

Appendix A

Comments Received on the Environmental Review

Appendix A

Comments Received on the Environmental Review

1 **Part I - Comments Received During Scoping**

2
3 On August 23, 2001, the U.S. Nuclear Regulatory Commission (NRC) published a Notice of
4 Intent in the Federal Register (66 FR 44386), to notify the public of the staff's intent to prepare
5 a plant-specific supplement to the *Generic Environmental Impact Statement for License*
6 *Renewal of Nuclear Plants* (GEIS), NUREG-1437, Volumes 1 and 2, to support the renewal
7 application for the McGuire Nuclear Station, Units 1 and 2, operating licenses and to conduct
8 scoping. This plant-specific supplement to the GEIS has been prepared in accordance with the
9 National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) guidelines,
10 and 10 CFR Part 51. As outlined by NEPA, the NRC initiated the scoping process with the
11 issuance of the Federal Register Notice. The NRC invited the applicant; Federal, State, and
12 local government agencies; local organizations; and individuals to participate in the scoping
13 process by providing oral comments at scheduled public meetings and/or submitting written
14 suggestions and comments no later than October 21, 2001.

15
16 The scoping process included two public scoping meetings, which were held at the Central
17 Piedmont Community College in Huntersville, North Carolina on September 25, 2001. More
18 than 100 individuals attended the meetings. Each session began with NRC staff members
19 providing brief overviews of the license renewal process and the NEPA process. After the
20 NRC's prepared statements, the meetings were opened for public comments. Twenty six
21 attendees (five of whom spoke at both sessions) provided either oral statements that were
22 recorded and transcribed by a certified court reporter or written statements. The meeting
23 transcripts are an attachment to the scoping meeting summary dated October 12, 2001. In
24 addition to the comments provided during the public meetings, five e-mail messages were
25 received by the NRC in response to the Notice of Intent.

26
27 At the conclusion of the scoping period, the NRC staff and its contractors reviewed the tran-
28 scripts and all written material received to identify specific comments and issues. Each set of
29 comments from an individual was given a unique identifier (Commenter ID), so that the
30 comments could be traced back to the original transcript or e-mail containing the comment.
31 Specific comments were numbered sequentially within each comment set. Several
32 commenters submitted more than one set of comments (i.e., they made statements in both the
33 afternoon and evening scoping meetings). In these cases, there is a unique Commenter ID for
34 each set of comments.

35
36 Table A.1 identifies the individuals who provided comments applicable to the environmental
37 review and gives the Commenter ID associated with each set of comments. Individuals who

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1 spoke at the scoping meetings are listed in the order in which they spoke at the public meeting,
 2 and individuals who provided comments by letter or e-mail are listed in alphabetical order. To
 3 maintain consistency with the scoping summary report, (McGuire Scoping Summary Report,
 4 dated March 27, 2002), the unique identifier used in that report for each set of comments is
 5 retained in this report.

6
 7 **Table A-1.** Individuals Providing Comments During Scoping Comment Period
 8

9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Commenter ID	Commenter	Affiliation (If Stated)	Comment Source											
A	James Harrill	Mayor, Stanley, NC	Afternoon Scoping Meeting											
B	Wayne Broome	Director, Charlotte-Mecklenburg Emergency Management	Afternoon Scoping Meeting											
C	Larry Dickerson	Iredell County Emergency Management	Afternoon Scoping Meeting											
D	Thurman Ross	Cornelius, NC	Afternoon Scoping Meeting											
E	Brew Barron	Site Vice President, McGuire Nuclear Station	Afternoon Scoping Meeting											
F	Dayna Herrick	Engineering Supervisor, McGuire Nuclear Station	Afternoon Scoping Meeting											
G	Melanie O'Connell-Underwood	Mooresville-South Iredell Chamber of Commerce	Afternoon Scoping Meeting											
H	John Gibb		Afternoon Scoping Meeting											
I	Rosemary Hubbard	Charlotte Women for Environmental Justice/Blue Ridge Environmental Defense League	Afternoon Scoping Meeting											
J	Allen Hubbard		Afternoon Scoping Meeting											
K	Scott Hinkle	Executive Director, Lake Norman Times	Afternoon Scoping Meeting											
L	Sally Ashworth	Chairwoman, Lake Norman Convention and Visitors Bureau	Afternoon Scoping Meeting											
M	Constance Kolpitcke		Afternoon Scoping Meeting											

1	N	Catherine Mitchell	Blue Ridge Environmental Defense League	Afternoon Scoping Meeting
2	O	Joan Bodonheimer	Teacher, Long Creek Elementary School	Afternoon Scoping Meeting
3	P	Don Moniak	Organizer, Blue Ridge Environmental Defense League	Afternoon Scoping Meeting
4	Q	Lou Zeller	Community Organizer, Blue Ridge Environmental Defense League	Afternoon Scoping Meeting
5	R	Don Moniak	Organizer, Blue Ridge Environmental Defense League	Evening Scoping Meeting
6	S	Tommy Almond	Deputy Fire Marshall, Gaston County Emergency Management	Evening Scoping Meeting
7	T	Brew Barron	Site Vice President, McGuire Nuclear Station	Evening Scoping Meeting
8	U	Dayna Herrick	Engineering Supervisor, McGuire Nuclear Station	Evening Scoping Meeting
9	V	Tim Gestwicki	North Carolina Wildlife Federation	Evening Scoping Meeting
10	W	Lou Zeller	Community Organizer, Blue Ridge Environmental Defense League	Evening Scoping Meeting
11	X	Donna Lizenby	Catawba Riverkeeper	Evening Scoping Meeting
12	Y	Bill Russell	President, Lake Norman Chamber of Commerce	Evening Scoping Meeting
13	Z	Paul Smith	President, Mooresville-South Iredell Chamber of Commerce	Evening Scoping Meeting
14	AA	Mitch Eisner	Principal, Catawba Springs Elementary School	Evening Scoping Meeting
15	AB	Catherine Mithcell	Blue Ridge Environmental Defense League	Evening Scoping Meeting

