



U.S. Department of the Interior
Office of Surface Mining
Reclamation and Enforcement



Appendix B—Comment Letters and Responses

San Juan Mine Deep Lease Extension Mining Plan Modification



March 2019

Office of Surface Mining Reclamation and Enforcement
Western Region
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1. INTRODUCTION

This appendix contains written and oral comments received from federal, state, and local agencies, the general public, and Native Americans during the public comment period for the Draft Environmental Impact Statement (EIS) for the San Juan Mine Deep Lease Extension Mining Plan Modification. The Office of Surface Mining Reclamation and Enforcement (OSMRE), Western Region, Denver, CO, published the Notice of Availability for the Draft EIS in the *Federal Register* on May 25, 2018. This initiated a 45-day comment period. The comment period ended on July 9, 2018.

Notices advertising public review period for the Draft EIS and public meetings were published in five local newspapers. In addition, flyers were posted two weeks before the start of meetings at appropriate community centers, post offices, libraries, grocery stores, gas stations, trading posts, town halls, and other gathering places throughout the Four Corners region to further reach community members and remote locations where interested stakeholders potentially resided. The notification flyer provided the meeting locations, dates, and times; provided information on how to submit comments; and remained posted until the end of the public review period. A public service announcement announcing the dates and times of the local public meetings was distributed to the KGXL-FM radio station in Gallup, New Mexico. Public service announcements were recorded and played in both Navajo and English.

At the start of the public review period, the OSMRE mailed forty-eight stakeholder letters and CD-ROM copies of the Draft EIS to county, state, and federal agencies, as well as non-governmental organizations and an additional 61 postcards to pertinent government officials and interested parties on May 25, 2018. OSMRE also sent email notification to all individuals that requested addition to the project mailing list during the scoping period. Hardcopies of the Draft EIS were sent to eight repositories in the Four Corners region to facilitate public review of the document. The Draft EIS was also posted on OSMRE's project website on May 25, 2018, and the project video and other materials presented at the public meetings were posted on July 9, 2018.

During the public review period, OSMRE held five open house public meetings from June 25, 2018 to June 29, 2018 in Albuquerque, New Mexico, Farmington, New Mexico, Shiprock, New Mexico, Towaoc, Colorado, and Durango, Colorado. All meetings were held in an open house format, with information stations describing varying aspects of the Project located throughout the venue and subject matter experts available to answer questions and describe the process and analysis. The information stations were attended by the OSMRE and the OSMRE consultant technical experts who would be developing the resource analyses in the EIS. The open-house format allowed visitors to arrive at any time during the public meeting and did not require attendance at a formal presentation in order to learn about the project and NEPA process. Visitors could also ask questions of the OSMRE and the OSMRE consultant technical experts before providing their formal comments on the Draft EIS. During all public meetings, opportunity to comment in written and oral form via a court reporter was provided; translation services were provided for Navajo speakers at the Shiprock meeting and Ute Mountain Ute

speakers at the Towaoc meeting. Written, oral, and video comments were also received via email, fax, and the U.S. Postal Service mail.’

In accordance with the National Environmental Policy Act (NEPA), public and agency written and oral comments were reviewed and incorporated into this Final EIS. Both written and oral comments were given equal treatment in this process. These public and agency comments were taken into consideration by OSMRE in preparing the Final EIS as well as in its decision-making process. The following presents the OSMRE comment and response process.

1.1. COMMENT RECEIPT AND REVIEW

Comment Receipt

Comments on the Draft EIS included both written correspondence and oral testimony received during the 45-day public comment period. All written and oral comments submitted to OSMRE during that period are included in the Decision File. Oral comments were received only at the five public meetings held during the comment period and were given to licensed court reporters either directly or through the use of a Navajo or Ute Mountain Ute translator. The testimony is also provided in the Decision File. The OSMRE also received 4,100 form emails from WildEarth Guardians; Comment Letter 5 is included in this appendix and is representative of these form letters. Individuals who submitted a WildEarth Guardian form letter are not listed individually in this appendix, but can find the response to their letter in the response to Comment Letter 5.

In addition to comments received by OSMRE, 4,100 form emails from WildEarth Guardians were sent directly to the Assistant Secretary of Land and Minerals Management (ASLM) about the Project during the public review period. These emails all contained the same language addressing the ASLM’s decision on the Project and did not address the Draft EIS except to request that economic transition be prioritized as part of the EIS process. Therefore, while these emails have been reviewed by both the ASLM and the OSMRE, they are not included in this comment response appendix.

Comment Review

In accordance with 40 Code of Federal Regulations (CFR) 1503.4, comments were assessed and considered as follows:

- Each written or oral comment was assigned an identification number. Comment letters were numbered sequentially based on when they were received by OSMRE.
- Each written and oral comment was reviewed carefully. Within each comment, substantive comments were identified, bracketed, and assigned into a category based on technical sections within the EIS. Those written or oral comments that did not contain a substantive comment are included in the Decision File. Three guidelines were used for determining substantive comments:
 1. The comment questioned components of the proposed action or alternatives associated with the San Juan Mine DLE Mining Plan Modification;

2. The methodology of the analysis or results was questioned; or
 3. The use, adequacy, or accuracy of data was questioned.
- The bracketed comments were reviewed by appropriate environmental resource specialists who drafted responses. There were some comments that were made frequently enough that OSMRE prepared “master responses” to these comments. Those comments and their responses are provided in Section 2 of this appendix. If the same comment was repeated within the same letter or oral comments, it was bracketed only the first time it appeared.
 - The individual bracketed comments were assigned a number and a response developed for each comment. The comment letters and oral comments are presented in Section 4 of this appendix. Each individual comment within the letters are bracketed and numbered; associated responses are organized consecutively by number and to the extent possible are depicted adjacent to the comment.

1.2. LOCATING YOUR COMMENTS

Section 3 lists commenters’ names alphabetically (by last name) followed by the comment letter number in bold (see Table of Contents for location of comment letter).

2. MASTER RESPONSES

2.1. MASTER RESPONSE 1: RENEWABLE ENERGY ALTERNATIVES

Many of the comments suggested that OSMRE should have considered a wider range of alternatives, including renewable energy options, as an alternative to the proposed action. Section 1502.14 of NEPA regulations requires that an EIS examine all reasonable alternatives to the proposal, including alternatives that are outside the legal jurisdiction of the lead agency, if determined reasonable. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense. As described in Section 2.2 of the EIS, these requirements guided the screening criteria used to examine each of the alternatives.

As described in Section 1 of the EIS, the Applicant's proposal subject to OSMRE's review and the Department of the Interior's decision is the Proposed Action to approve, approve with conditions, or disapprove continued underground mining within the DLE of the San Juan Mine. While all of the coal mined at the San Juan Mine is currently sold to the San Juan Generating Station and is anticipated to continue to be sold there until 2022, there is no action or federal decision to be made about the San Juan Generating Station. Although the effects of coal combustion at the San Juan Generating Station were fully analyzed in the EIS as required by the voluntary remand, there is no requirement to analyze alternatives to indirect effects. Therefore, the Department of the Interior and OSMRE have considered alternatives to the proposed mining methods, and sequence of mining activities, as presented in Table 2.2-1 of the EIS, but not alternatives to the indirect impacts of mining—i.e., electricity generation. Consideration of alternative forms of energy generation at the San Juan Generating Station other than coal combustion would not create alternatives to the proposed action of underground coal mining; therefore, renewable energy alternatives would not be reasonable alternatives to the Proposed Action.

Alternatives must also meet the agency's purpose and need. As a continuing operations project and not a new project, the purpose and need guiding development of the EIS is focused on the ASLM's decision whether to approve, approve with conditions, or disapprove continuing operations within the DLE of the San Juan Mine. Specifically, the underlying purpose to which the agency is responding to is established by the Mineral Leasing Act of 1920, which requires the evaluation of SJCC's proposed Mining Plan Modification for the DLE to continue underground mining and reclamation operations to develop Federal coal lands included in Federal Coal Lease NM-99144. In the alternatives considered in the EIS, either the coal would be mined as proposed under the Proposed Action (including potential sale to a new customer as is analyzed under Alternative B) or the coal would not be mined (Alternative C – No Action Alternative). Consideration of replacing coal combustion at the San Juan Generating Station with renewable energy development would be the functional equivalent of No Action. Development of renewable energy alternatives beyond No Action is speculative at this point because there are no such proposals. If economic development of renewable energy alternatives were feasible and economic, they would be subject to their own independent NEPA review process and would

occur following reclamation of the mine associated with No Action under OSMRE's decision-making process. The construction and operation of renewable energy generation could occur at some point in the future; at such time, such a proposal would be considered and analyzed under its own environmental review process in accordance with any state and federal permits that such a proposal might require.

2.2. MASTER RESPONSE 2: SOCIAL COST OF CARBON

There are several comments related to the use of the Social Cost of Carbon (SCC) method for monetizing CO₂e emissions. The SCC method is intended to monetize changes in net agricultural productivity, human health, property damages from increased flood risk, the value of ecosystem services, and other factors, due to climate change. It translates the metric for describing climate change consequences from tonnes/year of GHG expressed as CO₂e, to dollars/year. The underlying analysis is functionally the same for purposes of evaluating impacts, but the units become dollars per year rather than CO₂e. Details for why the OSMRE did not use the SCC tool are included in Section 4.2.1.3, GHG Emissions Monetization Policy, of the EIS.

Procedural Considerations

Executive Order 12866 requires Federal rulemakings to “assess both the costs and the benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs.” A 12-member Interagency Working Group (IWG) was formed to develop the calculation of SCC for inclusion in the cost-benefit analysis for rulemakings. The IWG released its initial Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis in February 2010, which was subsequently updated in May 2013.

Even as it was developed, the IWG recognized that the calculation of the SCC is laden with uncertainties; according to the IWG (IWG 2010):

“It is important to recognize that a number of key uncertainties remain, and that current SCC estimates should be treated as provisional and revisable since they will evolve with improved scientific and economic understanding. The interagency group also recognizes that the existing models are imperfect and incomplete. The National Academy of Science (2009) points out that there is tension between the goal of producing quantified estimates of the economic damages from an incremental ton of carbon and the limits of existing efforts to model these effects.”

Such uncertainties include the quantitative value placed on greenhouse gas emissions, which is uncertain. Social cost estimates for a ton of carbon dioxide emitted range from \$5 to over \$800 (Interagency Working Group 2010; F. Ackerman & E. Stanton, *Climate Risks and Carbon Prices: Revising the Social Costs of Carbon*, 2010). In addition, “[t]he choice of a discount rate, especially over long periods of time, raises highly contested and exceedingly difficult questions of science, economics, philosophy, and law. Although it is well understood that the discount rate

has a large influence on the current value of future damages, there is no consensus about what rates to use in this context.” (IWG 2010)

A quantitative SCC analysis was not conducted for the San Juan Mine DLE EIS because the NEPA analysis is not required to contain a cost-benefit analysis similar to that required by Executive Order 12866 for significant rulemakings and for which the SCC method was developed. The numerous uncertainties in the method, the wide range of potential values of social cost (more than a factor of 100), and the wide range in outcomes depending on the choice of discount rate all indicated that the use of the analysis for the EIS would not enhance understanding of the effects on climate change of the Proposed Action (Alternatives A and B). The Proposed Action (Alternatives A and B) was analyzed quantitatively for CO₂e emissions, and the effect of those emissions in a global context. This quantitative analysis was sufficient to inform decision-makers and the public about the environmental consequences of the proposed action related to climate change.

The lack of utility in performing the SCC was demonstrated in the EIS for the Four Corners Power Plant-Navajo Mine Energy Project (OSMRE 2015). In that EIS, the OSMRE was considering actions at the mine and the power plant related to the Four Corners Power Plant-Navajo Mine Energy Project. At that time, the Four Corners Power Plant was estimated to produce annual CO₂e emissions of 6,716,400 metric tonnes/year over a 25-year period. OSMRE in the Draft EIS included a description of the social costs of GHG emissions similar to that presented in the San Juan Mine DLE Draft EIS. The Final EIS, however, included a full calculation of the SCC, following IWG (2013) guidance and protocols and estimated that the selected alternative had a cumulative SCC ranging from approximately \$4.2 billion to \$22.1 billion depending on dollar value and the discount rate used in the SCC calculation. If this analysis had considered the accepted range in social cost per tonne of CO₂e emitted, this range in value would have expanded by more than a factor of 100. The cumulative SCC for the no action alternative ranged from \$2.0 billion to \$10.7 billion (reducing the total by considering the GHG emissions from a portfolio of likely replacement energy sources). Notably, the OSMRE’s experience with the Four Corners Power Plant-Navajo Mine Energy Project EIS demonstrated that the SCC values are so disparate that they do not meaningfully assist with an assessment of the effects of the action. In addition, in that case, the overall effects, although quantified in the Final EIS, did not change the findings or the level of significance for climate change discussed in the Draft EIS. As described below, the emissions profiles are practically the same between Four Corners Power Plant and the Generating Station.

Further, NEPA does not require a cost-benefit analysis (40 CFR 1502.23), although it does require consideration of “effects” that include “economic” and “social” effects (40 CFR 1508.8(b)). Without a complete monetary cost-benefit analysis, which would include the social benefits of the proposed action to society as a whole and other potential positive benefits, inclusion solely of an SCC cost analysis would be unbalanced, potentially inaccurate, and not useful in facilitating an authorized officer’s decision. The EIS analyzed the socioeconomic effects of the proposed action and considered revenue, employment, labor income, total value added, and output, that is expected to occur. However, the analysis of socioeconomic impact neither sought to quantify all economic benefits nor characterize such impacts because economic

effects can alter local population, competition for jobs, and changes to the quality of the local community. In order to have balanced cost-benefit comparison, such as that required by Executive Order 12866, the OSMRE would need to monetize these broader socioeconomic impacts as well as the SCC. Otherwise, to quantify only the SCC would not provide a balanced description of the total economic impacts of the project. CEQ NEPA regulations do allow agencies to use cost benefit analysis in NEPA analyses in certain circumstances (40 CFR 1502.23). The CEQ regulation states (in part), “for the purposes of complying with the Act, the weighing of the merits and drawbacks of various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations.” Accordingly, such qualitative considerations are important to this decision, further arguing against a cost-benefit analysis.

An additional consideration is that Executive Order 13783, among other actions, withdrew the Technical Support Documents upon which the protocol was based and disbanded the earlier IWG on Social Cost of Greenhouse Gases. Executive Order 13783 further directed agencies to ensure that estimates of the social cost of greenhouse gases used in regulatory analyses “are based on the best available science and economics” and are consistent with the guidance contained in Office of Management and Budget Circular A-4, “including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates” (E.O. 13783, Section 5(c)). In compliance with Office of Management and Budget Circular A-4, interim protocols have been developed for use in the rulemaking context. However, the Circular does not apply to project decisions, only rulemaking.

San Juan Mine DLE Project Considerations

As stated above and in Section 4.2.1.3, Emissions Monetization, a SCC calculation is not warranted for this project. Despite this, the OSMRE recognizes that the San Juan Mine DLE project has almost exactly the same greenhouse gas emission rates as the nearby Four Corners Power Plant-Navajo Mine Energy Project. For example, the annual CO_{2e} emission rate is practically the same as for Four Corners Power Plant-Navajo Mine Energy Project (6,095,000 metric tonnes/year for San Juan Mine DLE project compared to 6,716,400 metric tonnes/year for Four Corners Power Plant-Navajo Mine Energy Project), and the duration is slightly less (22 year project life for the Proposed Action and Action Alternative for San Juan Mine DLE project compared to 25 year project life for the Proposed Action and Action Alternative for Four Corners Power Plant-Navajo Mine Energy Project). If the OSMRE calculated the SCC for the San Juan Mine DLE project, then it would be slightly less than that calculated from the Four Corners-Navajo Mine Energy Project; that is, less than \$2.1 billion to \$10.7 billion. This factor of five range (\$2.1 billion to \$10.7 billion) is large, but if the accepted range in social cost per tonne of CO_{2e} emitted were considered (a factor of 100) the range would actually be a factor of 500.

Translating the CO_{2e} emission from the San Juan Mine DLE project from metric tonnes to dollars provides a different way to express the amount of CO_{2e} emissions. However, the change in metric does not change the conclusion of the Draft EIS:

“The GHG emissions lead to levels above natural fluctuation but the levels are compliant with the regulatory standard set by the NMED Title V permit. Therefore, while the Proposed Action would contribute to the effects of climate change, its contribution relative to other sources would be minor but permanent (i.e., within EPA precision limits of -2 to +5 percent).”

2.3. MASTER RESPONSE 3: DEFICIENT ANALYSIS

OSMRE received comments stating that the Draft EIS is deficient in its analysis of the full economic, environmental, and human health impacts of this project, or that the Draft EIS did not take a “hard look” at environmental consequences. CEQ guidelines (40 CFR 1502.16) state that an EIS must include discussions of:

- direct effects and their significance;
- indirect effects and their significance; and
- possible conflicts between the proposed action and the objective of federal, regional, state, local, and tribal land use plans, policies, and controls.

OSMRE NEPA Handbook further states that it is necessary to systematically assess the impacts of a proposed action on individual environmental resources, factors, or concerns. Environmental resources, factors and concerns suggested as a guide for consideration include: public health and safety, air quality, land, surface water and groundwater resources, vegetation, fish and wildlife populations and habitats, existing and future land use, transportation and utilities, socioeconomic characteristics, public services, noise and ground vibration, recreational resources, cultural resources, and aesthetics.

The analysis provided in the EIS meets or exceeds these requirements. Additional issues identified during scoping are analyzed. The level of analysis for resource categories, including socioeconomics, air quality, climate change, water quality, public health, and ecological conditions all rely on technically sound, peer-reviewed methodologies as applicable, in many cases recommended by the agency with jurisdiction over the issue. The analysis of the impacts of the project is addressed in Section 4 of the Draft EIS. Each section in Section 4 includes the description of affected environment for that resource, the environmental consequences of the Proposed Action and alternatives on that resource, and proposed mitigation for any identified major effect. These analyses are at the project level. The cumulative impact analysis and the environmental justice analysis takes a broader view, considering the effects of past, present, and reasonably foreseeable future projects on the environmental resources within the study area, including multi-media effects.

2.4. MASTER RESPONSE 4: ALTERNATIVE B

Alternative B analyzes the environmental consequences of continuation of San Juan Mine operations following shutdown of the San Juan Generating Station in 2022. Some commenters have stated that the alternative is speculative, and does not consider earlier shutdown of the mine. Earlier shutdown of the mine is encompassed by Alternative C, No Action. Alternative B was developed with the express intent to avoid speculation.

First, the need for Alternative B is not speculative. It was prompted by PNM's 2017-2036 Integrated Resource Plan (IRP), published on July 3, 2017. IRPs are prepared every three years for the New Mexico Public Resources Commission. The purpose of an IRP is to identify the most cost-effective resource mix that would meet the projected electricity demands of PNM's customers over the next 20 years, and to develop a four-year action plan that is consistent with that resource mix. The most significant finding of the IRP is that retiring PNM's 497-MW share of the Generating Station in 2022 would provide long-term cost savings for PNM's customers, assuming that PNM is able to recover the full cost of the remaining plant investment after the Generating Station retirement. Therefore, it is not speculative that the San Juan Generating station may shut down in 2022, removing its demand for coal from the San Juan Mine.

Second, the potential future uses for coal mined from the San Juan Mine after 2022 under Alternative B are not speculative. There is no projection of what the actual future use would be, if any. Rather, the approach taken with Alternative B is similar to an analysis of a mine that does not have an identified generating station as the market. In those circumstances, it is reasonable to analyze coal combustion effects using a "typical" local generating station. This approach allows for a reasonable approximation of the potential combustion-related effects. In the case of the San Juan Mine DLE, the analysis of the combustion-related effects at the Generating Station through 2033 in this EIS would provide such a reasonable bounding-level analysis of potential future emissions from coal combustion. If the alternate use after 2022 falls outside the bounds of the analysis in this EIS (less emission control, new form of transit, new use for the coal), then the OSMRE or another federal agency with an action associated with the new use (such as approval of a new rail line or spur) would conduct an independent or supplemental NEPA analysis to analyze new impacts or impacts outside the bounds of those analyzed in this EIS.

NEPA only requires an agency to analyze a reasonable number of examples, covering the full spectrum of alternatives" (46 FR 18026). To the extent the mine is shut down prior to 2033, those impacts would be described by Alternatives A or B for the time the mine is open and Alternative C for when it closes down

3. LIST OF COMMENTERS

Below are the federal/state/local agencies, organizations, and individuals that provided comments to the San Juan Mine Deep Lease Extension Mining Plan Modification Draft Environmental Impact Statement. Commenters are listed alphabetically followed by the comment letter number in bold.

Adair, Hank, **18**
Altaha, Mark, **8**
Anderson, Bruce, **52**
Arviso, Orville, **44**
Atkinson, Susan, **38**
Baker, Larry, **40**
Barnaclo, Ross, **39**
Barry, Amy, **7**
Baskota, Krishna, **14**
Begay, Orlando, **37**
Bernal, Julia, **33**
Billey-Badonie, Karmen, **15**
Bodiford, Dan, **26**
Chambers, Meghan, **35**
Chieffe, Mary, **11**
Clayton, Jeffrey, **21**
Commenter, Anonymous, **42**
Cusenbary, Allen, **23**
Davis, Alex, **36**
Eisenfeld, Mike, **43**
Gallegos Jr., J., **32**
Garcia, Damian, **50**
Garduno, Ilsa, **5**
Harrison, Billy, **17**
Heyden, Thomas, **45**
Horn, Claudette, **22**

Horneffer, Steve, **8**
Hughes, Shannon, **19**
Imbus, Benjamin, **31**
Johnston, Lyla, **30**
Kellermueller, Ronald, **27**
Koyiyumptewa, Stewart, **49**
Kuhnert, Bob, **25**
Kyrala, Michaelene, **6**
Lavey, Mike, **2**
Lavey, Mike, **3**
Lavey, Mike, **4**
Linus Gourneau, Isadore, **46**
Marks, Diane, **41**
Mumm, Daniel, **53**
Nephew, Erik, **29**
Public, Jean, **10**
Robinson, Shelby, **47**
Schwartz, Jason, **13**
Seager, Cheryl, **54**
Smith, Eleanor, **48**
Smith, James, **28**
Tsingine, Brian, **16**
Unsicker, Warren, **12**
Zink, Andrew, **51**

4. COMMENTS LETTERS AND RESPONSES

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
1	1.001	Stephen	Elsbury	Westmoreland	Email	In regard to haze considerations, the determination of “moderate impact” to local DLE areas is absurd. The greatest cause of haze in area DLEs is without argument the haze that comes off burning forest on public land. Compared to this significant and perennial issue, haze generated by coal burned at the San Juan Generating Plant is next to nil. The finding in this regard is flawed.	Air Quality	As discussed in Section 4.1, air quality impacts related to haze at Class I areas are considered minor and long-term. However, with respect to project contributions to regional haze (including haze outside Class I areas) the impact is considered a moderate impact. The contributions to all regional haze are considered moderate because there are potential impacts to visual resources and recreational experiences in the local region. For an impact to be considered “moderate,” Section 4 states that a moderate impact is one that would result in an adverse change to the environment outside the range of natural fluctuation but would not exceed regulatory standards.
2	2.001	Mike	Lavey	Private	Email	I recommend that the San Juan Generating Station be shut down and mining be stopped. Alternative C is the most environmentally responsible choice. I have lived in the Four Corners area for almost 30 years and have observed first hand the haze and smog generated by the San Juan power plants. We should be focusing our efforts on renewable energy sources rather than relying on out dated fossil fuel combustion. We should be training the workers in the area to enable them to find jobs with sustainable income in renewable energy industries. Impacts on haze, air quality, visibility, surface water quality were claimed to be minor but the effects would be long term. Long term exposure to air and water quality is cumulative and the health risks to inhabitants is not acceptable. Hazardous substances included in the long term effects are nitrogen oxide, mercury, sulfur dioxide and particulates. Once again please implement Alternative C for the health and safety of Four Corners women, men, children and others living organisms. Thank you for your consideration.	General Against Project	Comment noted. Please see Master Response 1. As described in Section 4.16, a health risk assessment was conducted for the proposed action and found that impacts would be minor. As defined in Section 4, minor impacts are defined as those which would occur but be within the natural fluctuation of the baseline setting.
3	3.001	Mike	Lavey	private	Email	I recommend that the San Juan Generating Station be shut down and mining be stopped. Alternative C is the most environmentally responsible choice. I have lived in the Four Corners area for almost 30 years and have observed first hand the haze and smog generated by the San Juan power plants. We should be focusing our efforts on renewable energy sources rather than relying on out dated fossil fuel combustion. We should be training the workers in the area to enable them to find jobs with sustainable income in renewable energy industries. Impacts on haze, air quality, visibility, surface water quality were claimed to be minor but the effects would be long term. Long term exposure to air and water quality is cumulative and the health risks to inhabitants is not acceptable. Hazardous substances included in the long term effects are nitrogen oxide, mercury, sulfur dioxide and particulates. Once again please implement Alternative C for the health and safety of Four Corners women, men, children and others living organisms. Thank you for your consideration.	General Against Project	Please see response to Comment Letter 2.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
4	4.001	Mike	Lavey	Private	Email	I recommend that the San Juan Generating Station be shut down and mining be stopped. Alternative C is the most environmentally responsible choice. I have lived in the Four Corners area for almost 30 years and have observed first hand the haze and smog generated by the San Juan power plants. We should be focusing our efforts on renewable energy sources rather than relying on out dated fossil fuel combustion. We should be training the workers in the area to enable them to find jobs with sustainable income in renewable energy industries. Impacts on haze, air quality, visibility, surface water quality were claimed to be minor but the effects would be long term. Long term exposure to air and water quality is cumulative and the health risks to inhabitants is not acceptable. Hazardous substances included in the long term effects are nitrogen oxide, mercury, sulfur dioxide and particulates. Once again please implement Alternative C for the health and safety of Four Corners women, men, children and others living organisms. Thank you for your consideration.	General Against Project	Please see response to Comment Letter 2.
5	5.001	Ilsa	Garduno	private	Email	I ask that the Office of Surface Mining Reclamation and Enforcement (OSMRE) assess a wider range of alternatives, including energy efficiency, climate change solutions and a full renewable energy option.	Alternatives	See Master Response 1.
5	5.002	Ilsa	Garduno	private	Email	The No Action Alternative should also include other economic opportunities within the community.	Alternatives	Please see Section 2.2.4 - Alternative D.
5	5.003	Ilsa	Garduno	private	Email	Furthermore, the DEIS does not adequately assess the very significant air quality, climate change, toxic waste, water, and public health impacts from continued operation. The public deserves a responsible decision based on robust data and analysis in these critical areas.	Process	See Master Response 3.
6	6.001	Michaelene	Kyrala	New Mexico Environmental Department (NMED)	Email	As stated in the DEIS, ground water quality in the mine area is of poor quality and quantity with high total dissolved solids and sulfate concentrations. MECS finds that the proposed action will not contribute to additional degradation of the already observed poor quality and quantity background ground water conditions stated to be present at the site.	Groundwater	Comment noted.
6	6.002	Michaelene	Kyrala	New Mexico Environmental Department (NMED)	Email	San Juan Generating Station: This is a facility with four tanks. This is not a LUST (confirmed release) Site. (photos - Map from GoNM OpenEnviroMap showing San Juan Generating Station facilities and confirmed releases)	Hazards and Hazardous Materials	Comment noted.
6	6.003	Michaelene	Kyrala	New Mexico Environmental Department (NMED)	Email	San Juan Coal Co San Juan – Release ID#: 2057. Confirmed release with a “No Further Action” Status (photos - Map from GoNM OpenEnviroMap showing San Juan Mine facilities and confirmed LUST release)	Hazards and Hazardous Materials	Comment noted. A review of the No Further Action letter and data from the <u>Petroleum Storage Tank Bureau</u> database indicates that the release occurred in 1994 and No Further Action letter dated the same year. The information is noted.
6	6.004	Michaelene	Kyrala	New Mexico Environmental Department (NMED)	Email	There are no other confirmed release sites in the immediate area.	Hazards and Hazardous Materials	Comment noted.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
6	6.005	Michaelene	Kyrala	New Mexico Environmental Department (NMED)	Email	If you'd like a further response from this bureau, please reply with the information you find (say no information if none; say whether you found info on leaks or not; and if possible, say whether there are tanks and whether they are underground or aboveground). In addition, please use any FID's (facility identification numbers) or RID's (release identification numbers) you've found in these searches for the facilities or releases you are seeking information on, and please statespecifically which records you're looking for. If you want to see all records for a facility, you're welcome to arrange a time with us to come look at the files. If you need any help using the online resources, please let me know.	Hazards and Hazardous Materials	Comment noted.
6	6.006	Michaelene	Kyrala	New Mexico Environmental Department (NMED)	Email	Please review the lists on the webpage, https://www.env.nm.gov/ust/lists.html . Click on the Active Leaking and NFA Sites link. The first document lists NFA sites (sites for which no further action is currently required) by county and city. The third document lists active sites alphabetically by priority (the second and fourth documents are pdfs). Click on the document you need, then click Download for the option you choose in the window that opens. You can search the Active Leaking or NFA Sites spreadsheets (or any other spreadsheet) by holding down the ctrl key on your keyboard and then hitting the F key, or by going to Find & Select (all the way to the right) on the Home tab of the spreadsheet, selecting Find, and entering an address or part of an address, a name, or any information you'd like to search on and then clicking on Find Next repeatedly to find all records that fit your search. You can download the No Further Action letter for many of these records by clicking the link in the last column of the NFA spreadsheet. If the No Further Action letter is not online and you need it or any other information, let us know.	Hazards and Hazardous Materials	Comment noted. A review of the No Further Action letter and data from the database indicates that the release occurred in 1994 and No Further Action letter dated the same year. The information is noted.
6	6.007	Michaelene	Kyrala	New Mexico Environmental Department (NMED)	Email	If you are looking for information about the presence of underground or aboveground storage tanks at an address, please download the All Storage Tank list, also at https://www.env.nm.gov/ust/lists.html . This lists all storage tanks in the state that fall or fell under our regulations and have been registered with us, whether they are still present or not. This spreadsheet can be searched the same way as the above ones. If you only need to know about tanks that are currently in use or temporarily out of use, download the Active Storage Tank list.	Hazards and Hazardous Materials	Comment noted. OSMRE reviewed the information and determined that information presented in the EIS is accurate.

