



July 31, 2020

Mr. Adam Teitzman, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Environmental Cost Recovery Clause
Docket No. 20200007-EI

Dear Mr. Teitzman:

Attached is Gulf Power Company's 2020 Estimated Actual Testimony and Exhibit to be filed in the above-referenced docket. The testimonies consist of the following:

1. Prepared direct testimony and exhibits of Michael W. Sole.
2. Prepared direct testimony and exhibit of Richard L. Hume.

Pursuant to the Order Establishing Procedure in this docket, electronic copies of exhibits MWS-1, MWS-2 and RLH-2 will be provided to the parties under separate cover.

Sincerely,

S/Richard Hume

Richard Hume
Regulatory Issues Manager

md

Attachments

cc: Florida Public Service Commission
Charles Murphy, Sr Attorney, Office of the General Counsel (5 copies)
Gulf Power Company
Russell Badders, Esq., VP & Associate General Counsel

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

ENVIRONMENTAL COST RECOVERY CLAUSE

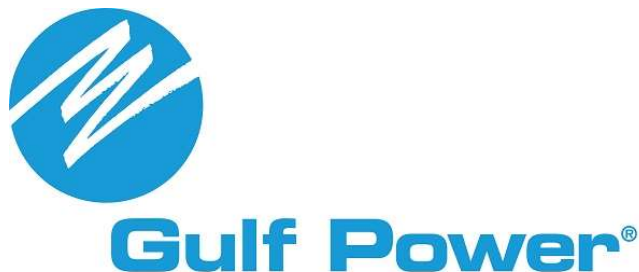
DOCKET NO. 20200007-EI

PREPARED DIRECT TESTIMONY OF
Richard L. Hume

ESTIMATED/ACTUAL TRUE-UP FILING
FOR THE PERIOD

JANUARY 2020 - DECEMBER 2020

July 31, 2020



1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **GULF POWER COMPANY**

3 **TESTIMONY OF RICHARD L. HUME**

4 **DOCKET NO. 20200007-EI**

5 **JULY 31, 2020**

6
7 **Q. Please state your name and address.**

8 A. My name is Richard Hume. My business address is Gulf Power Company, 700
9 Universe Boulevard, Juno Beach, FL 33408.

10 **Q. By whom are you employed and in what capacity?**

11 A. I am employed by Gulf Power Company (“Gulf” or the “Company”) as Manager of
12 Regulatory Issues, in the Regulatory & State Governmental Affairs Department.

13 **Q. Have you previously filed testimony in this docket?**

14 A. Yes.

15 **Q. What is the purpose of your testimony?**

16 A. The purpose of my testimony is to present for Commission review and approval the
17 Actual/Estimated True-up associated with Gulf’s environmental compliance activities
18 for the period January 2020 through December 2020.

19 **Q. Have you prepared or caused to be prepared under your direction, supervision
20 or control an exhibit in this proceeding?**

21 A. Yes, I have. My Exhibit RLH-2 consists of nine forms, PSC Forms 42-1E through 42-
22 9E, included in Appendix I.

- 23 • Form 42-1E provides a summary of the Actual/Estimated True-up amount for
24 the period January 2020 through December 2020.

25

- 1 • Forms 42-2E and 42-3E reflect the calculation of the Actual/Estimated True-
2 up amount for the period.
- 3 • Forms 42-4E and 42-6E reflect the Actual/Estimated O&M and capital cost
4 variances as compared to original projections for the period.
- 5 • Forms 42-5E and 42-7E reflect jurisdictional recoverable O&M and capital
6 project costs for the period.
- 7 • Form 42-8E (pages 8 through 42) reflect the monthly calculations of
8 recoverable costs associated with each capital project for the current recovery
9 period.
- 10 • Form 42-9E provides the capital structure, components and cost rates relied
11 upon to calculate the rate of return applied to capital investment amounts
12 included for recovery for the period January 2020 through December 2020.

13 **Q. Please explain the calculation of the Environmental Cost Recovery Clause**
14 **(“ECRC”) Actual/Estimated True-Up amount Gulf is requesting this**
15 **Commission to approve.**

16 A. The Actual/Estimated True-Up amount for the period January 2020 through December
17 2020 is an over-recovery, including adjustments and interest, of \$2,837,159
18 (Appendix I, page 1, line 4). The Actual/Estimated True-Up amount is calculated on
19 Form 42-2E by comparing actual data for January 2020 through May 2020 and revised
20 estimates for June 2020 through December 2020 to original projections for the same
21 period. The over-recovery of \$2,788,240 shown on page 2, line 5 plus the interest
22 provision of \$47,030 shown on line 6, which is calculated on Form 42-3E, plus
23 adjustment of \$1,889 shown on line 10, results in the final over-recovery of
24 \$2,837,159, shown on line 11. The adjustment of \$1,889 represents carrying costs
25 related to the deferred amortization for the reclassification associated with Plant Smith

1 and Plant Scholz pond closure projects which were moved from capital accounts to
2 deferred FERC 182 regulatory asset accounts during the fall of 2019. This was
3 discussed in Witness Hume's 2019 ECRC Final True-up testimony, filed on April 1,
4 2020.

5 **Q. Are all costs listed in Forms 42-4E through 42-8E attributable to environmental**
6 **compliance projects approved by the Commission?**

7 A. Yes.

8 **Q. What jurisdictional factors were used to calculate projected recoverable costs**
9 **for the period January 2020 through December 2020?**

10 A. The demand jurisdictional factors applied in the calculation of retail revenue
11 requirements is 97.23427 percent, which is based upon Gulf's 2018 Cost of Service
12 Load Research Study results filed with the Commission in accordance with Rule 25-
13 6.0437, F.A.C. The energy jurisdictional factors for each month are the same as those
14 used in the fuel clause, or 100%, pending final calculation of the stratified
15 jurisdictional energy factors. Due to new stratified wholesale agreement with Florida
16 Public Utilities Company ("FPU"), Gulf is in process of determining the appropriate
17 stratified jurisdictional factors to be completed before the end of the year. Any
18 eventual over or under-recovery of costs due to changes in jurisdictional allocations
19 will be handled through the final true-up process.

20 **Q. How do the actual/estimated project costs for January 2020 through December**
21 **2020 compare with original projections for the same period?**

22 A. Form 42-4E (Appendix I, page 4) shows that total O&M project costs are \$7,831,254
23 lower than projected and Form 42-6E (Appendix I, page 6) shows that total capital
24 project revenue requirements are \$1,305,837 lower than projected. Significant project
25 variances are explained in Gulf Witness Sole's testimony.

1 **Q. Please explain the variance associated with the Scherer/Flint credit?**

2 A. The Flint contract and resulting Scherer credit expired on December 31, 2019. The
3 final December 2019 credit booked in January 2020 was not included in the 2020
4 projection filing, resulting in a variance of \$127,104.

5 **Q. Does this conclude your testimony?**

6 A. Yes.

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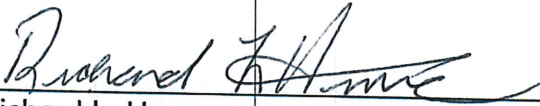
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AFFIDAVIT

STATE OF FLORIDA)
)
COUNTY OF ESCAMBIA)

Docket No. 20200007-EI

Before me, the undersigned authority, personally appeared Richard L. Hume, who being first duly sworn, deposes and says that he is the Regulatory Issues Manager of Gulf Power Company, a Florida corporation, that the foregoing is true and correct to the best of his knowledge and belief. He is personally known to me.


Richard L. Hume
Regulatory Issues Manager

Sworn to and subscribed before me by means of physical presence or _____
online notarization this 31st day of July, 2020.


Notary Public, State of Florida at Large



MELISSA A DARNES
Commission # GG 366942
Expires December 17, 2023
Bonded thru Budget Notary Services

APPENDIX I

ENVIRONMENTAL COST RECOVERY COMMISSION FORMS 42-1E THROUGH 42-9E

JANUARY 2020 - DECEMBER 2020
ACTUAL/ESTIMATED TRUE-UP

RLH-2
DOCKET NO. 20200007-EI
EXHIBIT _____
PAGES 1-44
JULY 31, 2020

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
CALCULATION OF THE ACTUAL / ESTIMATED TRUE-UP AMOUNT FOR THE PERIOD

JANUARY 2020 THROUGH DECEMBER 2020

	2020
1. Over/(Under) Recovery for the Current Period (Form 42-2E, Line 5)	\$2,788,240
2. Interest Provision (Form 42-3E, Line 10)	\$47,030
3. Sum of Current Period Adjustments (Form 42-2E, Line 10)	\$1,889
4. Actual/Estimated True-up to be refunded/(recovered)	<u>\$2,837,159</u>

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 CALCULATION OF THE ACTUAL / ESTIMATED TRUE-UP AMOUNT FOR THE PERIOD

January 2020 - December 2020

	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Total
1. ECRRC Revenues (Net of Revenue Taxes)	\$13,111,890	\$11,731,758	\$12,146,163	\$12,671,424	\$14,987,254	\$17,596,186	\$19,263,843	\$19,041,859	\$16,553,093	\$13,951,673	\$12,159,705	\$13,591,194	\$176,806,042
2. True-Up Provision (Order No. PSC-2018-0594-FOF-EI)	\$542,141	\$542,142	\$542,142	\$542,142	\$542,142	\$542,142	\$542,142	\$542,142	\$542,142	\$542,142	\$542,142	\$542,142	\$6,505,703
3. ECRRC Revenues Applicable to Period (Lines 1 + 2)	\$13,654,031	\$12,273,900	\$12,688,305	\$13,213,566	\$15,529,396	\$18,138,328	\$19,805,985	\$19,584,001	\$17,095,235	\$14,493,815	\$12,701,847	\$14,133,336	\$183,311,745
4. Jurisdictional ECRRC Costs													
a. O&M Activities (Form 42-5E-2, Line 9)	\$2,020,448	\$1,457,563	\$2,492,770	\$1,286,152	\$3,163,769	\$2,038,613	(\$1,075)	\$2,221,442	\$1,950,127	\$2,041,781	\$3,408,911	\$2,019,681	\$24,100,184
b. Capital Investment Projects (Form 42-7E-2, Line 8)	\$12,815,145	\$12,931,396	\$13,036,933	\$12,934,907	\$12,923,511	\$12,825,770	\$13,017,232	\$13,060,447	\$13,093,822	\$13,161,652	\$13,272,477	\$13,350,029	\$156,423,321
c. Total Jurisdictional ECRRC Costs	\$14,835,593	\$14,388,959	\$15,529,703	\$14,221,060	\$16,087,280	\$14,864,382	\$13,016,158	\$15,281,889	\$15,043,949	\$15,203,433	\$16,681,388	\$15,369,710	\$180,523,505
5. Over/(Under) Recovery (Line 3 - Line 4c)	(\$1,181,561)	(\$2,115,059)	(\$2,841,398)	(\$1,007,494)	(\$557,884)	\$3,273,945	\$6,789,827	\$4,302,112	\$2,051,286	(\$709,618)	(\$3,979,541)	(\$1,236,374)	\$2,788,240
6. Interest Provision (Schedule 3E, Line 10)	\$15,527	\$12,478	\$9,980	\$3,688	\$149	\$227	\$528	\$863	\$1,040	\$1,049	\$855	\$644	\$47,030
7. Prior Period True-Up to be (Collected)/Refunded	\$6,505,703	\$4,797,528	\$2,152,804	(\$1,218,867)	(\$2,764,815)	(\$3,864,892)	(\$1,132,661)	\$5,115,552	\$8,876,385	\$10,386,569	\$9,135,858	\$4,615,030	\$6,505,703
a. Deferred True-Up (Form 42-1A, Line 7)	\$5,891,843	\$5,891,843	\$5,891,843	\$5,891,843	\$5,891,843	\$5,891,843	\$5,891,843	\$5,891,843	\$5,891,843	\$5,891,843	\$5,891,843	\$5,891,843	\$5,891,843
8. True-Up Collected/(Refunded) (see Line 2)	(\$542,141)	(\$542,142)	(\$542,142)	(\$542,142)	(\$542,142)	(\$542,142)	(\$542,142)	(\$542,142)	(\$542,142)	(\$542,142)	(\$542,142)	(\$542,142)	(\$6,505,703)
9. End of Period Total True-Up (Lines 5 + 6 + 7a + 7b + 8)	\$10,689,370	\$8,044,647	\$4,671,087	\$3,127,027	\$2,027,151	\$4,759,181	\$11,007,395	\$14,768,228	\$16,278,412	\$15,027,701	\$10,506,873	\$8,729,001	\$2,835,270
10. Adjustments to Period Total True-Up Including Interest	\$0	\$0	\$1,889	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,889
11. End of Period Total True-Up (Lines 9 + 10)	\$10,689,370	\$8,044,647	\$4,672,976	\$3,127,027	\$2,027,151	\$4,759,181	\$11,007,395	\$14,768,228	\$16,278,412	\$15,027,701	\$10,506,873	\$8,729,001	\$2,837,159

Notes:
 The adjustment in March 2020 are carrying costs related to the deferred amortization for the reclassification associated with Plant Smith and Plant Scholz pond closure projects

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 CALCULATION OF THE ACTUAL / ESTIMATED TRUE-UP AMOUNT FOR THE PERIOD

January 2020 - December 2020

	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Total
1 Beg. True-Up Amount (Form 42-2E, Lines 7 + 7a)	\$12,397,546	\$10,689,370	\$8,044,647	\$4,672,976	\$3,127,027	\$2,027,151	\$4,759,181	\$11,007,395	\$14,768,228	\$16,278,412	\$15,027,701	\$10,506,873	\$10,506,873
2 Ending True-Up Amount Before Interest	\$10,673,843	\$8,032,169	\$4,661,107	\$3,123,340	\$2,027,001	\$4,758,954	\$11,006,867	\$14,767,364	\$16,277,372	\$15,026,652	\$10,506,017	\$8,728,357	\$8,728,357
3 Total of Beginning & Ending True-Up (Lines 1 + 2)	\$23,071,389	\$18,721,539	\$12,705,754	\$7,796,315	\$5,154,029	\$6,786,104	\$15,765,048	\$25,774,759	\$31,045,600	\$31,305,064	\$25,533,718	\$19,235,230	\$19,235,230
4 Average True-Up Amount (Line 3 x 1/2)	\$11,535,694	\$9,360,770	\$6,352,877	\$3,898,158	\$2,577,014	\$3,393,052	\$7,883,024	\$12,887,380	\$15,522,800	\$15,652,532	\$12,766,859	\$9,617,615	\$9,617,615
5 Interest Rate (First Day of Reporting Business Month) ¹	1.59000%	1.64000%	1.56000%	2.21000%	0.06000%	0.08000%	0.08000%	0.08000%	0.08000%	0.08000%	0.08000%	0.08000%	0.08000%
6 Interest Rate (First Day of Subsequent Business Month) ¹	1.64000%	1.56000%	2.21000%	0.06000%	0.08000%	0.08000%	0.08000%	0.08000%	0.08000%	0.08000%	0.08000%	0.08000%	0.08000%
7 Total of Beginning and Ending Interest Rates (Line 5 + Line 6)	3.23000%	3.20000%	3.77000%	2.27000%	0.14000%	0.16000%	0.16000%	0.16000%	0.16000%	0.16000%	0.16000%	0.16000%	0.16000%
8 Average Interest Rate (Line 7 x 1/2)	1.61500%	1.60000%	1.88500%	1.13500%	0.07000%	0.08000%	0.08000%	0.08000%	0.08000%	0.08000%	0.08000%	0.08000%	0.08000%
9 Monthly Average Interest Rate (Line 8 x 1/12)	0.13460%	0.13330%	0.15710%	0.09460%	0.00580%	0.00670%	0.00670%	0.00670%	0.00670%	0.00670%	0.00670%	0.00670%	0.00670%
10 Interest Provision for the Month (Line 4 x Line 9)	\$15,527	\$12,478	\$9,980	\$3,688	\$149	\$227	\$528	\$863	\$1,040	\$1,049	\$855	\$644	\$47,030

Notes:

1 Actual interest rates are developed using the AA financial 30-day rates as published by the Federal Reserve. Estimated interest rates are based on the actual rates for May 2020.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
CALCULATION OF THE ACTUAL / ESTIMATED TRUE-UP AMOUNT FOR THE PERIOD

JANUARY 2020 THROUGH DECEMBER 2020
VARIANCE REPORT OF O&M ACTIVITIES

(1) O&M PROJECT #	(2) ECRC - 2020 Actual Estimated Filing (a)	(3) ECRC - 2020 Projection Filing (b)	(4) Dif ECRC - 2020 Projection Filing (c)	(5) % Dif ECRC - Projection Filing (d)
1 - Sulfur	\$0	\$0	\$0	
2 - Air Emission Fees	\$270,737	\$285,269	(\$14,532)	(5.1%)
3 - Title V	\$217,024	\$231,465	(\$14,441)	(6.2%)
4 - Asbestos Fees	\$1,000	\$1,000	\$0	0.0%
5 - Emission Monitoring	\$688,542	\$736,399	(\$47,858)	(6.5%)
6 - General Water Quality	\$1,257,915	\$1,542,559	(\$284,645)	(18.5%)
7 - Groundwater Contamination Investigation	\$2,091,013	\$2,241,964	(\$150,951)	(6.7%)
8 - State NPDES Administration	\$49,516	\$35,000	\$14,516	41.5%
9 - Lead and Copper Rule	\$0	\$0	\$0	
10 - Env Auditing/Assessment	\$2,588	\$15,000	(\$12,412)	(82.7%)
11 - General Solid & Hazardous Waste	\$957,980	\$968,840	(\$10,860)	(1.1%)
12 - Above Ground Storage Tanks	\$196,679	\$183,659	\$13,020	7.1%
13 - Low NOx	\$0	\$0	\$0	
14 - Ash Pond Diversion Curtains	\$0	\$0	\$0	
15 - Mercury Emissions	\$0	\$0	\$0	
16 - Sodium Injection	\$0	\$0	\$0	
17 - Gulf Coast Ozone Study	\$0	\$0	\$0	
18 - SPCC Substation Project	\$0	\$0	\$0	
19 - FDEP NOx Reduction Agreement	\$227,320	\$560,731	(\$333,411)	(59.5%)
20 - Air Quality Compliance Program	\$16,998,777	\$18,287,138	(\$1,288,361)	(7.0%)
21 - MACT ICR	\$0	\$0	\$0	
22 - Crist Water Conservation	\$208,487	\$45,978	\$162,508	353.4%
23 - Coal Combustion Residual	\$1,000,844	\$6,866,072	(\$5,865,228)	(85.4%)
24 - Smith Water Conservation	\$36,806	\$48,696	(\$11,890)	(24.4%)
25 - Mercury Allowances	\$0	\$0	\$0	
26 - Annual NOx Allowances	\$1,362	\$3,087	(\$1,725)	(55.9%)
27 - Seasonal NOx Allowances	\$1,545	\$7,113	(\$5,568)	(78.3%)
28 - SO2 Allowances	\$30,417	\$9,834	\$20,583	209.3%
Total	\$24,238,551	\$32,069,805	(\$7,831,254)	(24.4%)

(a) The 12-Month Totals on Form 42-5E

(b) As approved in Order No. PSC-2019-0500-FOF-EI issued November 22, 2019

(c) Column (2) - Column (3)

(d) Column (4) / Column (3)

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
CALCULATION OF THE ACTUAL / ESTIMATED TRUE-UP AMOUNT FOR THE PERIOD

JANUARY 2020 THROUGH DECEMBER 2020

O&M ACTIVITIES

Line	O & M Project	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Amount	Method of Classification	Energy	
1	Description of O & M Activities																
1	Sulfur	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	Air Emission Fees	\$3,475	(\$6,635)	\$137,213	\$16,883	\$11,153	(\$34,821)	\$12,976	\$12,976	\$12,976	\$12,976	\$12,976	\$12,976	\$270,737	\$0	\$0	\$270,737
3	Title V	\$12,225	\$21,892	\$18,269	\$16,531	\$13,808	\$17,757	\$23,526	\$16,987	\$17,757	\$17,757	\$16,987	\$23,530	\$217,024	\$0	\$0	\$217,024
4	Asbestos Fees	\$2,329	\$1,000	\$51,500	(\$18)	\$733	(\$54,543)	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000	\$1,000	\$0	\$0
5	Emission Monitoring	\$46,081	\$40,695	\$41,240	\$60,469	\$68,633	\$91,108	\$52,876	\$53,048	\$53,048	\$53,048	\$53,048	\$57,819	\$688,542	\$0	\$0	\$688,542
6	General Water Quality	(\$67,189)	\$80,089	\$121,111	\$47,195	\$68	\$125,226	\$153,164	\$170,590	\$154,187	\$201,001	\$166,923	\$105,527	\$1,257,915	\$0	\$0	\$1,257,915
7	Groundwater Contamination Investigation	\$219,935	\$175,562	\$169,139	\$247,262	\$398,113	\$125,498	\$153,015	\$100,498	\$126,498	\$126,498	\$126,498	\$102,498	\$2,091,013	\$0	\$0	\$2,091,013
8	State NPDES Administration	\$3,020	\$3,120	\$16,727	\$14,246	\$16,326	(\$38,423)	\$0	\$0	\$0	\$0	\$0	\$34,500	\$49,516	\$0	\$0	\$49,516
9	Lead & Copper Rule	(\$4,912)	\$0	\$0	\$0	\$28,500	(\$26,000)	\$0	\$0	\$0	\$2,500	\$0	\$0	\$2,588	\$0	\$0	\$2,588
10	Environmental Auditing/Assessment	\$116,157	\$103,716	\$15,721	\$61,784	\$52,120	\$95,146	\$86,808	\$117,192	\$101,754	\$91,282	\$71,545	\$45,352	\$957,980	\$0	\$0	\$957,980
11	General Solid & Hazardous Waste	\$6,447	\$11,325	\$8,149	\$18,811	\$12,166	\$34,190	\$20,000	\$4,000	\$36,000	\$33,590	\$6,000	\$6,000	\$196,679	\$0	\$0	\$196,679
12	Above Ground Storage Tanks	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
13	Low NOx	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14	Ash Pond Diversion Curtains	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
15	Mercury Emissions	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
16	Sodium Injection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
17	Gulf Coast Ozone Study	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
18	SPCC Substation Project	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
19	FDEP NOx Reduction Agreement	\$78,137	\$5,299	(\$23,948)	\$3,073	\$3,309	\$26,727	\$38,979	\$45,366	\$37,999	\$3,927	\$3,927	\$3,927	\$227,320	\$0	\$0	\$227,320
20	Air Quality Compliance Program	\$1,147,460	\$731,047	\$1,745,060	\$728,491	\$1,120,104	\$1,292,806	\$1,575,768	\$1,709,679	\$1,310,422	\$1,382,405	\$2,029,096	\$1,426,418	\$16,996,777	\$0	\$0	\$16,996,777
21	MACT ICR	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22	Crist Water Conservation	\$0	\$0	\$0	\$0	\$16,509	\$50,000	\$67,000	\$12,000	\$12,000	\$20,978	\$30,000	\$0	\$208,487	\$0	\$0	\$208,487
23	Coal Combustion Residuals	\$466,919	\$304,789	\$183,026	\$65,932	\$1,455,371	(\$386,462)	(\$2,280,949)	(\$17,909)	\$94,619	\$105,504	\$95,593	\$141,487	\$1,000,844	\$0	\$0	\$1,000,844
24	Smith Water Conservation	\$4,254	\$2,466	\$2,933	(\$1,373)	\$120	\$4,058	\$4,058	\$4,058	\$4,058	\$4,058	\$4,058	\$4,058	\$36,806	\$0	\$0	\$36,806
25	Mercury Allowances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	Annual NOx Allowances	\$829	(\$286)	\$0	\$176	\$0	\$93	\$81	\$89	\$87	\$80	\$58	\$67	\$1,362	\$0	\$0	\$1,362
27	Seasonal NOx Allowances	(\$24)	\$0	\$0	(\$32)	\$0	\$375	\$417	\$426	\$0	\$0	\$0	\$0	\$1,545	\$0	\$0	\$1,545
28	SO2 Allowances	\$4,293	\$1,395	\$0	\$18,846	(\$5)	\$1,491	\$1,184	\$1,193	\$1,126	\$622	\$117	\$155	\$30,417	\$0	\$0	\$30,417
2	Total of O & M Activities	\$2,039,556	\$1,475,475	\$2,506,739	\$1,297,675	\$3,217,047	\$2,056,392	(\$52,865)	\$2,230,033	\$1,963,040	\$2,056,207	\$3,419,327	\$2,029,926	\$24,238,551	\$5,802,827	\$0	\$18,435,724
3	Recoverable Costs Allocated to Energy	\$1,292,596	\$793,407	\$1,918,433	\$844,436	\$1,237,002	\$1,354,777	\$1,744,038	\$1,839,603	\$1,433,923	\$1,470,796	\$2,916,209	\$1,590,503	\$18,435,724	\$0	\$0	\$18,435,724
4	Recoverable Costs Allocated to Demand	\$746,960	\$682,068	\$588,306	\$453,238	\$1,980,046	\$701,614	(\$1,796,903)	\$390,429	\$529,117	\$585,411	\$503,117	\$439,423	\$5,802,827	\$0	\$0	\$5,802,827
5	Retail Energy Jurisdictional Factor (C)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	\$0	\$0	\$0
6	Retail Demand Jurisdictional Factor (D)	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	\$0	\$0	\$0
7	Jurisdictional Energy Recoverable Costs (A)	\$1,294,147	\$794,359	\$1,920,735	\$845,449	\$1,238,486	\$1,356,403	\$1,746,131	\$1,841,811	\$1,435,644	\$1,472,561	\$2,910,709	\$1,592,412	\$18,457,847	\$0	\$0	\$18,457,847
8	Jurisdictional Demand Recoverable Costs (B)	\$726,301	\$663,204	\$572,035	\$440,703	\$1,925,283	\$682,210	(\$1,747,206)	\$379,631	\$514,483	\$569,220	\$489,203	\$427,270	\$5,642,337	\$0	\$0	\$5,642,337
9	Total Jurisdictional Recoverable Costs for O & M Activities (Lines 7 + 8)	\$2,020,448	\$1,457,563	\$2,492,770	\$1,286,152	\$3,163,769	\$2,038,613	(\$1,075)	\$2,221,442	\$1,950,127	\$2,041,781	\$3,408,911	\$2,019,681	\$24,100,184	\$0	\$0	\$24,100,184

Notes:

- (A) Line 3 x Line 5 x line loss multiplier
- (B) Line 4 x Line 6
- (C) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (D) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 CALCULATION OF THE ACTUAL / ESTIMATED TRUE-UP AMOUNT FOR THE PERIOD

JANUARY 2020 THROUGH DECEMBER 2020
 VARIANCE REPORT OF CAPITAL INVESTMENT PROJECTS - RECOVERABLE COSTS

Capital Project #	ECRC - 2020 Actual Estimated Filing (a)	ECRC - 2020 Projection Filing (b)	Dif ECRC - 2020 Projection Filing (c)	% Dif ECRC - 2020 Projection Filing (d)
1 - Air Quality Assurance Testing	\$17,141	\$17,086	\$55	0.3%
2 - Crist 5, 6 & 7 Precipitator Projects	\$3,718,240	\$3,713,837	\$4,403	0.1%
3 - Crist 7 Flue Gas Conditioning	\$104,389	\$104,659	(\$270)	(0.3%)
4 - Low NOx Burners, Crist 6 & 7	\$1,733,968	\$1,742,469	(\$8,501)	(0.5%)
5 - CEMS - Plants Crist, & Daniel	\$533,364	\$530,306	\$3,058	0.6%
6 - Substation Contamination Remediation	\$415,526	\$475,659	(\$60,133)	(12.6%)
7 - Raw Water Well Flowmeters - Plants Crist & Smith	\$12,688	\$12,648	\$39	0.3%
8 - Crist Cooling Tower Cell	\$37,035	\$37,131	(\$96)	(0.3%)
9 - Crist Dechlorination System	\$23,178	\$23,055	\$123	0.5%
10 - Crist Diesel Fuel Oil Remediation	\$194	\$3,704	(\$3,510)	(94.8%)
11 - Crist Bulk Tanker Unload Sec Contain Struc	\$4,848	\$4,812	\$36	0.8%
12 - Crist IWW Sampling System	\$2,822	\$2,801	\$21	0.8%
13 - Sodium Injection System	\$20,996	\$20,913	\$82	0.4%
14 - Smith Stormwater Collection System	\$165,602	\$165,182	\$421	0.3%
15 - Smith Waste Water Treatment Facility	\$69,378	\$70,151	(\$773)	(1.1%)
16 - Daniel Ash Management Project	\$1,243,496	\$1,262,109	(\$18,613)	(1.5%)
17 - Smith Water Conservation	\$2,304,613	\$3,153,816	(\$849,203)	(26.9%)
18 - Underground Fuel Tank Replacement	\$0	\$0	\$0	
19 - Crist FDEP Agreement for Ozone Attainment	\$10,386,786	\$10,502,402	(\$115,615)	(1.1%)
20 - SPCC Compliance	\$74,023	\$73,763	\$260	0.4%
21 - Crist Common FTIR Monitor	(\$860)	\$4,383	(\$5,243)	(119.6%)
22 - Precipitator Upgrades for CAM Compliance	\$1,098,475	\$1,105,511	(\$7,035)	(0.6%)
23 - Plant Groundwater Contamination	\$0	\$0	\$0	
24 - Crist Water Conservation	\$1,723,370	\$1,752,873	(\$29,503)	(1.7%)
25 - Plant NPDES Permit Compliance Projects	\$1,112,903	\$1,126,922	(\$14,018)	(1.2%)
26 - Air Quality Compliance Program	\$122,344,829	\$124,010,680	(\$1,665,851)	(1.3%)
27 - General Water Quality	\$441,535	\$410,718	\$30,817	7.5%
28 - Coal Combustion Residual	\$9,160,660	\$7,501,752	\$1,658,908	22.1%
29 - Steam Electric Effluent Limitations Guidelines	\$689,659	\$652,519	\$17,139	2.6%
30 - 316(b) Cooling Water Intake Structure Regulation	\$114,654	\$211,791	(\$97,137)	(45.9%)
31 - Mercury Allowances	\$0	\$0	\$0	
32 - Annual NOx Allowances	\$336	\$243	\$94	38.6%
33 - Seasonal NOx Allowances	\$904	\$14,801	(\$13,897)	(93.9%)
34 - SO2 Allowances	\$437,357	\$438,794	(\$1,436)	(0.3%)
35 - Scherer/Flint Credit - Energy	(\$9,777)	\$0	(\$9,777)	
36 - Scherer/Flint Credit - Demand	(\$117,327)	\$0	(\$117,327)	
37 - Regulatory Asset Smith Units 1 & 2	\$2,661,190	\$2,664,546	(\$3,355)	(0.1%)
Total	\$160,506,198	\$161,812,035	(\$1,305,837)	(0.8%)

(a) The 12-Month Totals on Form 42-7E

(b) As approved in Order No. PSC-2019-0500-FOF-EI issued November 22, 2019

(c) Column (2) - Column (3)

(d) Column (4) / Column (3)

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
 For Program: Air Quality Assurance Testing

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	83,954	83,954	83,954	83,954	83,954	83,954	83,954	83,954	83,954	83,954	83,954	83,954	83,954	83,954
3	Less: Accumulated Depreciation (C)	(3,998)	(4,997)	(5,997)	(6,996)	(7,996)	(8,995)	(9,995)	(10,994)	(11,993)	(12,993)	(13,992)	(14,992)	(15,991)	(15,991)
4	CWIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	79,956	78,957	77,957	76,958	75,958	74,959	73,959	72,960	71,960	70,961	69,962	68,962	67,963	67,963
6	Average Net Investment		79,456	78,457	77,457	76,458	75,459	74,459	73,460	72,460	71,461	70,461	69,462	68,462	68,462
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)	366	361	361	357	352	347	343	352	347	342	337	333	328	328
b	Debt Component (Line 6 x Debt Component x 1/12)	92	91	91	90	89	88	87	77	76	75	74	73	72	72
8	Investment Expenses														
a	Depreciation (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Amortization (F)		999	999	999	999	999	999	999	999	999	999	999	999	999
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		1,458	1,452	1,446	1,440	1,435	1,429	1,428	1,422	1,417	1,411	1,405	1,399	1,399
a	Recoverable Costs Allocated to Energy	112	112	112	111	111	110	110	110	109	109	109	108	108	108
b	Recoverable Costs Allocated to Demand	1,345	1,340	1,335	1,330	1,324	1,318	1,319	1,318	1,313	1,308	1,302	1,297	1,292	1,292
10	Energy Jurisdictional Factor (J)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)	112	112	112	111	111	110	110	110	110	109	109	108	108	108
13	Retail Demand-Related Recoverable Costs (I)	1,308	1,303	1,298	1,293	1,288	1,282	1,282	1,282	1,277	1,272	1,266	1,261	1,256	1,256
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)	1,421	1,415	1,409	1,404	1,398	1,392	1,392	1,392	1,386	1,381	1,375	1,369	1,364	1,364

Notes:

- (A) Description and reason for 'Other' adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
For Program: C1st 5, 6 & 7 Precipitator Programs

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	33,657,087	33,657,087	33,657,087	33,657,087	33,657,087	33,657,087	33,657,087	33,657,087	33,657,087	33,657,087	33,657,087	33,657,087	33,657,087	33,657,087
3	Less: Accumulated Depreciation (C)	1,086,225	974,034	861,844	749,654	637,464	525,273	413,083	300,893	188,702	76,512	(35,678)	(147,868)	(260,059)	(260,059)
4	CWIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	34,743,311	34,631,121	34,518,931	34,406,741	34,294,550	34,182,360	34,070,170	33,957,979	33,845,789	33,733,599	33,621,409	33,509,218	33,397,028	33,397,028
6	Average Net Investment		34,687,216	34,575,026	34,462,836	34,350,645	34,238,455	34,126,265	34,014,075	33,901,884	33,789,694	33,677,504	33,565,313	33,453,123	33,453,123
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		159,700	159,183	158,667	158,150	157,634	157,117	162,893	162,356	161,819	161,282	160,744	160,207	1,919,753
b	Debt Component (Line 6 x Debt Component x 1/12)		40,307	40,176	40,046	39,915	39,785	39,655	35,681	35,563	35,445	35,328	35,210	35,092	452,203
8	Investment Expenses														
a	Depreciation (E)		112,190	112,190	112,190	112,190	112,190	112,190	112,190	112,190	112,190	112,190	112,190	112,190	1,346,283
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		312,197	311,550	310,903	310,256	309,609	308,962	310,764	310,109	309,455	308,800	308,145	307,490	3,718,240
a	Recoverable Costs Allocated to Energy		24,015	23,965	23,916	23,866	23,816	23,766	23,905	23,855	23,804	23,754	23,703	23,653	286,018
b	Recoverable Costs Allocated to Demand		288,182	287,585	286,987	286,390	285,793	285,196	286,859	286,255	285,650	285,046	284,441	283,837	3,432,221
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		24,044	23,994	23,944	23,894	23,845	23,795	23,934	23,883	23,833	23,782	23,732	23,681	286,362
13	Retail Demand-Related Recoverable Costs (I)		280,211	279,631	279,050	278,469	277,889	277,308	278,926	278,338	277,750	277,162	276,574	275,986	3,337,295
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		304,255	303,625	302,994	302,364	301,734	301,103	302,859	302,221	301,583	300,944	300,306	299,668	3,623,657

Notes:

- (A) Description and reason for "Other" adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
 For Program: Crist 7 Flue Gas Conditioning

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)		0	0	0	0	0	0	0	0	0	0	0	0	0
3	Less: Accumulated Depreciation (C)		1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322
4	CWIP - Non Interest Bearing		0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)		1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322
6	Average Net Investment		1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322	1,499,322
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		6,903	6,903	6,903	6,903	6,903	6,903	7,180	7,180	7,180	7,180	7,180	7,180	84,499
b	Debt Component (Line 6 x Debt Component x 1/12)		1,742	1,742	1,742	1,742	1,742	1,742	1,573	1,573	1,573	1,573	1,573	1,573	19,890
8	Investment Expenses														
a	Depreciation (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		8,645	8,645	8,645	8,645	8,645	8,645	8,753	8,753	8,753	8,753	8,753	8,753	104,389
a	Recoverable Costs Allocated to Energy		665	665	665	665	665	665	673	673	673	673	673	673	8,030
b	Recoverable Costs Allocated to Demand		7,980	7,980	7,980	7,980	7,980	7,980	8,080	8,080	8,080	8,080	8,080	8,080	96,359
10	Energy Jurisdictional Factor (J)		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		666	666	666	666	666	666	674	674	674	674	674	674	8,040
13	Retail Demand-Related Recoverable Costs (I)		7,759	7,759	7,759	7,759	7,759	7,759	7,856	7,856	7,856	7,856	7,856	7,856	93,694
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		8,425	8,425	8,425	8,425	8,425	8,425	8,530	8,530	8,530	8,530	8,530	8,530	101,733

Notes:

- (A) Description and reason for 'Other' adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
 For Program: Low NOx Burners, Crist 6 & 7

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	13,527,932	13,527,932	13,527,932	13,527,932	13,527,932	13,527,932	13,527,932	13,527,932	13,527,932	13,527,932	13,527,932	13,527,932	13,527,932	13,527,932
3	Less: Accumulated Depreciation (C)	3,671,263	3,624,938	3,578,612	3,532,287	3,485,962	3,439,636	3,393,311	3,346,986	3,300,660	3,254,335	3,208,010	3,161,684	3,115,359	3,115,359
4	CWIP - Non Interest Bearing	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	Net Investment (Lines 2 + 3 + 4) (A)	17,199,195	17,152,869	17,106,544	17,060,219	17,013,893	16,967,568	16,921,243	16,874,917	16,828,592	16,782,267	16,735,941	16,689,616	16,643,291	16,643,291
6	Average Net Investment		17,176,032	17,129,707	17,083,381	17,037,056	16,990,731	16,944,405	16,898,080	16,851,755	16,805,429	16,759,104	16,712,779	16,666,453	16,666,453
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		79,078	78,865	78,652	78,439	78,225	78,012	80,925	80,703	80,481	80,259	80,037	79,816	79,816
b	Debt Component (Line 6 x Debt Component x 1/12)		19,959	19,905	19,851	19,797	19,743	19,689	17,726	17,677	17,629	17,580	17,532	17,483	17,483
8	Investment Expenses														
a	Depreciation (E)		44,614	44,614	44,614	44,614	44,614	44,614	44,614	44,614	44,614	44,614	44,614	44,614	44,614
b	Amortization (F)		1,711	1,711	1,711	1,711	1,711	1,711	1,711	1,711	1,711	1,711	1,711	1,711	1,711
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		145,362	145,095	144,828	144,561	144,294	144,027	144,976	144,706	144,435	144,165	143,895	143,624	143,624
a	Recoverable Costs Allocated to Energy		11,182	11,161	11,141	11,120	11,100	11,079	11,152	11,131	11,110	11,090	11,069	11,048	11,048
b	Recoverable Costs Allocated to Demand		134,181	133,934	133,687	133,441	133,194	132,948	133,824	133,575	133,325	133,075	132,826	132,576	132,576
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		11,195	11,175	11,154	11,133	11,113	11,092	11,165	11,145	11,124	11,103	11,082	11,061	11,061
13	Retail Demand-Related Recoverable Costs (I)		130,470	130,230	129,990	129,750	129,510	129,270	130,123	129,880	129,638	129,395	129,152	128,909	128,909
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		141,665	141,404	141,144	140,884	140,623	140,363	141,288	141,025	140,761	140,498	140,234	139,971	139,971

Notes:

- (A) Description and reason for "Other" adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
For Program: CEWS - Plants Crist & Daniel

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
e	PIS Adjustment		0	0	0	0	0	0	0	0	0	0	0	0	0
f	Accumulated Depreciation Adjustment		(29)	0	0	0	0	0	0	0	0	0	0	0	(29)
2	Plant-in-Service/Depreciation Base (B)	4,712,783	4,712,783	4,712,783	4,712,783	4,712,783	4,712,783	4,712,783	4,712,783	4,712,783	4,712,783	4,712,783	4,712,783	4,712,783	4,712,783
3	Less: Accumulated Depreciation (C)	266,590	251,344	236,127	220,911	205,694	190,477	175,261	160,044	144,828	129,611	114,394	99,178	83,961	83,961
4	CWIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	4,979,373	4,964,127	4,948,910	4,933,894	4,918,477	4,903,280	4,888,044	4,872,827	4,857,611	4,842,394	4,827,177	4,811,961	4,796,744	4,796,744
6	Average Net Investment		4,971,750	4,956,519	4,941,302	4,926,085	4,910,869	4,895,652	4,880,435	4,865,219	4,850,002	4,834,786	4,819,569	4,804,352	4,804,352
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		22,890	22,820	22,750	22,680	22,610	22,540	23,372	23,300	23,227	23,154	23,081	23,008	275,430
b	Debt Component (Line 6 x Debt Component x 1/12)		5,777	5,759	5,742	5,724	5,706	5,689	5,120	5,104	5,088	5,072	5,056	5,040	64,876
8	Investment Expenses														
a	Depreciation (E)		15,217	15,217	15,217	15,217	15,217	15,217	15,217	15,217	15,217	15,217	15,217	15,217	182,599
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		872	872	872	872	872	872	872	872	872	872	872	872	10,460
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		44,755	44,668	44,580	44,492	44,404	44,317	44,580	44,491	44,403	44,314	44,225	44,136	533,364
a	Recoverable Costs Allocated to Energy		3,443	3,436	3,429	3,422	3,416	3,409	3,429	3,422	3,416	3,409	3,402	3,395	41,028
b	Recoverable Costs Allocated to Demand		41,313	41,232	41,151	41,070	40,989	40,908	41,151	41,069	40,987	40,905	40,823	40,741	492,336
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		3,447	3,440	3,433	3,427	3,420	3,413	3,433	3,427	3,420	3,413	3,406	3,399	41,077
13	Retail Demand-Related Recoverable Costs (I)		40,170	40,091	40,012	39,934	39,855	39,776	40,013	39,933	39,853	39,774	39,694	39,614	478,720
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		43,617	43,531	43,446	43,360	43,275	43,189	43,446	43,360	43,273	43,186	43,100	43,013	519,797

Notes:

- (A) Due to automation of Gulf Clause schedules and corresponding calculations, we have made adjustments to Plant in Service and Depreciation expense in order properly account for all ECR capital costs.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-5.0437, F.A.C.

