



**TECHNICAL REVIEW AND EVALUATION
FOR
AIR QUALITY PERMIT No. 89460,
AS AMENDED IN PERMIT REOPENING No. 95095**

I. INTRODUCTION

Permit action No. 95095 is being taken to reopen Class I Renewal Permit No. 89460, which was issued on December 1, 2021 to Salt River Project (SRP) for the continued operation of Coronado Generating Station (CGS). On January 10, 2022, the Sierra Club petitioned the United States Environmental Protection Agency (EPA) Administrator to object to the issuance of Permit No. 89460, and on June 14, 2022, the EPA Administrator signed an Order (OAR-22-000-4700) that granted in part and denied in part the Sierra Club's petition to object. In the Order, the EPA stated that ADEQ must do the following:

- Direction #1: Amend Permit No. 89460 and the permit record to explain and include the extension granted to SRP CGS for the construction of the SCR on Unit 1, and how those extensions were consistent with the SIP at Arizona Administrative Code (A.A.C.) R18-2-402(J). (ADEQ's response to Direction #1, including the associated changes that were made in the permit, is provided below in Section II.)
- Direction #2: Amend permit conditions in Attachment "E" of the Permit to specify the actual origin and authority for the permit condition as required by 40 C.F.R. § 70.6(a)(1)(i) and A.A.C. R18-2-306.A.2.a. 40 C.F.R. § 70.6(a)(1) and A.A.C. R18-2-306.A.2 are not the origin of an applicable requirement, but rather the title V requirement to include those terms in the title V permit. Therefore, the title V permit should cite to the original permit action, the SIP, or other underlying applicable requirement(s) for the authority for each permit term in the title V permit. (ADEQ's response to Direction #2, including the associated changes that were made in the permit, is provided below in Section III.)

Permit No. 89460 has been reopened solely to respond to these directions from the EPA. The permit conditions that were changed in this reopening are Condition II.C.4 of Attachment "E" and the citations for all permit conditions in Attachment "E". ADEQ will accept public comments on only those permit conditions that are being amended in this permitting action and this technical support document. There are no changes in processes, equipment, applicable regulations, or emissions at CGS associated with this reopening. Therefore, this permit reopening does not trigger minor or major New Source Review (NSR), ambient air impact analysis, environmental justice analysis, or a learning site evaluation. Information regarding the process description, applicable regulations, and potential-to-emit (PTE) for CGS may be found in the application, permit, and TSD for Renewal Permit No. 89460.

A. Company Information

Facility Name: Coronado Generating Station (CGS)

Mailing Address: P.O. Box 1018

St. Johns, AZ 85936

Facility Location: Six miles northeast of St. Johns, AZ off U.S. Highway 191
St. Johns, Apache County, AZ 85936

B. Attainment Classification

This facility is located in an area that is classified as in attainment or unclassifiable for all criteria pollutants.

II. RESPONSE TO DIRECTION #1: PSD EXTENSIONS

Permit Conditions Changed: Condition II.C.4 of Attachment "E"

A. Background

On December 14, 2016, ADEQ issued Attachment "E" of Operating Permit No. 64169 (as amended by Significant Permit Revision (SPR) No. 63088) to serve as the basis of an ADEQ revision to the Regional Haze SIP for approval as a "BART Alternative" for CGS Units 1 and 2. The revision proposed two BART alternative operating strategies, the first of which involved the installation and operation of a selective catalytic reduction (SCR) system on Unit 1 by December 31, 2025. Due to the collateral increases of emissions associated with the potential operation of the SCR on Unit 1, the permit revision triggered Prevention of Significant Deterioration (PSD) review for particulate matter with an aerodynamic diameter less than 10 microns (PM₁₀), particulate matter with an aerodynamic diameter less than 2.5 microns (PM_{2.5}), and sulfuric acid (H₂SO₄). The permit revision thus also constituted a PSD construction permit authorizing the installation of an SCR system on Unit 1, as would be required if SRP selected the Unit 1 SCR BART Alternative operating strategy. Pursuant to A.A.C. R18-2-402(J) the authority to construct shall become invalid if construction is not commenced within 18 months of issuance of the final PSD construction permit unless an extension is granted by the Director. ADEQ issued the final permit to SRP on December 14, 2016, which set the original termination date to commence construction as June 14, 2018.