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6	6.008	Michaelene	Kyrala	New Mexico Environmental Department (NMED)	Email	The GoNM map link also enables you to locate quite a bit of information that will facilitate your search, including NFA letters. Not all information about each site has been uploaded there, but recently many site documents have been added. Instructions for Go NM: Go to https://www.env.nm.gov/ust/lists.html . Click on the GoNM link at the bottom left of the page. Documents may download more easily if you use Internet Explorer. When you are in the GoNM Mapper, you can use the zoom slider at the upper left of the map to zoom in. Colored and white shapes represent facilities that have or had tanks and/or have been involved in a release. To find out more about a facility, click on the white i inside the blue circle at top of the screen and then click on the shape that represents that facility. When the dialog box pops up, you can click on either the Report or any link under Documents. If it is a leaking site, there will usually be a link under Documents. Many No Further Action letters and other documents are accessible and downloadable this way. If you click on the icon under Report at the left of the dialogue box, there is also quite a bit of information there. If there is a triangle (like a "play" symbol on a media player) at the top right of the dialog box, click on it, and a second page of information will open.	Hazards and Hazardous Materials	Comment noted. OSMRE reviewed the information and determined that information presented in the EIS is accurate.
7	7.001	Amy	Barry	NAGPRA - Southern Ute	Email	We have received the (DRAFT EIS-SJ Mine Federal Coal Lease NM-99144) packet, on (06/06/18). The NAGPRA Coordinator is working on this and I will return an answer before or on the due date. Which I have noted as, (07/09/18). If there are any questions or concerns, please don't hesitate to contact the NAGPRA Group at: sunagpra@southernute-nsn.gov	Cultural Resources	Comment noted. No additional comments were received from the NAGPRA Coordinator.
8	8.001	Mark	Altaha	White Mountain Apache Tribe - THPO	Email	Thank you for allowing the White Mountain Apache tribe the opportunity to review and respond to the above draft EIS for the proposed Mine modifications for the Deep Lease Extension at the existing underground San Juan Mine, Waterflow, New Mexico. We've determined the proposed project plans will "Not have an Adverse Effect" on the White Mountain Apache tribe's historic properties and/or traditional cultural properties.	Cultural Resources	Comment noted. This response has been noted in Section 5 of the EIS.
8	8.002	Mark	Altaha	White Mountain Apache Tribe - THPO	Email	Regardless, any/all ground disturbing activities should be monitored "if" there are reasons to believe that there are human remains and/or funerary objects present, and if such remains are encountered they shall be treated with respect and handled accordingly until such remains are repatriated to the affiliated tribe.	Cultural Resources	Any unanticipated discovery of human remains and/or funerary objects would be treated in accordance with NAGPRA. Section 4.4 has been updated with status of Section 106 consultation and conditions, which would be incorporated into the Record of Decision and Mining Plan Decision Document if Alternative A is selected.

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8	9.000	Steve	Horneffer	Private	Email	I recognize that inertia is compelling, and change is difficult, especially where vested interests are threatened, but if you have been paying attention to current events you will recognize that global warming is accelerating, feeding on itself, killing the Great Barrier Reef, causing extreme weather, drought, flooding, melting the permafrost which contains billions more tons of methane, a greenhouse gas 70 or 80 times as potent as CO2, slowing the ocean conveyor and generally putting us on the road to becoming Venus. Instead of doubling down on what science and logic tell us is a suicidal policy, to wit: increasing our use of coal, we should be building solar and wind farms, particularly in a place like New Mexico. For this reason, as well as for the abysmal record of the mining industry vis a vis cleaning up their inevitable messes after the fact, I oppose any extension of the permit for this mine. Sincerely, Steven Horneffer Address Redacted (presently 48 feet above sea level, but sure to be under water in the not too distant)	General Against Project	Comment noted. Please see Master Response 1.
10	10.001	Jean	Public	private	Email	in addition, I do not think this company is mandated to clean up the site when they are done destroying it and that needs to be bonded by this company profiteers immediately so that the taxpayers of this nation do not get the bill for clean up, we have been screwed by companies like this millions of time in the past.	Project Description	Comment noted. Reclamation of mining activities is included in the mining permit that is provided by New Mexico MMD. The federal government requires coal companies to get bonds to assure their payment for these activities. The State of New Mexico Mining Act requires that each operator post, prior to obtaining a permit, financial assurance (FA) "sufficient to assure the completion of the performance requirements of the permit, including closure and reclamation, if the work had to be performed by the director or a third party contractor." The act also prohibits the operator from using "any type or variety of self-guarantee or self-insurance." The following sentences regarding reclamation activities have been added to Section 2 of the EIS: " <u>Reclamation of mining operations is conducted in accordance with an approved Reclamation Plan that is included as part of New Mexico MMD permit 14-01. Reclamation is conducted by SJCC under the oversight of the New Mexico MMD.</u> "
11	11.001	Mary	Chieffe	private	Email	Please keep the coal in the ground. An extension should not be granted. Instead, Work to develop area jobs in cleaner solar power or wind energy. No more coal polluting our air, soil and water and harming every creature. No to coal.	General Against Project	Comment noted. Please see Master Response 1.
12	12.001	Warren	Unsicker	Four Corners Economic Development	Email	As we strive for diversification and attraction of new industries for the region, we continue to be faced with potential threats to our economic stability. The early termination of Westmoreland's coal contract would mean loss of not only the jobs associated with the mine, but the eminent shutdown of the association power plant, San Juan Generating Station. The combined loss would constitute over 450 direct jobs, as well as an additional nearly 1000 indirect jobs from supporting and ancillary industries throughout the community. Likewise, we would lose hundreds of families that would have to seek work elsewhere as their skillsets do not easily transfer to new industry sectors.	Socioeconomics	Comment noted.

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12	12.002	Warren	Unsicker	Four Corners Economic Development	Email	Beyond the extensive loss of jobs this would create, there is also the devastating loss of tax base that would ensue. This would cripple already tax strapped municipal budgets in San Juan County, making providing basic services to their citizens that much harder. This tax shortfall would also include one of the most vital services, education, especially for Central Consolidated School District, should San Juan mine be forced to shut down prematurely. This would render a district that serves over 70% economically disadvantaged children unable to pay its bonds, expand its facilities to best serve its children, or provide the level of service these children deserve.	Socioeconomics	Comment noted. Section 3.11 of the EIS describes the potential economic impacts of the Proposed Action and alternatives.
13	13.001	Jason	Schwartz	EDF	Email	While the DEIS quantifies the 97.5 million tons of greenhouse gas emissions related to this project, OSM fails to use the social cost of greenhouse gas metric to fully account for the climate effects of these emissions. OSM explicitly chose not to monetize the impact of emissions by using the social costs of greenhouse gases in its analysis for a number of flawed reasons. The agency's refusal is arbitrary and unlawful in light of a growing body of case law holding that failure to monetize a project's costs is impermissible if the agency relies on the project's monetized benefits to justify its action. The refusal is also arbitrary in light of the growing consensus around the appropriate social cost of greenhouse gas values to use in environmental impact statements.	Climate Change	The EIS provides a quantitative and qualitative analysis of the effects of greenhouse gas emissions. Please see Master Response 2.
13	13.002	Jason	Schwartz	EDF	Email	1. NEPA requires a "reasonably thorough discussion" and "necessary contextual information" on climate impacts. The social cost of greenhouse gases provides such information, while the mere recitation of so many tons of carbon that will be emitted by the project fails to provide the public and decisionmakers with the required information. Moreover, when an agency monetizes a project's potential benefits—as OSM does here—the potential climate costs must be treated with proportional rigor.	Climate Change	The EIS provides a quantitative and qualitative analysis of the effects of greenhouse gas emissions. The Climate Change section of the EIS quantifies the GHG emissions from the mine and generating station, and uses those data to qualitatively describe the climate change related impacts that could occur. The social cost of carbon was addressed, a similar analysis was cited (although not used because the wide variation in outcomes would not enhance decision making), and conclusions were drawn based on the qualitative and quantitative analysis. Please see Master Response 2.
13	13.003	Jason	Schwartz	EDF	Email	2. The social cost of greenhouse gases metric is appropriate for a project-level EIS with emissions of this magnitude. The metric can be applied to any action that significantly increases greenhouse gas emissions, not just to rulemakings. The uncertainty around factors like catastrophic outcomes that cannot currently be fully monetized is not a reason not to use the metric, but rather a reason to treat available values as lower-bound estimates of the true climate costs of emissions.	Climate Change	Please see Master Response 2 for response to the use of social cost of carbon for a project level EIS. The response also quantifies the level of uncertainty of the analysis, in both underestimating and overestimating the effects.

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13	13.004	Jason	Schwartz	EDF	Email	4. OSM fails to consider whether and to what extent this permit could increase downstream emissions by increasing the total supply of coal, thereby lowering the commodity's price and increasing demand.	Climate Change	The EIS is not evaluating the effects of a new mine or a new source of coal, but continuation of an existing operation. The existing continuing operation has one customer who does not use coal from any other source, and the mine supplies coal to only that customer, at a contracted rate. Therefore, there would be no effect on the overall cost of the commodity on the open market. Under Alternative B, the scenario analyzed provides a bounding-level impact analysis based on the existing conditions for coal mining and coal combustion. The scenario makes no assumptions regarding actual future uses of the coal, because such uses are entirely speculative. Rather, the scenario allows a bounding-level analysis of environmental effects against which actual future uses, if they occur, can be compared to determine the need for supplemental NEPA analysis. Demand and price is driven by market forces, including the cost and availability of alternate fuels and generation sources. The marginal effect of this supply of coal would be speculative, driven by market forces, and considered to be out of scope for this EIS. In addition, NEPA does not require the development of a cost-benefit analysis, as is suggested by the comment.
13	13.005	Jason	Schwartz	EDF	Email	1. NEPA Requires a "Reasonably Thorough Discussion" and "Necessary Contextual Information" on Climate Impacts, Which the Social Cost of Greenhouse Gases Provides OSM fails to discuss the actual climate impacts of the project, even though it quantifies the tons of greenhouse gas emissions from the mine's present and future operations. OSM neither quantitatively nor qualitatively discusses the damages to which these additional tons of greenhouse gases would contribute. Meanwhile, OSM has monetized effects like hundreds of millions of dollars' worth in annual economic output and royalties, which the agency presents as the "benefits" of the project. Failing to similarly monetize the climate costs of the project is inconsistently arbitrary and deprives the public and decisionmakers of the information and context they need to weigh all the project's potential effects.	Climate Change	The effects of the Proposed Action on climate change were analyzed in the EIS in both a quantitative and qualitative manner. Master Response 2 provides further comparison of these results to the quantitative analysis of CO ₂ e emissions conducted for the San Juan Mine DLE.

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13	13.006	Jason	Schwartz	EDF	Email	In this DEIS, OSM monetizes the same economic benefits as in MEIC v. OSM—hundreds of millions of dollars’ worth in annual economic output, taxes, and royalties—and so is required to be consistent in monetizing other significant effects, including climate costs. OSM seemingly tries to skirt the precedent set by MEIC v. OSM by identifying these economic benefits as “economic impacts.” The DEIS reads, “[a]ny increased economic activity, in terms of revenue, employment, labor income, total value added, and output . . . is simply an economic impact, rather than an economic benefit, inasmuch as such impacts might be viewed by another person as negative or undesirable impacts.” However, in MEIC v. OSM, the District Court of the District of Montana dismissed this same argument as “a distinction without a difference.” Tellingly, elsewhere in this DEIS, OSM prominently presents these same impacts as the “benefits” of the project. Despite OSM’s attempts to use terminology to distinguish the impacts it wants to monetize from those impacts it would prefer not to monetize, NEPA regulations group all these impacts under the same category of “effects”: economic and social impacts are listed as “effects” alongside ecological and health impacts, and all these effects must be discussed in as much detail as possible in an environmental impact statement. It is arbitrary to apply inconsistent protocols for analysis of some effects compared to others, and to monetize some effects but not others that are equally monetizeable.	Climate Change	The effects of the Proposed Action on climate change were analyzed in the EIS in both a quantitative and qualitative manner. In addition, reference was made to the results of a Social Cost of Carbon analysis conducted previously by OSMRE. Master Response 2 provides further comparison of these results to the quantitative analysis of CO ₂ e emissions conducted for the San Juan Mine DLE. Distinctions in terminology are important in NEPA analyses. The MEIC v. OSM case referenced by the commenter states that, “In its response to comments on the draft Mining Plan EA, the Enforcement Office asserted that these numbers are “an economic impact assessment, to be distinguished from a cost-benefit analysis.” AR 021640. This is a distinction without a difference where, as here, the economic benefits of the action were quantified while the costs were not.” It does not state that an economic impact is no different from an economic benefit; many economic impacts are not beneficial. In addition, Monetizing the SCC is not appropriate at this time because NEPA does not require a cost-benefit analysis, a cost benefit analysis was not conducted and a benefit-cost analysis would not substantively add useful information to the decision maker because the climate change analysis in the EIS quantifies the amount of GHG emissions, which is a direct measure of the impact. The climate change analysis also qualitatively describes the effects that these emissions have on the environment. The decision makers do not need further quantification. While the Draft EIS contains quantified impacts, and while some of these quantified impacts are monetary, the Draft EIS does not contain comparable economic benefits and costs to the
13	13.007	Jason	Schwartz	EDF	Email	The Social Cost of Greenhouse Gases Reflects the Value of Discrete Climate Damages, and Gives Necessary Context to Climate Damages OSM argues that “the SCC [social cost of carbon] protocol does not measure the actual incremental impacts of a project on the environment.” This statement reveals a deep misunderstanding of the design and proper application of the social cost of greenhouse gases. Not only is the social cost of greenhouse gas methodology ideally suited for valuing the marginal climate damages of individual projects, but the monetization directly reflects the “actual incremental impacts” of emissions on climate change. Monetization is actually a more useful way under NEPA to present the information to decisionmakers and the public than a qualitative description of discrete effects or a mere tallying of the tons of emissions.	Climate Change	Please see Master Response 2.

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13	13.008	Jason	Schwartz	EDF	Email	OSM is required by NEPA to provide enough context to ensure that the public and decisionmakers would not overlook the associated climate risks. Monetization is one way that OSM could provide the necessary context to foster both informed decisionmaking and informed public participation. As the OSM itself has explained in a previous environmental impact statement from 2015, including the social cost of greenhouse gases in a NEPA document “provide[s] further context and enhance[s] the discussion of climate change impacts in the NEPA analysis.” In that 2015 EIS, OSM noted that the social cost of greenhouse gases is representative of “net” climate-induced effects, meaning the estimates take into account both costs and benefits from climate change. OSM’s use of the social cost of greenhouse gases in 2015 proves that the metric is readily available and appropriate for NEPA analyses of this type of action.	Climate Change	Please see Master Response 2.
13	13.009	Jason	Schwartz	EDF	Email	Finally, the social cost of greenhouse gas metric provides useful context even without a full cost-benefit analysis. OSM argues that without a complete cost-benefit analysis, including the so-called “social benefits of energy production” from coal combustion, applying the social cost of greenhouses gases would be inappropriate and inaccurate. OSM is wrong. To begin, while the agency does not define what it means by the “social benefits” of energy production, basic economic theory dictates that the value of coal in the marketplace already is the best approximation of how much consumers value the welfare they derive from using the energy generated by coal. And the DEIS already includes several monetized metrics relating to the value of coal in the marketplace. OSM includes a calculation of “output” from the project, including about \$356 million per year in direct economic output, but it is unclear if this figure reflects the value of coal or is only a measure of income from project-related employment. The DEIS never defines the term “economic output” either. The ambiguity about what that figure measures is particularly problematic because OSM has failed to publish the underlying analysis from “Ecosphere” on which the OSM relies for much of its economic assessment. It is therefore impossible for the public to meaningfully review and comment on OSM’s calculations of economic output. That said, OSM also calculates \$17 million per year in federal royalties which, assuming an 8% royalty rate on surface coal, would imply an approximate value in the marketplace of the coal produced at around \$212 million. In short, the DEIS already contains monetized values relating to the value to consumers of the coal to be mined.	Climate Change	The effects of the Proposed Action on climate change were analyzed in the EIS in both a quantitative and qualitative manner. However, none of the analyses in the EIS are at the level that would support a cost benefit analysis. See Master Response 2 for additional considerations on this comment. As indicated in the introduction to the EIS, the technical studies that were summarized in the Technical Resource Document, including the Socioeconomic report from EcoSphere, are available as part of the administrative record and can be requested through a FOIA request. No FOIA request for this information has been received by OSMRE to date.
13	13.010	Jason	Schwartz	EDF	Email	The social cost of greenhouse gas metric provides that necessary context. OSM’s inadequate transparency regarding the exact economic output from the coal mined cannot serve as a justification for further obscuring the economic and environmental impacts of this proposal by omitting use of the social cost of greenhouse gas metrics.	Climate Change	Please see Master Response 2.

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13	13.011	Jason	Schwartz	EDF	Email	2. The Social Cost of Greenhouse Gas Metric Is Appropriate for a Project-Level EIS with Emissions of this Magnitude OSM next offers various arguments against using the social cost of greenhouse gases in this particular EIS. OSM claims that the metric is only appropriate for rulemakings; that there is no way to tell if this action's effects are significant enough to warrant use of the metric; and that the metric measures long-term effects and so applying it to an 8-year mine extension would result in uncertainties. Each of these attacks fundamentally misunderstands the social cost of greenhouse gas metric. First, despite OSM's claims that the social cost of greenhouse gases only apply to rulemakings, the social cost of greenhouse gas methodology is well suited to measure the marginal climate damages of individual projects.	Climate Change	Please see Master Response 2.
13	13.012	Jason	Schwartz	EDF	Email	In fact, as recently as 2015, OSM reaffirmed in a different EIS that, though the metric was first developed for cost-benefit analysis in federal rulemaking, it was nonetheless useful and appropriate for NEPA analyses.	Climate Change	The effects of the Proposed Action on climate change were analyzed in the EIS in both a quantitative and qualitative manner. In addition, reference was made to the results of the Social Cost of Carbon analysis conducted previously by OSMRE; the 2015 EIS for the Four Corners Power Plant/Navajo Mine Energy Project. Master Response 2 provides further comparison of the results to the quantitative analysis of CO ₂ e emissions conducted for the San Juan Mine DLE. Master Response 2 also provides further comparison to the SCC analysis in the 2015 EIS.
13	13.013	Jason	Schwartz	EDF	Email	Second, OSM claims there is no impact threshold to characterize the significance of a single action on global climate change. While there may not be a bright-line test for significance, the emissions OSM estimates for this project—hundreds of thousands of tons per year in direct emissions plus several million tons per year in indirect emissions—are clearly significant and warrant monetization. This is especially true since, once emissions have been quantified (as they have been here), the additional step of monetization through application of the Interagency Working Group's 2016 estimates entails nothing more than a simple arithmetic calculation.	Climate Change	As the comment notes, there is no bright line test for significance related to impacts from climate change. The EIS discloses the effects, places them in a regional and national context, and references the social cost of carbon analysis in the Four Corners Power Plant and Navajo Mine Energy Project EIS. See Master Response 2.

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13	13.014	Jason	Schwartz	EDF	Email	In High Country, the District Court for the District of Colorado found that it was arbitrary for the Forest Service not to monetize the “1.23 million tons of carbon dioxide equivalent emissions [from methane] the West Elk mine emits annually.” That suggests that emissions in quantities far below what OSM estimates here are significant and warrant monetization. In Montana Environmental Information Center, the District Court for the District of Montana found it was arbitrary for the Office of Surface Mining not to monetize the 23.16 million metric tons in annual emissions; the over 97 million metric tons cumulatively at stake here are in the same ballpark. In Center for Biological Diversity, the Ninth Circuit found that it was arbitrary for the Department of Transportation not to monetize the 35 million metric ton difference in lifetime emissions from increasing the fuel efficiency of motor vehicles: given the estimated lifetime of vehicles sold in the years 2008-2011 (sometimes estimated at about 15 years on average), this could represent as little two million metric tons per year, well below the annual emissions at stake here. In a recent environmental impact statement from the Bureau of Ocean Energy Management published in August 2017, the agency explained that the social cost of carbon was “a useful measure” to apply to a NEPA analysis of an action anticipated to have a difference in greenhouse gas emissions compared to the no-action baseline of about 25 million metric tons over a 5-year period, or about 5 million metric tons per year. Once again, OSM’s estimate for the San Juan mine project and its downstream emissions is higher. Under any reasonable social cost of greenhouse gases, the direct and indirect emissions from the San Juan mine expansion will cause hundreds of millions of dollars in climate damages.	Climate Change	The effects of the Proposed Action on climate change were analyzed in the EIS in both a quantitative and qualitative manner in the Climate Change section of the EIS. For the reasons explained in Section 4.2.1, although OSMRE did not use dollars as the quantitative unit, OSMRE did cite the results of the Social Cost of Carbon analysis conducted previously by OSMRE for the analogous Four Corners Power Plant/Navajo Mine Energy Project. Master Response 2 provides further comparison of these results to the quantitative analysis of CO ₂ e emissions conducted for the San Juan Mine DLE. San Juan Mine is also unlike the proposed rulemaking for the Corporate Average Fuel Economy Standards, which was reviewed by the Ninth Circuit in <i>NHTSA v. CBD</i> . OSMRE recognizes that calculating the SCC for a rulemaking may be appropriate when a full cost-benefit analysis is conducted pursuant to Executive Order 12866; however, NEPA does not require a full cost-benefit analysis to analyze the environmental impacts of a specific project. The BOEM SCC analysis referenced by the commenter builds off of the SCC analysis run for a Programmatic EIS covering 2017 – 2022 Outer Continental Shelf Oil and Gas Program, which was run to support their larger economic cost-benefit analysis for the program. The values presented in the BOEM Liberty Oil Production Plan vary from 0.622 to 7.69 for the Proposed Action and Alternatives depending on the discount rate and from 0.853 to 10.610 under the No Action Alternative. As with the Four Corners Power Plant/Navajo Mine Energy Project, these figures demonstrate that high variability of results when completing an SCC analysis, which limits the utility of
13	13.015	Jason	Schwartz	EDF	Email	Finally, OSM argues that because the social cost of carbon protocol was designed to estimate impacts “over long time frames,” there are too many “uncertainties associated with assigning a specific and accurate SCC resulting from 14 additional years of operation” at San Juan mine. ⁵² This statement misunderstands both the social cost of carbon and the nature of uncertainty around the estimate. While the social cost of greenhouse gases does calculate the economic impacts of climate damages stretching out for several centuries over the lifespan of carbon emissions, the methodology estimates a specific value for the cost of emissions from each individual year. There are year-by-year estimates for the per ton cost of emissions for each of the 14 ⁵³ additional years of operation at the San Juan mine.	Climate Change	The effects of the Proposed Action on climate change were analyzed in the EIS in both a quantitative and qualitative manner. In addition, the uncertainties in the method was discussed (with the potential for both over and under estimating), and reference was made to the results of the Social Cost of Carbon analysis conducted for the Four Corners Power Plant and Navajo Mine Energy Project EIS for quantitative analysis. Master Response 2 provides further comparison of these results to the quantitative analysis of CO ₂ e emissions conducted for the San Juan Mine DLE.

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13	13.016	Jason	Schwartz	EDF	Email	<p>3. The Interagency Working Group Estimates Remain the Best Available Values for Federal Agencies to Use in Analyses</p> <p>One of OSM's justifications for not using the social cost of greenhouse gases is the disbandment of the Interagency Working Group on the Social Cost of Greenhouse Gases (IWG) and the withdrawal of the group's guidance on using the social cost of greenhouse gases metric. OSM also claims that the IWG's social cost of greenhouse gases estimates fail to take into account the benefits of coal-generated energy. However, as we explain below, the IWG's social cost of greenhouse gas estimates remain the best available assessments for federal agencies to use in evaluating climate impacts.</p> <p>New Executive Order Encourages Continued Monetization of the Social Cost of Greenhouse Gases</p> <p>Executive Order 13,783 officially disbanded the IWG and withdrew its technical support documents that underpinned their range of estimates. Nevertheless, Executive Order 13,783 assumes that federal agencies will continue to "monetiz[e] the value of changes in greenhouse gas emissions" and instructs agencies to ensure such estimates are "consistent with the guidance contained in OMB Circular A-4." Consequently, while OSM and other federal agencies no longer benefit from ongoing technical support from the IWG on use of the social cost of greenhouse gases, by no means does the new Executive Order imply that agencies should not monetize important effects in their regulatory analyses or environmental impact statements. In fact, Circular A-4 instructs agencies to monetize costs and benefits whenever feasible. The Executive Order does not prohibit agencies from relying on the same choice of models as the IWG, the same inputs and assumptions as the IWG, the same statistical methodologies as the IWG, or the same ultimate values as derived by the IWG. To the contrary, because the Executive Order requires consistency with Circular A-4, it effectively requires agencies to continue to use the same models, inputs, and assumptions as the IWG.</p>	Climate Change	Please see Master Response 2.
13	13.017	Jason	Schwartz	EDF	Email	<p>Omitted Categories of Damages Should Be Discussed Qualitatively</p> <p>OSM faults the social cost of carbon for failing to include "all damages or benefits from carbon emissions." Alleged benefits of carbon emissions, such as from increased fertilization, are in fact already included in the IWG's estimates and are probably even overstated in those estimates. Many of the assumptions about climate benefits built into the integrated assessment models used by the IWG are now outdated; for example, recent work demonstrates that the benefits to agriculture from climate change assumed by the developers of FUND are, in fact, far lower. Other research has also shown that the predicted amenity benefits from climate change, like agricultural benefits, are also highly controversial.</p>	Climate Change	The effects of the Proposed Action on climate change were analyzed in the EIS in both a quantitative and qualitative manner. In addition, reference was made to the results of the Social Cost of Carbon analysis conducted for the Four Corners Power Plant and Navajo Mine Energy Project EIS for quantitative analysis. OSMRE is not claiming that the alleged benefits of carbon emissions are not factored into the SCC. OSMRE is saying is that monetizing one aspect of the downstream effects and not others means that a full cost-benefit analysis cannot be conducted for the project. Master Response 2 provides further comparison of these results to the quantitative analysis of CO ₂ e emissions conducted for the San Juan Mine DLE.
13	13.018	Jason	Schwartz	EDF	Email	<p>4. OSM Fails to Consider Whether and to What Extent This Permit Could Increase Downstream Emissions</p> <p>OSM fails to assess whether and to what extent the increased supply of coal from this action could affect price in ways that increase the total demand for and combustion of coal in the market.</p>	Climate Change	Please see Response 81.4.

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13	13.019	Jason	Schwartz	EDF	Email	Under the requirement of NEPA, OSM may not ignore the impact that increased production could have on the availability of coal, the price of coal relative to other energy resources, and the downstream emissions that could result from those changes. OSM must analyze whether this permit approval will change demand for coal in ways that will further increase downstream greenhouse gas emissions, and so increase the total climate costs of the project.	Climate Change	Please see Response 81.4.
14	14.001	Krishna	Baskota	Navajo Nation Surface Coal Mining Program	Email	1. Section: ES-Page-24. a) The potential for impacts from a release or spill is considered long-term and would exist for the project life through the end of reclamation. Comments: An emergency plan should be in place in the event of release or spill of the hazardous or solid waste. An emergency plan also needs to be provided for the reclamation phase of the operation. We feel that this should be included in the EIS.	Hazards and Hazardous Materials	Further detail regarding existing emergency plans implemented by the SJCC is included in Section 3.15 Hazards and Solid Wastes of the Technical Resource Document, which is incorporated by reference into the EIS. In addition, as discussed in Section 3.15.1 of the Technical Resource Document, the SJCC is required to prepare and implement a Spill Prevention, Control and Countermeasure (SPCC) Plan for all operations. However, as described in Section 4.15 of the EIS, the San Juan Mine does not store hazardous materials in quantities that trigger the reporting requirements of the Emergency Planning and Community Right to Know Act. Hazardous and universal wastes and special wastes at the mine would continue to be accumulated, managed, and disposed of in accordance with applicable EPA and Department of Transportation regulations and these programs are adequate for mitigating any potential hazardous materials releases or spills.
14	14.002	Krishna	Baskota	Navajo Nation Surface Coal Mining Program	Email	2. Section: 2.1.1.5-Page 20-23. a) Two pits remain open to facilitate the placement of CCR from the Generating Station. One of these, pinon pit, will be fully reclaimed by 2023, while Juniper pit will remain open for the LOM to provide access to U/G operation. Comments: Placement of CCR in the pit has completely ceased in the adjacent Navajo Mine since 2008, due to a prior study regarding the hazardous nature of CCR. This could become an issue in the future.	Hazards and Hazardous Materials	Comment noted. CCR placement in the Navajo Mine ceased in 2008 by agreement between the Four Corners Power Plant owners and the mine owners. Per EPA's review of CCR beginning 2008 and published in their 2014 ruling, CCR is not a hazardous material and may be disposed of as solid waste, under the requirements applicable to municipal landfills. This placement is analyzed in the Water Quality section of the EIS, and is regulated under SMCRA with the jurisdiction of NMD.
14	14.003	Krishna	Baskota	Navajo Nation Surface Coal Mining Program	Email	3. Section: 3.3.2-Page 51. a) A survey focused on the Kirtland formation exposures within the DLE area, which are designated as Potential Fossil Yield Category 4-5 by the BLM due to the presence of several scientifically significant fossil groups. Fossil material observed during the survey included three groups: unidentifiable vertebrate skeletal material, identifiable vertebrate skeletal material, and, petrified wood. Comments: Should a mitigation plan be developed to protect the Paleontology and Cultural resources from subsidence damage due to mining?	Cultural Resources	Paleontological resources are protected under the U.S. Paleontological Resources Preservation Act, which is implemented by BLM on the DLE (as the DLE is entirely located on BLM lands). In general, the Paleontological Resources Preservation Act prohibits the damage of paleontological resources unless permitted in accordance with the act. The act does not specify recordation standards or mitigation plans. In accordance with the Paleontological Resources Preservation Act, BLM has published draft rules for implementation of the Act on BLM lands, which would apply to the proposed Project. Section 4.4 of the EIS addresses potential effects to cultural resources from subsidence and associated permit conditions.

