 93 percent) were written in a formulaic way and made similar points in a similar manner. While two of the comments were positive, about 95 percent of the comments requested a public hearing; 54 percent of the comments stated that the studies don't go far enough; one percent of the comments stated that proposed fines were not high enough; and approximately three percent of the comments were opposed in general to the order, but made no specific requests. Below is a summary of the concerns raised. The summary groups similar comments together.

Numerous organizations were represented in the comments, including the Southern Environmental Law Center (SELC), Green Peace and various Riverkeepers, the Sierra Club and the Western North Carolina Alliance. Two government units made comments: Gaston County and City of Asheville.

The comments are posted at <http://portal.ncdenr.org/web/wq/swp/ps/npdes/coal-ash-docs>

Public Comments and Recommended Resolutions

1. Public Hearings

Comments: Approximately 95 percent of the public comments received requested a public hearing. The majority of these comments were written in a formulaic way and made similar points in a similar manner.

Response/Discussion:

The proposed Consent Order was noticed in statewide and regional newspapers where both facilities are located and was posted on the Division of Water Resources website on July 15, 2013. A 30-day window for public comments was provided. Based on the scope of comments received and the uniqueness of the issues raised by the commenters, holding a public hearing would likely not result in any new information or present any new strategies for addressing the issues of the proposed Consent Order.

2. Structural Integrity of the Dams and Location of the Ash

a. Structural integrity of the dams

Comments: One comment expressed concerns about the structural integrity of the dams at the Asheville plant. The Southern Environmental Law Center (SELC) noted that United States Environmental Protection Agency (“EPA”) has classified these dams as having a “high hazard potential.” SELC expressed a concern that “...the settlement fails to disclose the nature of the problems that [have] necessitate[d] repairs” in the past. The commenter further noted that an internal dike was breached at the Asheville plant in October 2012. The commenter raised a question about whether excessive wetness and seeps might cause the dams to fail. SELC further commented that the proposed Consent Order “ignores structural concerns with the coal ash lagoons and assumes that ash lagoons are . . . a safe and reliable means of storing coal ash into the future”

One comment expressed concern regarding the structural integrity of the Riverbend Plant’s dike. The commenter stated that the site poses a catastrophic risk to the residents and environment.

Response/Discussion:

The proposed Consent Order is intended to address the water quality issues at the Asheville Steam Station and the Riverbend Plant which were raised in the complaints filed against Duke Energy Progress, Inc., and Duke Energy Carolinas, LLC. DENR’s Division of Energy, Mineral and Land Resources (DEMLR) routinely inspects the dams at these facilities to determine whether the dams are structurally sound and whether any repairs or corrective measures are needed, in accordance with N.C.G.S. 143-215.32 and 15A NCAC 2K.0301. In its recent inspections, DEMLR

found no deficiencies in the maintenance or conditions of these dams and determined that the dams at these two facilities are structurally sound.

EPA has assigned a “high hazard potential” rating to the two dams at the Asheville Plant and one of the dams at the Riverbend Plant. EPA has explained that its “hazard potential ratings” do not reflect the condition or structural integrity of a dam or the probability that a dam is reasonably likely to fail in the future. Rather, the classification is a rating of the potential damage that could be caused if a dam were to fail.

The October 2012 breach at the Asheville facility involved an internal dike constructed within the 1982 Ash Pond reservoir area which is impounded by a larger main containment dam. The main containment dams are generally more rigorously designed than internal dikes. DEMLR guidelines for design of internal dikes built within main reservoir areas of an ash pond provide for setbacks from the main containment dams. The containment dams are designed to allow full containment of ash material released in the event of an internal dike failure. The system worked as designed during this incident. All ash material released through the internal dike was contained within the impoundment by the main container dam.

Seepage through all earthen dams is common and does not necessarily lead to failure of the dam. Excessive seepage must be filtered by drainage systems such that earth material from the dam is not carried away by the seepage flow resulting in internal erosion within the dam. Internal erosion within a dam can lead to failure. In addition, seepage should be regularly observed for change in turbidity and rate of flow. Concentrated seepage is less of a structural threat to the dam when the emergence point is located well away from the dam. While seepage has been noted on some of these dams, there are no outstanding notices of deficiency on any North Carolina jurisdictional ash pond dams at this time.

b. Lining ash ponds/removing ash and placing in lined ash ponds

Comments: Over half of the public comments received addressed the subject of removing the coal ash and placing it in a lined landfill: “We need a settlement that moves polluted coal ash away from the French Broad and River Mountain Island Lake and stores it safely in a dry lined landfill.” The comments were directed at both the Asheville and Riverbend plants. Below are excerpts from comments made by various organizations and citizens that address this same concern.

SELC criticized the settlement concerning the Asheville plant in that "...the settlement could have, but does not, require Duke to line the impoundment already being emptied, in order provide a barrier to groundwater infiltration and abate seeps...it stops short of actually requiring Duke to transition away from the wet storage of ash in the unlined 1982 lagoon."

Comments from a citizen self identified as a Mecklenburg Lake resident stated, "The only way to prevent coal ash contamination of lake and wells on Mountain Island Lake is to remove it and place it in a dry state in lined landfills."

Another citizen stated Duke needs to remove the ash down to "ground level" and place a double liner in it before "... putting the ash back in the lined pond, then capping..."

North Carolina Conservation Network stated that the "...court should require Duke to close the coal ash ponds at the Riverbend and Asheville facilities and store the coal ash in a dry state in lined landfills, far removed from Mountain Island Lake and the French Broad River."

A representative of the Catawba River Foundation stated that "Removing the coal ash from the unlined lagoons and storing it in a dry state away from the Catawba River would stop the illegal seeps and groundwater contamination and eliminate the long-term risk..." to local residents. "Moreover, emptying out obsolete, unlined coal ash lagoons has proven to be an effective approach for another utility on the Catawba River, SCE&G."

Response/Discussion

The proposed Consent Order establishes a process for achieving compliance and groundwater restoration. The 2L Groundwater Rules give Duke options to achieve compliance and to restore groundwater, as necessary based on the conditions at each facility. While the option of placing the coal ash into a lined lagoon might be an appropriate corrective action, other steps must be taken before a determination of the appropriate corrective action can be made.

Currently, neither the EPA nor North Carolina have regulations which specifically require that existing coal ash impoundments be lined or that materials in existing unlined impoundments be removed.