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1	AC	Jim Gilpin	Private Environmental Consultant	Evening Scoping Meeting
2	AD	Bob Mahood		Evening Scoping Meeting
3	AE	Dan Faris		Evening Scoping Meeting
4	AF	Alton Beasley		Electronic mail
5	AG	Dottie Toney		Electronic mail
6	AH	Mark Gilliss	Mechanical Engineer	Electronic mail
7	AI	Jim Matthews		Electronic mail
8	AJ	Hager		Electronic mail

9
10 Specific comments were categorized and consolidated by topic. Comments with similar specific
11 objectives were combined to capture the common essential issues raised by the commenters.
12 The comments fall into one of several general groups. These groups include

- 13
- 14 • Specific comments that address environmental issues within the purview of the NRC
15 environmental regulations related to license renewal. These comments address Category 1
16 or Category 2 issues or issues that were not addressed in the GEIS. They also address
17 alternatives and related federal actions.
- 18
- 19 • General comments (1) in support of or opposed to nuclear power or license renewal or (2)
20 on the license renewal process, the NRC's regulations, and the regulatory process. These
21 comments may or may not be specifically related to the McGuire license renewal
22 application.
- 23
- 24 • Questions that do not provide new information.
- 25
- 26 • Specific comments that address issues that do not fall within or are specifically excluded
27 from the purview of NRC environmental regulations. These comments typically address
28 issues such as the need for power, emergency preparedness, current operational safety
29 issues, and safety issues related to operation during the renewal period.
- 30

31 Each comment applicable to this environmental review is summarized in this section. This
32 information, which was extracted from the McGuire Scoping Summary Report, is provided for
33 the convenience of those interested in the scoping comments applicable to this environmental
34 review. The comments that are general or outside the scope of the environmental review for
35 McGuire are not included here. More detail regarding the disposition of general or
36 nonapplicable comments can be found in the summary report. The ADAMS accession number
37 for the summary report is: ML020870574.

1
2 These accession numbers are provided to facilitate access to the document through the Public
3 Electronic Reading Room (ADAMS) <http://www.nrc.gov/reading-rm.html> .
4

5 The following pages summarize the comments and suggestions received as part of the scoping
6 process that are applicable to this environmental review, and discuss the disposition of the
7 comments and suggestions. The parenthetical alpha-numeric identifier after each comment
8 refers to the comment set (Commenter ID) and the comment number.
9

10 Comments in this section are grouped in the following categories:
11

- 12 1. Comments Concerning Surface Water Quality, Hydrology, and Use Issues
- 13 2. Comments Concerning Aquatic Ecology Issues
- 14 3. Comments Concerning Terrestrial Resource Issues
- 15 4. Comments Concerning Threatened and Endangered Species Issues
- 16 5. Comments Concerning Air Quality Issues
- 17 6. Comments Concerning Socioeconomic Issues
- 18 7. Comments Concerning Postulated Accident Issues
- 19 8. Comments Concerning Uranium Fuel Cycle and Waste Management Issues
- 20 9. Comments Concerning Alternate Energy Sources
- 21 10 Comments Concerning Environmental Justice
- 22 11. Comments Concerning Related Federal Projects
- 23 12. Comments Concerning Safety Issues Within the Scope of License Renewal
- 24 13. Questions: Cumulative Impacts

25 26 **Comments**

27 28 **1. Comments Concerning Surface Water Quality, Hydrology, and Use Issues**

29
30 As stated in 10 CFR Part 51, Table B-1, Category 1 water quality issues include:

- 31
- 32 • Impacts of refurbishment on surface water quality
- 33 • Impacts of refurbishment on surface water use
- 34 • Altered current patterns at intake and discharge structures
- 35 • Altered salinity gradients
- 36 • Altered thermal stratification of lakes
- 37 • Temperature effects on sediment transport capacity
- 38 • Scouring caused by discharged cooling water
- 39 • Eutrophication
- 40 • Discharge of chlorine or other biocides
- 41 • Discharge of sanitary wastes and minor chemical spills

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- 1 • Discharge of other metals in waste water
- 2 • Water use conflicts (plants with once-through cooling systems)

3
4 **Comment:** Duke Energy has conducted water quality and aquatic ecology testing on Lake
5 Norman since the early 1970s. The areas that we study include water quality, water flow at the
6 intake and discharge structures, and aquatic ecology. (F-2)

7
8 **Comment:** We had clean water and clean air. Over these many years, however, we have seen
9 a tremendous degradation of our groundwater, our rivers, our streams, and our air. And Duke
10 Energy has been a great contributor to that. (I-3)

11
12 **Comment:** In terms of the environmental impact of the plant, which is incredibly, and
13 remarkably negligible, Lake Norman is among the most cleanest, it is among the most cleanest
14 and environmentally sound bodies of water in the eastern United States. It is a wonderful
15 resource for thousands of people, if not hundreds of thousands of people use each and every
16 day. It is an incredibly clean source of drinking water for our communities. (K-2)

17
18 **Comment:** The areas that we routinely study include water quality, water flow at the intake and
19 discharge structures, and aquatic ecology. (U-2)

20
21 **Response:** *The comments are noted. Surface water quality is a Category 1 issue and will be*
22 *discussed in Chapter 2 of the SEIS. The comments provide no new information; therefore, the*
23 *comments will not be evaluated further.*