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14	14.004	Krishna	Baskota	Navajo Nation Surface Coal Mining Program	Email	4. Section: 3.16.2- Page 65-66. a) In San Juan County, the death rate in adults aged 65 years and older due to pneumococcal disease is close to double the statewide rate and in the city of Farmington four percent of children under three years of age had elevated levels of lead in their blood, which is four times that of San Juan County and close to 16 times the state percentage. Comments: This could be elaborated a little more in depth and may need further studies.	Public Health	Because the amount of increase in PM _{2.5} and lead concentrations are so small in the populated areas, and because there would be no exceedances of health-based standards at any location, the potential increase in risk for those with compromised respiratory health was found to be minor. Because the increase in potential health risks is minor, additional studies are not warranted. There is additional health information in Section 3.16.2.2 of the Technical Resource Document, which is incorporated by reference into the EIS.
14	14.005	Krishna	Baskota	Navajo Nation Surface Coal Mining Program	Email	5. Section: 4.15.2- Page 131-132. a) Although the hazardous materials and waste storage, handling, transportation, and disposal management programs for the existing San Juan Mine meet regulatory requirements for these activities, CCR generated from Units 1 and 4 would continue to be placed in Pinon and Juniper Pits for reclamation. Estimated annual storage amount would be 962,000 tons. The EPA final rule requires operators to develop a site-specific closure and post-closure management plans for areas where CCR have been disposed or where they will be disposed to minimize hazards related to CCR. Comments: Should decommissioning and demolition plan be mentioned in this paragraph?	Hazards and Hazardous Materials	As noted in the EIS, the EPA final rule on CCRs does not apply to underground mines. No change has been made.
14	14.006	Krishna	Baskota	Navajo Nation Surface Coal Mining Program	Email	6. Section: 4.16.2.2-Page 134-136. a) There is some uncertainty around whether the PM _{2.5} (particulate matter less than or equal to 2.5 microns in diameter) NAAQS fully protects sensitive subpopulations (Native Americans & children). EPA has noted that the toxicity of PM can vary by composition. Diesel particulate matter (DPM) is less than 2.5 microns in diameter and is considered carcinogenic to humans. The other components of PM _{2.5} may cause lung cancer besides diesel exhaust, e.g., heavy metals in coal dust such as Arsenic and Nickel. Asthmatic people might also experience adverse health impact even at levels below NAAQS. Comment: Due to the uncertainty of this study, especially towards the sensitive population, should additional data be used to further explain this paragraph?	Public Health	EPA's team of air quality and health experts performed their last evaluation of the available health information when they established the latest NAAQS for PM _{2.5} in 2012. Based on that review EPA was not able to determine a lower limit threshold level for sensitive subpopulations, nor exactly how the composition of PM _{2.5} affects toxicity. While EPA is currently reviewing any additional studies that may have been published since their last literature review, at this time it is not known if there is any additional data that would better characterize these issues. Because the increases of PM _{2.5} are so small, additional studies are not warranted.
14	14.007	Krishna	Baskota	Navajo Nation Surface Coal Mining Program	Email	7. Section: 4.16.5-Page 142. a) The cumulative impacts to the public, particularly for Native American populations who already have higher rates of respiratory diseases, due to climate change are possible but cannot be quantified. Comments: The experts have found that the available studies are of limited quality. To quantify the affect, should further research be done?	Public Health	Comment noted. The state of the science in modeling future climate change impacts along with the difficulties in performing human epidemiological studies precludes the ability to provide quantification the risk to sensitive populations. As discussed in the EIS, a Human Health Risk Assessment was conducted for the proposed project and conclusions are described in the EIS. In addition, the EIS evaluates the proposed project and alternatives potential contributions to Climate Change in Section 4.2.

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14	14.008	Krishna	Baskota	Navajo Nation Surface Coal Mining Program	Email	8. General Comment. a) The No Action Alternative would leave the region in turmoil with the loss of 897 jobs and \$356 million in annual economic activity for the four corners region. In 2017, PNM released a new Integrated Resource Plan (IRP) which states that they would build their new renewable energy facilities in northwest New Mexico, utilize the existing transmission lines, retrain workers for the new jobs in case the coal fired power plant shuts down. This should bring some relief to the people of the region if this happens.	Socioeconomics	Comment noted.
15	15.001	Karmen	Billey-Badonie	Navajo Nation Surface Coal Mining Program	Email	Figure 4.1-1 Projects Considered in the Cumulative Analysis (page 68): Below are the major findings I noted from the Figure 4.1-1, which for the most part needs to be verified within Google Earth. The lists is just naming a few corrections needing to be made, but the whole Figure 4.1-1 needs to be updated with correct locations identifying the proper "Projects Considered - Types" noted in the "Legend." As well as, properly identifying the sections to the correct color schemes. o Need to identify the proper locations to the correct names. For example, No. 1 is named "Four Corners Power Plant" within the section called "Energy Generation and Transmission" colored in green. This needs to be changed to "Navajo Generating Station." o Within the figure, legend called "Projects Considered-Types" needs to be re-verified. Some of the types are not matching to the correct numbers listed. For example, within section "Mines" colored orange, Kayenta Mine Complex and McKinley Mine are not matching to the proper location. Additional example is within section "Transportation" colored red list, No. 63 labeled as Shiprock Airport, which is not in its proper location area. Furthermore, No. 67 is named as Burnham housing project, but is within the Shiprock area and not in Burnham, New Mexico. o There is no "Sanostee Prison" listed on the exhibit but is numbered within section "Other" colored brown. I do not recall a prison existing within the designated area. The "Burnham Airstrip" is not located in the correction location but needs to be confirm if an airstrip exist; therefore, it might be mistaken for Shiprock Airport.	Technical Edit	The figure has been reviewed and revised in the Final EIS.
15	15.002	Karmen	Billey-Badonie	Navajo Nation Surface Coal Mining Program	Email	To provide additional background data collect verifications, it might be suggested to add Navajo Nation Environmental Protection Agency, Air Quality Control Program, air monitoring station located in Shiprock, New Mexico. The air monitoring station has data collection for ozone, nitride oxide and sulfur dioxide that might help with additional parameter information within San Juan County, New Mexico.	Air Quality	The NNEPA monitoring data for Shiprock for ozone, nitrogen oxide, and sulfur dioxide appear in Figure 3.1-1, and Tables 3.1-6 and 3.1-7 in the Technical Resource Document, which is incorporated by reference into the EIS.

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16	16.001	Brian	Tsingine	Navajo Nation Surface Coal Mining Program	Mailed Letter	<p>1. FFO – Acronym Definition (Executive Summary, pg. ES-2) – not in Appendix A Supporting Document, Acronyms and Abbreviations – Farmington Field Office mentioned on pg. 53</p> <p>2. BA - Acronym Definition (Executive Summary, pg. ES-7) – not in Appendix A Supporting Document, Acronyms and Abbreviations</p> <p>3. AFC - Acronym Definition (Section 2, pg. 14) – not in Appendix A Supporting Document, Acronyms and Abbreviations, Fig 2.1-3 shows Armored Face Conveyor</p> <p>4. ASB - Acronym Definition (Section 2.3, pg. 38) – not in Appendix A Supporting Document, Acronyms and Abbreviations</p> <p>5. PHC - Acronym Definition (Section 2.3, pg. 39) – not in Appendix A Supporting Document, Acronyms and Abbreviations</p> <p>6. AST - Acronym Definition (Section 2.3, pg. 44) – not in Appendix A Supporting Document, Acronyms and Abbreviations</p> <p>7. PCB - Acronym Definition (Section 2.3, pg. 44) – not in Appendix A Supporting Document, Acronyms and Abbreviations</p> <p>8. SPCC - Acronym Definition (Section 2.3, pg. 44) – not in Appendix A Supporting Document, Acronyms and Abbreviations</p> <p>10. ROI – Acronym Definition (Section 3.5.3, pg. 56) – not in Appendix A Supporting Document, Acronyms, and Abbreviations</p>	Technical Edit	Comment noted. Suggested edit has been incorporated into the Final EIS.

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16	16.002	Brian	Tsingine	Navajo Nation Surface Coal Mining Program	Mailed Letter	<p>9. Section 3.5 Water Resource/Hydrology – Section 3.5.1, pg. 53 – The Shumway and Westwater arroyo confluence could be stated as pre-mining watersheds and located on Figure 3.5-1, Inset Map 2.</p> <p>a. Section 3.5.1, pg. 53 – “The Shumway Arroyo serves as the primary surface water drainage at the San Juan Mine and has a small base flow that begins below its confluence with the Westwater Arroyo in the [southern] vicinity of the Generating Station.”</p> <p>i. Pre-mine Shumway and Westwater Arroyo confluence was approximately located 1.5 miles southeast of the San Juan Generating Station and 0.8 miles southeast of the San Juan Power Generation Reservoir.</p> <p>b. Section 3.5.1, pg. 53 – “Hutch Canyon and an unnamed tributary enter the middle segment of the Shumway arroyo within the coal lease and upstream of the confluence with Westwater Arroyo.”</p> <p>i. Post-mine Shumway Arroyo has been rerouted with the Shumway diversion into the Westwater Arroyo east of the Generating Station. The new confluence of the two arroyos are now within the Shumway Diversion east of the Generating Station.</p> <p>c. Section 3.5.1, pg. 53 – “The total drainage area of the Shumway Arroyo upstream of the Westwater confluence is 108.8 square miles.”</p> <p>i. Is this confluence location pre-mining, which would put it southeast of the Generating Station?</p> <p>ii. This will then support the sentence: “It then flows south along the contact between the PCS and the Fruitland Formation near the western boundary of the coal lease to confluence with the Shumway Arroyo.”</p>	Surface Water	Comment noted. The description of the surface water bodies in the Technical Resource Document, which is incorporated by reference into the EIS, is of those segments specifically within the DLE. The description has been expanded to provide additional details as indicated in this comment.
16	16.003	Brian	Tsingine	Navajo Nation Surface Coal Mining Program	Mailed Letter	<p>11. Well locations – 17CC and 32CD (Section 3.5.3, pg. 56), not shown on Figure 3.5-1</p> <p>14. Well SM-5 (Section 4.5.2.3, pg. 128), not shown on Figure 3.5-1</p>	Groundwater	Comment noted. The figure has been updated accordingly.
16	16.004	Brian	Tsingine	Navajo Nation Surface Coal Mining Program	Mailed Letter	<p>12. Section 3.5.3, pg. 56 – “Samples of alluvial well GE (located in the Westwater [Shumway] Arroyo and upgradient [downgradient] of CCR disposal sites at the San Juan Mine) taken...”</p> <p>a. Well GE location on Figure 3.5-1, Inset Map 2 and CCR disposal located on Figure 2.1-5 □</p>	Groundwater	Comment noted. The text has been revised as suggested.
16	16.005	Brian	Tsingine	Navajo Nation Surface Coal Mining Program	Mailed Letter	<p>13. Section 3.5.3, pg. 57 – “In addition to well GE, an analysis of CCR disposal at the San Juan Mine in 2011 (Thomson et al. 2012) also evaluated water quality data from well GL [located approximately 1,00 feet east of well GE] in the Shumway Arroyo...”</p>	Groundwater	Comment noted and suggested revision has been incorporated into the Final EIS.
17	17.001	Billy	Harrison	Navajo Nation Surface Coal Mining Program	Mailed Letter	<p>1. 3.1 RECREATION “Section 3.10 of the TRD” Where is the TRD located and can the reader find this document?</p>	Process	The Technical Resource Document is available on the OSMRE website and on request from OSMRE.
17	17.002	Billy	Harrison	Navajo Nation Surface Coal Mining Program	Mailed Letter	<p>2. 3.11.2 Employment This paragraph is hard to read and it might be better to go by each state first with the data then the states with the counties. San Juan County is also mentioned twice at 15.6 then 16 percent.</p>	Socioeconomics	A breakdown of the employment information is available in Section 3.11.2 of the Technical Resource Document and incorporated by reference in the EIS. The second mention of San Juan County’s employment is “nearly 16 percent.”

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17	17.003	Billy	Harrison	Navajo Nation Surface Coal Mining Program	Mailed Letter	3. 3.11.2 Employment The last paragraph refers to ROI (U.S. Census Bureau 2010d). The ROI I'm used to is the Return on Investment. Since I did not read all of the report maybe nothing refers to ROI, but maybe that need to clarified?	Socioeconomics	ROI stands for Region of Influence, which is the study area for the analysis. Added the following text to the EIS: <u>"As provided in Table 3.11-1 in the EIS and TRD, the following counties are included in the primary Region of Influence (ROI) for the socioeconomic study area: San Juan County, McKinley County, Rio Arriba County, New Mexico, La Plata County, Montezuma County, Colorado, San Juan County, Utah, Apache County, Coconino County, Navajo County, Arizona."</u>
17	17.004	Billy	Harrison	Navajo Nation Surface Coal Mining Program	Mailed Letter	The only other comment I would like to make is the Figure ES-2. This map is totally unreadable. I wanted to see the mining progress by year and by lease, but maybe you have a much better, readable version.	Technical Edit	Figure ES-2 shows color-coded areas that would be mined each year under the Proposed Action. There is no change to the EIS.
18	18.001	Hank	Adair	private	Email	Socioeconomic effects are significant with respect to the baseload generation the utility receives from the mine. As being the regional electric provider, if the mine, and thereby the station were to close the utility would be required to leave nearly \$30 million dollars of useful capital asset fallow, and replace that baseload generation as evaluated within the utilities integrated resource plan. In that analysis from year 2016, the data showed that extending the plant life beyond year 2022 had a Net Present Value Benefit (NPV) positively of \$20 million dollars over a 20 year span. If the mine were to cease operations prior to 2022 in year 2019, the negative effect would be even worse.	Socioeconomics	The EIS accounts for the economic effect of the mine closing in 2019 and the Generating Station in 2020 in Alternative C (No Action Alternative), Section 4.11.4. As stated in the EIS, "The consequence of closing both San Juan Mine and the Generating Station represents a permanent major impact to the economies of San Juan County and the region (Table 4.11-1)."
18	18.002	Hank	Adair	private	Email	If the mine, and thereby the plant, were to cease operations, rates for our service territory will increase. This is an increased burden on our customers, and our businesses. It also affects our ability to attract and diversify our industry with economic development and our benefit if being the lowest cost provider of energy in the area erodes. It negatively affects our customer base as well as employees of both the mine and the plant relocate to retain employment.	Socioeconomics	It is beyond the scope of the EIS to consider potential impacts to the rate payer or cost of electricity. OSMRE does not have any authority over the cost/rate of electricity in New Mexico, which is the mandate of the New Mexico Public Regulation Commission. Further, it is unknown how the closure of the Generating Station would affect the cost of electricity, or subsequent economic and demographic impacts.
19	19.001	Shannon	Hughes	WildEarth Guardians	Email	As addressed below, given the harmful impacts to air, water, climate, and other resources caused by the proposed action, we urge OSMRE to reject the proposed modification in favor of the No Action alternative.	General Against Project	Comment noted.
19	19.002	Shannon	Hughes	WildEarth Guardians	Email	Accordingly, OSMRE should utilize this process to ensure an orderly shut-down of the mine and power plant by 2022 and take all necessary and appropriate steps to help advance economic and energy transition in this region. As PNM has confirmed that continued reliance on coal-fired power is not cost-effective, OSMRE must plan for both the reclamation and transition.	Alternatives	Please see Alternative D in Section 2 of the EIS.

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19	19.003	Shannon	Hughes	WildEarth Guardians	Email	Here, while OSMRE provided notice to the public and technically provided several public meetings across the region, these meetings fell short of their intended purpose for several reasons. Particularly, the meetings did not provide a forum for the public to provide comments directly to officials involved in the development of the DEIS, and no agency officials with actual authority were present at the meetings. Further, the meetings presented as one-sided, with explanations of OSMRE's analysis focused only on the proposed action or the almost identical Alternative B. Moreover, public comment was arranged to be given privately, through writing or through a private court reporter that was hired for the events, and not directly to officials. These scoping meetings were poster sessions with agency and resource specialists primarily from OSM and third party EIS contractors, Catalyst Environmental Solutions out of Sherman Oaks, California.	Process	The CEQ regulations require that agencies “make diligent efforts to involve the public in preparing and implementing their NEPA procedures.” 40 CFR 1506.6(a). This public involvement can include NEPA-related public meetings. 40 CFR 1506.6(b). The regulations leave the decision whether to hold public meetings and the format of the public meeting to the discretion of the agency, and CEQ has recognized the public meetings can “be held in a variety of formats[.]” CEQ’s Citizen’s Guide to the NEPA (Dec. 2007) at 16 n. 29. In accordance with these regulations, OSMRE hosted five public comment meetings to solicit comments on the Draft EIS. These meetings were held in a format that allowed members of the public to have direct access to the resource experts and agency representatives who were involved in the development of the Draft EIS as well as OSMRE managers, i.e., Field Operations Branch Manager and the Program Support Division Manager for OSMRE Western Region. This format allows the public to ask questions and discuss the project and the impact analysis directly with those representatives in an informal workshop setting. At these meetings, the public is able to provide oral or written comments. Those that chose to provide oral comments have their comments recorded by a court reporter. OSMRE is then able to review and respond to these comments within this comment response document in accordance with NEPA guidelines. OSMRE have found this type of meeting to be particularly effective in obtaining comments because it allows for direct communication with commenters in a comfortable setting. Further, this letter was delivered to OSMRE the morning of the first public comment meeting. OSMRE staff were already in transit to the meeting location and arrangements

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19	19.004	Shannon	Hughes	WildEarth Guardians	Email	<p>Here, OSMRE's statement of purpose and need is legally flawed. OSMRE narrowly frames the purpose of the proposal as "to evaluate the environmental effects of coal mining on the proposed portions of Federal Coal Lease NM-99144 within the San Juan Mine." (DEIS at 7). OSMRE notes that "approval of the federal Mining Plan Modification is necessary to mine the reserves." Id. This is merely a statement of whether Westmoreland can continue to mine coal in a specific area. While an agency may restrict its analysis to alternatives that suit the basic policy objectives of a planning action, it may do so only as long as the statements of purpose and need are drafted to guide the environmental review process and are not unreasonably narrow. See 42 U.S.C.A. § 4332(2)(i); see also New Mexico ex rel. Richardson v. Bureau of Land Mgmt., 565 F.3d 683 (10th Cir. 2009).</p> <p>This narrow evaluation, even if OSMRE has the authority to "approve, disapprove, or approve with conditions," is inconsistent with NEPA's procedural mandates. OSMRE must craft a revised Purpose and Need section that more broadly frames the proposal and does more than simply evaluate the various avenues for Westmoreland to accomplish its private goals.</p>	Purpose and Need	<p>As a continuing operations project and not a new project, the purpose and need guiding development of the EIS is focused on approving or disapproving continuing operations. The purpose and need of this project relates to the agency's purpose need for the action. OSMRE's purpose and need for this project is guided by section 7(c) of the Mineral Leasing Act (30 U.S.C. 207(c), which requires the Secretary to approve an operations and reclamation plan for the mine after the coal has been leased. In this case, the federal coal leased by the BLM is an expansion of an existing mine and not a new project. Thus, OSMRE appropriately framed the purpose and need to account for the Federal action. Moreover, as required by the regulations, OSMRE analyzed a No Action alternative, which looked at the impacts of denial of the mining plan modification, which is the functional equivalent of no mining. See also Master Response 1. Development of any alternative use beyond No Action is speculative at this point because the mine is active, has continuing operations, and has a contract with the purchaser of the coal. If economic development of alternate land uses to mining were feasible and economic, they would be subject to their own independent NEPA review process, and would occur following reclamation of the mine associated with No Action under OSMRE's decision-making process.</p>
19	19.005	Shannon	Hughes	WildEarth Guardians	Email	<p>OSMRE failed to consider an adequate range of alternatives as required by NEPA. Under NEPA, an EIS must contain a detailed statement regarding "alternatives to the proposed action." 42 U.S.C. § 4332(2)(C)(iii). The agency must "[r]igorously explore and objectively evaluate all reasonable alternatives" for the proposed action in response to a "specif[ied] underlying purpose and need." 40 C.F.R. §§ 1502.13, 1502.14(a). In addition, federal agencies are directed to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E)(2006). Here, because the Purpose and Need has already been set to evaluate how Westmoreland may continue to mine, it follows that the reasonable range of alternatives is also woefully insufficient.</p>	Alternatives	<p>See Master Response 1.</p> <p>See Response 90.4 regarding the Draft EIS's purpose and need.</p>

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19	19.006	Shannon	Hughes	WildEarth Guardians	Email	This analysis rests on pure speculation, as OSMRE has not identified a consumer for San Juan coal, or an economically viable path to broader coal markets once SJGS closes. Instead, OSMRE speculates that if a buyer for San Juan coal later becomes available, sale of the coal to that buyer may also require a separate NEPA process if the impacts would trigger additional federal approvals not evaluated here (such as having to install new rail lines). Id. But NEPA does not allow such an informational dodge, and the DEIS falls short of NEPA's "hard look" mandate by presenting a highly speculative alternative in which more than half of the environmental analysis has not been prepared. OSMRE's preferred approach would mean the required analysis would fall to some other, unidentified state or federal agency at some indeterminate point in time in the future.	Alternatives	See Master Response 4. The EIS analysis for Alternative B sets boundaries within which all impacts of coal combustion by a customer have been analyzed - that of a "typical" local generating station - which allows for a reasonable approximation of combustion-related effects. NEPA does not require a lead agency to speculate into the future; however, existing market conditions necessitate the reasonable alternative that following 2022, the San Juan Generating Station may no longer purchase San Juan Mine coal, but that Westmoreland may have approvals to mine in accordance with the Mining Plan Modification. Past 2022, a new customer has not been identified, which requires bounding of the impact analysis in order to determine the most feasible and reasonable scenario.
19	19.007	Shannon	Hughes	WildEarth Guardians	Email	Further, NEPA does not require OSMRE to consider alternatives rejected as too remote, speculative, impractical, or ineffective. 40 C.F.R. § 1502.14(a). However, NEPA regulations explain, "[t]he NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment." 40 C.F.R. 1500.1(c). "Without substantive, comparative environmental impact information regarding other possible courses of action, the ability of an EIS to inform agency deliberation and facilitate public involvement would be greatly degraded." New Mexico ex rel. Richardson v. BLM, 565 F.3d 683, 708 (10th Cir. 2009). In no way does can this document help authorized officials make a decision on the proposal, based on the understanding of environmental consequences. Rather, this document is simply a proposal for continued mining at San Juan.	Alternatives	See Master Response 1 and 3. In addition, as a continuing operations project, in which the agency is considering whether to allow actions to continue, the scope of alternatives must include consideration of different mining methods, and plans. Consideration of other activities for the same land would only follow after selection of the No Action Alternative. The EIS provides a full analysis of the consequences of both the Proposed Action, Alternative B, and the No Action Alternatives in order to assist the ASLM in making an informed decision.
19	19.008	Shannon	Hughes	WildEarth Guardians	Email	Here, OSMRE has the responsibility to determine the future of the San Juan mine and SJGS site where a full evaluation of shutdown in 2022 is warranted, given current economic realities and the continued financial difficulties of Westmoreland Coal. OSMRE must ensure an orderly decommissioning and cleanup of the mine and power plant, and enable workers and communities to move toward more sustainable and prosperous economies. As part of a "Just Transition," the agencies must work to leverage resources and enable communities to develop alternative sources of sustainable revenue and jobs. This includes prioritizing job placement for plant and mine workers in SJGS site reclamation and decommissioning, and job re-training.	Alternatives	Alternative B analyzes the potential impacts of shutdown in 2022. Please see Alternative D regarding OSMRE's consideration of the Just Transition Alternative.

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19	19.009	Shannon	Hughes	WildEarth Guardians	Email	<p>OSMRE must evaluate alternatives that would continue to meet electrical demand but do so using forms of energy other than coal. Our electrical grid functions by substituting different sources of electricity (such as coal, gas, wind, and solar) for one another as prices change. Here, alternatives exist that are realistic, technologically available, technically feasible within the project time frame, and economically feasible in relation to the Proposed Action.</p> <p>Renewable alternatives should have been analyzed to encompass a range of energy efficiency and renewable energy scenarios, both to compare against the coal facilities and operations subject to the proposed actions and to identify the ability of renewable energy to ameliorate the impacts of these facilities. Ignoring renewable energy alternatives or using generic boilerplate content in NEPA analyses is not evidence of a hard look at relative impacts and fails to constitute meaningful action to reduce greenhouse gas emissions and protect against climate change impacts to communities and the environment.</p>	Alternatives	See Master Response 1.
19	19.010	Shannon	Hughes	WildEarth Guardians	Email	<p>Here, however, OSMRE dismissed any sort of renewables alternative as "too speculative." The DEIS states that identifying other industries or employers that could replace the revenue and jobs provided by San Juan Mine and the Generating Station, facilitating their introduction into the regional economy in an orderly manner, and providing for training are beyond the scope of NEPA analysis. (DEIS at 35). Instead, OSMRE places this analysis on the shoulders of "economic development councils." Id. OSMRE fails to consider these realities and makes the assumption that perpetuation of coal mining and combustion at these facilities is the sole reasoned and informed energy choice to consider. The ready availability of renewable energy alternatives renders OSMRE's assumption baseless.</p>	Alternatives	NEPA regulations require consideration of all reasonable alternatives. Please see Master Response 1. With regard to using NEPA to identify other employers to replace revenue, facilitate introduction of new industries into the regional economy and provide for training; these activities are beyond the scope and purpose of the NEPA regulation. OSMRE acknowledges the potential for renewable energy industries in San Juan area and describes actions and planning already occurring in the region. Please see Alternative D - Just Transition Alternative.
19	19.011	Shannon	Hughes	WildEarth Guardians	Email	<p>Impacts from coal mining operations as well as coal combustion are significant, harmful, and not sufficiently analyzed in the DEIS. The U.S. Supreme Court has called the disclosure of impacts the "key requirement of NEPA," and held that agencies must "consider and disclose the actual environmental effects" of a proposed project in a way that "brings those effects to bear on [the agency's] decisions."11 OSM was required to fully analyze and assess direct, indirect, and cumulative impacts to air quality, including impacts to air quality in the context of all National Ambient Air Quality Standards ("NAAQS"), prevention of significant deterioration ("PSD"), increments for Class I and II areas, and visibility impacts to Class I areas.</p> <p>The immense ongoing impacts of coal combustion are not represented in the DEIS. The DEIS must be revised to accurately evaluate air quality impacts, including, but not limited to, mercury deposition, visibility, greenhouse gas emissions, and public health impacts from the past, present, and reasonably foreseeable future from SJGS.</p>	Air Quality	The direct, indirect, and cumulative effects of the Proposed Action and alternatives on Air Quality, Greenhouse gases, mercury deposition, visibility, and public health are all analyzed in Section 4 of the EIS.

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19	19.012	Shannon	Hughes	WildEarth Guardians	Email	In addition, cumulative air impacts that include the nearby Four Corners Power Plant, and the Methane hotspot problem hovering over the region, were ignored in the Draft EIS and must be addressed.	Cumulative Effects	The Four Corners Power Plant was expressly included in the analysis of cumulative effects. See Figure 4.1-1 and Sections 4.1.5.1 and 4.2.5.1. Literature regarding the methane hot spot refers to oil and gas production as largest contributors to this issue; oil and gas production in the region is considered in the cumulative effects analysis. A description of the regional methane hot spot is included in Section 3.2 of the Technical Resource Document, which is incorporated by reference into the EIS.
19	19.013	Shannon	Hughes	WildEarth Guardians	Email	The DEIS also fails to properly represent how immense these air impacts are, resting its analysis on the notion that San Juan County has not exceeded National Ambient Air Quality Standards ("NAAQS") this year. San Juan County is expected to remain on the brink - if not exceed - NAAQS for years to come principally because of the continuing emissions at SJGS - which is supplied by the San Juan Mine - as well as from contributions from area oil and gas operations. ¹² In fact, the ozone standard was exceeded in 2006. ¹³ This situation is particularly troubling because "San Juan County is the worst county in New Mexico for release of toxic materials to the environment, and is ranked in the top 10% of worst counties in the United States for toxic releases to the environment." ¹⁴	Air Quality	Under the Proposed Action and Alternatives, the amount of air emissions from both the San Juan Mine and Generating Station would be reduced by approximately half or more, for a period not extending beyond 2033. This is the primary factor pertaining to the air quality effects of the decision to be made regarding the Proposed Action. The existing Affected Environment (e.g., ozone trends) and more detailed analysis of Cumulative Effects are provided in the Technical Resource Document, which is incorporated by reference into the EIS.
19	19.014	Shannon	Hughes	WildEarth Guardians	Email	OSMRE may not stop its analysis under the unrealistic assumption that San Juan County will continue its short record of not exceeding NAAQS. Moreover, even if NAAQS levels are not exceeded, that does not automatically indicate that emissions are less than significant and harmful. OSMRE must revise the DEIS to reflect this.	Air Quality	The NAAQS provides the widely accepted Significance threshold for NEPA analyses. Under the Proposed Action and Alternatives, the amount of air emissions from both the San Juan Mine and Generating Station would be reduced by approximately half or more, for a period not extending beyond 2033. This is the primary factor pertaining to the air quality effects of the decision to be made regarding the Proposed Action.
19	19.015	Shannon	Hughes	WildEarth Guardians	Email	San Juan Mine and SJGS are "connected actions" and require more robust analysis. Coal mining from the San Juan Mine and subsequent coal combustion at SJGS are "interdependent parts of a larger action and depend on the larger action for their justification." 40 C.F.R. § 1508.25(a)(1)(iii). OSMRE states that, "[c]oal mined from the San Juan Mine is burned exclusively at the Generating Station, and the Generating Station only burns coal from the San Juan Mine." (DEIS at 24).	Process	As stated in Section 1.3.2, no federal permits or approvals are required to continue operation at the San Juan Generating Station; therefore, there are no Federal actions at the San Juan Generating Station considered in the EIS. Consequently, there is no action at the San Juan Generating Station, which is dependent on the Federal action at the San Juan Mine. However, combustion at the San Juan Generating Station of coal mined at the San Juan Mine is fully analyzed in the EIS, including impacts to human health (see Section 4.6), as an indirect impact of the proposed action.
19	19.016	Shannon	Hughes	WildEarth Guardians	Email	OSMRE must submit additional analysis looking at the cumulative effects of both SJGS and the San Juan Mine and consider the two facilities as connected actions.	Process	As stated in Section 1.3.2, no federal permits or approvals are required to continue operation at the San Juan Generating Station; therefore, there are no Federal actions at the San Juan Generating Station considered in the EIS. Consequently, there is no action at the San Juan Generating Station, which is dependent on the Federal action at the San Juan Mine. However, combustion at the San Juan Generating Station of coal mined at the San Juan Mine is fully analyzed in the EIS as an indirect impact of the Proposed Action.