B. Authority for PSD Permit Extensions

Under A.A.C. R18-2-402(J), ADEQ has the authority to extend the 18-month period to commence construction under a PSD permit, upon a showing to the satisfaction of the Director that such an extension is justified. As part of this permit reopening, the language from this rule has been added to Condition II.C.4 of Attachment "E" and the citation for authority has been updated to A.A.C. R18-2-402(J) to provide clarity.

As of this permit reopening, SRP has requested, and ADEQ has granted, three extensions to the deadline for commencement of construction of SCR on Unit 1. In response to Direction #1, ADEQ attaches and incorporates into the permit record the letters documenting the extensions previously granted by the Director; and provides further explanation of these extensions in Sections II.C through II.E. In short, ADEQ timely extended the deadline for commencement of construction upon review of the materials submitted by SRP and after determining to the satisfaction of the Director that the extensions were justified as provided in A.A.C. R18-2-402(J).

C. 1st Extension

On May 1, 2018, SRP submitted a request to ADEQ requesting to extend the original PSD deadline to commence construction on the Unit 1 SCR (June 14, 2018) by 36 months. SRP believed an extension was warranted without a re-evaluation under the PSD program for the following reasons:

- Based upon a review of the RACT/BACT/LAER clearinghouse (RBLC), SRP identified no new air pollution control technology or other emission reduction techniques since the final permit revision was issued.
- SRP stated that the PSD increment allocated for this project was minor and there were no new permitting activities in the area that would potentially be constrained by the allocation of the increment.

In EPA's guidance on PSD extension dated January 31, 2014¹, it is recommended that approval of an 18-month extension generally may be granted without a re-evaluation of PSD review as improvements in air pollution control technology are not expected to occur rapidly within an 18-month period following the issuance of a final PSD permit. Based on this guidance and ADEQ's evaluation, on May 15, 2018, ADEQ sent a letter to SRP that granted an 18-month extension to commence construction by December 14, 2019.

D. 2nd Extension

On September 19, 2019, SRP submitted a request to ADEQ asking that the deadline (then December 14, 2019) be extended by another 18 months to June 14, 2021. To support their request, SRP reevaluated the 2016 BACT analyses for H₂SO₄ and PM₁₀/PM_{2.5} emissions from CGS Unit 1 that were a part of the application for Significant Permit Revision No. 63088. SRP's conclusions are summarized below:

- Except the technologies identified in the 2016 submittal, no new technologies were potentially available for use in controlling emissions of H₂SO₄ or PM₁₀/PM_{2.5} from CGS Unit 1.
- Coal switching/washing/processing and flus gas conditioning remained technically infeasible for CGS Unit 1.
- The application of a reagent/sorbent injection system, fabric filter (FF) baghouse, and wet electrostatic precipitator (WESP) were still cost prohibitive for CGS Unit 1. The cost-effectiveness (\$/ton) for these controls would be higher than the 2016 estimates due to cost escalation as well as overestimation of the emission reductions in the 2016 submittal.

¹ U.S. EPA. 2014. *Guidance on Extension of Prevention of Significant Deterioration (PSD) Permits under 40 CFR 52.21(r)(2)*. Stephen D. Page's Memorandum dated January 31, 2014.
<https://www.epa.gov/sites/production/files/2015-07/documents/extend14.pdf>

- There were no new permitting actions establishing limits for H₂SO₄ and PM₁₀/PM_{2.5} emission limits for coal-fired units since 2016.
- The U.S. Energy information Administration (EIA) database² indicated that none of the emissions units similar to CGS Unit 1 (*i.e.*, hot-side electrostatic precipitator (HESP) and SCR) were subject to a limit on H₂SO₄ or PM₁₀/PM_{2.5} that was as stringent as the limits already imposed on CGS Unit 1.