24 **2. Comments Concerning Aquatic Ecology Issues**

25
26
27 As stated in 10 CFR Part 51, Table B-1, Category 1 and 2 aquatic ecology issues include:

28 Category 1

- 29
- 30
- 31 • Accumulation of contaminants in sediments or biota
- 32 • Entrainment of phytoplankton and zooplankton
- 33 • Cold shock
- 34 • Thermal plume barrier to migrating fish
- 35 • Distribution of aquatic organisms
- 36 • Premature emergence of aquatic insects
- 37 • Gas supersaturation (gas bubble disease)
- 38 • Low dissolved oxygen in the discharge
- 39 • Losses from predation, parasitism, and disease among organisms exposed to sublethal
- 40 stresses
- 41 • Stimulation of nuisance organisms

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Category 2

- Entrainment of fish and shellfish in early life stages
- Impingement of fish and shellfish
- Heat shock

Comment: Our evaluation of the historical data has indicated that we have made no changes to the aquatic resources on Lake Norman. And our continued operation will not have an adverse impact on the lake or the river. (F-3)

Comment: Our evaluation of this data has shown that we have made no changes to Lake Norman's aquatic resources, and our continued operations will continue that. We will not adversely impact the lake or the river. (U-3)

Comment: The second point I would like to address is the protection of the water resources. Duke has taken several steps to preserve this resource through continuing biological studies of the lakes. (AC-3)

Response: *The comments are noted and are supportive of license renewal at McGuire. Aquatic ecology will be discussed in Chapter 2 and Chapter 4 of the SEIS. The comments provide no new information; therefore, they will not be evaluated further.*

Comment: First of all, McGuire Nuclear does not have cooling water structures of any kind. It was built several years before Catawba. Catawba has cooling water structures. And so some kind of cooling water structure on McGuire would profoundly decrease the thermal shock, and the chronic thermal temperature impacts on Lake Norman. Finally, I wanted to bring to your attention that I believe the failure to have any kind of cooling water intake, a cooling water structure on McGuire is an inequitable application of the law in the United States. Many other nuclear facilities are required to have cooling water structures. Catawba has them, and particularly in the southeast where our temperatures are high in the summertime, we need some kind of cooling water structure on McGuire Nuclear. A substantial component of the -- it should revolve around, not if cooling structures are needed, but should be required as a condition of the relicense. (X-1)

Comment: Duke Energy, Duke Power also has an NPDES, which is national pollution discharge elimination system permit variance for their delta T above state standards for hot water discharge. And also above EPA recommended levels for hot water discharges. McGuire has, I believe, and you all correct me if I'm wrong, but you all have, the NPDES permit provides an unlimited discharge of non-contact cooling water for North Carolina, is that right? No, I'm talking volume, not temperature. I'm pretty sure it is an unlimited discharge volume metrically. I

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1 just wanted to say that there are profound environmental impacts on aquatic life due to chronic
2 effects of thermal impact from hot water into the aquatic environment. And I will give everyone
3 here three brief examples that are well noted in the literature. Let's take, for example, the
4 zooplankton *Ceriodaphnia*. *Ceriodaphnia* can survive about 108 days when water temperature
5 is approximately 45 degrees. However, they only typically survive about 26 days when water
6 temperature is about 82 degrees. I take the Riverkeeper patrol boat into the discharge areas of
7 all of McGuire's plants, and we call them hot holes, here locally. And there are a lot of
8 fishermen there, typically. And it is not uncommon for me to see water coming out of those hot
9 water discharges at 95 degrees. And that is a profound environmental impact. Not only does it
10 affect zooplankton, and provide lethal thermal shock, as well as chronic lethal effects, it also
11 affects reproduction, and has lethal impacts for other aquatic species. For example, the upper
12 lethal limit for bass is about 85 degrees Fahrenheit. And, typically, as I've said in the
13 summertime it is not uncommon, and even in the winter, for me to find the water coming out of
14 many of Duke's plants above 90 degrees. Hot water discharges also affects reproductivities of
15 aquatic life. For example, the release of glochidia from *Corbicula*. And for those non- science
16 people, the release of immature young from clams relies on environmental cues. Specifically
17 they rely on water temperature cues, as they rise in the spring, it triggers reproduction. And so
18 hot water discharges, like the one from McGuire, can create a profound environmental impact.
19 Additionally cooling water structures provide for recycling of water. The intake structures are
20 huge, and the outflow structures are huge. And when there is a cooling water intake structure,
21 a cooling water structure of some kind that cools the non-contact water, what happens is that
22 the water, because it is non-contact, can be recirculated, rather than having to continuously
23 withdraw water from the Catawba river, run it through the system once, and discharge it. And so
24 some kind of cooling water structure on McGuire would profoundly decrease the thermal shock,
25 and the chronic thermal temperature impacts on Lake Norman. (X-2)

26
27 **Comment:** When we also look at McGuire nuclear in relation to its cumulative impact on Lake
28 Norman, we find that Marshall steam station has a very large hot water discharge above
29 McGuire. And so the EIS, and the relicensing process, should take into account the impact of
30 Marshall. It should take into account the cumulative impact to all of Lake Norman, considering
31 the other thermal impacts from other discharges in the Lake Norman reservoir. Finally I would
32 also like to ask the Nuclear Regulatory Commission to do a detailed analysis for the thermal
33 impacts, and the need for cooling structure at McGuire, including the cumulative impacts of
34 Marshall upstream. (X-3)

35
36 **Comment:** In talking with the gentlemen from Duke, they indicated that the proper venue for
37 this discussion of thermal impacts was through the NPDES permitting process. I respectfully
38 disagree with the gentlemen, and I believe it should be included in the relicensing discussions
39 and documentation, and the environmental scoping documents, the impact statements, and
40 would like to see that included. (X-4)