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19	19.017	Shannon	Hughes	WildEarth Guardians	Email	Here, OSMRE first attempts to skirt any meaningful analysis by refusing to acknowledge combustion from SJGS as a connected action and then further minimizes its impacts by comparing the emissions from SJGS to the national scale. Comparing pollution from combustion of the strip mine's coal with all air pollution in the United States serves only to minimize the immense impact that SJGS actually has on the local environment and public health, and does nothing to provide a meaningful scale for decision-makers. An agency cannot minimize the significance of impacts of a project's criteria air pollution by comparing emissions to national inventories. Pac. Coast Fed'n of Fishermen's Ass'ns v. NMFS, 265 F.3d 1028, 1035-37 (9th Cir. 2001). Finally, OSMRE uses the classification of "minor" impacts from SJGS to turn it around and make the determination that not allowing the proposal to continue (under the "No Action Alternative would also cause minimal effects, explaining, "air quality impacts under the No Action Alternative would be permanent, but minor (since the effects of the emissions under the Proposed Action is considered minor, removal of emissions is also considered minor)." (DEIS at 19).	Air Quality	See Response 19.15 for connected action discussion. Under the Proposed Action and Alternatives, the full effects of coal combustion at the San Juan Generating Station are analyzed, in addition to the direct effects of coal mining at the San Juan Mine. The impacts are compared to objective standards where such standards exist, and to background levels where objective standards are not available. The level of impact is not determined based on comparisons to a national or regional scale. The EIS also describes that as a result of the revised State Implementation Plan for regional haze, the amount of air emissions from both the San Juan Mine and Generating Station would be reduced by approximately half or more, for a period extending to 2033. The existing Affected Environment (e.g., ozone trends) and more detailed analysis of Cumulative Effects are provided in the Technical Resource Document, which is incorporated by reference into the EIS. Further, extensive modeling analysis was described in the Technical Resource Document that quantified the effects of the current and future emissions with respect to NAAQS, as well as air quality related values (ozone, visibility, fine particulate matter, deposition, regional haze). These analyses looked beyond the comparative emissions levels cited in the comment, and did quantify the effects to support a meaningful decision with respect to air quality factors.
19	19.018	Shannon	Hughes	WildEarth Guardians	Email	Air pollution from the power plant has been a major source of harmful haze in the Four Corners region, clouding the air and views in economically important national parks, including the Grand Canyon. Despite these concerns, OSMRE determined that Regional Haze due to SJGS emissions were "minor." (DEIS at 75). Despite the reported data and its reference to Class I areas in the DEIS, the analysis and assessment of air quality impacts does not even attempt to analyze actual impacts to air quality. 17 Instead, the DEIS only compares emissions data to the national averages. It is impossible that continuing operations until 2033, under Alternative B would produce only "minor" impacts to air quality in the region. (17 The significant amounts of air pollution from San Juan also contributes to regional haze, which impacts visibility in numerous Class I areas and the "Golden Circle of National Parks."108 Within a 300 - km/200-mile range of San Juan, there are 27 National Park units, 9 of which are Class I areas. The National Parks - and the myriad resources within those parks - are already under tremendous pressure from 17 existing coal-fired power plants and other emission sources within the Four Corners area. In addition, areas deserving the same level of air quality protection on the Navajo Nation, such as Chaco Canyon, Canyon de Chelly, and Monument Valley are not even considered as Class I under the Regional Haze Program.)	Air Quality	Extensive modeling analysis was described in the Technical Resource Document, which is incorporated by reference into the EIS, that quantified the effects of the current and future emissions with respect to NAAQS, as well as air quality related values (ozone, visibility, fine particulate matter, deposition, regional haze). These analyses looked beyond the comparative emissions levels cited in the comment, and did quantify the effects to support a meaningful decision with respect to air quality factors. Support for the "minor" impact determination is supported by modeling of visibility impacts in Class I areas within 300 km of the San Juan site that show a projected decrease in regional haze, due to shutting down 2 of 4 Generating Station units after 2017 under the revised State Implementation Plan (refer to EIS Table 4.1-4).

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19	19.019	Shannon	Hughes	WildEarth Guardians	Email	The identification of the Four Corners Region as the a "methane hotspot" in 2014 represents the toll that extractive resource development and burning of fossil fuels have manifested on the Four Corners region for decades. The region is home to tens of thousands of natural gas wells, hundreds of un-reclaimed uranium mines and mills, three coal-fired power plants, and three massive coal-mining operations. The Four Corners Region has a significant history of energy leasing including natural gas, proposed coal gasification, uranium, coal and associated proposed railroads to transport resources. These leases virtually cover the area of land south of Farmington per information from the Navajo-El Paso/Consolidation Coal Lease and Mining Plan Final Environmental Statement in 1977.18 Needless to say, the San Juan Mine and Generating Station is not the sole source of the vast CO2 emissions in San Juan County, New Mexico. Oil and gas development in the San Juan Basin contributes significant greenhouse gases; the San Juan EA 2011 notes that in 2006, San Juan County alone, exclusive of tribal lands, contained almost 8,300 conventional gas wells, over 3,100 coal-bed-methane wells, and 451 conventional oil wells. More than 300 oil and gas wells were located on tribal lands within San Juan County. These other sources of GHG pollution must be analyzed and reported in the cumulative impacts analysis of the DEIS.	Climate Change	The trends in cumulative effects were disclosed in the EIS Section 4.2.4. This discussion points out that industry data more current than the 2011 San Juan EA cited in the comment, from the state of New Mexico, indicates that 2004 - 2006 was relatively a peak period for gas production in the northwest portion of the state. Gas production in that northwest New Mexico has declined steadily, starting with the economic downturn in 2007-2008, to a level in 2016 that was less than 60 percent of the 2006 rate (OCD 2017). As discussed in Section 4.2.4, the net effect of reduced gas production in the San Juan Basin means that emissions of methane in the region will tend to decline over the coming decades. The current oil and gas activity in these basins is primarily targeted at maintaining flat levels of production, while some equipment turnover and controls requirements continue to reduce emissions (WRAP-WEA 2010).
19	19.020	Shannon	Hughes	WildEarth Guardians	Email	Cumulative adverse air quality impacts dictate that any legitimate air quality analysis in the DEIS was required to include a thorough programmatic air quality analysis incorporating regional sources. In addition, the cumulative impacts of mercury pollution from the mine in addition to SJGS have impacted nearly all of the region's waterways and have contributed to mercury deposition.	Cumulative Effects	Section 4.1 specifically addressed the potential cumulative impacts from past, present and reasonably foreseeable future projects and facilities, which emit criteria pollutants. The potential cumulative effects of mercury deposition resulting from air emissions are addressed in Section 4.5. Specifically, the EIS states that "Although modeling and ERAs for the Proposed Action found that the depositional area of emissions from the Generating Station is less than 50 kilometers, 16 other power plants are located in the region of influence. In addition, the background levels of metals in soil and water and elevated. Taken together with the effect of emissions and transport of mercury and selenium from Asia, such effects could be cumulatively major on water quality."
19	19.021	Shannon	Hughes	WildEarth Guardians	Email	To comply with the hard look that NEPA requires, OSMRE was obligated to analyze and assess the cumulative impacts of the region's additional fossil fuel projects on air quality and climate change, and not simply list them. OSMRE failed to assess the cumulative impacts because they were "too speculative" to be predicted. (DEIS at 76.). This is not consistent with the "hard look" that is required of OSMRE. In a similar fashion, mercury from emissions was quantified, but not analyzed nor assessed. (DEIS at 48).	Cumulative Effects	See Master Response 3.

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19	19.022	Shannon	Hughes	WildEarth Guardians	Email	<p>OSM was obligated to conduct a full analysis of reasonably foreseeable coal combustion, coal transport, and coal export impacts on air quality. 40 C.F.R. § 1508.25(c). Its failure to do so caused the analysis to be insufficient under NEPA. 42 U.S.C. § 4332(2)(C). While OSM did collect information and disclosed emissions and sources, it failed to analyze the significance of the impacts and how they would affect the human environment, as required under NEPA. 40 C.F.R. § 1208.8. It especially missed this mark in its Alternative B analysis in which it neither disclosed nor analyzed the direct, indirect, nor cumulative effects of its actions of shipping coal to an unknown consumer. NEPA requires disclosure of foreseeable impacts. Here, how can it foresee what isn't proposed or disclosed?</p> <p>OSM was required to assess impacts that result from these trips, including CO2 emissions emitted during transportation, diesel PM emissions, and air quality impacts from coal trains, and vehicle traffic. To fully analyze the impacts of air pollution, OSMRE must investigate the significance of additional mining. Finally, OSMRE must investigate the significance of transporting coal to a mystery customer.</p>	Air Quality	<p>The decision to be made pertaining to the Proposed Action and Alternatives does not include coal exports, as there is no foreseeable alternative that includes that activity. Further, extensive modeling analysis was described in the Technical Report that quantified the effects of the current and future emissions with respect to NAAQS, as well as air quality related values (ozone, visibility, fine particulate matter, deposition, regional haze). These analyses looked beyond the comparative emissions levels cited in the comment, and did quantify the effects to support a meaningful decision with respect to air quality factors. Definition of a "hypothetical customer" for San Juan Mine coal would be necessary to quantify the effects from vehicle trips, etc. that might occur under Alternative B, and analysis of a speculative outcome is not appropriate under NEPA. See Master Response 4 for further detail about Alternative B.</p>
19	19.023	Shannon	Hughes	WildEarth Guardians	Email	<p>Further, a recent study found a new toxin existing in coal combustion emissions. The study suspected that in the U.S., scrubbers capture the material, reducing its prevalence. However, there is no monitoring of this particular harmful toxin, which contributes to the estimated 3 million air-pollution related deaths worldwide. Thus, OSMRE was required to include an analysis of this particular new toxin's prevalence in the effects of coal combustion.</p>	Air Quality	<p>Coal combustion can result in emissions of various hazardous air pollutants and related toxins, as discussed in the EIS. The recent study mentioned in the comment hypothesizes that a nanomaterial of titanium oxides is formed during coal combustion and presents a preliminary mortality study on zebrafish. Per the study, the compounds are only detectable via X-ray diffraction, scanning electron microscopy, and transmission electron microscopy. The study did not present a method for measuring the concentrations of these nanoparticles, and therefore; the concentration used to evaluate toxicity in zebrafish embryos, has no correlation to the potential concentrations produced during coal emissions. Further, there is no scientific basis for extrapolation of one 48-h acute toxicity test in zebrafish embryos to any other species, endpoints, or potential impacts. That coal combustion forms these nanomaterials is still currently speculative, and there are no consensus-based concentration or toxicity data from which to estimate potential impacts. Thus, it is outside the scope of NEPA to evaluate these compounds in the analysis and no change to the EIS has been made.</p>

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19	19.024	Shannon	Hughes	WildEarth Guardians	Email	Because mercury accumulates in the environment and in organisms, the relevant concern is not the rate of combustion but the total pollutant contribution. OSMRE cannot ignore this significant impact under NEPA due to minor uncertainty regarding the precise destination and combustion conditions for San Juan coal.	Air Quality	<p>Historic mercury deposition for the region, including past effects of San Juan Mine, is addressed in the EIS at Section 3.1.3, and in the Affected Environment section in the Technical Resource Document, which is incorporated by reference into the EIS. The analysis includes measured data for historic emissions, and modeled conditions for further emissions, including an accounting of global mercury emissions and transport in the atmosphere. Future effects due to the mine and generating station would decline, as a result of the reduced mercury emissions resulting from implementation of the revised State Implementation Plan and shutdown of two of four units at the Generating Station.</p> <p>The bioaccumulative nature of Hg is accounted for in both the Ecological Risk Assessment, discussed in the EIS Sections 4.7 and 4.8 and TRD Sections 3.7 and 3.8, and the Human Health Risk Assessment, discussed in EIS Section 4.16 and Technical Resource Document Section 3.16 (which is incorporated by reference into the EIS). The ERA evaluates potential risk to higher-level trophic species via food web modeling and estimates of risk for both Hg and methylmercury.</p>
19	19.025	Shannon	Hughes	WildEarth Guardians	Email	<p>The DEIS improperly downplays the climate impacts of OSMRE's preferred alternative by relying on outdated science and omitting any discussion of the short-term effects of methane emissions. OSMRE failed to disclose that methane persists in the atmosphere for far less time than carbon dioxide and is commonly reported with both a 20-year and 100-year time horizon for methane's global warming potential (or "GWP"), and the agency likewise omitted the fact that these 20-year and 100-year figures differ significantly. OSMRE instead misled the public about the climate-warming impact of the mine's methane emissions by: (1) using only a 100-year GWP of 25, based on an outdated report from 2007-the agency failed to utilize or disclose the updated 100-year GWP of 28-36 reported by the U.S. Environmental Protection Agency (EPA) and published by the Intergovernmental Panel on Climate Change (IPCC) in 2014; and (2) failing to utilize or disclose the 20-year GWP for methane of 84-87 recognized as accurate by both EPA and the IPCC.</p> <p>NEPA requires agencies provide the public with "high quality" information and "[a]ccurate scientific analysis," 40 C.F.R. § 1500.1(b), as well as a "full and fair discussion of significant environmental impacts." 40 C.F.R. 1502.1. Additionally, under NEPA "[b]oth short and long-term effects are relevant." 40 C.F.R. § 1508.27(a). Here, OSMRE failed to meet these mandates by improperly relying on outdated science, failing to disclose both short- and long-term impacts of methane, and drastically understating the climate impacts of the mine's methane emissions.</p>	Climate Change	<p>The value of methane GWP of 25 represents the accepted value for regulatory reporting and emission calculations for major source determinations. It is the basis for current and historic GHG emission data in the public literature since the outset of the Mandatory Reporting Rule in the U.S. in 2010. The persistence of methane molecules covers a distribution of timeframes that may range from 20 to 100 years or longer, depending upon the rate of atmospheric reactions. OSMRE reported the Project CO₂eq inventory using a 100-year GWP value of 25 for methane to allow direct comparison of those emissions on the same basis as reported emissions under the Mandatory Report Rule, and reporting to the State of New Mexico. Otherwise, the reader would have difficulty putting the Project CO₂eq in the context of the historic record of reported emissions. As discussed in Section 4.2.4 of the EIS, and in more detail with regard to cumulative effects in Sections 4.1.1.2 and 4.1.2.3 in the Technical Resource Document, which is incorporated by reference into the EIS, the net effect of reduced gas production in the San Juan Basin means that emissions of methane in the region will tend to decline over the coming decades. The North and South San Juan Basins are considered to be relatively older basins that have been in decline for a number of years, based on the historic production data. The current oil and gas activity in these basins is primarily targeted at maintaining flat levels of production, while some equipment turnover and controls requirements continue to reduce emissions (WRAP-WEA 2010).</p>

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19	19.026	Shannon	Hughes	WildEarth Guardians	Email	Here, the DEIS implies that all of the mine's direct GHG emissions are from methane: "GHG emissions from the San Juan Mine are the result of the CH4 released by underground extraction from the coal seam and primary crushing of the coal." (DEIS at 78).	Climate Change	A more detailed examination of San Juan Mine GHG emissions is provided in the Technical Resource Document, which is incorporated by reference into the EIS. As an underground mine, the level of operation for above-ground engine-driven equipment is much less than for a surface coal mine of comparable output. Reported CO ₂ emissions for San Juan Mine reflect operation of the surface engine-driven equipment. Between 2008 and 2016 the engine exhaust CO ₂ emissions averaged less than 0.1 percent of the total mine CH ₄ emissions on a CO ₂ -equivalent basis (San Juan Mine 2017). Consequently, as stated in Section 4.2 of the EIS these surface GHG emissions are viewed as negligible compared to the methane emissions from underground mining and coal crushing emissions.
19	19.027	Shannon	Hughes	WildEarth Guardians	Email	OSM's decision to disclose 25 as the only GWP for methane improperly downplays the extent of the climate warming influence exerted by the mine's methane emissions. First, OSMRE did not include any discussion of GWP in the DEIS itself, instead leaving that buried in one of many technical appendices. This is improper. Under NEPA, the analysis of impacts - including analysis and disclosure of the shortcomings of the assumptions relied on by the agency- must be found in the NEPA document itself, not in supplemental documentation, or even buried somewhere in the administrative record.	Process	As stated in Section 3, "The OSMRE's guidelines for implementing NEPA (OSMRE 1989) state that: 'the EIS should provide concise analysis and conclusions, helpful to decision makers. Technical analyses and data may be an important part of EIS preparation but generally are not included in the text. Such material should be incorporated by reference, summarized in the text, or, if needed to substantiate statements made in the EIS, put in an appendix.'" Accordingly, the OSMRE prepared a Technical Resource Document, which is incorporated by reference in the EIS.
19	19.028	Shannon	Hughes	WildEarth Guardians	Email	Second, OSMRE failed to provide accurate scientific information by using an outdated 100-year GWP for methane that no scientific body agrees is accurate. OSMRE presents the GWP of 25 as unassailable and backed by EPA, explaining that "EPA's defined GWP coefficient for CH ₄ is 25." OSMRE, Technical Resource Document at 3.2-8. Neither is true. Periodically, the Intergovernmental Panel on Climate Change releases "assessment reports," which publish the then-prevailing scientific consensus on a multitude of issues relating to climate change, including global warming potentials for greenhouse gasses. OSMRE's figure of 25 for methane's GWP comes from the IPCC's Assessment Report 4 (AR4), published in 2007, but this report was superseded by IPCC's 2014 AR5. The AR5 report states that methane has a 100-year GWP of 28-36. 24 Moreover, EPA considers the AR5 figures to be the best available science and explains that it uses the 2007 AR4 figures for certain reporting purposes only because the United Nations Framework Convention on Climate Change made a political decision to require countries to report emissions based on that document.	Climate Change	The value of methane GWP of 25 is that which is specified for annual GHG emission reporting (40 CFR Part 98), and also used in the NMED Inventory of New Mexico Greenhouse Gas Emissions (NMED 2016), publication of as it was the accepted value as of those dates, and therefore would be the basis for virtually all of the publically available reported CO ₂ e for methane emissions. This clarification has been added to the following sentence in Section 3.2.2.1 of the Technical Resource Document: "The EPA's defined GWP coefficient for CH ₄ is 25, <u>used under federal regulations for annual emission reporting and GHG major source determines which assumes</u> , its persistence in the atmosphere is estimated to be about 9 to 15 years (EPA 2012b, d)." The persistence of methane molecules covers a distribution of timeframes that may range from 20 to 100 years or longer, depending upon the rate of atmospheric reactions. OSMRE reported the Project CO ₂ eq inventory using a 100-year GWP value of 25 for methane to allow direct comparison of those emissions on the same basis as reported emissions under the Mandatory Report Rule, and reporting to the State of New Mexico. Otherwise, the reader would have difficulty putting the Project CO ₂ eq in the context of the historic record of reported emissions.

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19	19.029	Shannon	Hughes	WildEarth Guardians	Email	<p>Third, OSMRE fails to address the fact that methane is far more potent when measured over shorter time periods. NEPA requires analysis of methane's near-term impact, 40 C.F.R. §1508.27(a), but OSMRE focused exclusively on the 100-year time horizon. Methane persists in the atmosphere for much less time than carbon dioxide, and thus comparisons of methane and carbon dioxide are therefore necessarily tied to a particular time frame. The shorter the timeframe, the more extreme the warming impact of methane compared to carbon dioxide, and the higher methane's GWP. By relying only on a 100-year GWP, OSMRE failed to disclose the scientific consensus that methane's GWP is significantly higher when measured over a 20-year period, a fact recognized by both EPA and the IPCC. 26 As explained by EPA, methane has a 100-year GWP of 28-36, and a 20-year GWP of 84-87.27</p> <p>Here, OSMRE's failure to use scientifically accurate GWPs for methane significantly underreported the mine's direct GHG emissions. OSMRE discloses 480,000 tons of CO₂e per year in direct emissions. (DEIS at 78). Using OSMRE's preferred GWP of 25, the mine emits 19,200 tons of methane per year (480,000 / 25 = 19,200). Taking those same 19,200 tons per year of direct methane emissions and multiplying by appropriate GWPs (36 for a 100-year GWP and 87 for a 20-year GWP) yields direct CO₂e emissions of 691,200 tons of CO₂e or 1,670,400 tons of CO₂e per year. Thus, by any scientifically defensible numbers, OSMRE disclosed far less direct GHG emissions than will occur. Actual direct GHG emissions, when measured using current 20-year methane GWP figures, will be between three and four times greater than those OSMRE disclosed. This misleading and self-serving analysis cannot stand.</p>	Climate Change	<p>The value of methane GWP of 25 is that which is specified for annual GHG emission reporting (40 CFR Part 98), and also used in the NMED Inventory of New Mexico Greenhouse Gas Emissions (NMED 2016), publication of as it was the accepted value as of those dates, and therefore would be the basis for virtually all of the publically available reported CO₂e for methane emissions. This clarification has been added to the following sentence in Section 3.2.2.1 of the Technical Resource Document: "The EPA's defined GWP coefficient for CH₄ is 25, <u>used under federal regulations for annual emission reporting and GHG major source determines which assumes</u>, its persistence in the atmosphere is estimated to be about 9 to 15 years (EPA 2012b, d)." The persistence of methane molecules covers a distribution of timeframes that may range from 20 to 100 years or longer, depending upon the rate of atmospheric reactions. OSMRE reported the Project CO₂eq inventory using a 100-year GWP value of 25 for methane to allow direct comparison of those emissions on the same basis as reported emissions under the Mandatory Report Rule, and reporting to the State of New Mexico. Otherwise, the reader would have difficulty putting the Project CO₂eq in the context of the historic record of reported emissions.</p>
19	19.030	Shannon	Hughes	WildEarth Guardians	Email	<p>Here OSMRE makes no attempt to address this question. It simply quantifies GHG emissions from coal mining and coal combustion, with zero information on whether OSMRE's decision would affect those emissions in any way. This informational dodge is not allowed under NEPA, which requires agencies to "insure the professional integrity" of their environmental analyses. 40 C.F.R. § 1502.24. Thus, [a]ccurate scientific analysis" is "essential to implementing NEPA." 40 C.F.R. § 1500.1(b). Further, NEPA affirmatively requires "reasonable forecasting and requires agencies to provide information that is "essential to a reasoned choice among alternatives," where the cost of obtaining the information is not exorbitant. 40 C.F.R. § 1502.22(a); Scientists' Inst. for Pub. Info. v. Atomic Energy Comm'n, 481 F.2d 1079, 1092 (D.C. Cir. 1973). Here, knowing the difference in GHG emissions between approving and rejecting the proposed mine plan modification is essential information. OSMRE cannot make an informed decision without that information, and the agency's failure to address the question deprives the public of the opportunity to understand the impacts of the proposal and provide fully informed public comment on those impacts.</p>	Climate Change	<p>The GHG emissions for direct sources (mining) and indirect sources (coal combustion) are quantified for the Proposed Action in detail in the supporting Technical Resource Document. As is accepted NEPA practice, the EIS is structured into review of the No Action Alternative separate from emissions inventory for the Proposed Action. The EIS discussion of the No Action Alternative does provide information on whether OSMRE's decision would affect these emissions. Under the No Action Alternative discussion (refer to EIS Section 4.2.5): "Compared to the GHG emissions and effects under the Proposed Action the overall GHG emissions would be greatly reduced, by about 90 percent or more, if the reclamation operations are comparable to current surface operations at the San Juan Mine to dispose of CCR, resulting in a minor and permanent effect."</p>

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19	19.031	Shannon	Hughes	WildEarth Guardians	Email	<p>Here, OSMRE refused to further analyze climate change impacts, stating that it was too difficult to model impacts from a specific source and that, "[t]here are no direct source-impact relationships for the GHG emissions associated with the OLE and the Generating Station." (DEIS at 78). This statement is incorrect. OSMRE has more refined tools available and, if utilized, could provide meaningful information to decision makers and the public on the climate harms from this project's direct and indirect GHG emissions.</p> <p>The social cost of carbon - a tool created by federal agencies and generally accepted in the scientific community- could be used here, as it would allow OSMRE to quantify and disclose the harm caused by that the project's carbon dioxide emissions. The social cost of carbon provides a metric for estimating the economic damage, in dollars, of each incremental ton of carbon dioxide emitted into the atmosphere.</p>	Climate Change	<p>The discussion on climate change effects correctly acknowledges that the incremental effect of any single project, or even projects within a region, cannot be linked by a physical model to specific changes in climate parameters. The tools used to assess qualitatively the potential for regional climate change effects are more completely described in the Technical Resource Document, which is incorporated by reference into the EIS.</p> <p>Details for why OSMRE did not use the SCC tool are included in Section 4.2.1.3, GHG Emissions Monetization Policy, of the EIS. See Master Response 2.</p>
19	19.032	Shannon	Hughes	WildEarth Guardians	Email	<p>OSMRE offers four unavailing excuses for not using the social cost of carbon. First, OSMRE notes that this project is not for rulemaking, and that the social cost of carbon was initially developed for use in evaluating the environmental impacts of proposed federal agency rulemakings. (DEIS at 80). OSMRE offers zero explanation for why a tool designed to measure the environmental impacts of federal proposals in a rulemaking context cannot also be used to measure the environmental impacts of federal proposals of specific projects. Indeed, the social cost of carbon provides an estimate of the environmental harm, measured in dollars, of each additional ton of carbon dioxide emitted into the atmosphere. Whether those additional tons occur as a result of a federal rulemaking, or as a result of a federal project approval, has no impact on the extent of the environmental damage, the dollar value of that damage, or the resulting social costs of the proposal, be it for rulemaking or a project.</p>	Climate Change	See Master Response 2.
19	19.033	Shannon	Hughes	WildEarth Guardians	Email	<p>Second, OSMRE notes that on March 28, 2017 President Trump issued an executive order that withdrew the technical support documents prepared by the federal interagency working group that had been tasked with creating and refining the social cost of carbon. (DEIS at 80-81). Yet while the Trump Administration disbanded the interagency working group on political grounds, it has not contested the scientific accuracy of the social cost of carbon, nor has it offered any reasoned basis for its decision. The social cost of carbon, based on "the latest peer-reviewed science and economic models," "remain[s] the best method[s] available to analyze the social cost of greenhouse gas emissions. Jayni Foley Hein, Federal Lands and Fossil Fuels: Maximizing Social Welfare in Federal Energy Leasing, 42 Harv. Envtl. L. Rev. 1, 30-31 (2018). The political decision to disband the interagency working group does not affect the scientific accuracy of the social cost of carbon, nor does it change OSMRE's obligation to use "[a]ccurate scientific analysis" in its NEPA reviews. 40 C.F.R. §§ 1500.1(b), 1502.24.</p>	Climate Change	The EIS rational for not using the SCC tool is not entirely dependent upon the 2017 Executive Order rescinding the earlier executive order; See Master Response 2.

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19	19.034	Shannon	Hughes	WildEarth Guardians	Email	Third, OSMRE notes that a formal cost-benefit analysis is not required under NEPA. (DEIS at 80). Although NEPA does not mandate agencies prepare a formal cost-benefit analysis, an agency may not present misleading economic information by quantifying purported benefits while refusing to quantify costs of the projects they approve. MEIC v. OSMRE, 274 F. Supp. 3d 1074, 1104 (D. Mont. 2017) (overturning an OSMRE mine plan approval where agency quantified benefits while refusing to use the social cost of carbon to quantify harms in a way that "essentially zeroed the climate change impacts scale,"); High Country Conservation Advocates v. Forest Service, 52 F. Supp. 3d 1174, 1191 (D. Colo. 2014) (same for BLM coal lease authorization). An agency's review is arbitrary where it "tip[s] the scales of an EIS by promoting possible benefits while ignoring costs." Sierra Club v. Sigler, 695 F.2d 957, 979 (5th Cir. 1983). Here OSMRE relied on the benefits of the proposal, noting both the positive economic benefits of approving the project and the negative economic consequences of rejecting additional mining in favor of the No Action alternative. (E.g., DEIS at ES-22, 118-119). Yet OSMRE has improperly skewed its economic analysis by refusing to quantify any of the easily quantifiable environmental harms caused by the 97.5 million tons of CO ₂ e emitted by the project.	Climate Change	The effects of the Proposed Action on climate change were analyzed in the EIS in both a quantitative and qualitative manner. However, none of the analyses in the EIS are at the level that would support a cost benefit analysis. See Master Response 2 for additional considerations on this comment. See Responses 13.14 and 13.6 regarding the High Country and MEIC v. OSM cases.
19	19.035	Shannon	Hughes	WildEarth Guardians	Email	Finally, OSMRE asserts that using the social cost of carbon to quantify some of the environmental harms associated with its project approval would be misleading both because the agency has not quantified all of the social benefits of coal-fired electricity and because the social cost of carbon "does not measure the actual incremental impacts of a project on the environment and does not include all damages or benefits from carbon emissions." (DEIS at 80). Unpacking that is a useful exercise. First, the social cost of carbon does "measure actual incremental impacts of a project on the environment." That is what the social cost of carbon does - it puts a dollar figure on the amount of environmental damage caused by each additional ton of carbon dioxide emitted into the atmosphere. Second, OSMRE's assertion that it cannot use the social cost of carbon because the tool does not include "all damages or benefits" of carbon emissions is illogical. Simply because a tool does not measure every aspect of a problem does not invalidate that tool. Moreover, putting some cost on the harm caused by these emissions is far more accurate than putting zero cost of those same emissions, which is what OSMRE effectively does here. Finally, if OSMRE wants to monetize the benefits of coal-fired electricity to provide additional context to the social harms caused by its decision, it is free to do so. But instead, OSMRE has improperly tried to justify its limited evaluation of environmental harms by voluntarily constraining its evaluation of purported benefits - without any support that there are in fact unaccounted for benefits of coal-fired electricity. This excuse, like the others offered by OSMRE, holds no water and cannot stand judicial scrutiny.	Climate Change	The effects of the Proposed Action on climate change were analyzed in the EIS in both a quantitative and qualitative manner. For the reasons explained in Section 4.2.1, although OSMRE did not use dollars as the quantitative unit, OSMRE did cite the In addition, reference was made to the results of the Social Cost of Carbon analysis conducted for the analogous Navajo Mine/Four Corners Energy Project EIS for quantitative analysis. Master Response 2 provides further comparison of these results to the quantitative analysis of CO ₂ e emissions conducted for the San Juan Mine DLE. This commenter is correct that if OSMRE wanted to run a full cost-benefit analysis, it could choose to do so. However, NEPA is generally designed to provide the decision-maker with an analysis of the environmental impacts of an action—not the economic impacts. As such, NEPA's implementing regulations the NEPA regulations specifically do not require an agency to perform a complete cost-benefit analysis. 40 CFR 1502.23. In fact, the regulation states that agenciesIndeed, the regulation stated that "when there are important qualitative considerations[,] agencies should not weight the merits and drawbacks of alternatives using a monetary cost-benefit analysis." when there are "important qualitative considerations." Id. Because climate change has many global effects that can be readily understood qualitatively (such as increase in temperature, increase precipitation and storm intensity, melting ice caps, temperature and chemical changes in the oceans, increased flooding, drought, and more frequent and severe heat waves), OSMRE has chosen to discuss those qualitative considerations, primarily in the

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19	19.036	Shannon	Hughes	WildEarth Guardians	Email	An additional 480,000 mt CO ₂ e would be added to this amount due to venting from the DLE (DEIS at 78). In its alternatives, OSM must consider the capture and use or flaring of methane venting emissions from the mine as a mitigation alternative to reduce climate impacts. Relevant factors that must be analyzed include characteristics of the emissions such as quantities, constancy, gas composition, and costs of capture and use such as proximity to and availability of transmission.	Climate Change	Methods used at the mine to minimize CO ₂ e emissions are described in Section 2 and 4.2 of the EIS, and include use of emission control devices as suggested in the comment.
19	19.037	Shannon	Hughes	WildEarth Guardians	Email	It is unconscionable that OSMRE would neglect the toxic legacy of the San Juan Mine and SJGS complex and thus ignore significant public health implications of OSMRE's decision to approve further mining and additional disposal of CCR in unlined mining pits. The DEIS needs to be completely revised to accurately account for the cumulative and projected toxic legacy of the San Juan Mine and SJGS complex, taking responsibility to clean up the contamination at both San Juan Mine and SJGS.	Hazards and Hazardous Materials	Please see Master Response 3. Placement of CCR for use in reclamation is addressed in Section 4.5, Water Resources and potential effects of operations on public health is evaluated in Section 4.16; which includes description of the Health Risk Assessment that was conducted for the project. Reclamation activities at the San Juan Mine are described in Section 2, and are a condition of the MMD permit for the San Juan Mine.
19	19.038	Shannon	Hughes	WildEarth Guardians	Email	The DEIS must also address specifics as to how storage or disposal will protect water and air resources. For example, the DEIS must address the ongoing construction and operation of a slurry wall at the San Juan Mine, which is required as part of a settlement in litigation brought by conservation organizations under the Resource Conservation and Recovery Act. The environmental implications of the slurry wall, its purpose, location, and effectiveness have not been disclosed in the DEIS.	Hazards and Hazardous Materials	Impacts related to air and water resources are included in Section 4.1, Air Quality, and Section 4.5, Water Resources/Hydrology. The Technical Resource Document describes the conditions of the consent decree with PNM that is referenced in the comment. The slurry wall is located between the raw water pond and Shumway Arroyo, and has been designed to minimize the potential for leakage from the pond to enter the arroyo. The installation has been completed recently (in 2018), and no data are available regarding its effectiveness at this time.
19	19.039	Shannon	Hughes	WildEarth Guardians	Email	OSMRE failed to characterize the chemistry of the CCW dumping and the effects to groundwater and surface water.	Groundwater	Section 4.5 specifically analyzes the potential effects of placement of CCR in reclamation pits on groundwater and surface water. OSMRE describes the constituents in CCR in Section 3.15 of the Technical Resource Document, which was incorporated by reference into the EIS.
19	19.040	Shannon	Hughes	WildEarth Guardians	Email	The San Juan Mine contributes to water quality issues in the area. Just as with other issues in the EIS, OSMRE is responsible for taking a "hard look" at surface and groundwater water quality and quantity impacts. See Nat. Resources Def Council v. Hodel, 865 F.2d 288, 299 (D.C. Cir. 1988). Importantly here, OSMRE failed to look at these impacts within the context of the affected region. See 40 C.F.R. § 1508.27(a) ("significance of an action must be analyzed in several contexts such as ... the affected region"). The San Juan River is the source of approximately 24,200 acre-feet per year of water drawn used to cool SJGS. 34	Groundwater	Potential effects to Water Quality (Surface water and ground water), including cumulative effects are addressed in Section 4.5. See Master Response 3.
19	19.041	Shannon	Hughes	WildEarth Guardians	Email	The DEIS indicated water quality for the Upper and Lower Stevens were poor in quality but dismissed mining impacts as relevant because they were not a direct cause of the impairment. (DEIS at 54). This fails the "hard look" analysis that NEPA requires as it is not at all apparent how adding more pollution to an already impaired system will result in anything less than major impacts, especially given that the impacts to the watershed from the mining operation will likely continue for centuries or millennia.	Surface Water	As stated in Section 4.5 of the EIS, evaluation of the TDS concentrations in Upper and Lower Stevens arroyo were found to be likely due to evaporation and/or dissolution of evaporates. Mining activity does not result in the discharge of any water or other materials into the Stevens Arroyo; therefore, there would be no "adding more pollution" resulting from the Proposed Action or Alternatives.