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020

For Program: Substation Contamination Remediation

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		11,588	27,124	(25,982)	(554,252)	3,630	103,500	1,036,252	18,000	6,250	6,250	16,750	1,250	650,360
b	Clearings to Plant		0	0	0	(554,252)	0	0	1,031,252	0	0	0	0	0	477,000
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	554,252	0	0	(554,252)	0	0	0	0	0	0
e	PIS Adjustment		0	0	0	0	0	0	0	0	0	0	0	0	0
f	Accumulated Depreciation Adjustment		588	0	0	0	0	0	0	0	0	0	0	0	588
2	Plant-in-Service/Depreciation Base (B)	3,245,823	3,245,823	3,245,823	3,245,823	2,691,572	2,691,572	2,691,572	3,722,823	3,722,823	3,722,823	3,722,823	3,722,823	3,722,823	3,722,823
3	Less: Accumulated Depreciation (C)	1,058,872	1,052,058	1,044,657	1,037,255	1,584,821	1,578,851	1,572,881	1,012,659	1,006,690	1,000,720	994,750	988,780	982,810	982,810
4	CWIP - Non Interest Bearing	294,900	306,488	333,612	307,630	307,630	311,280	414,760	419,760	437,760	444,010	450,260	467,010	468,260	468,260
5	Net Investment (Lines 2 + 3 + 4) (A)	4,599,596	4,604,369	4,624,092	4,590,708	4,584,022	4,581,682	4,679,212	5,155,242	5,167,272	5,167,553	5,167,833	5,173,613	5,173,893	5,173,893
6	Average Net Investment		4,601,982	4,614,231	4,607,400	4,587,365	4,582,852	4,630,447	4,917,227	5,161,257	5,167,412	5,167,693	5,173,223	5,176,253	5,176,253
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		21,188	21,244	21,212	21,120	21,099	21,319	23,549	24,717	24,747	24,748	24,775	24,789	274,506
b	Debt Component (Line 6 x Debt Component x 1/12)		5,348	5,362	5,354	5,331	5,325	5,381	5,158	5,414	5,421	5,421	5,427	5,430	64,370
8	Investment Expenses														
a	Depreciation (E)		7,402	7,402	7,402	6,886	5,970	5,970	5,970	5,970	5,970	5,970	5,970	5,970	76,650
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		33,937	34,007	33,968	33,137	32,395	32,669	34,677	36,101	36,137	36,139	36,171	36,189	415,526
a	Recoverable Costs Allocated to Energy		2,611	2,616	2,613	2,549	2,492	2,513	2,667	2,777	2,780	2,780	2,782	2,784	31,964
b	Recoverable Costs Allocated to Demand		31,326	31,391	31,355	30,588	29,903	30,156	32,009	33,324	33,357	33,359	33,389	33,405	383,563
10	Energy Jurisdictional Factor (J)	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000
11	Demand Jurisdictional Factor (K)	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		2,614	2,619	2,616	2,552	2,495	2,516	2,671	2,780	2,783	2,783	2,786	2,787	32,002
13	Retail Demand-Related Recoverable Costs (I)		30,460	30,523	30,488	29,742	29,076	29,322	31,124	32,403	32,435	32,436	32,465	32,481	372,955
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		33,073	33,142	33,104	32,294	31,571	31,838	33,795	35,183	35,218	35,220	35,251	35,268	404,956

Notes:

- (A) Due to automation of Gulf Clause schedules and corresponding calculations, we have made adjustments to Plant in Service and Depreciation expense in order properly account for all ECRC capital costs.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

JANUARY 2020 THROUGH DECEMBER 2020

For Program: Raw Water Well Flowmeters - Plants Crist & Smith

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	149,950	149,950	149,950	149,950	149,950	149,950	149,950	149,950	149,950	149,950	149,950	149,950	149,950	1,499,500
3	Less: Accumulated Depreciation (C)	(50,859)	(51,359)	(51,859)	(52,359)	(52,859)	(53,358)	(53,858)	(54,358)	(54,858)	(55,358)	(55,858)	(56,357)	(56,857)	(568,557)
4	CWIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	99,090	98,591	98,091	97,591	97,091	96,591	96,091	95,592	95,092	94,592	94,092	93,592	93,092	930,992
6	Average Net Investment	98,840	98,341	97,841	97,341	96,841	96,341	95,841	95,342	94,842	94,342	93,842	93,342	92,842	933,442
7	Return on Average Net Investment		455	453	450	448	446	444	459	457	454	452	449	447	5,414
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		115	114	114	113	113	112	101	100	99	99	98	98	1,276
b	Debt Component (Line 6 x Debt Component x 1/12)														
8	Investment Expenses		500	500	500	500	500	500	500	500	500	500	500	500	5,998
a	Depreciation (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)	1,070	1,067	1,064	1,061	1,058	1,055	1,052	1,059	1,056	1,054	1,051	1,048	1,045	12,688
a	Recoverable Costs Allocated to Energy	82	82	82	82	82	81	81	81	81	81	81	81	80	976
b	Recoverable Costs Allocated to Demand	987	985	982	979	977	974	978	978	975	972	970	967	964	11,712
10	Energy Jurisdictional Factor (J)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	10,000,000
11	Demand Jurisdictional Factor (K)	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)	82	82	82	82	81	81	81	82	81	81	81	81	80	977
13	Retail Demand-Related Recoverable Costs (I)	960	958	955	952	950	947	951	951	948	946	943	940	938	11,388
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)	1,042	1,040	1,037	1,034	1,031	1,028	1,032	1,032	1,029	1,027	1,024	1,021	1,018	12,365

Notes:

- (A) Description and reason for 'Other' adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020

For Program: Crist Cooling Tower Cell

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)		0	0	0	0	0	0	0	0	0	0	0	0	0
3	Less: Accumulated Depreciation (C)		531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926
4	CWIP - Non Interest Bearing		0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)		531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926
6	Average Net Investment		531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926	531,926
7	Return on Average Net Investment		2,449	2,449	2,449	2,449	2,449	2,449	2,547	2,547	2,547	2,547	2,547	2,547	29,978
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		618	618	618	618	618	618	558	558	558	558	558	558	7,057
b	Debt Component (Line 6 x Debt Component x 1/12)														
8	Investment Expenses		0	0	0	0	0	0	0	0	0	0	0	0	0
a	Depreciation (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		3,067	3,067	3,067	3,067	3,067	3,067	3,105	3,105	3,105	3,105	3,105	3,105	37,035
a	Recoverable Costs Allocated to Energy		236	236	236	236	236	236	239	239	239	239	239	239	2,849
b	Recoverable Costs Allocated to Demand		2,831	2,831	2,831	2,831	2,831	2,831	2,867	2,867	2,867	2,867	2,867	2,867	34,186
10	Energy Jurisdictional Factor (J)		1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000	1,0000000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		236	236	236	236	236	236	239	239	239	239	239	239	2,852
13	Retail Demand-Related Recoverable Costs (I)		2,753	2,753	2,753	2,753	2,753	2,753	2,787	2,787	2,787	2,787	2,787	2,787	33,241
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		2,989	2,989	2,989	2,989	2,989	2,989	3,026	3,026	3,026	3,026	3,026	3,026	36,093

Notes:

- (A) Description and reason for "Other" adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020

For Program: Crist Dechlorination System

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	380,697	380,697	380,697	380,697	380,697	380,697	380,697	380,697	380,697	380,697	380,697	380,697	380,697	380,697
3	Less: Accumulated Depreciation (C)	(258,869)	(260,138)	(261,407)	(262,676)	(263,945)	(265,214)	(266,483)	(267,752)	(269,021)	(270,290)	(271,559)	(272,828)	(274,097)	
4	CWIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	121,828	120,559	119,290	118,021	116,752	115,483	114,214	112,945	111,676	110,407	109,138	107,869	106,600	
6	Average Net Investment	121,194	119,825	118,456	117,087	115,718	114,349	112,980	111,611	110,242	108,873	107,504	106,135	104,766	107,235
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)	558	552	546	540	535	529	524	518	513	507	501	495	489	6,433
b	Debt Component (Line 6 x Debt Component x 1/12)	141	139	138	136	135	133	131	129	128	126	125	123	122	1,518
8	Investment Expenses														
a	Depreciation (E)	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	1,269	15,228
b	Amortization (F)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)	1,968	1,960	1,953	1,946	1,939	1,931	1,925	1,918	1,911	1,904	1,897	1,890	1,883	23,178
a	Recoverable Costs Allocated to Energy	151	151	150	150	149	149	149	148	148	147	147	146	146	1,783
b	Recoverable Costs Allocated to Demand	1,816	1,810	1,803	1,796	1,789	1,783	1,777	1,771	1,765	1,759	1,753	1,747	1,741	21,395
10	Energy Jurisdictional Factor (J)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)	152	151	150	150	149	149	149	148	148	148	147	147	146	1,785
13	Retail Demand-Related Recoverable Costs (I)	1,766	1,760	1,753	1,746	1,740	1,733	1,727	1,721	1,715	1,709	1,703	1,697	1,691	20,804
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)	1,918	1,911	1,903	1,896	1,889	1,882	1,876	1,870	1,864	1,858	1,852	1,846	1,840	22,589

Notes:

- (A) Description and reason for "Other" adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
For Program: Crist Diesel Fuel Oil Remediation

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
e	PIS Adjustment		0	0	0	0	0	0	0	0	0	0	0	0	0
f	Accumulated Depreciation Adjustment		0	0	0	0	36,282	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	20,968	20,968	20,968	20,968	20,968	20,968	20,968	20,968	20,968	20,968	20,968	20,968	20,968	20,968
3	Less: Accumulated Depreciation (C)	(52,562)	(52,772)	(52,772)	(52,842)	(52,842)	(16,630)	(16,700)	(16,769)	(16,839)	(16,909)	(16,979)	(17,049)	(17,119)	(17,119)
4	CWIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	(31,595)	(31,804)	(31,804)	(31,874)	(31,874)	(4,338)	(4,268)	(4,198)	(4,128)	(4,058)	(3,988)	(3,919)	(3,849)	(3,849)
6	Average Net Investment		(31,630)	(31,699)	(31,769)	(31,839)	(13,768)	(4,303)	(4,233)	(4,163)	(4,093)	(4,023)	(3,954)	(3,884)	(3,884)
7	Return on Average Net Investment		(146)	(146)	(146)	(147)	(63)	(20)	(20)	(20)	(20)	(19)	(19)	(19)	(511)
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		(37)	(37)	(37)	(37)	(16)	(5)	(4)	(4)	(4)	(4)	(4)	(4)	(133)
b	Debt Component (Line 6 x Debt Component x 1/12)		70	70	70	70	70	70	70	70	70	70	70	70	839
8	Investment Expenses		0	0	0	0	0	0	0	0	0	0	0	0	0
a	Depreciation (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		(112)	(113)	(113)	(114)	(9)	(95)	(95)	(94)	(94)	(93)	(93)	(93)	194
a	Recoverable Costs Allocated to Energy		(9)	(9)	(9)	(9)	(1)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	15
b	Recoverable Costs Allocated to Demand		(104)	(104)	(105)	(105)	(9)	(87)	(87)	(87)	(87)	(86)	(86)	(85)	179
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		(9)	(9)	(9)	(9)	(1)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	15
13	Retail Demand-Related Recoverable Costs (I)		(101)	(101)	(102)	(102)	(9)	(85)	(85)	(85)	(84)	(84)	(83)	(83)	174
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		(110)	(110)	(110)	(111)	(9)	(92)	(92)	(92)	(91)	(91)	(91)	(90)	189

Notes:

- (A) Prior period adjustment to reserve balance made in May 2020.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020

For Program: Crist Bulk Tanker Unloading Secondary Containment

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	101,495	101,495	101,495	101,495	101,495	101,495	101,495	101,495	101,495	101,495	101,495	101,495	101,495	1,014,950
3	Less: Accumulated Depreciation (C)	(88,134)	(88,473)	(88,811)	(89,149)	(89,488)	(89,826)	(90,164)	(90,503)	(90,841)	(91,179)	(91,518)	(91,856)	(92,194)	(921,944)
4	CWIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4)/(A)	13,361	13,022	12,684	12,346	12,007	11,669	11,331	10,992	10,654	10,316	9,977	9,639	9,301	93,010
6	Average Net Investment		13,191	12,853	12,515	12,176	11,838	11,500	11,162	10,823	10,485	10,147	9,808	9,470	94,700
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)	61	59	58	56	55	53	53	53	52	50	49	47	45	637
b	Debt Component (Line 6 x Debt Component x 1/12)	15	15	15	14	14	13	13	12	11	11	11	10	10	151
8	Investment Expenses														
a	Depreciation (E)	338	338	338	338	338	338	338	338	338	338	338	338	338	4,060
b	Amortization (F)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)	414	412	410	409	407	405	405	403	402	400	398	396	394	4,848
a	Recoverable Costs Allocated to Energy	32	32	32	31	31	31	31	31	31	31	31	30	30	373
b	Recoverable Costs Allocated to Demand	383	381	379	377	375	374	374	372	371	369	367	365	363	4,475
10	Energy Jurisdictional Factor (J)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	10,000,000
11	Demand Jurisdictional Factor (K)	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)	32	32	32	31	31	31	31	31	31	31	31	30	30	373
13	Retail Demand-Related Recoverable Costs (I)	372	370	368	367	365	363	363	362	360	359	357	355	353	4,352
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)	404	402	400	398	396	394	394	393	391	389	387	386	384	4,725

Notes:

- (A) Description and reason for "Other" adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
 For Program: Chtst INWV Sampling System

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	59,543	59,543	59,543	59,543	59,543	59,543	59,543	59,543	59,543	59,543	59,543	59,543	59,543	59,543
3	Less: Accumulated Depreciation (C)	(52,023)	(52,222)	(52,420)	(52,619)	(52,817)	(53,015)	(53,214)	(53,412)	(53,611)	(53,809)	(54,008)	(54,206)	(54,405)	(54,405)
4	CWIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	7,520	7,321	7,123	6,924	6,726	6,527	6,329	6,130	5,932	5,733	5,535	5,336	5,138	5,138
6	Average Net Investment		7,420	7,222	7,023	6,825	6,627	6,428	6,230	6,031	5,833	5,634	5,436	5,237	5,237
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		34	33	32	31	31	30	30	29	28	27	26	25	356
b	Debt Component (Line 6 x Debt Component x 1/12)		9	8	8	8	8	7	7	6	6	6	6	5	84
8	Investment Expenses														
a	Depreciation (E)	198	198	198	198	198	198	198	198	198	198	198	198	198	198
b	Amortization (F)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		241	240	239	238	237	236	235	234	233	231	230	229	2,822
a	Recoverable Costs Allocated to Energy		19	18	18	18	18	18	18	18	18	18	18	18	217
b	Recoverable Costs Allocated to Demand		223	222	221	220	218	217	217	216	215	214	213	211	2,605
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		19	18	18	18	18	18	18	18	18	18	18	18	217
13	Retail Demand-Related Recoverable Costs (I)		217	216	214	213	212	211	211	210	209	208	207	206	2,533
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		235	234	233	232	231	230	229	228	227	225	224	223	2,750

Notes:

- (A) Description and reason for 'Other' adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
 For Program: Sodium Injection System

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	284,622	284,622	284,622	284,622	284,622	284,622	284,622	284,622	284,622	284,622	284,622	284,622	284,622	284,622
3	Less: Accumulated Depreciation (C)	(140,871)	(141,819)	(142,768)	(143,717)	(144,666)	(145,614)	(146,563)	(147,512)	(148,460)	(149,409)	(150,358)	(151,307)	(152,255)	(152,255)
4	CWIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	143,751	142,802	141,854	140,905	139,956	139,007	138,059	137,110	136,161	135,213	134,264	133,315	132,366	132,366
6	Average Net Investment		143,277	142,328	141,379	140,431	139,482	138,533	137,584	136,636	135,687	134,738	133,789	132,841	132,841
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		660	655	651	647	642	638	635	634	630	625	621	617	613
b	Debt Component (Line 6 x Debt Component x 1/12)		166	165	164	163	162	161	144	143	142	141	140	139	139
8	Investment Expenses														
a	Depreciation (E)		949	949	949	949	949	949	949	949	949	949	949	949	949
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		1,775	1,769	1,764	1,758	1,753	1,748	1,752	1,746	1,741	1,735	1,730	1,724	20,996
a	Recoverable Costs Allocated to Energy		137	136	136	135	135	134	135	134	134	133	133	133	1,615
b	Recoverable Costs Allocated to Demand		1,638	1,633	1,628	1,623	1,618	1,613	1,617	1,612	1,607	1,602	1,597	1,592	19,381
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		137	136	136	135	135	135	135	135	134	134	133	133	1,617
13	Retail Demand-Related Recoverable Costs (I)		1,593	1,588	1,583	1,578	1,573	1,568	1,572	1,567	1,562	1,558	1,553	1,548	18,845
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		1,730	1,724	1,719	1,714	1,708	1,703	1,707	1,702	1,697	1,691	1,686	1,680	20,462

Notes:

- (A) Description and reason for "Other" adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
 For Program: Smith Stormwater Collection System

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	2,764,379	2,764,379	2,764,379	2,764,379	2,764,379	2,764,379	2,764,379	2,764,379	2,764,379	2,764,379	2,764,379	2,764,379	2,764,379	28,854
3	Less: Accumulated Depreciation (C)	(2,197,622)	(2,197,622)	(2,208,449)	(2,219,277)	(2,230,104)	(2,240,931)	(2,251,758)	(2,262,585)	(2,273,412)	(2,284,240)	(2,295,067)	(2,305,894)	(2,316,721)	6,822
4	CWIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	577,583	566,756	555,929	545,102	534,275	523,448	512,621	501,793	490,966	480,139	469,312	458,485	447,658	
6	Average Net Investment		572,170	561,343	550,516	539,688	528,861	518,034	507,207	496,380	485,553	474,726	463,898	453,071	
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		2,634	2,584	2,535	2,485	2,435	2,385	2,429	2,377	2,325	2,273	2,222	2,170	28,854
b	Debt Component (Line 6 x Debt Component x 1/12)		665	652	640	627	615	602	632	521	509	498	487	475	6,822
8	Investment Expenses		10,827	10,827	10,827	10,827	10,827	10,827	10,827	10,827	10,827	10,827	10,827	10,827	129,926
a	Depreciation (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		14,126	14,064	14,001	13,939	13,877	13,814	13,788	13,725	13,662	13,599	13,535	13,472	165,602
a	Recoverable Costs Allocated to Energy		1,087	1,082	1,077	1,072	1,067	1,063	1,061	1,056	1,051	1,046	1,041	1,036	12,739
b	Recoverable Costs Allocated to Demand		13,040	12,982	12,924	12,867	12,809	12,752	12,728	12,669	12,611	12,553	12,494	12,436	152,864
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	
12	Retail Energy-Related Recoverable Costs (H)		1,088	1,083	1,078	1,074	1,069	1,064	1,062	1,057	1,052	1,047	1,042	1,038	12,754
13	Retail Demand-Related Recoverable Costs (I)		12,679	12,623	12,567	12,511	12,455	12,399	12,376	12,319	12,262	12,205	12,149	12,092	148,636
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		13,767	13,706	13,645	13,584	13,524	13,463	13,437	13,376	13,314	13,253	13,191	13,129	161,390

Notes:

- (A) Description and reason for "Other" adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6-0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
For Program: Smith Waste Water Treatment Facility

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	464,658	0	0	0	0	0	0	0	0	0	0	464,658
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		(7,018)	13,505	9,030	7,069	0	0	0	0	0	0	0	0	22,586
e	PIS Adjustment		0	(464,658)	0	0	464,658	0	0	0	0	0	0	0	0
f	Accumulated Depreciation Adjustment		4,596	0	0	0	(3,553)	0	0	0	0	0	0	0	1,043
2	Plant-in-Service/Depreciation Base (B)	178,962	178,962	178,962	178,962	178,962	643,620	643,620	643,620	643,620	643,620	643,620	643,620	643,620	643,620
3	Less: Accumulated Depreciation (C)	128,007	124,884	137,688	146,017	152,385	146,311	143,790	141,269	138,748	136,228	133,707	131,186	128,665	128,665
4	CWIP - Non Interest Bearing	464,658	464,658	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	771,626	768,503	316,650	324,978	331,347	789,930	787,410	784,889	782,368	779,847	777,326	774,805	772,285	772,285
6	Average Net Investment		770,065	542,576	320,814	328,163	560,639	788,670	786,149	783,628	781,108	778,587	776,066	773,545	773,545
7	Return on Average Net Investment		3,545	2,498	1,477	1,511	2,581	3,631	3,765	3,753	3,741	3,729	3,717	3,705	37,652
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		895	630	373	381	651	916	825	822	819	817	814	811	8,756
b	Debt Component (Line 6 x Debt Component x 1/12)		701	701	701	701	2,521	2,521	2,521	2,521	2,521	2,521	2,521	2,521	22,970
8	Investment Expenses		0	0	0	0	0	0	0	0	0	0	0	0	0
a	Depreciation (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		5,141	3,829	2,551	2,593	5,753	7,068	7,110	7,096	7,081	7,066	7,052	7,037	69,378
a	Recoverable Costs Allocated to Energy		395	295	196	199	443	544	547	546	545	544	542	541	5,337
b	Recoverable Costs Allocated to Demand		4,746	3,535	2,355	2,394	5,311	6,525	6,563	6,550	6,536	6,523	6,509	6,496	64,041
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		396	295	196	200	443	544	548	546	545	544	543	542	5,343
13	Retail Demand-Related Recoverable Costs (I)		4,614	3,437	2,289	2,327	5,164	6,344	6,362	6,369	6,355	6,342	6,329	6,316	62,270
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		5,010	3,732	2,486	2,527	5,607	6,889	6,930	6,915	6,901	6,886	6,872	6,858	67,613

Notes:

- (A) Due to automation of Gulf Clause schedules and corresponding calculations, we have made adjustments to Plant in Service and Depreciation expense in order properly account for all ECR capital costs.
- (B) Timing of CWIP transfers, under the new automated data environment, creates the need for catchup adjustments until fully implemented.
- (C) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (D) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (E) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (F) Applicable depreciation rate or rates.
- (G) Applicable amortization period.
- (H) Description and reason for "Other" adjustments to investment expenses for this program.
- (I) Line 9a x Line 10 x line loss multiplier
- (J) Line 9b x Line 11.
- (K) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100% pending final calculation of the stratified jurisdictional energy factors.
- (L) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
For Program: Daniel Ash Management Program

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
e	PIS Adjustment		0	0	0	0	0	0	0	0	0	0	0	0	0
f	Accumulated Depreciation Adjustment		(6)												(6)
2	Plant-in-Services/Depreciation Base (B)	14,939,561	14,939,561	14,939,561	14,939,561	14,939,561	14,939,561	14,939,561	14,939,561	14,939,561	14,939,561	14,939,561	14,939,561	14,939,561	14,939,561
3	Less: Accumulated Depreciation (C)	(6,833,021)	(6,870,382)	(6,907,737)	(6,945,092)	(6,982,446)	(7,019,801)	(7,057,156)	(7,094,511)	(7,131,866)	(7,169,221)	(7,206,576)	(7,243,931)	(7,281,286)	(7,281,286)
4	CWIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	8,106,540	8,069,179	8,031,824	7,984,470	7,957,115	7,919,760	7,882,405	7,845,050	7,807,695	7,770,340	7,732,985	7,695,630	7,658,275	7,658,275
6	Average Net Investment		8,087,860	8,050,502	8,013,147	7,975,792	7,938,437	7,901,082	7,863,727	7,826,372	7,789,017	7,751,663	7,714,308	7,676,953	7,676,953
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		37,237	37,065	36,893	36,721	36,549	36,377	36,205	37,480	37,302	37,123	36,944	36,765	444,112
b	Debt Component (Line 6 x Debt Component x 1/12)		9,398	9,355	9,311	9,268	9,224	9,181	9,138	8,210	8,171	8,131	8,092	8,053	104,644
8	Investment Expenses		37,355	37,355	37,355	37,355	37,355	37,355	37,355	37,355	37,355	37,355	37,355	37,355	448,259
a	Depreciation (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		20,540	20,540	20,540	20,540	20,540	20,540	20,540	20,540	20,540	20,540	20,540	20,540	246,481
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		104,530	104,314	104,099	103,883	103,668	103,453	103,237	103,585	103,367	103,149	102,931	102,713	1,243,496
a	Recoverable Costs Allocated to Energy		8,041	8,024	8,008	7,991	7,974	7,958	7,941	7,968	7,951	7,935	7,918	7,901	95,654
b	Recoverable Costs Allocated to Demand		96,489	96,290	96,091	95,892	95,694	95,495	95,296	95,617	95,416	95,215	95,013	94,812	1,147,843
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		8,050	8,034	8,017	8,001	7,984	7,967	7,950	7,978	7,961	7,944	7,927	7,910	95,768
13	Retail Demand-Related Recoverable Costs (I)		93,820	93,627	93,434	93,240	93,047	92,854	92,661	92,973	92,777	92,581	92,386	92,190	1,116,097
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		101,871	101,661	101,451	101,241	101,031	100,821	100,611	100,950	100,738	100,525	100,313	100,100	1,211,865

Notes:

- (A) Due to automation of Gulf Clause schedules and corresponding calculations, we have made adjustments to Plant in Service and Depreciation expense in order properly account for all ECRC capital costs.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
For Program: Smith Water Conservation

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		(5,523)	4,464	5,916	1,049	16,483	22,385	59,015	77,330	40,700	22,894	22,894	33,069	300,675
b	Clearings to Plant		0	6,087	214,648	351,763	0	0	0	0	0	0	0	0	572,518
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
e	PIS Adjustment		(753)	0	(214,648)	(346,443)	561,092	0	0	0	0	0	0	0	0
f	Accumulated Depreciation Adjustment		0	0	0	0	(4,290)	0	0	0	0	0	0	0	(5,044)
2	Plant-in-Service/Depreciation Base (B)	21,018,243	21,018,243	21,024,330	21,024,330	21,029,670	21,590,761	21,590,761	21,590,761	21,590,761	21,590,761	21,590,761	21,590,761	21,590,761	21,590,761
3	Less: Accumulated Depreciation (C)	(2,473,936)	(2,557,010)	(2,639,344)	(2,721,689)	(2,804,045)	(2,892,899)	(2,977,463)	(3,062,027)	(3,146,590)	(3,231,154)	(3,315,718)	(3,400,282)	(3,484,846)	(3,484,846)
4	CWIP - Non Interest Bearing	574,610	569,087	567,464	558,732	7,988	24,461	46,866	105,861	183,211	223,911	246,805	269,699	302,767	302,767
5	Net Investment (Lines 2 + 3 + 4) (A)	19,118,917	19,030,320	18,952,450	18,661,372	18,233,623	18,722,343	18,660,165	18,634,616	18,627,362	18,583,518	18,521,848	18,460,178	18,408,683	18,408,683
6	Average Net Investment		19,074,619	18,991,385	18,806,911	18,447,497	18,477,983	18,691,254	18,647,390	18,630,999	18,605,450	18,552,683	18,491,013	18,434,430	18,434,430
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		87,820	87,436	86,587	84,932	85,073	86,065	89,302	89,224	89,102	88,849	88,553	88,282	1,051,215
b	Debt Component (Line 6 x Debt Component x 1/12)		22,165	22,068	21,854	21,436	21,471	21,719	19,561	19,544	19,517	19,462	19,397	19,338	247,532
8	Investment Expenses														
a	Depreciation (E)		82,321	82,333	82,345	82,356	84,564	84,564	84,564	84,564	84,564	84,564	84,564	84,564	1,005,866
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		192,306	191,838	190,796	188,724	191,108	192,338	193,427	193,332	193,182	192,874	192,514	192,184	2,304,613
a	Recoverable Costs Allocated to Energy		14,793	14,757	14,676	14,517	14,701	14,785	14,879	14,872	14,860	14,836	14,809	14,783	177,278
b	Recoverable Costs Allocated to Demand		177,513	177,081	176,110	174,207	176,407	177,542	178,548	178,460	178,322	178,038	177,706	177,401	2,127,335
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		14,810	14,774	14,693	14,535	14,718	14,813	14,897	14,890	14,878	14,854	14,827	14,801	177,491
13	Retail Demand-Related Recoverable Costs (I)		172,603	172,183	171,239	169,389	171,528	172,632	173,610	173,524	173,390	173,114	172,791	172,494	2,068,499
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		187,414	186,958	185,933	183,923	186,247	187,445	188,507	188,414	188,268	187,968	187,617	187,295	2,245,989

Notes:

- (A) Due to automation of Gulf Clause schedules and corresponding calculations, we have made adjustments to Plant in Service and Depreciation expense in order properly account for all ECRC capital costs.
- (B) Timing of CWIP transfers, under the new automated data environment, creates the need for catchup adjustments until fully implemented.
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x the loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
 For Program: Underground Fuel Tank Replacement

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Less: Accumulated Depreciation (C)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	CWIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Average Net Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b	Debt Component (Line 6 x Debt Component x 1/12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Investment Expenses														
a	Depreciation (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		0	0	0	0	0	0	0	0	0	0	0	0	0
a	Recoverable Costs Allocated to Energy		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10	Energy Jurisdictional Factor (J)		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		0	0	0	0	0	0	0	0	0	0	0	0	0
13	Retail Demand-Related Recoverable Costs (I)		0	0	0	0	0	0	0	0	0	0	0	0	0
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		0	0	0	0	0	0	0	0	0	0	0	0	0

Notes:

- (A) Description and reason for "Other" adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional factor is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
 For Program: Crist FDEP Agreement for Ozone Attainment

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		3,625												3,625
b	Clearings to Plant		0												0
c	Retirements		0												0
d	Other		2,175												2,175
e	PIS Adjustment		0												0
f	Accumulated Depreciation Adjustment		297,647					(297,645)							2
2	Plant-in-Service/Depreciation Base (B)	119,583,919	119,583,919	119,583,919	119,583,919	119,583,919	119,583,919	119,583,919	119,583,919	119,583,919	119,583,919	119,583,919	119,583,919	119,583,919	119,583,919
3	Less: Accumulated Depreciation (C)	(38,453,274)	(38,559,142)	(38,964,832)	(39,370,522)	(39,776,212)	(40,181,902)	(40,885,237)	(41,290,927)	(41,696,616)	(42,102,306)	(42,507,996)	(42,913,686)	(43,319,375)	(43,319,375)
4	CWIP - Non Interest Bearing	443,813	447,438	447,438	447,438	447,438	447,438	447,438	447,438	447,438	447,438	447,438	447,438	447,438	447,438
5	Net Investment (Lines 2 + 3 + 4) (A)	81,574,458	81,472,215	81,066,525	80,660,835	80,255,145	79,849,455	79,146,120	78,740,430	78,334,741	77,929,051	77,523,361	77,117,671	76,711,982	76,711,982
6	Average Net Investment		81,523,337	81,269,370	80,863,880	80,457,990	80,052,300	79,497,788	78,943,275	78,537,585	78,131,896	77,726,206	77,320,516	76,914,826	76,914,826
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		375,333	374,164	372,296	370,429	368,561	366,008	378,059	376,116	374,174	372,231	370,288	368,345	4,466,005
b	Debt Component (Line 6 x Debt Component x 1/12)		94,730	94,435	93,964	93,492	93,021	92,376	82,811	82,386	81,960	81,535	81,109	80,684	1,052,504
8	Investment Expenses														
a	Depreciation (E)		395,364	395,364	395,364	395,364	395,363	395,363	395,363	395,363	395,363	395,363	395,363	395,363	4,744,361
b	Amortization (F)		10,326	10,326	10,326	10,326	10,326	10,326	10,326	10,326	10,326	10,326	10,326	10,326	123,917
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		875,754	874,289	871,950	869,611	867,271	864,074	866,561	864,192	861,824	859,455	857,087	854,718	10,386,786
a	Recoverable Costs Allocated to Energy		67,966	67,253	67,073	66,893	66,713	66,467	66,659	66,476	66,294	66,112	65,930	65,748	798,984
b	Recoverable Costs Allocated to Demand		808,388	807,036	804,877	802,718	800,558	797,607	799,902	797,716	795,530	793,343	791,157	788,971	9,587,803
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		67,446	67,334	67,154	66,973	66,793	66,547	66,738	66,556	66,374	66,191	65,999	65,826	799,942
13	Retail Demand-Related Recoverable Costs (I)		786,030	784,716	782,616	780,517	778,417	775,547	777,779	775,653	773,527	771,402	769,276	767,150	9,322,630
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		853,477	852,050	849,770	847,490	845,210	842,094	844,517	842,209	839,901	837,593	835,285	832,977	10,122,572

Notes:
 (A) Adjustment to reserve balance in January and June 2020.
 (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
 (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
 (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
 (E) Applicable depreciation rate or rates.
 (F) Applicable amortization period.
 (G) Description and reason for "Other" adjustments to investment expenses for this program.
 (H) Line 9a x Line 10 x line loss multiplier.
 (I) Line 9b x Line 11.
 (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
 (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020

For Program: SPCC Compliance

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	947,925	947,925	947,925	947,925	947,925	947,925	947,925	947,925	947,925	947,925	947,925	947,925	947,925	947,925
3	Less: Accumulated Depreciation (C)	(430,582)	(433,863)	(437,145)	(440,426)	(443,708)	(446,990)	(450,271)	(453,553)	(456,834)	(460,116)	(463,397)	(466,679)	(469,960)	(469,960)
4	CWIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	517,343	514,061	510,780	507,498	504,217	500,935	497,654	494,372	491,091	487,809	484,528	481,246	477,965	477,965
6	Average Net Investment		515,702	512,421	509,139	505,858	502,576	499,295	496,013	492,731	489,450	486,168	482,887	479,605	479,605
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)	2,374	2,374	2,359	2,344	2,329	2,314	2,299	2,275	2,260	2,244	2,328	2,313	2,297	2,297
b	Debt Component (Line 6 x Debt Component x 1/12)	599	599	595	592	588	584	580	520	517	513	510	507	503	503
8	Investment Expenses														
a	Depreciation (E)	3,124	3,124	3,124	3,124	3,124	3,124	3,124	3,124	3,124	3,124	3,124	3,124	3,124	3,124
b	Amortization (F)	157	157	157	157	157	157	157	157	157	157	157	157	157	157
c	Dismantlement	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		6,255	6,236	6,217	6,198	6,179	6,160	6,177	6,158	6,139	6,120	6,101	6,081	6,081
a	Recoverable Costs Allocated to Energy	481	481	480	478	477	475	474	475	474	472	471	469	468	5,694
b	Recoverable Costs Allocated to Demand	5,774	5,774	5,756	5,739	5,722	5,704	5,687	5,702	5,684	5,667	5,649	5,631	5,614	68,329
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		482	480	479	477	476	474	476	474	473	471	470	468	5,701
13	Retail Demand-Related Recoverable Costs (I)		5,614	5,597	5,580	5,563	5,546	5,529	5,544	5,527	5,510	5,493	5,476	5,458	68,439
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		6,096	6,078	6,059	6,041	6,022	6,004	6,020	6,001	5,983	5,964	5,945	5,927	72,140

Notes:

- (A) Description and reason for "Other" adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
For Program: Crist Common FTIR Monitor

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
e	PIS Adjustment		0	0	0	0	0	0	0	0	0	0	0	0	0
f	Accumulated Depreciation Adjustment		0	0	0	0	33,156	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	0	(33,155)	(33,155)	(33,155)	(33,155)	0	0	0	0	0	0	0	0	0
3	Less: Accumulated Depreciation (C)	(33,155)	(33,155)	(33,155)	(33,155)	(33,155)	0	0	0	0	0	0	0	0	0
4	C/WIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	(33,155)	(33,155)	(33,155)	(33,155)	(33,155)	0	0	0	0	0	0	0	0	0
6	Average Net Investment		(33,155)	(33,155)	(33,155)	(33,155)	(16,578)	0	0	0	0	0	0	0	0
7	Return on Average Net Investment		(153)	(153)	(153)	(153)	(76)	0	0	0	0	0	0	0	(687)
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		(39)	(39)	(39)	(39)	(19)	0	0	0	0	0	0	0	(173)
b	Debt Component (Line 6 x Debt Component x 1/12)		0	0	0	0	0	0	0	0	0	0	0	0	0
8	Investment Expenses		0	0	0	0	0	0	0	0	0	0	0	0	0
a	Depreciation (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		(191)	(191)	(191)	(191)	(96)	0	0	0	0	0	0	0	(860)
a	Recoverable Costs Allocated to Energy		(15)	(15)	(15)	(15)	(7)	0	0	0	0	0	0	0	(66)
b	Recoverable Costs Allocated to Demand		(176)	(176)	(176)	(176)	(88)	0	0	0	0	0	0	0	(794)
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		(15)	(15)	(15)	(15)	(7)	0	0	0	0	0	0	0	(66)
13	Retail Demand-Related Recoverable Costs (I)		(172)	(172)	(172)	(172)	(86)	0	0	0	0	0	0	0	(772)
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		(186)	(186)	(186)	(186)	(93)	0	0	0	0	0	0	0	(838)

Notes:

- (A) Prior period adjustment to reserve balance made in May 2020.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
For Program: Precipitator Upgrades for CAM Compliance

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
	a Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
	b Cleanings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
	c Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
	d Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	13,895,639	13,895,639	13,895,639	13,895,639	13,895,639	13,895,639	13,895,639	13,895,639	13,895,639	13,895,639	13,895,639	13,895,639	13,895,639	13,895,639
3	Less: Accumulated Depreciation (C)	(5,622,857)	(5,869,176)	(5,915,495)	(5,961,813)	(6,008,132)	(6,054,451)	(6,100,770)	(6,147,089)	(6,193,407)	(6,239,726)	(6,286,046)	(6,332,364)	(6,378,683)	(6,378,683)
4	CWIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	8,072,782	8,026,463	7,980,144	7,933,825	7,887,506	7,841,188	7,794,869	7,748,550	7,702,231	7,655,912	7,609,594	7,563,275	7,516,956	7,516,956
6	Average Net Investment		8,049,622	8,003,303	7,956,985	7,910,666	7,864,347	7,818,028	7,771,709	7,725,391	7,679,072	7,632,753	7,586,434	7,540,115	7,540,115
7	Return on Average Net Investment														
	a Equity Component (Line 6 x Equity Component x 1/12) (D)		37,060	36,847	36,634	36,421	36,207	35,994	35,779	35,567	35,354	35,141	34,928	34,715	34,715
	b Debt Component (Line 6 x Debt Component x 1/12)		9,354	9,300	9,246	9,192	9,138	9,085	9,031	8,977	8,923	8,869	8,815	8,761	8,761
8	Investment Expenses		46,319	46,319	46,319	46,319	46,319	46,319	46,319	46,319	46,319	46,319	46,319	46,319	46,319
	a Depreciation (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
	b Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
	c Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
	d Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
	e Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		92,733	92,466	92,199	91,932	91,665	91,398	91,131	90,864	90,597	90,330	90,063	89,796	89,796
	a Recoverable Costs Allocated to Energy		7,133	7,092	7,051	7,010	6,969	6,928	6,887	6,846	6,805	6,764	6,723	6,682	6,682
	b Recoverable Costs Allocated to Demand		85,600	85,353	85,107	84,860	84,613	84,367	84,120	83,873	83,626	83,380	83,133	82,886	82,886
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		7,142	7,121	7,101	7,080	7,060	7,039	7,018	7,001	6,984	6,967	6,950	6,933	6,933
13	Retail Demand-Related Recoverable Costs (I)		83,232	82,992	82,753	82,513	82,273	82,034	81,794	81,554	81,314	81,074	80,834	80,594	80,594
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		90,374	90,114	89,853	89,593	89,333	89,073	88,813	88,553	88,293	88,033	87,773	87,513	87,513

Notes:

- (A) Description and reason for 'Other' adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

JANUARY 2020 THROUGH DECEMBER 2020
For Program: Plant Groundwater Investigation

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Less: Accumulated Depreciation (C)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	CWIP - Non Interest Bearing	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Average Net Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b	Debt Component (Line 6 x Debt Component x 1/12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Investment Expenses														
a	Depreciation (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		0	0	0	0	0	0	0	0	0	0	0	0	0
a	Recoverable Costs Allocated to Energy		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Recoverable Costs Allocated to Demand		0	0	0	0	0	0	0	0	0	0	0	0	0
10	Energy Jurisdictional Factor (J)		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		0	0	0	0	0	0	0	0	0	0	0	0	0
13	Retail Demand-Related Recoverable Costs (I)		0	0	0	0	0	0	0	0	0	0	0	0	0
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		0	0	0	0	0	0	0	0	0	0	0	0	0

Notes:

- (A) Description and reason for 'Other' adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
 For Program: Crest Water Conservation Program

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		0	533,264	0	0	0	0	0	0	0	0	0	0	0
b	Clearings to Plant		0	0	298,319	0	0	0	0	0	0	0	0	0	533,264
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	298,319
d	Other		0	0	0	0	533,264	0	0	0	0	0	0	0	0
e	PIS Adjustment		0	(533,264)	0	0	(1,560)	0	0	0	0	0	0	0	0
f	Accumulated Depreciation Adjustment		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)		19,748,717	19,748,717	19,450,398	19,450,398	19,983,662	19,983,662	19,983,662	19,983,662	19,983,662	19,983,662	19,983,662	19,983,662	19,983,662
3	Less: Accumulated Depreciation (C)		(6,413,268)	(6,544,927)	(6,311,939)	(6,376,774)	(6,444,947)	(6,511,559)	(6,578,171)	(6,644,783)	(6,711,395)	(6,778,008)	(6,844,620)	(6,911,232)	(6,911,232)
4	CWIP - Non Interest Bearing		533,264	0	0	0	0	0	0	0	0	0	0	0	0
5	Net Investment (Lines 2 + 3 + 4) (A)		13,868,713	13,203,790	13,138,459	13,073,624	13,538,715	13,472,103	13,405,491	13,338,879	13,272,266	13,205,654	13,139,042	13,072,430	13,072,430
6	Average Net Investment		13,835,798	13,503,337	13,171,125	13,106,041	13,306,170	13,505,409	13,438,797	13,372,185	13,305,573	13,238,960	13,172,348	13,105,736	13,105,736
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		63,700	62,169	60,640	60,340	61,262	62,179	64,358	64,039	63,720	63,401	63,082	62,763	751,655
b	Debt Component (Line 6 x Debt Component x 1/12)		16,077	15,691	15,305	15,229	15,462	15,693	14,097	14,027	13,958	13,888	13,818	13,748	176,993
8	Investment Expenses														
a	Depreciation (E)		65,829	65,829	65,332	64,835	66,612	66,612	66,612	66,612	66,612	66,612	66,612	66,612	794,722
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		145,606	143,689	141,277	140,404	143,336	144,484	145,068	144,679	144,290	143,901	143,512	143,123	1,723,370
a	Recoverable Costs Allocated to Energy		11,200	11,053	10,867	10,800	11,026	11,114	11,159	11,129	11,099	11,069	11,039	11,009	132,867
b	Recoverable Costs Allocated to Demand		134,406	132,636	130,409	129,604	132,310	133,370	133,909	133,550	133,191	132,832	132,473	132,114	1,590,803
10	Energy/Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand/Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		11,214	11,066	10,880	10,813	11,039	11,128	11,172	11,143	11,113	11,083	11,053	11,023	132,726
13	Retail Demand-Related Recoverable Costs (I)		130,688	128,968	126,802	126,019	128,650	129,682	130,205	129,856	129,507	129,158	128,809	128,460	1,546,806
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		141,902	140,034	137,682	136,833	139,689	140,809	141,378	140,999	140,620	140,241	139,862	139,483	1,679,552

Notes:

- (A) Due to automation of Gulf Clause schedules and corresponding calculations, we have made adjustments to Plant in Service and Depreciation expense in order property account for all ECR capital costs.
- (B) Timing of CWIP transfers, under the new automated data environment, creates the need for catchup adjustments until fully implemented.
- (C) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (D) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (E) The equity component has been crossed up for taxes. The approved ROE is 10.25%.
- (F) Applicable amortization rate or rates.
- (G) Applicable amortization period.
- (H) Description and reason for "Other" adjustments to investment expenses for this program.
- (I) Line 9a x Line 10 x line loss multiplier
- (J) Line 9b x Line 11
- (K) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (L) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
For Program: Plant NPDES Permit Compliance Programs

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		10,652	0	1,379,255	73,984	1,419,520	335,775	0	0	0	0	0	0	3,219,187
b	Clearings to Plant		403,812	35,511	1,382	0	2,778,482	0	0	0	0	0	0	0	3,219,187
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		(403,812)	(35,511)	(1,382)	0	440,705	0	0	0	0	0	0	0	0
e	PIS Adjustment		0	0	0	0	(289)	0	0	0	0	0	0	0	(289)
f	Accumulated Depreciation Adjustment		9,951,406	9,951,406	9,951,406	9,951,406	10,392,112	13,170,593	13,170,593	13,170,593	13,170,593	13,170,593	13,170,593	13,170,593	131,705,933
2	Plant-in-Service/Depreciation Base (B)		(2,989,281)	(3,024,668)	(3,060,955)	(3,095,442)	(3,132,587)	(3,174,074)	(3,220,192)	(3,266,310)	(3,312,427)	(3,358,545)	(3,404,662)	(3,450,780)	(34,507,800)
3	Less: Accumulated Depreciation (C)		(392,104)	(427,615)	(500,258)	(602,242)	(724,242)	(868,762)	(1,056)	(1,056)	(1,056)	(1,056)	(1,056)	(1,056)	(10,560)
4	CWIP - Non Interest Bearing		6,570,021	6,499,123	7,841,609	7,880,206	9,703,286	9,937,574	9,951,457	9,905,339	9,859,222	9,813,104	9,766,966	9,720,863	97,208,663
5	Net Investment (Lines 2 + 3 + 4) (A)		6,784,294	6,534,572	7,170,366	7,860,908	8,791,746	9,850,430	9,974,516	9,928,398	9,882,280	9,836,163	9,790,045	9,743,927	97,439,927
6	Average Net Investment														
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		31,235	30,085	33,012	36,192	40,477	45,351	47,768	47,547	47,326	47,105	46,885	46,664	489,648
b	Debt Component (Line 6 x Debt Component x 1/12)		7,883	7,583	8,332	9,134	10,216	11,446	10,463	10,415	10,367	10,318	10,270	10,221	116,659
8	Investment Expenses														
a	Depreciation (E)		35,387	35,387	35,387	35,387	36,856	41,487	46,118	46,118	46,118	46,118	46,118	46,118	496,597
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		74,505	73,065	76,731	80,713	87,549	98,284	104,349	104,080	103,810	103,541	103,272	103,003	1,112,903
a	Recoverable Costs Allocated to Energy		5,731	5,620	5,902	6,209	6,735	7,560	8,027	8,006	7,985	7,965	7,944	7,923	85,608
b	Recoverable Costs Allocated to Demand		68,774	67,445	70,829	74,504	80,815	90,724	96,322	96,074	95,825	95,576	95,328	95,079	1,027,295
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	10,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	9,723,427
12	Retail Energy-Related Recoverable Costs (H)		5,738	5,627	5,909	6,216	6,743	7,569	8,036	8,016	7,995	7,974	7,954	7,933	85,711
13	Retail Demand-Related Recoverable Costs (I)		68,872	65,580	68,870	72,444	78,590	88,215	93,658	93,416	93,175	92,933	92,691	92,450	998,683
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		72,610	71,207	74,779	78,660	85,322	95,784	101,694	101,432	101,170	100,907	100,645	100,383	1,084,594

Notes:
(A) Due to automation of Gulf Clause schedules and corresponding calculations, we have made adjustments to Plant in Service and Depreciation expense in order properly account for all ECR capital costs.
(B) Timing of CWIP transfers, under the new automated data environment, creates the need for catchup adjustments until fully implemented.
(C) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
(D) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
(E) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
(F) Applicable depreciation rate or rates.
(G) Applicable amortization period.
(H) Description and reason for "Other" adjustments to investment expenses for this program.
(I) Line 8a x Line 10 x line loss multiplier
(J) Line 9b x Line 11.
(K) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
(L) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6-0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020

For Program: Air Quality Compliance Program

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		258,626	377,494	316,304	39,535	549,804	197,198	488,481	1,056,326	1,235,345	627,854	178,134	2,871,141	8,206,042
b	Clearings to Plant		34,419	11,845	808,381	21,349	0	0	0	0	0	0	0	525,594	2,081,622
c	Retirements		40,957	47,578	374,957	292,271	69,201	600,000	0	0	0	0	0	250,000	1,637,386
d	Other		(128,681)	47,578	(54,597)	31,487	27,284	(88,211)	8,440	2,102	2,102	2,102	2,102	73,461	(75,832)
e	PIA Adjustments		(1,708,482)	1,472,003	(289)	(0)	231,971	0	0	0	0	0	0	0	(10,586)
f	Accumulated Depreciation Adjustments		(67,177)	(6,958)	0	0	1,120	0	0	0	0	0	0	0	0
2	Plant-In-Service/Depreciation Base (B)	1,343,294,490	1,341,958,470	1,343,068,316	1,345,499,454	1,343,899,217	1,344,063,335	1,343,463,335	1,343,463,335	1,343,463,335	1,343,463,335	1,343,463,335	1,343,463,335	1,343,463,335	1,343,738,929
3	Less: Accumulated Depreciation (C)	(316,705,228)	(320,700,107)	(324,561,152)	(328,144,832)	(331,736,747)	(335,524,921)	(338,753,270)	(342,464,068)	(346,221,204)	(349,958,340)	(353,688,476)	(357,432,612)	(360,846,389)	(360,846,389)
4	CWIP - Non Interest Bearing	2,015,378	2,239,585	2,605,234	2,115,157	1,472,668	2,001,113	2,198,311	2,686,792	3,753,118	4,398,463	5,616,117	5,794,250	6,139,797	6,139,797
5	Net Investment (Lines 2 + 3 + 4) (A)	1,028,604,642	1,023,123,948	1,021,112,401	1,017,469,779	1,013,635,127	1,010,539,627	1,006,908,377	1,003,676,059	1,000,995,249	998,493,458	995,383,976	991,824,973	991,030,338	991,030,338
6	Average Net Investment		1,025,864,295	1,022,118,174	1,019,291,090	1,015,552,453	1,012,087,377	1,008,724,002	1,005,392,218	1,002,335,654	999,744,354	996,938,717	993,604,475	991,427,656	991,427,656
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		4,723,079	4,705,832	4,692,816	4,675,603	4,659,650	4,644,165	4,614,344	4,600,185	4,787,776	4,774,340	4,758,372	4,747,947	56,784,111
b	Debt Component (Line 6 x Debt Component x 1/12)		1,192,054	1,187,701	1,184,416	1,180,072	1,176,046	1,172,137	1,054,552	1,051,450	1,048,732	1,045,789	1,042,291	1,040,008	13,375,248
8	Investment Expenses														
a	Depreciation (E)		3,879,150	3,882,732	3,883,433	3,884,751	3,885,356	3,719,314	3,718,314	3,718,314	3,718,314	3,718,314	3,718,314	3,718,314	45,444,622
b	Amortization (F)		20,291	20,291	20,607	20,923	20,923	20,923	20,923	20,923	20,923	20,923	20,923	20,923	249,500
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		546,264	540,462	540,462	540,462	540,462	540,462	540,462	540,462	540,462	540,462	540,462	540,462	6,491,349
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		10,360,838	10,337,019	10,321,735	10,301,812	10,282,438	10,097,003	10,148,596	10,131,336	10,116,208	10,099,828	10,080,363	10,067,655	122,344,829
a	Recoverable Costs Allocated to Energy		796,988	795,155	793,980	792,447	790,957	776,693	780,661	779,334	778,170	776,910	775,413	774,435	9,411,141
b	Recoverable Costs Allocated to Demand		9,563,850	9,541,864	9,527,756	9,509,365	9,491,481	9,320,310	9,367,935	9,352,002	9,338,038	9,322,918	9,304,950	9,283,220	112,933,688
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		797,944	796,109	794,932	793,398	791,906	777,625	781,598	780,269	779,104	777,842	776,343	775,364	9,422,434
13	Retail Demand-Related Recoverable Costs (I)		9,299,340	9,277,961	9,264,244	9,246,361	9,228,972	9,062,535	9,108,843	9,093,351	9,079,773	9,065,072	9,047,601	9,036,194	109,810,247
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		10,097,284	10,074,071	10,059,176	10,039,759	10,020,878	9,840,160	9,890,441	9,873,620	9,858,876	9,842,914	9,823,944	9,811,559	119,232,681

Notes: (A) Due to automation of Gulf Clause schedules and corresponding calculations, we have made adjustments to Plant In Service and Depreciation expense in order properly account for all ECRC capital costs.