41

1 **Comment:** I think Donna's comments were pretty much on mark, of looking at the possibility of
2 cooling water, and cooling towers. (AC-4)

3
4 **Comment:** The high temperature of the water discharged into Lake Norman is a negative
5 effect that cannot be ignored. Instead of fixing the problem, Duke merely lobbied for an
6 exemption from the law. Skirting the law is becoming all too common for Duke Energy. (AI-4)

7
8 **Response:** *The comments are noted. The comments pertain to heat shock which is a*
9 *Category 2 issue and will be addressed in Chapter 4 of the McGuire SEIS.*

10 11 **3. Comments Concerning Terrestrial Resource Issues**

12
13 As stated in 10 CFR Part 51, Table B-1, Category 1 terrestrial resource issues include:

- 14 • Cooling tower impacts on crops and ornamental vegetation
- 15 • Cooling tower impacts on native plants
- 16 • Bird collisions with cooling towers
- 17 • Cooling pond impacts on terrestrial resources
- 18 • Power line rights-of-way management (cutting and herbicide application)
- 19 • Bird collisions with power lines
- 20 • Impacts of electromagnetic fields on flora and fauna (plants, agricultural crops, honeybees,
21 wildlife, livestock)
- 22 • Floodplains and wetland on power line rights-of-way

23
24
25 **Comment:** And I can tell you that they are very viable, and apparently very healthy members
26 of the accipiter family, buteo family, as well as the osprey, along Lake Norman, along Lake
27 Wiley. So from my personal observations, at least as far as the birds of prey are concerned,
28 not only are they viable, but they are healthy. (C-2)

29
30 **Comment:** However, McGuire has a thriving population of osprey, wild turkey, deer, and
31 numerous other species. And we have many ongoing environmental initiatives that we manage
32 in cooperation with the North Carolina Wildlife Resources Commission, the Wildlife Federation,
33 Mecklenburg County Parks and Rec, and the Wild Turkey Federation. We are also wildlife and
34 industry, together, certified by the North Carolina Wildlife Federation. We have a certified
35 backyard habitat. We have a wood duck pond, a blue bird trail, an herbivore pond, a fish
36 friendly pier, and numerous other wildlife areas on-site. Based on our review of our operating
37 history, and a look at our continued operation, we have concluded that we will not adversely
38 impact the plants and animals on-site. (F-5)

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1 **Comment:** However, we do have a thriving population of wild turkey, osprey, deer, and
2 numerous other species. We have many ongoing environmental initiatives that we manage in
3 cooperation with the North Carolina Wildlife Resources Commission, the Wildlife Federation,
4 Mecklenburg County Parks and Rec, and Wild Turkey Federation. We are wildlife and industry
5 together certified by the North Carolina Wildlife Federation. We have a certified backyard
6 habitat, bluebird trails, wildlife food plots, a herbivore pond, a fish friendly pier, and I can go on,
7 the wildlife areas that we maintain on the McGuire site. Based on our review of our operating
8 history, and a look at continued operation, again, we conclude that we will not adversely impact
9 plants and animals at McGuire. (U-5)

10
11 **Comment:** McGuire Nuclear Station is the second corporate site in North Carolina to be
12 certified as a Wildlife and Industry Together Site. This unique program recognizes companies
13 across our state that exhibit wildlife stewardship on their properties. For example at McGuire
14 instead of excess parking lots, there are planted food plots for turkey and deer. Instead of
15 underutilized fescue acreage, there are butterfly gardens, songbird meadows, and bluebird, owl
16 and hawk nesting boxes. An osprey platform has also been erected down by the lake. (V-1)

17
18 **Comment:** Most importantly McGuire has fostered relationships with the communities in the
19 area. McGuire allows public wildlife viewing, and educational opportunities in the areas
20 throughout their site. Just one example is McGuire's nature trail, which coincidentally goes
21 through one of the first areas ever designated by the National Audubon Society as a very
22 important bird designation area. I think that the signs at the front entrance of McGuire tell it all.
23 They proudly proclaim, in big bold letters, wildlife habitat enhancement program, and wildlife
24 and industry together. (V-3)

25
26 **Comment:** Simply put the folks at McGuire have embraced their surroundings. They have
27 sought to enhance their property, and their community relations through wildlife enhancement
28 and education. They have realized that these concerns serve not only the betterment of wildlife
29 itself, but of the community as a whole. (V-4)

30
31 **Response:** *The comments are noted. The comments discuss the participation of Duke in*
32 *programs to protect the environment. They provide no new information and will not be*
33 *evaluated further. The appropriate descriptive information regarding the plant-specific ecology*
34 *of the site will be addressed in Chapters 2 and 4 of the McGuire SEIS.*

35 36 **4. Comments Concerning Threatened and Endangered Species Issues**

37
38 As stated in 10 CFR Part 51, Table B-1, Category 2 threatened or endangered species issues
39 are:

- 40
41
 - Threatened or endangered species

1
2 **Comment:** As part of our study Duke Energy worked with Dr. L.L. "Chick" Gaddy, a well known
3 environmental scientist, to conduct a survey of threatened and endangered species around the
4 McGuire site. And the results of that study showed that there are no endangered or threatened
5 species at the McGuire site. (F-4)
6

7 **Comment:** The second category is plants and animals. As part of our study we worked with
8 Dr. L. L. "Chick" Gaddy, a well-known environmental scientist, to do a survey of threatened and
9 endangered species around McGuire. The results of that study is that there are no federally or
10 state listed threatened or endangered species on the McGuire site. (U-4)
11

12 **Response:** *The comments are noted. They provide no new information and will not be*
13 *evaluated further. The appropriate descriptive information regarding the plant-specific ecology*
14 *of the site will be addressed in Chapters 2 and 4 of the SEIS.*
15