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19	19.042	Shannon	Hughes	WildEarth Guardians	Email	The EIS should analyze how those water resources could be used in an environmentally responsible manner to improve conditions in San Juan River and/or economic development.	Surface Water	Under NEPA, a lead agency must evaluate and disclose the potential impacts of a Proposed Action and alternatives. It is outside the scope of a NEPA analysis to identify alternative uses for resources, which are being used according to legal rights and regulatory permits.
19	19.043	Shannon	Hughes	WildEarth Guardians	Email	Finally, New Mexico Mining and Minerals Division is still conducting a review of the hydrologic assessment done at the mine from 2010-2013. The DEIS should include a final review of this study when it is completed and until then, should wait to proceed until such information can be properly processed. (DEIS at 94). The DEIS must be corrected to accurately address the potential for significant water resources and hydrology impacts from any of the Alternatives being evaluated.	Surface Water	The Final EIS has been updated to include a summary of the MMD/USGS hydrologic assessment of the mine. Review of this information does not change any of the analyses or conclusions in the EIS.
19	19.044	Shannon	Hughes	WildEarth Guardians	Email	The DEIS indicated that habitat fragmentation could be mitigated during the reclamation stage by using "native seed mixes" that would "reduce the potential for permanent loss of habitat." (DEIS at 101). This solution seems inadequate.	Wildlife	As described in Section 4.7, a Reclamation Plan has been prepared as part of the San Juan Mine's New Mexico MMD Permit 14-01. Please see the Technical Resource Document, Section 3.7.4.1, which is incorporated by reference into the EIS, for additional information on Biodiversity, Habitat Loss and Fragmentation, and Ground Disturbance.
19	19.045	Shannon	Hughes	WildEarth Guardians	Email	Thus, regardless of how much is emitted at once, it becomes harmful, and so the level of analysis should not dismiss the amount of mercury it deems negligible, without analyzing its biocumulative effect.	Special Status Species	The Ecological Risk Assessment and evaluation in the EIS accounted for bioaccumulation. As described in Section 4.8 and 5 of the EIS, the USFWS has concurred with OSMRE's analysis of potential effects. For more information, see the Technical Resource Document, Section 3.8.4.1, Subsections Terrestrial Wildlife and Aquatic Wildlife, which is incorporated by reference into the EIS.
19	19.046	Shannon	Hughes	WildEarth Guardians	Email	The DEIS fails to recognize the majority of these impacts and fails to conduct any analysis of how they will affect socioeconomic conditions in the project area. The agency has refused to analyze, quantify, or monetize the negative impacts of the Proposed Action on climate change.	Socioeconomics	The EIS includes an analysis of the impacts of Climate Change in Section 4.2. Please see Master Response 2. Section 4.11 of the Draft EIS includes a discussion of the socioeconomic impacts in the project area.
19	19.047	Shannon	Hughes	WildEarth Guardians	Email	OSMRE is obligated to address the level of economic activity that could be created by energy efficiency, renewable energy development, decommissioning, reclamation and restoration, education and training, and tourism, adequately quantify the socioeconomic impacts of the proposed action, and compare those results using comparable data and modeling for the alternatives we have proposed. OSMRE must also conduct qualitative analysis to capture important but hard to quantify socioeconomic factors such as a cleaner environment, reduced health risk, and access to energy resources. OSMRE must also identify and utilize new sources of data available on the potential economic impacts of solar development and outdoor recreation.	Socioeconomics	The scope of the socioeconomic analysis is focused on the impacts of continuing the mining operation or the shutdown of the mine and Generating Station. There are no pending plans or submitted applications that propose to use the San Juan Mine Lease Area for any other use, including solar energy or recreation, etc. There are oil and gas wells present on the surface of the San Juan Mine, but no proposals for additional wells have been submitted. For a project to be considered for analysis or taken into account, there must be an application or formal record that indicates the project is reasonably foreseeable. It would be beyond the scope of the EIS to develop hypothetical scenarios for analysis or as an alternative. Further, other sections of the EIS consider the environmental and human health impacts of the mine and Generating Station shutting down.

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19	19.048	Shannon	Hughes	WildEarth Guardians	Email	Socioeconomic analysis of the No Action Alternative, which would lead to mine shutdown, is inadequate. Much of the focus went to the "major permanent impact" in job loss and monetary loss in economic activity. (DEIS at ES-25, "[t]he No Action Alternative would ultimately result in the loss of 897 jobs and of \$356 million in annual economic activity for the Four Corners Region."). Socioeconomic analysis of the No Action Alternative, which would lead to mine shut-down, is equally inadequate. It consists of a statement that the jobs, income, and fiscal conditions established in the baseline would simply disappear.	Socioeconomics	As with the analysis of the other alternatives, the economic impacts were derived using an economic model called IMPLAN. IMPLAN is widely recognized as the industry-standard model for estimating economic impacts in NEPA documents. Through the use of a statistical algorithm, IMPLAN produces estimates, or outputs, on factors like jobs, economic activity (monetized), and fiscal impacts. The analysis in Section 4.11 of the EIS presents and discusses the model's results. Further, the socioeconomic analysis for the No Action Alternative considers the impact of a dual shutdown of the Mine and Generating Station, and modeling was performed on this scenario. The results provided in Section 4.11 are original and do not represent a simple dismissal of baseline conditions.
19	19.049	Shannon	Hughes	WildEarth Guardians	Email	Conservation Groups' scoping comments requested that the analysis of the No Action Alternative include other economic opportunities within the community (tourism, outdoor recreation, solar, etc.). (Scoping Comments at 43). These were not considered because they were "too speculative." However, as indicated earlier, OSMRE is required to consider possible industries in the region in order to properly assess any alternatives presented.	Socioeconomics	There are no pending plans or submitted applications that propose to use the San Juan Mine Lease Area for any other use, including solar energy or recreation. There are oil and gas wells present on the surface of the San Juan Mine, but no proposals for additional wells have been submitted. For a project to be considered for analysis or taken into account, there must be an application or formal record that indicates the project is reasonably foreseeable. It would be beyond the scope of the EIS to develop hypothetical scenarios for analysis or as an alternative. It is worth mentioning that an economic assessment and strategy for northwest New Mexico was performed in 2016 by the Northwest New Mexico Council of Governments, including an energy assessment.
19	19.050	Shannon	Hughes	WildEarth Guardians	Email	With the potential departure of PNM now from SJGS, it is critical that the Department of Interior, as oversight agency for OSMRE, consider the implications of the closure of SJGS and look at the historic grounds for aiding the Farmington region in transitional economic opportunities and including coal worker job retraining and economic diversification.	Socioeconomics	The scenario where both the Mine and Generating Station close is captured by the No Action Alternative, specifically Section 4.11.4 that discusses the economic implications of both facilities shutting down. This section acknowledges the potential demographic impact of a displaced workforce where past mine or Generating Station employees may be forced to leave the region to find employment elsewhere. OSMRE considers these impacts in the decision-making process.

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19	19.051	Shannon	Hughes	WildEarth Guardians	Email	OSMRE must recognize the inevitable closure of San Juan especially in light of SJGS closure. The closure of this and other mines is a reality that the coal industry must grapple with. In considering alternative economic activity, OSMRE was required to consider the many resources that are available to support economic diversification and transition in the region.	Socioeconomics	Pursuant to NEPA, the EIS analyzes the proposed action submitted by SJCC, the shutdown of the Mine (No Action), and in light of PNM's Integrated Resource Management Plan, the potential scenario of the Generating Station shutting down in 2022 but the Mine finds an alternative buyer for the coal. OSMRE is not required to develop scenarios for economic diversification for the Four Corners region. It would be beyond the scope of the EIS to develop hypothetical scenarios for analysis or as an alternative. This issue is being actively addressed by local government, including an economic assessment and strategy for northwest New Mexico that was performed in 2016 by the Northwest New Mexico Council of Governments, including an economic assets assessment.
19	19.052	Shannon	Hughes	WildEarth Guardians	Email	OSMRE was obligated to address the level of economic activity that could be created by energy efficiency, renewable energy development, decommissioning, reclamation and restoration, education and training, and tourism. They were required to adequately quantify the socioeconomic impacts of the Proposed Action, and compare those results using comparable data and modeling for the alternatives we have proposed. It was also necessary for OSM to conduct qualitative analysis to capture important, but hard to quantify, socioeconomic factors such as a cleaner environment, reduced health risk, and access to energy resources.	Socioeconomics	The scope of the socioeconomic analysis is focused on the impacts of continuing the mining operation or the shutdown of the mine and Generating Station. There are no pending plans or submitted applications that propose to use the San Juan Mine Lease Area for any other use, including solar energy or recreation, etc. There are oil and gas wells present on the surface of the San Juan Mine, but no proposals for additional wells have been submitted. For a project to be considered for analysis or taken into account, there must be an application or formal record that indicates the project is reasonably foreseeable. It would be beyond the scope of the EIS to develop hypothetical scenarios for analysis or as an alternative. Further, other sections of the EIS consider the environmental and human health impacts of the mine and Generating Station shutting down.
19	19.053	Shannon	Hughes	WildEarth Guardians	Email	OSMRE must consider the impacts of the Proposed Actions on these important drivers of the regional economy. The federal government offers transition and economic development assistance through many programs run by different agencies.	Socioeconomics	Federal programs are available to assist coal-bearing regions, such as northwest New Mexico, with economic transition and displaced work forces. The region is already tapping into these programs and the Northwest New Mexico Council of Governments prepared an Economic Assessment and Strategy for the region through the federal SMART program ran by the U.S. Economic Development Administration. OSMRE recognizes the extent these facilities play in the regional economy, as captured in Section 4.11.
19	19.054	Shannon	Hughes	WildEarth Guardians	Email	Currently, Westmoreland does not seem to have set aside any funds to help their workers transition when San Juan inevitably shuts down. The DEIS has also not indicated that it has set aside funds for transition.	Socioeconomics	SJCC's financial plans and arrangements are considered proprietary and not subject to review under NEPA. The economic impact of the mine shutting down is captured under Section 4.11 of the EIS. Alternative D of the EIS analyzes the Just Transition Alternative, which considers this comment.
19	19.055	Shannon	Hughes	WildEarth Guardians	Email	OSMRE failed to analyze and assess public health impacts as it relates to continued coal mining operations at San Juan and coal combustion at SJGS.	Public Health	Public health impacts were analyzed in Section 4.16 of the EIS for both mining and the burning of the coal at the Generating Station. Please see Master Response 3.

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19	19.056	Shannon	Hughes	WildEarth Guardians	Email	These impacts were required to be identified, evaluated, and quantified in the EIS. The DEIS acknowledges that health in the area surrounding the mine is poor, and collected data on adverse health effects in the surrounding counties. DEIS at 184. However, the DEIS also considers the impacts of air pollution "negligible." DEIS at 682 ("[T]he power plants' contribution to the area's environmental health is long-term, minor to moderate, and adverse, to which the Proposed Action would contribute negligibly.").	Public Health	This comment appears to refer to the Rosebud Mine EIS, not the subject document. The quoted statements are not present in the Draft EIS which was made available for public review. No public health impacts were characterized as "negligible," see Section 3.16 of the Technical Resource Document and Section 4.16 of the EIS. Impacts were identified as minor due to the small amount of emissions and because health-based air quality standards were met.
19	19.057	Shannon	Hughes	WildEarth Guardians	Email	The DEIS also acknowledges that the major concern in the area is inhalation of PM, but does not evaluate or disclose how the proposed mine plan modification affects PM emissions or contributes to the public health impacts of PM inhalation. DEIS at 183.	Public Health	This comment appears to refer to the Rosebud Mine EIS, not the subject document. The cited page number is not present in the Draft EIS, which was made available for public review. Section 3.1 of the Technical Resource Document, which is incorporated by reference into the EIS, provides a detailed analysis of PM emissions from the facility. The public health impacts of the PM emissions were evaluated in Section 4.16 of the EIS. See Master Response 3.
19	19.058	Shannon	Hughes	WildEarth Guardians	Email	The DEIS did not sufficiently analyze the public health impacts from continuing to operate the San Juan Complex, including providing information regarding available medical care and services in the context of a region suffering numerous health impacts from energy development.	Public Health	A discussion of the available medical care and services in the area is presented in Section 3.16.2.3 of the Technical Resource Document, which is incorporated by reference into the EIS. A discussion of potential cumulative health effects due to oil and gas development is included in Section 3.16 in the EIS. See Master Response 3.
19	19.059	Shannon	Hughes	WildEarth Guardians	Email	OSMRE incorrectly focused its analysis on the false reality that if jobs from the mining operations are no longer available, the community's health will suffer, "[t]he key environmental justice community in the region would realize an economic and social impact from the Proposed Action in the form of high-paying positions, and the indirect/induced economic and fiscal impacts that San Juan Mine provides the region through 2033." (DEIS at E-23). The complete lack of analysis surrounding the public health impacts that the neighboring community faces only helps to bolster Westmoreland's request for additional coal and falls short of the analysis necessary to fulfill NEPA's requirements.	Environmental Justice	Socioeconomic impacts represent a key off-site impacts, for both the Proposed Action and No Action Alternative. The Environmental Justice analysis considered all the potential effects from the other resource analyses in the EIS, and did not solely focus on socioeconomics. As discussed in Section 3.12.6.3 of the Technical Resource Document, which is incorporated by reference into the EIS, the Environmental Justice analysis focused on the off-site impacts of the Alternatives, because no residents or potential Environmental Justice communities are present on the surface of the mine. As stated in Section 3.12.6 of the TRD, "Where other resource sections have identified adverse impacts in comparison to the baseline condition, this section describes the potential associated social, economic, or health impacts and determines whether major impacts would disproportionately affect Native Americans." Additionally, Section 4.12 of the EIS includes specific analysis of public health and air quality.

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19	19.060	Shannon	Hughes	WildEarth Guardians	Email	OSMRE must revise the EIS to explain how it will ensure that low income communities and tribal communities are protected from the disproportionate health and environmental impacts of the San Juan Mine and SJGS. It may not simply dismiss very obvious impacts as not disproportionate using air quality gerrymandering.	Environmental Justice	As discussed in Section 3.12.6.3, the Environmental Justice analysis concluded that Environmental Justice communities in the region of influence would experience long-term and minor human health effects. This conclusion was based on the results of the air quality modeling and human health risk assessment that concluded that emissions from the mine and Generating Station were below NAAQS standards, which are set by the EPA to protect human health. NEPA does not require a lead agency to issue mitigation on those effects that are determined to be less than significant.
19	19.061	Shannon	Hughes	WildEarth Guardians	Email	The DEIS indicated that under the No Action Alternative, the effect of closing down the San Juan Mine would have major adverse impacts for all residents in the region, and not disproportionately on the environmental justice communities in the region. (DEIS at 125). That the analysis was produced on boundaries based on county lines (and seemingly included some regions far away that happened to be more socio-economically prosperous) shows that the region studied was based on arbitrary reasons, at best, or in an effort to balance out the disproportionate effect of those communities that live near the mine.	Environmental Justice	The region of influence for the analysis, comprised of counties in NM, UT, CO, and AZ, was developed on the basis of capturing the counties where employees for the mine and Generating Station reside. These impacts were determined to be major for the entire region; therefore, there would not be a disproportionate impact to environmental justice communities alone. All communities would be adversely affected.
19	19.062	Shannon	Hughes	WildEarth Guardians	Email	The DEIS also indicated that the closure of the generating station would also reduce dust and mercury which would also impact public health but does not say how. (DEIS at 125). This falls short of the full analysis that NEPA requires.	Environmental Justice	See Master Response 3. Section 4.12.4 of the EIS specifically discusses how the shutdown of the Generating Station may impact Environmental Justice communities in the region of influence, as stated, "Removing a large source of criteria air pollutants from the region would improve the air quality and human health impact to the environmental justice community (i.e., Kirtland residents) present within the deposition zone. " The effects of dust are addressed in the EIS Air Quality section, and the effects of mercury on public health under the three alternatives is addressed in the EIS Public Health section.
19	19.063	Shannon	Hughes	WildEarth Guardians	Email	As noted in Conservation Groups' scoping comments, the Desert Rock Energy Project EIS concluded: "[t]he local population [in the Four Corners region] is disproportionately impacted by the cumulative land use and visual effects" of the existing coal-fired power plants, as well as other energy mining projects in the region. OSMRE therefore has a duty to ensure that the analysis in this EIS addresses the "disproportionate impacts" caused by these facilities, and the cumulative impacts of energy development in the region. (Conservation Groups' scoping Comments at 9).	Environmental Justice	See Master Response 3. Each NEPA document/analysis is unique to the project that is proposed. While similar, the Desert Rock project is different than the Proposed Action for this EIS (i.e., new power plant vs. existing operations). The Environmental Justice analysis performed for this EIS thoroughly examined all impacts to low-income and minority communities, based on the concept that there cannot be an impact to an Environmental Justice community if no direct impact was identified in each resource analyses in the EIS.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
19	19.064	Shannon	Hughes	WildEarth Guardians	Email	OSMRE focused on a possible disparate impact on things like train noise, and not the analysis of only greenhouse gas emissions from trains, which merely demonstrates the inadequacy of the agencies' analysis. OSMRE should have analyzed more significant impacts such as air pollution and coal dust; impacts to public health in vulnerable communities; and the economic costs that increased coal traffic will force onto local communities.	Environmental Justice	The comment notes that OSMRE focuses too much on things like train noise and not GHGs from trains and states that OSMRE should have focused more on air impacts from increased coal traffic. However, neither the Proposed Action nor the No Action Alternative involves train transportation. Under the proposed action, coal is transported to the SJGS via conveyor; these impacts are discussed in Section 4. Under the No Action alternative, no coal is transported. Under Alternative B, coal is transported potentially by rail; however, because that is speculative and would need to be analyzed in a future NEPA document, we did not discuss it in detail. See Master Response 4.
19	19.065	Shannon	Hughes	WildEarth Guardians	Email	The NEPA review for the proposed San Juan Mine deep lease mine plan modification provides a critical opportunity for OSMRE to help the Four Corners region transition from coal to more sustainable and prosperous economies, as well as to clean and more reliable and affordable energy sources. Given the massive impacts to air, water, climate, and public health caused by the proposed modification, OSMRE should reject the proposed modification in favor of the No Action alternative.	General Against Project	Comment noted.
20	20.001	Jeremy	Nichols	WildEarth Guardians	Email	For one, we have learned the meetings will not provide a forum for the public to provide comments directly to officials involved in the development of the DEIS. In discussions with OSMRE staff, we have learned that should the public desire to provide comment in person at this week's meetings, they will be required to share their comments one-on-one with a hired stenographer. This is not an opportunity for public comment. Rather this appears to be an attempt to avoid interacting and conversing with, and more importantly hearing, the concerns of Americans. We are gravely concerned that by requiring people to testify to hired third-party stenographers, Interior and OSMRE are subverting the point of a public meeting, which is to provide a forum for discourse and interaction between Americans and their federal government.	Process	See Response 19.3.
20	20.002	Jeremy	Nichols	WildEarth Guardians	Email	Second, we have also learned that no officials who have decisionmaking authority, or who are authorized to act on behalf of an authorized official, will be in attendance at any of the upcoming public meetings regarding the San Juan coal mine DEIS. Specifically, no Interior Department officials will be in attendance and no OSMRE officials with delegated authority to make recommendations to the Interior Department will be in attendance. This raises serious concerns that the upcoming meetings are not actually forums that will allow the public to be heard by federal decisionmakers or officials authorized to act on behalf of such decisionmakers.	Process	See Response 19.3. OSMRE Western Region staff directly responsible for preparation of the NEPA document were present at the public meetings. OSMRE Western Region staffed included the Field Operations Branch Manager and the Program Support Division Manager.
20	20.003	Jeremy	Nichols	WildEarth Guardians	Email	1. We request that OSMRE and Interior provide a meaningful opportunity for public comment to be heard at public meetings, including an opportunity for the public to comment directly to OSMRE and/or Interior officials, and for this comment to be documented for the record; and	Process	See Response 19.3.

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20	20.004	Jeremy	Nichols	WildEarth Guardians	Email	2. We request that Interior Department officials with authority to make decisions related to the San Juan coal mine, or officials authorized to act on behalf of these officials, attend the public meetings. Without participation from any responsible officials, we are concerned that any public meetings will not provide a meaningful forum for Americans to converse with and be heard by actual decisionmakers.	Process	See Response 19.3.
21	21.001	Jeffrey	Clayton	private	Form letter	I am very concerned how our history of mining and inadequate reclamation has on the quality of water, air and health of our citizens, wildlife and the environment. Any company that is taking our natural resources for profit should also be held accountable for returning the land and water to it's previous state. It should be included in their business plan.	Project Description	Comment noted. Reclamation of mining activities is included in the mining permit that is provided by New Mexico MMD. Additional details regarding reclamation activities have been added to Section 2 of the EIS.
22	22.001	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	References to the Generating Station that implicate the ownership and operational status of the Generating Station should clarify that PNM is one of several co-owners and operates the Generating Station on behalf of the co-owners.	Technical Edit	This information is stated in Section 1.3.2 and Table 1.3-2 of the EIS.
22	22.002	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	As discussed in Section 1 of the DEIS, there is no federal action to be considered at the Generating Station, and the specific timing of and requirements for the potential shutdown and disposition of the Generating Station assets are beyond the jurisdiction of OSMRE and ASLM and the scope of the NEPA analysis. In specifying operational timelines for the Generating Station under each of the three alternatives for the purpose of the NEPA analysis of the indirect effects of coal combustion at the Generating Station, the DEIS and TRD should clarify that those operational timelines are estimated for that purpose. In addition, those estimated timelines should be consistent throughout the body of the DEIS and TRD.	Alternatives	Comment noted. The description of Generating Station timelines in the alternatives present the information as scenarios based on published information.
22	22.003	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	The description of Alternative B should avoid the unintended implication that Alternative B would be conditioned on termination of the supply of DLE coal to the Generating Station in 2022. Instead, the description should be clarified to indicate that under Alternative B, DLE coal would be provided to the Generating Station in a supply sufficient for the Generating Station to operate until the closure of coal-fired Units 1 and 4, estimated for purposes of the NEPA analysis of Alternative B to occur in 2022, and, the remaining reserves of DLE coal would then be sold on the open market.	Alternatives	Please see Master Response 4.
22	22.004	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	The Proposed Action is continued mining of coal in the San Juan Mine DLE, and the NEPA analysis of the Generating Station evaluates the potential indirect effects of combustion of the DLE coal. Accordingly, references in the DEIS and TRD regarding potential effects associated with the Generating Station should center on the potential indirect effects of coal combustion (for example, potential disposition of Generating Station assets if and when Units 1 and 4 are shut down is beyond the scope of the NEPA analysis).	Project Description	Comment noted. The EIS does analyze the indirect effects of coal combustion at San Juan Generating Station.

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22	22.005	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	The use of short-term and long-term impacts is defined in the DEIS in Section 4, page 67 and in Section 2.2 on page 2-3 in the TRD. Short-term is defined as construction activities while long-term is defined as the length of the project and reclamation. Many of the impact analyses do not follow this definition and use shortterm as the length of the mining and reclamation. The use of short-term versus long-term for resource impacts should be reviewed for consistency with the definitions provided.	Technical Edit	The EIS and TRD text have been revised where necessary to reflect the short- and long-term definitions. These changes do not affect any of the conclusion presented in the Draft EIS.
22	22.006	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	There are discrepancies in when the Generating Station would actually close under Alternative C. The Alternative C text discussion states an assumption of August 2020 but several of the impact discussions for Alternative C state February 2020 or early 2020. A consistent date for closure of the Generating Station should be used in the discussion. We would recommend using "in 2020" to avoid a more definitive date which is not known at this time.	Alternatives	The EIS has been revised as noted in the comment.
22	22.007	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	<p>Various locations throughout the documents mention "not-to-exceed" risk thresholds.</p> <p>For all instances, the term "not-to-exceed" should be either removed or updated to terminology similar to the terminology used in the EPA guidance document (i.e. "presumptive benchmarks").</p> <p>The EPA guidance document describing the thresholds³ does not use terminology indicative of "not-to-exceed" values, but instead refers to them as "presumptive benchmarks" for risks that would be deemed "acceptable". They are further described as goals for protecting public health with an ample margin of safety.</p> <p>Locations where the "not to exceed" terminology is used include:</p> <p>DEIS</p> <p>Page ES-25</p> <p>Page 124, Section 4.12.2.6, 2nd Paragraph (2 places)</p> <p>Page 135, Section 4.16.2.2, bottom of page</p> <p>Page 138, Section 4.16.2.2 last paragraph on page (2 places)</p> <p>Page 139, Section 4.16.2.2, 1st full paragraph, 2nd full paragraph, 3rd full paragraph</p> <p>Page 140, Table 4.16-2</p> <p>Page 141, Section 4.16.5, end of 1st paragraph</p> <p>Page 142, Section 4.16.5, 1st paragraph TRD</p> <p>Page 3.12-17, Section 3.12.6.3, 2nd full paragraph (2 places)</p> <p>Page 3.16-27, Section 3.16.4.1, 1st paragraph</p> <p>Page 3.16-32, Section 3.16.4.1, 1st paragraph (2 places), 2nd paragraph, 4th paragraph</p> <p>Page 3.16-33, Table 3.16-7</p> <p>Page 3.16-34, Section 3.16.4.1, 1st paragraph</p> <p>Page 4-50, Section 4.2.16, 1st paragraph, 3rd paragraph</p> <p>Page 4-51, Section 4.2.16, 2nd paragraph</p>	Public Health	Comment noted. The "not-to-exceed" term was used as more easily understandable to the public than "presumptive benchmarks" and also because it conveys how the target health goals are used in a regulatory framework. If target health goals are exceeded, steps are typically taken to reduce chemical concentrations, and are effectively a not-to-exceed level. The requested change would not affect or change the conclusions in the EIS. No changes have been made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
22	22.008	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	The wildlife resources and special status species impact discussions of the DEIS (Sections 4.7 and 4.8) and the TRD (Sections 3.7 and 3.8) discuss potential impacts from entrainment. Entrainment has already been analyzed by the USFWS in previous Biological Assessments (BAs). The recent BA for the DLE states that consultation has already occurred on impingement and entrainment and that those items will be discussed as part of the baseline conditions. In accordance with the discussions in the BA, discussions of entrainment in the DEIS and TRD should be moved to the Affected Environment discussion and not included as part of the impact discussions.	Wildlife	The EIS fully discloses the prior Biological Opinion regarding water intake and potential for entrainment. As part of analyzing the continued operation of the San Juan Mine, the EIS analyzes the potential effects of water use at the mine, which includes the water intake on the San Juan River. No change to the EIS has been made. Separately, OSMRE consulted with USFWS under Section 7 of the ESA for the proposed action. Since consultation had already occurred for the water intake, USFWS did not require reconsultation for that aspect of the project. Consequently, the prior consultation was included as part of the Affected Environment (regulatory environment) in the Biological Assessment submitted to USFWS.
22	22.009	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Throughout the document, "RSIP" should be used to refer to the regional haze SIP instead of merely "SIP" or "New Mexico SIP," as those terms are more appropriately used to describe the collection of all air quality requirements that New Mexico has submitted to EPA for approval as its "SIP." The abbreviation "RSIP" should also be added to the abbreviations lists for both documents and defined as "Revised New Mexico Regional Haze State Implementation Plan"	Air Quality	Comment noted. The term New Mexico SIP in the current drafts is intended to refer to the state regional haze SIP, which included the term sheet that required the shut down of SJGS Units 2 and 3. No change has been made.
22	22.010	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Various sections of the DEIS and TRD (Section 4.8 of DEIS and Section 4.6, 4.7 and 4.8 of the TRD) indicate that the deposition area and San Juan buffer zone represent the Generating Station region of influence for the ERA. Suggest defining this as the "Generating Station ROI" in this paragraph and using this terminology consistently, as appropriate. The terminology is consistent with the rest of the resource areas and would avoid confusion with the use of the "ERA Study Area" terminology.	Air Quality	Comment noted. No change made
22	22.011	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Discussions of impacts from Generating Station decommissioning and demolition activities should be deleted from the DEIS and the TRD in order to avoid any implication that those activities are within the scope of the NEPA analysis. Locations where this is discussed include Section 4.15.4 of the DEIS and Sections 3.14.4.5 and 3.15.4.3 of the TRD. In addition the discussion in Section 2.1 of the TRD regarding a programmatic evaluation of decommissioning and demolition of the Generating Station should be removed	Alternatives	OSMRE determined that a programmatic consideration of the effects of decommissioning and demolition would be useful for considering the environmental consequences of the No Action alternative. That is, it is reasonably foreseeable that the No Action alternative would lead to decommissioning and demolition. No changes to the EIS have been made.
22	22.012	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.6.3 & 4.6.4; page 99 - A discussion of impacts (or lack of impacts) related to indirect effects of coal combustion with operations shutdown earlier than modeled in the ERA should be added to Alternative B and C, where the ERA is discussed. This discussion should mention uncertainties associated with assuming the ERA findings apply at another coal combustion facility in Alternative B or that the ERA results can be used to infer potential impacts from shorter durations. This discussion text should be included in Table ES-4 and in Sections 4.6.3 & 4.6.4, 4.7.3 & 4.7.4, and 4.8.3 & 4.8.4 of the DEIS and in Sections 4.6.4.2 & 3.6.4.3, 3.7.4.2 & 3.7.4.3, and 3.8.4.2 & 3.8.4.3.	Wildlife	Alternative C (No Action) discusses the cessation of impacts after shutdown and associated activities. Alternative B uses the same impact profile as that for pre-2022 to provide a bounding level analysis of post-2022 impacts. Therefore, no change was made.