(B) Timing of CWIP transfers, under the new automated data environment, creates the need for catchup adjustments until fully implemented.

(C) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).

(D) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.

(E) The equity component has been grossed up for taxes. The approved ROE is 10.25%.

(F) Applicable amortization rate or rates.

(G) Applicable amortization period.

(H) Description and reason for "Other" adjustments to investment expenses for this program.

(I) Line 9a x Line 10 x line loss multiplier

(J) Line 9b x Line 11

(K) The energy jurisdictional factors for each month are the same as that used in the fuel clauses, or 100%, pending final calculation of the stratified jurisdictional energy factors.

(L) The demand jurisdictional factor is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.04-37, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020

For Program: General Water Quality

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		144,305	0	0	0	0	0	0	0	0	0	0	0	144,305
b	Clearings to Plant		144,305	0	0	0	0	0	0	0	0	0	0	0	144,305
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Plant-in-Service/Depreciation Base (B)	852,461	996,766	996,766	996,766	996,766	996,766	996,766	996,766	996,766	996,766	996,766	996,766	996,766	996,766
3	Less: Accumulated Depreciation (C)	(50,034)	(53,116)	(56,438)	(59,761)	(63,084)	(66,406)	(69,729)	(73,051)	(76,374)	(79,696)	(83,019)	(86,341)	(89,664)	(89,664)
4	CWIP - Non Interest Bearing	396,464	396,464	396,464	396,464	396,464	396,464	396,464	396,464	396,464	396,464	396,464	396,464	396,464	396,464
5	Crist Closed Ash Landfill Reg Asset	0	2,401,279	2,451,043	2,474,765	2,459,149	2,498,268	2,590,007	2,611,217	2,630,416	2,636,964	2,643,513	7,000,262	8,839,289	8,839,289
6	Net Investment (Lines 2 + 3 + 4) (A)	1,198,891	3,741,393	3,787,835	3,806,234	3,789,296	3,825,092	3,913,508	3,931,396	3,947,272	3,950,498	3,953,725	8,307,151	10,142,855	10,142,855
7	Average Net Investment	2,470,142	3,764,614	3,798,035	3,798,035	3,798,765	3,807,194	3,869,300	3,922,452	3,939,334	3,948,885	3,952,112	6,130,438	9,225,003	9,225,003
8	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)	11,373	17,332	17,332	17,488	17,490	17,528	17,814	18,785	18,865	18,911	18,927	29,359	44,179	248,048
b	Debt Component (Line 6 x Debt Component x 1/12)	2,870	4,374	4,374	4,413	4,414	4,424	4,496	4,115	4,132	4,142	4,146	6,431	9,677	57,635
9	Investment Expenses														
a	Depreciation (E)	3,082	3,323	3,323	3,323	3,323	3,323	3,323	3,323	3,323	3,323	3,323	3,323	3,323	39,630
b	Amortization (F)	4,009	8,114	8,114	8,264	8,305	8,372	8,451	8,451	8,451	8,451	8,451	8,451	8,451	96,221
c	Dismantlement	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)	0	57,878	57,878	31,986	(7,310)	47,490	100,190	29,661	27,650	15,000	15,000	4,365,200	1,847,477	6,530,222
10	Total System Recoverable Expenses (Lines 7 + 8)														
a	Recoverable Costs Allocated to Energy	21,334	33,143	33,143	33,488	33,531	33,647	34,084	34,673	34,771	34,827	34,846	47,563	65,629	441,535
b	Recoverable Costs Allocated to Demand	1,641	2,549	2,549	2,576	2,579	2,588	2,622	2,667	2,675	2,679	2,680	3,659	5,048	33,964
		19,693	30,594	30,594	30,910	30,952	31,059	31,462	32,006	32,097	32,148	32,166	43,904	60,581	407,571
11	Energy Jurisdictional Factor (J)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
12	Demand Jurisdictional Factor (K)	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
13	Retail Energy-Related Recoverable Costs (H)	1,643	2,553	2,553	2,579	2,582	2,591	2,625	2,670	2,678	2,682	2,684	3,663	5,054	34,005
14	Retail Demand-Related Recoverable Costs (I)	19,148	29,748	29,748	30,055	30,096	30,200	30,592	31,121	31,209	31,259	31,276	42,690	58,905	396,299
15	Total Jurisdictional Recoverable Costs (Lines 12 + 13)	20,791	32,300	32,300	32,634	32,678	32,791	33,217	33,791	33,887	33,941	33,960	46,353	63,960	430,304

Notes:

- (A) Description and reason for 'Other' adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable amortization rate or rates.
- (F) Applicable depreciation rate or rates.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020

For Program: Coal Combustion Residuals

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		3,015,036	1,132,005	1,467,296	3,483,565	7,458,849	5,411,990	1,658,469	4,798,457	3,264,214	2,138,421	2,432,472	3,022,143	39,282,917
b	Clearings to Plant		(658,051)	(231,446)	(640,898)	(57,163)	17,118,089	0	9,131,445	123,473	248,610	16,808,710	20,946,583	879,544	63,668,895
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	118,910	80,798	60,495	231,814	2,747,811	332,860	582,860	582,860	582,860	407,346	740,954	6,469,568
e	PIS Adjustments		0	0	0	0	(14,664,653)	0	0	0	0	0	0	0	(14,664,653)
f	Accumulated Depreciation Adjustments		(76,099)	0	0	0	(183,226)	0	0	0	0	0	0	0	(299,325)
2	Plant-in-Service/Depreciation Base (B)	19,585,347	18,927,296	18,695,850	18,054,952	17,997,768	20,451,224	35,115,877	44,247,322	44,370,795	44,619,405	61,428,115	82,374,697	83,254,241	0
3	Less: Accumulated Depreciation (C)	(34,638,588)	(34,810,019)	(34,785,539)	(34,796,375)	(34,830,875)	(34,877,453)	(32,248,908)	(32,060,171)	(31,633,002)	(31,206,299)	(30,823,743)	(30,701,019)	(30,286,270)	0
4	CWIP - Non Interest Bearing	72,965,701	76,638,788	78,002,239	80,110,433	83,651,161	73,991,922	79,403,912	71,939,936	76,605,920	79,621,524	64,951,235	46,437,125	48,579,273	0
5	Ash Pond Closure Regulatory Asset	11,167,690	11,534,778	11,925,968	12,346,551	12,651,770	13,673,165	14,856,054	21,834,714	26,230,296	30,829,691	34,706,544	37,716,239	40,179,026	0
6	Net Investment (Lines 2 + 3 + 4) (A)	69,080,149	72,290,842	73,838,518	75,713,560	79,469,845	73,233,858	97,126,935	105,952,802	115,574,009	123,864,320	130,262,152	135,827,042	141,726,721	0
7	Average Net Investment		70,685,496	73,064,680	74,776,039	77,591,702	76,354,351	85,182,896	101,539,888	110,763,405	119,719,165	127,063,236	133,044,597	138,776,881	0
8	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		325,436	336,390	344,269	357,232	351,535	362,182	486,274	530,446	573,335	608,506	637,151	664,602	5,607,359
b	Debt Component (Line 6 x Debt Component x 1/12)		82,137	84,901	86,890	90,162	88,724	98,983	106,515	116,191	125,585	133,289	139,564	145,577	1,288,517
9	Investment Expenses														
a	Depreciation (E)		40,471	39,570	38,774	38,134	40,305	64,405	89,262	100,831	101,296	145,442	229,761	271,344	1,199,596
b	Amortization (F)		0	0	118,169	21,046	22,188	23,058	23,058	23,058	23,058	23,058	23,058	23,058	322,806
c	Dismantlement		54,861	54,861	54,861	54,861	54,861	54,861	54,861	54,861	54,861	54,861	54,861	54,861	658,328
d	Property Taxes		7,248	6,073	6,073	6,073	6,073	6,073	6,073	6,073	6,073	6,073	6,073	6,073	74,053
e	Other (G)		367,088	391,191	538,752	326,265	1,043,583	1,205,947	7,001,718	4,418,640	4,622,452	3,899,911	3,032,752	2,485,844	29,334,142
10	Total System Recoverable Expenses (Lines 7 + 8)		510,153	521,795	649,036	567,508	563,686	639,561	766,043	831,459	884,208	971,229	1,090,467	1,165,515	9,160,660
a	Recoverable Costs Allocated to Energy		39,243	40,138	49,926	43,654	43,360	49,197	58,926	63,958	68,016	74,710	83,882	89,655	704,666
b	Recoverable Costs Allocated to Demand		470,910	481,657	599,110	523,854	520,326	590,364	707,117	767,501	816,192	896,519	1,006,585	1,075,860	8,455,994
11	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
12	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
13	Retail Energy-Related Recoverable Costs (H)		39,290	40,186	49,986	43,707	43,413	49,256	58,997	64,035	68,098	74,800	83,983	89,763	705,512
14	Retail Demand-Related Recoverable Costs (I)		457,886	468,335	582,540	509,366	505,935	574,036	687,560	746,274	793,618	871,724	978,746	1,046,105	8,222,124
15	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		497,176	508,521	632,526	553,072	549,348	623,292	746,557	810,309	861,716	946,523	1,062,729	1,135,867	8,927,635

Notes:

- (A) Due to automation of Gulf Clause schedules and corresponding calculations, we have made adjustments to Plant in Service and Depreciation expense in order properly account for all ECRC capital costs.
- (B) Applying of CWIP transfers, under the new automated data environment, creates the need for catchup adjustments until fully implemented.
- (C) Description of beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (D) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (E) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (F) Applicable amortization rate or rates.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The equity jurisdictional factors for each month are the same as that used in the fuel clause, or 100% pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
For Program: Steam Electric Effluent Limitations Guidelines

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		75,272	9,951	10,627	26,521	21,637	24,432	14,768	14,768	14,768	14,768	14,768	14,768	257,048
b	Clearings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		0	0	0	0	0	0	0	0	0	0	0	0	0
e	PIS Adjustments		(131)	0	0	0	131	0	0	0	0	0	0	0	0
f	Accumulated Depreciation Adjustments		(1,534)	0	0	0	(5,972)	0	0	0	0	0	0	0	(7,506)
2	Plant-in-Service/Depreciation Base (B)	6,042,460	6,042,329	6,042,329	6,042,329	6,042,329	6,042,460	6,042,460	6,042,460	6,042,460	6,042,460	6,042,460	6,042,460	6,042,460	6,042,460
3	Less: Accumulated Depreciation (C)	(410,569)	(430,962)	(449,821)	(468,681)	(487,540)	(513,077)	(531,937)	(550,797)	(569,656)	(588,516)	(607,375)	(626,235)	(645,095)	(645,095)
4	CWIP - Non Interest Bearing	653,027	728,298	738,250	748,876	775,397	797,034	821,466	836,234	851,002	865,770	880,538	895,306	910,074	910,074
5	Net Investment (Lines 2 + 3 + 4) (A)	6,284,918	6,339,666	6,330,758	6,322,525	6,330,186	6,326,417	6,331,989	6,327,988	6,323,806	6,319,714	6,315,623	6,311,531	6,307,440	6,307,440
6	Average Net Investment		6,312,292	6,335,212	6,326,641	6,326,301	6,329,203	6,329,943	6,329,943	6,325,852	6,321,760	6,317,669	6,313,577	6,309,486	6,309,486
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		29,082	29,167	29,128	29,127	29,135	29,140	30,314	30,285	30,275	30,255	30,236	30,216	356,349
b	Debt Component (Line 6 x Debt Component x 1/12)		7,335	7,362	7,352	7,351	7,353	7,355	6,640	6,636	6,632	6,627	6,623	6,619	83,883
8	Investment Expenses														
a	Depreciation (E)		18,859	18,859	18,859	18,859	19,565	18,860	18,860	18,860	18,860	18,860	18,860	18,860	227,019
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		237	197	197	197	197	197	197	197	197	197	197	197	2,407
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		55,493	55,585	55,536	55,534	56,251	55,551	56,011	55,987	55,963	55,939	55,916	55,892	669,659
a	Recoverable Costs Allocated to Energy		4,269	4,276	4,272	4,272	4,327	4,273	4,309	4,307	4,305	4,303	4,301	4,299	51,512
b	Recoverable Costs Allocated to Demand		51,224	51,309	51,264	51,262	51,924	51,278	51,703	51,681	51,658	51,636	51,614	51,592	618,147
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		4,274	4,281	4,277	4,277	4,332	4,278	4,314	4,312	4,310	4,308	4,306	4,305	51,574
13	Retail Demand-Related Recoverable Costs (I)		49,808	49,890	49,846	49,845	50,488	49,860	50,273	50,251	50,230	50,208	50,187	50,165	601,050
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		54,081	54,171	54,123	54,122	54,820	54,138	54,586	54,563	54,540	54,516	54,493	54,470	652,624

Notes:

- (A) Due to automation of Gulf Clause schedules and corresponding calculations, we have made adjustments to Plant in Service and Depreciation expense in order properly account for all EORC capital costs.
- (B) Timing of CWIP transfers, under the new automated data environment, creates the need for catchup adjustments until fully implemented.
- (C) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (D) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (E) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (F) Applicable depreciation rate or rates.
- (G) Applicable amortization period.
- (H) Description and reason for "Other" adjustments to investment expenses for this program.
- (I) Line 9a x Line 10 x line loss multiplier
- (J) Line 9b x Line 11.
- (K) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (L) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
For Program: 316(b) Intake Structure Regulation

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Expenditures/Additions		31,976	372,474	188,149	184,306	12,795	23,555	23,555	23,555	682,418	900,343	1,387,068	190,273	4,020,468
b	Cleanings to Plant		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Retirements		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Other		3,198	36,146	18,815	0	0	0	0	0	0	0	0	0	58,158
2	Plant-in-Service/Depreciation Base (B)		0	0	0	0	0	0	0	0	0	0	0	0	0
3	Less: Accumulated Depreciation (C)	29,428	32,625	68,771	87,586	87,586	87,586	87,586	87,586	87,586	87,586	87,586	87,586	87,586	87,586
4	CWIP - Non Interest Bearing	318,704	350,680	723,154	911,303	1,095,610	1,108,405	1,131,960	1,155,515	1,179,070	1,861,488	2,761,831	4,148,699	4,339,172	
5	Net Investment (Lines 2 + 3 + 4) (A)	348,132	383,305	791,925	998,889	1,183,196	1,195,990	1,219,546	1,243,101	1,266,656	1,949,074	2,849,417	4,236,485	4,426,757	
6	Average Net Investment		365,718	587,615	895,407	1,091,042	1,189,593	1,207,768	1,231,323	1,254,878	1,607,865	2,399,245	3,542,951	4,331,621	
7	Return on Average Net Investment														
a	Equity Component (Line 6 x Equity Component x 1/12) (D)		1,684	2,705	4,122	5,023	5,477	5,561	5,897	6,010	7,700	11,490	16,967	20,744	93,380
b	Debt Component (Line 6 x Debt Component x 1/12)		425	683	1,040	1,268	1,382	1,403	1,292	1,316	1,687	2,517	3,717	4,544	21,274
8	Investment Expenses														
a	Depreciation (E)		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Amortization (F)		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Dismantlement		0	0	0	0	0	0	0	0	0	0	0	0	0
d	Property Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0
e	Other (G)		0	0	0	0	0	0	0	0	0	0	0	0	0
9	Total System Recoverable Expenses (Lines 7 + 8)		2,109	3,388	5,163	6,291	6,859	6,964	7,188	7,326	9,387	14,007	20,684	25,288	114,654
a	Recoverable Costs Allocated to Energy		162	261	397	484	528	536	553	564	722	1,077	1,591	1,945	8,820
b	Recoverable Costs Allocated to Demand		1,947	3,128	4,766	5,807	6,332	6,428	6,636	6,762	8,665	12,929	19,093	23,343	105,834
10	Energy Jurisdictional Factor (J)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (K)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (H)		162	261	398	484	528	536	554	564	723	1,079	1,593	1,948	8,830
13	Retail Demand-Related Recoverable Costs (I)		1,893	3,041	4,634	5,646	6,156	6,251	6,452	6,575	8,425	12,572	18,565	22,697	102,907
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		2,055	3,302	5,032	6,131	6,685	6,787	7,006	7,140	9,148	13,650	20,158	24,645	111,737

Notes:

- (A) Description and reason for 'Other' adjustments to net investment for this program, if applicable.
- (B) Applicable beginning of period and end of period depreciable base by production plant name(s), unit(s), or plant account(s).
- (C) Description of Adjustments to Reserve for Gross Salvage and Other Recoveries and Cost of Removal.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Applicable depreciation rate or rates.
- (F) Applicable amortization period.
- (G) Description and reason for "Other" adjustments to investment expenses for this program.
- (H) Line 9a x Line 10 x line loss multiplier
- (I) Line 9b x Line 11.
- (J) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (K) The demand jurisdictional factor is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
 For Project: Annual NOx Allowances

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
	a Purchases/Transfers		0	0	0	0	0	0	0	0	0	0	0	0	0
	b Sales/Transfers		0	0	0	0	0	0	0	0	0	0	0	0	0
	c Auction Proceeds/Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Working Capital														
	a FERC 158.1 Allowance Inventory	5,768	4,839	5,125	5,125	4,950	4,950	4,856	4,776	4,676	4,590	4,530	4,472	4,405	
	b FERC 158.2 Allowances Withheld	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	c FERC 182.3 Other Reg. Assets - Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	d FERC 254 Regulatory Liabilities - Gains	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Total Working Capital Balance	5,768	4,839	5,125	5,125	4,950	4,950	4,856	4,776	4,676	4,590	4,530	4,472	4,405	
4	Average Net Working Capital Balance		5,303	4,982	5,125	5,038	4,950	4,903	4,816	4,726	4,633	4,560	4,501	4,439	
5	Return on Average Net Working Capital Balance														
	a Equity Component (Line 4 x Equity Component x 1/12) (A)		24	23	24	23	23	23	23	23	22	22	22	21	272
	b Debt Component (Line 4 x Debt Component x 1/12)		6	6	6	6	6	6	5	5	5	5	5	5	64
6	Total Return Component (D)		31	29	30	29	29	28	28	28	27	27	26	26	336
7	Expenses														
	a Gains		0	0	0	0	0	0	0	0	0	0	0	0	0
	b Losses		0	0	0	0	0	0	0	0	0	0	0	0	0
	c Annual NOx Allowance Expense		929	(286)	0	176	0	93	81	99	87	60	58	67	1,362
	d Net Expenses (E)		929	(286)	0	176	0	93	81	99	87	60	58	67	1,362
9	Total System Recoverable Expenses (Lines 6 + 8)		959	(258)	30	205	29	122	109	127	114	87	84	93	1,699
	a Recoverable Costs Allocated to Energy		931	(284)	2	178	2	96	83	102	89	62	60	69	1,388
	b Recoverable Costs Allocated to Demand		28	27	27	27	26	26	26	25	25	25	24	24	310
10	Energy Jurisdictional Factor (F)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	
11	Demand Jurisdictional Factor (G)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	
12	Retail Energy-Related Recoverable Costs (B)		932	(284)	2	178	2	96	83	102	89	62	60	69	1,390
13	Retail Demand-Related Recoverable Costs (C)		27	26	27	26	26	25	25	25	24	24	24	23	302
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		960	(259)	29	204	28	121	108	126	113	86	83	92	1,692

Notes:

- (A) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (B) Line 9a x Line 10 x line loss multiplier
- (C) Line 9b x Line 11.
- (D) Line 6 is reported on Schedule 3P.
- (E) Line 8 is reported on Schedule 2P.
- (F) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (G) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020

For Program: SO2 Allowances

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Purchases/Transfers		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Sales/Transfers		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Auction Proceeds/Other		0	0	0	24	0	0	0	0	0	0	0	0	0
2	Working Capital														
a	FERC 158.1 Allowance Inventory	6,302,888	6,298,581	6,297,186	6,297,186	6,278,336	6,278,336	6,276,841	6,275,653	6,274,455	6,273,325	6,272,698	6,272,577	6,272,417	
b	FERC 158.2 Allowances Withheld	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c	FERC 182.3 Other Regl. Assets - Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d	FERC 254 Regulatory Liabilities - Gains	(161)	(147)	(147)	(147)	(167)	(163)	(158)	(154)	(149)	(145)	(140)	(136)	(131)	
3	Total Working Capital Balance	6,302,727	6,298,434	6,297,039	6,297,039	6,278,169	6,278,174	6,276,683	6,275,499	6,274,306	6,273,180	6,272,557	6,272,441	6,272,286	
4	Average Net Working Capital Balance		6,300,581	6,297,737	6,297,039	6,287,604	6,278,171	6,277,428	6,276,091	6,274,902	6,273,743	6,272,869	6,272,499	6,272,363	
5	Return on Average Net Working Capital Balance														
a	Equity Component (Line 4 x Equity Component x 1/12) (A)		29,008	28,995	28,992	28,948	28,905	28,901	30,056	30,051	30,045	30,041	30,039	30,038	354,018
b	Debt Component (Line 4 x Debt Component x 1/12)		7,321	7,318	7,317	7,306	7,295	7,294	6,584	6,582	6,581	6,580	6,580	6,580	83,339
6	Total Return Component (D)		36,329	36,313	36,309	36,254	36,200	36,196	36,640	36,633	36,626	36,621	36,619	36,618	437,357
7	Expenses														
a	Gains		(15)	0	0	(3)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(54)
b	Losses		0	0	0	0	0	0	0	0	0	0	0	0	0
c	SO2 Allowance Expense		4,307	1,395	0	18,849	0	1,495	1,188	1,198	1,130	627	121	160	30,471
8	Net Expenses (E)		4,293	1,395	0	18,846	(5)	1,491	1,184	1,193	1,126	622	117	155	30,417
9	Total System Recoverable Expenses (Lines 6 + 8)		40,622	37,708	36,309	55,100	36,195	37,687	37,824	37,826	37,752	37,244	36,735	36,773	487,774
a	Recoverable Costs Allocated to Energy		7,087	4,189	2,793	21,635	2,780	4,275	4,002	4,011	3,943	3,439	2,933	2,972	64,060
b	Recoverable Costs Allocated to Demand		33,535	33,519	33,516	33,466	33,415	33,411	33,821	33,815	33,809	33,804	33,802	33,801	403,714
10	Energy Jurisdictional Factor (F)		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
11	Demand Jurisdictional Factor (G)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (B)		7,096	4,194	2,796	21,661	2,783	4,280	4,007	4,016	3,948	3,444	2,937	2,975	64,137
13	Retail Demand-Related Recoverable Costs (C)		32,607	32,592	32,589	32,540	32,491	32,487	32,886	32,880	32,874	32,869	32,867	32,866	392,549
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		39,703	36,786	35,385	54,200	35,275	36,768	36,893	36,896	36,822	36,313	35,804	35,842	456,686

Notes:

- (A) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (B) Line 9a x Line 10 x line loss multiplier
- (C) Line 9b x Line 11.
- (D) Line 6 is reported on Schedule 3P.
- (E) Line 8 is reported on Schedule 2P.
- (F) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (G) The demand jurisdictional factors for each month are based on actual 2018 retail kilowatt-hour sales expressed as a percentage of 2018 total territorial kilowatt-hour sales, pending final calculation of the stratified jurisdictional demand factors.

GULF POWER COMPANY
ENVIRONMENTAL COST RECOVERY CLAUSE
RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
For Program: Seasonal NOx Allowances

Line	Description	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	Twelve Month Total
1	Investments														
a	Purchases/Transfers		0	0	0	0	0	0	0	0	0	0	85,000	0	85,000
b	Sales/Transfers		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Auction Proceeds/Other		0	0	0	0	0	0	0	0	0	0	0	0	0
2	Working Capital														
a	FERC 158.1 Allowance Inventory	2,917	2,941	2,941	2,941	2,973	2,973	2,598	2,180	1,755	1,372	1,372	86,372	86,372	0
b	FERC 158.2 Allowances Withheld	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c	FERC 182.3 Other Regl. Assets - Losses	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d	FERC 254 Regulatory Liabilities - Gains	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Total Working Capital Balance	2,917	2,941	2,941	2,941	2,973	2,973	2,598	2,180	1,755	1,372	1,372	86,372	86,372	0
4	Average Net Working Capital Balance		2,929	2,941	2,941	2,957	2,973	2,785	2,389	1,967	1,563	1,372	43,872	86,372	0
5	Return on Average Net Working Capital Balance														
a	Equity Component (Line 4 x Equity Component x 1/12) (A)		13	14	14	14	14	13	11	9	7	7	210	414	739
b	Debt Component (Line 4 x Debt Component x 1/12)		3	3	3	3	3	3	3	3	2	2	46	91	165
6	Total Return Component (D)		17	17	17	17	17	16	14	11	9	8	256	504	904
7	Expenses														
a	Gains		0	0	0	0	0	0	0	0	0	0	0	0	0
b	Losses		0	0	0	0	0	0	0	0	0	0	0	0	0
c	Seasonal NOx Allowance Expense		(24)	0	0	(32)	0	375	417	426	383	0	0	0	1,545
8	Net Expenses (E)		(24)	0	0	(32)	0	375	417	426	383	0	0	0	1,545
9	Total System Recoverable Expenses (Lines 6 + 8)		(7)	17	17	(15)	17	391	431	437	392	8	256	504	2,449
a	Recoverable Costs Allocated to Energy		(23)	2	1	(31)	1	376	418	427	383	1	20	39	1,615
b	Recoverable Costs Allocated to Demand		16	16	16	16	16	15	13	11	8	7	236	465	834
10	Energy Jurisdictional Factor (F)		1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
11	Demand Jurisdictional Factor (G)		0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
12	Retail Energy-Related Recoverable Costs (B)		(23)	2	1	(31)	1	377	419	427	384	1	20	39	1,617
13	Retail Demand-Related Recoverable Costs (C)		15	15	15	15	15	14	13	10	8	7	230	453	811
14	Total Jurisdictional Recoverable Costs (Lines 12 + 13)		(8)	17	17	(16)	17	391	432	437	392	8	250	491	2,428

Notes:

- (A) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (B) Line 9a x Line 10 x line loss multiplier
- (C) Line 9b x Line 11.
- (D) Line 6 is reported on Schedule 3P.
- (E) Line 8 is reported on Schedule 2P.
- (F) The energy jurisdictional factors for each month are the same as that used in the fuel clause, or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (G) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 RETURN ON CAPITAL INVESTMENTS, DEPRECIATION AND TAXES

JANUARY 2020 THROUGH DECEMBER 2020
 For Program: Regulatory Asset Smith Units 1 & 2

	Beginning of Period Amount	Actual January	Actual February	Actual March	Actual April	Actual May	Estimated June	Estimated July	Estimated August	Estimated September	Estimated October	Estimated November	Estimated December	12-Month Total
0	0													
1	Regulatory Asset Balance 182.2 (B)	18,498,355	18,379,776	18,261,197	18,142,617	18,024,038	17,905,459	17,786,880	17,668,301	17,549,721	17,431,142	17,312,563	17,193,984	
2	Less Amortization (C)	0	(118,579)	(118,579)	(118,579)	(118,579)	(118,579)	(118,579)	(118,579)	(118,579)	(118,579)	(118,579)	(118,579)	
3	Net Regulatory Asset Balance (Lines 1 + 2) (A)	18,498,355	18,379,776	18,261,197	18,142,617	18,024,038	17,905,459	17,668,880	17,668,301	17,549,721	17,431,142	17,312,563	17,193,984	17,075,405
4	Average Regulatory Asset Balance	18,439,065	18,320,486	18,201,907	18,083,328	17,964,749	17,846,169	17,727,590	17,609,011	17,490,432	17,371,853	17,253,273	17,134,694	
5	Return on Average Regulatory Asset Balance													
a	Equity Component (Line 6 x Equity Component x 1/12) (D)	84,893	84,348	83,802	83,256	82,710	82,164	81,617	81,071	80,525	79,979	79,433	78,887	1,002,038
b	Debt Component (Line 6 x Debt Component x 1/12)	21,426	21,288	21,151	21,013	20,875	20,737	20,599	20,461	20,323	20,185	20,047	19,909	236,202
6	Amortization Expense													
a	Recoverable Costs Allocated to Energy	118,579	118,579	118,579	118,579	118,579	118,579	118,579	118,579	118,579	118,579	118,579	118,579	1,422,950
b	Other (F)	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Total System Recoverable Expenses (Lines 5 + 6)	224,899	224,215	223,531	222,848	222,164	221,480	220,797	220,113	219,429	218,745	218,061	217,377	2,661,190
a	Recoverable Costs Allocated to Energy	17,300	17,247	17,195	17,142	17,090	17,037	16,984	16,931	16,878	16,825	16,772	16,719	204,707
b	Recoverable Costs Allocated to Demand	207,599	206,968	206,337	205,706	205,074	204,443	203,812	203,181	202,550	201,919	201,288	200,657	2,456,484
8	Energy Jurisdictional Factor (I)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
9	Demand Jurisdictional Factor (J)	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427	0.9723427
10	Retail Energy-Related Recoverable Costs (G)	17,321	17,268	17,215	17,163	17,110	17,057	17,004	16,951	16,898	16,845	16,792	16,739	204,953
11	Retail Demand-Related Recoverable Costs (H)	201,857	201,244	200,630	200,016	199,403	198,789	198,175	197,561	196,947	196,333	195,719	195,105	2,388,544
12	Total Jurisdictional Recoverable Costs (Lines 10 + 11)	219,178	218,512	217,845	217,179	216,513	215,846	215,179	214,513	213,847	213,181	212,515	211,849	2,593,496

Notes:

- (A) End of period Regulatory Asset Balance.
- (B) Beginning of period Regulatory Asset Balance.
- (C) Regulatory Asset has a 15 year amortization period.
- (D) The equity component has been grossed up for taxes. The approved ROE is 10.25%.
- (E) Regulatory Asset has a 15 year amortization period.
- (F) Description and reason for "Other" adjustments to regulatory asset.
- (G) Line 7a x Line 8 x line loss multiplier
- (H) Line 7b x Line 9
- (I) The energy jurisdictional factors for each month are the same as that used in the fuel clause or 100%, pending final calculation of the stratified jurisdictional energy factors.
- (J) The demand jurisdictional is based upon Gulf Power's 2018 Cost of Service Load Research Study results filed with the Commission in accordance with Rule 25-6.0437, F.A.C.

GULF POWER COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE

2020 Depreciation Schedule

Form 42-8E

Project Number	Project	Plant	Amortization /Depreciation	Plant	Plant	Monthly Depr Rate
1	401-Air Quality Assurance Testing	Other	A	83,954	83,954	
2	402-Crist 5, 6 & 7 Precipitator Projects	Crist	D	33,657,087	33,657,087	0.3333333
3	403-Crist 7 Flue Gas Conditioning	Crist	D	0	0	0.3333333
4	404-Low NOx Burners, Crist 6 & 7	Crist Amort	A	143,759	143,759	0.0119048
4	404-Low NOx Burners, Crist 6 & 7	Crist	D	13,384,173	13,384,173	0.3333333
5	405-CEMS - Plants Crist & Daniel	Crist	D	4,086,636	4,086,636	0.3333333
5	405-CEMS - Plants Crist & Daniel	Crist Amort	A	0	0	0.0119048
5	405-CEMS - Plants Crist & Daniel	Daniel	D	67,461	67,461	0.2500000
5	405-CEMS - Plants Crist & Daniel	Daniel CEMs	D	558,686	558,686	0.2500000
6	406-Substation Contamination Remediation	Ft Walton	D	2,775,019	2,775,019	0.2583333
6	406-Substation Contamination Remediation	Laguna	D	339,156	339,156	0.1416667
6	406-Substation Contamination Remediation	Distribution	D	131,648	608,648	0.2583333
7	407-Raw Water Well Flowmeters Plants Crist & Smith	Crist	D	149,950	149,950	0.3333333
7	407-Raw Water Well Flowmeters Plants Crist & Smith	Smith (355)	D	0	0	0.3916667
8	408-Crist Cooling Tower Cell	Crist	D	0	0	0.3333333
9	409-Crist Dechlorination System	Crist	D	380,697	380,697	0.3333333
10	410-Crist Diesel Fuel Oil Remediation	Crist	D	20,968	20,968	0.3333333
11	411-Crist Bulk Tanker Unloading Second Containment	Crist	D	101,495	101,495	0.3333333
12	412-Crist IWW Sampling System	Crist	D	59,543	59,543	0.3333333
13	413-Sodium Injection System	Crist	D	284,622	284,622	0.3333333
13	413-Sodium Injection System	Smith	D	0	0	
14	414-Smith Stormwater Collection System	Smith (355)	D	2,764,379	2,764,379	0.3916667
15	415-Smith Waste Water Treatment Facility	Smith (355)	D	178,962	643,620	0.3916667
16	416-Daniel Ash Management Project	Daniel	D	14,939,561	14,939,561	0.2500000
16	416-Daniel Ash Management Project	Other	D	0	0	
17	417-Smith Water Conservation	Smith (355)	D	21,018,243	21,590,761	0.3916667
18	418-Underground Fuel Tank Replacement	Other	D	0	0	
19	419-Crist FDEP Agreement for Ozone Attainment	Crist	D	118,758,299	118,758,299	0.3333333
19	419-Crist FDEP Agreement for Ozone Attainment	Crist Amort	A	825,620	825,620	0.0119048
20	420-SPCC Compliance	Crist	D	919,836	919,836	0.3333333
20	420-SPCC Compliance	Other Amort	A	13,195	13,195	0.0119048
20	420-SPCC Compliance	Smith (355)	D	14,895	14,895	0.3916667
21	421-Crist Common FTIR Monitor	Crist	D	0	0	0.3333333
22	422-Precipitator Upgrades for CAM Compliance	Crist	D	13,895,639	13,895,639	0.3333333
23	423-Plant Groundwater Investigation	Other	D	0	0	
24	424-Crist Water Conservation	Crist	D	19,748,717	19,983,662	0.3333333
25	425-Plant NPDES Permit Compliance Projects	Crist	D	6,153,140	9,372,327	0.3333333
25	425-Plant NPDES Permit Compliance Projects	Smith (355)	D	3,798,266	3,798,266	0.3916667
26	426-Air Quality Compliance Program	Crist	D	193,354,217	193,354,419	0.3333333
26	426-Air Quality Compliance Program	Crist SCR	D	65,329	65,329	0.3333333
26	426-Air Quality Compliance Program	Crist SCR Amort	A	105,607	105,607	0.0119048
26	426-Air Quality Compliance Program	Crist Scrubber	D	586,883,361	587,330,241	0.3333333
26	426-Air Quality Compliance Program	Crist Scrubber Amort	A	730,203	730,203	0.0119048
26	426-Air Quality Compliance Program	Crist Scrubber (353)	D	2,986,187	2,986,187	0.2333333
26	426-Air Quality Compliance Program	Crist Scrubber (352)	D	176,690	176,690	0.1416667
26	426-Air Quality Compliance Program	Crist Scrubber (354)	D	565,062	565,062	0.1666667
26	426-Air Quality Compliance Program	Crist Scrubber (355)	D	502,662	502,662	0.3833333
26	426-Air Quality Compliance Program	Crist Scrubber (356)	D	576,009	576,009	0.2166667
26	426-Air Quality Compliance Program	Daniel	D	13,882,987	13,882,987	0.2500000
26	426-Air Quality Compliance Program	Daniel 1 Scrubber	D	360,297,878	360,582,168	0.2500000
26	426-Air Quality Compliance Program	Daniel 2 Scrubber	D	0	0	0.2500000
26	426-Air Quality Compliance Program	Scherer	D	15,044,458	14,674,528	0.1833333
26	426-Air Quality Compliance Program	Scherer Scrubber	D	72,289,440	72,289,504	0.1833333
26	426-Air Quality Compliance Program	Scherer Scrubber Amort	A	20,761	20,761	0.0119048
26	426-Air Quality Compliance Program	Scherer Scrubber (352)	D	32,707	32,707	0.1416667
26	426-Air Quality Compliance Program	Scherer Scrubber (353)	D	1,599,066	1,599,066	0.2333333
26	426-Air Quality Compliance Program	Scherer Baghouse	D	46,154,432	46,154,432	0.1833333
26	426-Air Quality Compliance Program	Scherer SCR	D	47,797,695	47,880,628	0.1833333
26	426-Air Quality Compliance Program	Scholz	D	0	0	
26	426-Air Quality Compliance Program	Smith	D	229,742	229,742	0.5250000
27	427-General Water Quality	Crist	D	852,461	996,766	0.3333333
27	427-General Water Quality	Crist Sampling Boat	D	0	0	0.0166667
28	428-Coal Combustion Residuals	Crist	D	790,872	675,957	0.3333333
28	428-Coal Combustion Residuals	Daniel	D	104,724	21,243,089	0.2500000
28	428-Coal Combustion Residuals	Scherer	D	16,088,112	29,280,122	0.1833333
28	428-Coal Combustion Residuals	Scherer	L	0	0	
28	428-Coal Combustion Residuals	Scholz	D	0	0	
28	428-Coal Combustion Residuals	Smith	D	0	0	
28	428-Coal Combustion Residuals	Smith (355)	D	2,601,638	2,601,638	0.3916667
28	428-Coal Combustion Residuals	Smith Pond Closure	D	0	29,453,436	0.5250000
28	428-Coal Combustion Residuals	Scholz Pond Closure	D	0	0	
28	428-Coal Combustion Residuals	CCR-C	D	0	0	
28	428-Coal Combustion Residuals	CCR-D	D	0	0	
28	428-Coal Combustion Residuals	CCR-S	D	0	0	
29	429-Steam Electric Effluent Limitations Guidelines	Crist	D	5,657,885	5,657,885	0.3333333
29	429-Steam Electric Effluent Limitations Guidelines	Scherer	D	384,575	384,575	0.1833333
30	430-316(B) Intake Structure Regulation	Smith (355)	D	0	0	0.3916667
		Total		1,629,028,360	1,698,254,307	

Form 42-9E

January 2020 - June 2020 FPSC Capital Structure and Cost Rates						
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Line	Capital Component	(1) Jurisdictional Rate Base Test Year (\$000's)	(2) Ratio %	(3) Cost Rate %	(4) Weighted Cost Rate %	(5) Revenue Requirement Rate %	(6) Monthly Revenue Requirement Rate %
1	Long-Term Debt	894,848	34.5416	3.91	1.3519	1.3519	
2	Short-Term Debt	20,976	0.8097	2.96	0.0240	0.0240	
3	Preferred Stock	0	0.0000	0.00	0.0000	0.0000	
4	Common Stock	1,053,681	40.6728	10.25	4.1690	5.5234	
5	Customer Deposits	22,119	0.8538	2.08	0.0178	0.0178	
6	Deferred Taxes	598,399	23.0986				
7	Investment Tax Credit	<u>608</u>	<u>0.0235</u>	7.34	<u>0.0017</u>	<u>0.0021</u>	
8	Total	<u>2,590,631</u>	<u>100.0000</u>		<u>5.5644</u>	<u>6.9192</u>	<u>0.5766</u>
	<u>ITC Component:</u>						
9	Debt	894,848	45.9243	3.91	1.7974	0.0004	
10	Equity-Preferred	0	0.0000	0.00	0.0000	0.0000	
11	-Common	<u>1,053,681</u>	<u>54.0757</u>	10.25	<u>5.5428</u>	<u>0.0017</u>	
12		<u>1,948,530</u>	<u>100.0000</u>		<u>7.3402</u>	<u>0.0021</u>	
	<u>Breakdown of Revenue Requirement Rate of Return between Debt and Equity:</u>						
13	Total Debt Component (Lines 1, 2, 5, and 9)					1.3941	0.1162
14	Total Equity Component (Lines 3, 4, 10, and 11)					<u>5.5251</u>	0.4604
15	Total Revenue Requirement Rate of Return					<u>6.9192</u>	<u>0.5766</u>

Column:

- (1) Based on the May 2019 Surveillance Report, Schedule 4.
Adjusted to achieve the 53.5% equity ratio as prescribed in the 2018 Tax Reform Settlement Agreement in Docket No. 20180039-EI.
- (2) Column (1) / Total Column (1)
- (3) Based on the May 2019 Surveillance Report, Schedule 4.
- (4) Column (2) x Column (3)
- (5) For equity components: Column (4) / (1-.245218); 24.5218% = effective income tax rate
For debt components: Column (4)
- (6) Column (5) /12

Form 42-9E

**January 2020 - June 2020
FPSC Capital Structure and Cost Rates**

<u>Line</u>	<u>Capital Component</u>	(1) Jurisdictional Rate Base Test Year (\$000's)	(2) Ratio %	(3) Cost Rate %	(4) Weighted Cost Rate %	(5) Revenue Requirement Rate %	(6) Monthly Revenue Requirement Rate %
1	Long-Term Debt	877,077	31.6409	3.76	1.1912	1.1912	
2	Short-Term Debt	141,485	5.1041	0.92	0.0470	0.0470	
3	Preferred Stock	0	0.0000	0.00	0.0000	0.0000	
4	Common Stock	1,171,867	42.2754	10.25	4.3332	5.7410	
5	Customer Deposits	20,015	0.7220	2.69	0.0194	0.0194	
6	Deferred Taxes	558,907	20.1627				
7	Investment Tax Credit	<u>2,632</u>	0.0949	7.47	<u>0.0071</u>	<u>0.0071</u>	
8	Total	<u>2,771,983</u>	<u>100.0000</u>		<u>5.5979</u>	<u>7.0057</u>	<u>0.5838</u>
	<u>ITC Component:</u>						
9	Debt	877,077	42.8063	3.76	1.6116	0.0015	
10	Equity-Preferred	0	0.0000	0.00	0.0000	0.0000	
11	-Common	<u>1,171,867</u>	57.1937	10.25	5.8624	0.0056	
12		<u>2,048,944</u>	<u>100.0000</u>		<u>7.4740</u>	<u>0.0071</u>	
	<u>Breakdown of Revenue Requirement Rate of Return between Debt and Equity:</u>						
13	Total Debt Component (Lines 1, 2, 5, and 9)					1.2591	0.1049
14	Total Equity Component (Lines 3, 4, 10, and 11)					<u>5.7466</u>	<u>0.4789</u>
15	Total Revenue Requirement Rate of Return					<u>7.0057</u>	<u>0.5838</u>

Column:

- (1) Based on the May 2020 Surveillance Report, Schedule 4.
Adjusted to achieve the 53.5% equity ratio as prescribed in the 2018 Tax Reform Settlement Agreement in Docket No. 20180039-EI.
- (2) Column (1) / Total Column (1)
- (3) Based on the May 2019 Surveillance Report, Schedule 4.
- (4) Column (2) x Column (3)
- (5) For equity components: Column (4) / (1-.245218); 24.5218% = effective income tax rate
For debt components: Column (4)
- (6) Column (5) /12

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

ENVIRONMENTAL COST RECOVERY CLAUSE

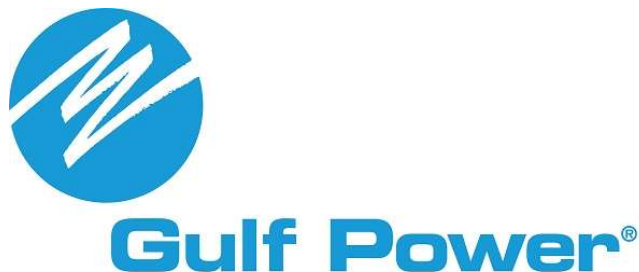
DOCKET NO. 20200007-EI

PREPARED DIRECT TESTIMONY OF
Michael W. Sole

ESTIMATED/ACTUAL TRUE-UP FILING
FOR THE PERIOD

JANUARY 2020 - DECEMBER 2020

July 31, 2020



1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **GULF POWER COMPANY**

3 **TESTIMONY OF MICHAEL W. SOLE**

4 **DOCKET NO. 20200007-EI**

5 **JULY 31, 2020**

6
7 **Q. Please state your name and address.**

8 A. My name is Michael W. Sole and my business address is 700 Universe Boulevard,
9 Juno Beach, Florida 33408.

10 **Q. By whom are you employed and in what capacity?**

11 A. I am employed by NextEra Energy, Inc. (“NEE”) as Vice President of
12 Environmental Services.

13 **Q. Please describe your educational background and professional experience.**

14 A. I received a Bachelor of Science degree in Marine Biology from the Florida Institute
15 of Technology in 1986. I served as an Officer in the United States Marine Corps
16 from 1985 through 1990, attaining the rank of Captain. I was employed by the
17 Florida Department of Environmental Protection (“FDEP”) in multiple roles from
18 1990 to 2010 and served as the Secretary of the FDEP from 2007-2010. I have been
19 employed by NEE or its subsidiary Florida Power & Light Company (“FPL”) since
20 2010. In November 2016, I assumed the position of Vice President of Environmental
21 Services for NEE and its subsidiaries including Gulf Power Company (“Gulf”)
22 which was acquired by NEE in 2019. In that role, I am responsible for FPL’s and
23 Gulf’s environmental licensing and compliance efforts. In May 2017, I was
24 appointed by Governor Scott to the Florida Fish and Wildlife Conservation
25 Commission (“FWC”).

1 **Q. What is the purpose of your testimony in this proceeding?**

2 A. The purpose of my testimony is to explain the reasons for significant variances in
3 costs associated with O&M expenses and capital investments which support Gulf's
4 Environmental Cost Recovery Clause ("ECRC") actual/estimated true-up filing for
5 the period January through December 2020. This true-up is based on five months
6 of actual data and seven months of estimated data.