16 **5. Comments Concerning Air Quality Issues**

17

18 As stated in 10 CFR Part 51, Table B-1, Category 1 air quality issues include:

- 19 • Air quality effects of transmission lines
20
21

22 **Comment:** The third category we looked at was air quality. For the past 20 years McGuire has
23 not adversely impacted the air quality in this region. And there is nothing associated with
24 license renewal that would change that. (F-6)
25

26 **Comment:** We had clean water and clean air. Over these many years, however, we have seen
27 a tremendous degradation of our groundwater, our rivers, our streams, and our air. And Duke
28 Energy has been a great contributor to that. (I-3)
29

30 **Comment:** The third category we looked at was air quality. You may not know, but nuclear
31 power provides almost 50 percent of Duke Energy's total electric generation in the Piedmont
32 Carolinas, and because of that overall emissions from that generation system are well below
33 the national average. For the past 20 years McGuire has not adversely impacted the air quality
34 in this region, and there is nothing about continued operations, or license renewal that will
35 change that. (U-6)
36

37 **Comment:** And then this happens. Going and lobbying and saying, let's not have these
38 stringent regulations, we don't have to have air that clean. So that shakes me. (AD-3)
39

40 **Response:** *The comments are noted. Air quality impacts from plant operations were*
41 *evaluated in the GEIS and found to be minimal. These emissions are regulated through*

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1 *permits issued by the U.S. Environmental Protection Agency and the State. Air quality effects*
2 *are a Category 1 issue as evaluated in the GEIS and will be discussed in Chapter 2 of the*
3 *SEIS. The comments provide no new information and therefore will not be evaluated further.*
4

5 **6. Comments Concerning Socioeconomic Issues**

6
7 As stated in 10 CFR Part 51, Table B-1, Category 1 and 2 socioeconomic issues include:
8

9 Category 1

- 10
11 • Public services: public safety, social services, and tourism and recreation
12 • Public services, education (license renewal term)
13 • Aesthetics impacts (refurbishment)
14 • Aesthetics impacts (license renewal)
15 • Aesthetics impacts of transmission lines (license renewal term)
16

17 Category 2

- 18
19 • Housing impacts
20 • Public services: public utilities
21 • Public services, education (refurbishment)
22 • Offsite land use (refurbishment)
23 • Offsite land use (license renewal term)
24 • Public services, transportation
25 • Historic and archaeological resources
26

27 **Comment:** So from a personal point I think they are good neighbors. We have even been out
28 to their grounds for gatherings, family gatherings, and church gatherings. (D-1)
29

30 **Comment:** We do a number, they participate in a number of community support activities.
31 Catawba Spring School, Long Creek Elementary School, clean cast fishing events for local
32 children, Boy Scouts and Girl Scouts events, United Way and Arts and Science Council
33 campaigns. Supporting the community is a priority for them. (E-4)
34

35 **Comment:** As Brew mentioned earlier, our employees spend thousand of hours, every year,
36 volunteering for school, and civic, and church programs, and groups. We are proud to be part
37 of this community. (F-9)
38

39 **Comment:** I cannot tell you the impact, as far as economic impact, that Duke Power does, and
40 represents with our hospitality industry. We are looking at exit 36 to exit 18. (L-1)
41

1 **Comment:** And the economic impact that they do on our hospitality industry, and as Scott
2 Hinkle has just said, with the tragedy that happened two weeks ago, it still remains, we have to
3 have somebody like that, that keeps our hotels running as well as they have. (L-4)
4

5 **Comment:** About five years ago Duke Power adopted our school and initiated a Pony Express
6 writing program, where the students have a pen pal. As you can see, Duke Power is very
7 actively involved in our community, and it is a very important part of our school at Long Creek
8 Elementary. (O-1)
9

10 **Comment:** At Christmas time the pen pals come to our school bringing gifts for each child.
11 They also have expanded their program to help needy families at our school. (O-2)
12

13 **Comment:** We do a lot of things in the community. Our employees give a lot of their time to
14 the betterment of their communities and their neighbors. We have had an 11-year partnership
15 with the Catawba Springs Elementary School providing help in math and reading and computer
16 skills; a pen pal partnership with the Long Creek Elementary School; we hold clean cast fishing
17 events for local children; we hold Boy Scouts and Girl Scouts events; we hold annual United
18 Way and Arts and Science Council drives. Last year the McGuire employees contributed
19 160,000 dollars to their communities through United Way agencies, and the United Way
20 campaign. (T-4)
21

22 **Comment:** As Brew mentioned earlier, our employees spend thousands of hours every year
23 volunteering for church, community, school, civic groups, and programs. We are proud to be
24 part of this community. (U-9)
25

26 **Comment:** McGuire has been instrumental in creating many of these learning opportunities.
27 Opportunities such as learning about wildlife habitat, and then actually putting that knowledge to
28 use, like the students at East Lincoln High School, who created a backyard wildlife habitat at
29 McGuire, and were subsequently recognized by the National Wildlife Federation for this honor.
30 And all the kids that get to learn about water quality and fishing do collaborative family fishing
31 days that McGuire hosts. And the kids that are introduced to safe, ethical sportsmen activities
32 through the nationally recognized JAKES, juniors acquiring knowledge, ethics, and
33 sportsmanship, also hosted and sponsored by McGuire. These wildlife education programs
34 require a commitment and rely on enduring partnerships. That is why McGuire is recognized as
35 a Wildlife and Industry Together Site. McGuire has developed and sustained partnerships that
36 allow continuing wildlife projects, such as the annual butterfly and bird inventories with
37 Mecklenburg Parks, hosting composting workshops with county waste reduction, hosting
38 environmental workshops for our state's educators, in conjunction with the state, through
39 project WILD. (V-2)
40