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22	22.013	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	The purpose of the NEPA analysis is to evaluate mining in the DLE. The DEIS and TRD do not consistently state that the evaluation is for mining of the DLE and in some cases refer to mining at the San Juan Mine. A global change should be made to consistently refer to the mining being evaluated as mining in the DLE.	Purpose and Need	Comment noted. The EIS has been updated to consistently refer to the DLE.
22	22.014	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	The abbreviation ROI is used in the discussion of affected environment and environmental consequences of the DEIS but ROI abbreviation is not defined and what makes up the region of influence for each resource is not consistently discussed. Adding a sentence or two for each resource that defines the area that makes up the ROI would be helpful to the reader in understanding the impacts.	Technical Edit	ROI has been added to the acronyms and abbreviations list. Please see Response 53.3.
22	22.015	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	The purpose of the Proposed Action is continued mining in the DLE, not the evaluation of the proposed Mining Plan Modification. This discussion of the Purpose and Need appears on page ES-6 and in Section 1.4 on page 7 and Section 2 on page 11.	Purpose and Need	OSMRE's purpose for preparing the EIS is evaluation of the proposed Mining Plan Modification. The statement of purpose and need includes both the agency and the applicant's purpose and need. The P&N is the agency's purpose and need, but in this case, the proponent is the trigger for the action so its P&N is a relevant consideration. No change has been made.
22	22.016	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section Table ES-3; page ES-8 - Table ES-3 identifies the "Continue to Mine at 6 Million TPY Rate (F)" alternative as technically feasible, while Table 2.2.1 indicates that the "Continue to Mine at 6 Million TPY Rate (F) is not technically feasible. These tables should be consistent and Table ES-3 should be corrected to recognize that Alternative (F) is not technically feasible.	Executive Summary	Tables ES-3 and 2.2.1 of the Draft EIS indicated Alternative F is not technically feasible.
22	22.017	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section Alternative B; page ES-10 - Alternative B should be amended to recognize that there are other owners of the San Juan Generating Station which would be involved in any decision to close the Generating Station.	Executive Summary	Section 1 of the states that PNM operates the Generating Station on behalf of other owners. No edit necessary.
22	22.018	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Page ES-10 - PNM's share of MW's as discussed relative to the IRP is 497 MW on pages ES-10 and 32 which does not match Table ES-2 on page ES-5 and Table 1.3-2 on page 6. This is due to changes since the IRP was completed and should be addressed by a footnote on pages ES-11 and 32 where the IRP is discussed to avoid confusion. Suggested footnote: "At the time the IRP was prepared, PNM's ownership of SJGS through 2022 was expected to be 497 MW after the shutdown of Units 2 and 3. PNM acquired an additional 65 MW on December 31, 2017."	Executive Summary	Requested footnote added to Section 1.
22	22.019	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section Alternative B; page ES-11 - The description of the ASLM approval under Alternative B should be revised to state" <u>Under Alternative B</u> In this alternative, the OSMRE would recommend to the ASLM that <u>a Mining Plan Modification for the DLE be approved authorizing the San Mine to supply DLE coal to the Generating Station as needed to maintain operation of Units 1 and 4 in accordance with any schedule for unit closure approved by the New Mexico Public Regulation Commission as part of the integrated resource planning process, and thereafter to sell remaining DLE reserves on the open market <u>but with the condition that coal would only be supplied to the Generating Station until 2022 and the remaining reserves from 2023 through 2033 would go to the open market.</u></u>	Executive Summary	Comment noted. No change to the EIS made. The text is correct as written.

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22	22.020	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	<p>Section Table ES-4; Air Quality, Alternative A; page ES-15 - "...this finding includes the 1-hour SO2 standard that was not met before 2017."</p> <p>This statement is incorrect and does not provide the reader with the full context for the statement. Modeling done using previous version of AERMOD has shown full compliance with the 1-hour SO2 standard and that needs to be recognized. In addition, the most recent version of AERMOD was used in the AECOM 2017 modeling and showed that the 1-hour SO2 standard was not met, however when the model was reviewed, the San Juan Met Station near a large number of the receptors evaluated did not have sustained wind conditions or wind velocity to allow SO2 to reach these receptors. This indicates the model is overestimating the SO2 concentrations at these receptors. If the receptors that appear to be overestimating the SO2 concentrations are removed from the analysis, then the remaining receptors do meet the 1-hour SO2 standard. In other words, the latest version of AERMOD is introducing artificial wind conditions to carry the SO2 emissions which actual on-site wind condition data do not support. This should be recognized in the text.</p>	Executive Summary	Comment noted. The full analysis of air quality impacts is provided in Section 4.1. The Executive Summary has been revised for the Final EIS.
22	22.021	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	<p>Section Table ES-4; page ES-15 through ES-25 - Table ES-4 is confusing as it does not always draw a distinction between the direct effects related to the San Juan Mine and the indirect effects from the coal combustion so it is difficult for a reader to draw that distinction. The table is not comprehensive and inconsistently discusses deposition-related impacts in some areas but not others. The table should be updated to be a comprehensive summary which clearly states expected direct and indirect impacts</p> <p>For example:</p> <ul style="list-style-type: none"> -The first paragraph under Air Quality for the proposed action applies to the mine but the following paragraph applies to both the mine and the generating station and the last paragraph does not apply to either because visibility was not modeled specifically for this EIS and the results are from the Four Corners EIS modeling. The discussion under the No Action Alternative appears to apply to both as well. -The last sentence of the third paragraph for the Proposed Action under the discussion of Water Resources/Hydrology appears to apply to the Generating Station but that is not entirely clear. -Under wildlife, there is a discussion of little brown bats which appears to relate to deposition of emissions from the Generating Station but that is not clearly stated. 	Executive Summary	Comment noted. The Executive Summary has been revised for the Final EIS.

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22	22.022	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section Table ES-4, Recreation, Alternative A; page ES-22 - The Proposed Action discussion indicates that due to effects to visibility there would be long-term moderate impacts to recreation but the air quality section of Table ES-4 on page ES-15 states the following: "The modeled visibility impairment levels even on the highest visibility impact days are well below the accepted significance level of 5 percent, which indicates that implementation of the New Mexico SIP will improve regional air quality. Consequently, the future impacts on regional haze and visibility in Class I areas would be longterm, but minor." The air quality finding on visibility appears to be inconsistent with the finding of a moderate impact to recreation.	Executive Summary	The EIS describes that impacts to Class I areas would be minor; however, for regional recreational areas and visual resources, the EIS concludes that potential effects would be moderate. As described in Section 4, a moderate impact is defined as one that would result in an adverse change to the environment outside the range of natural fluctuation but would not exceed regulatory requirements. No change made.
22	22.023	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section Table ES-4, Recreation, Alternative B; page ES-22 - The discussion fails to recognize the closure of the Generating Station and changes to scenic quality or visibility and associated recreational impacts as a result and should be amended to provide additional information on indirect effects.	Executive Summary	See Response 22.22.
22	22.024	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section Table ES-4, Visual Resources, Alternative A; page ES-24 - "Coal mined within the DLE would be burned by the Generating Station, which would result in indirect adverse effects to visibility and regional haze." Suggest that this discussion include the degree of indirect adverse effects. Based on the discussion of visibility and regional haze in the air quality section, it would appear that these adverse impacts are minor. □	Executive Summary	See Response 22.22.
22	22.025	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section Table ES-4, Visual Resources, Alternative C; page ES-24 - The discussion under Air Quality for the Proposed Action indicates that the Generating Station is currently having a minor, long-term effect on visibility and regional haze. The discussion under Alternative C for visual resources indicates a moderate, long-term impact as a result of closure of the Generating Station. Since air quality impacts are considered minor it is inconsistent to indicate a moderate impact from closure of the Generating Station. In addition, the impact should be qualified as a beneficial impact to avoid confusion.	Visual Resources	See Response 22.22.
22	22.026	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section Figure 2.1-6; page 21 - The figure shows schematic locations for the SJGS river-to-lake and SJGS lake-to SJCC water lines. Actual routes should be shown to avoid the appearance that the river water line crossed active surface mine areas. Note that there are two lines to SJCC. The older line served surface mining and the newer was built for underground mine purposes	Project Description	Comment noted. Figure has been updated.

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22	22.027	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.1.2.3; page 26 - Suggested text below should be added as the last sentence of the 1st paragraph: “The furnace bottom ash is collected and removed by means of a jet pump system and delivered via sluice water pipelines to dewatering bins. In the bins, the sluice water is decanted and the bottom ash is loaded on to San Juan Mine trucks for use in reclamation of the surface mine pits at the San Juan Mine. A drag chain system to manage bottom ash was installed in 2018 for Units 1 and 4. Bottom ash will be dewatered in the drag chain system eliminating the need for the jet pump system, sluice water pipelines, and dewatering bins. The bottom ash will continue to be transported to the San Juan Mine.” □	Project Description	Comment noted. Text has been updated accordingly.
22	22.028	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.2.2; page 32 - PNM’s share of MW’s as discussed relative to the IRP is 497 MW on pages ES-10 and 32 which does not match Table ES-2 on page ES-5 and Table 1.3-2 on page 6. This is due to changes since the IRP was completed and should be addressed by a footnote on pages ES-11 and 32 where the IRP is discussed to avoid confusion. Suggested footnote: “At the time the IRP was prepared, PNM’s ownership of SJGS through 2022 was expected to be 497 MW after the shutdown of Units 2 and 3. PNM acquired an additional 65 MW on December 31, 2017.”	Project Description	The EIS has been revised as noted in the comment.
22	22.029	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.2.2; page 32 - The description of the ASLM approval under Alternative B should be revised to state” Under Alternative B <u>In this alternative</u> , the OSMRE would recommend to the ASLM that <u>a Mining Plan Modification for the DLE be approved authorizing the San Mine to supply DLE coal to the Generating Station as needed to maintain operation of Units 1 and 4 in accordance with any schedule for unit closure approved by the New Mexico Public Regulation Commission as part of the integrated resource planning process, and thereafter to sell remaining DLE reserves on the open market</u> but with the condition that coal would only be supplied to the Generating Station until 2022 and the remaining reserves from 2023 through 2033 would go to the open market.	Project Description	Comment noted. Text is correct as written. No change made.
22	22.030	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.2.4; page 35 - As discussed in Section 1, there is no action to be considered at the Generating Station, and <u>specific timing and requirements for shutdown and potential disposition of the Generating Station are; therefore, identification of a specific date for shut-down of the Generating Station and reclamation of the Generating Station site is beyond the authority of the OSMRE and ASLM and the scope of this NEPA analysis; therefore, any dates identified for shutdown of the Generating Station are estimated for purposes of this NEPA analysis.</u>	Project Description	Comment noted. The EIS states that these items are beyond the scope of NEPA. The lead agency is required to analyze the consequences of the totality of the action, including those items beyond its direct jurisdiction.
22	22.031	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2, 2nd paragraph; page 49 - Please review the first several sentences to confirm numbers are correct as they do not appear to add up to the 3.5% increase discussed in the first sentence (i.e. 15% increase and then a 10% decrease leaves a 5% increase)	Climate Change	The text does make the point that GHG peaked after 1990, in 2007. So, it is correct that emissions have reduced 10 percent, compared to 2007, and by 15 percent compared to 1990. No change necessary.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
22	22.032	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2; page 49 - The term carbon dioxide equivalent (CO ₂ e) is introduced here but it not explained. An explanation of exactly what CO ₂ e is and how it is derived should be added to the discussion to assist the reader.	Climate Change	A brief definition of CO ₂ e has been added to the EIS where the term CO ₂ e is first introduced.
22	22.033	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section Table 3.2-1; page 50 - The values in the table represent 2016 data with projects of similar data for 2017. The title should be changed to reflect that this is 2016 data expected to be similar for 2017. In addition, the reference to PNM 2017b should be changed to AECOM 2017 as PNM provided the AECOM-authored report on GHG emissions information to OSMRE in September 2017. This change should be made for all instances when PNM 2017b is used.	Climate Change	The intent of Table 3.2-1 is to provide recent-year actual GHG emissions, since that data is available. The reference and in-text citations have been updated accordingly.
22	22.034	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section Table 3.2-1; page 50 - GHGs from the mine should be included in the table. Contributions from the Generating Station are much higher than the mine, but the mine does contribute to GHGs and is the Proposed Action.	Climate Change	Comment noted. GHGs from the mine are described in the prior paragraph. No change to the table has been made.
22	22.035	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section Table 3.2-1; page 50 - Table 3.2-1 is confusing as currently presented and should be corrected as follows: •Move the "Total" row to below the "Storage" row. •The value for Total CO ₂ should be corrected to "1,270,239."	Technical Edit	The EIS has been revised as noted in the comment.
22	22.036	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section Figure 4.1-1; page 69 - A number of the projects considered in the cumulative analysis appear to be outside of the airshed and watershed that would be affected by the Proposed Action and the rationale for including these projects or how they add to cumulative impacts is not well defined. Please review the projects considered for the cumulative impact analysis and provide the rationale for inclusion and how they were used in the analysis or delete the projects from the list, as appropriate.	Cumulative Project List	Comment noted. Rationale for each project considered in the cumulative effects analysis is presented in full in the Technical Resource Document and incorporated by reference into the EIS. No change made.
22	22.037	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section Figure 4.1-1; page 69 - The figure is incorrect and the key does not accurately represent the locations of projects considered in the cumulative analysis. 6 and 7 are Coronado and Springerville, not 8 and 9. 1 is Navajo, not FCPP. 20 rather than 29 is the Kayenta Mine Complex, etc. Please check all of the labels and correct this figure.	Cumulative Project List	Figure has been corrected and updated accordingly in the Final EIS.
22	22.038	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.1.2.2; page 72 - The cited paragraph appears to come from analyses done for the Four Corners and Navajo Mine Energy Project which is not explained or referenced. The text needs to clarify that the "modeling" cited here was specifically done for the Four Corners Power Plant as part of the Four Corners Power Plant and Navajo Mine Energy Project EIS Ozone Impact Assessment.	Cumulative Effects	The EIS has been revised as noted in the comment.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
22	22.039	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	The discussion should also include how the Four Corners study relates to the Generating Station and potential changes or differences as a result of unit shutdown at the Generating Station. It should be noted that the Four Corners Power Plant is further away from the Class I areas than the Generating Station, but, after 2017, the Generating Station emissions will be lower. It should be clarified in the text exactly where the numbers came from and how/why they are applicable. □	Cumulative Effects	Comment noted. The cumulative effects section, in addition to the air quality section, addresses the potential in overlap between the two sources. No change has been made.
22	22.040	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.7, second paragraph; page 100 - This paragraph incorrectly describes the ERA conducted to evaluate indirect effects of coal combustion at the Generating Station on terrestrial and aquatic wildlife. Comparisons against soil screening levels were only conducted for earthworms. Comparisons to media-specific screening levels were used to evaluate potential risks to lower trophic level receptors (plants, soil invertebrates, benthic invertebrates, aquatic biota) and food web modeling was used to evaluate potential risks to higher trophic level receptors (birds, mammals). The ERA description provided on page 105, beginning with the 3rd paragraph, and continuing onto page 106 should be moved to replace the current discussion in Section 4.7 or provided in both sections.	Wildlife	EIS Section 4.7 has been updated to provide clarity as follows: "The ERA used a food web model to evaluate risk via bioaccumulation pathways to representative mammalian and avian receptors. The modeling determined potential daily intake doses and compared those values to allowable daily intake values that are considered protective to wildlife populations and individuals. The ERA was based on the comparison of conservative wildlife protective soil screening levels to the concentrations of constituents in the environment (soil and water) within the deposition area. This was done under current conditions as well as the predicted concentrations of COPECs in the environment following 16 years of future emissions..."
22	22.041	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.7.2; page 103 - A summary of potential impacts to semiaquatic birds and mammals evaluated in the food web model should be included in this section. This section only discusses findings for the aquatic and benthic biota but the ERA also evaluated semi-aquatic birds and mammals.	Wildlife	ERA results for aquatic wildlife species are discussed in Section 3.8.4.1 of the Technical Resource Document, which is incorporated by reference into the EIS. Aquatic birds examined in the ERA include the bald eagle and southwestern willow flycatcher. These species and ERA results are discussed in EIS Section 4.8.2.1 and Technical Resource Document Section 3.8.4.1.
22	22.042	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.8.2.2; page 110 - "Surface water drawn from the San Juan River for use at the Generating Station and San Juan Mine is obtained according to water rights for consumptive use held by SJCC." SJCC does not hold water rights as discussed in Section 2.1.1.3.	Special Status Species	Edit has been made to clarify that water rights are held by PNM, TEP, and APS as described in Section 2.1.3.3

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22	22.043	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	<p>Section 4.10.2; page 117 - "While the Proposed Action would not affect access to regional recreation areas, effects to visibility at recreational areas is considered a long-term moderate impact."</p> <p>The air quality section of Table ES-4 on page ES-15 states the following: "The modeled visibility impairment levels even on the highest visibility impact days are well below the accepted significance level of 5 percent, which indicates that implementation of the New Mexico SIP will improve regional air quality. Consequently, the future impacts on regional haze and visibility in Class I areas would be longterm, but minor."</p> <p>The air quality finding on visibility appears to be inconsistent with the finding of a moderate impact to recreation.</p>	Recreation	See Response 22.22
22	22.044	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	<p>Section 4.10.3; page 117 - "Under Alternative B, potential recreational effects would therefore be the same as those described under Alternative A above." -</p> <p>This discussion fails to recognize the closure of the Generating Station and changes to scenic quality or visibility and associated recreational impacts as a result and should be amended to provide additional information on indirect effects.</p>	Recreation	Under Alternative B, in the event of PNM halting coal-fired generation in 2022, the EIS provides a bounding level assessment of impacts post-2022 by analyzing a use with the same characteristics as SJGS. As such, the recreational effects would be the same in Alternative B as Alternative A.
22	22.045	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	<p>Section 4.10.5; page 117 - "The Proposed Action would neither directly or indirectly alter the recreation experience at any public recreation areas in the region and would not preclude continued recreation within the DLE area. Therefore, it would not cumulatively contribute to impacts caused by other projects in the Four Corners region."</p> <p>This statement is not consistent with the discussion under Section 4.10.2 which does indicate that the burning of coal at the Generating Station would have a longterm, moderate impact to recreation.</p>	Recreation	The EIS has been revised as noted in the comment to discuss cumulative effects of haze on regional recreation. The following text has been added: " <u>As stated in the analysis discussing the effects of haze on the recreational experience, emissions from the Generating Station would potentially indirectly affect the recreational experience at local recreation areas and would contribute to potential cumulative effects. Section 4.1.5 discusses the potential for cumulative contributions to regional haze and visibility.</u> "
22	22.046	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	<p>Section 4.15.2; page 131-132 - "The EPA's Final Rule for Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electrical Utilities (December 19, 2014) specifies closure and post-closure requirements applicable to the Generating Station and the Piñon and Juniper Pits."</p> <p>The final rule exempts disposal of CCR in mine pits and is not applicable to the Generating Station/Pinon or Juniper Pits.</p>	Hazards and Hazardous Materials	Text has been revised to remove reference to the EPA's final rule.
22	22.047	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	<p>Section 4.16.2.2; page 138 - "For chemicals with non-cancer toxicity, evidence shows that there is a safe level."</p> <p>EPA points out that while this is the case for most such chemicals and standard risk assessments do make this assumption, there are some chemicals that don't have a threshold "safe level" in actuality⁴.</p> <p>Suggest either removing the sentence or editing to: For most chemicals with non-cancer toxicity evidence shows that there is a safe level.</p>	Public Health	The sentence has been edited to include the word "most": "For most chemicals with non-cancer toxicity, evidence shows that there is a safe level."

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22	22.048	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	The TRD discuss water intake for use at both the San Juan Mine and the Generating Station on page 3.7- 28 in Section 3.7.4.1 and page 3.7-29 in Section 3.7.4.2. Any discussion of water intake and associated consequences should be limited to the portion of water used by the San Juan Mine. The water intake for the Generating Station is not relevant to indirect effects of coal combustion.	Wildlife	Comment noted. The text is correct as written and provides a description of the baseline environment. No change has been made.
22	22.049	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.7; page 3.1-15 - The entire section on “refined coal” should be deleted as it is immaterial to the NEPA analysis. If the section is not deleted, a number of edits are required in order to make the section technical accurate. For example a fuel performance test was required under the RSIP and was completed in 2016 but there are no ongoing requirements for testing and the SJF is not specifically required to meet the RSIP limits. “The function of the SJF is to supply treated coal, which helps to satisfy a condition of the Generating Station’s SIP and specifically meeting emission reduction targets of Section 45(e)(7). Operation of the facility includes treatment of coal and several testing programs. Chemical additives are added to raw coal as part of the coal-refining process to reduce NO _x and SO ₂ emissions during the coal combustion and steam generation process. ... The SJF is intended to qualify as a refined coal production facility described in Section 45(d)(8)(B), including all assets that are an “integral part” of the SJF. The aim of the SIP testing is to reduce NO _x , but the additive technology also has capability to reduce Hg and SO ₂ .”	Air Quality	Comment noted. The text has been revised as suggested.
22	22.050	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.2.2; Figure 3.1-1; Page 3.1-31 - The figure shows a 300 km buffer which is not explained in the text. The explanation should include how and why this buffer was designated.	Air Quality	The 300 km distance defines the limit of the domain for analysis of air quality related effects in Class I areas. This explanation has been added to Section 3.1.2.2.
22	22.051	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.2.4; Page 3.1-31 - “These decreases primarily result from the Clean Air Markets program (formerly termed the Acid Rain Program).” The document uses the terminology “Acid Rain Program” in other section. The title should be changed throughout the document to reflect the current name for the program.	Technical Edit	The EIS has been revised as noted in the comment.
22	22.052	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.1-12, Section 3.1.2.4; Page 3.1-32, 3.1-33 - The table indicates that the 300 km buffer relates to the San Juan Mine. The text on page 3.1-33 implies that the 300 km buffer is for the Generating Station. Figure 3.1-1 indicates that the 300 km buffer is for the Generating Station. The discussion interchangeably refers to the buffer as for the mine and for the Generating Station. The 300 km buffer should be discussed in terms of why and how it was designated and if it is a buffer for the mine, the Generating Station of both.	Air Quality	Because the modeled sources comprise both the Mine and Generating Station, the 300 km domain refers to both closely spaced sources. The text has been revised to provide greater clarification.
22	22.053	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.1-16 and 3.1-17; Page 3.1-37 and 3.1-38 - The data for each year is the same in both tables even though the chemical constituents are different and the mean, medium and cumulative data is different. Please verify that the information in both tables is accurately represented.	Air Quality	The tables have been revised as noted in the comment. These changes do not affect the analysis or conclusions presented in the EIS.
22	22.054	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.1-18 and 3.1-19; Page 3.1-41 and 3.1-42 - The data in these two tables is identical. Please verify that the information in these tables is accurately represented.	Air Quality	The tables have been revised as noted in the comment. These changes do not affect the analysis or conclusions presented in the EIS.

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22	22.055	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.2.7; Page 3.1-47 - “Gaseous pollutants (SO ₂ , NO ₂ , and CO) are primarily emitted from the elevated Generating Station stacks, and are transported to more distant locations. Highest impacts from gaseous pollutant emissions were predicted to occur to the southeast in the case of NO ₂ .” This discussion should be clarified to explain that the impact for NO ₂ to the southeast is due to the San Juan Mine GVB engines and not the Generating Station. Further the analysis of the operating time for the GVB engines was a conservative estimate and likely overestimates the actual impacts.	Air Quality	While the TRD language is correct, the text has been revised to acknowledge that both the stacks and GVB engines contribute to the NO ₂ impact as follows: Section 3.1.2.7 first paragraph: Gaseous pollutants (SO ₂ , NO ₂ , and CO) <u>are contributed by the San Juan Mine ventilation engines, but are</u> primarily emitted from the elevated Generating Station stacks, <u>such that</u> and impacts are transported to more distant locations. Note that AERMOD analysis results available in the modeling report do not quantify the contributions from separate sources, and the revision above does not alter the analysis or conclusions in the EIS.
22	22.056	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.3.2 Table 3.1-26, Footnote c; Page 3.1-52 - “Hg numbers based on 1.2 lb/MMBtu Mercury and Air Toxics Standard (MATS) limit.” If tabulated emissions are to represent historical average (or post-SIP based on 2016 actual), then the non-criteria emissions should be based on emission factors using actual data instead of MATS limits which are much higher than actuals. For example, the HHRA used actual plant data to develop the Hg emission factor (0.131 lb/Tbtu for post-SIP), which is far less than MATS factor (1.2 lb/Tbtu – incorrectly listed in the text as 1.2 lb/MMBtu). Calculations of actual emissions using MATS limits would be overstated and, if used, the text should be revised to acknowledge that.	Air Quality	The Hg emissions for historic operation and post-SIP based on the MATS limits are described in the AECOM 2017 report referenced, which used the MATS standard of 1.2 lb/Tbtu. The Hg emission values from this report were originally reflected in Table 3.1-26. However, the intent of Table 3.1-26 is to summarize the comparison of past <u>actual</u> emissions with Post-SIP emissions. Table 3.1-26 of the Technical Resource Document has been updated to include plant data in Generating Station TRI reports for 2010-16 , as noted in revised footnote c. The revision does not alter the analysis or conclusions in the EIS.
22	22.057	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.3.2; Page 3.1-52 at seq - The discussion of the Four Corners Air Quality Task Force might be better as part of the Affected Environment section.	Technical Edit	Comment noted. The change would not affect the analysis or conclusions presented in the EIS; no change had been made.
22	22.058	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.3.2; Page 3.1-54 - “A NAAQS Modeling Study (AECOM 2014a) performed for the earlier EIS that evaluated the impacts of criteria emissions from Four Corners Power Plant Units 4 and 5 on local ambient air quality,” Suggest this be clarified if the discussion is of the “earlier EUS” relates to the 2015 Four Corners EIS.	Air Quality	Suggested edit has been made.
22	22.059	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.4.3; Page 3.1-60 - “Based on the distance of Class I areas from the Generating Station, the contribution to cumulative ozone concentrations from the Generating Station would be closer to 0.1 to 0.5 ppb, based on the relative lack of discernable concentrations at those locations in Figure 3.1-4.” The figure reference here is from the Four Corners Power Plant modeling and the discussion presents the impacts the Four Corners Power Plant. This discussion should be clarified to demonstrate that this is not based on actual modeling at the Generating Station, but rather on the Four Corners modeling. The Four Corners Power Plant is further away from the Class I areas than the Generating Station, but, after 2018, the Generating Station emissions will be lower so the results are likely to be comparable; however, it should be clarified in the text exactly where the numbers came from and why they are applicable.	Air Quality	The Four Corners Power Plant modeling was utilized to reflect overall contributions from both FCPP and Generating Station, which are included in the sources within the modeled region. The change would not affect the analysis or conclusions presented in the EIS; no change had been made.