15A NCAC 02L .0106(a) states that, while it is the goal of any required corrective action to restore groundwater to the established standards, the economic and technical feasibility of restoration shall also be considered. Rule 15A NCAC 02L .0106 provides that, where groundwater has been degraded, available corrective action options include abatement, containment or control of the migration of contaminants, as well as removal, treatment or control of any primary or secondary sources of pollution. Additionally, 15A NCAC 2L .0106(i) states that the Director shall consider "...the extent of any threat to human health or safety, the extent of damage or potential adverse impact to the environment, technology available to accomplish restoration, the potential for degradation of the contaminants in the environment, the time and costs estimated to achieve groundwater quality restoration, and the public and economic benefits to be derived from the groundwater quality restoration." DENR believes the proposed Consent Order was developed and drafted in accordance with the requirements in 15A NCAC 02L .0106 and the other 2L rules.

c. Relocate ash away from surface water/long term solution

Comments: Citizens also had concerns about the location of the ash ponds and how the proposed Consent Order addressed/did not address this. Below are excerpts from comments made by various organizations and citizens (see attached) that deal with this same issue.

One citizen stated that minimum steps for Duke Energy should include "...a remediation plan to secure the ash lagoons while the contents are re-located to a properly designed and maintained state landfill."

The Rockingham County Manager refers to this "new era of powerful hurricanes in the Eastern United States" and stated that the "coal ash impoundments at both locations ...are classified as 'high-hazard' by the [EPA]." Thus, the proposed settlement needs "...an accountable process for swift removal of the coal ash in the unlined lagoons at both sites, and storage of this ash in a dry landfill away from the Catawba River and French Broad River."

A representative of Green Peace stated that "We believe that the impact of the settlement will not be to protect communities surrounding these ash ponds. Instead, more action needs to be taken by DENR...to find a long-term solution for disposing of coal ash in a manner that puts human health and the environment first."

SELC stated that “Removing the coal ash from the unlined lagoons and storing it in a dry state away from the Catawba River would stop the illegal seeps and groundwater contamination and eliminate the long-term risk...” to local residents.

North Carolina Conservation Network stated that the “...court should require Duke to close the coal ash ponds at the Riverbend and Asheville facilities and store the coal ash in a dry state in lined landfills, far removed from Mountain Island Lake and the French Broad River.”

The Catawba Riverkeeper Foundation stated the “...removal of the ash to dry, lined storage away from the Lake is the obvious first step [to stopping pollution].”

Response/Discussion:

Currently, there is no Federal or State regulation which specifically requires that coal ash in unlined surface impoundments be removed and placed in a lined facility at a different location. However, DENR recognizes that removal and placement in a lined landfill or impoundment is an option, in addition to others, including containment and control, capping, and natural attenuation depending on site-specific circumstances.

Most of the water chemistry samples in the receiving streams show that parameters of concern are either below detection or below water quality standards/criteria. Receiving streams also support balanced and indigenous fish and macroinvertebrate populations.

Many of the ash ponds located within North Carolina are scheduled to be closed. Rule 15A NCAC 02L .0106 specifies that where groundwater has been degraded, available corrective action options include abatement, containment or control of the migration of contaminants, as well as removal, treatment or control of any primary or secondary sources of pollution. 15A NCAC 02L .0106(a) states that, while it is the goal of any required corrective action to restore groundwater to the established standards, the economic and technical feasibility of restoration shall also be considered. Additionally, 15A NCAC 2L .0106(i) states that the Director shall consider “...the extent of any threat to human health or safety, the extent of damage or potential adverse impact to the environment, technology available to accomplish restoration, the potential for degradation of the contaminants in the environment, the time and costs estimated to achieve groundwater quality restoration, and the public and economic benefits to be derived from the groundwater quality restoration.” DENR believes the proposed Consent Order satisfies the requirements in 15A NCAC 02L .0106.

3. Studies

a. Duplicate studies/studies not needed

Comments: Approximately one-third of the public comments received stated that studying the illegal pollution "...won't clean it up and continues to put communities at risk." Below are excerpts from comments made by various organizations and citizens (see attached) that address this same concern.

One high school student stated that "...we don't need a study of the coal ash we need action towards a cleaner river basin and a cleaner state altogether...Please consider the repercussions of only requiring Duke to study the coal ash. The proposal to require Duke to study not clean the coal ash puts the health and safety of over 86,000 [users of Catawba River] people at risk."

Another citizen stated, "PLEASE DON'T let them fool youall [sic] into a study and not a CLEAN UP of all these flyash ponds. Being from the South Point area my whole life I have seen Cancer kill more and more of our neighbors here on the Point than other areas in the Belmont region. Class mates who have or have had cancer who grew up on South Point road near the Plant is unforgiveable."

SELC submitted comments that state "In sum, the proposed settlement does not achieve the fundamental purpose of enforcement: it fails to require Duke to stop the ash lagoons from acting as a source of future contamination ...[and] relies on a series of studies and indefinite timetables to confirm what is already known – that the Asheville lagoons are currently contaminating groundwater and unlawfully leaking into streams and the French Broad River." They also state that "Instead of bringing Duke into compliance with the laws ...the proposed settlement weaken[s] existing obligations by facilitating indefinite delay of corrective action through duplicative study and assessment.

North Carolina Conservation Network stated that "The proposed Consent Order ...unlawfully fails to require immediate action. Instead it again establishes an indefinite timeline for assessments and studies of the already well-documented pollution."

Response/Discussion:

The proposed Consent Order establishes a process for addressing unpermitted discharges and violations at Asheville Station and the Riverbend Plant. The process is consistent with and guided by North Carolina law and regulations.

In 2006, Duke and Progress Energy began voluntarily monitoring groundwater at the Asheville and Riverbend facilities. In 2009, DWQ required Duke and Progress Energy to monitor groundwater at the two facilities. In 2010, Duke Energy Progress, Inc., and Duke Energy Carolinas, LLC, completed installation of monitoring wells and began monitoring the groundwater at the two facilities. The primary purpose of this data collection was to determine if there were exceedances of the groundwater standards at or beyond the compliance boundary and if there were exceedances, whether the exceedances were violations. Once exceedances and possible violations at or beyond the compliance boundary are determined, additional data must be collected to determine the extent of the violation. The 2L Groundwater Rules in 15A NCAC 2L .0106 (c) require submission of a report to the Director which assesses the cause, significance and extent of the violation...” The specific requirements of a site assessment are found in 15A NCAC 2L .0106(g).