For this extension request, SRP also updated the air dispersion modeling analyses conducted in 2016 by using updated model versions, meteorological data, off-site source emissions inventory, and background concentrations. SRP also incorporated the EPA's recent PM_{2.5} SIL guidance³ into their analyses. SRP's updated modeling report showed that the maximum ambient impacts for PM₁₀ were below the Class I and Class II SILs, and the maximum ambient impacts for PM_{2.5} were below the applicable NAAQS and PSD increment. The amount of PM_{2.5} increment consumed by the Unit 1 SCR project was small in relation to the allowable increases in concentration, and the allocation of PM_{2.5} increment for the Unit 1 SCR project would be unlikely to constrain economic growth in the surrounding area.

According to the EPA's 2014 guidance on PSD permit extension⁴, a substantive permit analysis such as BACT analysis, NAAQS analysis, or PSD increment consumption analysis may be necessary in the case of a second permit extension that would extend the construction commencement deadline greater than 18 months from the original deadline. Upon review, ADEQ concurred with SRP's review of the 2016 BACT determinations on the SCR project for CGS Unit 1, which concluded that such determinations remained current. ADEQ also concurred with SRP's updated air dispersion modeling analyses, which demonstrated that the SCR project would comply with the NAAQS and PSD increments requirements. In conclusion, ADEQ determined that the requested extension was justified. On December 10, 2019, ADEQ sent a letter to SRP that granted an 18-month extension to commence construction by June 14, 2021.

E. 3rd Extension

On October 20, 2020, SRP submitted a third extension request to ADEQ asking that the deadline to commence construction on the Unit 1 SCR (then June 14, 2021) be extended by an additional 18 months. In the request, SRP expressed concerns about meeting the June 14, 2021 deadline in the context of the ongoing COVID-19 pandemic. SRP stated that the additional extension would be necessary to analyze the impacts of the pandemic and pursue the best resource plan for the community and customers. SRP also once again noted that

² Form EIA-860. <https://www.eia.gov/electricity/data/eia860/>

³ U.S.EPA. 2018. *Guidance on Significant Impact Levels (SILs) for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program*. Peter Tsigotis Memorandum dated April 17, 2018. https://www.epa.gov/sites/production/files/2018-04/documents/sils_policy_guidance_document_final_signed_4-17-18.pdf

⁴ See Footnote 1.

they had conducted a review of ADEQ's BACT determinations and its conclusions regarding air quality impacts from the Unit 1 SCR project, and had determined that these remained current. Additionally, SRP again stated that the PSD increment allocated for this project is minor and that there were no new permitting activities in the area that would potentially be constrained by the allocation of the increment.

Upon review, ADEQ concurred with SRP's conclusions regarding the BACT determinations and PSD increment analysis. Additionally, given the unique nature of the COVID-19 pandemic, ADEQ concluded that the third extension request for the commencement of construction of the Unit 1 SCR was justified. However, ADEQ determined that an extension of 18 months would be effective from the date of ADEQ's approval letter rather than from the June 14, 2021 deadline. On February 17, 2021, ADEQ sent a letter to SRP that granted an 18-month extension from the date of the letter, which extended the deadline to commence construction to August 17, 2022.

III. RESPONSE TO DIRECTION #2: CORRECTION OF A.A.C. R18-2-306.A.2 CITATIONS

Permit Conditions Changed: Citations for all conditions in Attachment "E"

EPA noted in their Order that A.A.C. R18-2-306.A.2, which is cited as the authority for several permit conditions in Attachment "E" of Permit No. 89460, does not actually grant ADEQ authority to require these permit conditions. As explained in Section II.A, ADEQ issued Attachment "E" of Operating Permit No. 64169 (as amended by SPR No. 63088) to serve as the basis of an ADEQ revision to the Regional Haze SIP for approval as a "BART Alternative" for CGS Units 1 and 2. EPA's approval of the incorporation of Attachment "E" of Operating Permit No. 64169 (as amended by SPR No. 63088) into the Arizona Regional Haze SIP is codified in 40 CFR 52.120(d). Therefore, based on EPA's guidance in their Order, the citations in Attachment "E" of Permit No. 89460 have been modified to reference 40 CFR 52.120(d) and the associated permit conditions in Attachment "E" of Operating Permit No. 64169 (as amended by SPR No. 63088), which are the true authority for these permit conditions. Citations for all permit conditions in Attachment "E" have been modified, including for those that did not originally cite A.A.C. R18-2-306.A.2, for additional clarity.