7 **Q. Have you provided an exhibit that contains information to which you will refer
8 in your testimony?**

9 A. Yes, I am sponsoring the following exhibits:

- 10 • MWS-1 - Federal Coal Combustion Residuals Rule and 2018 Amendment
11 (40 CFR Parts 257 and 261)
- 12 • MWS-2 - Mississippi PSC Order dated October 28, 2019

13 **Q. Please explain the reasons for any significant variance in costs associated with
14 O&M expenses and capital investments.**

15 A. The significant variances in Gulf's 2020 recoverable O&M expenses and capital
16 revenue requirements from projection amounts are associated with the following
17 projects:

18

19

Capital Variance Explanations

20

Project 6. Substation Contamination Remediation

21

Project revenue requirements are \$60,133, or 12.6% lower than previously
22 projected. The variance is primarily attributed to the retirement of the Ft. Walton
23 substation groundwater remediation system. The retirement balance was
24 inadvertently omitted in 2019 causing an overstatement in the revenue requirement
25 that carried forward in the 2020 Projection Filing. In addition, 2019 costs for

1 construction of the new remediation system were lower than estimated, which
2 impacted the revenue requirement in 2020.

3
4 **Project 17. Smith Water Conservation Program**

5 Project revenue requirements are \$849,203 or 26.9% lower than previously
6 projected. The variance is primarily due to postponing construction of the Plant
7 Smith Underground Injection Control (“UIC”) wastewater treatment system and its
8 associated pump station from the Fall of 2020 to early 2021 due to additional time
9 required to finalize the reclaimed water supply contract negotiations. The new
10 treatment system and permanent pump station are required to begin using reclaimed
11 water for Unit 3’s cooling tower water supply. Gulf has completed installation of
12 three deep injection wells, piping, and initial equipment needed for the reclaimed
13 water pump station.

14
15
16 **Project 28. Coal Combustion Residuals (“CCR”)**

17 Project revenue requirements are \$1,658,908 or 22.1% higher than previously
18 projected. The variance is primarily due to the addition of costs for CCR activities
19 at Plant Daniel which were deferred from the 2020 Projection Filing pending
20 further review and approval from the Mississippi Public Service Commission
21 (“MPSC”). In addition, approximately \$5.9 million of costs associated with ash
22 excavation and placement for the Smith and Scholz ash pond closure projects were
23 reclassified from O&M to capital to properly account for the deferred regulatory
24 asset. These ash handling costs are appropriate for inclusion in the total ash pond
25 closure costs to be amortized over the life of the project.

1 As noted in Gulf's 2019 and 2020 ECRC Projection Filings filed August 24, 2018
2 and August 30, 2019, respectively, Plant Daniel is required to construct new
3 wastewater treatment and ash handling systems for the wastewater streams being
4 routed to the pond (bottom ash and low volume wastewater) prior to beginning ash
5 pond closure activities. Plant Daniel is installing a temporary wastewater treatment
6 system for low volume wastewater streams while the plant closes and repurposes
7 the bottom ash pond to serve as a low volume wastewater treatment pond. The Unit
8 1 and Unit 2 dry bottom ash conversion projects are scheduled to be placed in-
9 service in 2020 to meet the Federal requirements provided by the Coal Combustion
10 Residual rule located in Title 40 Code of Federal Regulations ("CFR") Parts 257
11 and 261 or "CCR Rule" adopted in April of 2015 and amended in July of 2018. A
12 copy of the CCR Rule is attached as MWS-1.

13
14 Plant Daniel must cease placing CCR and non-CCR wastewater streams into the
15 ash pond, in accordance with the CCR Rule unless Mississippi Power Company
16 ("MPC") commits to permanent cessation of coal operations at Plant Daniel under
17 the alternative closure requirements in 40 CFR Part 257.103. MPC has determined
18 that early retirement of the Daniel Units 1 and 2 is not a viable compliance option
19 due to transmission constraints and the reliability risk in the region. In addition,
20 early retirement would require acceleration of other closure obligations.

21
22 On October 28, 2019 the MPSC issued an order finding that public convenience
23 and necessity require the proposed Plant Daniel CCR projects. A copy of the MPSC
24 Order, dated October 28, 2019, is attached as Exhibit MWS-2. As documented in
25 the MPSC Order, Plant Daniel must complete the following CCR projects in

1 sequential order to comply with the Federal CCR requirements; 1) conversion of
2 the bottom ash collection systems to new systems that will not require use of the
3 ash pond for the discharge of any CCR waste stream, 2) closure of the ash pond by
4 removing all CCR material, and 3) construction of a new low-volume wastewater
5 treatment system on the site of the former ash pond. The ash pond closure must be
6 completed within five years of the commencement of closure activities pursuant to
7 40 CFR Part 257.102 unless the facility demonstrates that it was not feasible to
8 complete closure within the required timeframes due to factors beyond the facility's
9 control.

10
11 The Gulf Power CCR Program was approved for recovery through the ECRC in
12 PSC Order No. 15-0536-FOF-EI, with the reasonableness and prudence of
13 individual project expenditures subject to the Commission's review in future
14 proceedings. The Daniel CCR wastewater treatment and bottom ash handling costs
15 originally projected for the 2019 timeframe were included in Gulf's ECRC
16 jurisdictional revenue requirements approved in PSC Order No. 2018-0594-FOF-
17 EI. As noted in Gulf Witness Markey's 2019 ECRC Projection testimony, Plant
18 Daniel will need "to construct a new wastewater treatment and ash handling
19 system" prior to beginning closure activities. Gulf included capital expenditures for
20 the Daniel CCR projects in its 2019 Projection Filing; however, the projects were
21 subsequently delayed until 2020 due to timing of vendor selection and equipment
22 fabrication.

23
24 As explained in Gulf Witness Markey's 2020 ECRC Projection Testimony, Plant
25 Daniel dry bottom ash handling projects are scheduled to be placed in-service in

1 2020 in order to meet the Federal CCR requirement to cease receipt of CCR and
2 non-CCR wastestreams (40 CFR Part 257.101). Gulf has projected \$19.1 million
3 of ECRC capital expenditures for the Daniel CCR projects and \$3.3 million for cost
4 of removal for the Daniel ash pond closure in the 2020 Actual/Estimated filing.
5 The Daniel CCR project meets the criteria for cost recovery established by the
6 Commission in Order No. PSC-94-0044-FOF-EI in that the costs associated with it
7 are not recovered through any other cost recovery mechanism or through base rates
8 and will be incurred after April 13, 1993. In addition, the Daniel CCR projects are
9 necessary to ensure compliance with the Federal CCR Rule, which is legally
10 mandated under a governmentally imposed environmental regulation.

11
12 **Project 30. 316(b) Cooling Water Intake Structure Regulation**

13 Project revenue requirements are \$97,137 or 45.9% lower than previously
14 projected. The variance is primarily due to delays associated with replacing the
15 Plant Smith intake pumps with new lower capacity pumps. Gulf initially planned
16 to place the new pumps in-service in March 2020; however, the replacement was
17 re-scheduled to January 2021 in order to coordinate with other projects.

18
19
20 **O&M Variance Explanations**

21
22 **Project 6. General Water Quality**

23 Project expenditures are \$284,645 or 18.5% lower than previously projected. The
24 variance is primarily due to costs for Plant Smith's industrial wastewater permit
25 renewal being less than originally projected and costs for Plant Daniel's

1 groundwater monitoring being lower than previously projected. In addition, Plant
2 Crist was not able to complete the Spring 2020 thermal study due to Units 4 and 5
3 being offline during the sampling period. The variance was partially offset by costs
4 projected for modification of the Plant Scholz stormwater pond and additional Plant
5 Scholz wastewater sampling expenses.

6
7 **Project 19. FDEP NO_x Reduction Agreement**

8 Project expenditures are \$333,411 or 59.5% lower than previously projected. The
9 variance is primarily due to maintenance costs associated with the Crist Unit 7
10 Selective Catalytic Reduction (“SCR”) project being less than originally projected.

11
12 **Project 22. Crist Water Conservation**

13 Project expenditures are \$162,508 or 353.4% higher than previously projected. The
14 variance is due to chemical and maintenance costs associated with Plant Crist’s
15 reclaimed water system being greater than originally projected. These costs are
16 associated with replacing the reclaimed water line air relief valves, dispersant tank,
17 as well as acid lines which were originally scheduled to be replaced during the Fall
18 2019.

19
20 **Project 23. Coal Combustion Residuals**

21 Project expenditures are \$5,865,228 or 85.4% lower than previously projected. The
22 variance is primarily due to reclassification of ash handling costs required for the
23 Smith and Scholz ash pond closure projects as discussed above.

24 **Q. Does this conclude your testimony?**

25 **A. Yes.**

AFFIDAVIT

STATE OF FLORIDA)
)
COUNTY OF ESCAMBIA)

Docket No. 20200007-EI

Before me, the undersigned authority, personally appeared Michael W. Sole, who being first duly sworn, deposes and says that he is the Vice President of Environmental Services of Gulf Power Company, a Florida corporation, that the foregoing is true and correct to the best of his knowledge and belief. He is personally known to me.

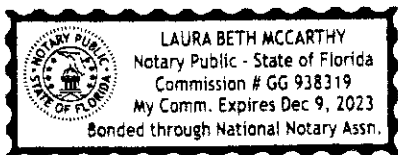


Michael W. Sole
Vice President, Environmental Services

Sworn to and subscribed before me by means of physical presence or _____
online notarization this 30th day of July, 2020.



Notary Public, State of Florida at Large



available and applicable voluntary consensus standards.

This rulemaking involves technical standards. EPA has decided to use the following technical standards in this rule: (1) RCRA Subpart D, Section 257.70 liner design criteria for new CCR landfills and any lateral expansion of a CCR landfill includes voluntary consensus standards developed by ASTM International and EPA test methods such as SW-846, (2) Section 257.71 liner design criteria for existing CCR surface impoundments include voluntary consensus standards developed by ASTM International and EPA test methods such as SW-846, (3) Section 257.72 liner design criteria for new CCR surface impoundments and any lateral expansion of a CCR surface impoundment include voluntary consensus standards developed by ASTM International and EPA test methods such as SW-846, and (4) Section 257.73 structural stability standards for new and existing surface impoundments use the ASTM D 698 and 1557 standards for embankment compaction.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order (E.O.) 12898 (59 FR 7629, Feb. 16, 1994) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population.

EPA's risk assessment for this action did not separately evaluate either minority or low income populations. However, to evaluate the demographic characteristics of communities that may be affected by the CCR rule, the RIA compares the demographic characteristics of populations surrounding coal-fired electric utility

plants with broader population data for two geographic areas: (1) One-mile radius from CCR management units (*i.e.*, landfills and impoundments) likely to be affected by groundwater releases from both landfills and impoundments; and (2) watershed catchment areas downstream of surface impoundments that receive surface water run-off and releases from CCR impoundments and are at risk of being contaminated from CCR impoundment discharges (*e.g.*, unintentional overflows, structural failures, and intentional periodic discharges).

For the population as a whole 24.8% belong to a minority group and 11.3% falls below the Federal Poverty Level. For the population living within one mile of plants with surface impoundments 16.1% belong to a minority group and 13.2% live below the Federal Poverty Level. These minority and low-income populations are not disproportionately high compared to the general population. The percentage of minority residents of the entire population living within the catchment areas downstream of surface impoundments is disproportionately high relative to the general population, *i.e.*, 28.7%, versus 24.8% for the national population. Also, the percentage of the population within the catchment areas of surface impoundments that is below the Federal Poverty Level is disproportionately high compared with the general population, *i.e.*, 18.6% versus 11.3% nationally.

Comparing the population percentages of minority and low income residents within one mile of landfills to those percentages in the general population, EPA found that minority and low-income residents make up a smaller percentage of the populations near landfills than they do in the general population, *i.e.*, minorities comprised 16.6% of the population near landfills versus 24.8% nationwide and low-income residents comprised 8.6% of the population near landfills versus 11.3% nationwide. In summary, although populations within the catchment areas of plants with surface impoundments appear to have disproportionately high percentages of minority and low-income residents relative to the nationwide average, populations surrounding plants with landfills do not. Because landfills are less likely than impoundments to experience surface water run-off and releases, catchment areas were not considered for landfills.

Because the CCR rule is risk-reducing, with reductions in risk occurring largely within the surface water catchment zones around, and groundwater

beneath, coal-fired electric utility plants, the rule will not result in new disproportionate risks to minority or low-income populations.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A Major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective 180 days after its publication in the **Federal Register**.

List of Subjects

40 CFR Part 257

Environmental protection, Beneficial use, Coal combustion products, Coal combustion residuals, Coal combustion waste, Disposal, Hazardous waste, Landfill, Surface impoundment.

40 CFR Part 261

Environmental protection, Hazardous waste, Recycling, Reporting and recordkeeping requirements.

Dated: December 19, 2014.

Gina McCarthy,
Administrator.

For the reasons set out in the preamble, title 40, chapter I, of the Code of Federal Regulations is amended as follows:

PART 257—CRITERIA FOR CLASSIFICATION OF SOLID WASTE DISPOSAL FACILITIES AND PRACTICES

■ 1. The authority citation for part 257 continues to read as follows:

Authority: 42 U.S.C. 6907(a)(3), 6912(a)(1), 6944(a); 33 U.S.C. 1345(d) and (e).

■ 2. Section 257.1 is amended by:

■ a. Adding a sentence at the end of paragraph (a) introductory text;

■ b. Revising paragraphs (a)(1) and (2); and

■ c. Adding paragraph (c)(12).

The revisions and additions read as follows:

§ 257.1 Scope and purpose.

(a) * * * Unless otherwise provided, the criteria in §§ 257.50 through 257.107 are adopted for determining which CCR landfills and CCR surface impoundments pose a reasonable probability of adverse effects on health or the environment under sections 1008(a)(3) and 4004(a) of the Act.

(1) Facilities failing to satisfy any of the criteria in §§ 257.1 through 257.4 or §§ 257.5 through 257.30 or §§ 257.50 through 257.107 are considered open dumps, which are prohibited under section 4005 of the Act.

(2) Practices failing to satisfy any of the criteria in §§ 257.1 through 257.4 or §§ 257.5 through 257.30 or §§ 257.50 through 257.107 constitute open dumping, which is prohibited under section 4005 of the Act.

* * * * *

(c) * * *

(12) Except as otherwise specifically provided in subpart D of this part, the criteria in subpart A of this part do not apply to CCR landfills, CCR surface impoundments, and lateral expansions of CCR units, as those terms are defined in subpart D of this part. Such units are instead subject to subpart D of this part.

■ 3. Section 257.2 is amended by adding in alphabetical order definitions for “CCR landfill” and “CCR surface impoundment” to read as follows:

§ 257.2 Definitions.

* * * * *

CCR landfill means an area of land or an excavation that receives CCR and which is not a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground or surface coal mine, or a cave. For purposes of this subpart, a CCR landfill also includes sand and gravel pits and quarries that receive CCR, CCR piles, and any practice that does not meet the definition of a beneficial use of CCR.

CCR surface impoundment means a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR.

* * * * *

■ 4. Part 257 is amended by:

■ a. Adding and reserving subpart C; and

■ b. Adding subpart D.

The additions read as follows:

Subpart C—[Reserved]

Subpart D—Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments

General Provisions

Sec.

- 257.50 Scope and purpose.
- 257.51 Effective date of this subpart.
- 257.52 Applicability of other regulations.
- 257.53 Definitions.

Location Restrictions

- 257.60 Placement above the uppermost aquifer.
- 257.61 Wetlands.
- 257.62 Fault areas.
- 257.63 Seismic impact zones.
- 257.64 Unstable areas.

Design Criteria

- 257.70 Design criteria for new CCR landfills and any lateral expansion of a CCR landfill.
- 257.71 Liner design criteria for existing CCR surface impoundments.
- 257.72 Design criteria for new CCR surface impoundments and any lateral expansion of a CCR surface impoundment.
- 257.73 Structural integrity criteria for existing CCR surface impoundments.
- 257.74 Structural integrity criteria for new CCR surface impoundments and any lateral expansion of a CCR surface impoundment.

Operating Criteria

- 257.80 Air criteria.
- 257.81 Run-on and run-off controls for CCR landfills.
- 257.82 Hydrologic and hydraulic capacity requirements for CCR surface impoundments.
- 257.83 Inspection requirements for CCR surface impoundments.
- 257.84 Inspection requirements for CCR landfills.

Groundwater Monitoring and Corrective Action

- 257.90 Applicability.
- 257.91 Groundwater monitoring systems.
- 257.92 [Reserved]
- 257.93 Groundwater sampling and analysis requirements.
- 257.94 Detection monitoring program.
- 257.95 Assessment monitoring program.
- 257.96 Assessment of corrective measures.
- 257.97 Selection of remedy.
- 257.98 Implementation of the corrective action program.

Closure and Post-Closure Care

- 257.100 Inactive CCR surface impoundments.
- 257.101 Closure or retrofit of CCR units.
- 257.102 Criteria for conducting the closure or retrofit of CCR units.
- 257.103 Alternative closure requirements.
- 257.104 Post-closure care requirements.

Recordkeeping, Notification, and Posting of Information to the Internet

- 257.105 Recordkeeping requirements.
- 257.106 Notification requirements.

257.107 Publicly accessible internet site requirements.

Subpart D—Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments

§ 257.50 Scope and purpose.

(a) This subpart establishes minimum national criteria for purposes of determining which solid waste disposal facilities and solid waste management practices do not pose a reasonable probability of adverse effects on health or the environment under sections 1008(a)(3) and 4004(a) of the Resource Conservation and Recovery Act.

(b) This subpart applies to owners and operators of new and existing landfills and surface impoundments, including any lateral expansions of such units that dispose or otherwise engage in solid waste management of CCR generated from the combustion of coal at electric utilities and independent power producers. Unless otherwise provided in this subpart, these requirements also apply to disposal units located off-site of the electric utility or independent power producer. This subpart also applies to any practice that does not meet the definition of a beneficial use of CCR.

(c) This subpart also applies to inactive CCR surface impoundments at active electric utilities or independent power producers, regardless of the fuel currently used at the facility to produce electricity.

(d) This subpart does not apply to CCR landfills that have ceased receiving CCR prior to October 19, 2015.

(e) This subpart does not apply to electric utilities or independent power producers that have ceased producing electricity prior to October 19, 2015.

(f) This subpart does not apply to wastes, including fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated at facilities that are not part of an electric utility or independent power producer, such as manufacturing facilities, universities, and hospitals. This subpart also does not apply to fly ash, bottom ash, boiler slag, and flue gas desulfurization materials, generated primarily from the combustion of fuels (including other fossil fuels) other than coal, for the purpose of generating electricity unless the fuel burned consists of more than fifty percent (50%) coal on a total heat input or mass input basis, whichever results in the greater mass feed rate of coal.

(g) This subpart does not apply to practices that meet the definition of a beneficial use of CCR.

(h) This subpart does not apply to CCR placement at active or abandoned underground or surface coal mines.

(i) This subpart does not apply to municipal solid waste landfills that receive CCR.

§ 257.51 Effective date of this subpart.

The requirements of this subpart take effect on October 19, 2015.

§ 257.52 Applicability of other regulations.

(a) Compliance with the requirements of this subpart does not affect the need for the owner or operator of a CCR landfill, CCR surface impoundment, or lateral expansion of a CCR unit to comply with all other applicable federal, state, tribal, or local laws or other requirements.

(b) Any CCR landfill, CCR surface impoundment, or lateral expansion of a CCR unit continues to be subject to the requirements in §§ 257.3-1, 257.3-2, and 257.3-3.

§ 257.53 Definitions.

The following definitions apply to this subpart. Terms not defined in this section have the meaning given by RCRA.

Acre foot means the volume of one acre of surface area to a depth of one foot.

Active facility or active electric utilities or independent power producers means any facility subject to the requirements of this subpart that is in operation on October 14, 2015. An electric utility or independent power producer is in operation if it is generating electricity that is provided to electric power transmission systems or to electric power distribution systems on or after October 14, 2015. An off-site disposal facility is in operation if it is accepting or managing CCR on or after October 14, 2015.

Active life or in operation means the period of operation beginning with the initial placement of CCR in the CCR unit and ending at completion of closure activities in accordance with § 257.102.

Active portion means that part of the CCR unit that has received or is receiving CCR or non-CCR waste and that has not completed closure in accordance with § 257.102.

Aquifer means a geologic formation, group of formations, or portion of a formation capable of yielding usable quantities of groundwater to wells or springs.

Area-capacity curves means graphic curves which readily show the reservoir water surface area, in acres, at different elevations from the bottom of the reservoir to the maximum water surface, and the capacity or volume, in acre-feet,

of the water contained in the reservoir at various elevations.

Areas susceptible to mass movement means those areas of influence (*i.e.*, areas characterized as having an active or substantial possibility of mass movement) where, because of natural or human-induced events, the movement of earthen material at, beneath, or adjacent to the CCR unit results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides and flows, soil fluctuation, block sliding, and rock fall.

Beneficial use of CCR means the CCR meet all of the following conditions:

(1) The CCR must provide a functional benefit;

(2) The CCR must substitute for the use of a virgin material, conserving natural resources that would otherwise need to be obtained through practices, such as extraction;

(3) The use of the CCR must meet relevant product specifications, regulatory standards or design standards when available, and when such standards are not available, the CCR is not used in excess quantities; and

(4) When unencapsulated use of CCR involving placement on the land of 12,400 tons or more in non-roadway applications, the user must demonstrate and keep records, and provide such documentation upon request, that environmental releases to groundwater, surface water, soil and air are comparable to or lower than those from analogous products made without CCR, or that environmental releases to groundwater, surface water, soil and air will be at or below relevant regulatory and health-based benchmarks for human and ecological receptors during use.

Closed means placement of CCR in a CCR unit has ceased, and the owner or operator has completed closure of the CCR unit in accordance with § 257.102 and has initiated post-closure care in accordance with § 257.104.

Coal combustion residuals (CCR) means fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from burning coal for the purpose of generating electricity by electric utilities and independent power producers.

CCR fugitive dust means solid airborne particulate matter that contains or is derived from CCR, emitted from any source other than a stack or chimney.

CCR landfill or landfill means an area of land or an excavation that receives CCR and which is not a surface

impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground or surface coal mine, or a cave. For purposes of this subpart, a CCR landfill also includes sand and gravel pits and quarries that receive CCR, CCR piles, and any practice that does not meet the definition of a beneficial use of CCR.

CCR pile or pile means any non-containerized accumulation of solid, non-flowing CCR that is placed on the land. CCR that is beneficially used off-site is not a CCR pile.

CCR surface impoundment or impoundment means a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR.

CCR unit means any CCR landfill, CCR surface impoundment, or lateral expansion of a CCR unit, or a combination of more than one of these units, based on the context of the paragraph(s) in which it is used. This term includes both new and existing units, unless otherwise specified.

Dike means an embankment, berm, or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids, or other materials.

Displacement means the relative movement of any two sides of a fault measured in any direction.

Disposal means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste as defined in section 1004(27) of the Resource Conservation and Recovery Act into or on any land or water so that such solid waste, or constituent thereof, may enter the environment or be emitted into the air or discharged into any waters, including groundwaters. For purposes of this subpart, disposal does not include the storage or the beneficial use of CCR.

Downstream toe means the junction of the downstream slope or face of the CCR surface impoundment with the ground surface.

Encapsulated beneficial use means a beneficial use of CCR that binds the CCR into a solid matrix that minimizes its mobilization into the surrounding environment.

Existing CCR landfill means a CCR landfill that receives CCR both before and after October 14, 2015, or for which construction commenced prior to October 14, 2015 and receives CCR on or after October 14, 2015. A CCR landfill has commenced construction if the owner or operator has obtained the federal, state, and local approvals or permits necessary to begin physical

construction and a continuous on-site, physical construction program had begun prior to October 14, 2015.

Existing CCR surface impoundment means a CCR surface impoundment that receives CCR both before and after October 14, 2015, or for which construction commenced prior to October 14, 2015 and receives CCR on or after October 14, 2015. A CCR surface impoundment has commenced construction if the owner or operator has obtained the federal, state, and local approvals or permits necessary to begin physical construction and a continuous on-site, physical construction program had begun prior to October 14, 2015.

Facility means all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, disposing, or otherwise conducting solid waste management of CCR. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them).

Factor of safety (Safety factor) means the ratio of the forces tending to resist the failure of a structure to the forces tending to cause such failure as determined by accepted engineering practice.

Fault means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.

Flood hydrograph means a graph showing, for a given point on a stream, the discharge, height, or other characteristic of a flood as a function of time.

Freeboard means the vertical distance between the lowest point on the crest of the impoundment dike and the surface of the waste contained therein.

Free liquids means liquids that readily separate from the solid portion of a waste under ambient temperature and pressure.

Groundwater means water below the land surface in a zone of saturation.

Hazard potential classification means the possible adverse incremental consequences that result from the release of water or stored contents due to failure of the diked CCR surface impoundment or mis-operation of the diked CCR surface impoundment or its appurtenances. The hazardous potential classifications include high hazard potential CCR surface impoundment, significant hazard potential CCR surface impoundment, and low hazard potential CCR surface impoundment, which terms mean:

(1) *High hazard potential CCR surface impoundment* means a diked surface impoundment where failure or mis-

operation will probably cause loss of human life.

(2) *Low hazard potential CCR surface impoundment* means a diked surface impoundment where failure or mis-operation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the surface impoundment owner's property.

(3) *Significant hazard potential CCR surface impoundment* means a diked surface impoundment where failure or mis-operation results in no probable loss of human life, but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns.

Height means the vertical measurement from the downstream toe of the CCR surface impoundment at its lowest point to the lowest elevation of the crest of the CCR surface impoundment.

Holocene means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch, at 11,700 years before present, to present.

Hydraulic conductivity means the rate at which water can move through a permeable medium (i.e., the coefficient of permeability).

Inactive CCR surface impoundment means a CCR surface impoundment that no longer receives CCR on or after October 14, 2015 and still contains both CCR and liquids on or after October 14, 2015.

Incised CCR surface impoundment means a CCR surface impoundment which is constructed by excavating entirely below the natural ground surface, holds an accumulation of CCR entirely below the adjacent natural ground surface, and does not consist of any constructed diked portion.

Indian country or Indian lands means:

(1) All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running throughout the reservation;

(2) All dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of the State; and

(3) All Indian allotments, the Indian titles to which have not been extinguished, including rights of way running through the same.

Indian Tribe or Tribe means any Indian tribe, band, nation, or community recognized by the Secretary of the Interior and exercising substantial

governmental duties and powers on Indian lands.

Inflow design flood means the flood hydrograph that is used in the design or modification of the CCR surface impoundments and its appurtenant works.

In operation means the same as *active life*.

Karst terrain means an area where karst topography, with its characteristic erosional surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terranes include, but are not limited to, dolines, collapse shafts (sinkholes), sinking streams, caves, seeps, large springs, and blind valleys.

Lateral expansion means a horizontal expansion of the waste boundaries of an existing CCR landfill or existing CCR surface impoundment made after October 14, 2015.

Liquefaction factor of safety means the factor of safety (safety factor) determined using analysis under liquefaction conditions.

Lithified earth material means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term does not include man-made materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil, or regolith lying at or near the earth surface.

Maximum horizontal acceleration in lithified earth material means the maximum expected horizontal acceleration at the ground surface as depicted on a seismic hazard map, with a 98% or greater probability that the acceleration will not be exceeded in 50 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

New CCR landfill means a CCR landfill or lateral expansion of a CCR landfill that first receives CCR or commences construction after October 14, 2015. A new CCR landfill has commenced construction if the owner or operator has obtained the federal, state, and local approvals or permits necessary to begin physical construction and a continuous on-site, physical construction program had begun after October 14, 2015. Overfills are also considered new CCR landfills.

New CCR surface impoundment means a CCR surface impoundment or lateral expansion of an existing or new CCR surface impoundment that first receives CCR or commences construction after October 14, 2015. A

new CCR surface impoundment has commenced construction if the owner or operator has obtained the federal, state, and local approvals or permits necessary to begin physical construction and a continuous on-site, physical construction program had begun after October 14, 2015.

Operator means the person(s) responsible for the overall operation of a CCR unit.

Overflow means a new CCR landfill constructed over a closed CCR surface impoundment.

Owner means the person(s) who owns a CCR unit or part of a CCR unit.

Poor foundation conditions mean those areas where features exist which indicate that a natural or human-induced event may result in inadequate foundation support for the structural components of an existing or new CCR unit. For example, failure to maintain static and seismic factors of safety as required in §§ 257.73(e) and 257.74(e) would cause a poor foundation condition.

Probable maximum flood means the flood that may be expected from the most severe combination of critical meteorologic and hydrologic conditions that are reasonably possible in the drainage basin.

Qualified person means a person or persons trained to recognize specific appearances of structural weakness and other conditions which are disrupting or have the potential to disrupt the operation or safety of the CCR unit by visual observation and, if applicable, to monitor instrumentation.

Qualified professional engineer means an individual who is licensed by a state as a Professional Engineer to practice one or more disciplines of engineering and who is qualified by education, technical knowledge and experience to make the specific technical certifications required under this subpart. Professional engineers making these certifications must be currently licensed in the state where the CCR unit(s) is located.

Recognized and generally accepted good engineering practices means engineering maintenance or operation activities based on established codes, widely accepted standards, published technical reports, or a practice widely recommended throughout the industry. Such practices generally detail approved ways to perform specific engineering, inspection, or mechanical integrity activities.

Retrofit means to remove all CCR and contaminated soils and sediments from the CCR surface impoundment, and to ensure the unit complies with the requirements in § 257.72

Representative sample means a sample of a universe or whole (e.g., waste pile, lagoon, and groundwater) which can be expected to exhibit the average properties of the universe or whole. See EPA publication SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Chapter 9 (available at <http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm>) for a discussion and examples of representative samples.

Run-off means any rainwater, leachate, or other liquid that drains over land from any part of a CCR landfill or lateral expansion of a CCR landfill.

Run-on means any rainwater, leachate, or other liquid that drains over land onto any part of a CCR landfill or lateral expansion of a CCR landfill.

Sand and gravel pit or quarry means an excavation for the extraction of aggregate, minerals or metals. The term sand and gravel pit and/or quarry does not include subsurface or surface coal mines.

Seismic factor of safety means the factor of safety (safety factor) determined using analysis under earthquake conditions using the peak ground acceleration for a seismic event with a 2% probability of exceedance in 50 years, equivalent to a return period of approximately 2,500 years, based on the U.S. Geological Survey (USGS) seismic hazard maps for seismic events with this return period for the region where the CCR surface impoundment is located.

Seismic impact zone means an area having a 2% or greater probability that the maximum expected horizontal acceleration, expressed as a percentage of the earth's gravitational pull (g), will exceed 0.10 g in 50 years.

Slope protection means engineered or non-engineered measures installed on the upstream or downstream slope of the CCR surface impoundment to protect the slope against wave action or erosion, including but not limited to rock riprap, wooden pile, or concrete revetments, vegetated wave berms, concrete facing, gabions, geotextiles, or fascines.

Solid waste management or management means the systematic administration of the activities which provide for the collection, source separation, storage, transportation, processing, treatment, or disposal of solid waste.

State means any of the fifty States in addition to the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

State Director means the chief administrative officer of the lead state agency responsible for implementing the state program regulating disposal in CCR landfills, CCR surface impoundments, and all lateral expansions of a CCR unit.

Static factor of safety means the factor of safety (safety factor) determined using analysis under the long-term, maximum storage pool loading condition, the maximum surcharge pool loading condition, and under the end-of-construction loading condition.

Structural components mean liners, leachate collection and removal systems, final covers, run-on and run-off systems, inflow design flood control systems, and any other component used in the construction and operation of the CCR unit that is necessary to ensure the integrity of the unit and that the contents of the unit are not released into the environment.

Unstable area means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity, including structural components of some or all of the CCR unit that are responsible for preventing releases from such unit. Unstable areas can include poor foundation conditions, areas susceptible to mass movements, and karst terrains.

Uppermost aquifer means the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary. Upper limit is measured at a point nearest to the natural ground surface to which the aquifer rises during the wet season.

Waste boundary means a vertical surface located at the hydraulically downgradient limit of the CCR unit. The vertical surface extends down into the uppermost aquifer.

Location Restrictions

§ 257.60 Placement above the uppermost aquifer.

(a) New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must be constructed with a base that is located no less than 1.52 meters (five feet) above the upper limit of the uppermost aquifer, or must demonstrate that there will not be an intermittent, recurring, or sustained hydraulic connection between any portion of the base of the CCR unit and the uppermost aquifer due to normal fluctuations in groundwater elevations (including the seasonal high water table). The owner or operator must demonstrate by the dates specified in paragraph (c) of this section

that the CCR unit meets the minimum requirements for placement above the uppermost aquifer.

(b) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the demonstration meets the requirements of paragraph (a) of this section.

(c) The owner or operator of the CCR unit must complete the demonstration required by paragraph (a) of this section by the date specified in either paragraph (c)(1) or (2) of this section.

(1) For an existing CCR surface impoundment, the owner or operator must complete the demonstration no later than October 17, 2018.

(2) For a new CCR landfill, new CCR surface impoundment, or any lateral expansion of a CCR unit, the owner or operator must complete the demonstration no later than the date of initial receipt of CCR in the CCR unit.

(3) The owner or operator has completed the demonstration required by paragraph (a) of this section when the demonstration is placed in the facility's operating record as required by § 257.105(e).

(4) An owner or operator of an existing CCR surface impoundment who fails to demonstrate compliance with the requirements of paragraph (a) of this section by the date specified in paragraph (c)(1) of this section is subject to the requirements of § 257.101(b)(1).

(5) An owner or operator of a new CCR landfill, new CCR surface impoundment, or any lateral expansion of a CCR unit who fails to make the demonstration showing compliance with the requirements of paragraph (a) of this section is prohibited from placing CCR in the CCR unit.

(d) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(e), the notification requirements specified in § 257.106(e), and the internet requirements specified in § 257.107(e).

§ 257.61 Wetlands.

(a) New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must not be located in wetlands, as defined in § 232.2 of this chapter, unless the owner or operator demonstrates by the dates specified in paragraph (c) of this section that the CCR unit meets the requirements of paragraphs (a)(1) through (5) of this section.

(1) Where applicable under section 404 of the Clean Water Act or applicable state wetlands laws, a clear and objective rebuttal of the presumption that an alternative to the CCR unit is

reasonably available that does not involve wetlands.

(2) The construction and operation of the CCR unit will not cause or contribute to any of the following:

(i) A violation of any applicable state or federal water quality standard;

(ii) A violation of any applicable toxic effluent standard or prohibition under section 307 of the Clean Water Act;

(iii) Jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973; and

(iv) A violation of any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary.

(3) The CCR unit will not cause or contribute to significant degradation of wetlands by addressing all of the following factors:

(i) Erosion, stability, and migration potential of native wetland soils, muds and deposits used to support the CCR unit;

(ii) Erosion, stability, and migration potential of dredged and fill materials used to support the CCR unit;

(iii) The volume and chemical nature of the CCR;

(iv) Impacts on fish, wildlife, and other aquatic resources and their habitat from release of CCR;

(v) The potential effects of catastrophic release of CCR to the wetland and the resulting impacts on the environment; and

(vi) Any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected.

(4) To the extent required under section 404 of the Clean Water Act or applicable state wetlands laws, steps have been taken to attempt to achieve no net loss of wetlands (as defined by acreage and function) by first avoiding impacts to wetlands to the maximum extent reasonable as required by paragraphs (a)(1) through (3) of this section, then minimizing unavoidable impacts to the maximum extent reasonable, and finally offsetting remaining unavoidable wetland impacts through all appropriate and reasonable compensatory mitigation actions (e.g., restoration of existing degraded wetlands or creation of man-made wetlands); and

(5) Sufficient information is available to make a reasoned determination with respect to the demonstrations in paragraphs (a)(1) through (4) of this section.

(b) The owner or operator of the CCR unit must obtain a certification from a

qualified professional engineer stating that the demonstration meets the requirements of paragraph (a) of this section.

(c) The owner or operator of the CCR unit must complete the demonstrations required by paragraph (a) of this section by the date specified in either paragraph (c)(1) or (2) of this section.

(1) For an existing CCR surface impoundment, the owner or operator must complete the demonstration no later than October 17, 2018.

(2) For a new CCR landfill, new CCR surface impoundment, or any lateral expansion of a CCR unit, the owner or operator must complete the demonstration no later than the date of initial receipt of CCR in the CCR unit.

(3) The owner or operator has completed the demonstration required by paragraph (a) of this section when the demonstration is placed in the facility's operating record as required by § 257.105(e).

(4) An owner or operator of an existing CCR surface impoundment who fails to demonstrate compliance with the requirements of paragraph (a) of this section by the date specified in paragraph (c)(1) of this section is subject to the requirements of § 257.101(b)(1).

(5) An owner or operator of a new CCR landfill, new CCR surface impoundment, or any lateral expansion of a CCR unit who fails to make the demonstrations showing compliance with the requirements of paragraph (a) of this section is prohibited from placing CCR in the CCR unit.

(d) The owner or operator must comply with the recordkeeping requirements specified in § 257.105(e), the notification requirements specified in § 257.106(e), and the Internet requirements specified in § 257.107(e).

§ 257.62 Fault areas.

(a) New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must not be located within 60 meters (200 feet) of the outermost damage zone of a fault that has had displacement in Holocene time unless the owner or operator demonstrates by the dates specified in paragraph (c) of this section that an alternative setback distance of less than 60 meters (200 feet) will prevent damage to the structural integrity of the CCR unit.

(b) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the demonstration meets the requirements of paragraph (a) of this section.

(c) The owner or operator of the CCR unit must complete the demonstration

required by paragraph (a) of this section by the date specified in either paragraph (c)(1) or (2) of this section.

(1) For an existing CCR surface impoundment, the owner or operator must complete the demonstration no later than October 17, 2018.

(2) For a new CCR landfill, new CCR surface impoundment, or any lateral expansion of a CCR unit, the owner or operator must complete the demonstration no later than the date of initial receipt of CCR in the CCR unit.

(3) The owner or operator has completed the demonstration required by paragraph (a) of this section when the demonstration is placed in the facility's operating record as required by § 257.105(e).

(4) An owner or operator of an existing CCR surface impoundment who fails to demonstrate compliance with the requirements of paragraph (a) of this section by the date specified in paragraph (c)(1) of this section is subject to the requirements of § 257.101(b)(1).

(5) An owner or operator of a new CCR landfill, new CCR surface impoundment, or any lateral expansion of a CCR unit who fails to make the demonstration showing compliance with the requirements of paragraph (a) of this section is prohibited from placing CCR in the CCR unit.

(d) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(e), the notification requirements specified in § 257.106(e), and the Internet requirements specified in § 257.107(e).

§ 257.63 Seismic impact zones.

(a) New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must not be located in seismic impact zones unless the owner or operator demonstrates by the dates specified in paragraph (c) of this section that all structural components including liners, leachate collection and removal systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site.

(b) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the demonstration meets the requirements of paragraph (a) of this section.

(c) The owner or operator of the CCR unit must complete the demonstration required by paragraph (a) of this section by the date specified in either paragraph (c)(1) or (2) of this section.

(1) For an existing CCR surface impoundment, the owner or operator

must complete the demonstration no later than October 17, 2018.

(2) For a new CCR landfill, new CCR surface impoundment, or any lateral expansion of a CCR unit, the owner or operator must complete the demonstration no later than the date of initial receipt of CCR in the CCR unit.

(3) The owner or operator has completed the demonstration required by paragraph (a) of this section when the demonstration is placed in the facility's operating record as required by § 257.105(e).

(4) An owner or operator of an existing CCR surface impoundment who fails to demonstrate compliance with the requirements of paragraph (a) of this section by the date specified in paragraph (c)(1) of this section is subject to the requirements of § 257.101(b)(1).

(5) An owner or operator of a new CCR landfill, new CCR surface impoundment, or any lateral expansion of a CCR unit who fails to make the demonstration showing compliance with the requirements of paragraph (a) of this section is prohibited from placing CCR in the CCR unit.

(d) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(e), the notification requirements specified in § 257.106(e), and the Internet requirements specified in § 257.107(e).

§ 257.64 Unstable areas.

(a) An existing or new CCR landfill, existing or new CCR surface impoundment, or any lateral expansion of a CCR unit must not be located in an unstable area unless the owner or operator demonstrates by the dates specified in paragraph (d) of this section that recognized and generally accepted good engineering practices have been incorporated into the design of the CCR unit to ensure that the integrity of the structural components of the CCR unit will not be disrupted.

(b) The owner or operator must consider all of the following factors, at a minimum, when determining whether an area is unstable:

(1) On-site or local soil conditions that may result in significant differential settling;

(2) On-site or local geologic or geomorphologic features; and

(3) On-site or local human-made features or events (both surface and subsurface).

(c) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the demonstration meets the requirements of paragraph (a) of this section.

(d) The owner or operator of the CCR unit must complete the demonstration required by paragraph (a) of this section by the date specified in either paragraph (d)(1) or (2) of this section.

(1) For an existing CCR landfill or existing CCR surface impoundment, the owner or operator must complete the demonstration no later than October 17, 2018.

(2) For a new CCR landfill, new CCR surface impoundment, or any lateral expansion of a CCR unit, the owner or operator must complete the demonstration no later than the date of initial receipt of CCR in the CCR unit.

(3) The owner or operator has completed the demonstration required by paragraph (a) of this section when the demonstration is placed in the facility's operating record as required by § 257.105(e).

(4) An owner or operator of an existing CCR surface impoundment or existing CCR landfill who fails to demonstrate compliance with the requirements of paragraph (a) of this section by the date specified in paragraph (d)(1) of this section is subject to the requirements of § 257.101(b)(1) or (d)(1), respectively.

(5) An owner or operator of a new CCR landfill, new CCR surface impoundment, or any lateral expansion of a CCR unit who fails to make the demonstration showing compliance with the requirements of paragraph (a) of this section is prohibited from placing CCR in the CCR unit.

(e) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(e), the notification requirements specified in § 257.106(e), and the Internet requirements specified in § 257.107(e).

Design Criteria

§ 257.70 Design criteria for new CCR landfills and any lateral expansion of a CCR landfill.

(a)(1) New CCR landfills and any lateral expansion of a CCR landfill must be designed, constructed, operated, and maintained with either a composite liner that meets the requirements of paragraph (b) of this section or an alternative composite liner that meets the requirements in paragraph (c) of this section, and a leachate collection and removal system that meets the requirements of paragraph (d) of this section.

(2) Prior to construction of an overfill the underlying surface impoundment must meet the requirements of § 257.102(d).

(b) A *composite liner* must consist of two components; the upper component

consisting of, at a minimum, a 30-mil geomembrane liner (GM), and the lower component consisting of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} centimeters per second (cm/sec). GM components consisting of high density polyethylene (HDPE) must be at least 60-mil thick. The GM or upper liner component must be installed in direct and uniform contact with the compacted soil or lower liner component. The composite liner must be:

(1) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the CCR or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(2) Constructed of materials that provide appropriate shear resistance of the upper and lower component interface to prevent sliding of the upper component including on slopes;

(3) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(4) Installed to cover all surrounding earth likely to be in contact with the CCR or leachate.

(c) If the owner or operator elects to install an alternative composite liner, all of the following requirements must be met:

(1) An *alternative composite liner* must consist of two components; the upper component consisting of, at a minimum, a 30-mil GM, and a lower component, that is not a geomembrane, with a liquid flow rate no greater than the liquid flow rate of two feet of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec. GM components consisting of high density polyethylene (HDPE) must be at least 60-mil thick. If the lower component of the alternative liner is compacted soil, the GM must be installed in direct and uniform contact with the compacted soil.

(2) The owner or operator must obtain certification from a qualified professional engineer that the liquid flow rate through the lower component of the alternative composite liner is no greater than the liquid flow rate through two feet of compacted soil with a hydraulic conductivity of 1×10^{-7} cm/sec. The hydraulic conductivity for the two feet of compacted soil used in the comparison shall be no greater than $1 \times$

10^{-7} cm/sec. The hydraulic conductivity of any alternative to the two feet of compacted soil must be determined using recognized and generally accepted methods. The liquid flow rate comparison must be made using Equation 1 of this section, which is derived from Darcy's Law for gravity flow through porous media.

$$\text{(Eq. 1)} \quad \frac{Q}{A} = q = k \left(\frac{h}{t} + 1 \right)$$

Where,

Q = flow rate (cubic centimeters/second);

A = surface area of the liner (squared centimeters);

q = flow rate per unit area (cubic centimeters/second/squared centimeter);

k = hydraulic conductivity of the liner (centimeters/second);

h = hydraulic head above the liner (centimeters); and

t = thickness of the liner (centimeters).

(3) The alternative composite liner must meet the requirements specified in paragraphs (b)(1) through (4) of this section.

(d) The *leachate collection and removal system* must be designed, constructed, operated, and maintained to collect and remove leachate from the landfill during the active life and post-closure care period. The leachate collection and removal system must be:

(1) Designed and operated to maintain less than a 30-centimeter depth of leachate over the composite liner or alternative composite liner;

(2) Constructed of materials that are chemically resistant to the CCR and any non-CCR waste managed in the CCR unit and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying waste, waste cover materials, and equipment used at the CCR unit; and

(3) Designed and operated to minimize clogging during the active life and post-closure care period.

(e) Prior to construction of the CCR landfill or any lateral expansion of a CCR landfill, the owner or operator must obtain a certification from a qualified professional engineer that the design of the composite liner (or, if applicable, alternative composite liner) and the leachate collection and removal system meets the requirements of this section.

(f) Upon completion of construction of the CCR landfill or any lateral expansion of a CCR landfill, the owner or operator must obtain a certification from a qualified professional engineer that the composite liner (or, if applicable, alternative composite liner) and the leachate collection and removal

system has been constructed in accordance with the requirements of this section.

(g) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(f), the notification requirements specified in § 257.106(f), and the Internet requirements specified in § 257.107(f).

§ 257.71 Liner design criteria for existing CCR surface impoundments.

(a)(1) No later than October 17, 2016, the owner or operator of an existing CCR surface impoundment must document whether or not such unit was constructed with any one of the following:

(i) A liner consisting of a minimum of two feet of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec;

(ii) A composite liner that meets the requirements of § 257.70(b); or

(iii) An alternative composite liner that meets the requirements of § 257.70(c).

(2) The hydraulic conductivity of the compacted soil must be determined using recognized and generally accepted methods.

(3) An existing CCR surface impoundment is considered to be an existing unlined CCR surface impoundment if either:

(i) The owner or operator of the CCR unit determines that the CCR unit is not constructed with a liner that meets the requirements of paragraphs (a)(1)(i), (ii), or (iii) of this section; or

(ii) The owner or operator of the CCR unit fails to document whether the CCR unit was constructed with a liner that meets the requirements of paragraphs (a)(1)(i), (ii), or (iii) of this section.

(4) All existing unlined CCR surface impoundments are subject to the requirements of § 257.101(a).