DWR typically requires site assessment activities meeting the requirements of 15A NCAC 2L .0106(c)(3) and 2L .0106(g) to be completed to ensure a full understanding of the scope of environmental impacts, prior to requiring the implementation of corrective action measures as required at 15A NCAC 2L .0106(c)(4) and 2L .0106(h). DENR believes the proposed Consent Order satisfies the requirements in 15A NCAC 02L .0106(c) and (g).

There are a number of issues on which additional data will be not only useful, but necessary to understand facility-specific conditions and to determine appropriate remedies.

b. No timelines for studies

Comments: Some citizens/organizations were concerned that “studies” were requested as a response to potential violations with no concrete time limits set to complete these studies. Below are excerpts from comments received that demonstrate this concern.

The City of Asheville stated their concern that “the draft consent order sets no deadline for completion of the requested studies.”

SELC stated that “The proposed settlement imposes no concrete time limits other than deadlines for submitting ‘plans’ or ‘proposals’ for additional study. Instead of setting an enforceable timetable...the proposed order only requires Duke to submit a *proposal* for the assessment, without actually starting it, within 45 days. This agreement eventually to complete the site assessment required by 2L .0106(g) fails to ‘assure current and future compliance with...the North Carolina Groundwater Standards contained in 15A NCAC Subchapter 2L.’”

North Carolina Conservation Network stated that “The draft consent order... fails to require the abatement of both the unpermitted discharges and the groundwater violations. Instead, it calls for numerous studies and assessments under an open-ended timetable...” Further in its comments it stated “Following a series of assessments and a redundant determination of exceedances of groundwater standards, Duke would have 60 days to submit a plan to conduct a site assessment and propose its own schedule for implementing that plan.” And again, they state “...Duke would have 180 days to ‘submit a plan to determine whether [unpermitted discharges] ...have reached surface waters...’” with a date for final determination submitted by Duke.

Response/Discussion:

In areas where it has been determined there are exceedances of groundwater standards beyond the compliance boundary that are not due to naturally occurring conditions, the permittee is required to “...assess the cause, significance and extent of the violation of standards ...” The rule at 15A NCAC 2L .0106 (g) states that the “Reports of site assessments shall be submitted to the Division as soon as practicable or in accordance with a schedule established by the Director or his designee. In establishing a schedule the Director or his designee shall consider any reasonable proposal by the person submitting the report.”

Even though DENR believes the proposed Consent Order satisfies the requirements in 15A NCAC 2L .0106 (g), DENR recommends consideration be given to shortening timelines for submittal of the site assessment plan, and the establishment of timelines for beginning implementation of site assessment activities, to address public concerns.

4. Remediation of the Site

Comments: Concerns that remediation to clean up existing contamination is not being addressed. Below are excerpts from comments (see attached) that demonstrate this concern.

One citizen stated that the settlement should include “remediation of the site after ash removal to insure that no contaminants remain that could contaminate groundwater or other waterways.”

The Catawba Riverkeeper stated that “Riverbend was one of Duke’s earliest plants and helped the company grow into what is now the world’s largest publically-traded utility. The least Duke can do is leave the land like it found it. After all, other – and smaller – utilities are cleaning up their mess. South Carolina Electric & Gas (SCE&G) agreed to clean up its coal ash ponds on the Wateree River and (for a plant continuing to operate) convert to dry ash handling. Duke itself regularly cleaned out the coal ash at the Riverbend lagoons when they filled up. Why can’t there be one more cleanout?”

After citing many concerns about the proposed Consent Order, SELC stated, “Neither does the proposed settlement mandate action to remediate existing contamination caused by decades of storing wet coal ash in the unlined lagoons” but confirmed violations are now “potential” infractions. They state that “Nearly seven years of groundwater monitoring data from Asheville facility confirms illegal contamination of groundwater.”

Further in their comments, SELC talks about sampling in private wells done by the local DWR Regional offices, and stated, “The sampling found violations of the 2L standards for both iron and manganese in the private water supply wells. Without explanation, the proposed settlement presumes that Duke will not be required to remedy that contamination, requiring only that Duke provide “alternate water for those impacted wells pursuant to 15A NCAC 2L .0106(b)” if violations are confirmed...North Carolina law requires Duke to remediate contaminated groundwater...”

Response/Discussion:

15A NCAC 2L.0106(a) provides: “where groundwater quality has been degraded, the goal of any required corrective action shall be restoration to the level of the standards or as closely thereto as is economically and technologically feasible.”

While remediation of contaminated soil and groundwater is the desired end result, a comprehensive site assessment is required to determine the horizontal and vertical extent of the soil and groundwater contamination and all significant factors affecting contaminant transport. This is required under 15A NCAC 2L .0106(g). Once the site assessment is submitted and determined to be complete, a corrective action plan and schedule to implement any approved corrective actions must be proposed in accordance with 15A NCAC 2L .0106(h). 15A NCAC 2L .0106(i) further states that the Director shall consider "...the extent of any threat to human health or safety, the extent of damage or potential adverse impact to the environment, technology available to accomplish restoration, the potential for degradation of the contaminants in the environment, the time and costs estimated to achieve groundwater quality restoration, and the public and economic benefits to be derived from the groundwater quality restoration." Remediation then takes place according to the approved corrective action plan and schedule. The proposed Consent Order was drafted and developed to comply with both 15A NCAC 02L .0106(g) and (h).

5. Timeliness of Actions

a. Remove, treat and control ash/stop and clean up pollution

Comments: Approximately one-third of the public comments received stated they want Duke to stop polluting the groundwater and surface water and "...to start cleaning up the mess that has already been made". The majority of those who submitted individual comments addressed this topic in some fashion. Below are excerpts from comments (see attached) that demonstrate this concern.

A representative of Green Peace stated that "We believe that the impact of the settlement will not be to protect communities surrounding these ash ponds. Instead, more action needs to be taken by DENR [to] stop the ongoing groundwater pollution and Clean Water Act violations ... that puts human health and the environment first."

One citizen stated that the settlement should include "immediate steps to stop the current pollution from the Riverbend site."

One student stated that "There have been studies on coal ash and on the effects it has had on Mountain Island Lake...the EPA considers all [arsenic, cobalt, iron, and manganese] these dangerous; I believe that this is enough grounds to require Duke Energy to clean up their ponds...the coal ash increases arsenic and mercury that can be stored in the flesh of fish and deem them unsafe for human consumption. There is

currently a mercury advisory for eating fish over the entire basin because of coal fired plants. We are going to see more fish advisories, recreation advisories if we do not stop the coal ash pollution.

The Catawba Riverkeeper stated that “The solution is simple – remove the source of contamination...Duke made a mess. Why is there any question about whether or not they should clean it up?”