IV. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
AQD	Air Quality Division
A.R.S.	Arizona Revised Statutes
BACT	Best Available Control Technology
CFR	Code of Federal Regulations
EPA	United States Environmental Protection Agency
ESP	Electrostatic Precipitator
H ₂ SO ₄	Sulfuric Acid
LAER	Lowest Achievable Emissions Rate
NAAQS	National Ambient Air Quality Standard
NSPS	New Source Performance Standards
NSR	New Source Review
PM ₁₀	Particulate Matter less than 10 µm nominal aerodynamic diameter

PM_{2.5} Particulate Matter less than 2.5 µm nominal aerodynamic diameter
PSD Prevention of Significant Deterioration
PTE Potential to Emit
RACT Reasonable Available Control Technology
SCR Selective Catalytic Reduction
SIL Significant Impact Level
SPR Significant Permit Revision



Douglas A. Ducey
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Misael Cabrera
Director

Via Email

May 8, 2018

Rudy Navarro, Plant Manager
Salt River Project, Coronado Generating Station
PO Box 1018
St. Johns, AZ 85936

Re: Approval for Extension of 18-Month Timeframe for Commencing Construction under Prevention of Significant Deterioration (PSD)

Dear Mr. Navarro:

The Arizona Department of Environmental Quality (ADEQ) is in receipt of your letter, dated May 1, 2018, requesting a 36 month extension for approval to construct a selective catalytic reduction (SCR) system on Unit 1 that was authorized by Significant Permit Revision No. 63088. The Department has reviewed your request, and based upon the discussion below, will grant an 18 month extension which will establish a new timeframe for Salt River Project's (SRP) Coronado Generating Station (CGS) to commence construction of the SCR on Unit 1 by December 14, 2020.

Background:

ADEQ issued the referenced permit revision to serve as the basis of an ADEQ revision to the Regional Haze SIP for approval as a "BART Alternative" for CGS Units 1 and 2. The revision proposed two BART alternative operating strategies, the first of which involved the installation and operation of a SCR system on Unit 1 by December 31, 2025. Due to the collateral increases of emissions associated with the potential operation of the SCR, the permit revision triggered PSD review for PM₁₀, PM_{2.5}, and H₂SO₄. Pursuant to Arizona Administrative Code (A.A.C) R18-2-402.J the authority to construct shall become invalid if construction is not commenced within 18-months of issuance of the final permit unless an extension is granted by the Director. ADEQ issued the final permit to SRP on December 14, 2016, which sets the termination date to commence construction under this article as June 14, 2018.

SRPs Rationale for Extension:

SRP requests a 36-month extension to commence construction while it continues to evaluate its decision on the long term operation of Unit 1. SRP believes an extension is warranted without a re-evaluation under the PSD program for the following reasons:

1. **BACT Review:** Based upon a review of the BACT/RACT/LAER clearinghouse, SRP identified no new air pollution control technology or other emission reduction techniques since the final permit revision was issued.

2. Air Quality Impact Analysis: Additionally, SRP states that the PSD increment allocated for this project is minor and there are no new permitting activities in the area that would potentially be constrained by the allocation of the increment.

ADEQ Response:

ADEQ has the authority under A.A.C. R18-2-402.J to extend the 18-month period to commence construction, provided such an extension is justified. EPA guidance provided in a memorandum dated January 31, 2014, recommends that approval of an 18-month extension can be satisfactorily granted without a re-evaluation of PSD review, as improvements in air pollution control technology are not expected to occur rapidly within an 18-month period following the issuance of a final permit. However, it is believed to be much more likely that such advances in pollution control technology may occur within 36 months rendering the initial PSD analysis to become potentially outdated. Consequently, the Department has determined that an extension of 18 months is effective from the expiry date of the initial 18-month timeframe of June 14, 2018.

If you have any questions please contact Naveen Savarirayan, manager of the Air Permits Unit, at 602-771-2285.

Sincerely,

A handwritten signature in black ink, appearing to read 'Timothy S. Franquist', with a stylized flourish at the end.