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1 **Comment:** In addition to assisting with the business and industry recruitment, McGuire has
2 been an annual sponsor of the Chamber's leadership program by inviting participants to spend
3 a day on-site learning about electric supply and the McGuire station. (Z-3)
4

5 **Comment:** Furthermore, Duke Energy, McGuire, we've had a partnership for 11 years now,
6 with our school. We have seen many individuals come to our school from McGuire in many
7 capacities, helping the children. They have provided assistance with grant opportunities for the
8 school systems. They have provided assistance in developing a computer lab, provided coats
9 for children, assisted in grading our land. They've assisted with volunteers in our school. (AA-2)
10

11 **Response:** *The comments are noted. The comments are supportive of license renewal at*
12 *McGuire. Public services were evaluated in the GEIS and determined to be a Category 1 issue.*
13 *Information regarding the impact on education will be discussed in Chapter 4 of the SEIS.*
14 *Socioeconomic issues will be addressed in Chapters 2 and 4 of the SEIS. The comments*
15 *provide no new information; therefore the comments will not be evaluated further.*
16

17 **Comment:** It (McGuire) is a great impact on our economy. It brings in a lot of money, a lot of
18 good employees in this area. (A-2)
19

20 **Comment:** As far as the economic around here, I have a lot of friends that work at Duke
21 Power. They have been at Duke for a while, and it is a huge impact on the economy. (D-3)
22

23 **Comment:** Over the last five years we've paid nine million annually in property taxes to
24 Mecklenburg County. We have 1,100 employees that helped maintain a strong economy in the
25 area. And our annual payroll of over 77 million, helps to support local business and industry.
26 (F-8)
27

28 **Comment:** The McGuire nuclear plant employs over 1,000 employees. And I'm a little off in
29 the statistics you just gave, but approximately 80 percent of these employees live within a 30
30 mile drive of the facility. Their payroll alone, which is close to 80 million, only multiplies as it is
31 spent in our community. (G-2)
32

33 **Comment:** The property taxes to our neighboring county, Mecklenburg, of now eight million,
34 are paying significant contributions in our schools, roads, libraries, police, fire, and it just keeps
35 going. (G-3)
36

37 **Comment:** In addition to being safely operated we provide many benefits to the community.
38 Over the last five years we've paid nine million, annually in property taxes to Mecklenburg
39 county. We have 1,100 employees who help to maintain a strong economy in this area. And
40 our annual payroll of over 77 million helps to support local business and industry. (U-8)
41

1 **Comment:** As President of the Chamber I'm very interested in attracting new business to our
2 area. Reliable and affordable electricity is always a major factor for business who are
3 considering a location. Duke Power has attractive rates, and the power has been reliable for
4 Lake Norman Regional. My understanding from Duke is that 20 percent of their generation
5 comes from McGuire. It makes good business sense to keep that supply source around for an
6 additional 20 years. (Z-2)
7

8 **Response:** *The comments are noted. The comments are supportive of license renewal at*
9 *McGuire. Socioeconomic issues specific to the plant are Category 2 issues and will be*
10 *addressed in Chapter 4 of the SEIS. The comments provide no new information; therefore the*
11 *comments will not be evaluated further.*
12

13 **7. Comments Concerning Postulated Accident Issues**

14
15 As stated in 10 CFR Part 51, Table B-1, Category 1, postulated accidents issues include:

- 16 • Design basis accidents
- 17 • Severe accidents
- 18
- 19

20 The environmental impacts of design basis accidents is a Category 1 issue in the GEIS. Also,
21 the Commission has determined that the probability-weighted environmental consequences
22 from severe accidents (i.e., beyond design basis accidents) are small for all plants but that
23 alternatives to mitigate severe accidents must be considered for all plants that have not
24 considered such alternatives. See 10 CFR 51.53(c)(3)(iii)(L).
25

26 **Comment:** In the event of a severe accident, when the reactor fuel melts, the risk that reactor
27 containment will rupture, and large releases of radioactive material get into the environment, will
28 occur at significantly greater at Catawba and McGuire than at other pressured water reactors
29 with other types of containment. There is no backup system for reactor containment. The steel
30 containment vessel is the only one. Other plant systems may have backups. (Q-7)
31

32 **Response:** *The comment is noted. Severe accidents were evaluated in the GEIS and the*
33 *impacts were determined to be small for all plants. A site-specific analysis of Severe Accident*
34 *Mitigation Alternatives will be performed by the NRC staff in the SEIS for McGuire. The*
35 *comment provides no new information; therefore, the comment will not be evaluated further.*
36

37 **8. Comments Concerning Uranium Fuel Cycle and Waste Management Issues**

38
39 As stated in 10 CFR Part 51, Table B-1, Category 1 uranium fuel cycle and waste management
40 issues include:
41

Appendix A

- 1 • Offsite radiological impacts (individual effects from other than the disposal of spent fuel
- 2 and high level waste)
- 3 • Offsite radiological impacts (collective effects)
- 4 • Offsite radiological impacts (spent fuel and high level waste disposal)
- 5 • Nonradiological impacts of the uranium fuel cycle
- 6 • Low level waste storage and disposal
- 7 • Mixed waste storage and disposal
- 8 • On-site spent fuel
- 9 • Nonradiological waste
- 10 • Transportation

11

12 **Comment:** I don't think we should renew any of our nuclear plants licenses across the country
13 until there has been a solution of what to do with the nuclear radioactive waste that is
14 accumulating. There is nothing to be done with it. So if you don't have a solution to a problem,
15 why keep adding to the problem and keep creating more waste, with nobody knowing what to
16 do with it? (M-1)