(b) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer attesting that the documentation as to whether a CCR unit meets the requirements of paragraph (a) of this section is accurate.

(c) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(f), the notification requirements specified in § 257.106(f), and the Internet requirements specified in § 257.107(f).

§ 257.72 Liner design criteria for new CCR surface impoundments and any lateral expansion of a CCR surface impoundment.

(a) New CCR surface impoundments and lateral expansions of existing and new CCR surface impoundments must

be designed, constructed, operated, and maintained with either a composite liner or an alternative composite liner that meets the requirements of § 257.70(b) or (c).

(b) Any liner specified in this section must be installed to cover all surrounding earth likely to be in contact with CCR. Dikes shall not be constructed on top of the composite liner.

(c) Prior to construction of the CCR surface impoundment or any lateral expansion of a CCR surface impoundment, the owner or operator must obtain certification from a qualified professional engineer that the design of the composite liner or, if applicable, the design of an alternative composite liner complies with the requirements of this section.

(d) Upon completion, the owner or operator must obtain certification from a qualified professional engineer that the composite liner or if applicable, the alternative composite liner has been constructed in accordance with the requirements of this section.

(e) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(f), the notification requirements specified in § 257.106(f), and the Internet requirements specified in § 257.107(f).

§ 257.73 Structural integrity criteria for existing CCR surface impoundments.

(a) The requirements of paragraphs (a)(1) through (4) of this section apply to all existing CCR surface impoundments, except for those existing CCR surface impoundments that are incised CCR units. If an incised CCR surface impoundment is subsequently modified (e.g., a dike is constructed) such that the CCR unit no longer meets the definition of an incised CCR unit, the CCR unit is subject to the requirements of paragraphs (a)(1) through (4) of this section.

(1) No later than, December 17, 2015, the owner or operator of the CCR unit must place on or immediately adjacent to the CCR unit a permanent identification marker, at least six feet high showing the identification number of the CCR unit, if one has been assigned by the state, the name associated with the CCR unit and the name of the owner or operator of the CCR unit.

(2) *Periodic hazard potential classification assessments.* (i) The owner or operator of the CCR unit must conduct initial and periodic hazard potential classification assessments of the CCR unit according to the timeframes specified in paragraph (f) of

this section. The owner or operator must document the hazard potential classification of each CCR unit as either a high hazard potential CCR surface impoundment, a significant hazard potential CCR surface impoundment, or a low hazard potential CCR surface impoundment. The owner or operator must also document the basis for each hazard potential classification.

(ii) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the initial hazard potential classification and each subsequent periodic classification specified in paragraph (a)(2)(i) of this section was conducted in accordance with the requirements of this section.

(3) *Emergency Action Plan (EAP)—(i) Development of the plan.* No later than April 17, 2017, the owner or operator of a CCR unit determined to be either a high hazard potential CCR surface impoundment or a significant hazard potential CCR surface impoundment under paragraph (a)(2) of this section must prepare and maintain a written EAP. At a minimum, the EAP must:

(A) Define the events or circumstances involving the CCR unit that represent a safety emergency, along with a description of the procedures that will be followed to detect a safety emergency in a timely manner;

(B) Define responsible persons, their respective responsibilities, and notification procedures in the event of a safety emergency involving the CCR unit;

(C) Provide contact information of emergency responders;

(D) Include a map which delineates the downstream area which would be affected in the event of a CCR unit failure and a physical description of the CCR unit; and

(E) Include provisions for an annual face-to-face meeting or exercise between representatives of the owner or operator of the CCR unit and the local emergency responders.

(ii) *Amendment of the plan.* (A) The owner or operator of a CCR unit subject to the requirements of paragraph (a)(3)(i) of this section may amend the written EAP at any time provided the revised plan is placed in the facility's operating record as required by § 257.105(f)(6). The owner or operator must amend the written EAP whenever there is a change in conditions that would substantially affect the EAP in effect.

(B) The written EAP must be evaluated, at a minimum, every five years to ensure the information required in paragraph (a)(3)(i) of this section is accurate. As necessary, the EAP must be updated and a revised EAP placed in

the facility's operating record as required by § 257.105(f)(6).

(iii) *Changes in hazard potential classification.* (A) If the owner or operator of a CCR unit determines during a periodic hazard potential assessment that the CCR unit is no longer classified as either a high hazard potential CCR surface impoundment or a significant hazard potential CCR surface impoundment, then the owner or operator of the CCR unit is no longer subject to the requirement to prepare and maintain a written EAP beginning on the date the periodic hazard potential assessment documentation is placed in the facility's operating record as required by § 257.105(f)(5).

(B) If the owner or operator of a CCR unit classified as a low hazard potential CCR surface impoundment subsequently determines that the CCR unit is properly re-classified as either a high hazard potential CCR surface impoundment or a significant hazard potential CCR surface impoundment, then the owner or operator of the CCR unit must prepare a written EAP for the CCR unit as required by paragraph (a)(3)(i) of this section within six months of completing such periodic hazard potential assessment.

(iv) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the written EAP, and any subsequent amendment of the EAP, meets the requirements of paragraph (a)(3) of this section.

(v) *Activation of the EAP.* The EAP must be implemented once events or circumstances involving the CCR unit that represent a safety emergency are detected, including conditions identified during periodic structural stability assessments, annual inspections, and inspections by a qualified person.

(4) The CCR unit and surrounding areas must be designed, constructed, operated, and maintained with vegetated slopes of dikes not to exceed a height of 6 inches above the slope of the dike, except for slopes which are protected with an alternate form(s) of slope protection.

(b) The requirements of paragraphs (c) through (e) of this section apply to an owner or operator of an existing CCR surface impoundment that either:

(1) Has a height of five feet or more and a storage volume of 20 acre-feet or more; or

(2) Has a height of 20 feet or more.

(c)(1) No later than October 17, 2016, the owner or operator of the CCR unit must compile a history of construction, which shall contain, to the extent feasible, the information specified in

paragraphs (c)(1)(i) through (xi) of this section.

(i) The name and address of the person(s) owning or operating the CCR unit; the name associated with the CCR unit; and the identification number of the CCR unit if one has been assigned by the state.

(ii) The location of the CCR unit identified on the most recent U.S. Geological Survey (USGS) 7½ minute or 15 minute topographic quadrangle map, or a topographic map of equivalent scale if a USGS map is not available.

(iii) A statement of the purpose for which the CCR unit is being used.

(iv) The name and size in acres of the watershed within which the CCR unit is located.

(v) A description of the physical and engineering properties of the foundation and abutment materials on which the CCR unit is constructed.

(vi) A statement of the type, size, range, and physical and engineering properties of the materials used in constructing each zone or stage of the CCR unit; the method of site preparation and construction of each zone of the CCR unit; and the approximate dates of construction of each successive stage of construction of the CCR unit.

(vii) At a scale that details engineering structures and appurtenances relevant to the design, construction, operation, and maintenance of the CCR unit, detailed dimensional drawings of the CCR unit, including a plan view and cross sections of the length and width of the CCR unit, showing all zones, foundation improvements, drainage provisions, spillways, diversion ditches, outlets, instrument locations, and slope protection, in addition to the normal operating pool surface elevation and the maximum pool surface elevation following peak discharge from the inflow design flood, the expected maximum depth of CCR within the CCR surface impoundment, and any identifiable natural or manmade features that could adversely affect operation of the CCR unit due to malfunction or mis-operation.

(viii) A description of the type, purpose, and location of existing instrumentation.

(ix) Area-capacity curves for the CCR unit.

(x) A description of each spillway and diversion design features and capacities and calculations used in their determination.

(xi) The construction specifications and provisions for surveillance, maintenance, and repair of the CCR unit.

(xii) Any record or knowledge of structural instability of the CCR unit.

(2) *Changes to the history of construction.* If there is a significant change to any information compiled under paragraph (c)(1) of this section, the owner or operator of the CCR unit must update the relevant information and place it in the facility's operating record as required by § 257.105(f)(9).

(d) *Periodic structural stability assessments.* (1) The owner or operator of the CCR unit must conduct initial and periodic structural stability assessments and document whether the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering practices for the maximum volume of CCR and CCR wastewater which can be impounded therein. The assessment must, at a minimum, document whether the CCR unit has been designed, constructed, operated, and maintained with:

(i) Stable foundations and abutments;

(ii) Adequate slope protection to protect against surface erosion, wave action, and adverse effects of sudden drawdown;

(iii) Dikes mechanically compacted to a density sufficient to withstand the range of loading conditions in the CCR unit;

(iv) Vegetated slopes of dikes and surrounding areas not to exceed a height of six inches above the slope of the dike, except for slopes which have an alternate form or forms of slope protection;

(v) A single spillway or a combination of spillways configured as specified in paragraph (d)(1)(v)(A) of this section. The combined capacity of all spillways must be designed, constructed, operated, and maintained to adequately manage flow during and following the peak discharge from the event specified in paragraph (d)(1)(v)(B) of this section.

(A) All spillways must be either:

(1) Of non-erodible construction and designed to carry sustained flows; or

(2) Earth- or grass-lined and designed to carry short-term, infrequent flows at non-erosive velocities where sustained flows are not expected.

(B) The combined capacity of all spillways must adequately manage flow during and following the peak discharge from a:

(1) Probable maximum flood (PMF) for a high hazard potential CCR surface impoundment; or

(2) 1000-year flood for a significant hazard potential CCR surface impoundment; or

(3) 100-year flood for a low hazard potential CCR surface impoundment.

(vi) Hydraulic structures underlying the base of the CCR unit or passing

through the dike of the CCR unit that maintain structural integrity and are free of significant deterioration, deformation, distortion, bedding deficiencies, sedimentation, and debris which may negatively affect the operation of the hydraulic structure; and

(vii) For CCR units with downstream slopes which can be inundated by the pool of an adjacent water body, such as a river, stream or lake, downstream slopes that maintain structural stability during low pool of the adjacent water body or sudden drawdown of the adjacent water body.

(2) The periodic assessment described in paragraph (d)(1) of this section must identify any structural stability deficiencies associated with the CCR unit in addition to recommending corrective measures. If a deficiency or a release is identified during the periodic assessment, the owner or operator unit must remedy the deficiency or release as soon as feasible and prepare documentation detailing the corrective measures taken.

(3) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the initial assessment and each subsequent periodic assessment was conducted in accordance with the requirements of this section.

(e) *Periodic safety factor assessments.*

(1) The owner or operator must conduct an initial and periodic safety factor assessments for each CCR unit and document whether the calculated factors of safety for each CCR unit achieve the minimum safety factors specified in paragraphs (e)(1)(i) through (iv) of this section for the critical cross section of the embankment. The critical cross section is the cross section anticipated to be the most susceptible of all cross sections to structural failure based on appropriate engineering considerations, including loading conditions. The safety factor assessments must be supported by appropriate engineering calculations.

(i) The calculated static factor of safety under the long-term, maximum storage pool loading condition must equal or exceed 1.50.

(ii) The calculated static factor of safety under the maximum surcharge pool loading condition must equal or exceed 1.40.

(iii) The calculated seismic factor of safety must equal or exceed 1.00.

(iv) For dikes constructed of soils that have susceptibility to liquefaction, the calculated liquefaction factor of safety must equal or exceed 1.20.

(2) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating

that the initial assessment and each subsequent periodic assessment specified in paragraph (e)(1) of this section meets the requirements of this section.

(f) *Timeframes for periodic assessments*—(1) *Initial assessments*. Except as provided by paragraph (f)(2) of this section, the owner or operator of the CCR unit must complete the initial assessments required by paragraphs (a)(2), (d), and (e) of this section no later than October 17, 2016. The owner or operator has completed an initial assessment when the owner or operator has placed the assessment required by paragraphs (a)(2), (d), and (e) of this section in the facility's operating record as required by § 257.105(f)(5), (10), and (12).

(2) *Use of a previously completed assessment(s) in lieu of the initial assessment(s)*. The owner or operator of the CCR unit may elect to use a previously completed assessment to serve as the initial assessment required by paragraphs (a)(2), (d), and (e) of this section provided that the previously completed assessment(s):

(i) Was completed no earlier than 42 months prior to October 17, 2016; and

(ii) Meets the applicable requirements of paragraphs (a)(2), (d), and (e) of this section.

(3) *Frequency for conducting periodic assessments*. The owner or operator of the CCR unit must conduct and complete the assessments required by paragraphs (a)(2), (d), and (e) of this section every five years. The date of completing the initial assessment is the basis for establishing the deadline to complete the first subsequent assessment. If the owner or operator elects to use a previously completed assessment(s) in lieu of the initial assessment as provided by paragraph (f)(2) of this section, the date of the report for the previously completed assessment is the basis for establishing the deadline to complete the first subsequent assessment. The owner or operator may complete any required assessment prior to the required deadline provided the owner or operator places the completed assessment(s) into the facility's operating record within a reasonable amount of time. In all cases, the deadline for completing subsequent assessments is based on the date of completing the previous assessment. For purposes of this paragraph (f)(3), the owner or operator has completed an assessment when the relevant assessment(s) required by paragraphs (a)(2), (d), and (e) of this section has been placed in the facility's operating record as required by § 257.105(f)(5), (10), and (12).

(4) *Closure of the CCR unit*. An owner or operator of a CCR unit who either fails to complete a timely safety factor assessment or fails to demonstrate minimum safety factors as required by paragraph (e) of this section is subject to the requirements of § 257.101(b)(2).

(g) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(f), the notification requirements specified in § 257.106(f), and the internet requirements specified in § 257.107(f).

§ 257.74 Structural integrity criteria for new CCR surface impoundments and any lateral expansion of a CCR surface impoundment.

(a) The requirements of paragraphs (a)(1) through (4) of this section apply to all new CCR surface impoundments and any lateral expansion of a CCR surface impoundment, except for those new CCR surface impoundments that are incised CCR units. If an incised CCR surface impoundment is subsequently modified (e.g., a dike is constructed) such that the CCR unit no longer meets the definition of an incised CCR unit, the CCR unit is subject to the requirements of paragraphs (a)(1) through (4) of this section.

(1) No later than the initial receipt of CCR, the owner or operator of the CCR unit must place on or immediately adjacent to the CCR unit a permanent identification marker, at least six feet high showing the identification number of the CCR unit, if one has been assigned by the state, the name associated with the CCR unit and the name of the owner or operator of the CCR unit.

(2) *Periodic hazard potential classification assessments*. (i) The owner or operator of the CCR unit must conduct initial and periodic hazard potential classification assessments of the CCR unit according to the timeframes specified in paragraph (f) of this section. The owner or operator must document the hazard potential classification of each CCR unit as either a high hazard potential CCR surface impoundment, a significant hazard potential CCR surface impoundment, or a low hazard potential CCR surface impoundment. The owner or operator must also document the basis for each hazard potential classification.

(ii) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the initial hazard potential classification and each subsequent periodic classification specified in paragraph (a)(2)(i) of this section was

conducted in accordance with the requirements of this section.

(3) *Emergency Action Plan (EAP)*—(i) *Development of the plan*. Prior to the initial receipt of CCR in the CCR unit, the owner or operator of a CCR unit determined to be either a high hazard potential CCR surface impoundment or a significant hazard potential CCR surface impoundment under paragraph (a)(2) of this section must prepare and maintain a written EAP. At a minimum, the EAP must:

(A) Define the events or circumstances involving the CCR unit that represent a safety emergency, along with a description of the procedures that will be followed to detect a safety emergency in a timely manner;

(B) Define responsible persons, their respective responsibilities, and notification procedures in the event of a safety emergency involving the CCR unit;

(C) Provide contact information of emergency responders;

(D) Include a map which delineates the downstream area which would be affected in the event of a CCR unit failure and a physical description of the CCR unit; and

(E) Include provisions for an annual face-to-face meeting or exercise between representatives of the owner or operator of the CCR unit and the local emergency responders.

(ii) *Amendment of the plan*. (A) The owner or operator of a CCR unit subject to the requirements of paragraph (a)(3)(i) of this section may amend the written EAP at any time provided the revised plan is placed in the facility's operating record as required by § 257.105(f)(6). The owner or operator must amend the written EAP whenever there is a change in conditions that would substantially affect the EAP in effect.

(B) The written EAP must be evaluated, at a minimum, every five years to ensure the information required in paragraph (a)(3)(i) of this section is accurate. As necessary, the EAP must be updated and a revised EAP placed in the facility's operating record as required by § 257.105(f)(6).

(iii) *Changes in hazard potential classification*. (A) If the owner or operator of a CCR unit determines during a periodic hazard potential assessment that the CCR unit is no longer classified as either a high hazard potential CCR surface impoundment or a significant hazard potential CCR surface impoundment, then the owner or operator of the CCR unit is no longer subject to the requirement to prepare and maintain a written EAP beginning on the date the periodic hazard potential assessment documentation is

placed in the facility's operating record as required by § 257.105(f)(5).

(B) If the owner or operator of a CCR unit classified as a low hazard potential CCR surface impoundment

subsequently determines that the CCR unit is properly re-classified as either a high hazard potential CCR surface impoundment or a significant hazard potential CCR surface impoundment, then the owner or operator of the CCR unit must prepare a written EAP for the CCR unit as required by paragraph (a)(3)(i) of this section within six months of completing such periodic hazard potential assessment.

(iv) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the written EAP, and any subsequent amendment of the EAP, meets the requirements of paragraph (a)(3) of this section.

(v) *Activation of the EAP.* The EAP must be implemented once events or circumstances involving the CCR unit that represent a safety emergency are detected, including conditions identified during periodic structural stability assessments, annual inspections, and inspections by a qualified person.

(4) The CCR unit and surrounding areas must be designed, constructed, operated, and maintained with vegetated slopes of dikes not to exceed a height of six inches above the slope of the dike, except for slopes which are protected with an alternate form(s) of slope protection.

(b) The requirements of paragraphs (c) through (e) of this section apply to an owner or operator of a new CCR surface impoundment and any lateral expansion of a CCR surface impoundment that either:

(1) Has a height of five feet or more and a storage volume of 20 acre-feet or more; or

(2) Has a height of 20 feet or more.

(c)(1) No later than the initial receipt of CCR in the CCR unit, the owner or operator unit must compile the design and construction plans for the CCR unit, which must include, to the extent feasible, the information specified in paragraphs (c)(1)(i) through (xi) of this section.

(i) The name and address of the person(s) owning or operating the CCR unit; the name associated with the CCR unit; and the identification number of the CCR unit if one has been assigned by the state.

(ii) The location of the CCR unit identified on the most recent U.S. Geological Survey (USGS) 7½ minute or 15 minute topographic quadrangle map,

or a topographic map of equivalent scale if a USGS map is not available.

(iii) A statement of the purpose for which the CCR unit is being used.

(iv) The name and size in acres of the watershed within which the CCR unit is located.

(v) A description of the physical and engineering properties of the foundation and abutment materials on which the CCR unit is constructed.

(vi) A statement of the type, size, range, and physical and engineering properties of the materials used in constructing each zone or stage of the CCR unit; the method of site preparation and construction of each zone of the CCR unit; and the dates of construction of each successive stage of construction of the CCR unit.

(vii) At a scale that details engineering structures and appurtenances relevant to the design, construction, operation, and maintenance of the CCR unit, detailed dimensional drawings of the CCR unit, including a plan view and cross sections of the length and width of the CCR unit, showing all zones, foundation improvements, drainage provisions, spillways, diversion ditches, outlets, instrument locations, and slope protection, in addition to the normal operating pool surface elevation and the maximum pool surface elevation following peak discharge from the inflow design flood, the expected maximum depth of CCR within the CCR surface impoundment, and any identifiable natural or manmade features that could adversely affect operation of the CCR unit due to malfunction or mis-operation.

(viii) A description of the type, purpose, and location of existing instrumentation.

(ix) Area-capacity curves for the CCR unit.

(x) A description of each spillway and diversion design features and capacities and calculations used in their determination.

(xi) The construction specifications and provisions for surveillance, maintenance, and repair of the CCR unit.

(xii) Any record or knowledge of structural instability of the CCR unit.

(2) *Changes in the design and construction.* If there is a significant change to any information compiled under paragraph (c)(1) of this section, the owner or operator of the CCR unit must update the relevant information and place it in the facility's operating record as required by § 257.105(f)(13).

(d) *Periodic structural stability assessments.* (1) The owner or operator of the CCR unit must conduct initial and periodic structural stability assessments

and document whether the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering practices for the maximum volume of CCR and CCR wastewater which can be impounded therein. The assessment must, at a minimum, document whether the CCR unit has been designed, constructed, operated, and maintained with:

(i) Stable foundations and abutments;

(ii) Adequate slope protection to protect against surface erosion, wave action, and adverse effects of sudden drawdown;

(iii) Dikes mechanically compacted to a density sufficient to withstand the range of loading conditions in the CCR unit;

(iv) Vegetated slopes of dikes and surrounding areas not to exceed a height of six inches above the slope of the dike, except for slopes which have an alternate form or forms of slope protection;

(v) A single spillway or a combination of spillways configured as specified in paragraph (d)(1)(v)(A) of this section. The combined capacity of all spillways must be designed, constructed, operated, and maintained to adequately manage flow during and following the peak discharge from the event specified in paragraph (d)(1)(v)(B) of this section.

(A) All spillways must be either:

(1) Of non-erodible construction and designed to carry sustained flows; or

(2) Earth- or grass-lined and designed to carry short-term, infrequent flows at non-erosive velocities where sustained flows are not expected.

(B) The combined capacity of all spillways must adequately manage flow during and following the peak discharge from a:

(1) Probable maximum flood (PMF) for a high hazard potential CCR surface impoundment; or

(2) 1000-year flood for a significant hazard potential CCR surface impoundment; or

(3) 100-year flood for a low hazard potential CCR surface impoundment.

(vi) Hydraulic structures underlying the base of the CCR unit or passing through the dike of the CCR unit that maintain structural integrity and are free of significant deterioration, deformation, distortion, bedding deficiencies, sedimentation, and debris which may negatively affect the operation of the hydraulic structure; and

(vii) For CCR units with downstream slopes which can be inundated by the pool of an adjacent water body, such as a river, stream or lake, downstream slopes that maintain structural stability

during low pool of the adjacent water body or sudden drawdown of the adjacent water body.

(2) The periodic assessment described in paragraph (d)(1) of this section must identify any structural stability deficiencies associated with the CCR unit in addition to recommending corrective measures. If a deficiency or a release is identified during the periodic assessment, the owner or operator unit must remedy the deficiency or release as soon as feasible and prepare documentation detailing the corrective measures taken.

(3) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the initial assessment and each subsequent periodic assessment was conducted in accordance with the requirements of this section.

(e) *Periodic safety factor assessments.*

(1) The owner or operator must conduct an initial and periodic safety factor assessments for each CCR unit and document whether the calculated factors of safety for each CCR unit achieve the minimum safety factors specified in paragraphs (e)(1)(i) through (v) of this section for the critical cross section of the embankment. The critical cross section is the cross section anticipated to be the most susceptible of all cross sections to structural failure based on appropriate engineering considerations, including loading conditions. The safety factor assessments must be supported by appropriate engineering calculations.

(i) The calculated static factor of safety under the end-of-construction loading condition must equal or exceed 1.30. The assessment of this loading condition is only required for the initial safety factor assessment and is not required for subsequent assessments.

(ii) The calculated static factor of safety under the long-term, maximum storage pool loading condition must equal or exceed 1.50.

(iii) The calculated static factor of safety under the maximum surcharge pool loading condition must equal or exceed 1.40.

(iv) The calculated seismic factor of safety must equal or exceed 1.00.

(v) For dikes constructed of soils that have susceptibility to liquefaction, the calculated liquefaction factor of safety must equal or exceed 1.20.

(2) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the initial assessment and each subsequent periodic assessment specified in paragraph (e)(1) of this section meets the requirements of this section.

(f) *Timeframes for periodic assessments—*

(1) *Initial assessments.* Except as provided by paragraph (f)(2) of this section, the owner or operator of the CCR unit must complete the initial assessments required by paragraphs (a)(2), (d), and (e) of this section prior to the initial receipt of CCR in the unit. The owner or operator has completed an initial assessment when the owner or operator has placed the assessment required by paragraphs (a)(2), (d), and (e) of this section in the facility's operating record as required by § 257.105(f)(5), (10), and (12).

(2) *Frequency for conducting periodic assessments.* The owner or operator of the CCR unit must conduct and complete the assessments required by paragraphs (a)(2), (d), and (e) of this section every five years. The date of completing the initial assessment is the basis for establishing the deadline to complete the first subsequent assessment. The owner or operator may complete any required assessment prior to the required deadline provided the owner or operator places the completed assessment(s) into the facility's operating record within a reasonable amount of time. In all cases, the deadline for completing subsequent assessments is based on the date of completing the previous assessment. For purposes of this paragraph (f)(2), the owner or operator has completed an assessment when the relevant assessment(s) required by paragraphs (a)(2), (d), and (e) of this section has been placed in the facility's operating record as required by § 257.105(f)(5), (10), and (12).

(3) *Failure to document minimum safety factors during the initial assessment.* Until the date an owner or operator of a CCR unit documents that the calculated factors of safety achieve the minimum safety factors specified in paragraphs (e)(1)(i) through (v) of this section, the owner or operator is prohibited from placing CCR in such unit.

(4) *Closure of the CCR unit.* An owner or operator of a CCR unit who either fails to complete a timely periodic safety factor assessment or fails to demonstrate minimum safety factors as required by paragraph (e) of this section is subject to the requirements of § 257.101(c).

(g) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(f), the notification requirements specified in § 257.106(f), and the internet requirements specified in § 257.107(f).

Operating Criteria

§ 257.80 Air criteria.

(a) The owner or operator of a CCR landfill, CCR surface impoundment, or any lateral expansion of a CCR unit must adopt measures that will effectively minimize CCR from becoming airborne at the facility, including CCR fugitive dust originating from CCR units, roads, and other CCR management and material handling activities.

(b) *CCR fugitive dust control plan.* The owner or operator of the CCR unit must prepare and operate in accordance with a CCR fugitive dust control plan as specified in paragraphs (b)(1) through (7) of this section. This requirement applies in addition to, not in place of, any applicable standards under the Occupational Safety and Health Act.

(1) The CCR fugitive dust control plan must identify and describe the CCR fugitive dust control measures the owner or operator will use to minimize CCR from becoming airborne at the facility. The owner or operator must select, and include in the CCR fugitive dust control plan, the CCR fugitive dust control measures that are most appropriate for site conditions, along with an explanation of how the measures selected are applicable and appropriate for site conditions. Examples of control measures that may be appropriate include: Locating CCR inside an enclosure or partial enclosure; operating a water spray or fogging system; reducing fall distances at material drop points; using wind barriers, compaction, or vegetative covers; establishing and enforcing reduced vehicle speed limits; paving and sweeping roads; covering trucks transporting CCR; reducing or halting operations during high wind events; or applying a daily cover.

(2) If the owner or operator operates a CCR landfill or any lateral expansion of a CCR landfill, the CCR fugitive dust control plan must include procedures to emplace CCR as conditioned CCR. Conditioned CCR means wetting CCR with water to a moisture content that will prevent wind dispersal, but will not result in free liquids. In lieu of water, CCR conditioning may be accomplished with an appropriate chemical dust suppression agent.

(3) The CCR fugitive dust control plan must include procedures to log citizen complaints received by the owner or operator involving CCR fugitive dust events at the facility.

(4) The CCR fugitive dust control plan must include a description of the procedures the owner or operator will

follow to periodically assess the effectiveness of the control plan.

(5) The owner or operator of a CCR unit must prepare an initial CCR fugitive dust control plan for the facility no later than October 19, 2015, or by initial receipt of CCR in any CCR unit at the facility if the owner or operator becomes subject to this subpart after October 19, 2015. The owner or operator has completed the initial CCR fugitive dust control plan when the plan has been placed in the facility's operating record as required by § 257.105(g)(1).

(6) *Amendment of the plan.* The owner or operator of a CCR unit subject to the requirements of this section may amend the written CCR fugitive dust control plan at any time provided the revised plan is placed in the facility's operating record as required by § 257.105(g)(1). The owner or operator must amend the written plan whenever there is a change in conditions that would substantially affect the written plan in effect, such as the construction and operation of a new CCR unit.

(7) The owner or operator must obtain a certification from a qualified professional engineer that the initial CCR fugitive dust control plan, or any subsequent amendment of it, meets the requirements of this section.

(c) *Annual CCR fugitive dust control report.* The owner or operator of a CCR unit must prepare an annual CCR fugitive dust control report that includes a description of the actions taken by the owner or operator to control CCR fugitive dust, a record of all citizen complaints, and a summary of any corrective measures taken. The initial annual report must be completed no later than 14 months after placing the initial CCR fugitive dust control plan in the facility's operating record. The deadline for completing a subsequent report is one year after the date of completing the previous report. For purposes of this paragraph (c), the owner or operator has completed the annual CCR fugitive dust control report when the plan has been placed in the facility's operating record as required by § 257.105(g)(2).

(d) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(g), the notification requirements specified in § 257.106(g), and the internet requirements specified in § 257.107(g).

§ 257.81 Run-on and run-off controls for CCR landfills.

(a) The owner or operator of an existing or new CCR landfill or any lateral expansion of a CCR landfill must

design, construct, operate, and maintain:

(1) A run-on control system to prevent flow onto the active portion of the CCR unit during the peak discharge from a 24-hour, 25-year storm; and

(2) A run-off control system from the active portion of the CCR unit to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(b) Run-off from the active portion of the CCR unit must be handled in accordance with the surface water requirements under § 257.3–3.

(c) *Run-on and run-off control system plan—(1) Content of the plan.* The owner or operator must prepare initial and periodic run-on and run-off control system plans for the CCR unit according to the timeframes specified in paragraphs (c)(3) and (4) of this section. These plans must document how the run-on and run-off control systems have been designed and constructed to meet the applicable requirements of this section. Each plan must be supported by appropriate engineering calculations. The owner or operator has completed the initial run-on and run-off control system plan when the plan has been placed in the facility's operating record as required by § 257.105(g)(3).

(2) *Amendment of the plan.* The owner or operator may amend the written run-on and run-off control system plan at any time provided the revised plan is placed in the facility's operating record as required by § 257.105(g)(3). The owner or operator must amend the written run-on and run-off control system plan whenever there is a change in conditions that would substantially affect the written plan in effect.

(3) *Timeframes for preparing the initial plan—(i) Existing CCR landfills.* The owner or operator of the CCR unit must prepare the initial run-on and run-off control system plan no later than October 17, 2016.

(ii) *New CCR landfills and any lateral expansion of a CCR landfill.* The owner or operator must prepare the initial run-on and run-off control system plan no later than the date of initial receipt of CCR in the CCR unit.

(4) *Frequency for revising the plan.* The owner or operator of the CCR unit must prepare periodic run-on and run-off control system plans required by paragraph (c)(1) of this section every five years. The date of completing the initial plan is the basis for establishing the deadline to complete the first subsequent plan. The owner or operator may complete any required plan prior to the required deadline provided the owner or operator places the completed plan into the facility's operating record

within a reasonable amount of time. In all cases, the deadline for completing a subsequent plan is based on the date of completing the previous plan. For purposes of this paragraph (c)(4), the owner or operator has completed a periodic run-on and run-off control system plan when the plan has been placed in the facility's operating record as required by § 257.105(g)(3).

(5) The owner or operator must obtain a certification from a qualified professional engineer stating that the initial and periodic run-on and run-off control system plans meet the requirements of this section.

(d) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(g), the notification requirements specified in § 257.106(g), and the internet requirements specified in § 257.107(g).

§ 257.82 Hydrologic and hydraulic capacity requirements for CCR surface impoundments.

(a) The owner or operator of an existing or new CCR surface impoundment or any lateral expansion of a CCR surface impoundment must design, construct, operate, and maintain an inflow design flood control system as specified in paragraphs (a)(1) and (2) of this section.

(1) The inflow design flood control system must adequately manage flow into the CCR unit during and following the peak discharge of the inflow design flood specified in paragraph (a)(3) of this section.

(2) The inflow design flood control system must adequately manage flow from the CCR unit to collect and control the peak discharge resulting from the inflow design flood specified in paragraph (a)(3) of this section.

(3) The inflow design flood is:

(i) For a high hazard potential CCR surface impoundment, as determined under § 257.73(a)(2) or § 257.74(a)(2), the probable maximum flood;

(ii) For a significant hazard potential CCR surface impoundment, as determined under § 257.73(a)(2) or § 257.74(a)(2), the 1,000-year flood;

(iii) For a low hazard potential CCR surface impoundment, as determined under § 257.73(a)(2) or § 257.74(a)(2), the 100-year flood; or

(iv) For an incised CCR surface impoundment, the 25-year flood.

(b) Discharge from the CCR unit must be handled in accordance with the surface water requirements under § 257.3–3.

(c) *Inflow design flood control system plan—(1) Content of the plan.* The owner or operator must prepare initial

and periodic inflow design flood control system plans for the CCR unit according to the timeframes specified in paragraphs (c)(3) and (4) of this section. These plans must document how the inflow design flood control system has been designed and constructed to meet the requirements of this section. Each plan must be supported by appropriate engineering calculations. The owner or operator of the CCR unit has completed the inflow design flood control system plan when the plan has been placed in the facility's operating record as required by § 257.105(g)(4).

(2) *Amendment of the plan.* The owner or operator of the CCR unit may amend the written inflow design flood control system plan at any time provided the revised plan is placed in the facility's operating record as required by § 257.105(g)(4). The owner or operator must amend the written inflow design flood control system plan whenever there is a change in conditions that would substantially affect the written plan in effect.

(3) *Timeframes for preparing the initial plan—(i) Existing CCR surface impoundments.* The owner or operator of the CCR unit must prepare the initial inflow design flood control system plan no later than October 17, 2016.

(ii) *New CCR surface impoundments and any lateral expansion of a CCR surface impoundment.* The owner or operator must prepare the initial inflow design flood control system plan no later than the date of initial receipt of CCR in the CCR unit.

(4) *Frequency for revising the plan.* The owner or operator must prepare periodic inflow design flood control system plans required by paragraph (c)(1) of this section every five years. The date of completing the initial plan is the basis for establishing the deadline to complete the first periodic plan. The owner or operator may complete any required plan prior to the required deadline provided the owner or operator places the completed plan into the facility's operating record within a reasonable amount of time. In all cases, the deadline for completing a subsequent plan is based on the date of completing the previous plan. For purposes of this paragraph (c)(4), the owner or operator has completed an inflow design flood control system plan when the plan has been placed in the facility's operating record as required by § 257.105(g)(4).

(5) The owner or operator must obtain a certification from a qualified professional engineer stating that the initial and periodic inflow design flood control system plans meet the requirements of this section.

(d) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(g), the notification requirements specified in § 257.106(g), and the internet requirements specified in § 257.107(g).

§ 257.83 Inspection requirements for CCR surface impoundments.

(a) *Inspections by a qualified person.* (1) All CCR surface impoundments and any lateral expansion of a CCR surface impoundment must be examined by a qualified person as follows:

(i) At intervals not exceeding seven days, inspect for any appearances of actual or potential structural weakness and other conditions which are disrupting or have the potential to disrupt the operation or safety of the CCR unit;

(ii) At intervals not exceeding seven days, inspect the discharge of all outlets of hydraulic structures which pass underneath the base of the surface impoundment or through the dike of the CCR unit for abnormal discoloration, flow or discharge of debris or sediment; and

(iii) At intervals not exceeding 30 days, monitor all CCR unit instrumentation.

(iv) The results of the inspection by a qualified person must be recorded in the facility's operating record as required by § 257.105(g)(5).

(2) *Timeframes for inspections by a qualified person—(i) Existing CCR surface impoundments.* The owner or operator of the CCR unit must initiate the inspections required under paragraph (a) of this section no later than October 19, 2015.

(ii) *New CCR surface impoundments and any lateral expansion of a CCR surface impoundment.* The owner or operator of the CCR unit must initiate the inspections required under paragraph (a) of this section upon initial receipt of CCR by the CCR unit.

(b) *Annual inspections by a qualified professional engineer.* (1) If the existing or new CCR surface impoundment or any lateral expansion of the CCR surface impoundment is subject to the periodic structural stability assessment requirements under § 257.73(d) or § 257.74(d), the CCR unit must additionally be inspected on a periodic basis by a qualified professional engineer to ensure that the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards. The inspection must, at a minimum, include:

(i) A review of available information regarding the status and condition of the CCR unit, including, but not limited to, files available in the operating record (e.g., CCR unit design and construction information required by §§ 257.73(c)(1) and 257.74(c)(1), previous periodic structural stability assessments required under §§ 257.73(d) and 257.74(d), the results of inspections by a qualified person, and results of previous annual inspections);

(ii) A visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit and appurtenant structures; and

(iii) A visual inspection of any hydraulic structures underlying the base of the CCR unit or passing through the dike of the CCR unit for structural integrity and continued safe and reliable operation.

(2) *Inspection report.* The qualified professional engineer must prepare a report following each inspection that addresses the following:

(i) Any changes in geometry of the impounding structure since the previous annual inspection;

(ii) The location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection;

(iii) The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection;

(iv) The storage capacity of the impounding structure at the time of the inspection;

(v) The approximate volume of the impounded water and CCR at the time of the inspection;

(vi) Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit and appurtenant structures; and

(vii) Any other change(s) which may have affected the stability or operation of the impounding structure since the previous annual inspection.

(3) *Timeframes for conducting the initial inspection—(i) Existing CCR surface impoundments.* The owner or operator of the CCR unit must complete the initial inspection required by paragraphs (b)(1) and (2) of this section no later than January 18, 2016.

(ii) *New CCR surface impoundments and any lateral expansion of a CCR surface impoundment.* The owner or operator of the CCR unit must complete the initial annual inspection required by paragraphs (b)(1) and (2) of this section is completed no later than 14 months

following the date of initial receipt of CCR in the CCR unit.

(4) *Frequency of inspections.* (i) Except as provided for in paragraph (b)(4)(ii) of this section, the owner or operator of the CCR unit must conduct the inspection required by paragraphs (b)(1) and (2) of this section on an annual basis. The date of completing the initial inspection report is the basis for establishing the deadline to complete the first subsequent inspection. Any required inspection may be conducted prior to the required deadline provided the owner or operator places the completed inspection report into the facility's operating record within a reasonable amount of time. In all cases, the deadline for completing subsequent inspection reports is based on the date of completing the previous inspection report. For purposes of this section, the owner or operator has completed an inspection when the inspection report has been placed in the facility's operating record as required by § 257.105(g)(6).

(ii) In any calendar year in which both the periodic inspection by a qualified professional engineer and the quinquennial (occurring every five years) structural stability assessment by a qualified professional engineer required by §§ 257.73(d) and 257.74(d) are required to be completed, the annual inspection is not required, provided the structural stability assessment is completed during the calendar year. If the annual inspection is not conducted in a year as provided by this paragraph (b)(4)(ii), the deadline for completing the next annual inspection is one year from the date of completing the quinquennial structural stability assessment.

(5) If a deficiency or release is identified during an inspection, the owner or operator must remedy the deficiency or release as soon as feasible and prepare documentation detailing the corrective measures taken.

(c) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(g), the notification requirements specified in § 257.106(g), and the internet requirements specified in § 257.107(g).

§ 257.84 Inspection requirements for CCR landfills.

(a) *Inspections by a qualified person.* (1) All CCR landfills and any lateral expansion of a CCR landfill must be examined by a qualified person as follows:

(i) At intervals not exceeding seven days, inspect for any appearances of actual or potential structural weakness

and other conditions which are disrupting or have the potential to disrupt the operation or safety of the CCR unit; and

(ii) The results of the inspection by a qualified person must be recorded in the facility's operating record as required by § 257.105(g)(8).

(2) *Timeframes for inspections by a qualified person—*(i) *Existing CCR landfills.* The owner or operator of the CCR unit must initiate the inspections required under paragraph (a) of this section no later than October 19, 2015.

(ii) *New CCR landfills and any lateral expansion of a CCR landfill.* The owner or operator of the CCR unit must initiate the inspections required under paragraph (a) of this section upon initial receipt of CCR by the CCR unit.

(b) *Annual inspections by a qualified professional engineer.* (1) Existing and new CCR landfills and any lateral expansion of a CCR landfill must be inspected on a periodic basis by a qualified professional engineer to ensure that the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards. The inspection must, at a minimum, include:

(i) A review of available information regarding the status and condition of the CCR unit, including, but not limited to, files available in the operating record (e.g., the results of inspections by a qualified person, and results of previous annual inspections); and

(ii) A visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit.

(2) *Inspection report.* The qualified professional engineer must prepare a report following each inspection that addresses the following:

(i) Any changes in geometry of the structure since the previous annual inspection;

(ii) The approximate volume of CCR contained in the unit at the time of the inspection;

(iii) Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit; and

(iv) Any other change(s) which may have affected the stability or operation of the CCR unit since the previous annual inspection.

(3) *Timeframes for conducting the initial inspection—*(i) *Existing CCR landfills.* The owner or operator of the CCR unit must complete the initial inspection required by paragraphs (b)(1) and (2) of this section no later than January 18, 2016.

(ii) *New CCR landfills and any lateral expansion of a CCR landfill.* The owner or operator of the CCR unit must complete the initial annual inspection required by paragraphs (b)(1) and (2) of this section no later than 14 months following the date of initial receipt of CCR in the CCR unit.

(4) *Frequency of inspections.* The owner or operator of the CCR unit must conduct the inspection required by paragraphs (b)(1) and (2) of this section on an annual basis. The date of completing the initial inspection report is the basis for establishing the deadline to complete the first subsequent inspection. Any required inspection may be conducted prior to the required deadline provided the owner or operator places the completed inspection report into the facility's operating record within a reasonable amount of time. In all cases, the deadline for completing subsequent inspection reports is based on the date of completing the previous inspection report. For purposes of this section, the owner or operator has completed an inspection when the inspection report has been placed in the facility's operating record as required by § 257.105(g)(9).

(5) If a deficiency or release is identified during an inspection, the owner or operator must remedy the deficiency or release as soon as feasible and prepare documentation detailing the corrective measures taken.

(c) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(g), the notification requirements specified in § 257.106(g), and the internet requirements specified in § 257.107(g).

Groundwater Monitoring and Corrective Action

§ 257.90 Applicability.

(a) Except as provided for in § 257.100 for inactive CCR surface impoundments, all CCR landfills, CCR surface impoundments, and lateral expansions of CCR units are subject to the groundwater monitoring and corrective action requirements under §§ 257.90 through 257.98.

(b) *Initial timeframes—*(1) *Existing CCR landfills and existing CCR surface impoundments.* No later than October 17, 2017, the owner or operator of the CCR unit must be in compliance with the following groundwater monitoring requirements:

(i) Install the groundwater monitoring system as required by § 257.91;

(ii) Develop the groundwater sampling and analysis program to include selection of the statistical

procedures to be used for evaluating groundwater monitoring data as required by § 257.93;

(iii) Initiate the detection monitoring program to include obtaining a minimum of eight independent samples for each background and downgradient well as required by § 257.94(b); and

(iv) Begin evaluating the groundwater monitoring data for statistically significant increases over background levels for the constituents listed in appendix III of this part as required by § 257.94.

(2) *New CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units.* Prior to initial receipt of CCR by the CCR unit, the owner or operator must be in compliance with the groundwater monitoring requirements specified in paragraph (b)(1)(i) and (ii) of this section. In addition, the owner or operator of the CCR unit must initiate the detection monitoring program to include obtaining a minimum of eight independent samples for each background well as required by § 257.94(b).

(c) Once a groundwater monitoring system and groundwater monitoring program has been established at the CCR unit as required by this subpart, the owner or operator must conduct groundwater monitoring and, if necessary, corrective action throughout the active life and post-closure care period of the CCR unit.

(d) In the event of a release from a CCR unit, the owner or operator must immediately take all necessary measures to control the source(s) of releases so as to reduce or eliminate, to the maximum extent feasible, further releases of contaminants into the environment. The owner or operator of the CCR unit must comply with all applicable requirements in §§ 257.96, 257.97, and 257.98.

(e) *Annual groundwater monitoring and corrective action report.* For existing CCR landfills and existing CCR surface impoundments, no later than January 31, 2018, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For new CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this subpart, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater

monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this section, the owner or operator has prepared the annual report when the report is placed in the facility's operating record as required by § 257.105(h)(1). At a minimum, the annual groundwater monitoring and corrective action report must contain the following information, to the extent available:

(1) A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;

(2) Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;

(3) In addition to all the monitoring data obtained under §§ 257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;

(4) A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); and

(5) Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.

(f) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(h), the notification requirements specified in § 257.106(h), and the internet requirements specified in § 257.107(h).

§ 257.91 Groundwater monitoring systems.

(a) *Performance standard.* The owner or operator of a CCR unit must install a groundwater monitoring system that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer that:

(1) Accurately represent the quality of background groundwater that has not been affected by leakage from a CCR unit. A determination of background

quality may include sampling of wells that are not hydraulically upgradient of the CCR management area where:

(i) Hydrogeologic conditions do not allow the owner or operator of the CCR unit to determine what wells are hydraulically upgradient; or

(ii) Sampling at other wells will provide an indication of background groundwater quality that is as representative or more representative than that provided by the upgradient wells; and

(2) Accurately represent the quality of groundwater passing the waste boundary of the CCR unit. The downgradient monitoring system must be installed at the waste boundary that ensures detection of groundwater contamination in the uppermost aquifer. All potential contaminant pathways must be monitored.

(b) The number, spacing, and depths of monitoring systems shall be determined based upon site-specific technical information that must include thorough characterization of:

(1) Aquifer thickness, groundwater flow rate, groundwater flow direction including seasonal and temporal fluctuations in groundwater flow; and

(2) Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, but not limited to, thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

(c) The groundwater monitoring system must include the minimum number of monitoring wells necessary to meet the performance standards specified in paragraph (a) of this section, based on the site-specific information specified in paragraph (b) of this section. The groundwater monitoring system must contain:

(1) A minimum of one upgradient and three downgradient monitoring wells; and

(2) Additional monitoring wells as necessary to accurately represent the quality of background groundwater that has not been affected by leakage from the CCR unit and the quality of groundwater passing the waste boundary of the CCR unit.

(d) The owner or operator of multiple CCR units may install a multiunit groundwater monitoring system instead of separate groundwater monitoring systems for each CCR unit.

(1) The multiunit groundwater monitoring system must be equally as capable of detecting monitored constituents at the waste boundary of

the CCR unit as the individual groundwater monitoring system specified in paragraphs (a) through (c) of this section for each CCR unit based on the following factors:

- (i) Number, spacing, and orientation of each CCR unit;
- (ii) Hydrogeologic setting;
- (iii) Site history; and
- (iv) Engineering design of the CCR unit.

