

Attachment 3

Responses to DEQ Comments and Corresponding Additional Information

Attachment 3 - Buck – Site Specific NCDEQ comments and Responses

Buck	Comments	Responses
1	CSA failed to explain site conditions - describe relative distribution of coal ash constituents	CSA Section 10, including referenced isoconcentration figures describe spatial distribution of all groundwater COIs in all three flow layers, shallow, deep, and bedrock. CSA Section 3 and associated figures describe the spatial distribution of contaminant (ash) sources. In addition, based on subsequent discussions with DEQ additional soil borings will be performed and additional wells will be installed to refine the SCM. This work will be initiated in January/February 2016. The results of this additional investigation will be submitted Summer 2016.
2	Background soil and groundwater need discussion	Additional discussion of background conditions has been included in CAP Part 1.
3	Provisional concentrations for assessment. MW-6 S/D was only background well used.	A detailed analysis of Buck background soil and groundwater PPBCs is provided in the CAP Part 1 Report.
4	Need to consider geochemical changes at background wells and effects from "halo" caused by ash basin impacts. Evaluate with modeling.	An evaluation of the groundwater data with a flow and transport model is included as Appendix C of the CAP Part 1 report.
5	Specifically request that concentrations be declared background	Proposed Provisional Background Concentrations (PPBCs) are proposed in the CAP Part 1 as a statistically derived, additional source of background comparison.
6	Could concentration (numbers) of receptor wells affect flow paths and previous pond levels affect wells along southern side of site? Need additional BR wells south of site. Evaluate with modeling.	Wells MW-8BR and MW-6BR are planned for installation at well clusters MW-8S/D and MW-6S/D respectively in January/February 2016 to further understand any contaminant flow upgradient due to receptor well effects. The results of this additional investigation will be submitted Summer 2016.
7	Consider Cr VI as COI.	Cr(VI) has been included as a constituent of interest in the CAP reports.
8	If Duke has attempted to install wells off-site and been denied access, include discussion on access issues and state that Duke will have to rely on modeling to evaluate impacts.	Data gaps due to access issues is discussed in CSA Section 14.1.3 "Data Gaps Resulting from Other Sources".
9	Need additional data: along stream to west of Cell 1	Well clusters GWA-20S/D and GWA-21S/D are planned for installation west of Cell 1 between Dukeville Road and the stream respectively in January/February 2016. The results of this additional investigation will be submitted Summer 2016.
10	Need additional data: along stream to northeast of Cell 3	Well cluster GWA-17S/D is to be installed along the eastern stream east of Cell 3 respectively in January/February

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		2016. The results of this additional investigation will be submitted Summer 2016.
11	Additional delineation D/S of GWA-6 and GWA-12, check exceedances near GWA-12, review against background concentrations and turbidity.	Well cluster GWA-18S/D is to be installed in proximity to GWA-6S/BRU/BR and GWA-12S/D to further delineate contaminant plumes. Data from GWA-18S/D will be reviewed against background concentrations along with associated downgradient wells. The results of this additional investigation will be submitted Summer 2016.
12	GWA-9, GWA-7, need additional delineation of exceedances	Well cluster GWA-19S/D is to be installed close to clusters GWA-9S/D/BR and GWA-7S/D in January/February 2016. The results of this additional investigation will be submitted Summer 2016.
13	Groundwater iso cons, should not show solid line where no data exists	Based on subsequent discussions with DEQ additional soil borings will be performed and additional wells will be installed to refine the delineation of exceedances. This work will be initiated in March 2016. The results of this additional investigation will be submitted Summer 2016.
14	MW-6S/D – Include historical statistical analysis for all constituents.	Historical statistics were performed on MW-6S/D for all groundwater COIs.
15	Incorporate new constituents in background values and explain how it will be done	Proposed Provisional Background Concentrations (PPBCs) are proposed in the CAP reporting as a statistically derived, additional source of background comparison.
16	Soil, only need to refer to POG PSRG's	In subsequent analytical tables, POG PSRGs will be the standard for comparison. A revised Table 8-5 is included in this Attachment 3.
17	Lab needs to meet POG standards. Document if no approved method can meet standard, then detection limit is standard.	HDR worked with the labs to reduce the reporting limits, however, for these COIs it was not able to be achieved to date. Resampling will be discussed with Duke Energy, however, may not provide additional insight.
18	Latitude and longitude was wrong for site	Latitude and Longitude shown on cover page should be 35°42'43"N; 80°22'37"W.
19	There is an Alcoa property boundary at the Yadkin River, how does this effect CAP? Note this on applicable figures.	A revised CSA Figure 4-5 and Table 4-2 with the Alcoa property boundary displayed has been included in this Attachment 3. The Alcoa property is addressed with the groundwater to surface water modeling in the CAP reports.
20	Section 10.1, Inconsistency of relevance to standard, ensure constituents are discussed if they are mentioned in reference.	Groundwater constituents of concern are compared to NCDEQ 2L standards.
21	X-sections, make sure "East-West" is correct	The East/West labels on the CSA Figures 8.2 through 8.4 and 10.52 through 10.55 (cross-sections) are correct.