17

18 **Comment:** It (spent fuel) is a potential fire bomb if a terrorist comes in with a plane and just
19 suicides, kamikaze-like, into these ceramic, whatever enclosures are housing this waste, that
20 as I understand is sitting outdoors on concrete pads. But let's don't sacrifice the lives of our
21 posterity. Maybe it won't happen for another 100, 200, 300 years, but do we want to be
22 responsible for letting some disaster happen, when we don't have to? (M-2)

23

24 **Comment:** Spent fuel, is that within the scope of the EIS, or outside? (R-15)

25

26 **Comment:** The first is the long-term handling and storage of the radioactive waste, particularly
27 the high level radioactive waste generated with the spent fuel rod assemblies. I have asked the
28 question, and you have heard from others here, how open Duke Power is on asking questions,
29 and their answering them. I asked the question, I said, how good is your long term storage?
30 And here is the reply I got. Approximately 50 fuel rod assemblies are replaced each year,
31 although not every 365 days, but on a different schedule. And they are currently permitted at
32 the McGuire site for on-site storage for up to about 2,200 fuel rod assemblies. If one does a
33 quick math, you can figure out that they've got just about a 40 year permitted area for the spent
34 fuel rods on-site. And that does not include the possible disposal of central facility, that we
35 have already talked about, with Yucca Mountain. (AC-2)

36

37 **Comment:** Is the waste stored inside the reactor shell which is so strong, and all that, or is it in
38 another building, or is it in fact sitting around outdoors, the way it is at some nuclear plants?
39 (AD-6)

40

1 **Comment:** The spent fuel storage problem is reason enough to decline the license renewal
2 request. The Nitrogen-16 EMF radiation detectors at McGuire are picking up gamma rays from
3 the spent fuel dry casks. This was not supposed to happen. What other little surprises will
4 develop from storing spent fueling dry casks? The problem is not getting better; it is getting
5 worse. (AI-8)

6
7 **Response:** *The comments are noted. Onsite storage and offsite disposal of spent nuclear fuel*
8 *are Category 1 issues. The safety and environmental effects of long-term storage of spent fuel*
9 *onsite has been evaluated by the NRC and, as set forth in the Waste Confidence Rule, the*
10 *NRC generically determined that such storage could be accomplished without significant*
11 *environmental impact. In the Waste Confidence Rule, the Commission determined that spent*
12 *fuel can be stored onsite for at least 30 years beyond the licensed operating life, which may*
13 *include the term of a renewed license. At or before the end of that period, the fuel would be*
14 *moved to a permanent repository. The GEIS is based upon the assumption that storage of the*
15 *spent fuel onsite is not permanent. The plant-specific supplement to the GEIS regarding*
16 *license renewal for Catawba will be prepared based on the same assumption. The comments*
17 *provide no new information; therefore, the comments will not be evaluated further.*

18 19 **9. Comments Concerning Alternative Energy Sources**

20
21 **Comment:** And part of this analysis we reviewed various alternatives to license renewal. We
22 looked at solar, wind, conventional fossil generation, as methods to be able to replace McGuire.
23 But none of those alternatives were selected. We didn't select them because of their high cost,
24 relatively low electrical output, land use impacts, and other environmental impacts. (E-7)

25
26 **Comment:** I believe in nuclear generation, I believe it is the environmentally responsible way to
27 create electricity. It is obviously, cleaner than fossil. And it is, obviously, an economical way to
28 create electricity. (K-7)

29
30 **Comment:** I think we need to concentrate on developing alternative energy sources. A
31 gentleman spoke that they had eliminated, they had looked at solar, and other forms of energy,
32 and had discounted it. Maybe it will cost us more, maybe we will have to pay more for our
33 energy. Maybe we will have to conserve, maybe we will have to share rides, maybe we will
34 have to walk, maybe we will have to move closer to our jobs. Let's put our resources into
35 developing the sustainable energy resources. (M-3)

36
37 **Comment:** Duke says that they believe that combined cycle technology is the most
38 economically attractive baseload technology. I think that this is -- I don't know what
39 economically attractive means to anyone in the room here, but I don't think that Duke did a
40 sufficient analysis to be able to tell us if their comparison with other forms of renewable energy,

Appendix A

1 including wind power, and solar power, had been compared alongside of the continued use of
2 the Catawba or the McGuire reactors, in this case. (Q-1)

3
4 **Comment:** I might point out, as a dramatic point, that the consideration of safety issues in
5 terrorism with regards to wind powered generators almost seems ridiculous, because there are
6 no issues with regard to safety and terrorism, with regard to wind energy generators. This is a
7 significant omission in their application process. (Q-2)

8
9 **Comment:** As for alternative sources of energy, Duke did not conduct an analysis that looked
10 into the future. They looked at existing sources of energy and the current technologies. But
11 just as the United States essentially subsidized the entire nuclear energy industry with its
12 research and development, now they are sinking tens of millions of dollars into this thing called
13 clean coal. Well, what does clean coal mean, and what would a clean coal plant mean? And
14 that needs to be in this EIS, what would be the environmental impacts of a clean coal plant,
15 because I'm really dying to find out what they are. I've only seen it kind of talked about in vague
16 terms by the labs. (R-14)

17
18 **Comment:** We evaluated alternatives, we evaluated replacing McGuire's economical baseload
19 electric generation with other sources of power. We looked at wind, we looked at solar, we
20 looked at other forms of conventional fossil generation. We did not select those alternatives.
21 We did not select them based on their cost, based on their limited electrical output, and relative
22 basis, on their land use requirements, and on other environmental impacts. (T-7)

23
24 **Comment:** Okay, now to the questions. If the license is not renewed, would the nuclear plants
25 be total write-offs, or could they be converted to operation by gas as a fuel, or some other form
26 of energy? (AD-4)