(2) If the owner or operator elects to install a multiunit groundwater monitoring system, and if the multiunit system includes at least one existing unlined CCR surface impoundment as determined by § 257.71(a), and if at any time after October 19, 2015 the owner or operator determines in any sampling event that the concentrations of one or more constituents listed in appendix IV to this part are detected at statistically significant levels above the groundwater protection standard established under § 257.95(h) for the multiunit system, then all unlined CCR surface impoundments comprising the multiunit groundwater monitoring system are subject to the closure requirements under § 257.101(a) to retrofit or close.

(e) Monitoring wells must be cased in a manner that maintains the integrity of the monitoring well borehole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of groundwater samples. The annular space (*i.e.*, the space between the borehole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the groundwater.

(1) The owner or operator of the CCR unit must document and include in the operating record the design, installation, development, and decommissioning of any monitoring wells, piezometers and other measurement, sampling, and analytical devices. The qualified professional engineer must be given access to this documentation when completing the groundwater monitoring system certification required under paragraph (f) of this section.

(2) The monitoring wells, piezometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to the design specifications throughout the life of the monitoring program.

(f) The owner or operator must obtain a certification from a qualified professional engineer stating that the groundwater monitoring system has been designed and constructed to meet the requirements of this section. If the groundwater monitoring system

includes the minimum number of monitoring wells specified in paragraph (c)(1) of this section, the certification must document the basis supporting this determination.

(g) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(h), the notification requirements specified in § 257.106(h), and the internet requirements specified in § 257.107(h).

§ 257.92 [Reserved]

§ 257.93 Groundwater sampling and analysis requirements.

(a) The groundwater monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of groundwater quality at the background and downgradient wells required by § 257.91. The owner or operator of the CCR unit must develop a sampling and analysis program that includes procedures and techniques for:

- (1) Sample collection;
- (2) Sample preservation and shipment;
- (3) Analytical procedures;
- (4) Chain of custody control; and
- (5) Quality assurance and quality control.

(b) The groundwater monitoring program must include sampling and analytical methods that are appropriate for groundwater sampling and that accurately measure hazardous constituents and other monitoring parameters in groundwater samples. For purposes of §§ 257.90 through 257.98, the term *constituent* refers to both hazardous constituents and other monitoring parameters listed in either appendix III or IV of this part.

(c) Groundwater elevations must be measured in each well immediately prior to purging, each time groundwater is sampled. The owner or operator of the CCR unit must determine the rate and direction of groundwater flow each time groundwater is sampled. Groundwater elevations in wells which monitor the same CCR management area must be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction.

(d) The owner or operator of the CCR unit must establish background groundwater quality in a hydraulically upgradient or background well(s) for each of the constituents required in the particular groundwater monitoring program that applies to the CCR unit as determined under § 257.94(a) or

§ 257.95(a). Background groundwater quality may be established at wells that are not located hydraulically upgradient from the CCR unit if it meets the requirements of § 257.91(a)(1).

(e) The number of samples collected when conducting detection monitoring and assessment monitoring (for both downgradient and background wells) must be consistent with the statistical procedures chosen under paragraph (f) of this section and the performance standards under paragraph (g) of this section. The sampling procedures shall be those specified under § 257.94(b) through (d) for detection monitoring, § 257.95(b) through (d) for assessment monitoring, and § 257.96(b) for corrective action.

(f) The owner or operator of the CCR unit must select one of the statistical methods specified in paragraphs (f)(1) through (5) of this section to be used in evaluating groundwater monitoring data for each specified constituent. The statistical test chosen shall be conducted separately for each constituent in each monitoring well.

(1) A parametric analysis of variance followed by multiple comparison procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.

(2) An analysis of variance based on ranks followed by multiple comparison procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.

(3) A tolerance or prediction interval procedure, in which an interval for each constituent is established from the distribution of the background data and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.

(4) A control chart approach that gives control limits for each constituent.

(5) Another statistical test method that meets the performance standards of paragraph (g) of this section.

(g) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the selected statistical method is appropriate for evaluating the groundwater monitoring data for the CCR management area. The certification must include a narrative description of the statistical method selected to evaluate the groundwater monitoring data.

(g) Any statistical method chosen under paragraph (f) of this section shall comply with the following performance standards, as appropriate, based on the statistical test method used:

(1) The statistical method used to evaluate groundwater monitoring data shall be appropriate for the distribution of constituents. Normal distributions of data values shall use parametric methods. Non-normal distributions shall use non-parametric methods. If the distribution of the constituents is shown by the owner or operator of the CCR unit to be inappropriate for a normal theory test, then the data must be transformed or a distribution-free (non-parametric) theory test must be used. If the distributions for the constituents differ, more than one statistical method may be needed.

(2) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a groundwater protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparison procedure is used, the Type I experiment wise error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.

(3) If a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its associated parameter values shall be such that this approach is at least as effective as any other approach in this section for evaluating groundwater data. The parameter values shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

(4) If a tolerance interval or a prediction interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be such that this approach is at least as effective as any other approach in this section for evaluating groundwater data. These parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

(5) The statistical method must account for data below the limit of detection with one or more statistical procedures that shall at least as effective as any other approach in this section for evaluating groundwater data. Any practical quantitation limit that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.

(6) If necessary, the statistical method must include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.

(h) The owner or operator of the CCR unit must determine whether or not there is a statistically significant increase over background values for each constituent required in the particular groundwater monitoring program that applies to the CCR unit, as determined under § 257.94(a) or § 257.95(a).

(1) In determining whether a statistically significant increase has occurred, the owner or operator must compare the groundwater quality of each constituent at each monitoring well designated pursuant to § 257.91(a)(2) or (d)(1) to the background value of that constituent, according to the statistical procedures and performance standards specified under paragraphs (f) and (g) of this section.

(2) Within 90 days after completing sampling and analysis, the owner or operator must determine whether there has been a statistically significant increase over background for any constituent at each monitoring well.

(i) The owner or operator must measure "total recoverable metals" concentrations in measuring groundwater quality. Measurement of total recoverable metals captures both the particulate fraction and dissolved fraction of metals in natural waters. Groundwater samples shall not be field-filtered prior to analysis.

(j) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(h), the notification requirements specified in § 257.106(h), and the Internet requirements specified in § 257.107(h).

§ 257.94 Detection monitoring program.

(a) The owner or operator of a CCR unit must conduct detection monitoring at all groundwater monitoring wells consistent with this section. At a minimum, a detection monitoring program must include groundwater

monitoring for all constituents listed in appendix III to this part.

(b) Except as provided in paragraph (d) of this section, the monitoring frequency for the constituents listed in appendix III to this part shall be at least semiannual during the active life of the CCR unit and the post-closure period. For existing CCR landfills and existing CCR surface impoundments, a minimum of eight independent samples from each background and downgradient well must be collected and analyzed for the constituents listed in appendix III and IV to this part no later than October 17, 2017. For new CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units, a minimum of eight independent samples for each background well must be collected and analyzed for the constituents listed in appendices III and IV to this part during the first six months of sampling.

(c) The number of samples collected and analyzed for each background well and downgradient well during subsequent semiannual sampling events must be consistent with § 257.93(e), and must account for any unique characteristics of the site, but must be at least one sample from each background and downgradient well.

(d) The owner or operator of a CCR unit may demonstrate the need for an alternative monitoring frequency for repeated sampling and analysis for constituents listed in appendix III to this part during the active life and the post-closure care period based on the availability of groundwater. If there is not adequate groundwater flow to sample wells semiannually, the alternative frequency shall be no less than annual. The need to vary monitoring frequency must be evaluated on a site-specific basis. The demonstration must be supported by, at a minimum, the information specified in paragraphs (d)(1) and (2) of this section.

(1) Information documenting that the need for less frequent sampling. The alternative frequency must be based on consideration of the following factors:

- (i) Lithology of the aquifer and unsaturated zone;
- (ii) Hydraulic conductivity of the aquifer and unsaturated zone; and
- (iii) Groundwater flow rates.

(2) Information documenting that the alternative frequency will be no less effective in ensuring that any leakage from the CCR unit will be discovered within a timeframe that will not materially delay establishment of an assessment monitoring program.

(3) The owner or operator must obtain a certification from a qualified

professional engineer stating that the demonstration for an alternative groundwater sampling and analysis frequency meets the requirements of this section. The owner or operator must include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer in the annual groundwater monitoring and corrective action report required by § 257.90(e).

(e) If the owner or operator of the CCR unit determines, pursuant to § 257.93(h) that there is a statistically significant increase over background levels for one or more of the constituents listed in appendix III to this part at any monitoring well at the waste boundary specified under § 257.91(a)(2), the owner or operator must:

(1) Except as provided for in paragraph (e)(2) of this section, within 90 days of detecting a statistically significant increase over background levels for any constituent, establish an assessment monitoring program meeting the requirements of § 257.95.

(2) The owner or operator may demonstrate that a source other than the CCR unit caused the statistically significant increase over background levels for a constituent or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The owner or operator must complete the written demonstration within 90 days of detecting a statistically significant increase over background levels to include obtaining a certification from a qualified professional engineer verifying the accuracy of the information in the report. If a successful demonstration is completed within the 90-day period, the owner or operator of the CCR unit may continue with a detection monitoring program under this section. If a successful demonstration is not completed within the 90-day period, the owner or operator of the CCR unit must initiate an assessment monitoring program as required under § 257.95. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer.

(3) The owner or operator of a CCR unit must prepare a notification stating that an assessment monitoring program has been established. The owner or operator has completed the notification when the notification is placed in the facility's operating record as required by § 257.105(h)(5).

(f) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(h), the notification requirements specified in § 257.106(h), and the Internet requirements specified in § 257.107(h).

§ 257.95 Assessment monitoring program.

(a) Assessment monitoring is required whenever a statistically significant increase over background levels has been detected for one or more of the constituents listed in appendix III to this part.

(b) Within 90 days of triggering an assessment monitoring program, and annually thereafter, the owner or operator of the CCR unit must sample and analyze the groundwater for all constituents listed in appendix IV to this part. The number of samples collected and analyzed for each well during each sampling event must be consistent with § 257.93(e), and must account for any unique characteristics of the site, but must be at least one sample from each well.

(c) The owner or operator of a CCR unit may demonstrate the need for an alternative monitoring frequency for repeated sampling and analysis for constituents listed in appendix IV to this part during the active life and the post-closure care period based on the availability of groundwater. If there is not adequate groundwater flow to sample wells semiannually, the alternative frequency shall be no less than annual. The need to vary monitoring frequency must be evaluated on a site-specific basis. The demonstration must be supported by, at a minimum, the information specified in paragraphs (c)(1) and (2) of this section.

(1) Information documenting that the need for less frequent sampling. The alternative frequency must be based on consideration of the following factors:

- (i) Lithology of the aquifer and unsaturated zone;
- (ii) Hydraulic conductivity of the aquifer and unsaturated zone; and
- (iii) Groundwater flow rates.

(2) Information documenting that the alternative frequency will be no less effective in ensuring that any leakage from the CCR unit will be discovered within a timeframe that will not materially delay the initiation of any necessary remediation measures.

(3) The owner or operator must obtain a certification from a qualified professional engineer stating that the demonstration for an alternative groundwater sampling and analysis frequency meets the requirements of this section. The owner or operator must

include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer in the annual groundwater monitoring and corrective action report required by § 257.90(e).

(d) After obtaining the results from the initial and subsequent sampling events required in paragraph (b) of this section, the owner or operator must:

(1) Within 90 days of obtaining the results, and on at least a semiannual basis thereafter, resample all wells that were installed pursuant to the requirements of § 257.91, conduct analyses for all parameters in appendix III to this part and for those constituents in appendix IV to this part that are detected in response to paragraph (b) of this section, and record their concentrations in the facility operating record. The number of samples collected and analyzed for each background well and downgradient well during subsequent semiannual sampling events must be consistent with § 257.93(e), and must account for any unique characteristics of the site, but must be at least one sample from each background and downgradient well;

(2) Establish groundwater protection standards for all constituents detected pursuant to paragraph (b) or (d) of this section. The groundwater protection standards must be established in accordance with paragraph (h) of this section; and

(3) Include the recorded concentrations required by paragraph (d)(1) of this section, identify the background concentrations established under § 257.94(b), and identify the groundwater protection standards established under paragraph (d)(2) of this section in the annual groundwater monitoring and corrective action report required by § 257.90(e).

(e) If the concentrations of all constituents listed in appendices III and IV to this part are shown to be at or below background values, using the statistical procedures in § 257.93(g), for two consecutive sampling events, the owner or operator may return to detection monitoring of the CCR unit. The owner or operator must prepare a notification stating that detection monitoring is resuming for the CCR unit. The owner or operator has completed the notification when the notification is placed in the facility's operating record as required by § 257.105(h)(7).

(f) If the concentrations of any constituent in appendices III and IV to this part are above background values, but all concentrations are below the groundwater protection standard

established under paragraph (h) of this section, using the statistical procedures in § 257.93(g), the owner or operator must continue assessment monitoring in accordance with this section.

(g) If one or more constituents in appendix IV to this part are detected at statistically significant levels above the groundwater protection standard established under paragraph (h) of this section in any sampling event, the owner or operator must prepare a notification identifying the constituents in appendix IV to this part that have exceeded the groundwater protection standard. The owner or operator has completed the notification when the notification is placed in the facility's operating record as required by § 257.105(h)(8). The owner or operator of the CCR unit also must:

(1) Characterize the nature and extent of the release and any relevant site conditions that may affect the remedy ultimately selected. The characterization must be sufficient to support a complete and accurate assessment of the corrective measures necessary to effectively clean up all releases from the CCR unit pursuant to § 257.96. Characterization of the release includes the following minimum measures:

(i) Install additional monitoring wells necessary to define the contaminant plume(s);

(ii) Collect data on the nature and estimated quantity of material released including specific information on the constituents listed in appendix IV of this part and the levels at which they are present in the material released;

(iii) Install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with paragraph (d)(1) of this section; and

(iv) Sample all wells in accordance with paragraph (d)(1) of this section to characterize the nature and extent of the release.

(2) Notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off-site if indicated by sampling of wells in accordance with paragraph (g)(1) of this section. The owner or operator has completed the notifications when they are placed in the facility's operating record as required by § 257.105(h)(8).

(3) Within 90 days of finding that any of the constituents listed in appendix IV to this part have been detected at a statistically significant level exceeding the groundwater protection standards the owner or operator must either:

(i) Initiate an assessment of corrective measures as required by § 257.96; or

(ii) Demonstrate that a source other than the CCR unit caused the contamination, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Any such demonstration must be supported by a report that includes the factual or evidentiary basis for any conclusions and must be certified to be accurate by a qualified professional engineer. If a successful demonstration is made, the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to this section, and may return to detection monitoring if the constituents in appendices III and IV to this part are at or below background as specified in paragraph (e) of this section. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer.

(4) If a successful demonstration has not been made at the end of the 90 day period provided by paragraph (g)(3)(ii) of this section, the owner or operator of the CCR unit must initiate the assessment of corrective measures requirements under § 257.96.

(5) If an assessment of corrective measures is required under § 257.96 by either paragraph (g)(3)(i) or (g)(4) of this section, and if the CCR unit is an existing unlined CCR surface impoundment as determined by § 257.71(a), then the CCR unit is subject to the closure requirements under § 257.101(a) to retrofit or close. In addition, the owner or operator must prepare a notification stating that an assessment of corrective measures has been initiated.

(h) The owner or operator of the CCR unit must establish a groundwater protection standard for each constituent in appendix IV to this part detected in the groundwater. The groundwater protection standard shall be:

(1) For constituents for which a maximum contaminant level (MCL) has been established under §§ 141.62 and 141.66 of this title, the MCL for that constituent;

(2) For constituents for which an MCL has not been established, the background concentration for the constituent established from wells in accordance with § 257.91; or

(3) For constituents for which the background level is higher than the MCL identified under paragraph (h)(1)

of this section, the background concentration.

(i) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(h), the notification requirements specified in § 257.106(h), and the Internet requirements specified in § 257.107(h).

§ 257.96 Assessment of corrective measures.

(a) Within 90 days of finding that any constituent listed in appendix IV to this part has been detected at a statistically significant level exceeding the groundwater protection standard defined under § 257.95(h), or immediately upon detection of a release from a CCR unit, the owner or operator must initiate an assessment of corrective measures to prevent further releases, to remediate any releases and to restore affected area to original conditions. The assessment of corrective measures must be completed within 90 days, unless the owner or operator demonstrates the need for additional time to complete the assessment of corrective measures due to site-specific conditions or circumstances. The owner or operator must obtain a certification from a qualified professional engineer attesting that the demonstration is accurate. The 90-day deadline to complete the assessment of corrective measures may be extended for no longer than 60 days. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer.

(b) The owner or operator of the CCR unit must continue to monitor groundwater in accordance with the assessment monitoring program as specified in § 257.95.

(c) The assessment under paragraph (a) of this section must include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under § 257.97 addressing at least the following:

(1) The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;

(2) The time required to begin and complete the remedy;

(3) The institutional requirements, such as state or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(s).

(d) The owner or operator must place the completed assessment of corrective measures in the facility's operating record. The assessment has been completed when it is placed in the facility's operating record as required by § 257.105(h)(10).

(e) The owner or operator must discuss the results of the corrective measures assessment at least 30 days prior to the selection of remedy, in a public meeting with interested and affected parties.

(f) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(h), the notification requirements specified in § 257.106(h), and the Internet requirements specified in § 257.107(h).

§ 257.97 Selection of remedy.

(a) Based on the results of the corrective measures assessment conducted under § 257.96, the owner or operator must, as soon as feasible, select a remedy that, at a minimum, meets the standards listed in paragraph (b) of this section. This requirement applies to, not in place of, any applicable standards under the Occupational Safety and Health Act. The owner or operator must prepare a semiannual report describing the progress in selecting and designing the remedy. Upon selection of a remedy, the owner or operator must prepare a final report describing the selected remedy and how it meets the standards specified in paragraph (b) of this section. The owner or operator must obtain a certification from a qualified professional engineer that the remedy selected meets the requirements of this section. The report has been completed when it is placed in the operating record as required by § 257.105(h)(12).

(b) Remedies must:

- (1) Be protective of human health and the environment;
- (2) Attain the groundwater protection standard as specified pursuant to § 257.95(h);
- (3) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent feasible, further releases of constituents in appendix IV to this part into the environment;
- (4) Remove from the environment as much of the contaminated material that was released from the CCR unit as is feasible, taking into account factors such as avoiding inappropriate disturbance of sensitive ecosystems;
- (5) Comply with standards for management of wastes as specified in § 257.98(d).

(c) In selecting a remedy that meets the standards of paragraph (b) of this section, the owner or operator of the

CCR unit shall consider the following evaluation factors:

(1) The long- and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful based on consideration of the following:

(i) Magnitude of reduction of existing risks;

(ii) Magnitude of residual risks in terms of likelihood of further releases due to CCR remaining following implementation of a remedy;

(iii) The type and degree of long-term management required, including monitoring, operation, and maintenance;

(iv) Short-term risks that might be posed to the community or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and re-disposal of contaminant;

(v) Time until full protection is achieved;

(vi) Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, re-disposal, or containment;

(vii) Long-term reliability of the engineering and institutional controls; and

(viii) Potential need for replacement of the remedy.

(2) The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:

(i) The extent to which containment practices will reduce further releases; and

(ii) The extent to which treatment technologies may be used.

(3) The ease or difficulty of implementing a potential remedy(s) based on consideration of the following types of factors:

(i) Degree of difficulty associated with constructing the technology;

(ii) Expected operational reliability of the technologies;

(iii) Need to coordinate with and obtain necessary approvals and permits from other agencies;

(iv) Availability of necessary equipment and specialists; and

(v) Available capacity and location of needed treatment, storage, and disposal services.

(4) The degree to which community concerns are addressed by a potential remedy(s).

(d) The owner or operator must specify as part of the selected remedy a

schedule(s) for implementing and completing remedial activities. Such a schedule must require the completion of remedial activities within a reasonable period of time taking into consideration the factors set forth in paragraphs (d)(1) through (6) of this section. The owner or operator of the CCR unit must consider the following factors in determining the schedule of remedial activities:

(1) Extent and nature of contamination, as determined by the characterization required under § 257.95(g);

(2) Reasonable probabilities of remedial technologies in achieving compliance with the groundwater protection standards established under § 257.95(h) and other objectives of the remedy;

(3) Availability of treatment or disposal capacity for CCR managed during implementation of the remedy;

(4) Potential risks to human health and the environment from exposure to contamination prior to completion of the remedy;

(5) Resource value of the aquifer including:

(i) Current and future uses;

(ii) Proximity and withdrawal rate of users;

(iii) Groundwater quantity and quality;

(iv) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to CCR constituents;

(v) The hydrogeologic characteristic of the facility and surrounding land; and

(vi) The availability of alternative water supplies; and

(6) Other relevant factors.

(e) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(h), the notification requirements specified in § 257.106(h), and the Internet requirements specified in § 257.107(h).

§ 257.98 Implementation of the corrective action program.

(a) Within 90 days of selecting a remedy under § 257.97, the owner or operator must initiate remedial activities. Based on the schedule established under § 257.97(d) for implementation and completion of remedial activities the owner or operator must:

(1) Establish and implement a corrective action groundwater monitoring program that:

(i) At a minimum, meets the requirements of an assessment monitoring program under § 257.95;

(ii) Documents the effectiveness of the corrective action remedy; and

(iii) Demonstrates compliance with the groundwater protection standard pursuant to paragraph (c) of this section.

(2) Implement the corrective action remedy selected under § 257.97; and

(3) Take any interim measures necessary to reduce the contaminants leaching from the CCR unit, and/or potential exposures to human or ecological receptors. Interim measures must, to the greatest extent feasible, be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to § 257.97. The following factors must be considered by an owner or operator in determining whether interim measures are necessary:

(i) Time required to develop and implement a final remedy;

(ii) Actual or potential exposure of nearby populations or environmental receptors to any of the constituents listed in appendix IV of this part;

(iii) Actual or potential contamination of drinking water supplies or sensitive ecosystems;

(iv) Further degradation of the groundwater that may occur if remedial action is not initiated expeditiously;

(v) Weather conditions that may cause any of the constituents listed in appendix IV to this part to migrate or be released;

(vi) Potential for exposure to any of the constituents listed in appendix IV to this part as a result of an accident or failure of a container or handling system; and

(vii) Other situations that may pose threats to human health and the environment.

(b) If an owner or operator of the CCR unit, determines, at any time, that compliance with the requirements of § 257.97(b) is not being achieved through the remedy selected, the owner or operator must implement other methods or techniques that could feasibly achieve compliance with the requirements.

(c) Remedies selected pursuant to § 257.97 shall be considered complete when:

(1) The owner or operator of the CCR unit demonstrates compliance with the groundwater protection standards established under § 257.95(h) has been achieved at all points within the plume of contamination that lie beyond the groundwater monitoring well system established under § 257.91.

(2) Compliance with the groundwater protection standards established under § 257.95(h) has been achieved by demonstrating that concentrations of constituents listed in appendix IV to this part have not exceeded the groundwater protection standard(s) for a

period of three consecutive years using the statistical procedures and performance standards in § 257.93(f) and (g).

(3) All actions required to complete the remedy have been satisfied.

(d) All CCR that are managed pursuant to a remedy required under § 257.97, or an interim measure required under paragraph (a)(3) of this section, shall be managed in a manner that complies with all applicable RCRA requirements.

(e) Upon completion of the remedy, the owner or operator must prepare a notification stating that the remedy has been completed. The owner or operator must obtain a certification from a qualified professional engineer attesting that the remedy has been completed in compliance with the requirements of paragraph (c) of this section. The report has been completed when it is placed in the operating record as required by § 257.105(h)(13).

(f) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(h), the notification requirements specified in § 257.106(h), and the internet requirements specified in § 257.107(h).

Closure and Post-Closure Care

§ 257.100 Inactive CCR surface impoundments.

(a) Except as provided by paragraph (b) of this section, inactive CCR surface impoundments are subject to all of the requirements of this subpart applicable to existing CCR surface impoundments.

(b) An owner or operator of an inactive CCR surface impoundment that completes closure of such CCR unit, and meets all of the requirements of either paragraphs (b)(1) through (4) of this section or paragraph (b)(5) of this section no later than April 17, 2018, is exempt from all other requirements of this subpart.

(1) *Closure by leaving CCR in place.* If the owner or operator of the inactive CCR surface impoundment elects to close the CCR surface impoundment by leaving CCR in place, the owner or operator must ensure that, at a minimum, the CCR unit is closed in a manner that will:

(i) Control, minimize or eliminate, to the maximum extent feasible, post-closure infiltration of liquids into the waste and releases of CCR, leachate, or contaminated run-off to the ground or surface waters or to the atmosphere;

(ii) Preclude the probability of future impoundment of water, sediment, or slurry;

(iii) Include measures that provide for major slope stability to prevent the

sloughing or movement of the final cover system; and

(iv) Minimize the need for further maintenance of the CCR unit.

(2) The owner or operator of the inactive CCR surface impoundment must meet the requirements of paragraphs (b)(2)(i) and (ii) of this section prior to installing the final cover system required under paragraph (b)(3) of this section.

(i) Free liquids must be eliminated by removing liquid wastes or solidifying the remaining wastes and waste residues.

(ii) Remaining wastes must be stabilized sufficient to support the final cover system.

(3) The owner or operator must install a final cover system that is designed to minimize infiltration and erosion, and at a minimum, meets the requirements of paragraph (b)(3)(i) of this section, or the requirements of an alternative final cover system specified in paragraph (b)(3)(ii) of this section.

(i) The final cover system must be designed and constructed to meet the criteria specified in paragraphs (b)(3)(i)(A) through (D) of this section.

(A) The permeability of the final cover system must be less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-5} centimeters/second, whichever is less.

(B) The infiltration of liquids through the CCR unit must be minimized by the use of an infiltration layer that contains a minimum of 18 inches of earthen material.

(C) The erosion of the final cover system must be minimized by the use of an erosion layer that contains a minimum of six inches of earthen material that is capable of sustaining native plant growth.

(D) The disruption of the integrity of the final cover system must be minimized through a design that accommodates settling and subsidence.

(ii) The owner or operator may select an alternative final cover system design, provided the alternative final cover system is designed and constructed to meet the criteria in paragraphs (b)(3)(ii)(A) through (C) of this section.

(A) The design of the final cover system must include an infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in paragraphs (b)(3)(i)(A) and (B) of this section.

(B) The design of the final cover system must include an erosion layer that provides equivalent protection from wind or water erosion as the erosion layer specified in paragraph (b)(3)(i)(C) of this section.

(C) The disruption of the integrity of the final cover system must be minimized through a design that accommodates settling and subsidence.

(4) The owner or operator of the CCR surface impoundment must obtain a written certification from a qualified professional engineer stating that the design of the final cover system meets either the requirements of paragraphs (b)(3)(i) or (ii) of this section.

(5) *Closure through removal of CCR.* The owner or operator may alternatively elect to close an inactive CCR surface impoundment by removing and decontaminating all areas affected by releases from the CCR surface impoundment. CCR removal and decontamination of the CCR surface impoundment are complete when all CCR in the inactive CCR surface impoundment is removed, including the bottom liner of the CCR unit.

(6) The owner or operator of the CCR surface impoundment must obtain a written certification from a qualified professional engineer that closure of the CCR surface impoundment under either paragraphs (b)(1) through (4) or (b)(5) of this section is technically feasible within the timeframe in paragraph (b) of this section.

(7) If the owner or operator of the CCR surface impoundment fails to complete closure of the inactive CCR surface impoundment within the timeframe in paragraph (b) of this section, the CCR unit must comply with all of the requirements applicable to existing CCR surface impoundments under this subpart.

(c) *Required notices and progress reports.* An owner or operator of an inactive CCR surface impoundment that closes in accordance with paragraph (b) of this section must complete the notices and progress reports specified in paragraphs (c)(1) through (3) of this section.

(1) No later than December 17, 2015, the owner or operator must prepare and place in the facility's operating record a notification of intent to initiate closure of the CCR surface impoundment. The notification must state that the CCR surface impoundment is an inactive CCR surface impoundment closing under the requirements of paragraph (b) of this section. The notification must also include a narrative description of how the CCR surface impoundment will be closed, a schedule for completing closure activities, and the required certifications under paragraphs (b)(4) and (6) of this section, if applicable.

(2) The owner or operator must prepare periodic progress reports summarizing the progress of closure implementation, including a description

of the actions completed to date, any problems encountered and a description of the actions taken to resolve the problems, and projected closure activities for the upcoming year. The annual progress reports must be completed according to the following schedule:

(i) The first annual progress report must be prepared no later than 13 months after completing the notification of intent to initiate closure required by paragraph (c)(1) of this section.

(ii) The second annual progress report must be prepared no later than 12 months after completing the first progress report required by paragraph (c)(2)(i) of this section.

(iii) The owner or operator has completed the progress reports specified in paragraph (c)(2) of this section when the reports are placed in the facility's operating record as required by § 257.105(i)(2).

(3) The owner or operator must prepare and place in the facility's operating record a notification of completion of closure of the CCR surface impoundment. The notification must be submitted within 60 days of completing closure of the CCR surface impoundment and must include a written certification from a qualified professional engineer stating that the CCR surface impoundment was closed in accordance with the requirements of either paragraph (b)(1) through (4) or (b)(5) of this section.

(d) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(i), the notification requirements specified in § 257.106(i), and the internet requirements specified in § 257.107(i).

§ 257.101 Closure or retrofit of CCR units.

(a) The owner or operator of an existing unlined CCR surface impoundment, as determined under § 257.71(a), is subject to the requirements of paragraph (a)(1) of this section.

(1) Except as provided by paragraph (a)(3) of this section, if at any time after October 19, 2015 an owner or operator of an existing unlined CCR surface impoundment determines in any sampling event that the concentrations of one or more constituents listed in appendix IV to this part are detected at statistically significant levels above the groundwater protection standard established under § 257.95(h) for such CCR unit, within six months of making such determination, the owner or operator of the existing unlined CCR surface impoundment must cease placing CCR and non-CCR wastestreams

into such CCR surface impoundment and either retrofit or close the CCR unit in accordance with the requirements of § 257.102.

(2) An owner or operator of an existing unlined CCR surface impoundment that closes in accordance with paragraph (a)(1) of this section must include a statement in the notification required under § 257.102(g) or (k)(5) that the CCR surface impoundment is closing or retrofitting under the requirements of paragraph (a)(1) of this section.

(3) The timeframe specified in paragraph (a)(1) of this section does not apply if the owner or operator complies with the alternative closure procedures specified in § 257.103.

(4) At any time after the initiation of closure under paragraph (a)(1) of this section, the owner or operator may cease closure activities and initiate a retrofit of the CCR unit in accordance with the requirements of § 257.102(k).

(b) The owner or operator of an existing CCR surface impoundment is subject to the requirements of paragraph (b)(1) of this section.

(1) Except as provided by paragraph (b)(4) of this section, within six months of determining that an existing CCR surface impoundment has not demonstrated compliance with any location standard specified in §§ 257.60(a), 257.61(a), 257.62(a), 257.63(a), and 257.64(a), the owner or operator of the CCR surface impoundment must cease placing CCR and non-CCR wastestreams into such CCR unit and close the CCR unit in accordance with the requirements of § 257.102.

(2) Within six months of either failing to complete the initial or any subsequent periodic safety factor assessment required by § 257.73(e) by the deadlines specified in § 257.73(f)(1) through (3) or failing to document that the calculated factors of safety for the existing CCR surface impoundment achieve the minimum safety factors specified in § 257.73(e)(1)(i) through (iv), the owner or operator of the CCR surface impoundment must cease placing CCR and non-CCR wastestreams into such CCR unit and close the CCR unit in accordance with the requirements of § 257.102.

(3) An owner or operator of an existing CCR surface impoundment that closes in accordance with paragraphs (b)(1) or (2) of this section must include a statement in the notification required under § 257.102(g) that the CCR surface impoundment is closing under the requirements of paragraphs (b)(1) or (2) of this section.

(4) The timeframe specified in paragraph (b)(1) of this section does not apply if the owner or operator complies with the alternative closure procedures specified in § 257.103.

(c) The owner or operator of a new CCR surface impoundment is subject to the requirements of paragraph (c)(1) of this section.

(1) Within six months of either failing to complete the initial or any subsequent periodic safety factor assessment required by § 257.74(e) by the deadlines specified in § 257.74(f)(1) through (3) or failing to document that the calculated factors of safety for the new CCR surface impoundment achieve the minimum safety factors specified in § 257.74(e)(1)(i) through (v), the owner or operator of the CCR surface impoundment must cease placing CCR and non-CCR wastestreams into such CCR unit and close the CCR unit in accordance with the requirements of § 257.102.

(2) An owner or operator of a new CCR surface impoundment that closes in accordance with paragraph (c)(1) of this section must include a statement in the notification required under § 257.102(g) that the CCR surface impoundment is closing under the requirements of paragraph (c)(1) of this section.

(d) The owner or operator of an existing CCR landfill is subject to the requirements of paragraph (d)(1) of this section.

(1) Except as provided by paragraph (d)(3) of this section, within six months of determining that an existing CCR landfill has not demonstrated compliance with the location restriction for unstable areas specified in § 257.64(a), the owner or operator of the CCR unit must cease placing CCR and non-CCR waste streams into such CCR landfill and close the CCR unit in accordance with the requirements of § 257.102.

(2) An owner or operator of an existing CCR landfill that closes in accordance with paragraph (d)(1) of this section must include a statement in the notification required under § 257.102(g) that the CCR landfill is closing under the requirements of paragraph (d)(1) of this section.

(3) The timeframe specified in paragraph (d)(1) of this section does not apply if the owner or operator complies with the alternative closure procedures specified in § 257.103.

§ 257.102 Criteria for conducting the closure or retrofit of CCR units.

(a) Closure of a CCR landfill, CCR surface impoundment, or any lateral expansion of a CCR unit must be

completed either by leaving the CCR in place and installing a final cover system or through removal of the CCR and decontamination of the CCR unit, as described in paragraphs (b) through (j) of this section. Retrofit of a CCR surface impoundment must be completed in accordance with the requirements in paragraph (k) of this section.

(b) *Written closure plan*—(1) *Content of the plan.* The owner or operator of a CCR unit must prepare a written closure plan that describes the steps necessary to close the CCR unit at any point during the active life of the CCR unit consistent with recognized and generally accepted good engineering practices. The written closure plan must include, at a minimum, the information specified in paragraphs (b)(1)(i) through (vi) of this section.

(i) A narrative description of how the CCR unit will be closed in accordance with this section.

(ii) If closure of the CCR unit will be accomplished through removal of CCR from the CCR unit, a description of the procedures to remove the CCR and decontaminate the CCR unit in accordance with paragraph (c) of this section.

(iii) If closure of the CCR unit will be accomplished by leaving CCR in place, a description of the final cover system, designed in accordance with paragraph (d) of this section, and the methods and procedures to be used to install the final cover. The closure plan must also discuss how the final cover system will achieve the performance standards specified in paragraph (d) of this section.

(iv) An estimate of the maximum inventory of CCR ever on-site over the active life of the CCR unit.

(v) An estimate of the largest area of the CCR unit ever requiring a final cover as required by paragraph (d) of this section at any time during the CCR unit's active life.

(vi) A schedule for completing all activities necessary to satisfy the closure criteria in this section, including an estimate of the year in which all closure activities for the CCR unit will be completed. The schedule should provide sufficient information to describe the sequential steps that will be taken to close the CCR unit, including identification of major milestones such as coordinating with and obtaining necessary approvals and permits from other agencies, the dewatering and stabilization phases of CCR surface impoundment closure, or installation of the final cover system, and the estimated timeframes to complete each step or phase of CCR unit closure. When preparing the written closure plan, if the

owner or operator of a CCR unit estimates that the time required to complete closure will exceed the timeframes specified in paragraph (f)(1) of this section, the written closure plan must include the site-specific information, factors and considerations that would support any time extension sought under paragraph (f)(2) of this section.

(2) *Timeframes for preparing the initial written closure plan*—(i) *Existing CCR landfills and existing CCR surface impoundments.* No later than October 17, 2016, the owner or operator of the CCR unit must prepare an initial written closure plan consistent with the requirements specified in paragraph (b)(1) of this section.

(ii) *New CCR landfills and new CCR surface impoundments, and any lateral expansion of a CCR unit.* No later than the date of the initial receipt of CCR in the CCR unit, the owner or operator must prepare an initial written closure plan consistent with the requirements specified in paragraph (b)(1) of this section.

(iii) The owner or operator has completed the written closure plan when the plan, including the certification required by paragraph (b)(4) of this section, has been placed in the facility's operating record as required by § 257.105(i)(4).

(3) *Amendment of a written closure plan.* (i) The owner or operator may amend the initial or any subsequent written closure plan developed pursuant to paragraph (b)(1) of this section at any time.

(ii) The owner or operator must amend the written closure plan whenever:

(A) There is a change in the operation of the CCR unit that would substantially affect the written closure plan in effect; or

(B) Before or after closure activities have commenced, unanticipated events necessitate a revision of the written closure plan.

(iii) The owner or operator must amend the closure plan at least 60 days prior to a planned change in the operation of the facility or CCR unit, or no later than 60 days after an unanticipated event requires the need to revise an existing written closure plan. If a written closure plan is revised after closure activities have commenced for a CCR unit, the owner or operator must amend the current closure plan no later than 30 days following the triggering event.

(4) The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the initial and any amendment of

the written closure plan meets the requirements of this section.

(c) *Closure by removal of CCR.* An owner or operator may elect to close a CCR unit by removing and decontaminating all areas affected by releases from the CCR unit. CCR removal and decontamination of the CCR unit are complete when constituent concentrations throughout the CCR unit and any areas affected by releases from the CCR unit have been removed and groundwater monitoring concentrations do not exceed the groundwater protection standard established pursuant to § 257.95(h) for constituents listed in appendix IV to this part.

(d) *Closure performance standard when leaving CCR in place*—(1) The owner or operator of a CCR unit must ensure that, at a minimum, the CCR unit is closed in a manner that will:

(i) Control, minimize or eliminate, to the maximum extent feasible, post-closure infiltration of liquids into the waste and releases of CCR, leachate, or contaminated run-off to the ground or surface waters or to the atmosphere;

(ii) Preclude the probability of future impoundment of water, sediment, or slurry;

(iii) Include measures that provide for major slope stability to prevent the sloughing or movement of the final cover system during the closure and post-closure care period;

(iv) Minimize the need for further maintenance of the CCR unit; and

(v) Be completed in the shortest amount of time consistent with recognized and generally accepted good engineering practices.

(2) *Drainage and stabilization of CCR surface impoundments.* The owner or operator of a CCR surface impoundment or any lateral expansion of a CCR surface impoundment must meet the requirements of paragraphs (d)(2)(i) and (ii) of this section prior to installing the final cover system required under paragraph (d)(3) of this section.

(i) Free liquids must be eliminated by removing liquid wastes or solidifying the remaining wastes and waste residues.

(ii) Remaining wastes must be stabilized sufficient to support the final cover system.

(3) *Final cover system.* If a CCR unit is closed by leaving CCR in place, the owner or operator must install a final cover system that is designed to minimize infiltration and erosion, and at a minimum, meets the requirements of paragraph (d)(3)(i) of this section, or the requirements of the alternative final cover system specified in paragraph (d)(3)(ii) of this section.

(i) The final cover system must be designed and constructed to meet the criteria in paragraphs (d)(3)(i)(A) through (D) of this section. The design of the final cover system must be included in the written closure plan required by paragraph (b) of this section.

(A) The permeability of the final cover system must be less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less.

(B) The infiltration of liquids through the closed CCR unit must be minimized by the use of an infiltration layer that contains a minimum of 18 inches of earthen material.

(C) The erosion of the final cover system must be minimized by the use of an erosion layer that contains a minimum of six inches of earthen material that is capable of sustaining native plant growth.

(D) The disruption of the integrity of the final cover system must be minimized through a design that accommodates settling and subsidence.

(ii) The owner or operator may select an alternative final cover system design, provided the alternative final cover system is designed and constructed to meet the criteria in paragraphs (f)(3)(ii)(A) through (D) of this section. The design of the final cover system must be included in the written closure plan required by paragraph (b) of this section.

(A) The design of the final cover system must include an infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in paragraphs (d)(3)(i)(A) and (B) of this section.

(B) The design of the final cover system must include an erosion layer that provides equivalent protection from wind or water erosion as the erosion layer specified in paragraph (d)(3)(i)(C) of this section.

(C) The disruption of the integrity of the final cover system must be minimized through a design that accommodates settling and subsidence.

(iii) The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the design of the final cover system meets the requirements of this section.

(e) *Initiation of closure activities.* Except as provided for in paragraph (e)(4) of this section and § 257.103, the owner or operator of a CCR unit must commence closure of the CCR unit no later than the applicable timeframes specified in either paragraph (e)(1) or (2) of this section.

(1) The owner or operator must commence closure of the CCR unit no

later than 30 days after the date on which the CCR unit either:

(i) Receives the known final receipt of waste, either CCR or any non-CCR waste stream; or

(ii) Removes the known final volume of CCR from the CCR unit for the purpose of beneficial use of CCR.

(2)(i) Except as provided by paragraph (e)(2)(ii) of this section, the owner or operator must commence closure of a CCR unit that has not received CCR or any non-CCR waste stream or is no longer removing CCR for the purpose of beneficial use within two years of the last receipt of waste or within two years of the last removal of CCR material for the purpose of beneficial use.

(ii) Notwithstanding paragraph (e)(2)(i) of this section, the owner or operator of the CCR unit may secure an additional two years to initiate closure of the idle unit provided the owner or operator provides written documentation that the CCR unit will continue to accept wastes or will start removing CCR for the purpose of beneficial use. The documentation must be supported by, at a minimum, the information specified in paragraphs (e)(2)(ii)(A) and (B) of this section. The owner or operator may obtain two-year extensions provided the owner or operator continues to be able to demonstrate that there is reasonable likelihood that the CCR unit will accept wastes in the foreseeable future or will remove CCR from the unit for the purpose of beneficial use. The owner or operator must place each completed demonstration, if more than one time extension is sought, in the facility's operating record as required by § 257.105(i)(5) prior to the end of any two-year period.

(A) Information documenting that the CCR unit has remaining storage or disposal capacity or that the CCR unit can have CCR removed for the purpose of beneficial use; and

(B) Information demonstrating that there is a reasonable likelihood that the CCR unit will resume receiving CCR or non-CCR waste streams in the foreseeable future or that CCR can be removed for the purpose of beneficial use. The narrative must include a best estimate as to when the CCR unit will resume receiving CCR or non-CCR waste streams. The situations listed in paragraphs (e)(2)(ii)(B)(1) through (4) of this section are examples of situations that would support a determination that the CCR unit will resume receiving CCR or non-CCR waste streams in the foreseeable future.

(1) Normal plant operations include periods during which the CCR unit does not receive CCR or non-CCR waste

streams, such as the alternating use of two or more CCR units whereby at any point in time one CCR unit is receiving CCR while CCR is being removed from a second CCR unit after its dewatering.

(2) The CCR unit is dedicated to a coal-fired boiler unit that is temporarily idled (*e.g.*, CCR is not being generated) and there is a reasonable likelihood that the coal-fired boiler will resume operations in the future.

(3) The CCR unit is dedicated to an operating coal-fired boiler (*i.e.*, CCR is being generated); however, no CCR are being placed in the CCR unit because the CCR are being entirely diverted to beneficial uses, but there is a reasonable likelihood that the CCR unit will again be used in the foreseeable future.

(4) The CCR unit currently receives only non-CCR waste streams and those non-CCR waste streams are not generated for an extended period of time, but there is a reasonable likelihood that the CCR unit will again receive non-CCR waste streams in the future.

(iii) In order to obtain additional time extension(s) to initiate closure of a CCR unit beyond the two years provided by paragraph (e)(2)(i) of this section, the owner or operator of the CCR unit must include with the demonstration required by paragraph (e)(2)(ii) of this section the following statement signed by the owner or operator or an authorized representative:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(3) For purposes of this subpart, closure of the CCR unit has commenced if the owner or operator has ceased placing waste and completes any of the following actions or activities:

(i) Taken any steps necessary to implement the written closure plan required by paragraph (b) of this section;

(ii) Submitted a completed application for any required state or agency permit or permit modification; or

(iii) Taken any steps necessary to comply with any state or other agency standards that are a prerequisite, or are otherwise applicable, to initiating or completing the closure of a CCR unit.

(4) The timeframes specified in paragraphs (e)(1) and (2) of this section do not apply to any of the following owners or operators:

(i) An owner or operator of an inactive CCR surface impoundment closing the CCR unit as required by § 257.100(b);

(ii) An owner or operator of an existing unlined CCR surface impoundment closing the CCR unit as required by § 257.101(a);

(iii) An owner or operator of an existing CCR surface impoundment closing the CCR unit as required by § 257.101(b);

(iv) An owner or operator of a new CCR surface impoundment closing the CCR unit as required by § 257.101(c); or

(v) An owner or operator of an existing CCR landfill closing the CCR unit as required by § 257.101(d).

(f) *Completion of closure activities.* (1) Except as provided for in paragraph (f)(2) of this section, the owner or operator must complete closure of the CCR unit:

(i) For existing and new CCR landfills and any lateral expansion of a CCR landfill, within six months of commencing closure activities.

(ii) For existing and new CCR surface impoundments and any lateral expansion of a CCR surface impoundment, within five years of commencing closure activities.

(2)(i) *Extensions of closure timeframes.* The timeframes for completing closure of a CCR unit specified under paragraphs (f)(1) of this section may be extended if the owner or operator can demonstrate that it was not feasible to complete closure of the CCR unit within the required timeframes due to factors beyond the facility's control. If the owner or operator is seeking a time extension beyond the time specified in the written closure plan as required by paragraph (b)(1) of this section, the demonstration must include a narrative discussion providing the basis for additional time beyond that specified in the closure plan. The owner or operator must place each completed demonstration, if more than one time extension is sought, in the facility's operating record as required by § 257.105(i)(6) prior to the end of any two-year period. Factors that may support such a demonstration include:

(A) Complications stemming from the climate and weather, such as unusual amounts of precipitation or a significantly shortened construction season;

(B) Time required to dewater a surface impoundment due to the volume of CCR contained in the CCR unit or the characteristics of the CCR in the unit;

(C) The geology and terrain surrounding the CCR unit will affect the amount of material needed to close the CCR unit; or

(D) Time required or delays caused by the need to coordinate with and obtain necessary approvals and permits from a state or other agency.

(ii) *Maximum time extensions.* (A) CCR surface impoundments of 40 acres or smaller may extend the time to complete closure by no longer than two years.

(B) CCR surface impoundments larger than 40 acres may extend the timeframe to complete closure of the CCR unit multiple times, in two-year increments. For each two-year extension sought, the owner or operator must substantiate the factual circumstances demonstrating the need for the extension. No more than a total of five two-year extensions may be obtained for any CCR surface impoundment.

(C) CCR landfills may extend the timeframe to complete closure of the CCR unit multiple times, in one-year increments. For each one-year extension sought, the owner or operator must substantiate the factual circumstances demonstrating the need for the extension. No more than a total of two one-year extensions may be obtained for any CCR landfill.