One citizen stated, “We must have a settlement that requires Duke to clean up this pollution, not just assess it.”

After citing concerns about the proposed Consent Order, SELC stated, “Nearly seven years of groundwater monitoring data from Asheville facility confirms illegal contamination of groundwater. Furthermore, DENR’s own internal documents confirm that the agency has known of seeps from the Asheville coal ash impoundments for years...Nonetheless, the settlement fails to require Duke to halt ongoing violations of law.”

One citizen who self identifies as a shareholder of Duke Energy and citizen of Mecklenburg county stated, “We expect you to stop Duke from pouring contaminated water into the Lake and the groundwater that will eventually reach the Lake.”

Another citizen stated, “The proposed settlement should be revised to require cleanup of the pollution and comply with laws protecting groundwater and drinking water reservoirs. This proposed settlement does not stop Duke’s illegal pollution or clean it up...Government and the polluter must do the right thing. The illegal pollution must be stopped and cleaned up, to protect the river and the drinking water reservoir.”

North Carolina Conservation Network stated, “The proposed consent order fails to require Duke to cease its unpermitted discharges into Mountain Island Lake and the French Broad River, contrary to both the CWA and state law.”

The Catawba Riverkeeper Foundation stated that the “... the Draft Consent Order guarantees that no immediate action will be taken to stop the pollution because it directs Duke to embark on an open-ended series of studies...The Draft Consent Order does not require prompt cessation of the illegal pollution and does not require Duke to clean it up. Instead, the Draft Consent Order is designed to push off for months or years any action to clean up the pollution and stop it.”

Response/Discussion:

As stated previously, 15A NCAC 02L .0106 specifies that where groundwater has been degraded, available corrective action options to the violator, or in this case, the permittee, include abatement, containment or control of the migration of contaminants, as well as removal, treatment or control of any primary or secondary sources of pollution. 15A NCAC 02L .0106(a) states that while it is the goal of any required corrective action to restore groundwater to the established standards, the economic and technical feasibility of restoration shall also be considered. Additionally, 15A NCAC 2L .0106(i) states that the Director shall consider "...the extent of any threat to human health or safety, the extent of damage or potential adverse impact to the environment, technology available to accomplish restoration, the potential for degradation of the contaminants in the environment, the time and costs estimated to achieve groundwater quality restoration, and the public and economic benefits to be derived from the groundwater quality restoration." DENR believes the proposed Consent Order satisfies the requirements in 15A NCAC 02L .0106.

The nature of seeps are such that they cannot be immediately stopped. Therefore, it is a logical and reasonable approach to determine the extent of the seeps and alternatives to address them before deciding upon an appropriate way to deal with them.

b. Immediate action to stop pollution

Comments: Over 50% of the public comments received stated that "It's time for Duke Energy and DENR to take immediate action to protect the French Broad River and Mountain Island Lake...and stop delaying the clean up." Below are excerpts from comments made by various organizations (see attached) that address this same concern.

The City of Asheville "requests that DENR continue to enforce the laws of North Carolina, so as to require a prompt solution that provides the best possible protection from the coal ash lagoons along the banks of the French Broad River."

SELC urges "...DENR to withdraw the settlement and instead to require Duke to take action to remedy the source of ongoing surface and groundwater contamination at Duke's Asheville facility – its antiquated, unlined coal ash lagoons." They also state that "The most troubling failure of the proposed settlement's approach to 'assur[ing] current and future compliance' ...is DENR's apparent agreement to waive minimum

requirements mandated by law when groundwater violations occur. North Carolina law requires Duke to now remove, or treat and control, the source of ongoing groundwater pollution.”

SELC also stated, “Section .0106(f) not only mandates specific action -- removal, or treatment and control, of pollution sources -- it also dictates a specific timeframe for implementation. As explained by the EMC’S brief defending its ruling on appeal, “corrective action following discovery of an unauthorized release of a contaminant includes those measures set forth in subsection 15A NCAC 2L .0106(f). . . . Such measures are to be implemented ‘prior to or concurrent with the assessment required in subsection (c)... DENR’s settlement with Duke ignores the EMC’s ruling. It requires “assessment” of past contamination at the Asheville facility, but not action to address ongoing sources of pollution as required by .0106(f), *prior to or concurrent with* that assessment.”

North Carolina Conservation Network requests that “the Court must restructure the settlement to require Duke to cease the illegal discharge of contaminated water and take immediate action to protect groundwater resources.”

The Catawba Riverkeeper Foundation stated that “Any legally valid settlement must require prompt action to stop the illegal coal ash pollution at Riverbend. North Carolina’s Water pollution statute [G.S. 143-215.2] provides for consent orders that ‘alleviate or eliminate the pollution,’ but this proposal does neither. Furthermore, because the Draft Consent Order fails to prevent or abate the known violations of law ... the Court cannot approve it.”

The Catawba Riverkeeper Foundation stated, “In its complaint, DENR asked the court to enter a mandatory injunction to require Duke to abate the violations of groundwater standards at the compliance boundary at Riverbend. ... Yet the Draft Consent Order requires no action to abate these longstanding, documented violations.” Later it stated, “the Draft Consent Order completely ignores the ‘immediate action’ requirement of Section .0106(c)(2)[see 15A NCAC 2L rules]... Yet the Draft Consent Order specifies instead that after determining that an exceedence at the compliance boundary has occurred, Duke is merely to submit ‘a plan to conduct a site assessment...’ “While the 2L rules do require a site assessment... it is distinct from Section .0106(c)(2)’s logically prior requirement for *immediate action to eliminate* the source of contamination.” The Foundation continues to state 15A NCAC .0106(f) “...requires no action to remove or control the source of this pollution *prior to or concurrent with* that assessment...”

Response/Discussion:

As stated previously, 15A NCAC 02L .0106 specifies that where groundwater has been degraded, available corrective action options to the violator, or in this case, the permittee, include abatement, containment or control of the migration of contaminants, as well as removal, treatment or control of any primary or secondary sources of pollution. The economic and technical feasibility of restoration shall also be considered under 15A NCAC 02L .0106(a). The Director must also consider "...the extent of any threat to human health or safety, the extent of damage or potential adverse impact to the environment, technology available to accomplish restoration, the potential for degradation of the contaminants in the environment, the time and costs estimated to achieve groundwater quality restoration, and the public and economic benefits to be derived from the groundwater quality restoration." 15A NCAC 2L .0106(i). DENR believes the proposed Consent Order satisfies the requirements in 15A NCAC 02L .0106.