27
28 **Comment:** This point is one I already made, so I won't make it again. The final point is, I think
29 we are reaching a new era. A power plant that works on wave power. Solar power suggestions
30 as well. (AD-11)

31
32 **Response:** *The comments are noted. The GEIS included an extensive discussion of*
33 *alternative energy sources. Environmental impacts associated with various reasonable*
34 *alternatives to renewal of the operating licenses for McGuire Nuclear Station, Units 1 and 2, will*
35 *be discussed in Chapter 8 of the SEIS.*

36 37 **10. Comments Concerning Environmental Justice**

38
39 **Comment:** But nonetheless there are tens, and tens of thousands of families who are very
40 poor, not as well educated as we would like Americans to be, living in this most polluted part of
41 town. We are also home, mostly, to poor whites, blacks, and Latinos. The NRC begged you to

1 consider all this, because you will further burden these many scores of thousands of families,
2 unless you rein in Duke Power's ability to carry out their plans for using this plutonium. (I-4)

3
4 **Response:** *The comment is noted. Environmental Justice is an issue specific to the plant and*
5 *will be addressed in Chapter 4 of the SEIS.*

6 7 **11. Comments Concerning Related Federal Projects**

8
9 **Comment:** And my understanding was the license originally was that Duke Energy had the
10 right to dam the Catawba River at Lake Wiley, and Lake Norman, to produce energy. And since
11 this was given by the federal government, the citizens gave them that right to do that, they had
12 certain responsibilities about the water, and the land surrounding those lakes that they created,
13 and where they were creating power. And I'm not sure, in today's nuclear age, how that original
14 license fits into what this process is talking about today, about these two units. Because my
15 concerns are about the environmental impact. So this is talking about two units, I'm talking
16 about the whole picture for relicensing, which involves Duke Energy's responsibility to the
17 citizens that gave them the right to dam the rivers and produce energy. (AE-1)

18
19 **Comment:** When I was growing up I had friends who had a lease on property on Lake Wiley,
20 we loved to go out there, had a great time growing up as a child. We were known as river rats.
21 Some of you have heard that expression before. And we just had a wonderful time. My
22 understanding is the license doesn't just apply to these plants on the lakes. When the original
23 license was given Duke had the responsibility of helping maintain the water, and the land
24 adjacent to the lakes. And this is a question. It seems to me they lost that power to control the
25 quality of the water, and maybe some of the air, too. When instead of having these leases they
26 started selling off the land to private owners. And so now you heard the people talking about all
27 the wonderful things they are doing at the sites, the sites, the sites. Well, yes, because I guess
28 they don't have control of the property right on the lakes, and so the local governments are
29 trying to get buffers now, get people to agree to buffers. So my question is, has Duke
30 inadvertently abandoned what the federal government licensed them to do by giving up this
31 buffer of leasing? If someone is not doing what they should be doing as far as protecting the
32 water and so forth in their lease, it seems to me Duke could have some say so, I don't know,
33 I'm just asking that question. (AE-2)

34
35 **Response:** *The comments are noted. These comments relate to Duke Energy Corporation*
36 *(Duke) hydro power operations that fall under the authority of the Federal Energy Regulatory*
37 *Commission (FERC). Related Federal projects such as the FERC license will be discussed in*
38 *Chapter 2 of the SEIS.*

1 **12. Comments Concerning Safety Issues Within the Scope of License Renewal**

2
3 **Comment:** Neutron bombardment, silting from fission reaction degrades the metal parts of the
4 reactor, the metal becomes brittle. Reactor embrittlement increases with age. And an
5 embrittled reactor may look unchanged, but it will not perform as well under extreme conditions.
6 In the event of a drop in the level of reactor coolant, the heated water is replaced by cold water
7 from outside the reactor. The cold water can cause embrittled reactor parts to fail, and minor
8 reactor failure becomes a major one. Embrittlement of reactor parts is a well known
9 phenomenon, and has caused premature closing of commercial power reactors. (W-5)

10
11 **Comment:** Having directly been involved with the design and installation of nuclear power
12 plants I can testify that the original design was never intended to operate beyond a 40 year life.
13 Operating these plants beyond the design life is clearly an experiment in stress and corrosion
14 analysis, cycling fatigue and resulting fatigue failure. The granting of operating licenses to
15 extend the life of a nuclear power plant within close proximity of densely populated area is
16 analogous to playing Russian roulette with the health and safety of the public. (AH-1)

17
18 **Response:** *The comments are noted. The NRC's environmental review is confined to*
19 *environmental matters relevant to the extended period of operation requested by the applicant.*
20 *To the extent that the comments pertain to safety of equipment and aging within the scope of*
21 *license renewal, these issues will be addressed during the parallel safety analysis review*
22 *performed under 10 CFR Part 54. Operational safety issues are outside the scope of 10 CFR*
23 *Part 51 and will not be evaluated further in this SEIS. The comments provide no new*
24 *information and, therefore, will not be evaluated further in the context of the environmental*
25 *review. However, the comments will be forwarded to the project manager for the license*
26 *renewal safety review for consideration.*

27
28 **13. Questions**

29
30 The following comment was presented in the form of a question during the scoping process.
31 The staff will take note of the questions to the extent that the question applies to the issues
32 discussed in the SEIS. However, the question did not provide new information and will not be
33 evaluated further.

34
35 Cumulative Impacts

36
37 **Comment:** Are you going to consider the cumulative impacts as if all four reactors were
38 running at once? (R-6)

39
40 **Response:** The SEIS will include a consideration of cumulative impacts considering both the
41 two-unit McGuire plant and the two-unit Catawba plant.

1 **Part II - Comments Received on the Draft SEIS**

2

3 (Reserved for comments received on the draft SEIS.)