(iii) In order to obtain additional time extension(s) to complete closure of a CCR unit beyond the times provided by paragraph (f)(1) of this section, the owner or operator of the CCR unit must include with the demonstration required by paragraph (f)(2)(i) of this section the following statement signed by the owner or operator or an authorized representative:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(3) Upon completion, the owner or operator of the CCR unit must obtain a certification from a qualified professional engineer verifying that closure has been completed in accordance with the closure plan specified in paragraph (b) of this section and the requirements of this section.

(g) No later than the date the owner or operator initiates closure of a CCR unit, the owner or operator must prepare a notification of intent to close a CCR unit. The notification must include the certification by a qualified professional engineer for the design of the final cover system as required by § 257.102(d)(3)(iii), if applicable. The

owner or operator has completed the notification when it has been placed in the facility's operating record as required by § 257.105(i)(7).

(h) Within 30 days of completion of closure of the CCR unit, the owner or operator must prepare a notification of closure of a CCR unit. The notification must include the certification by a qualified professional engineer as required by § 257.102(f)(3). The owner or operator has completed the notification when it has been placed in the facility's operating record as required by § 257.105(i)(8).

(i) *Deed notations.* (1) Except as provided by paragraph (i)(4) of this section, following closure of a CCR unit, the owner or operator must record a notation on the deed to the property, or some other instrument that is normally examined during title search.

(2) The notation on the deed must in perpetuity notify any potential purchaser of the property that:

(i) The land has been used as a CCR unit; and

(ii) Its use is restricted under the post-closure care requirements as provided by § 257.104(d)(1)(iii).

(3) Within 30 days of recording a notation on the deed to the property, the owner or operator must prepare a notification stating that the notation has been recorded. The owner or operator has completed the notification when it has been placed in the facility's operating record as required by § 257.105(i)(9).

(4) An owner or operator that closes a CCR unit in accordance with paragraph (c) of this section is not subject to the requirements of paragraphs (i)(1) through (3) of this section.

(j) The owner or operator of the CCR unit must comply with the closure recordkeeping requirements specified in § 257.105(i), the closure notification requirements specified in § 257.106(i), and the closure Internet requirements specified in § 257.107(i).

(k) *Criteria to retrofit an existing CCR surface impoundment.* (1) To retrofit an existing CCR surface impoundment, the owner or operator must:

(i) First remove all CCR, including any contaminated soils and sediments from the CCR unit; and

(ii) Comply with the requirements in § 257.72.

(iii) A CCR surface impoundment undergoing a retrofit remains subject to all other requirements of this subpart, including the requirement to conduct any necessary corrective action.

(2) *Written retrofit plan—(i) Content of the plan.* The owner or operator must prepare a written retrofit plan that

describes the steps necessary to retrofit the CCR unit consistent with recognized and generally accepted good engineering practices. The written retrofit plan must include, at a minimum, all of the following information:

(A) A narrative description of the specific measures that will be taken to retrofit the CCR unit in accordance with this section.

(B) A description of the procedures to remove all CCR and contaminated soils and sediments from the CCR unit.

(C) An estimate of the maximum amount of CCR that will be removed as part of the retrofit operation.

(D) An estimate of the largest area of the CCR unit that will be affected by the retrofit operation.

(E) A schedule for completing all activities necessary to satisfy the retrofit criteria in this section, including an estimate of the year in which retrofit activities of the CCR unit will be completed.

(ii) *Timeframes for preparing the initial written retrofit plan.* (A) No later than 60 days prior to date of initiating retrofit activities, the owner or operator must prepare an initial written retrofit plan consistent with the requirements specified in paragraph (k)(2) of this section. For purposes of this subpart, initiation of retrofit activities has commenced if the owner or operator has ceased placing waste in the unit and completes any of the following actions or activities:

(1) Taken any steps necessary to implement the written retrofit plan;

(2) Submitted a completed application for any required state or agency permit or permit modification; or

(3) Taken any steps necessary to comply with any state or other agency standards that are a prerequisite, or are otherwise applicable, to initiating or completing the retrofit of a CCR unit.

(B) The owner or operator has completed the written retrofit plan when the plan, including the certification required by paragraph (k)(2)(iv) of this section, has been placed in the facility's operating record as required by § 257.105(j)(1).

(iii) *Amendment of a written retrofit plan.* (A) The owner or operator may amend the initial or any subsequent written retrofit plan at any time.

(B) The owner or operator must amend the written retrofit plan whenever:

(1) There is a change in the operation of the CCR unit that would substantially affect the written retrofit plan in effect; or

(2) Before or after retrofit activities have commenced, unanticipated events

necessitate a revision of the written retrofit plan.

(C) The owner or operator must amend the retrofit plan at least 60 days prior to a planned change in the operation of the facility or CCR unit, or no later than 60 days after an unanticipated event requires the revision of an existing written retrofit plan. If a written retrofit plan is revised after retrofit activities have commenced for a CCR unit, the owner or operator must amend the current retrofit plan no later than 30 days following the triggering event.

(iv) The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the activities outlined in the written retrofit plan, including any amendment of the plan, meet the requirements of this section.

(3) *Deadline for completion of activities related to the retrofit of a CCR unit.* Any CCR surface impoundment that is being retrofitted must complete all retrofit activities within the same time frames and procedures specified for the closure of a CCR surface impoundment in § 257.102(f) or, where applicable, § 257.103.

(4) Upon completion, the owner or operator must obtain a certification from a qualified professional engineer verifying that the retrofit activities have been completed in accordance with the retrofit plan specified in paragraph (k)(2) of this section and the requirements of this section.

(5) No later than the date the owner or operator initiates the retrofit of a CCR unit, the owner or operator must prepare a notification of intent to retrofit a CCR unit. The owner or operator has completed the notification when it has been placed in the facility's operating record as required by § 257.105(j)(5).

(6) Within 30 days of completing the retrofit activities specified in paragraph (k)(1) of this section, the owner or operator must prepare a notification of completion of retrofit activities. The notification must include the certification by a qualified professional engineer as required by paragraph (k)(4) of this section. The owner or operator has completed the notification when it has been placed in the facility's operating record as required by § 257.105(j)(6).

(7) At any time after the initiation of a CCR unit retrofit, the owner or operator may cease the retrofit and initiate closure of the CCR unit in accordance with the requirements of § 257.102.

(8) The owner or operator of the CCR unit must comply with the retrofit recordkeeping requirements specified in

§ 257.105(j), the retrofit notification requirements specified in § 257.106(j), and the retrofit Internet requirements specified in § 257.107(j).

§ 257.103 Alternative closure requirements.

The owner or operator of a CCR landfill, CCR surface impoundment, or any lateral expansion of a CCR unit that is subject to closure pursuant to § 257.101(a), (b)(1), or (d) may continue to receive CCR in the unit provided the owner or operator meets the requirements of either paragraph (a) or (b) of this section.

(a)(1) *No alternative CCR disposal capacity.* Notwithstanding the provisions of § 257.101(a), (b)(1), or (d), a CCR unit may continue to receive CCR if the owner or operator of the CCR unit certifies that the CCR must continue to be managed in that CCR unit due to the absence of alternative disposal capacity both on-site and off-site of the facility. To qualify under this paragraph (a)(1), the owner or operator of the CCR unit must document that all of the following conditions have been met:

(i) No alternative disposal capacity is available on-site or off-site. An increase in costs or the inconvenience of existing capacity is not sufficient to support qualification under this section;

(ii) The owner or operator has made, and continues to make, efforts to obtain additional capacity. Qualification under this subsection lasts only as long as no alternative capacity is available. Once alternative capacity is identified, the owner or operator must arrange to use such capacity as soon as feasible;

(iii) The owner or operator must remain in compliance with all other requirements of this subpart, including the requirement to conduct any necessary corrective action; and

(iv) The owner or operator must prepare an annual progress report documenting the continued lack of alternative capacity and the progress towards the development of alternative CCR disposal capacity.

(2) Once alternative capacity is available, the CCR unit must cease receiving CCR and initiate closure following the timeframes in § 257.102(e) and (f).

(3) If no alternative capacity is identified within five years after the initial certification, the CCR unit must cease receiving CCR and close in accordance with the timeframes in § 257.102(e) and (f).

(b)(1) *Permanent cessation of a coal-fired boiler(s) by a date certain.* Notwithstanding the provisions of § 257.101(a), (b)(1), and (d), a CCR unit may continue to receive CCR if the

owner or operator certifies that the facility will cease operation of the coal-fired boilers within the timeframes specified in paragraphs (b)(2) through (4) of this section, but in the interim period (prior to closure of the coal-fired boiler), the facility must continue to use the CCR unit due to the absence of alternative disposal capacity both on-site and off-site of the facility. To qualify under this paragraph (b)(1), the owner or operator of the CCR unit must document that all of the following conditions have been met:

(i) No alternative disposal capacity is available on-site or off-site. An increase in costs or the inconvenience of existing capacity is not sufficient to support qualification under this section.

(ii) The owner or operator must remain in compliance with all other requirements of this subpart, including the requirement to conduct any necessary corrective action; and

(iii) The owner or operator must prepare an annual progress report documenting the continued lack of alternative capacity and the progress towards the closure of the coal-fired boiler.

(2) For a CCR surface impoundment that is 40 acres or smaller, the coal-fired boiler must cease operation and the CCR surface impoundment must have completed closure no later than October 17, 2023.

(3) For a CCR surface impoundment that is larger than 40 acres, the coal-fired boiler must cease operation, and the CCR surface impoundment must complete closure no later than October 17, 2028.

(4) For a CCR landfill, the coal-fired boiler must cease operation, and the CCR landfill must complete closure no later than April 19, 2021.

(c) Required notices and progress reports. An owner or operator of a CCR unit that closes in accordance with paragraphs (a) or (b) of this section must complete the notices and progress reports specified in paragraphs (c)(1) through (3) of this section.

(1) Within six months of becoming subject to closure pursuant to § 257.101(a), (b)(1), or (d), the owner or operator must prepare and place in the facility's operating record a notification of intent to comply with the alternative closure requirements of this section. The notification must describe why the CCR unit qualifies for the alternative closure provisions under either paragraph (a) or (b) of this section, in addition to providing the documentation and certifications required by paragraph (a) or (b) of this section.

(2) The owner or operator must prepare the periodic progress reports required by paragraphs (a)(1)(iv) or (b)(1)(iii), in addition to describing any problems encountered and a description of the actions taken to resolve the problems. The annual progress reports must be completed according to the following schedule:

(i) The first annual progress report must be prepared no later than 13 months after completing the notification of intent to comply with the alternative closure requirements required by paragraph (c)(1) of this section.

(ii) The second annual progress report must be prepared no later than 12 months after completing the first annual progress report. Additional annual progress reports must be prepared within 12 months of completing the previous annual progress report.

(iii) The owner or operator has completed the progress reports specified in paragraph (c)(2) of this section when the reports are placed in the facility's operating record as required by § 257.105(i)(10).

(3) An owner or operator of a CCR unit must also prepare the notification of intent to close a CCR unit as required by § 257.102(g).

(d) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(i), the notification requirements specified in § 257.106(i), and the Internet requirements specified in § 257.107(i).

§ 257.104 Post-closure care requirements.

(a) *Applicability.* (1) Except as provided by either paragraph (a)(2) or (3) of this section, § 257.104 applies to the owners or operators of CCR landfills, CCR surface impoundments, and all lateral expansions of CCR units that are subject to the closure criteria under § 257.102.

(2) An owner or operator of a CCR unit that elects to close a CCR unit by removing CCR as provided by § 257.102(c) is not subject to the post-closure care criteria under this section.

(3) An owner or operator of an inactive CCR surface impoundment that elects to close a CCR unit pursuant to the requirements under § 257.100(b) is not subject to the post-closure care criteria under this section.

(b) *Post-closure care maintenance requirements.* Following closure of the CCR unit, the owner or operator must conduct post-closure care for the CCR unit, which must consist of at least the following:

(1) Maintaining the integrity and effectiveness of the final cover system, including making repairs to the final

cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover;

(2) If the CCR unit is subject to the design criteria under § 257.70, maintaining the integrity and effectiveness of the leachate collection and removal system and operating the leachate collection and removal system in accordance with the requirements of § 257.70; and

(3) Maintaining the groundwater monitoring system and monitoring the groundwater in accordance with the requirements of §§ 257.90 through 257.98.

(c) *Post-closure care period.* (1) Except as provided by paragraph (c)(2) of this section, the owner or operator of the CCR unit must conduct post-closure care for 30 years.

(2) If at the end of the post-closure care period the owner or operator of the CCR unit is operating under assessment monitoring in accordance with § 257.95, the owner or operator must continue to conduct post-closure care until the owner or operator returns to detection monitoring in accordance with § 257.95.

(d) *Written post-closure plan—(1) Content of the plan.* The owner or operator of a CCR unit must prepare a written post-closure plan that includes, at a minimum, the information specified in paragraphs (d)(1)(i) through (iii) of this section.

(i) A description of the monitoring and maintenance activities required in paragraph (b) of this section for the CCR unit, and the frequency at which these activities will be performed;

(ii) The name, address, telephone number, and email address of the person or office to contact about the facility during the post-closure care period; and

(iii) A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other component of the containment system, or the function of the monitoring systems unless necessary to comply with the requirements in this subpart. Any other disturbance is allowed if the owner or operator of the CCR unit demonstrates that disturbance of the final cover, liner, or other component of the containment system, including any removal of CCR, will not increase the potential threat to human health or the environment. The demonstration must be certified by a qualified professional engineer, and notification shall be provided to the State Director that the demonstration has been placed in the

operating record and on the owners or operator's publicly accessible Internet site.

(2) *Deadline to prepare the initial written post-closure plan—(i) Existing CCR landfills and existing CCR surface impoundments.* No later than October 17, 2016, the owner or operator of the CCR unit must prepare an initial written post-closure plan consistent with the requirements specified in paragraph (d)(1) of this section.

(ii) *New CCR landfills, new CCR surface impoundments, and any lateral expansion of a CCR unit.* No later than the date of the initial receipt of CCR in the CCR unit, the owner or operator must prepare an initial written post-closure plan consistent with the requirements specified in paragraph (d)(1) of this section.

(iii) The owner or operator has completed the written post-closure plan when the plan, including the certification required by paragraph (d)(4) of this section, has been placed in the facility's operating record as required by § 257.105(i)(4).

(3) *Amendment of a written post-closure plan.* (i) The owner or operator may amend the initial or any subsequent written post-closure plan developed pursuant to paragraph (d)(1) of this section at any time.

(ii) The owner or operator must amend the written closure plan whenever:

(A) There is a change in the operation of the CCR unit that would substantially affect the written post-closure plan in effect; or

(B) After post-closure activities have commenced, unanticipated events necessitate a revision of the written post-closure plan.

(iii) The owner or operator must amend the written post-closure plan at least 60 days prior to a planned change in the operation of the facility or CCR unit, or no later than 60 days after an unanticipated event requires the need to revise an existing written post-closure plan. If a written post-closure plan is revised after post-closure activities have commenced for a CCR unit, the owner or operator must amend the written post-closure plan no later than 30 days following the triggering event.

(4) The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the initial and any amendment of the written post-closure plan meets the requirements of this section.

(e) *Notification of completion of post-closure care period.* No later than 60 days following the completion of the post-closure care period, the owner or operator of the CCR unit must prepare

a notification verifying that post-closure care has been completed. The notification must include the certification by a qualified professional engineer verifying that post-closure care has been completed in accordance with the closure plan specified in paragraph (d) of this section and the requirements of this section. The owner or operator has completed the notification when it has been placed in the facility's operating record as required by § 257.105(i)(13).

(f) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(i), the notification requirements specified in § 257.106(i), and the Internet requirements specified in § 257.107(i).

Recordkeeping, Notification, and Posting of Information to the Internet

§ 257.105 Recordkeeping requirements.

(a) Each owner or operator of a CCR unit subject to the requirements of this subpart must maintain files of all information required by this section in a written operating record at their facility.

(b) Unless specified otherwise, each file must be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, record, or study.

(c) An owner or operator of more than one CCR unit subject to the provisions of this subpart may comply with the requirements of this section in one recordkeeping system provided the system identifies each file by the name of each CCR unit. The files may be maintained on microfilm, on a computer, on computer disks, on a storage system accessible by a computer, on magnetic tape disks, or on microfiche.

(d) The owner or operator of a CCR unit must submit to the State Director and/or appropriate Tribal authority any demonstration or documentation required by this subpart, if requested, when such information is not otherwise available on the owner or operator's publicly accessible Internet site.

(e) *Location restrictions.* The owner or operator of a CCR unit subject to this subpart must place the demonstrations documenting whether or not the CCR unit is in compliance with the requirements under §§ 257.60(a), 257.61(a), 257.62(a), 257.63(a), and 257.64(a), as it becomes available, in the facility's operating record.

(f) *Design criteria.* The owner or operator of a CCR unit subject to this subpart must place the following

information, as it becomes available, in the facility's operating record:

(1) The design and construction certifications as required by § 257.70(e) and (f).

(2) The documentation of liner type as required by § 257.71(a).

(3) The design and construction certifications as required by § 257.72(c) and (d).

(4) Documentation prepared by the owner or operator stating that the permanent identification marker was installed as required by §§ 257.73(a)(1) and 257.74(a)(1).

(5) The initial and periodic hazard potential classification assessments as required by §§ 257.73(a)(2) and 257.74(a)(2).

(6) The emergency action plan (EAP), and any amendment of the EAP, as required by §§ 257.73(a)(3) and 257.74(a)(3), except that only the most recent EAP must be maintained in the facility's operating record irrespective of the time requirement specified in paragraph (b) of this section.

(7) Documentation prepared by the owner or operator recording the annual face-to-face meeting or exercise between representatives of the owner or operator of the CCR unit and the local emergency responders as required by §§ 257.73(a)(3)(i)(E) and 257.74(a)(3)(i)(E).

(8) Documentation prepared by the owner or operator recording all activations of the emergency action plan as required by §§ 257.73(a)(3)(v) and 257.74(a)(3)(v).

(9) The history of construction, and any revisions of it, as required by § 257.73(c), except that these files must be maintained until the CCR unit completes closure of the unit in accordance with § 257.102.

(10) The initial and periodic structural stability assessments as required by §§ 257.73(d) and 257.74(d).

(11) Documentation detailing the corrective measures taken to remedy the deficiency or release as required by §§ 257.73(d)(2) and 257.74(d)(2).

(12) The initial and periodic safety factor assessments as required by §§ 257.73(e) and 257.74(e).

(13) The design and construction plans, and any revisions of it, as required by § 257.74(c), except that these files must be maintained until the CCR unit completes closure of the unit in accordance with § 257.102.

(g) *Operating criteria.* The owner or operator of a CCR unit subject to this subpart must place the following information, as it becomes available, in the facility's operating record:

(1) The CCR fugitive dust control plan, and any subsequent amendment of

the plan, required by § 257.80(b), except that only the most recent control plan must be maintained in the facility's operating record irrespective of the time requirement specified in paragraph (b) of this section.

(2) The annual CCR fugitive dust control report required by § 257.80(c).

(3) The initial and periodic run-on and run-off control system plans as required by § 257.81(c).

(4) The initial and periodic inflow design flood control system plan as required by § 257.82(c).

(5) Documentation recording the results of each inspection and instrumentation monitoring by a qualified person as required by § 257.83(a).

(6) The periodic inspection report as required by § 257.83(b)(2).

(7) Documentation detailing the corrective measures taken to remedy the deficiency or release as required by §§ 257.83(b)(5) and 257.84(b)(5).

(8) Documentation recording the results of the weekly inspection by a qualified person as required by § 257.84(a).

(9) The periodic inspection report as required by § 257.84(b)(2).

(h) *Groundwater monitoring and corrective action.* The owner or operator of a CCR unit subject to this subpart must place the following information, as it becomes available, in the facility's operating record:

(1) The annual groundwater monitoring and corrective action report as required by § 257.90(e).

(2) Documentation of the design, installation, development, and decommissioning of any monitoring wells, piezometers and other measurement, sampling, and analytical devices as required by § 257.91(e)(1).

(3) The groundwater monitoring system certification as required by § 257.91(f).

(4) The selection of a statistical method certification as required by § 257.93(f)(6).

(5) Within 30 days of establishing an assessment monitoring program, the notification as required by § 257.94(e)(3).

(6) The results of appendices III and IV to this part constituent concentrations as required by § 257.95(d)(1).

(7) Within 30 days of returning to a detection monitoring program, the notification as required by § 257.95(e).

(8) Within 30 days of detecting one or more constituents in appendix IV to this part at statistically significant levels above the groundwater protection standard, the notifications as required by § 257.95(g).

(9) Within 30 days of initiating the assessment of corrective measures requirements, the notification as required by § 257.95(g)(5).

(10) The completed assessment of corrective measures as required by § 257.96(d).

(11) Documentation prepared by the owner or operator recording the public meeting for the corrective measures assessment as required by § 257.96(e).

(12) The semiannual report describing the progress in selecting and designing the remedy and the selection of remedy report as required by § 257.97(a), except that the selection of remedy report must be maintained until the remedy has been completed.

(13) Within 30 days of completing the remedy, the notification as required by § 257.98(e).

(i) *Closure and post-closure care.* The owner or operator of a CCR unit subject to this subpart must place the following information, as it becomes available, in the facility's operating record:

(1) The notification of intent to initiate closure of the CCR unit as required by § 257.100(c)(1).

(2) The annual progress reports of closure implementation as required by § 257.100(c)(2)(i) and (ii).

(3) The notification of closure completion as required by § 257.100(c)(3).

(4) The written closure plan, and any amendment of the plan, as required by § 257.102(b), except that only the most recent closure plan must be maintained in the facility's operating record irrespective of the time requirement specified in paragraph (b) of this section.

(5) The written demonstration(s), including the certification required by § 257.102(e)(2)(iii), for a time extension for initiating closure as required by § 257.102(e)(2)(ii).

(6) The written demonstration(s), including the certification required by § 257.102(f)(2)(iii), for a time extension for completing closure as required by § 257.102(f)(2)(i).

(7) The notification of intent to close a CCR unit as required by § 257.102(g).

(8) The notification of completion of closure of a CCR unit as required by § 257.102(h).

(9) The notification recording a notation on the deed as required by § 257.102(i).

(10) The notification of intent to comply with the alternative closure requirements as required by § 257.103(c)(1).

(11) The annual progress reports under the alternative closure requirements as required by § 257.103(c)(2).

(12) The written post-closure plan, and any amendment of the plan, as required by § 257.104(d), except that only the most recent closure plan must be maintained in the facility's operating record irrespective of the time requirement specified in paragraph (b) of this section.

(13) The notification of completion of post-closure care period as required by § 257.104(e).

(j) *Retrofit criteria.* The owner or operator of a CCR unit subject to this subpart must place the following information, as it becomes available, in the facility's operating record:

(1) The written retrofit plan, and any amendment of the plan, as required by § 257.102(k)(2), except that only the most recent retrofit plan must be maintained in the facility's operating record irrespective of the time requirement specified in paragraph (b) of this section.

(2) The notification of intent that the retrofit activities will proceed in accordance with the alternative procedures in § 257.103.

(3) The annual progress reports required under the alternative requirements as required by § 257.103.

(4) The written demonstration(s), including the certification in § 257.102(f)(2)(iii), for a time extension for completing retrofit activities as required by § 257.102(k)(3).

(5) The notification of intent to initiate retrofit of a CCR unit as required by § 257.102(k)(5).

(6) The notification of completion of retrofit activities as required by § 257.102(k)(6).

§ 257.106 Notification requirements.

(a) The notifications required under paragraphs (e) through (i) of this section must be sent to the relevant State Director and/or appropriate Tribal authority before the close of business on the day the notification is required to be completed. For purposes of this section, *before the close of business* means the notification must be postmarked or sent by electronic mail (email). If a notification deadline falls on a weekend or federal holiday, the notification deadline is automatically extended to the next business day.

(b) If any CCR unit is located in its entirety within Indian Country, the notifications of this section must be sent to the appropriate Tribal authority. If any CCR unit is located in part within Indian Country, the notifications of this section must be sent both to the appropriate State Director and Tribal authority.

(c) Notifications may be combined as long as the deadline requirement for each notification is met.

(d) Unless otherwise required in this section, the notifications specified in this section must be sent to the State Director and/or appropriate Tribal authority within 30 days of placing in the operating record the information required by § 257.105.

(e) *Location restrictions.* The owner or operator of a CCR unit subject to the requirements of this subpart must notify the State Director and/or appropriate Tribal authority that each demonstration specified under § 257.105(e) has been placed in the operating record and on the owner or operator's publicly accessible internet site.

(f) *Design criteria.* The owner or operator of a CCR unit subject to this subpart must notify the State Director and/or appropriate Tribal authority when information has been placed in the operating record and on the owner or operator's publicly accessible internet site. The owner or operator must:

(1) Within 60 days of commencing construction of a new CCR unit, provide notification of the availability of the design certification specified under § 257.105(f)(1) or (3). If the owner or operator of the CCR unit elects to install an alternative composite liner, the owner or operator must also submit to the State Director and/or appropriate Tribal authority a copy of the alternative composite liner design.

(2) No later than the date of initial receipt of CCR by a new CCR unit, provide notification of the availability of the construction certification specified under § 257.105(f)(1) or (3).

(3) Provide notification of the availability of the documentation of liner type specified under § 257.105(f)(2).

(4) Provide notification of the availability of the initial and periodic hazard potential classification assessments specified under § 257.105(f)(5).

(5) Provide notification of the availability of emergency action plan (EAP), and any revisions of the EAP, specified under § 257.105(f)(6).

(6) Provide notification of the availability of documentation prepared by the owner or operator recording the annual face-to-face meeting or exercise between representatives of the owner or operator of the CCR unit and the local emergency responders specified under § 257.105(f)(7).

(7) Provide notification of documentation prepared by the owner or operator recording all activations of the emergency action plan specified under § 257.105(f)(8).

(8) Provide notification of the availability of the history of construction, and any revision of it, specified under § 257.105(f)(9).

(9) Provide notification of the availability of the initial and periodic structural stability assessments specified under § 257.105(f)(10).

(10) Provide notification of the availability of the documentation detailing the corrective measures taken to remedy the deficiency or release specified under § 257.105(f)(11).

(11) Provide notification of the availability of the initial and periodic safety factor assessments specified under § 257.105(f)(12).

(12) Provide notification of the availability of the design and construction plans, and any revision of them, specified under § 257.105(f)(13).

(g) *Operating criteria.* The owner or operator of a CCR unit subject to this subpart must notify the State Director and/or appropriate Tribal authority when information has been placed in the operating record and on the owner or operator's publicly accessible internet site. The owner or operator must:

(1) Provide notification of the availability of the CCR fugitive dust control plan, or any subsequent amendment of the plan, specified under § 257.105(g)(1).

(2) Provide notification of the availability of the annual CCR fugitive dust control report specified under § 257.105(g)(2).

(3) Provide notification of the availability of the initial and periodic run-on and run-off control system plans specified under § 257.105(g)(3).

(4) Provide notification of the availability of the initial and periodic inflow design flood control system plans specified under § 257.105(g)(4).

(5) Provide notification of the availability of the periodic inspection reports specified under § 257.105(g)(6).

(6) Provide notification of the availability of the documentation detailing the corrective measures taken to remedy the deficiency or release specified under § 257.105(g)(7).

(7) Provide notification of the availability of the periodic inspection reports specified under § 257.105(g)(9).

(h) *Groundwater monitoring and corrective action.* The owner or operator of a CCR unit subject to this subpart must notify the State Director and/or appropriate Tribal authority when information has been placed in the operating record and on the owner or operator's publicly accessible internet site. The owner or operator must:

(1) Provide notification of the availability of the annual groundwater

monitoring and corrective action report specified under § 257.105(h)(1).

(2) Provide notification of the availability of the groundwater monitoring system certification specified under § 257.105(h)(3).

(3) Provide notification of the availability of the selection of a statistical method certification specified under § 257.105(h)(4).

(4) Provide notification that an assessment monitoring programs has been established specified under § 257.105(h)(5).

(5) Provide notification that the CCR unit is returning to a detection monitoring program specified under § 257.105(h)(7).

(6) Provide notification that one or more constituents in appendix IV to this part have been detected at statistically significant levels above the groundwater protection standard and the notifications to land owners specified under § 257.105(h)(8).

(7) Provide notification that an assessment of corrective measures has been initiated specified under § 257.105(h)(9).

(8) Provide notification of the availability of assessment of corrective measures specified under § 257.105(h)(10).

(9) Provide notification of the availability of the semiannual report describing the progress in selecting and designing the remedy and the selection of remedy report specified under § 257.105(h)(12).

(10) Provide notification of the completion of the remedy specified under § 257.105(h)(13).

(i) *Closure and post-closure care.* The owner or operator of a CCR unit subject to this subpart must notify the State Director and/or appropriate Tribal authority when information has been placed in the operating record and on the owner or operator's publicly accessible Internet site. The owner or operator must:

(1) Provide notification of the intent to initiate closure of the CCR unit specified under § 257.105(i)(1).

(2) Provide notification of the availability of the annual progress reports of closure implementation specified under § 257.105(i)(2).

(3) Provide notification of closure completion specified under § 257.105(i)(3).

(4) Provide notification of the availability of the written closure plan, and any amendment of the plan, specified under § 257.105(i)(4).

(5) Provide notification of the availability of the demonstration(s) for a time extension for initiating closure specified under § 257.105(i)(5).

(6) Provide notification of the availability of the demonstration(s) for a time extension for completing closure specified under § 257.105(i)(6).

(7) Provide notification of intent to close a CCR unit specified under § 257.105(i)(7).

(8) Provide notification of completion of closure of a CCR unit specified under § 257.105(i)(8).

(9) Provide notification of the deed notation as required by § 257.105(i)(9).

(10) Provide notification of intent to comply with the alternative closure requirements specified under § 257.105(i)(10).

(11) The annual progress reports under the alternative closure requirements as required by § 257.105(i)(11).

(12) Provide notification of the availability of the written post-closure plan, and any amendment of the plan, specified under § 257.105(i)(12).

(13) Provide notification of completion of post-closure care specified under § 257.105(i)(13).

(j) *Retrofit criteria.* The owner or operator of a CCR unit subject to this subpart must notify the State Director and/or appropriate Tribal authority when information has been placed in the operating record and on the owner or operator's publicly accessible Internet site. The owner or operator must:

(1) Provide notification of the availability of the written retrofit plan, and any amendment of the plan, specified under § 257.105(j)(1).

(2) Provide notification of intent to comply with the alternative retrofit requirements specified under § 257.105(j)(2).

(3) The annual progress reports under the alternative retrofit requirements as required by § 257.105(j)(3).

(4) Provide notification of the availability of the demonstration(s) for a time extension for completing retrofit activities specified under § 257.105(j)(4).

(5) Provide notification of intent to initiate retrofit of a CCR unit specified under § 257.105(j)(5).

(6) Provide notification of completion of retrofit activities specified under § 257.105(j)(6).

§ 257.107 Publicly accessible Internet site requirements.

(a) Each owner or operator of a CCR unit subject to the requirements of this subpart must maintain a publicly accessible Internet site (CCR Web site) containing the information specified in this section. The owner or operator's Web site must be titled "CCR Rule Compliance Data and Information."

(b) An owner or operator of more than one CCR unit subject to the provisions

of this subpart may comply with the requirements of this section by using the same Internet site for multiple CCR units provided the CCR Web site clearly delineates information by the name or identification number of each unit.

(c) Unless otherwise required in this section, the information required to be posted to the CCR Web site must be made available to the public for at least five years following the date on which the information was first posted to the CCR Web site.

(d) Unless otherwise required in this section, the information must be posted to the CCR Web site within 30 days of placing the pertinent information required by § 257.105 in the operating record.

(e) *Location restrictions.* The owner or operator of a CCR unit subject to this subpart must place each demonstration specified under § 257.105(e) on the owner or operator's CCR Web site.

(f) *Design criteria.* The owner or operator of a CCR unit subject to this subpart must place the following information on the owner or operator's CCR Web site:

(1) Within 60 days of commencing construction of a new unit, the design certification specified under § 257.105(f)(1) or (3).

(2) No later than the date of initial receipt of CCR by a new CCR unit, the construction certification specified under § 257.105(f)(1) or (3).

(3) The documentation of liner type specified under § 257.105(f)(2).

(4) The initial and periodic hazard potential classification assessments specified under § 257.105(f)(5).

(5) The emergency action plan (EAP) specified under § 257.105(f)(6), except that only the most recent EAP must be maintained on the CCR Web site irrespective of the time requirement specified in paragraph (c) of this section.

(6) Documentation prepared by the owner or operator recording the annual face-to-face meeting or exercise between representatives of the owner or operator of the CCR unit and the local emergency responders specified under § 257.105(f)(7).

(7) Documentation prepared by the owner or operator recording any activation of the emergency action plan specified under § 257.105(f)(8).

(8) The history of construction, and any revisions of it, specified under § 257.105(f)(9).

(9) The initial and periodic structural stability assessments specified under § 257.105(f)(10).

(10) The documentation detailing the corrective measures taken to remedy the

deficiency or release specified under § 257.105(f)(11).

(11) The initial and periodic safety factor assessments specified under § 257.105(f)(12).

(12) The design and construction plans, and any revisions of them, specified under § 257.105(f)(13).

(g) *Operating criteria.* The owner or operator of a CCR unit subject to this subpart must place the following information on the owner or operator's CCR Web site:

(1) The CCR fugitive dust control plan, or any subsequent amendment of the plan, specified under § 257.105(g)(1) except that only the most recent plan must be maintained on the CCR Web site irrespective of the time requirement specified in paragraph (c) of this section.

(2) The annual CCR fugitive dust control report specified under § 257.105(g)(2).

(3) The initial and periodic run-on and run-off control system plans specified under § 257.105(g)(3).

(4) The initial and periodic inflow design flood control system plans specified under § 257.105(g)(4).

(5) The periodic inspection reports specified under § 257.105(g)(6).

(6) The documentation detailing the corrective measures taken to remedy the deficiency or release specified under § 257.105(g)(7).

(7) The periodic inspection reports specified under § 257.105(g)(9).

(h) *Groundwater monitoring and corrective action.* The owner or operator of a CCR unit subject to this subpart must place the following information on the owner or operator's CCR Web site:

(1) The annual groundwater monitoring and corrective action report specified under § 257.105(h)(1).

(2) The groundwater monitoring system certification specified under § 257.105(h)(3).

(3) The selection of a statistical method certification specified under § 257.105(h)(4).

(4) The notification that an assessment monitoring programs has been established specified under § 257.105(h)(5).

(5) The notification that the CCR unit is returning to a detection monitoring program specified under § 257.105(h)(7).

(6) The notification that one or more constituents in appendix IV to this part have been detected at statistically significant levels above the groundwater protection standard and the notifications to land owners specified under § 257.105(h)(8).

(7) The notification that an assessment of corrective measures has been initiated specified under § 257.105(h)(9).

(8) The assessment of corrective measures specified under § 257.105(h)(10).

(9) The semiannual reports describing the progress in selecting and designing remedy and the selection of remedy report specified under § 257.105(h)(12), except that the selection of the remedy report must be maintained until the remedy has been completed.

(10) The notification that the remedy has been completed specified under § 257.105(h)(13).

(i) *Closure and post-closure care.* The owner or operator of a CCR unit subject to this subpart must place the following information on the owner or operator's CCR Web site:

(1) The notification of intent to initiate closure of the CCR unit specified under § 257.105(i)(1).

(2) The annual progress reports of closure implementation specified under § 257.105(i)(2).

(3) The notification of closure completion specified under § 257.105(i)(3).

(4) The written closure plan, and any amendment of the plan, specified under § 257.105(i)(4).

(5) The demonstration(s) for a time extension for initiating closure specified under § 257.105(i)(5).

(6) The demonstration(s) for a time extension for completing closure specified under § 257.105(i)(6).

(7) The notification of intent to close a CCR unit specified under § 257.105(i)(7).

(8) The notification of completion of closure of a CCR unit specified under § 257.105(i)(8).

(9) The notification recording a notation on the deed as required by § 257.105(i)(9).

(10) The notification of intent to comply with the alternative closure requirements as required by § 257.105(i)(10).

(11) The annual progress reports under the alternative closure requirements as required by § 257.105(i)(11).

(12) The written post-closure plan, and any amendment of the plan, specified under § 257.105(i)(12).

(13) The notification of completion of post-closure care specified under § 257.105(i)(13).

(j) *Retrofit criteria.* The owner or operator of a CCR unit subject to this subpart must place the following information on the owner or operator's CCR Web site:

(1) The written retrofit plan, and any amendment of the plan, specified under § 257.105(j)(1).

(2) The notification of intent to comply with the alternative retrofit

requirements as required by § 257.105(j)(2).

(3) The annual progress reports under the alternative retrofit requirements as required by § 257.105(j)(3).

(4) The demonstration(s) for a time extension for completing retrofit activities specified under § 257.105(j)(4).

(5) The notification of intent to retrofit a CCR unit specified under § 257.105(j)(5).

(6) The notification of completion of retrofit activities specified under § 257.105(j)(6).

■ 5. Amend part 257 by adding “Appendix III to Part 257” and “Appendix IV to Part 257” to read as follows:

Appendix III to Part 257—Constituents for Detection Monitoring

Common name ¹
Boron
Calcium
Chloride
Fluoride
pH
Sulfate
Total Dissolved Solids (TDS)

¹ Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

Appendix IV to Part 257—Constituents for Assessment Monitoring

Common name ¹
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
Radium 226 and 228 combined

¹ Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

■ 6. The authority citation for part 261 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, 6922, 6924(y) and 6938.

■ 7. Section 261.4 is amended by revising paragraph (b)(4) to read as follows:

§ 261.4 Exclusions.

* * * * *

(b) * * *

(4)(i) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels, except as provided by § 266.112 of this chapter for facilities that burn or process hazardous waste.

(ii) The following wastes generated primarily from processes that support the combustion of coal or other fossil fuels that are co-disposed with the wastes in paragraph (b)(4)(i) of this section, except as provided by § 266.112 of this chapter for facilities that burn or process hazardous waste:

(A) *Coal pile run-off.* For purposes of paragraph (b)(4) of this section, coal pile run-off means any precipitation that drains off coal piles.

(B) *Boiler cleaning solutions.* For purposes of paragraph (b)(4) of this section, boiler cleaning solutions means water solutions and chemical solutions

used to clean the fire-side and water-side of the boiler.

(C) *Boiler blowdown.* For purposes of paragraph (b)(4) of this section, boiler blowdown means water purged from boilers used to generate steam.

(D) *Process water treatment and demineralizer regeneration wastes.* For purposes of paragraph (b)(4) of this section, process water treatment and demineralizer regeneration wastes means sludges, rinses, and spent resins generated from processes to remove dissolved gases, suspended solids, and dissolved chemical salts from combustion system process water.

(E) *Cooling tower blowdown.* For purposes of paragraph (b)(4) of this section, cooling tower blowdown means water purged from a closed cycle cooling system. Closed cycle cooling systems include cooling towers, cooling ponds, or spray canals.

(F) *Air heater and precipitator washes.* For purposes of paragraph (b)(4) of this section, air heater and

precipitator washes means wastes from cleaning air preheaters and electrostatic precipitators.

(G) *Effluents from floor and yard drains and sumps.* For purposes of paragraph (b)(4) of this section, effluents from floor and yard drains and sumps means wastewaters, such as wash water, collected by or from floor drains, equipment drains, and sumps located inside the power plant building; and wastewaters, such as rain runoff, collected by yard drains and sumps located outside the power plant building.

(H) *Wastewater treatment sludges.* For purposes of paragraph (b)(4) of this section, wastewater treatment sludges refers to sludges generated from the treatment of wastewaters specified in paragraphs (b)(4)(ii)(A) through (F) of this section.

* * * * *

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residents within one mile of landfills to those percentages in the general population, EPA found that minority and low-income residents make up a smaller percentage of the populations near landfills than they do in the general population, *i.e.*, minorities comprised 16.6 percent of the population near landfills versus 24.8 percent nationwide and low-income residents comprised 8.6 percent of the population near landfills versus 11.3 percent nationwide. In summary, although populations within the catchment areas of plants with surface impoundments appear to have disproportionately high percentages of minority and low-income residents relative to the nationwide average, populations surrounding plants with landfills do not. Because landfills are less likely than impoundments to experience surface water run-off and releases, catchment areas were not considered for landfills.

The CCR rule is risk-reducing with reductions in risk occurring largely within the surface water catchment zones around, and groundwater beneath, coal-fired electric utility plants. Since the CCR rule is risk-reducing and this action does not add to risks, this action will not result in new disproportionate risks to minority or low-income populations.

L. Congressional Review Act (CRA)

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 257

Environmental protection, Beneficial use, Coal combustion products, Coal combustion residuals, Coal combustion waste, Disposal, Hazardous waste, Landfill, Surface impoundment.

Dated: July 17, 2018.

Andrew R. Wheeler,
Acting Administrator.

For the reasons set out in the preamble, title 40, chapter I, of the Code of Federal Regulations is amended as follows:

PART 257—CRITERIA FOR CLASSIFICATION OF SOLID WASTE DISPOSAL FACILITIES AND PRACTICES

■ 1. The authority citation for part 257 is revised to read as follows:

Authority: 42 U.S.C. 6907(a)(3), 6912(a)(1), 6944(a), 6945(d); 33 U.S.C. 1345(d) and (e).

■ 2. Section 257.53 is amended by adding the definitions of "Nonparticipating State", "Participating State", and "Participating State Director" in alphabetical order to read as follows:

§ 257.53 Definitions.

* * * * *

Nonparticipating State means a State—

(1) For which the Administrator has not approved a State permit program or other system of prior approval and conditions under RCRA section 4005(d)(1)(B);

(2) The Governor of which has not submitted to the Administrator for approval evidence to operate a State permit program or other system of prior approval and conditions under RCRA section 4005(d)(1)(A);

(3) The Governor of which provides notice to the Administrator that, not fewer than 90 days after the date on which the Governor provides the notice to the Administrator, the State will relinquish an approval under RCRA section 4005(d)(1)(B) to operate a permit program or other system of prior approval and conditions; or

(4) For which the Administrator has withdrawn approval for a permit program or other system of prior approval and conditions under RCRA section 4005(d)(1)(E).

* * * * *

Participating State means a state with a state program for control of CCR that has been approved pursuant to RCRA section 4005(d).

Participating State Director means the chief administrative officer of any state agency operating the CCR permit program in a participating state or the delegated representative of the Participating State Director. If responsibility is divided among two or more state agencies, Participating State Director means the chief administrative officer of the state agency authorized to perform the particular function or procedure to which reference is made.

* * * * *

■ 3. Section 257.60 is amended by revising paragraph (b) to read as follows:

§ 257.60 Placement above the uppermost aquifer.

* * * * *

(b) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the demonstration meets the

requirements of paragraph (a) of this section.

* * * * *

■ 4. Section 257.61 is amended by revising paragraph (b) to read as follows:

§ 257.61 Wetlands.

* * * * *

(b) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the demonstration meets the requirements of paragraph (a) of this section.

* * * * *

■ 5. Section 257.62 is amended by revising paragraph (b) to read as follows:

§ 257.62 Fault areas.

* * * * *

(b) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the demonstration meets the requirements of paragraph (a) of this section.

* * * * *

■ 6. Section 257.63 is amended by revising paragraph (b) to read as follows:

§ 257.63 Seismic impact zones.

* * * * *

(b) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the demonstration meets the requirements of paragraph (a) of this section.

* * * * *

■ 7. Section 257.64 is amended by revising paragraph (c) to read as follows:

§ 257.64 Unstable areas.

* * * * *

(c) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the demonstration meets the requirements of paragraph (a) of this section.

* * * * *

■ 8. Section 257.70 is amended by revising paragraphs (c)(2), (e), and (f) to read as follows:

§ 257.70 Design criteria for new CCR landfills and any lateral expansion of a CCR landfill.

* * * * *

(c) * * *

(2) The owner or operator must obtain certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority that the liquid flow rate through the lower component of the alternative composite liner is no greater than the liquid flow rate through two feet of compacted soil with a hydraulic conductivity of 1×10^{-7} cm/sec. The hydraulic conductivity for the two feet of compacted soil used in the comparison shall be no greater than 1×10^{-7} cm/sec. The hydraulic conductivity of any alternative to the two feet of compacted soil must be determined using recognized and generally accepted methods. The liquid flow rate comparison must be made using Equation 1 of this section, which is derived from Darcy's Law for gravity flow through porous media.

(Eq. 1):

$$\frac{Q}{A} = q = k \left(\frac{h}{t} + 1 \right)$$

Where:
 Q = flow rate (cubic centimeters/second);
 A = surface area of the liner (squared centimeters);
 q = flow rate per unit area (cubic centimeters/second/squared centimeter);
 k = hydraulic conductivity of the liner (centimeters/second);
 h = hydraulic head above the liner (centimeters); and
 t = thickness of the liner (centimeters).

* * * * *

(e) Prior to construction of the CCR landfill or any lateral expansion of a CCR landfill, the owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority that the design of the composite liner (or, if applicable, alternative composite liner) and the leachate collection and removal system meets the requirements of this section.

(f) Upon completion of construction of the CCR landfill or any lateral expansion of a CCR landfill, the owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority that the design of the composite liner (or, if applicable, alternative composite liner) and the leachate collection and removal

system have been constructed in accordance with the requirements of this section.

* * * * *

■ 9. Section 257.71 is amended by revising paragraph (b) to read as follows:

§ 257.71 Liner design criteria for existing CCR surface impoundments.

* * * * *

(b) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority attesting that the documentation as to whether a CCR unit meets the requirements of paragraph (a) of this section is accurate.

* * * * *

■ 10. Section 257.72 is amended by revising paragraphs (c) and (d) to read as follows:

§ 257.72 Liner design criteria for new CCR surface impoundments and any lateral expansion of a CCR surface impoundment.

* * * * *

(c) Prior to construction of the CCR surface impoundment or any lateral expansion of a CCR surface impoundment, the owner or operator must obtain certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority that the design of the composite liner or, if applicable, the design of an alternative composite liner complies with the requirements of this section.

(d) Upon completion, the owner or operator must obtain certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority that the composite liner or if applicable, the alternative composite liner has been constructed in accordance with the requirements of this section.

* * * * *

■ 11. Section 257.80 is amended by revising paragraph (b)(7) to read as follows:

§ 257.80 Air criteria.

* * * * *

(b) * * *

(7) The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority that the initial CCR fugitive dust control plan, or any subsequent amendment of it, meets the requirements of this section.

* * * * *

■ 12. Section 257.81 is amended by revising paragraph (c)(5) to read as follows:

§ 257.81 Run-on and run-off controls for CCR landfills.

* * * * *

(c) * * *

(5) The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the initial and periodic run-on and run-off control system plans meet the requirements of this section.