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22	How will new area of wetness data affect 2L exceedance delineation or 2B exceedances?	New area of wetness data has been presented and analyzed in the CAP reporting.
23	Check stream classifications, should be the same as High Rock Lake (unless called out)	All surface water samples will subsequently be compared to 2B standards with the WS classification.
24	Document if efforts to collect additional info for data gaps are unsuccessful.	Additional assessment wells are planned for installation in February 2016 in response to identified spatial data gaps. Regarding temporal data gaps, please refer to the summary cover page at the beginning of Appendix A.
25	*Notify DEQ on proposed well locations and deviations from methods or sampling or drilling methods. Use email with text and map	Remaining information needs defined in the CSA report will be addressed and presented in summer 2016; changes to applicable methods will be discussed with DEQ and Duke Energy, however deviations from methods are not planned at this time.

Table 4-2. Property Owner Addresses Contiguous to the Ash Basin Waste Boundary

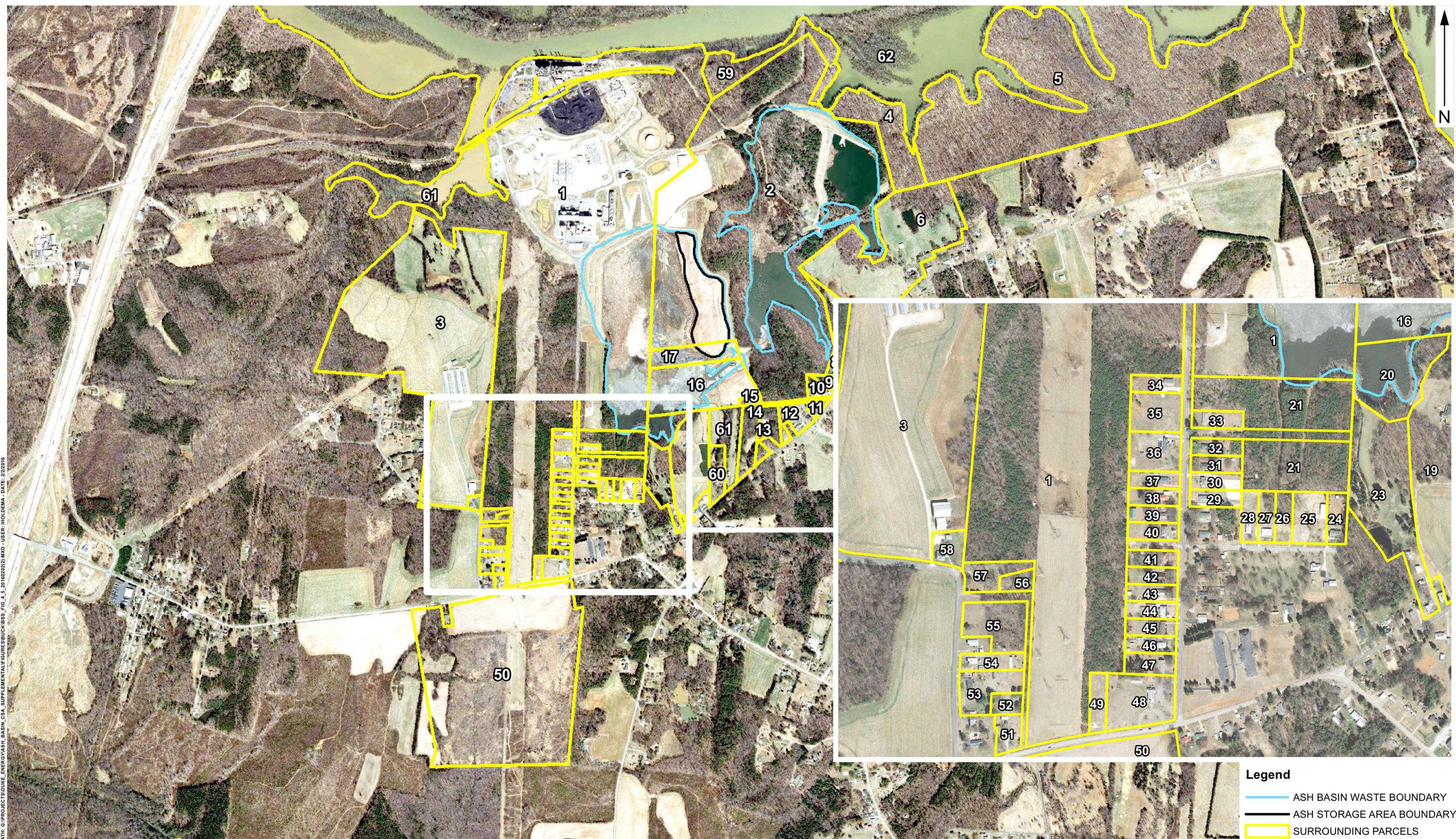
Map ID #	Parcel ID #	Property Address		
		Street	City	State
1	6501001	Dukeville Rd	Salisbury	NC
2	600 021	Leonard Rd	Salisbury	NC
3	6501002	Stoner Morgan Rd	Salisbury	NC
4	600 042	Leonard Rd	Salisbury	NC
5	601 018	Leonard Rd	Salisbury	NC
6	600 002	1160 Leonard Rd	Salisbury	NC
7	600 037	1020 Leonard Rd	Salisbury	NC
8	600 033	Leonard Rd	Salisbury	NC
9	600 00501	820 Leonard Rd	Salisbury	NC
10	600 005	770 Leonard Rd	Salisbury	NC
11	600 00901	680 Leonard Rd	Salisbury	NC
12	600 009	630 Leonard Rd	Salisbury	NC
13	600 010	560 Leonard Rd	Salisbury	NC
14	600 011	470 Leonard Rd	Salisbury	NC
15	600 027	Leonard Rd	Salisbury	NC
16	600 025	Leonard Rd	Salisbury	NC
17	600 024	Leonard Rd	Salisbury	NC
19	600 046	260 Leonard Rd	Salisbury	NC
20	600 039	Leonard Rd	Salisbury	NC
21	6502016	Dukeville Rd	Salisbury	NC
23	600 001	240 Leonard Rd	Salisbury	NC
24	6502028	2670 James St	Salisbury	NC
25	6502032	James St	Salisbury	NC
26	6502030	James St	Salisbury	NC
27	6502027	2560 James Rd	Salisbury	NC
28	6502024	2550 James Rd	Salisbury	NC
29	6502025	585 Dukeville Rd	Salisbury	NC
30	6502020	635 Dukeville Rd	Salisbury	NC
31	6502023	665 Dukeville Rd	Salisbury	NC
32	6502012	715 Dukeville Rd	Salisbury	NC
33	6502029	745 Dukeville Rd	Salisbury	NC
34	6502034	750 Dukeville Rd	Salisbury	NC
35	6502033	Dukeville Rd	Salisbury	NC
36	6502017	710 Dukeville Rd	Salisbury	NC
37	6502011	610 Dukeville Rd	Salisbury	NC
38	6502006	590 Dukeville Rd	Salisbury	NC
39	6502001	540 Dukeville Rd	Salisbury	NC
40	6502005	520 Dukeville Rd	Salisbury	NC
41	6502015	490 Dukeville Rd	Salisbury	NC
42	6502010	410 Dukeville Rd	Salisbury	NC
43	6502003	330 Dukeville Rd	Salisbury	NC
44	6502019	310 Dukeville Rd	Salisbury	NC
45	6502018	220 Dukeville Rd	Salisbury	NC