Timothy S. Franquist, Director
Air Quality Division

TSF:ns3



Douglas A. Ducey
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Misael Cabrera
Director

Via Certified Mail

December 10, 2019

Rudy Navarro, Plant Manager
Salt River Project, Coronado Generating Station
PO Box 1018
St. Johns, AZ 85936

Re: Approval for Additional Extension for Commencing Construction under Prevention of Significant Deterioration (PSD)

Dear Mr. Navarro:

The Arizona Department of Environmental Quality (ADEQ) is in receipt of your letter, dated September 19, 2019, requesting an additional 18-month extension for approval to construct a selective catalytic reduction (SCR) system on Unit 1 that was authorized by Significant Permit Revision (SPR) No. 63088. The Department has reviewed your request, and based upon the discussion below, will grant an additional 18-month extension which will establish a new timeframe for Salt River Project's (SRP) Coronado Generating Station (CGS) to commence construction of the SCR on Unit 1 by June 14, 2021.

Background

CGS consists of two pulverized coal-fired, electric utility steam boilers (Units 1 and 2). Both units were subject to Best Available Retrofit Technology (BART) under the Regional Haze Program.

On December 14, 2016, ADEQ issued the referenced permit revision to serve as the basis of an ADEQ revision to the Regional Haze SIP for approval as a "BART Alternative" for CGS Units 1 and 2. The revision proposed two BART alternative operating strategies: i) install a SCR system on Unit 1 no later than December 31, 2025, or ii) permanently cease operation of Unit 1 on December 31, 2025. The revision provides a deadline of December 31, 2022, for SRP to decide whether to install a SCR or permanently cease operation of Unit 1.

Under the first final BART compliance option, the installation of the SCR system on Unit 1 will result in significant increases in emissions of three regulated New Source Review (NSR) pollutants: PM₁₀, PM_{2.5}, and sulfuric acid mist (abbreviated herein as H₂SO₄). Therefore, the

Phoenix Office

1110 W. Washington St. • Phoenix, AZ 85007
602-771-2300

Southern Regional Office

400 W. Congress St. • Suite 433 • Tucson, AZ 85701
520-628-6733

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SCR Project at Unit 1 is a major modification under Prevention of Significant Deterioration (PSD) and is subject to PSD review for PM₁₀, PM_{2.5}, and H₂SO₄ under A.A.C. R18-2-406.

Pursuant to Arizona Administrative Code (A.A.C) R18-2-402.J, the authority to construct shall become invalid if construction is not commenced within 18 months of issuance of the final permit unless an extension is granted by the Director. ADEQ issued the final permit to SRP on December 14, 2016, which set the termination date to commence construction under this article as June 14, 2018.

On May 1, 2018, SRP submitted the first extension request to ADEQ asking that the original deadline (June 14, 2018) be extended by 36 months. On May 15, 2018, ADEQ granted an extension, but only for 18 months, to December 14, 2019. This determination was based on the EPA's *Guidance on Extension of Prevention of Significant Deterioration (PSD) Permits under 40 CFR 52.21(r)(2)* dated on January 31, 2014. The EPA recommends that approval of an 18-month extension can be satisfactorily granted without a re-evaluation of PSD review, as improvements in air pollution control technology are not expected to occur rapidly within an 18-month period following the issuance of a final permit.

Second Extension Request

According to the EPA guidance on PSD permit extensions, a substantive permit analysis such as a BACT, NAAQS or PSD increment consumption analysis may be necessary for the second extension request. The documentation submitted by SRP shows that the 2016 BACT determinations on the SCR project for CGS Unit 1 remain current. Moreover, the updated air dispersion modeling analyses demonstrate that the SCR project will comply with the NAAQS and PSD increments requirements. ADEQ concurs with SRP's analyses and determines that the requested extension is justified. Therefore, the Department hereby grants an extension of 18 months to June 14, 2021 for the PSD permit action.

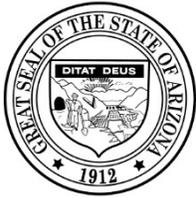
If you have any questions please contact Valerie Thorsen, manager of the Air Permits Unit, at 602-771-4420.