The proposed Consent Order requires submittal of a corrective action plan if the site assessment findings warrant such a plan.

c. Timelines should be set for cleanup

Comments: Some citizens/organizations were concerned that specific timelines were not set to complete assessment activities. Below are excerpts from comments received that demonstrate this concern.

One comment stated a specific timeline for clean up. "We believe that Duke Energy should have a time limit for cleaning up the coal ash ponds. It should be completed within the next year to protect the lake and the residents of the lake."

SELC criticizes the timeline for groundwater assessment by stating that "Section .0106(f) not only mandates specific action '... [but] also indicates a specific timeframe for implementation...Such measures are to be implemented '*prior to or concurrent with the assessment required in subsection (c).*'"

SELC also criticizes the timelines in the proposed Consent Order. "First, the settlement proposes an unnecessarily prolonged plan for investigation and includes information that already exists. It is unclear why six months is needed to gather this information... Similarly, the settlement provides Duke 180 days after entry of the Order to submit a plan to determine whether toe drains or seeps have reached surface

Waters of the French Broad River basin and are causing water quality violations... Once Duke submits this plan to determine whether seeps are reaching surface waters and are causing water quality violations, at some unspecified point DWQ determines whether or not a law is being violated. Duke then has another 180 days from the unspecified date of the DWQ determination to take a number of steps, which may not abate the unpermitted discharge...” SELC contends the proposed order must have specific compliance dates.

The Catawba Riverkeeper Foundation stated, “The Draft Consent Order is structured to avoid any definite timeline for Duke to comply. A quick glance at the document shows definite deadlines at the beginning of virtually every paragraph of the Riverbend Compliance Activities section. which give the superficial impression that the Draft Consent Order requires prompt action on a definite timeline... In fact, the Draft Consent Order intersperses each of its ‘deadlines’ with undefined periods in which Duke and/or DENR have complete discretion to delay even the inadequate assessment activities set forth in the proposed settlement.”

Response/Discussion:

Once it is determined there are exceedances of groundwater standards as a result of the permitted activity at or beyond the compliance boundary, the permittee is required to “...assess the cause, significance and extent of the violation of standards ...,” 15A NCAC 2L .0106 (g) states that the “Reports of site assessments shall be submitted to the Division as soon as practicable or in accordance with a schedule established by the Director or his designee. In establishing a schedule the Director or his designee shall consider any reasonable proposal by the person submitting the report.”

Even though DENR believes the proposed Consent Order satisfies the requirements in 15A NCAC 2L .0106 (g), DENR recommends consideration be given to shortening timelines for submittal of the site assessment plan, and the establishment of timelines for beginning implementation of site assessment activities, to address public concerns.

6. Seeps

a. Allows discharge without a permit

Comments: Comments were submitted that raise concerns that DENR is continuing to allow Duke Energy to allow discharges (seeps) without a permit. Below are excerpts from comments received that demonstrate this concern.

A citizen who identifies herself as a Mountain Island Lake resident stated, "...I believe they need to stop the pollution along the Catawba River/Mountain Island Lake, specifically, the unauthorized and unmonitored seepage along the River/Lake from the French tile drains that were installed without a permit."

SELC stated, "...unpermitted discharges must be halted or permitted under the CWA *even if they do not violate water quality standards*. Section 301 of the CWA prohibits "the discharge of any pollutant" into "the navigable waters of the United States" except pursuant to and in compliance with permits issued the Act. 33 U.S.C. G.S. 131(a). For all unpermitted discharges, no matter the amount, the CWA requires such discharges to either be stopped or permitted under the NPDES program. Language in the proposed settlement construed to allow these discharges to continue without a permit is unlawful."

Further in SELC comments they discuss the requests to identify and address new seeps. "Modifications to NPDES permits to allow additional discharge points are subject to public notice and comment procedures, which cannot be subverted through an open-ended catchall for future seeps."

North Carolina Conservation Network stated that "The Court's proposed consent order...is alarmingly deficient. Rather than requiring Duke to cease its unpermitted discharges, it simply establishes an indefinite timeline for assessments and studies of the already well-documented pollution." Further they state that the proposed Consent Order fails to address "...unpermitted discharges into Mountain Island Lake and the French Broad River, contrary to both the CWA and state law."

The Catawba Riverkeeper Foundation stated that DENR's own inspection notes state that seeps are discharging "into Mountain Island Lake without a permit, and that "... the plan set forth in ...the proposal is totally inadequate because it ignores all of Duke's ongoing, documented violations of law. Instead, the plan for the seeps gives Duke 180 days (six months) to 'submit a plan to determine whether engineered

channel outfalls or seep discharges have reached surface waters of the Catawba River basin.”

Response/Discussion:

The language in the proposed Consent Order is not intended to allow Duke Energy Progress or Duke Energy Carolinas to make unauthorized discharges of pollutants into waters of the State. The proposed Consent Order requires Duke Energy Progress and Duke Energy Carolinas to identify, analyze and assess all engineered toe drain outfalls and all non-engineered seeps.

Many commenters equate engineered toe drains, which are necessary to maintain the structural integrity of the walls of an impoundment, and seeps that have developed on their own, including ephemeral seeps.

At the Asheville Steam Station, discharge from the engineered seeps does reach the French Broad River. However, many ephemeral seeps do not reach the receiving stream; their discharge simply infiltrates into the ground. Thus, the collection and assessment of additional information about these seeps is very important. Seeps may also be addressed in the Asheville NPDES permit.

There are no engineered seeps at the Riverbend facility, only ephemeral seeps. Riverbend Station has been retired since April 2013 and Duke Energy is on schedule to drain the ash pond in 2015. The plan for closing out the ash pond is subject to DENR approval prior to the commencement of the ash pond decommissioning. The closure plan will also address the issue of the groundwater contamination.

b. Allows use of BMPs rather than action

Comments: The Southern Environment Law Center (SELC) and the Catawba Riverkeeper Foundation submitted concerns that the proposed Consent Order is allowing Best Management Practices (BMPs) to be submitted rather than action taken for violations of the standards. Below are excerpts from the comments received that demonstrate this concern.

SELC stated, “Duke may ‘address’ the seeps using undefined “BMPs” or ‘best management practices.’...The abstract BMP language is unclear and leaves open the possibility of continuing violations of the CWA and NC. Gen. Stat. 143-215.1(a)(1)...By stating that only unpermitted discharges of “unpermitted” pollutants would be prevented, the ambiguous language implies that unpermitted discharges of certain “permitted” pollutants could somehow be authorized by BMPs;

again, this would violate the CWA, which requires a permit for each discrete conveyance.