* * * * *

■ 13. Section 257.82 is amended by revising paragraph (c)(5) to read as follows:

§ 257.82 Hydrologic and hydraulic capacity requirements for CCR surface impoundments.

* * * * *

(c) * * *

(5) The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the initial and periodic inflow design flood control system plans meet the requirements of this section.

* * * * *

■ 14. Section 257.90 is amended by revising paragraph (a) and adding paragraph (g) to read as follows:

§ 257.90 Applicability.

(a) All CCR landfills, CCR surface impoundments, and lateral expansions of CCR units are subject to the groundwater monitoring and corrective action requirements under §§ 257.90 through 257.99, except as provided in paragraph (g) of this section.

* * * * *

(g) *Suspension of groundwater monitoring requirements.* (1) The Participating State Director or EPA where EPA is the permitting authority may suspend the groundwater monitoring requirements under §§ 257.90 through 257.95 for a CCR unit for a period of up to ten years, if the owner or operator provides written documentation that, based on the characteristics of the site in which the CCR unit is located, there is no potential for migration of any of the constituents listed in appendices III and IV to this part from that CCR unit to the uppermost aquifer during the active life of the CCR unit and the post-closure care period. This demonstration must be certified by a qualified professional

engineer and approved by the Participating State Director or EPA where EPA is the permitting authority, and must be based upon:

(i) Site-specific field collected measurements, sampling, and analysis of physical, chemical, and biological processes affecting contaminant fate and transport, including at a minimum, the information necessary to evaluate or interpret the effects of the following properties or processes on contaminant fate and transport:

(A) Aquifer Characteristics, including hydraulic conductivity, hydraulic gradient, effective porosity, aquifer thickness, degree of saturation, stratigraphy, degree of fracturing and secondary porosity of soils and bedrock, aquifer heterogeneity, groundwater discharge, and groundwater recharge areas;

(B) Waste Characteristics, including quantity, type, and origin;

(C) Climatic Conditions, including annual precipitation, leachate generation estimates, and effects on leachate quality;

(D) Leachate Characteristics, including leachate composition, solubility, density, the presence of immiscible constituents, Eh, and pH; and

(E) Engineered Controls, including liners, cover systems, and aquifer controls (e.g., lowering the water table). These must be evaluated under design and failure conditions to estimate their long-term residual performance.

(ii) Contaminant fate and transport predictions that maximize contaminant migration and consider impacts on human health and the environment.

(2) The owner or operator of the CCR unit may renew this suspension for additional ten year periods by submitting written documentation that the site characteristics continue to ensure there will be no potential for migration of any of the constituents listed in Appendices III and IV of this part. The documentation must include, at a minimum, the information specified in paragraphs (g)(1)(i) and (g)(1)(ii) of this section and a certification by a qualified professional engineer and approved by the State Director or EPA where EPA is the permitting authority. The owner or operator must submit the documentation supporting their renewal request for the state's or EPA's review and approval of their extension one year before the groundwater monitoring suspension is due to expire. If the existing groundwater monitoring extension expires or is not approved, the owner or operator must begin groundwater monitoring according to paragraph (a) of this section within 90

days. The owner or operator may continue to renew the suspension for ten-year periods, provided the owner or operator demonstrate that the standard in paragraph (g)(1) of this section continues to be met for the unit. The owner or operator must place each completed demonstration in the facility's operating record.

(3) The owner or operator of the CCR unit must include in the annual groundwater monitoring and corrective action report required by § 257.90(e) or § 257.100(e)(5)(ii) any approved no migration demonstration.

■ 15. Section 257.91 is amended by revising paragraph (f) to read as follows:

§ 257.91 Groundwater monitoring systems.

* * * * *

(f) The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the groundwater monitoring system has been designed and constructed to meet the requirements of this section. If the groundwater monitoring system includes the minimum number of monitoring wells specified in paragraph (c)(1) of this section, the certification must document the basis supporting this determination.

* * * * *

■ 16. Section 257.93 is amended by revising paragraph (f)(6) to read as follows:

§ 257.93 Groundwater sampling and analysis requirements.

* * * * *

(f) * * *

(6) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the selected statistical method is appropriate for evaluating the groundwater monitoring data for the CCR management area. The certification must include a narrative description of the statistical method selected to evaluate the groundwater monitoring data.

* * * * *

■ 17. Section 257.94 is amended by revising paragraphs (d)(3) and (e)(2) to read as follows:

§ 257.94 Detection monitoring program.

* * * * *

(d) * * *

(3) The owner or operator must obtain a certification from a qualified

professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the demonstration for an alternative groundwater sampling and analysis frequency meets the requirements of this section. The owner or operator must include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer or the approval from the Participating State Director or approval from EPA where EPA is the permitting authority in the annual groundwater monitoring and corrective action report required by § 257.90(e).

(e) * * *

(2) The owner or operator may demonstrate that a source other than the CCR unit caused the statistically significant increase over background levels for a constituent or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The owner or operator must complete the written demonstration within 90 days of detecting a statistically significant increase over background levels to include obtaining a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority verifying the accuracy of the information in the report. If a successful demonstration is completed within the 90-day period, the owner or operator of the CCR unit may continue with a detection monitoring program under this section. If a successful demonstration is not completed within the 90-day period, the owner or operator of the CCR unit must initiate an assessment monitoring program as required under § 257.95. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority.

* * * * *

■ 18. Section 257.95 is amended by revising paragraphs (c)(3), (g)(3)(ii), (h)(2) and (3) to read as follows:

§ 257.95 Assessment monitoring program.

* * * * *

(c) * * *

(3) The owner or operator must obtain a certification from a qualified

professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the demonstration for an alternative groundwater sampling and analysis frequency meets the requirements of this section. The owner or operator must include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer or the approval from the Participating State Director or the approval from EPA where EPA is the permitting authority in the annual groundwater monitoring and corrective action report required by § 257.90(e).

* * * * *

- (g) * * *
- (3) * * *

(ii) Demonstrate that a source other than the CCR unit caused the contamination, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Any such demonstration must be supported by a report that includes the factual or evidentiary basis for any conclusions and must be certified to be accurate by a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority. If a successful demonstration is made, the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to this section, and may return to detection monitoring if the constituents in Appendix III and Appendix IV of this part are at or below background as specified in paragraph (e) of this section. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer or the approval from the Participating State Director or the approval from EPA where EPA is the permitting authority.

* * * * *

- (h) * * *

(2) For the following constituents:
(i) Cobalt 6 micrograms per liter (µg/l);
(ii) Lead 15 µg/l;
(iii) Lithium 40 µg/l; and
(iv) Molybdenum 100 µg/l.
(3) For constituents for which the background level is higher than the levels identified under paragraphs (h)(1) and (h)(2) of this section, the background concentration.

* * * * *

■ 19. Section 257.96 is amended by revising paragraph (a) to read as follows:

§ 257.96 Assessment of corrective measures.

(a) Within 90 days of finding that any constituent listed in Appendix IV to this part has been detected at a statistically significant level exceeding the groundwater protection standard defined under § 257.95(h), or immediately upon detection of a release from a CCR unit, the owner or operator must initiate an assessment of corrective measures to prevent further releases, to remediate any releases and to restore affected area to original conditions. The assessment of corrective measures must be completed within 90 days, unless the owner or operator demonstrates the need for additional time to complete the assessment of corrective measures due to site-specific conditions or circumstances. The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority attesting that the demonstration is accurate. The 90-day deadline to complete the assessment of corrective measures may be extended for no longer than 60 days. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer or the approval from the Participating State Director or the approval from EPA where EPA is the permitting authority.

* * * * *

■ 20. Section 257.97 is amended by revising paragraph (a) to read as follows:

§ 257.97 Selection of remedy.

(a) Based on the results of the corrective measures assessment conducted under § 257.96, the owner or operator must, as soon as feasible, select a remedy that, at a minimum, meets the standards listed in paragraph (b) of this section. This requirement applies in addition to, not in place of, any applicable standards under the Occupational Safety and Health Act. The owner or operator must prepare a semiannual report describing the progress in selecting and designing the remedy. Upon selection of a remedy, the owner or operator must prepare a final report describing the selected remedy and how it meets the standards specified in paragraph (b) of this section. The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or

approval from EPA where EPA is the permitting authority that the remedy selected meets the requirements of this section. The report has been completed when it is placed in the operating record as required by § 257.105(h)(12).

* * * * *

■ 21. Section 257.98 is amended by revising paragraph (e) to read as follows:

§ 257.98 Implementation of the corrective action program.

* * * * *

(e) Upon completion of the remedy, the owner or operator must prepare a notification stating that the remedy has been completed. The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority attesting that the remedy has been completed in compliance with the requirements of paragraph (c) of this section. The report has been completed when it is placed in the operating record as required by § 257.105(h)(13).

* * * * *

■ 22. Section 257.101 is amended by revising paragraphs (a)(1) and (b)(1) to read as follows:

§ 257.101 Closure or retrofit of CCR units.

(a) * * *

(1) Except as provided by paragraph (a)(3) of this section, if at any time after October 19, 2015, an owner or operator of an existing unlined CCR surface impoundment determines in any sampling event that the concentrations of one or more constituents listed in appendix IV of this part are detected at statistically significant levels above the groundwater protection standard established under § 257.95(h) for such CCR unit, within six months of making such determination or no later than October 31, 2020, whichever date is later, the owner or operator of the existing unlined CCR surface impoundment must cease placing CCR and non-CCR wastestreams into such CCR surface impoundment and either retrofit or close the CCR unit in accordance with the requirements of § 257.102.

* * * * *

(b) * * *

(1)(i) *Location standard under § 257.60.* Except as provided by paragraph (b)(4) of this section, the owner or operator of an existing CCR surface impoundment that has not demonstrated compliance with the location standard specified in § 257.60(a) must cease placing CCR and non-CCR wastestreams into such CCR

unit no later than October 31, 2020, and close the CCR unit in accordance with the requirements of § 257.102.

(ii) *Location standards under §§ 257.61 through 257.64.* Except as provided by paragraph (b)(4) of this section, within six months of determining that an existing CCR surface impoundment has not demonstrated compliance with any location standard specified in §§ 257.61(a), 257.62(a), 257.63(a), and 257.64(a), the owner or operator of the CCR surface impoundment must cease placing CCR and non-CCR wastestreams into such CCR unit and close the CCR unit in accordance with the requirements of § 257.102.

* * * * *

■ 23. Section 257.102 is amended by revising paragraphs (b)(4), (d)(3)(iii), (f)(3), (g), (h), (k)(2)(iv), (k)(4) and (k)(6) to read as follows:

§ 257.102 Criteria for conducting the closure or retrofit of CCR units.

* * * * *

(b) * * *

(4) The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority that the initial and any amendment of the written closure plan meets the requirements of this section.

* * * * *

(d) * * *

(3) * * *

(iii) The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority that the design of the final cover system meets the requirements of this section.

* * * * *

(f) * * *

(3) Upon completion, the owner or operator of the CCR unit must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority verifying that closure has been completed in accordance with the closure plan specified in paragraph (b) of this section and the requirements of this section.

(g) No later than the date the owner or operator initiates closure of a CCR unit, the owner or operator must prepare a notification of intent to close a CCR unit. The notification must include the certification by a qualified professional engineer or the approval

from the Participating State Director or the approval from EPA where EPA is the permitting authority for the design of the final cover system as required by § 257.102(d)(3)(iii), if applicable. The owner or operator has completed the notification when it has been placed in the facility's operating record as required by § 257.105(i)(7).

(h) Within 30 days of completion of closure of the CCR unit, the owner or operator must prepare a notification of closure of a CCR unit. The notification must include the certification by a qualified professional engineer or the approval from the Participating State Director or the approval from EPA where EPA is the permitting authority as required by § 257.102(f)(3). The owner or operator has completed the notification when it has been placed in the facility's operating record as required by § 257.105(i)(8).

(k) * * *

(2) * * *

(iv) The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer or an approval from the Participating State Director or an approval from EPA where EPA is the permitting authority that the activities outlined in the written retrofit plan, including any amendment of the plan, meet the requirements of this section.

* * * * *

(4) Upon completion, the owner or operator must obtain a written certification from a qualified professional engineer or an approval from the Participating State Director or an approval from EPA where EPA is the permitting authority verifying that the retrofit activities have been completed in accordance with the retrofit plan specified in paragraph (k)(2) of this section and the requirements of this section.

* * * * *

(6) Within 30 days of completing the retrofit activities specified in paragraph (k)(1) of this section, the owner or operator must prepare a notification of completion of retrofit activities. The notification must include the certification from a qualified professional engineer or an approval from the Participating State Director or an approval from EPA where EPA is the permitting authority has is required by paragraph (k)(4) of this section. The owner or operator has completed the notification when it has been placed in the facility's operating record as required by § 257.105(j)(6).

* * * * *

■ 24. Section 257.104 is amended by revising paragraphs (d)(1)(iii), (d)(4) and (e) to read as follows:

§ 257.104 Post-closure care requirements.

* * * * *

(d) * * *

(1) * * *

(iii) A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other component of the containment system, or the function of the monitoring systems unless necessary to comply with the requirements in this subpart. Any other disturbance is allowed if the owner or operator of the CCR unit demonstrates that disturbance of the final cover, liner, or other component of the containment system, including any removal of CCR, will not increase the potential threat to human health or the environment. The demonstration must be certified by a qualified professional engineer or approved by the Participating State Director or approved from EPA where EPA is the permitting authority, and notification shall be provided to the State Director that the demonstration has been placed in the operating record and on the owners or operator's publicly accessible internet site.

* * * * *

(4) The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer or an approval from the Participating State Director or an approval from EPA where EPA is the permitting authority that the initial and any amendment of the written post-closure plan meets the requirements of this section.

(e) *Notification of completion of post-closure care period.* No later than 60 days following the completion of the post-closure care period, the owner or operator of the CCR unit must prepare a notification verifying that post-closure care has been completed. The notification must include the certification by a qualified professional engineer or the approval from the Participating State Director or the approval from EPA where EPA is the permitting authority verifying that post-closure care has been completed in accordance with the closure plan specified in paragraph (d) of this section and the requirements of this section. The owner or operator has completed the notification when it has been placed in the facility's operating record as required by § 257.105(i)(13).

* * * * *

■ 25. Section 257.105 is amended by adding paragraph (h)(14) to read as follows:

§ 257.105 Recordkeeping requirements.

* * * * *

(h) * * *
(14) The demonstration, including long-term performance data, supporting the suspension of groundwater monitoring requirements as required by § 257.90(g).

* * * * *

■ 26. Section 257.106 is amended by adding paragraph (h)(11) to read as follows:

§ 257.106 Notification requirements.

* * * * *

(h) * * *
(11) Provide the demonstration supporting the suspension of groundwater monitoring requirements specified under § 257.105(h)(14).

* * * * *

■ 27. Section 257.107 is amended by adding paragraph (h)(11) to read as follows:

§ 257.107 Publicly accessible internet site requirements.

* * * * *

(h) * * *
(11) The demonstration supporting the suspension of groundwater monitoring requirements specified under § 257.105(h)(14).

* * * * *

[FR Doc. 2018-16262 Filed 7-27-18; 8:45 am]

BILLING CODE 6560-50-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

45 CFR Part 153

[CMS-9920-F]

RIN 0938-AT65

Adoption of the Methodology for the HHS-Operated Permanent Risk Adjustment Program Under the Patient Protection and Affordable Care Act for the 2017 Benefit Year

AGENCY: Centers for Medicare & Medicaid Services (CMS), Department of Health and Human Services (HHS).

ACTION: Final rule.

SUMMARY: This final rule adopts the risk adjustment methodology that HHS previously established for the 2017 benefit year. In February 2018, a district court vacated the use of statewide average premium as a basis for the HHS-operated risk adjustment methodology for the 2014, 2015, 2016, 2017, and 2018

benefit years. Accordingly, HHS is issuing this final rule to allow charges to be collected and payments to be made for the 2017 benefit year. We hereby adopt the final rules set out in the publication in the **Federal Register** on March 23, 2012 and the publication in the **Federal Register** on March 8, 2016.

DATES: These provisions of this final rule are effective on July 30, 2018.

FOR FURTHER INFORMATION CONTACT: Abigail Walker, (410) 786-1725; Adam Shaw, (410) 786-1091; Jaya Ghildiyal, (301) 492-5149; or Adrienne Patterson, (410) 786-0686.

SUPPLEMENTARY INFORMATION:

I. Background

A. Legislative and Regulatory Overview

The Patient Protection and Affordable Care Act (Pub. L. 111-148), was enacted on March 23, 2010; the Health Care and Education Reconciliation Act of 2010 (Pub. L. 111-152) was enacted on March 30, 2010. These statutes are collectively referred to as “PPACA” in this final rule. Section 1343 of the PPACA established an annual permanent risk adjustment program under which payments are collected from health insurance issuers that enroll relatively low-risk populations, and payments are made to health insurance issuers that enroll relatively higher-risk populations. Consistent with section 1321(c)(1) of the PPACA, the Secretary is responsible for operating the risk adjustment program on behalf of any state that elected not to do so. For the 2017 benefit year, HHS is responsible for operation of the risk adjustment program in all 50 states and the District of Columbia.

HHS sets the risk adjustment methodology that it uses in states that elect not to operate the program in advance of each benefit year through a notice-and-comment rulemaking process with the intention that issuers will be able to rely on the methodology to price their plans appropriately (45 CFR 153.320; 76 FR 41930, 41932 through 41933; 81 FR 94058, 94702 (explaining the importance of setting rules ahead of time and describing comments supporting that practice)).

In the July 15, 2011 **Federal Register** (76 FR 41929), we published a proposed rule outlining the framework for the risk adjustment program. We implemented the risk adjustment program in a final rule, published in the March 23, 2012 **Federal Register** (77 FR 17219) (Premium Stabilization Rule). In the December 7, 2012 **Federal Register** (77 FR 73117), we published a proposed rule outlining the proposed Federally certified risk adjustment methodologies for the 2014 benefit year and other

parameters related to the risk adjustment program (proposed 2014 Payment Notice). We published the 2014 Payment Notice final rule in the March 11, 2013 **Federal Register** (78 FR 15409). In the June 19, 2013 **Federal Register** (78 FR 37032), we proposed a modification to the HHS-operated methodology related to community rating states. In the October 30, 2013, **Federal Register** (78 FR 65046), we finalized the proposed modification to the HHS-operated methodology related to community rating states. We published a correcting amendment to the 2014 Payment Notice final rule in the November 6, 2013 **Federal Register** (78 FR 66653) to address how an enrollee’s age for the risk score calculation would be determined under the HHS-operated risk adjustment methodology.

In the December 2, 2013 **Federal Register** (78 FR 72321), we published a proposed rule outlining the Federally certified risk adjustment methodologies for the 2015 benefit year and other parameters related to the risk adjustment program (proposed 2015 Payment Notice). We published the 2015 Payment Notice final rule in the March 11, 2014 **Federal Register** (79 FR 13743). In the May 27, 2014 **Federal Register** (79 FR 30240), the 2015 fiscal year sequestration rate for the risk adjustment program was announced.

In the November 26, 2014 **Federal Register** (79 FR 70673), we published a proposed rule outlining the proposed Federally certified risk adjustment methodologies for the 2016 benefit year and other parameters related to the risk adjustment program (proposed 2016 Payment Notice). We published the 2016 Payment Notice final rule in the February 27, 2015 **Federal Register** (80 FR 10749).

In the December 2, 2015 **Federal Register** (80 FR 75487), we published a proposed rule outlining the Federally certified risk adjustment methodology for the 2017 benefit year and other parameters related to the risk adjustment program (proposed 2017 Payment Notice). We published the 2017 Payment Notice final rule in the March 8, 2016 **Federal Register** (81 FR 12204).

In the September 6, 2016 **Federal Register** (81 FR 61455), we published a proposed rule outlining the Federally certified risk adjustment methodology for the 2018 benefit year and other parameters related to the risk adjustment program (proposed 2018 Payment Notice). We published the 2018 Payment Notice final rule in the December 22, 2016 **Federal Register** (81 FR 94058).

BEFORE THE MISSISSIPPI PUBLIC SERVICE COMMISSION

MISSISSIPPI POWER COMPANY
EC-120-00097-00

DOCKET NO. 2019-UA-116

**IN RE: PETITION OF MISSISSIPPI POWER COMPANY FOR A CERTIFICATE
 OF PUBLIC CONVENIENCE AND NECESSITY FOR
 ENVIRONMENTAL COMPLIANCE ACTIVITIES AUTHORIZING THE
 CLOSURE OF THE ASH POND, CONSTRUCTION OF LOW VOLUME
 WASTEWATER TREATMENT FACILITIES, AND CONVERSION OF
 BOTTOM ASH COLLECTION FACILITIES FOR THE PLANT VICTOR
 J. DANIEL ELECTRIC GENERATING FACILITY IN JACKSON
 COUNTY, MISSISSIPPI**

ORDER APPROVING PETITION FOR FACILITY CERTIFICATE

THIS CAUSE came on for consideration by the Mississippi Public Service Commission ("Commission") on the request of Mississippi Power Company (the "Company" or "MPCo") for a certificate that the present and future public convenience and necessity requires or will require the closure of the ash pond, construction of a low-volume wastewater facility, and conversion of bottom ash collection facilities (collectively, the "CCR Projects") to ensure continued compliance with federal environmental requirements at the Plant Victor J. Daniel Electric Generating Facility in Jackson County, Mississippi ("Plant Daniel"), pursuant to Sections 77-3-11 and 77-3-13 of the *Mississippi Code of 1972, as amended*, and Rule 7 of this Commission's Public Utilities Rules of Practice and Procedure ("Rules"). This Commission, being fully apprised in the premises, having considered the documents and record before it, and upon recommendation of the Mississippi Public Utilities Staff ("Staff"), finds that the certificate of public convenience and necessity requested by the Company should be granted, and further finds as follows:

DOCKET NO. 2019-UA-116

INTRODUCTION

1. The coal units at Plant Daniel ("Units 1 and 2") were placed in service in 1977 and 1981, respectively, and are the newest coal units in MPCo's fleet, which are capable of generating approximately 1,020 MW (net summer peak) of electricity.¹ For MPCo, Units 1 and 2 represent the only significant source of fuel diversity remaining in its fleet following the conversion of all their other coal units to natural gas.

2. To support its units, Plant Daniel employs approximately 200 full-time employees on site in Escatawpa, a small, rural community in Jackson County, Mississippi. A significant majority of these jobs directly support the two (2) coal units, and the Plant, in total, contributes over \$18 million annually to the ad valorem tax collections of Jackson County. Units 1 and 2 each have projected remaining useful lives of over 20 years.

3. Over the course of its service, Plant Daniel, and more particularly Units 1 and 2, has been impacted by the policies of the federal Environmental Protection Agency. For example, the Commission approved in 2012 the construction of a flue gas desulphurization system ("Scrubber") to further the continued operation of Units 1 and 2, which was necessitated by federal regulation and represented over \$600 million in construction costs. Advancing federal regulations and accommodation of their constrained compliance periods, once again, requires timely action by the Commission.

4. Accordingly, the Commission finds that the Company's petition should be granted for the following reasons and considerations, which will be set forth further in this Order: 1) the proposed projects are required to timely comply with applicable environmental laws respecting ash pond

¹ Plant Daniel is also home to two (2) natural gas-fired combined cycle units (Units 3 and 4) that combined are capable of generating approximately 1,054 MW (net summer peak) of electricity. This Commission also acknowledges that Gulf Power Company (NextEra) owns a 50% undivided interest in Units 1 and 2.

DOCKET NO. 2019-UA-116

closures and coal combustion residuals (CCR); 2) the transmission constraints identified by MPCo create untenable reliability risks to other compliance alternatives; 3) Units 1 and 2 at Plant Daniel have significant remaining useful life and are not scheduled to retire until 2042 and 2046, respectively;² 4) this Commission has previously determined in 2012 when it approved the installation of Scrubber equipment for Units 1 and 2 that preserving coal-fired generation at Plant Daniel provides important fuel diversity and is in the overall best interest of customers;³ and 5) the Commission, the Public Utilities Staff and the Company have been diligently and deliberately engaging, for over a year, in economic analysis regarding MPCo's fleet of generating assets in the Commission's Reserve Margin Plan Docket,⁴ where it is most appropriate for this Commission's policies regarding MPCo's existing generating facilities, including Plant Daniel Units 1 and 2, to be addressed.

PROCEDURAL BACKGROUND

5. The Company filed its Petition for Facility Certificate in this docket on July 9, 2019, and noted both in its filing and in accompanying pre-filed testimony the need for the Commission to move quickly to approve the Petition so that MPCo could comply with federal regulatory deadlines. Specifically, MPCo identified November 1, 2019, as the time by which Commission action would be necessary.

6. Notice of the matter was given to all persons interested therein in accordance with Mississippi law by mailing such notice to each public utility which may be affected, as well as by publication on July 20, 2019, in the Clarion Ledger, a newspaper of general circulation in Jackson, Mississippi, by publication on July 19, 2019, in the Mississippi Press, a newspaper

² *In re: Mississippi Power Company*, MPSC Docket No. 2014-UN-0276.

³ *In re: Mississippi Power Company*, MPSC Docket No. 2010-UA-0279.

⁴ MPSC Docket No. 2018-AD-0145.

DOCKET NO. 2019-UA-116

of general circulation in Jackson County, Mississippi, and by publication on July 18, 2019, in the Sun-Herald, a newspaper of general circulation in Harrison County, Mississippi.

7. Cooperative Energy and the Sierra Club requested and were granted status as intervenors in this docket.

8. On September 13, 2019, the Commission entered its Scheduling Order, specifically noting the time-sensitive nature of the proceedings and finding that the procedure outlined for submissions would promote efficient administration of the proceedings and would be in the best interest of the public and the interested parties. The Scheduling Order also indicated that at the time of issuance no party had submitted pre-filed testimony and only the Staff had completed its data request exchange with the Company. Moreover, at the time the Commission issued the Scheduling Order, no party had contested or otherwise objected to any matter related to the Petition.

9. The Staff conducted a thorough investigation of MPCo's application and submitted numerous data requests to MPCo to which the Company timely and thoroughly responded.

10. The Commission takes notice that while Sierra Club timely intervened, it waited until September 12, 2019, to issue its data requests to MPCo, over two (2) months after the Company filed its petition in this docket and on the eve of this Commission's Scheduling Order. On September 23, 2019, Sierra Club also filed a Motion to Require Supplementation of the Petition and a Revised Scheduling Order, which MPCo opposed. The parties presented oral argument on such Motion on October 24, 2019, and this Commission hereby confirms its denial of Sierra Club's Motion as provided for in this Order.

11. In addition, Sierra Club provided comments on MPCo's Proposed Order in the form of a report from Synapse Energy Economics, Inc. ("Synapse"). Finally, on October 16, 2019, Sierra

DOCKET NO. 2019-UA-116

Club submitted pre-filed direct testimony of Ms. Rachel Wilson of Synapse. MPCo opposed such filing as being out of time and in violation of scheduling order. The Commission agreed and granted MPCo's Motion to Strike Ms. Wilson's testimony. In both its offered comments and offered testimony, Sierra Club requested a delay of this proceeding similar to the request in Sierra Club's initial motion. Sierra Club's lack of prompt engagement in this proceeding should not delay the Commission's timely resolution of this matter, particularly in light of the Company's need to begin ash pond closure activities in November in order to cease receiving non-CCR waste streams by October 31, 2020, as required by the EPA.

12. On October 4, 2019, the Commission noticed the hearing of this matter and on October 24, 2019, the Commission held the hearing where the witness for MPCo appeared, testified, and was tendered for cross-examination by the parties, the Staff, and the Commission. As part of its case in chief, MPCo offered into evidence the public and confidential responses to Staff's and Sierra Club's data requests, and the Commission hereby incorporates MPCo's responses to all data requests by reference into the record in this proceeding and attaches to this Order the non-confidential versions of same.

13. This Commission has jurisdiction over the parties and subject matter pursuant to Sections 77-3-11 and 77-3-13 of the Mississippi Code of 1972, as amended. Given the considerations above, the Commission further finds that the Scheduling Order and hearing provide sufficient process, and the Commission has had opportunity to hear the positions of the parties through the submissions received and the testimony and evidence presented.

DOCKET NO. 2019-UA-116

LAW AND EVIDENCE

14. The federal environmental regulations governing CCR at Plant Daniel are similar to the regulations that required the closure of the ash pond facilities at the Company's Plant Jack Watson Electric Generating Plant authorized by this Commission in Docket No. 2016-UA-020. As stated *supra*, the EPA's CCR rules regulate CCR and non-CCR waste streams and require that MPCo cease placing CCR and non-CCR waste streams into the Plant Daniel ash pond by October 31, 2020, followed by closure of the ash pond, which must occur within five (5) years following the commencement of closure activities. Unless the Company commits to the permanent cessation of coal operations at Plant Daniel under the alternative closure requirements of the CCR Rules,⁵ the Company must cease placing CCR waste streams into the Plant Daniel ash pond by the October 31, 2020, deadline established by the EPA. However, under all circumstances, the Company must cease placing non-CCR waste streams (e.g. low volume waste water) into the ash pond by that October 31, 2020 deadline.

15. Sierra Club contends in its comments that MPCo did not adequately consider early retirement for Units 1 and 2 as a compliance alternative.⁶ Sierra Club suggests that early retirement would allow a delay of the ash pond closure until 2023 and avoid the bottom ash conversion project costs. MPCo, however, contends that early retirement would also require the acceleration of several other closure obligations, including asset retirement obligations, and additional non-CCR waste stream treatment expenses by October 31, 2020, while also creating transmission reliability

⁵ 40 C.F.R. §257.103.

⁶ *Id.*

DOCKET NO. 2019-UA-116

concerns.⁷ Sierra Club correctly points out that MPCo's co-owner, Gulf Power Company, has already indicated its intent to retire its ownership interest in Plant Daniel by 2024.

16. In response to data requests, MPCo demonstrated that it would need to finalize several transmission improvements and new projects no later than July 1, 2022 in order to reliably support consideration of early retirement as a technical possibility.⁸ While it might theoretically be possible to develop a planned schedule to accommodate outages and complete the transmission projects by July 1, 2022, there are many potential circumstances that could result in an unavoidable delay of the transmission projects, resulting in an unacceptable reliability risk. Events that have the potential to cause delays in schedules cannot be predicted and create uncertainty in the ability to execute a stringent schedule. What can be predicted with certainty is that if: 1) MPCo were to pursue an alternative to cease operation of Plant Daniel on July 1, 2022, so that closure of its impoundment can be completed by the required October 17, 2023, deadline, and 2) the transmission projects were not able to be completed by the July 1, 2022, Plant Daniel shut-down, reliability risk in the region would be unacceptable given that Plant Daniel would not be available for operation nor would the transmission projects be complete.

17. MPCo submits that the transmission constraints foreclose early retirement as a feasible option at this time, regardless of Gulf Power Company's desire to retire its ownership portion, because such constraints would need to be resolved prior to such retirement in 2024. We agree.

18. This Commission finds based upon the evidence in the record that such transmission constraints create an untenable reliability risk to early retirement of Plant Daniel and we are not convinced that the potential capital cost savings of \$12.5 million⁹ for MPCo is worth that reliability

⁷ MPCo Data Request Responses MPUS 1-8, MPUS 1-8 SUPP., MPUS 1-9, MPUS 1-9 SUPP, MPUS 1-13, and MPUS 1-13 SUPP.

⁸ *Id.*

⁹ *Id.*

DOCKET NO. 2019-UA-116

risk, particularly within the narrow timeframes for compliance established by the EPA. We reiterate that the long-term viability of MPCo's generating fleet, including Plant Daniel Units 1 and 2, as well as the impact of Gulf Power Company's intended retirement, are being considered in the RMP Docket; therefore, we find that the CCR Projects as proposed by MPC provide the most prudent path to compliance with the CCR Rules at this time and under these circumstances.

19. To comply with the EPA's regulations, MPCo must rapidly complete each of the following components of the CCR Projects, and must do so sequentially: 1) MPCo must complete a conversion of the bottom ash collection system that will not require use of the ash pond for the discharge of any CCR waste stream; 2) following the bottom ash conversion, the ash pond itself must be closed by first ceasing receipt of any CCR or non-CCR and then by removing all CCR in accordance with 40 C.F.R. § 257.102(c); and 3) following the ash pond closure, a new low-volume wastewater treatment system must be constructed on the site of the former ash pond. No party has presented evidence in this proceeding that is contrary to both the specific requirements and timing of compliance activities proposed by MPCo.

20. Time is of the essence. To comply with EPA's timeline, MPCo must begin construction of the CCR Projects no later than November 1, 2019. The total cost for all of the work described herein is approximately \$125 million. As an undivided owner of 50% of Plant Daniel Units 1 and 2, MPC's portion of the project costs would be approximately \$62.5 million.¹⁰

21. As explained in the testimony of Mr. Mark Loughman, MPCo's Director of Environmental Affairs, Plant Daniel's existing Ash Pond must be closed in order to comply with the CCR Rule under Subtitle D of the Resource Conservation and Recovery Act. 40 CFR § 257.60(a) and §

¹⁰ In data response MPUS 1-21 (Attachment), MPCo indicated that the estimate may be closer to \$67 million because a small portion of the CCR Project is necessary to support Plant Daniel Unit 3 and Unit 4, which are wholly owned by MPCo.

DOCKET NO. 2019-UA-116

257.101(b)(1). Its closure is governed by 40 CFR § 257.102(c), which requires the removal of all CCR from the ash pond and closure of the ash pond within five (5) years of commencing closure activities. More importantly, MPCo must cease placing CCR *and* non-CCR waste streams into the ash pond no later than October 31, 2020. MPCo currently expects to complete ash pond closure activities at Plant Daniel by the first quarter of 2022. Time is of the essence of these CCR Projects.

22. As Mr. Loughman describes in his testimony, the ash pond currently serves the dual purposes of bottom ash storage and low volume wastewater (LVW) retention of both CCR and non-CCR waste streams. Because the CCR Rule requires MPCo to cease receiving both types of waste streams into the ash pond by October 31, 2020, alternate facilities are required by that deadline to accommodate such waste streams once they can no longer be placed into the ash pond.

23. To that end, the Company plans to close the ash pond as described above in compliance with the applicable laws governing such closures, and to repurpose the former ash pond impoundment to serve as a LVW retention pond as described in Mr. Loughman's testimony. With respect to the bottom ash created by the coal combustion process that is currently sluiced to the ash pond, the Company plans to install a Submerged Grind Conveyor (SGC) system. A second SGC will de-water the bottom ash and transport it to a bunker for storage in compliance with applicable environmental laws and regulations.

24. While Mr. Loughman's testimony is uncontroverted in the record, additional considerations warrant attention. As noted previously, Plant Daniel, particularly its coal units, contribute substantially to the economic well-being of Jackson County. Moreover, that contribution is projected, at least, to continue for another 20 years: Based upon the last depreciation study filed by the Company and approved by this Commission in Docket No. 2014-UN-0276, Plant Daniel Units 1 and 2 have projected retirement dates of 2042 and 2046, respectively.

DOCKET NO. 2019-UA-116

25. Beyond the local economic contribution, coal-fired generation is MPCo's predominant source of fuel diversity, a policy this Commission has repeatedly observed. Just this past October, the Commission submitted comments in support of the Affordable Clean Energy rule, which confirmed its earlier opposition to the Clean Power Plan. The Commission's comments noted the following regarding the preservation of coal-fired generation in Mississippi: "Because Mississippi's climate and geography limit the potential for extensive investments in renewable sources, preserving some coal-fired generation is currently critical for maintaining fuel diversity and rate stability."¹¹ In 2014, the Commission submitted comments in opposition to the Clean Power Plan, again noting the need for fuel diversity and highlighting the detrimental effects of eliminating coal-fired generating resources.¹²

26. Consistent in its approach, in Docket No. 2010-UA-0279, the Commission approved MPCo's construction of a Scrubber for Plant Daniel Units 1 and 2, which preserved MPCo's currently scheduled unit retirement dates. In its order in the Scrubber docket, the Commission indicated its preference for fuel diversity and for the continued operating of coal-fired generation in MPCo's fleet where it stated: "[t]he Commission finds the strategic interest of fuel diversity very compelling and gives significant weight to this consideration."¹³ In that Order, the Commission further explained its rationale for maintaining some fuel diversity by continuing to support the operation of some coal-fired generation at Plant Daniel:

The Commission places superior weight on the benefits of fuel diversity and fuel security offered by the Scrubber Project and finds that these benefits to MPCo's ratepayers conclusively place the Scrubber Project ahead of a combined cycle alternative. Stated differently, the Commission finds that, given the "inconclusive"

¹¹ MPSC Comments submitted in Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program; Proposed Rule, Docket No. EPA-HQ-OAR-2017-0355 (October 30, 2018).

¹² See pp. 18-20 of comments of MPSC in *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Proposed Rule*, Docket No. EPA-HQ-OAR-2013-0602 (2014).

¹³ *In re: Petition of Mississippi Power Company*, Order, pg. 12, MPSC Docket No. 2010-UA-0279 (2012).

DOCKET NO. 2019-UA-116

or neutral economics noted by Drs. Vatter and Van Vactor, the strategic benefits of the Scrubber Project make it the best choice to serve the public interest and thereby satisfies the public convenience and necessity.¹⁴

27. Without Plant Daniel Units 1 and 2, MPCo's owned generating capacity would be 100% dependent upon natural gas, which this Commission believes is not in the best interest of MPCo's customers at this time.¹⁵

28. As with the Scrubber matter, the Commission may once again face neutral or non-determinative economic analysis, in which Commission policy considerations and choices will come to the fore. Those deliberations and decisions, however, are best addressed in the Commission's Reserve Margin Plan Docket, since it was established for that purpose.

29. For example, some data requests and responses indicate that if the Commission ordered early retirement of Unit 1 and Unit 2, then approximately \$45 million of CCR Project related costs could be avoided. However, because early retirement would accelerate other asset retirement obligations and related closure costs, the savings realized would be closer to \$25 million, which represents approximately \$12.5 million to MPCo based upon ownership percentage. Assuming those costs could actually be avoided and that the transmission construction schedule risk would be worth taking, MPCo's portion of those savings is relatively small compared to the overall investment at Plant Daniel and is certainly less significant than the weightier decision of whether to retire two units twenty years ahead of schedule that would largely eliminate MPCo's existing fuel diversity.

30. The Staff and its consultants have been diligently working with the Company in the Reserve Margin Docket to present a full picture to this Commission so that it may make the best

¹⁴ *Id.* at 15.

¹⁵ MPCo has approximately 150 megawatts of renewable energy under long-term output power purchase agreements on an energy-only basis (i.e. MPCo does not own the facilities).

DOCKET NO. 2019-UA-116

decision possible on a prudent timetable. This Commission finds that an economic re-analysis of Plant Daniel Unit 1 and Unit 2 does not serve the public interest, at this time. To the extent any additional economic analysis regarding MPCo's fleet of generating assets is performed in the Commission's Reserve Margin Docket established in Docket No. 2018-AD-0145, those results and any impacts on this Commission's policies regarding MPCo's existing generating facilities, including Plant Daniel Unit 1 and Unit 2, will be addressed in that proceeding.

CONCLUSION

31. For all the foregoing reasons and for all the reasons set forth in this Order, the Commission hereby finds that the public convenience and necessity requires and will require the CCR Projects proposed in the Company's petition to preserve the continued operation of its only coal-fired generation available for service to customers in Southeast Mississippi. However, acknowledging the ongoing review of MPCo's existing generation facilities in a distinct proceeding – the Reserve Margin Plan Docket – and that differing policy arguments continue to exist surrounding the continued operation of coal-fired generation facilities, generally, the Commission notes that the current deadlines established by the EPA motivate the granting of the instant petition. The granting of this petition does not suggest that the Commission is reaching, or has reached, a conclusion as to the continued operation of Plant Daniel in the Reserve Margin Plan Docket. Moreover, this Order in no way precludes future Commissions from revisiting the question of how to manage the public interest and necessity when considering fuel diversity needs in the future, especially as such diversity relates to the continued operation of coal-fired generation units.

32. The Company has reasonably complied with the applicable filing requirements and has provided information sufficient for the Commission's and the Staffs consideration of this matter.

DOCKET NO. 2019-UA-116

Therefore, for good cause shown, this Commission waives any other filing requirements as prescribed by this Commission's Rules and not provided by the Company.

33. While this Commission finds that the public convenience and necessity require the CCR Projects, we are sensitive to the positions espoused by Sierra Club in this proceeding regarding the continued review of the long-term viability of Plant Daniel Units 1 and 2, and this Commission's need to carefully consider the potential retirement of those units in the Reserve Margin Plan Docket. To that end, this Commission believes certain safeguards for customers are appropriate as set forth below.

WHEREFORE PREMISES CONSIDERED, it is therefore,

ORDERED, and the Commission hereby finds that the public convenience and necessity requires the CCR Projects as proposed and hereby grants the Company a Certificate of Public Convenience and Necessity authorizing the Company to perform the CCR Projects as described above and in the Company's Petition. It is further,

ORDERED, that as a continuing condition of this Order and the granting of a certificate hereunder, MPCo shall submit monthly reports to the Staff and Commission on the expenditures of the CCR Projects including the cumulative costs incurred to date, the estimated total costs to complete, the estimated total costs to cancel the project and the remaining contingency allowance. It is further,

ORDERED, that MPCo shall file updated analysis in the Reserve Margin Plan, Docket No. 2018-AD-0145, by December 31, 2019. It is further,

ORDERED, and the Commission affirmatively declares that no portion of the costs associated with the CCR Projects that are contractually assigned to Gulf Power Company shall be recoverable by MPCo in its rates. It is further,

DOCKET NO. 2019-UA-116

ORDERED, that if, upon the conclusion of the Reserve Margin Plan Docket, the Commission determines that the early retirement of Plant Daniel Units 1 and 2 serves the public interest and that the CCR Projects no longer serve the public interest, MPCo will use commercially reasonable efforts to safely and promptly cease those efforts, and any dollars committed to said CCR Projects after the date of such an Order will not be recoverable by MPCo in its rates. It is further,

ORDERED, that Sierra Club is hereby granted late intervenor status in the Reserve Margin Plan Docket, No. 2018-AD-0145, to participate fully as a party in said docket including the right to issue data requests and to file testimony within any deadlines prescribed by the Commission, and the Executive Secretary is directed to enter an Order to such effect. It is further,

ORDERED, that Sierra Club's Motion to Require Supplementation of the Petition and a Revised Scheduling Order is not well-taken, and is denied. It is further,

ORDERED, that MPCo's Motion to Strike Testimony regarding the late-filed testimony of Rachel Wilson is well-taken, and is granted, and that the testimony of David Schmitt that MPCo filed in rebuttal to Ms. Wilson's testimony is also stricken.

This Order shall be deemed issued on the day it is served upon the parties herein by the Executive Secretary of this Commission who shall note the service date in the file of this Docket.

Commission Vote

Chairman Brandon Presley

Aye _____ Nay _____

Vice Chairman Cecil Brown

Aye _____ Nay _____

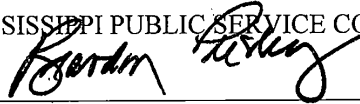
Commissioner Samuel F. Britton

Aye _____ Nay _____

DOCKET NO. 2019-UA-116

SO ORDERED by this Commission on this the 28th day of October, 2019.

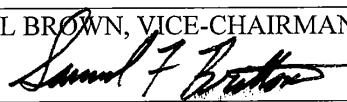
MISSISSIPPI PUBLIC SERVICE COMMISSION



BRANDON PRESLEY, CHAIRMAN

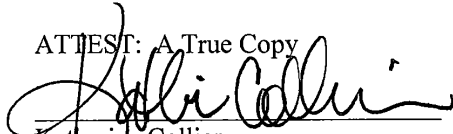


CECIL BROWN, VICE-CHAIRMAN



SAM BRITTON, COMMISSION

ATTEST: A True Copy



Katherine Collier
Executive Secretary

Effective this the 28th day of October, 2019



BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: **Environmental Cost**)
Recovery Clause)

Docket No.: 20200007-EI

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of the foregoing was furnished by electronic mail this 31st day of July, 2020 to the following:

Ausley Law Firm
James D. Beasley
J. Jeffry Wahlen
Malcolm N. Means
Post Office Box 391
Tallahassee, FL 32302
jbeasley@ausley.com
jwahlen@ausley.com
mmeans@ausley.com

PCS Phosphate – White Springs
c/o Stone Mattheis Xenopoulos
& Brew, P.C.
James W. Brew/Laura Baker
Eighth Floor, West Tower
1025 Thomas Jefferson St, NW
Washington, DC 20007
jbrew@smxblaw.com
lwb@smxblaw.com

Florida Power & Light Company
Kenneth Hoffman
134 West Jefferson Street
Tallahassee, FL 32301
Kenneth.Hoffman@fpl.com

Florida Industrial Power Users Group
c/o Moyle Law Firm
Jon C. Moyle, Jr.
118 North Gadsden Street
Tallahassee, FL 32301
jmoyle@moylelaw.com
mqualls@moylelaw.com

Florida Power & Light Company
Maria J. Moncada
David Lee
700 Universe Boulevard
Juno Beach, FL 33408-0420
Maria.moncada@fpl.com
David.lee@fpl.com

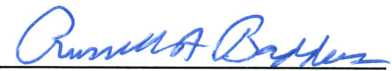
Office of the General Counsel
Charles Murphy
2540 Shumard Oak Blvd
Tallahassee, FL 32399-0850
cmurphy@psc.state.fl.us

Office of Public Counsel
J. Kelly/C. Rehwinkel/P. Christensen
T. David
c/o The Florida Legislature
111 W. Madison Street, Room 812
Tallahassee, FL 32399-1400
Christensen.patty@leg.state.fl.us
KELLY.JR@leg.state.fl.us
David.tad@leg.state.fl.us

Duke Energy Florida, Inc.
Matthew R. Bernier
106 East College Avenue, Suite 800
Tallahassee, FL 32301
Matthew.bernier@duke-energy.com
FLRegulatoryLegal@duke-energy.com

Duke Energy Florida, Inc.
Dianne M. Triplett
299 First Avenue North
St. Petersburg, FL 33701
Dianne.triplett@duke-energy.com

Tampa Electric Company
Ms. Paula K. Brown, Manager
Regulatory Coordination
P. O. Box 111
Tampa, FL 33601-0111
Regdept@tecoenergy.com



RUSSELL A. BADDERS
VP & Associate General Counsel
Florida Bar No. 007455
Russell.Badders@nexteraenergy.com
Gulf Power Company
One Energy Place
Pensacola FL 32520-0100
(850) 444-6550

STEVEN R. GRIFFIN
Florida Bar No. 0627569
srg@beggslane.com
Beggs & Lane
P. O. Box 12950
Pensacola FL 32591-2950
(850) 432-2451
Attorneys for Gulf Power