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22	22.060	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.4.3; Page 3.1-61 - "All of the maximum predicted concentrations for operations after the completion of the measures in the New Mexico SIP are less than, and in most instances well below, the applicable NAAQS/NMAAQs; this finding includes the 1-hour SO ₂ standard, which was not met prior to 2017." This statement is incorrect and does not provide the reader with the full context for the statement. Modeling done using previous version of AERMOD has shown full compliance with the 1-hour SO ₂ standard and that needs to be recognized. In addition, the most recent version of AERMOD was used in the AECOM 2017 modeling and showed that the 1-hour SO ₂ standard was not met, however when the model was reviewed, a large number of the receptors evaluated would not have sustained wind conditions to allow SO ₂ to reach these receptors. If the receptors that appear to be artificially influenced by wind conditions are removed from the analysis, then the remaining receptors do meet the 1-hour SO ₂ standard. In other words, the latest version of AERMOD is introducing artificial wind conditions to carry the SO ₂ emissions which actual on-site wind condition data do not support. This should be recognized in the text.	Air Quality	The modeled 1-hr. SO ₂ impacts for pre-2017 conditions and factors involved in the modeled exceedances are discussed fully in the Technical Resource Section 3.1.2.7, as part of the Affected Environment description of air quality conditions for pre-2017 conditions. The brief restatement of this pre-2017 result, as quoted in the comment, is from the discussion much later in the Technical Resource Document of future effects, where it does not contribute to the point of that section. The sentence has been revised: "Section 3.1.4.3, Future Criteria Pollutant Effects, second paragraph: All of the maximum predicted concentrations for operations after the completion of the measures in the New Mexico SIP are less than, and in most instances well below, the applicable NAAQS/NMAAQs. this finding includes the 1-hour SO₂ standard, which was not met prior to 2017. "
22	22.061	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.4.3; Page 3.1-79 - By comparison, incremental change in PM _{2.5} impacts due to secondary PM _{2.5} between the continued operation of the Navajo Generating Station and the No Action alternative for the earlier EIS are less than 3 percent of the PM _{2.5} NAAQS value of 35 µg/m ³ . There is no earlier EIS as mentioned in the text. Please clarify.	Air Quality	The text clearly refers to the Navajo Generating Station and Kayenta Mine Complex EIS in the first and last sentences of the same paragraph. The requested change would not affect the analysis or conclusions presented. No change made.
22	22.062	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.2; Page 3.2-7 - "Compared to 1990, annual GHG emissions in the U.S. have increased by about 3.5 percent, based on 2015 reported data. This reflects a general decrease of 10 percent since the highest reported year of 2007 (7,349,000 MT CO ₂ e) which represented a 15 percent increase compared to 1990." Please review the first several sentences to confirm numbers are correct as they do not appear to add up to the 3.5% increase discussed in the first sentence (i.e. 15% increase and then a 10% decrease leaves a 5% increase)	Climate Change	The EIS correctly describes that GHG peaked after 1990, in 2007. So, it is correct that emissions have reduced 10 percent, compared to 2007, and by 15 percent compared to 1990. No change necessary.
22	22.063	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.2.2; Page 3.2-12 - "The Interim Standard referenced in Table 3.2-2 is per the California Public Utilities Commission Decision No. 07-01-039, January 25, 2007 (SB 1368)." This discussion provides no information to the reader on what the Interim Standard is or how it relates to the discussion.	Climate Change	A brief statement describing the California Interim Standard and how it is used as a point of comparison for the EIS has been added to the text supporting Table 3.2-2.

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22	22.064	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2-3; Page 3.2-13 - The information on Generating Station GHG emissions listed in the table is not correct. According to the EPA e-GGRT, the Generating Station reported 10.7 MMT CO ₂ e in 2010 and 11.4 MMT CO ₂ e in 2013 (see Table 3.2-6 for correct numbers.). With these corrections, the 2007-2013 average may change. There were no reporting requirements under 40 CFR 98, Subpart in 2007. The source of 2007 data should be referenced in the table.	Climate Change	The TRD has been updated as noted in the comment. These changes do not affect the analysis or conclusions presented in the EIS.
22	22.065	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.3 Table 3.2-10; Page 3.2-19 - "The detailed annual data for GHG emissions during the Interim-SIP and Post- SIP scenarios at the Generating Station are provided in Table 3.2-10." Table 3.2-10 does not appear to represent the Interim SIP and Post SIP period discussed in the text, but rather appears to represent the Alternative B scenario with the period of 2018 through 2022. Figure 3.2-1 would represent this data or the table should be replaced with the table representing the Interim- and Post-SIP period.	Climate Change	The text has been revised to refer to Figure 3.2-1.
22	22.066	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.4.4.2; Page 3.4-26 - The description of Alternative B should be revised to state: " <u>Under Alternative B in this alternative</u> , the OSMRE would recommend to the ASLM that <u>a Mining Plan Modification for the DLE be approved authorizing the San Mine to supply DLE coal to the Generating Station as needed to maintain operation of Units 1 and 4 in accordance with any schedule for unit closure approved by the New Mexico Public Regulation Commission as part of the integrated resource planning process, and thereafter to sell remaining DLE reserves on the open market but with the condition that coal would only be supplied to the Generating Station until 2022 and the remaining reserves from 2023 through 2033 would go to the open market.</u> "	Alternatives	Comment noted. No change to text made.
22	22.067	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.5.1.1, 1st bullet on page; Page 3.5-6 - "Shumway Arroyo Groundwater Recovery System - The recovery system is intended to collect groundwater present in the shallow alluvium and surface water base flow and transport it via pipeline for <u>reuse or disposal</u> through evaporation to the San Juan Generating Station synthetically lined South Evaporation <u>Pond system or Process Pond system</u> . Disposal of the groundwater and surface water base flow in the South Evaporation Pond will be permitted through the issuance of a state discharge permit through Section 402-NPDES permit by the NMED . Also suggest adding the following: "NMED issued a final permit on March 14, 2018."	Groundwater	Comment noted. Suggested changes have been made.

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22	22.068	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	<p>Section 3.5.4.1; Page 3.5-33 - “Air quality modeling and emissions deposition modeling have defined the area that would be affected by Generating Station emissions and is shown in Figure 3.5-2.”</p> <p>The discussion implies that the deposition would all occur within the defined area and should be clarified to acknowledge that the deposition area is where the soil concentrations increases above 1% of background as a result of deposition.</p>	Groundwater	Comment noted. Suggested changes have been made.
22	22.069	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	<p>Section 3.5.4.1; Page 3.5-33 - “Therefore, while Hg and Se would continue to be deposited into the San Juan River watershed, impacts of continued operations and future deposition of Hg and Se on surface water quality f would be minor compared to baseline conditions, although still moderate (outside of natural fluctuations) and long-term.”</p> <p>This sentence is very confusing to readers. It should be reworded to eliminate reference to minor, if in fact the impacts are moderate. The contributions from global sources of HG should be discussed relative to the reason why these constituents increase.</p>	Surface Water	Comment noted. Text is correct as written. No change made.
22	22.070	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	<p>Section 3.5.4.2; Page 3.5-33 - Suggest that the last paragraph of Section 3.5.4.3 Alternative C is also appropriate for inclusion in Section 3.5.4.2 Alternative B.</p> <p>“With the shut-down of the Generating Station, emissions of criteria pollutants and greenhouse gases would cease (see Section 3.1, Air Quality); deposition of Hg, Se, and other pollutants from the Generating Station would also stop. As a result, water quality in surface water bodies within the deposition area, particularly the San Juan River, would improve at least incrementally, since deposition from the Generating Station was only one of the sources of deposition into these waterbodies.”</p>	Surface Water	Alternative B does not assume a potential post-2022 use, but provides a bounding level analysis that uses the impact mechanisms of the San Juan Generating Station. Therefore, the suggested revision is not accurate and has not been incorporated.
22	22.071	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	<p>Section 3.6; Page 3.6-1 - This section also includes an analysis of potential ecological risks to vegetation from the combustion of coal at the Generating Station, and the resulting deposition of air emissions.”</p> <p>It should be noted here and elsewhere that the deposition modeling also evaluated major sources from the mine (at the request of OSMRE), although by far the largest deposition comes from the Generating Station. □</p>	Vegetation	<p>The TRD has been updated to state:</p> <p>“This section also includes an analysis of potential ecological risks to vegetation from the combustion of coal at the Generating Station, and the resulting deposition of air emissions. <u>The analysis also accounted for emissions associated with San Juan Mine activities including material storage, handling, disposal, and reclamation.</u>”</p>

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
22	22.072	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.6.4.1; Page 3.6-19 - "The indirect effects of coal combustion are within the range of natural fluctuation of the existing natural baseline conditions for some metals have potential for moderate adverse effects to plants." The sentence appears to be contradictory. If the results are within the natural fluctuations, then the impacts are minor according to the definition of impacts. In addition, given that the ERA showed that soil concentrations from deposition as a result of or the Proposed Action are generally similar to background conditions, should this be described as a minor adverse ecological effect. Selenium was the only COPEC not within the range of background soils, but selenium levels are likely related to local shale. □	Vegetation	The Technical Resource Document (3.6.4.1 page 3.6-20) and EIS (4.6.2 page 100) were updated to clarify the sentence; however, the conclusion and impact analysis has not been changed.
22	22.073	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.7.4; Page 3.7-12 - This paragraph incorrectly describes the ERA conducted to evaluate indirect effects of coal combustion at the Generating Station on terrestrial and aquatic wildlife. Comparisons to media-specific screening levels were used to evaluate potential risks to lower trophic level receptors (plants, soil invertebrates, benthic invertebrates, aquatic biota) and food web modeling was used to evaluate potential risks to higher trophic level receptors (birds, mammals). This description needs to be expanded to encompass the ERA components considered in Section 3.7.4.	Wildlife	TRD Section 3.7.4 has been updated for clarity as follows: <u>"The ERA used a food web model to evaluate risk via bioaccumulation pathways to representative mammalian and avian receptors. The modeling determined potential daily intake doses and compared those values to allowable daily intake values that are considered protective to wildlife populations and individuals. The ERA was based on the comparison of conservative wildlife protective soil screening levels to the concentrations of constituents in the environment (soil and water) within the deposition area. This was done under current conditions as well as the predicted concentrations of COPECs in the environment following 16 years of future emissions..."</u> These revisions do not change the analysis or conclusions presented in the EIS.
22	22.074	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.7.4.1; Page 3.7-19 - Clarify if "Terrestrial Wildlife" also includes semi-aquatic birds and mammals feeding in aquatic habitats in the Generating Station ROI.	Wildlife	The following changes were made to Section 3.7.4.1: Omnivores are not explicitly modeled in the ERA. It is expected that potential risks to omnivores, which have varied diets, would be bound by the potential risks for lower trophic level herbivores and higher trophic level carnivores. <u>The only aquatic wildlife species that could occur within the ROIs are listed as special status species and are discussed in Section 3.8.4.1.</u> Representative wildlife species were identified as surrogates to estimate exposure and risk.
22	22.075	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.7.4.1; Page 3.7-24 - The bullet should be revised to clarify that barium exceeded the sediment quality guideline but that "current (baseline cumulative) concentrations already exceed their respective sediment quality guidelines."	Wildlife	The following bullet was deleted: <u>"No metals are predicted to exceed their sediment quality guidelines for the protection of sediment dwelling biota."</u>
22	22.076	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.10, Table 3.11; Page 3.7-25 3.7-26 - Not all COPECs in the ERA tables are shown in these tables. Add the missing COPECs or provide text or footnote for how table does not represent the full ERA table.	Wildlife	Tables 3.7-10 and 3.7-11 in the Technical Resource Document have been updated to include all COPECs listed in the ERA tables. This addition does not change the analysis or conclusions presented in the EIS.

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22	22.077	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.8.4; Page 3.8-26, 3.8-27 - The description of the ERA that appears on these pages might be better earlier in the document to provide the reader with additional information on the ERA prior to discussing results. ERA results are discussed in the two previous sections (Section 3.6 and 3.7). Consider moving some of this ERA description earlier in the document	Special Status Species	Comment noted. No change made.
22	22.078	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.8.4.1; Page 3.8-30 - Consider whether to revise the language regarding measures under the Fish and Wildlife Plan regarding migratory birds. Currently, language states that "Migratory birds and their nests are protected from take or disturbance under the MBTA." In other areas, the TRD and EIS acknowledge the recent Solicitor's opinion indicating that incidental take is not prohibited under MBTA. This section should be updated to be consistent and to clarify that only intentional take is prohibited. □	Special Status Species	No action taken. The recent opinion published by the U.S. DOI (Opinion M-37050, December 22, 2017) discusses "take" and the interpretation of that term. The language in this section regarding take and the MBTA is still appropriate in regards to that definition.
22	22.079	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.8.4.1; Page 3.8-42 - The last sentence in this paragraph is not from the ERA document. Suggest that the reference to AECOM 2017d be move to the end of the next to last sentence.	Technical Edit	Comment noted. Suggested changes have been made.
22	22.080	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.10.4.1; Page 3.10-11 - While the Proposed Action would not affect access to regional recreation areas, effects to visibility at recreational areas is considered a long term moderate impact. The air quality section states the following: "The modeled visibility impairment levels even on the highest visibility impact days are well below the accepted significance level of 5 percent, which indicates that implementation of the New Mexico SIP will improve regional air quality. Consequently, the future impacts on regional haze and visibility in Class I areas would be long- term, but minor." The air quality finding on visibility appears to be inconsistent with the finding of a moderate impact to recreation. □	Recreation	See Response 22.22.
22	22.081	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.10.4.2; Page 3.10-11 - "This alternative assumes that the Generating Station would close in 2022 and that coal mined at San Juan Mine would be sold on the market and used at another power plant." While this discussion mentions the closure of the Generating Station, it fails to discuss effects to recreation as a result of the closure and should be amended to provide additional information on indirect effects. □	Recreation	See Response 22.44.
22	22.082	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.11.2.5; Table 3.11-22, 3.11-23; Page 3.11-25 - In these tables and in the discussion the terminology indirect and induced effects are introduced. This terminology is not defined the TRD or in the glossary as it relates to socioeconomics and is especially confusing to readers given the designation of the Generating Station as an indirect effect but the lack of discussion of the Generating Station in this section. The use of the terms should be defined.	Socioeconomics	Direct, indirect, and induced effects are defined in the first section of Section 3.11 in the Technical Resource Document, which is incorporated by reference into the EIS.

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22	22.083	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.15.4.1; Page 3.15-18 - "The EPA's Final Rule for Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electrical Utilities (December 19, 2014) specifies closure and post-closure requirements applicable to the Generating Station and the Piñon and Juniper Pits." As discussed at the end of the first paragraph on page 3.15-7, EPAs final rule is not applicable to the CCR from the Generating Station being disposed at the mine. (The discussion on page 3.15-7 reads "However, the rule does not apply to both surface mines and underground mines that receive CCR material from an electric utility for use in mined land reclamation as discussed further below.") This discussion should be amended to reflect that the EPA Final Rule for Disposal of CCR is not applicable to applicable. □	Hazards and Hazardous Materials	The EPA Final Rule for Disposal of CCR does not apply to either surface mines and underground mines that receive CCR material from an electric utility for use in mined land reclamation. The text on page 3.15-18 has been revised accordingly.
22	22.084	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.16; Page 3.16-2 - "The ROI for public health is comprised of the 31-mile (50-kilometer) radius air quality study area (see Section 3.1, Air Quality) that includes parts of San Juan County, New Mexico (which includes the location of the DLE footprint), and parts of La Plata and Montezuma Counties in Colorado." It is unclear why Section 3.1 is referenced in this sentence since the air quality discussion in Section 3.1 never references a 50 km air quality study area and the only map shown in that section references a 300 kilometer buffer but not a 50 kilometer study area. Please clarify. □	Public Health	50 km was used as the primary air quality study area, and clarification of modeling domain areas will be added to Section 3.1. The 50 km radius is used for "near field" studies and within this area modeling is conducted to assess the surface concentrations of pollutants that disperse from the source. The 300 km distance is the extent of "far field" air analyses encompassing the pristine Class I areas, and addresses more regional issues like haze, ozone, and deposition. The 50 km is the focus of the health study area because that is where the majority of air impacts relevant to human health are expected. The reference to Section 3.1 has been removed from the sentence and the sentence has been expanded to clarify the points above.
22	22.085	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.16.2.2; Page 3.16-14 - "The study also found that Navajo Nation residents rely heavily on coal-burning stoves to heat their homes during the winter; which likely has a significant impact on indoor air quality, and therefore on respiratory health (Bunnell and Garcia 2008)." The coal-burning stoves that are heavily relied on would also have a significant impact on outdoor air quality. In fact, this mentioned later but should also be recognized in this section. □	Public Health	The following sentence has been added: "The study also found that Navajo Nation residents rely heavily on coal-burning stoves to heat their homes during the winter; which likely has a significant impact on indoor air quality, and therefore on respiratory health (Bunnell and Garcia 2008). Exhaust from coal-burning stoves also contributes to outdoor air pollution; however, the indoor pollution is likely more significant for health as people spend more time indoors and outdoor pollution is typically more diluted."
22	22.086	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.16.4 Figure 3.16-9; Page 3.16-30 - "Worst Case Resident Location and Location of all Fishers" The location shown is applicable to the Pre-SIP analysis only. There is a separate location for this receptor-type for the Post-SIP analysis – see Figure 1 attached to these comments. □	Public Health	Figure 3.16-9 has been updated to show the Post-SIP locations.
22	22.087	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.16.4; Page 3.16-32 - "For chemicals with non-cancer toxicity, evidence shows that there is a safe level." EPA points out that while this is the case for most such chemicals and standard risk assessments do make this assumption, there are some chemicals that don't have a threshold "safe level" in actuality. Suggest either removing the sentence or editing to: For most chemicals with non-cancer toxicity evidence shows that there is a safe level. □	Public Health	The sentence has been edited to include the word "most": "For <u>most</u> chemicals with non-cancer toxicity, evidence shows that there is a safe level."

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22	22.088	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 4.1-1 and Figure 4.1-1; Page 4-4 through 4-27 - A number of the projects considered in the cumulative analysis (Table 4.1-1 and Figure 4.1-1) appear to be outside of the airshed and watershed that would be affected by the Proposed Action and the rationale for including these projects or how they add to cumulative impacts is not well defined. Please review the projects considered for the cumulative impact analysis and provide the rationale for inclusion and how they were used in the analysis or delete the projects from the list, as appropriate. □	Cumulative Project List	As stated in the EIS, the Technical Resource Document, which is incorporated by reference in the EIS, provides a comprehensive list of these project types and includes a brief description of each project, as well as rationale for why each project either carried forward or excluded from the cumulative effects analysis.
22	22.089	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 4.1-1; Page 4-4; This table needs to be reviewed and - updated or projects eliminated if applicable in accordance with changes made since the 2015 reference. Some of the changes noted include: - The Nucla Generating Station is retiring in 2022 - Martin Drake Generating Station has only two operating units at this time - Comanche Generating Station is retiring one unit in 2022 and another in 2025 - Coronado Generating Station experiences partial shutdown each year as part of an agreement to reduce air emission □	Cumulative Project List	The projects considered in the cumulative effects analysis were developed based on a review of other NEPA documents completed recently in the region and through consultation with cooperating agencies. Table 4.1-1 has been updated to provide the most current information on each project included in the analysis in the Final EIS.
22	22.090	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.1; Page 4-8; The discussion of the Energy Utility Corridor Planning should clarify that the cumulative effects analysis is only applicable to the San Juan County corridor and that a programmatic EIS was completed for that corridor.	Cumulative Effects	The requested change would not affect the analysis or conclusions presented in the EIS. No change made.
22	22.091	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Figure 4.1-1; Page 4-26 - The figure is incorrect and the key does not accurately represent the locations of projects considered in the cumulative analysis. 6 and 7 are Coronado and Springerville, not 8 and 9. 1 is Navajo, not FCPP. 20 rather than 29 is the Kayenta Mine Complex, etc. Please check all of the labels and correct this figure. □	Cumulative Effects	Figure 4.1-1 has been revised and updated in the Final EIS.
22	22.092	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Top of page; ES-6 - "To continue operations through 2033, PNM must renew its New Mexico Environment Department (NMED) operating air permit <u>every five years with the next renewal in 2021.</u> "	Technical Edit	Comment noted. Change has been made.
22	22.093	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Purpose and Need, first paragraph; Page ES-6 - "The OSMRE is the agency responsible for making a recommendation to the ASLM to approve, disapprove, or approve with conditions the proposed Mining Plan Modification under 30 CFR 746."	Technical Edit	Comment noted. Change has been made.
22	22.094	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Agency Authority and Actions; Page ES-7 and ES-8 - The discussion of both the BLM and EPA as cooperating agencies is written in future tense indicating that these agencies have not yet provided input to the DEIS but will at some point in the future. If these agencies are currently providing input into the process, the text should be revised to show current tense.	Technical Edit	Comment noted. Final EIS is updated to reflect current status.
22	22.095	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Alternative B, second paragraph; Page ES-10 - IRPs are prepared every three years for the New Mexico Public Resources- <u>Regulation</u> Commission.	Technical Edit	Comment noted. Change has been made.
22	22.096	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Alternative B, first bullet at bottom of page; Page ES-10 - "File for abandonment of the Generating Station with the New Mexico Public Regulation Commission <u>after no later than July 1, 2018, but no later than December 31, 2018.</u> "	Technical Edit	Comment noted. The Final EIS has been updated to reflect current status.

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22	22.097	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table ES-4: Climate Change, 1st column; Page ES-15 - “Under this alternative, the Generating Station would produce a cumulative total of approximately 97.5 million <u>metric</u> tons of CO ₂ e <u>between 2018 and 2033.</u> ”	Technical Edit	Comment noted. Change has been made.
22	22.098	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table ES-4, Visual Resources, 3rd Column.; Page ES-24 - Therefore, the indirect effect of the No Action Alternative would be a <u>long term and minor permanent and moderate</u> impact to visibility and haze in the region Since the effect of the emissions on haze under the Proposed Action is considered minor, removal of emissions is also considered minor. □	Technical Edit	Since continuation of the emissions is considered a long-term moderate impact, removal of the emissions and haze and their effect on visibility would also be moderate, but permanent. No change has been made.
22	22.099	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table ES-4, Health and Safety, 3rd column; Page ES-25 - “The health benefits of removal of the air emissions due to the <u>closure of the</u> Generating Station would be the same as described for Alternative B...”	Technical Edit	Comment noted. Change has been made.
22	22.100	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 1.3.2; Page 5 - “To continue operations through 2033, PNM must renew its New Mexico Environment Department (NMED) operating air permit <u>every five years with the next renewal due by November 2021.</u> ”	Technical Edit	Comment noted. Change has been made.
22	22.101	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 1.3.2; Page 5 - “Units 1 through 4 annually generated 1,6834 megawatts (MW) of electricity, serving more than 2,000,000 customers in New Mexico, Arizona, Colorado, Utah, and California.”	Technical Edit	Comment noted. Change has been made.
22	22.102	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 1.4; Page 7 - “The OSMRE is the agency responsible for making a recommendation to the ASLM to approve, disapprove, or approve with conditions the proposed Mining Plan Modification under 30 CFR 746.”	Technical Edit	Comment noted. Change has been made.
22	22.103	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 1.5-1; Page 9 - The discussion under both the BLM and EPA is written in future tense indicating that these agencies have not yet provided input to the DEIS but will at some point in the future. If these agencies are currently providing input into the process, it is suggested that this be revised to show current tense.	Project Description	Comment noted. Final EIS is updated to reflect current status.
22	22.104	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.1.1.3; Page 19-20 - “In 1979, Utah International, then holder of the water rights, applied for a second point of diversion that would supply <u>up to 10,585 AF/year</u> of water to the Generating Station...”	Project Description	Text is correct as written. No change made.
22	22.105	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.1.1.5; Page 22; “Coal combustion byproducts include fly ash, boiler slag , bottom ash, and residues from flue gas desulfurization (FGD).” Some coal-fired Units produce large quantities of boiler slag, but SJGS is not so designed. A very small amount of “clinkers” or tube-fouling deposits are occasionally removed during repair outages. Such material is placed on the lined ash pad east of the Unit 4 cooling tower for disposal by SJCC. □	Project Description	Comment noted. Reference to boiler slag has been removed.
22	22.106	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.1.2; Page 24 - This paragraph is not relevant to the operation of the Generating Station or the analysis in the EIS and should be deleted. In 2016, PNM announced plans to consider installing natural gas-fired combined cycle turbines at the Generating Station. However, PNM subsequently withdrew their application from New Mexico Public Regulation Commission on October 28, 2016 and withdrew all pending permitting applications.	Project Description	Comment noted. The text is correct as written. No change has been made.

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22	22.107	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 2.1-5; Page 24 - Change Row labels as follows – “2012 Emissions (tpy) <u>Based on Permitted Limits</u> ” and “Projected 2018 Emissions (tpy) <u>Based on Permitted Limits</u> ”	Technical Edit	Comment noted. The text has been revised as suggested.
22	22.108	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.1.2; Page 24 - “Hot flue gas resulting from the combustion process passes through the economizer, <u>air pre-heaters</u> and then through a...”	Technical Edit	Comment noted. The text has been revised as suggested.
22	22.109	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.1.2.2; Page 25 - “The FGD sSystem is capable of removing up to 96 percent of the SO2 from the flue gas by injecting spraying Limestone sSlurry into the gas stream in the Scrubber Modules which reacts with sulfur-SO2 and O2 to form gypsum, which along with other CCR...”	Technical Edit	Comment noted. The text has been revised as suggested.
22	22.110	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.1.2.3; Page 26 - “In the bins, the sluice water is decanted and the bottom ash is loaded on to <u>San Juan Mine trucks for use in reclamation of the surface mine pits at the San Juan Mine.</u> ”	Technical Edit	Comment noted. The text has been revised as suggested.
22	22.111	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.2.2; Page 31 - Section Heading - “2.2.2. Alternative B – <u>Continued Mining in the DLE in the Event of San Juan Generating Station Shutdown in 2022</u> Continuation of San Juan Mine Operations Following Generating Station Shut Down in 2022 ”	Technical Edit	Comment noted. The text is correct as written. No change has been made.
22	22.112	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.2.2; Page 32 - “• File for abandonment of the Generating Station with the New Mexico Public Regulation Commission <u>no later than after July 1, 2018, but no later than December 31, 2018.</u> ”	Project Description	The Final EIS has been updated to reflect current information related to the status of the Generating Station.
22	22.113	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 2.3-1; Page 37 - The description of applicable laws related to air quality should be revised as indicated in Attachment A to this form.	Technical Edit	Comment noted. The text is correct as written. No change has been made.
22	22.114	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1; Page 47 - “Large stationary sources such as the Four Corners Power Plant and the Generating Station emit substantial amounts of NOX, <u>CO</u> , SO2, particulate matter less than 10 microns in diameter (PM10), and particulate matter less than 2.5 microns in diameter (PM2.5).”	Technical Edit	Comment noted. The text has been revised as suggested.
22	22.115	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2; Page 49 - “In 2015 (the most recent year with available results) , overall GHG emissions decreased about 2 percent from 2014 levels.” The reference to 2015 as the most recent data should be deleted. EPA has published a 2018 report containing emissions data through 2016, which can be found at https://www.epa.gov/ghgemissions . □	Technical Edit	Comment noted. The text has been revised as suggested.
22	22.116	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2; Page 49 - Since it is impossible to evaluate the climate change effects attributable to an individual stationary source of GHG emissions, suggest deleting the following sentence: “GHG emissions from past and future operations of the Generating Station are quantified and evaluated in order to evaluate the potential indirect effects of combustion of the coal produced at the San Juan Mine.” □	Air Quality	Comment noted. The sentence has been revised to provide greater clarity.
22	22.117	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2; Page 49 - “The total 2016 annual CO2e emissions from the Generating Station <u>are</u> is 11,365,795 MT.”	Technical Edit	Comment noted. No change made.

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22	22.118	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2; Page 49 - “This value is well below the NMED Title V permit limit total potential emissions of 17,827,333 MT CO ₂ e listed in the Title V permit for informational purposes.” The permit total is from Operating Permit Table 102.A: Total Potential Pollutant Emissions from Entire Facility. This table shows the total potential emissions for information only and is not an enforceable limit or condition and reference to a permit limit should be deleted. □	Technical Edit	Comment noted. The text has been revised as suggested.
22	22.119	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.2-1; Page 50 - Table title “Annual GHG Emissions from the Generating Station in 2016 and 2017”. The title says 2016 and 2017 but the numbers presented on the table are 2016 numbers. □	Climate Change	Comment noted. The table is correct as drafted.
22	22.120	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4; Page 67 - “...of mining, power production , atmospheric emissions of power production, deposition of...” “Power production” is too broad for the scope of the EIS environmental effects analysis. □	Technical Edit	Comment noted. The text has been revised as suggested.
22	22.121	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 4.1-2; Page 72 - Table footnote a Hg numbers based on 1.2 lb/TbMMBtu Mercury and Air Toxics Standard (MATS) limit. The MATS Hg emission limit is 1.2 lb/Tbtu. □	Technical Edit	Comment noted. The text has been revised as suggested.
22	22.122	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	“...The AERMOD analysis of direct and indirect effects of the Proposed Action and the related coal combustion at the Generating Station included...”	Air Quality	Comment noted. The text has been revised as suggested.
22	22.123	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.1.2.3; Page 74 - “The modeled concentrations for PM _{2.5} are well below the NAAQS for both averaging times and <u>maximum concentration</u> are predicted to occur in the less-developed areas west of the facilities. The modeling results show that the reduction in emissions for post-2017 operations has the intended effect of improving local air quality; therefore, impacts from emissions of <u>fine particulate matter dust</u> are anticipated to be long-term but minor.”	Technical Edit	Comment noted. The text has been revised as suggested.
22	22.124	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.1.2.4; Page 74 - “...(NMED 2013) for the post-SIP controls that will behave been applied...”	Technical Edit	Comment noted. The text has been revised as suggested.
22	22.125	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 4.1-4; Page 75 - Consider adding the following to the note below Table 4.1-4: “A dV is the unit of impairment of light. Each dV corresponds to a 10 times reduction in light transfer from perfectly clear air <u>and approximates a humanly perceptible change in virtually all situations (see 70 Fed. Reg at 39.120.n32).</u> ” □	Air Quality	The footnotes to Table 4.1-4 in the EIS (and Table 3.1-31 in the Technical Resource Document) have been revised as suggested.

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22	22.126	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.1.5.1; Page 76 - The following statement is incorrect and therefore should be deleted. “To avoid possible re-designation as an ozone non-attainment area, NMAC 20.2.72.1 requires the adoption of more stringent regulations to constrain emissions of NOX and volatile organic compounds (VOCs) in areas where the ambient ozone concentration is within 95 percent of the NAAQS.” Statutory provisions prohibit NMED from adopting more stringent regulations than required by federal law: NMSA § 74-2-5 C. Regulations adopted by the environmental improvement board or the local board may: (1) include regulations ... to achieve national ambient air quality standards in nonattainment areas; provided that such regulations: (a) shall be no more stringent than but at least as stringent as required by the federal act and federal regulations ... pertaining to nonattainment areas; Also delete the following related sentence: “If that trend does not occur then state requirements for additional NOX and VOC controls would take effect and would drive further emission reductions.”	Air Quality	Comment noted. The text has been revised as suggested.
22	22.127	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.1.5.2; Page 77 - “...(EPA 2011) that included post-SIP controls that will be have been applied...” □	Technical Edit	Comment noted. The text has been revised as suggested.
22	22.128	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	“In addition, future regional haze cumulative effects will be regulated under revised <u>updated</u> Regional Haze rules, issued by the EPA in January 2017 (82 FR 3078 6 [January 10, 2017]) that apply after 2018. In the <u>new updated</u> rules, the EPA <u>revised</u> <u>clarified</u> the relationship between long-term strategies in the individual state plans and the long-term strategy obligations of all states. <u>In future regional haze planning periods, states must determine</u> The rate of progress in some Class I areas may be meeting or exceeding the uniform rate of progress that would lead to natural visibility conditions by 2064, but this does not excuse states from conducting the required analysis in updated SIPs and determining whether additional progress would be reasonable with additional measures (82 Fed. Reg. 6 [January 10, 2017]). ”	Air Quality	Comment noted. Suggested changes have been made.
22	22.129	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.2.1; Page 78 - “A major impact potentially could <u>would</u> occur if modeled future emissions exceeded the Title V permit levels. Emissions that meet the limits set forth in the Title V permit are considered minor.”	Technical Edit	Comment noted. No change made.
22	22.130	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.2.1; Page 79 - “Estimated annual GHG emissions from the Generating Station during the period of the Proposed Action would be approximately 6.1 million <u>metric</u> tons CO2e/year (the same as described in Section 3.2).”	Technical Edit	Comment noted. No change made.
22	22.131	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.2.1; Page 79 - “Under the Proposed Action, between 2018 and 2033, the Generating Station would produce a total of approximately 97.5 million <u>metric</u> tons of CO2e (AECOM 2017c).”	Technical Edit	Comment noted. Text has been revised as suggested.