The Catawba Riverkeeper Foundation stated that the proposed plan "...is totally inadequate because it ignores all of Duke's ongoing, documented violations of law. Instead, the plan for the seeps gives Duke 180 days (six months) to '...submit a *plan to determine whether* engineered channel outfalls or seep discharges have reached surface waters of the Catawba River basin...'” If Duke identifies “unpermitted discharges to surface water,” the proposed Consent Order offers Duke the option to address these with Best Management Practices (BMPs). The Catawba Riverkeeper Foundation argues this is a violation of the CWA, and allows Duke to continue discharging without a permit.

The Catawba Riverkeeper Foundation continues its comments to state that “BMPs are authorized only to manage *non-point* sources such as storm water runoff...By leaving open the possibility of unpermitted discharges of at least some pollutants, the Draft Consent Order again violates the CWA. Unpermitted point source discharges of ‘*any* pollutant’ are prohibited by [the] CWA without regard to whether the pollutants are ‘permitted’ or ‘unpermitted’...”

Other contentions of the Catawba Riverkeeper Foundation are the proposed Consent Order fails to require ‘adequate’ monitoring of the seeps, and allows “illegal, unplanned flows of effluent from leaks that have spring unpredictably from the earthen dikes...” to be legalized by a permit. It also stated that “...some seeps will not be tested at all and, presumably, will not be addressed. ... There is no apparent reason why testing a seep would be ‘infeasible’ under the permit, the Clean Water Act, and North Carolina law, such a seep must be stopped.”

Response/Discussion:

Individual discharges from seeps vary in terms of flow rate, frequency, duration and content. The potential for impacts to surface water from a seep depends upon all of these factors as well as the location of the seep. The character of seeps can vary greatly at one facility site and at different facility locations. In addition, seeps are highly weather dependent and many disappear during drought. Analyses that have been conducted on some of the seeps indicate that their composition is similar to the permitted ash pond discharge. However, the concentration of the constituents in the seep discharge is lower than in the ash pond discharge, which can be attributed to filtering through the dam material.

The proposed Consent Order requires Duke Energy Carolinas and Duke Energy Progress to identify all intermittent and continuous seeps at their respective facilities. Any intermittent or continuous seep which is not captured by an engineered toe drain must be analyzed to determine location, flow rate, frequency, content, impact, if any, on surface waters. If discharge from a seep impacts surface water, each facility must identify the location of the impacts and sample for parameters required for groundwater and surface water sampling, as set forth in the NPDES permit.

Duke Energy Carolinas and Duke Energy Progress must stop the discharge, capture and re-route the discharge through a permitted outfall, address the seep through use of a best management practice (BMP) approved by DENR, or include the seep in and, thus make it subject to the requirements of, the NPDES permit.

The SELC letter referring to the Asheville Plant agrees with DWR that some new seeps are likely to appear. The majority of the seeps do not have a defined channelized discharge and many seeps do not have a permanent flow. They might appear and disappear, which would make it difficult to regulate seeps in the permitting process. Thus, one alternative under consideration is to address seeps through the use of BMPs.

The testing of each individual seep may not be feasible because many seeps have an extremely low flow that does not reach the surface water; the water simply infiltrates into the ground. In addition, the low flow volume complicates sampling of these discharges because they are contaminated by the soil. The seeps are also highly weather dependent and might disappear during drought. Some seeps also can be submerged during wet weather periods. Some seeps are just wet areas that are almost impossible to sample.

c. Limits seep sampling

Comments: Comments were received that raised issues about seep sampling. Below are excerpts from the comments that demonstrate this.

SELC stated, "...the seep sampling required by the settlement is also inadequate....it limits testing to an overly narrow set of parameters...Sampling by the French Broad Riverkeeper of tributaries and Progress Energy's own sampling of seeps leaving the toe drains have detected substances that would not be included in sampling under the proposed settlement, like cobalt and molybdenum [earlier in their comments, SELC stated that sampling by Conservation Groups of tributaries draining to the River below the impoundments revealed elevated levels of barium, boron, cobalt, iron,

manganese, and nickel. They also state Duke's own sampling revealed additional parameters such as molybdenum, chloride, sulfates and total dissolved solids]...some seeps will not be tested at all and, presumably, not addressed, based upon infeasibility of sampling. There is no apparent reason why testing a seep would be infeasible and no exception under the CWA or state law for seeps that are infeasible to sample.”

Catawba River Foundation stated, “The foundation’s sampling has revealed that the unpermitted streams of contaminated water, referred to as ‘seeps,’ ...are discharging substances...” that include arsenic, cobalt, manganese, iron, boron, barium, strontium, and zinc that exceed the standard, several at multiple times the standard.

Response/Discussion:

See response to 6.b.

In response to public comments, it is recommended that the parameters in the seep sampling (where feasible) be expanded to include, at least initially, additional parameters. The draft Consent Order has been modified to include all parameters required for groundwater sampling in the existing NPDES permit, which includes those parameters for which comments were received as well as cobalt and molybdenum. The comment that all seeps must be sampled did not result in a change to the draft order as it will not likely be feasible to sample some seep locations as enough flow needs to be present for representative sampling to occur.

7. Penalties

a. Penalties don't match violations/Increase penalties

Comments: Four comments were submitted about the penalties assessed. Below are excerpts from comments received that demonstrate this concern.

Greenpeace stated, “...we find that the fine of \$99,000 is an insult to the people of North Carolina negatively impacted by Duke’s years of illegal pollution and flagrant violations of corporate stewardship.”

One citizen stated, “The Draft Consent Order does not contain any specifics about... the seeps... Yet, the Draft Order proposes that Duke pay a civil penalty of \$51,500 to resolve *all* “alleged violations or threatened violations known to DWQ... Where did the \$51,000 figure come from? How many violations does NCDENR know about?”

What was the scale of each violation? How did NCDENR decide on an appropriate penalty for each violation?”

SELC stated, “The penalty imposed for the Asheville Plant... does not match the magnitude of the violations, which have been occurring for decades. Penalties are imposed in water pollution enforcement cases to ‘deter the violator and others from committing future violations.’... Penalties only have a deterrent effect however if they are severe enough to force a violator or potential violators to recalibrate their plans in light of a potential fine... Such a small fine is inadequate to have a deterrent long standing violations of water quality laws, and then, once forced to act, will only fine a violator only a nominal amount.”