Table 4-2. Property Owner Addresses Contiguous to the Ash Basin Waste Boundary

Map ID #	Parcel ID #	Property Address		
		Street	City	State
46	6502014	210 Dukeville Rd	Salisbury	NC
47	6502013	180 Dukeville Rd	Salisbury	NC
48	603 002	2380 Long Ferry Rd	Salisbury	NC
49	603 132	Long Ferry Rd	Salisbury	NC
50	603 118	Long Ferry Rd	Salisbury	NC
51	603B059	2302 Long Ferry Rd	Salisbury	NC
52	603B064	Long Ferry Rd	Salisbury	NC
53	603B056	221 Stoner Morgan Rd	Salisbury	NC
54	603B051	241 Stoner Morgan Rd	Salisbury	NC
55	603B050	Stoner Morgan Rd	Salisbury	NC
56	603B054	Stoner Morgan Rd	Salisbury	NC
57	603B055	351 Stoner Morgan Rd	Salisbury	NC
58	6501017	361 Stoner Morgan Rd	Salisbury	NC
59	600 029	Leonard Rd	Salisbury	NC
60	600014	329 Leonard Rd	Salisbury	NC
61	600052	345 Leonard Rd	Salisbury	NC
62	600 0360000001	Yadkin River ³	Multiple	NC

Notes:

1. Property owner addresses obtained from the Rowan County, NC GIS websites.
2. Map ID # corresponds to Figure 4-5.
3. Property extends the entire High Rock Lake and, as such, has no street address.



NOTES:

1. ASH BASIN WASTE BOUNDARIES AND ASH STORAGE AREA BOUNDARIES ARE APPROXIMATE.
2. ORTHOPHOTOGRAPHY IS FROM NC ONEMAP GIS ONLINE SERVICE.
3. PROPERTY BOUNDARIES WERE SUPPLIED BY RUTHERFORD COUNTY AND CLEVELAND COUNTY GIS OFFICES.
3. INFORMATION PERTAINING TO IDENTIFIED PROPERTIES IS INCLUDED IN TABLE 4-2.

SCALE (FEET)
500 0 500 1,000



SURROUNDING PROPERTY OWNERS
DUKE ENERGY CAROLINAS, LLC
BUCK STEAM STATION ASH BASIN
ROWAN COUNTY, NORTH CAROLINA

DATE
FEBRUARY 2016
FIGURE