Sincerely,



Daniel Czecholinski, Director
Air Quality Division

cc: Lisa Beckham, EPA Region IX



Douglas A. Ducey
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Misael Cabrera
Director

February 17, 2021

Rudy Navarro, Plant Manager
Salt River Project
Coronado Generating Station
PO Box 1018
St. Johns, AZ 85936

Re: Approval for Extension of 18-Month Timeframe for Commencing Construction
under Prevention of Significant Deterioration (PSD)

Dear Mr. Navarro:

The Arizona Department of Environmental Quality (ADEQ) is in receipt of your letter, dated October 21, 2020, requesting an additional 18-month extension for approval to construct a selective catalytic reduction (SCR) system on Unit 1 that was authorized by Significant Permit Revision No. 63088. The Department has reviewed your request, and based upon the discussion below, will grant an 18 month extension which will establish a new timeframe for Salt River Project's (SRP) Coronado Generating Station (CGS) to commence construction of the SCR on Unit 1 by August 17, 2022.

Background:

ADEQ issued the referenced permit revision to serve as the basis of an ADEQ revision to the Regional Haze SIP for approval as a "BART Alternative" for CGS Units 1 and 2. The revision proposed two BART alternative operating strategies, the first of which involved the installation and operation of a SCR system on Unit 1 by December 31, 2025. Due to the collateral increases of emissions associated with the potential operation of the SCR, the permit revision triggered PSD review for particulate matter less than 10 microns (PM₁₀), particulate matter less than 2.5 microns (PM_{2.5}), and sulfuric acid (H₂SO₄). Pursuant to Arizona Administrative Code (A.A.C) R18-2-402.J the authority to construct shall become invalid if construction is not commenced within 18-months of issuance of the final permit unless an extension is granted by the Director. ADEQ issued the final permit to SRP on December 14, 2016, which set the termination date to commence construction Article 4 as June 14, 2018.

On May 1, 2018, SRP submitted a letter to the Department requesting a 36-month extension to commence construction of the Unit 1 SCR. The Department granted an 18-month extension on May 8, 2018 which postponed the deadline to December 14, 2019. A second extension request containing a revised analysis of the ambient air impacts as well as a review of control technologies for PM₁₀, PM_{2.5} and H₂SO₄ was submitted to the Department on September 19,

Main Office

1110 W. Washington Street • Phoenix, AZ 85007
(602) 771-2300

Southern Regional Office

400 W. Congress Street • Suite 433 • Tucson, AZ 85701
(520) 628-6733

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2019. After reviewing analyses, the Department granted the second extension request on December 10, 2019, extending the deadline to commence construction to June 14, 2021.

SRPs Rationale for Extension:

SRP requests an 18-month extension to commence construction while it evaluates how to safely navigate the design and construction of the Unit 1 SCR during the COVID-19 pandemic. SRP believes an extension is warranted without a re-evaluation under the PSD program for the following reasons:

1. **BACT Review:** Based upon a review of the BACT/RACT/LAER clearinghouse, SRP identified no new air pollution control technology or other emission reduction techniques since the final permit revision was issued.
2. **Air Quality Impact Analysis:** Additionally, SRP states that the PSD increment allocated for this project is minor and there are no new permitting activities in the area that would potentially be constrained by the allocation of the increment.
3. **COVID-19 Pandemic:** SRP has expressed concerns regarding safety and the economic uncertainty surrounding the installation of the SCR on Unit 1 due to the ongoing COVID-19 pandemic.

ADEQ Response:

ADEQ has the authority under A.A.C. R18-2-402.J to extend the 18-month period to commence construction, provided such an extension is justified. Given the unique nature of the current COVID-19 pandemic, ADEQ concludes that a third extension request for the commencement of construction of the Unit 1 SCR is justified. Consequently, the Department has determined that an extension of 18 months is effective from the date of this approval letter and extends the deadline to commence construction to August 17, 2022.

If you have any questions please contact Valerie Thorsen, manager of the Air Permits Unit, at 602-771-4420.

Sincerely,



Daniel Czecholinski, Director
Air Quality Division

DC5:vt2