The Catawba Riverkeeper Foundation stated that “...the fine imposed for these violations of law makes a mockery of the Clean Water Act and North Carolina law. Duke Energy is the largest utility in America. For years, it has knowingly polluted the groundwater adjacent to and the surface water in the region’s drinking water reservoir. Yet, its fine for Riverbend is only \$36,000. Its total payment of fines and expenses for both sites are just over \$99,000 -transparently designed to be less than \$100,000. This fine is an insult to the public resources and legal requirements at issue and to the principle that no person and no corporation is above the law. It is immaterial to Duke Energy.”

Response/Discussion:

North Carolina General Statute 143B-282.1(b) lists eight factors that must be taken into account when assessing civil penalties. They are:

- The degree and extent of harm to the natural resources of the State, to the public health, or to private property resulting from the violation;
- The duration and gravity of the violation;
- The effect on ground or surface water quantity or quality or on air quality;
- The cost of rectifying the damage;
- The amount of money saved by noncompliance;
- Whether the violation was committed willfully or intentionally;
- The prior record of the violator in complying or failing to comply with programs over which the Environmental Management Commission has regulatory authority; and
- The cost to the State of the enforcement procedures.

Penalties up to the maximum authorized may be based on any one or combination of these factors. The statute does not authorize DWR to take into account an entity's ability to pay when assessing the penalties. DWR is required to determine the amount of a civil penalty based on the above factors. The amount of civil penalties assessed against Duke is commensurate with the facts of the cases as they relate to the eight factors. Factors of note for this case include number of known seeps, classification of receiving waters, duration of violation and number of known groundwater violations associated with coal ash.

8. Responsibility

a. Duke needs to admit/assume responsibility

Comments: Approximately one-third of the public comments received stated Duke Energy needs to "...start cleaning up the mess that has already been made" and 2646 form letters that state Duke needs to "...stop delaying the clean up." The majority of those who made individual comments addressed this topic in some fashion. Below is a representative of some of those statements.

The Catawba Riverkeeper stated that pollution at Riverbend is a well-documented problem. "If Duke is not held accountable – which they are not in the Consent Order – citizens will be left footing the bill." Citizens will be left paying "...drinking water treatment bills, in healthcare bills...and in tax bills" as a result of Duke's activities. They need to be held accountable.

The City of Asheville requests that "...Duke Energy Progress ...find a permanent solution that provides the best possible protection from the coal ash lagoons along the banks of the French Broad River."

One citizen stated, "We must have a settlement that requires Duke to clean up this pollution, not just assess it. They will not do their public duty unless they are forced through government direction."

Another citizen stated, "Duke should assume the full responsibility of cleaning up all of the grounds associated with the many years of operation. This would include removal of all structures, bricks and motor. As well as cleaning up leaching seeping coal ash ponds that have been accumulating high metal content and PCB's over the years....Doing nothing but paying minimal fine one time is not a solution. Doing nothing is not a good solution."

Green Peace stated, “Citizens should not bear the burden associated with Duke’s ongoing violations of state environmental protections. Any and all fines associated with Duke’s groundwater pollution should be large enough to not only deter future illegal activity, but should be borne by the company itself without redress to its regulated rate base in North Carolina...they should be solely responsible for the costs associated with their violations.”

A citizen who identifies herself as a Mountain Island Lake resident stated, “...it is Duke’s responsibility to clean up the coal ash ponds. They created them and it’s their responsibility to clean them up.”

North Carolina Conservation Network stated, “The court must hold Duke accountable for its repeated violations and protect the water resources that are essential to the state and its citizens.”

A resident of Weaverville NC stated, “Don’t settle with Duke Power, - make them clean up their mess!”

SELC stated the settlement only requires nominal fines which allow Duke to settle without accepting responsibility. “To resolve these violations, Duke should at least be required to acknowledge its wrongdoing.”

The Catawba Riverkeeper foundation stated that “this Draft Consent Order lets Duke get away with violating the law without admitting to and accepting responsibility for its illegal behavior. The Draft Consent Order concludes that it is entered into ‘Without admission of the non-jurisdictional allegations in the Complaints.’ ... When a lawbreaker is allowed to enter into a deal to resolve its legal violations without suffering the maximum ... the lawbreaker normally must acknowledge its illegal activity and its responsibility for the consequences of its illegal actions...Duke Energy should not be allowed to gloss over its illegal conduct and the consequences of its years of knowing illegal pollution without fully acknowledging its wrongdoing.”

Response/Discussion:

Under the proposed Consent Order, Duke Energy Progress, Inc. and Duke Energy Carolinas, LLC will begin taking the necessary steps required to mitigate violations of both surface and groundwater standards. The proposed Consent Order requires the companies to take a series of steps to determine the cause, significance and extent of exceedances of groundwater standards, including any imminent hazards to public

health and safety. Surface water sampling and analysis, beyond what is already required by the NPDES permits, are also required to address areas where unpermitted engineered or non-engineered seeps from the ash ponds have the potential to discharge to surface waters. Under the terms of the proposed Consent Order, Duke will be obligated to address all violations and potential violations for which injunctive relief is requested in these civil actions.

b. DENR needs to enforce the law

Comments: Comments were received that raised issues concerning how DENR is enforcing the law. Below are excerpts from the comments received that demonstrate this concern.

The City of Asheville “requests that DENR continue to enforce the laws of North Carolina, so as to require a prompt solution that provides the best possible protection from the coal ash lagoons along the banks of the French Broad River.”

One citizen asks “Why do you at NCDENR delay, postpone, shrink from doing your jobs?”

SELC claims that “The proposed settlement picks and chooses which elements of the 2L Rule to enforce.” It claims that “...the proposed order does not require Duke to comply with the corrective action requirements of 2L .0106(c), until completion of site assessment required by 2L .0106(g). But the 2L Rule requires completion of the site assessment required by 2L .0106(g) *as part of the requirements of 2L .0106(c)*... DENR has chosen to enforce a requirement under 2L .0106(c) to assess past groundwater contamination at the same time that it selectively ignores a separate obligation under 2L .0106(c) to remove, or treat and control, ongoing sources of future groundwater contamination.”

Response/Discussion:

Although the sequence in which a violator must conduct the specific activities identified in 15A NCAC 2L.0106 is not explicitly stated, in application, the DWR has typically required site assessment activities meeting the requirements of 15A NCAC 2L .0106(c)(3) and 2L .0106(g) to be completed to ensure a full understanding of the scope of environmental impacts, prior to requiring the implementation of corrective action measures as required at 15A NCAC 2L .0106(c)(4) and 2L .0106(h). DENR believes the proposed Consent Order satisfies the requirements in 15A NCAC 02L

.0106(c) and (g). DENR is enforcing North Carolina law and rules through the terms of the proposed Consent Order.

c. DENR needs to do more investigation

Comments: Two comments were received that question the investigation performed before the complaint was filed. Below are excerpts from these comments.

One comment stated that “It is unclear from the Amended Complaint whether NCDENR staff has conducted any subsequent inspections for unpermitted seeps since that day.”

The Catawba Riverkeeper Foundation stated that “The inadequacy of these deterrents and the entire Draft Consent Order is underscored by the fact, recited in the Draft Consent Order, that DENR has spent less than \$3,000 on its investigation and oversight of Duke’s pollution of Mountain Island Lake and the groundwater adjacent to it.”

Response/Discussion:

The proposed Consent Order already addresses these concerns. The proposed Consent Order mandates further investigation of “unpermitted seeps” by requiring the permittee to not only identify each engineered and non-engineered seep by latitude and longitude on a topographic map, but it also requires the permittee to determine if the seeps are continuous or intermittent, to report their monthly average flow, to characterize the water quality of the seep, etc. See also the response above to Paragraph 5b. *Allows use of BMPs rather than action*, that addresses DWR’s concern dealing with these processes.

The investigative costs quoted represents some of the DWR’s staff time spent determining the presence of the seeps and assessing groundwater impacts. These costs do not include all staff time spent conducting routine evaluation of data, report reviews and other activities normally conducted by staff for any permittee.

d. Allows Duke to make assessments whether groundwater contamination is naturally occurring

Comments: Comments were received from the Southern Environment Law Center (SELC) and the Catawba Riverkeeper Foundation that raised issues about Duke

making a determination whether groundwater exceedances were violations. Below is an excerpt from their comments that demonstrate this.

SELC makes the statement that “Despite documented contamination and confirmed violations, the ‘compliance activities’ imposed by the proposed settlement merely reiterate monitoring requirements already required of Duke and disregard a legal mandate for affirmative action to stop known sources of contamination The order also asks Duke to identify the ‘naturally occurring concentration of substances in the site’s groundwater’ even though DENR already has years of data from background wells and has already conducted statistical analysis of data generated by those wells.”

Additionally, SELC stated that “...the settlement asks Duke to submit a ‘proposal and schedule ‘for studying naturally occurring substances in groundwater, but specifies no timeline for implementation.” And finally, SELC stated that “...the State’s verified complaint alleges not only exceedances of the 2L Rules but violations, confirming that those exceedances are above the naturally occurring concentration for each substance.”

The Catawba Riverkeeper Foundation stated that the proposed Consent Order is “...deficient because it allows Duke to make the determination whether any constituents exceed background levels; ...the polluter should play no role in determining whether or not it is violating the law. Second, this entire step is unnecessary. It would come *after* DWQ has determined the naturally occurring concentrations...” since, by rule, the Director determines this.

Response/Discussion:

The proposed Consent Order requires a submittal schedule for completion of a comprehensive site assessment according to 15A NCAC .0106(g). Because several of the constituents associated with contamination from coal ash residuals can be naturally occurring in groundwater in the region (*e.g.* iron, manganese), it is necessary to have adequate characterization of naturally occurring concentrations to determine compliance. 15A NCAC 2L .0202(b)(3) states that “Where naturally occurring substances exceed the established standard, the standard shall be the naturally occurring concentrations as determined by the Director.”

In determining the naturally occurring concentration, DWR requires responsible parties to provide groundwater data in addition to DWR’s data. DWR acknowledges that substantial groundwater data exists from on-site background wells; however, the size of the site coupled with site-specific conditions may limit the applicability of

background well data necessitating further assessment. Additionally, if background wells are believed to be influenced by fly ash or the associated background data is found to be insufficient (*i.e.*, not reflective of actual natural aquifer conditions), additional assessment (*e.g.*, offsite monitoring wells) may be required. In all cases DWR will review information submitted as part of the site assessment activities and determine whether or not the information satisfies the requirements in the rules. DWR will require the submittal of additional information in instances where DWR determines that the information submitted was incomplete.

DENR believes the proposed Consent Order satisfies the requirements of 15A NCAC 2L .0106 and the other 2L Rules.

9. Other

a. Addresses mercury limit

Comments: Only one comment was received that addressed mercury limits addressed in the proposed Consent Order. Below is an excerpt that demonstrates this concern.

SELC stated, "...unrelated to the claims in the enforcement action, the proposed settlement seeks to set a mercury limit for Duke's primary Outfall 001 for its upcoming NPDES Permit renewal...The proposed settlement cannot be used to circumvent either the mercury TMDL or the required permit renewal process."

Response/Discussion:

The new mercury limit is consistent with the EPA's proposed modification to 40 CFR 423, as noticed in the Federal Register on June 7, 2013. The mercury limit in the NPDES permit will be established during the renewal process in accordance with the existing federal and state rules and procedures and the Total Maximum Daily Load (TMDL). The proposed settlement does not prevent DWR from establishing a stricter mercury limit in the new NPDES permit.

b. Allows illegal permit action

Comments: Only one comment was received that addressed an alleged "invalid permit modification" to address additional discharges in the proposed Consent Order. Below is an excerpt that demonstrates this concern.

SELC stated the proposed order allows Duke's inactive 1964 lagoon to discharge to Outfall 001. "DENR's assertion in the settlement that the 1964 pond 'can discharge to Outfall 001,' ... seeks to paper over an otherwise invalid permit modification. This settlement cannot be used to circumvent the permit revision process required to include additional polluted waste streams."

Response/Discussion:

This was an error in the proposed Consent Order and has been corrected. DENR does not intend to allow discharge of wastewater from the inactive 1964 lagoon to outfall 001 unless the permit is modified. Currently, the facility does not discharge any wastewater from the 1964 ash pond to Outfall 001.

RECOMMENDATIONS FOR CHANGES IN THE CONSENT ORDER

DENR has considered all of the public comments received and proposes the following changes to the proposed Consent Order:

1. Tightened timelines associated with various documents to be submitted by Duke Energy companies;
2. Expanded parameters required to be monitored at seeps;
3. Established timelines for DWR review of various documents to be submitted by Duke Energy companies;
4. Corrected error allowing discharge from Asheville 1964 ash pond to Outfall 001; and,
5. Strengthened language explaining that corrective action will be required where the plain language of the Rules imposes a duty to take corrective action.