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22	22.132	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.2.1.2; Page 79 - “The GHG emissions lead to levels above natural fluctuation but the levels are compliant with the regulatory standard set by the are below the total potential emissions listed for informational purposes in the NMED Title V permit.” Note that the NMED Title V Permit does not set a regulatory standard or limit for GHG.	Climate Change	Comment noted. Text has been revised as suggested.
22	22.133	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.2.2; Page 81 - “The annual GHG emissions due to combustion of coal mined in the DLE in 2018 through 2021 at the Generating Station would be 6.1 <u>million</u> MT CO ₂ e/yr, as for the Proposed Action.”	Technical Edit	Comment noted. No change made.
22	22.134	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.2.4; Page 82 - “ As described in Section 3.2.1, with the exception of the Generating Station’s NMED Title V permit limits for GHG emissions, No Federal or state rules or regulations currently limit or curtail emissions of GHGs from the San Juan Mine or other sources in the state of New Mexico.” The Title V Permit does not limit the GHG emissions for the Generating Station but does show the total potential emissions for information only, not as an enforceable limit or condition. □	Climate Change	Comment noted. Text has been revised as suggested.
22	22.135	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.5.5; Page 95 - These potential cumulative effects are addressed in Section 4.415, Hazardous Materials and Solid Wastes.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.136	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.6.2; Page 99 “The indirect effects of coal combustion are within the range of natural fluctuation of the existing natural baseline conditions for some metals which results in a minor have potential for moderate adverse effects to plants.” Based on the definition of impacts provided, if values are within the natural fluctuations, the impacts are considered minor. □	Vegetation	Comment noted. No change made.
22	22.137	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.6.2; Page 99 - The OSMRE therefore considers that continued mining and combustion of coal under the Proposed Action would result in long-term minor <u>moderate</u> impacts <u>within the natural fluctuations of</u> owing to the natural baseline conditions.	Technical Edit	Comment noted. No change made.
22	22.138	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.7; Page 100 - “...from the Generating Station and other nearby emission <u>San Juan Mine</u> sources, from 2018 through 2033.”	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.139	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.7.3; Page 103 - The ERA evaluated deposition-related risks based on emissions through 2033 and did not consider a scenario where operations ceased in 2022. Consider editing this sentence to clarify that the ERA did not consider this scenario, but that impacts on terrestrial and aquatic habitats would be less due to reduced emissions. “Given the shorter duration of emissions as compared to the Proposed Action, it is expected that minor impacts the ERA results indicate that minor impacts as described in the ERA for the Proposed Action would occur to a lesser extent and but no additional exposures to aquatic or terrestrial habitats or to aquatic biota from Generating Station emissions would occur after 2022 when operations would cease.” □	Technical Edit	Comment noted. No change made. Text is correct as written.

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22	22.140	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.8; Page 105 - For clarity suggest revising the sentence to read "...associated with continued <u>mining operations in the San Juan Mine DLE and coal combustion at the Generating Station.</u> "	Technical Edit	Comment noted. No change made. Text is correct as written.
22	22.141	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.8; Page 107 - "...however, within the Generating Station ROI, aquatic habitats and <u>terrestrial</u> habitats could be affected."	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.142	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.8.2; Page 107 - "Under the Proposed Action, no direct or indirect impacts would occur to special status amphibians or fish."	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.143	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.8.2.1; Page 108 - No total potential risk HQs exceeded 1 for carnivorous birds or mammals, represented in the food web by the red- tailed hawk <u>and red fox</u> , and as such, potential risk to this trophic guild is expected to be minor and long-term.	Special Status Species	The red fox was representative of only one species, the Canada Lynx, which was not carried forward for evaluation (see the Technical Resource Document, Table 3.8-3 and the second paragraph in Section 3.8.4 for further information). Therefore, the red fox was not included as a representative species.
22	22.144	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.8.2.1; Page 108 - "Since these results were predicted using conservative assumptions, potential risk to federally listed and special status carnivorous species (burrowing owl, ferruginous hawk, golden eagle, loggerhead shrike, long-eared owl, Mexican spotted owl, peregrine falcon, pinyon jay, and prairie falcon, gray wolf, Canada lynx, black-footed ferret, and kit fox)..." The federally listed or special status carnivorous mammals should be added here – gray wolf, Canada lynx, black- footed ferret, kit fox. □	Special Status Species	The gray wolf and kit fox were not on sensitive species lists for the Project area. The Canada lynx and black-footed ferret were not carried forward for analysis. See Technical Resource Document Section 3.8.2, Table 3.8-1, Table 3.8-3, and the second paragraph in Section 3.8.4 for further information.
22	22.145	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.8.2.2; Page 112; Revise footnote to read "'The c umulative <u>baseline</u> includes current contributions from all existing global, regional, and local natural and industrial <u>sources</u> to the San Juan River."	Technical Edit	Comment noted. Text is correct as written. No change made.
22	22.146	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.8.5; Page 113 - The following sentence appears to be incomplete and missing a conclusion: "If Hg emissions are expected to increase in the future, then the comparison of San Juan River fish tissue Hg and Se HQs for "Current Conditions + Generating Station Only Contributions" scenario and HQs for "Combined Source Contributions" scenario (this scenario included future emissions from China, the Generating Station, Four Corners Power Plant, and Navajo Generating Station). " Note that the "Combined Source Contributions" is the most appropriate scenario for evaluating cumulative effects of multiple sources. The "Current Conditions + Generating Station Only Contributions" results show that the Generating Station accounts for very minimal contributions to potential future risks. □	Special Status Species	EIS Section 4.8.5 has been updated as follows: "The combination of current conditions and Generating Station-related impacts can be viewed as future cumulative impacts if contributions from other sources remain constant. If Hg emissions are expected to increase in the future, then the comparison The addition of San Juan River fish tissue Hg and Se HQs for "Current Conditions + Generating Station Only Contributions" scenario and HQs for "Combined Source Contributions" scenario (this scenario included future emissions from China, the Generating Station, Four Corners Power Plant, and Navajo Generating Station) <u>are representative of cumulative effects to fish from the selected COPECs.</u> "
22	22.147	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.8.5; Page 113 - "...extends beyond the Deep Lease/ DLE, and on..."	Technical Edit	Comment noted. No change to the EIS made. The text is correct as drafted.
22	22.148	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.11.4.3; Page 120 - "...from the facilities' shut down are provided..." The DEIS should be reviewed for the use of the word "shut _ down" when using the terminology as a verb.	Technical Edit	Comment noted. No change to the EIS made. The text is correct as drafted.

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22	22.149	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.13.4; Page 127 - “Therefore, the indirect effect of the No Action Alternative would be a permanent and minor moderate impact to visibility and haze in the region. Since the effects on haze under the Proposed Action are considered minor, removal of emissions should also be considered minor.” □	Visual Resources	Comment noted. No change to the EIS made. The text is correct as drafted.
22	22.150	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.15.5; Page 132 - The cumulative effects ROI for hazardous and solid wastes includes all major permitted mine sites and generating stations in the region of the San Juan Mine through the year 20353.	Technical Edit	Comment noted. The EIS has been revised as suggested.
22	22.151	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.16; Page 133 - As noted in Comment 95, NMED is prohibited by statute from adopting standards more stringent than federal requirements, so the following sentence should be revised: “Individual states have the option to adopt <u>their own standards, consistent with state law, more stringent standards and to include additional regulated pollutants.</u> ”	Public Health	Comment noted. No change to the EIS made. Although New Mexico has adopted regulations preventing NMED from adopting more stringent standards, the text is correct as drafted.
22	22.152	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.16.2.2; Page 137 - These locations were selected by looking at where people lived and where the highest predicted air concentrations <u>and surface deposition</u> occur.	Technical Edit	Comment noted. The EIS has been revised as suggested.
22	22.153	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	4.16.2.2 and Table 4.16-1; Page 138 - Based on this analysis, 30 chemicals (including two chemical groups – dioxins/ <u>furans</u> and polyaromatic hydrocarbons [PAHs]) were evaluated in the risk assessment and are summarized on Table 4.16-1.	Public Health	Comment noted. The EIS has been revised as suggested.
22	22.154	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 4.16-2; Page 140 - “a Results are for worst-case resident out of eight <u>ten</u> locations considered.”	Technical Edit	Comment noted. Suggested revisions made.
22	22.155	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 5.1; Page 145 - Of the tribes contacted, the Hopi Tribe requested to be kept informed about Project milestones/updates, and, <u>with the exception of the Pueblo Tesuque</u> , no other tribes expressed an interest in consulting with the OSMRE on the government-to-government level.	Section 106	Comment noted. Section 5 has been updated to provide greater detail regarding the Section 106 process and tribal coordination.
22	22.156	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.1; Page 2-2 - “In each description of the environmental setting, the measured description of the environmental baseline (pre-2008 through December 2017) is described first and includes the retrospective analysis.” It is unclear what is meant by referring to baseline as pre-2008 through December 2017. Please clarify the text.	Project Description	Comment noted. The environmental baseline, includes a description of the resource area prior to 2008 (before the original decision was made), as well as the affected environment 2008-2017.
22	22.157	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.1; Page 2-2 - “...Station, reached an <u>agreement</u> settlement on air emissions...”	Technical Edit	Comment noted. The text has been revised as suggested.
22	22.158	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.1; Page 2-2 - “...of mining, power production , atmospheric emissions of power production, deposition of...” “Power production” is too broad for the scope of the EIS environmental effects analysis.	Project Description	Comment noted. The text has been revised as suggested.
22	22.159	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 2.2; Page 2-3 - CEQ guidance states, “[a]ll relevant, reasonable mitigation measures that could improve the project area are <u>are</u> to be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies, and thus would not be committed as part of the RODs of these agencies (Sections 1502.16(h), 1505.2(c)).	Technical Edit	Comment noted. The text has been revised as suggested.
22	22.160	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1; Page 3.1-1 - “Such emissions include products of combustion of coal in boilers, operation of cooling towers, coal handling <u>and grinding</u> , and ancillary support activities.”	Technical Edit	Comment noted. The text has been revised as suggested.

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22	22.161	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.1; Page 3.1-2 “The statute required the EPA to establish and periodically review NAAQS. <u>The pollutants for which EPA has established a NAAQS are referred to as for “criteria pollutants,” which include including CO, Pb, NO₂^x, ozone, PM₁₀, PM_{2.5}, and SO₂. The EPA is also required by the statute to issue National Emission Standards for Hazardous Air Pollutants (NESHAPs) and technology-based New Source Performance Standards (NSPS) for the criteria pollutants.”</u>	Technical Edit	Comment noted. The text is correct as drafted. No change has been made.
22	22.162	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.1; Page 3.1-2 - “The CAA Amendments of 1977 established a Prevention of Significant Deterioration (PSD) program and a program to protect visibility and limit regional haze in pristine areas referred to as Class I areas, including national parks and wilderness areas.”	Technical Edit	Comment noted. The text is correct as drafted. No change has been made.
22	22.163	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.1; Page 3.1-2 - “In the U.S., air quality in a given location is determined by comparing the monitored ground-level concentrations of various pollutants to the NAAQS as established by the EPA under the CAA of 1970 (amended 1977 and 1990). The NAAQS represent maximum levels of background pollution that are considered safe”	Technical Edit	Comment noted. The text is correct as drafted. No change has been made.
22	22.164	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.1; Page 3.1-2 - The following sentence does not seem to fit with the discussion because it is not an example of a NAAQS that has been revised. Recommend deletion of the sentence at this location. “For example, the EPA has proposed developing new secondary standards for SO₂ and NO_x aimed at reducing the impacts of atmospheric deposition on surface waters (GAO 2013, EPA 2015).”	Air Quality	Comment noted. The text is correct as drafted. No change has been made.
22	22.165	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.1; Page 3.1-5 - As in previous comments, NMED is prohibited by statute from adopting standards more stringent than federal requirements, so the following sentence should be revised: <u>“Individual states have the option to adopt their own standards, consistent with state law authority, more stringent standards and to include additional regulated pollutants.”</u>	Technical Edit	Comment noted. The sentence has been revised as follows: “Individual states have the option to adopt more stringent standards and to include additional regulated pollutants; <u>however, under New Mexico statute section 74-2-5, Regulations adopted by the environmental improvement board pursuant to the clean air act may be no more stringent than federal regulations.</u> ”
22	22.166	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.1; Page 3.1-8 - “Determination of Title V applicability with respect to a major source threshold does not include fugitive emissions for most industrial categories, including coal mines and electric generating stations.”	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.167	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1; Page 3.1-8 - “The current Title V permit for the Generating Station (No. 062R3-MT) was last renewed on November 10, 2016 and will expire <u>must be renewed every</u> 5 years from that date.”	Technical Edit	Comment noted. Text has been revised as suggested.

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22	22.168	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.1-2; Page 3.1-8, 3.1-9 - Table 3.1-2 does not have the correct values for TSP and PM10. Based on Title V permit, Table 102.A, Total Suspended Particulates (TSP) emissions should be: Maximum until 12/31/17: 1887 tpy Maximum after 12/31/17: 910 tpy Reduction (tpy): 977 Percent Reduction: 48% PM10 emissions should be: Maximum until 12/31/17: 1467 tpy Maximum after 12/31/17: 706 tpy Reduction (tpy): 761 Percent Reduction: 48%	Air Quality	Comment noted. Text has been revised as suggested.
22	22.169	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.1; Page 3.1-10 - "Under the CAA, Class I areas are those in which visibility is protected more stringently than in <u>other areas</u> . Under NAAQS."	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.170	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.1; Page 3.1-11 - "The reasonable progress goals are designed to reach natural conditions by <u>2064, 2060</u> ."	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.171	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.1; Page 3.1-11 - " Relationship to Secondary NAAQS ... However, consistent with the purposes of Section 169A of the CAA, the EPA recognizes that <u>nationally uniform standards</u> would not eliminate NAAQS cannot be applied to reduce visibility impairment in all parts of the country. <u>Primarily, this is because no level of pollutant concentration at ground level can be related to a specified degree of visibility impairment</u> . The regional haze program is designed to address utilizes a different set of atmospheric parameters that relate to measurement of local and regional visibility impacts outside of Class I areas that may persist after attainment of the secondary standard (64 FR 35714)."	Air Quality	Comment noted. Text has been revised to clarify that the section is discussing secondary NAAQS.
22	22.172	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.1; Page 3.1-11 - "The Regional Haze Rule requires the use of best available retrofit technology (BART) to reduce <u>visibility-impairing pollutant emissions from older emission units in certain industrial source categories (including coal-fired power plants)</u> that contribute to regional haze to improve visibility. <u>The BART provision in Section 169A(b)(2)(A) addresses the pollution from a specific set of existing sources, such as coal-fired power plants near Class I areas (e.g., Four Corners Power Plant, the Generating Station, Navajo Generating Station).</u> The BART provision in Section 169A(b)(2)(A) requires EPA to promulgate regulations...."	Air Quality	Comment noted. Text has been revised as suggested.

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22	22.173	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.1; Page 3.1-11 - “The CAA defines the sources potentially subject to BART as major stationary sources in any of 26 identified source categories, including reconstructed sources, which have the potential to emit 250 tpy or more of any air pollutant, and which were <u>in existence on placed into operation between August 1962 and August 7, 1977, but which had not been in operation for more than fifteen years as of that date.</u> This set of sources potentially subject to BART was defined in the 1977 amendments to the CAA, <u>and that list, which is reflected in the current regional haze regulation, includes the 2012 Regional Haze Rule is consistent with these amendments, 35 years later.</u> Chief among the 26 source categories are fossil-fuel-fired steam electric plants of more than 250 MMBtu per hour heat input such as the Generating Station.”	Air Quality	Comment noted. The text has been revised as suggested.
22	22.174	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.1; Page 3.1-11 - “Consistent with the Regional Haze Rule, the New Mexico RSIP for the Generating Station requires reduced emissions of NOX <u>and SO2</u> , and defines emission limits for PM10 as BART measures. The RSIP requires that Units 1 and 4 meet an emission limit of 0.23 pounds NOX per MMBtu (lb/MMBtu) <u>and 0.10 lb/mmBtu SO2, both</u> on a 30-day rolling average. These <u>This</u> measures were <u>was</u> accomplished before December 15, 2015.”	Air Quality	Comment noted. The text has been revised as suggested.
22	22.175	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1; Page 3.1-12 - “This measure was accomplished before December 15, 2015. The Generating Station must continue to meet the existing 20 percent opacity limit on Units 1 and 4 and the emergency generators and is required to comply with a 20-percent opacity limit on its material handling operations, including coal handling (EPA 2014).” The Title V permit does not address emergency generators. There is no 20% opacity limit on material handling operations in the Title V permit.	Air Quality	The revision in this comment correctly omits a 20 percent opacity limit of material and coal handling. However, stationary engines (including the emergency generators) do have an opacity limit, and opacity monitoring requirements in the Title V permit: At condition A.106.H. “In accordance with 20.2.61.109 NMAC, the owner or operator of stationary combustion equipment shall not permit, cause, suffer or allow visible emissions from the stationary combustion equipment to equal or exceed an opacity of 20 percent; . . . The emergency generators are subject to 20.2.61.109 NMAC.” At condition A111 “Facility: 20.2.61 NMAC Opacity. 20.2.61 NMAC Opacity Requirements (Units E602, E603, E604, E605, E606, E607)Monitoring: (2) For emergency, standby, or limited use compression ignition engines that operate on a limited basis, the permittee shall, . . . measure opacity during steady state operation on each Unit for a minimum of 10 minutes . . . The permittee shall also measure opacity on a Unit’s emissions stack anytime when visible emissions are observed during steady state operation.” The suggested sentence has been deleted and replaced with the following text: “In the Generating Station Title V permit there is also a 20 percent opacity limit on “stationary combustion equipment,” such as the emergency generators, and monitoring requirements for engine opacity emissions (NMED 2016a).”

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22	22.176	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.2; Page 3.1-13 - “The MATS emissions limits are based on existing control technologies that are widely available and commonly used in the electric utility industry such as ESPs, fabric filters (baghouses), FGD (scrubbers), or dry sorbent injection (EPA 2017b).” <u>The Generating Station met the MATS limits in 2017 with Units 1 through 4 running.</u>	Air Quality	The additional sentence in this comment has been included.
22	22.177	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.3; Page 3.1-13 - “ <u>New Mexico Regional Haze State Implementation Plan for San Juan Generating Station</u> After extended consideration of several options, in 2014, EPA approved a New Mexico SIP revision that addressed BARTs <u>for the Generating Station</u> to reduce regional haze in Class I areas. The final rule, termed the New Mexico RSIP in this discussion, requires that emissions from sources in New Mexico do not interfere with visibility improvement programs in other states (EPA 2014). In particular, the SIP imposed specific requirements that are included in the following analysis of air quality effects, including improved air emission controls at the San Juan Generating Station and the retirement by December 31, 2017 of Units 2 and 3 at the Generating Station.”	Air Quality	The suggested language changes in this comment make the paragraph specific to the Generating Station only, although the section is intended to provide more general SIP regulatory framework. No change made.
22	22.178	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.5; Page 3.1-14 - The Generating Station holds an NSR Permit (No. 0063-M9-R2) with the most recent revision dated May 14, 2015 (NMED 2015) April 9, 2018. Note that the most recent revision updated the owners.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.179	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.8; Page 3.1-15 - As described in Section 1 of the EIS, the Federal SMCRA allows for primary <u>primacy</u> ; New Mexico....	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.180	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.1.10; Page 3.1-18 - “Federal Tier 1 standards for off-road diesel engines were adopted in 1994 5 . More stringent Federal Tier 2 and Tier 3 standards were adopted in 2000, and selectively apply to the full range of diesel off-road engine power categories.”	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.181	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.2.1; Page 3.1-18 - “Meteorological data are also collected (but are not publicly available) from onsite monitoring programs operated by the San Juan Mine as part of the program to monitor air quality at the San Juan Mine.” Suggest adding text relating to the onsite meteorological station for the Generating Station in addition to the mine stations as the Generating Station meteorological data was used in air modeling.	Air Quality	Comment noted. Text is correct as written. No change made.
22	22.182	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.2.2; Page 3.1-20 - Large stationary sources such as the Four Corners Power Plant and the Generating Station emit substantial amounts of NOX, SO ₂ , <u>CO</u> , PM10, and PM2.5.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.183	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.2.2, Table 3.1-6; Page 3.1-26 – Footnote d “The monitor at Shiprock operated by NNEPA has reported only the 1-hour maximum data, for years 2013 to 2015 <u>2010 to 2015 to present.</u> ”	Technical Edit	Comment noted. Text has been revised as suggested.

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22	22.184	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.2.3; Page 3.1-29 - “The unit of visibility deterioration is the deciview (dV), with one dV being equivalent to a 10-fold change in atmospheric clarity. <u>The dV is a useful measure for comparing low and high visibility days and tracking changes in visibility because a one-dV change can typically be perceived by most human observers.</u> Average visual range in many Class I areas in the west is 60 to 90 miles (100 to 150 kilometers), equivalent to 13.6 to 9.6 dV or about 50 to 70 percent of the visual range that would exist absent anthropogenic air pollution (64 FR 35714).	Air Quality	Comment noted. Text has been revised as suggested.
22	22.185	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.2.3; Page 3.1-30 - As can be seen in table 3-1-42 11, the annual average of all, monitored dVs in Class I areas have generally decreased, indicating that regional visibility has improved during the 10-year period.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.186	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.2.6; Page 3.1-44 - PNM indicates that these upgrades resulted in the following emission reductions: <ul style="list-style-type: none"> • NOX – 44 percent • SO₂ – 72 71 percent • PM – ≥ 72 percent • Hg – 87 percent 	Air Quality	Comment noted. Text has been revised as suggested.
22	22.187	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.2.6; Page 3.1-44 - Scrubbers were installed in 1998 to 2000 time frame, not during 2005 to 2009. The Baghouse, activated carbon, Dibasic Acid and low NOX burners were installed in the 2005 to 2009 time frame. (Please verify dates)	Air Quality	Comment noted. No change made, as next comment provides additional information.
22	22.188	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.2.6; Page 3.1-44 - “Low NOX burners and an activated carbon injection system were installed on the generating units between 2005 and 2009 to reduce NOX emissions to 0.30 lb/MMBtu. Scrubbers were also upgraded installed during this time period, which reduced SO ₂ emissions.	Air Quality	Comment noted. Text has been revised as suggested.
22	22.189	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.2.6; Page 3.1-47 - “Wind erosion from the gypsum pile and coal pile is highly intermittent due to the high threshold wind speeds involved.”	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.190	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.2.7; Page 3.1-47 - “Gaseous pollutants (SO ₂ , NO ₂ , and CO) are primarily emitted from the elevated Generating Station stacks, and are transported to more distant locations. Highest impacts from gaseous pollutant emissions were predicted to occur to the southeast in the case of NO ₂ .” It should be clarified that the impact for NO ₂ to the southeast is due to the GVB engines and not the Generating Station stacks. The GVB emission estimates were conservative.	Air Quality	The text has been revised to state that both the stacks and GVB engines contribute to the NO ₂ impact: “Gaseous pollutants (SO ₂ , NO ₂ , and CO) are contributed by the San Juan Mine ventilation engines, but are primarily emitted from the elevated Generating Station stacks, and such that are transported to more distant locations. Highest impacts from gaseous pollutant emissions were predicted to occur to the southeast in the case of NO ₂ (due to the stacks and GVB engines)...”

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22	22.191	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.2.7; Page 3.1-50 - “The isolated high values for SO ₂ were predicted in unoccupied elevated areas to the north of the facilities at distances of 7 to 25 kilometers. Based on the significance threshold provided by the NAAQS, the maximum-modeled SO₂ surface concentrations represent a major impact. However, review of the windspeed trends indicates the high SO ₂ concentrations from the model occur during infrequent periods of low wind speeds and inhibited dispersion.” Additional context is required to explain the high values in the most recent modeling. Modeling done using previous version of AERMOD has shown full compliance with the 1-hour SO ₂ standard and that needs to be recognized. In addition, the most recent version of AERMOD was used in the AECOM 2017 modeling and showed that the 1-hour SO ₂ standard was not met, however when the model was reviewed, the San Juan Met Station near a large number of the receptors evaluated did not have sustained wind conditions or wind velocity to allow SO ₂ to reach these receptors. This indicates the model is overestimating the SO ₂ concentrations at these receptors. If the receptors that appear to be overestimating the SO ₂ concentrations are removed from the analysis, then the remaining receptors do meet the 1-hour SO ₂ standard. In other words, the latest version of AERMOD is introducing artificial wind conditions to carry the SO ₂ emissions which actual on-site wind condition data do not support.	Air Quality	Comment noted. The text is correct as drafted. No change has been made.
22	22.192	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.3.2; Page 3.1-51 - “ 3.1.3.2. Changes to Air Emissions from the Generating Station due to Compliance with the Revised Regional Haze State Implementation Plan ”	Technical Edit	Comment noted. The text has been revised at initial description of the State Implementation Plan that it is the Revised Regional Haze State Implementation Plan. No additional changes have been made.
22	22.193	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.3.2; Page 3.1-51 - Revise the final bullet to read “The rerouting in mid-2018 of San Juan Roads used for hauling CCR.”	Technical Edit	Comment noted. Information has been added to the section.
22	22.194	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.3.2, Table 3.1-26; Page 3.1-52 – Table footnote ⁶ Hg numbers based on 1.2 lb/MMBtu Mercury and Air Toxics Standard (MATS) limit.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.195	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.4.1; Page 3.1-55 - “Extensive modeling was conducted to assess the potential effects to air quality. This includes a near-field Ambient Air Quality Modeling Report (AECOM 2017a), and dispersion and deposition modeling analysis (reference)” Please add the missing reference.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.196	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.4.1; Page 3.1-57 - “...the Generating Station after implementing implementation of the...”	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.197	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 1.4.3; Page 3.1-59 - Under Alternative A, the air emissions from Units 21 and 34 would continue through 2033.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.198	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.1-29; Page 3.1-59 - Table footnote aHg numbers based on 1.2 lb/MMBtu Tbtu Mercury and Air Toxics Standard (MATS) limit.	Technical Edit	Comment noted. Text has been revised as suggested.

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22	22.199	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.4.3; Page 3.1-61 - All of the maximum predicted concentrations for operations after the completion of the measures in the New Mexico SIP are less than, and in most instances well below, the applicable NAAQS/NMAAQs; this finding includes the 1-hour SO ₂ standard, which was not met prior to 2017. This statement is incorrect and does not provide the reader with the full context for the statement. Modeling done using previous version of AERMOD has shown full compliance with the 1-hour SO ₂ standard and that needs to be recognized. In addition, the most recent version of AERMOD was used in the AECOM 2017 modeling and showed that the 1-hour SO ₂ standard was not met, however when the model was reviewed, the San Juan Met Station near a large number of the receptors evaluated did not have sustained wind conditions or wind velocity to allow SO ₂ to reach these receptors. This indicates the model is overestimating the SO ₂ concentrations at these receptors. If the receptors that appear to be overestimating the SO ₂ concentrations are removed from the analysis, then the remaining receptors do meet the 1-hour SO ₂ standard. In other words, the latest version of AERMOD is introducing artificial wind conditions to carry the SO ₂ emissions which actual on-site wind condition data do not support. This should be recognized in the text.	Air Quality	Comment noted. The text is correct as drafted. No change has been made.
22	22.200	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.4.3; Page 3.1-65 - "The isopleth diagrams prepared for the San Juan Mine and Generating Station impacts are used to identify the locations of higher impact levels, and these values are added to the modeled Four Corners Power Plant concentration isopleths at the same distances and directions relative to the Generating Station." This sentence is repeated three times on the page. Much of the 1st and 3rd paragraphs are repeated text. Suggest the entire discussion be condensed to be more concise and to reduce the repeated text.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.201	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.4.3; Page 3.1-66 - The isopleth views for predicted 24-hour average NO ₂ , and 8-hour average CO from AERMOD are shown in Figures 3.1-7 and 3.10-8, respectively. "...conservative, and representative of locate of the two plants...."	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.202	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.4.3; Page 3.1-78 - "These results when compared to CAMx simulation without the Navajo Generating Station emissions (the No Action Alternative)." This sentence appears to be missing some text.	Air Quality	Comment noted. Text has been revised to read "These results <u>were</u> compared to the corresponding CAMx simulation...."

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22	22.203	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.4.3; Page 3.1-79 - "Figure 3.1-12 is from the <u>Draft</u> Navajo Generating Station and Kayenta Mine Complex EIS and shows the geographic distribution of the predicted 98 th percentile of daily 24-hr secondary PM _{2.5} from the Navajo Generating Station emissions based on the 2020_B2 scenario (AECOM 2017b)." Note that the Navajo Generating Station and Kayenta Mine Complex was a Draft eIS and was never released as a Final EIS	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.204	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.4.4; Page 3.1-82 - "Under Alternative B, the air emissions from Units 1 and 2 and 3 would also cease in June 2022."	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.205	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.1.4.4, Table 3.1-32; Page 3.1-83 - Table footnote "aHg numbers based on 1.2 lb/ MMBtu <u>Tbtu</u> Mercury and Air Toxics Standard (MATS) limit." The MATS Hg emission limit is Tbtu.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.206	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.1-32 - Total NOx Emissions for Period of Alternative B should be 40,055 total tons and not 40,005.	Air Quality	Comment noted. Text has been revised as suggested.
22	22.207	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.1.1; Page 3.2-4 - As proposed, the Clean Power Plan would establish state-by-state goals to reduce GHGs by 30 percent from 2012 levels by 2030."	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.208	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.1.1; Page 3.2-4 - "As a Title V Operating Permit (40 CFR Part 71) source and Title IV Acid Rain Permit (40 CFR Part 72) source, the Generating Station is also required to report GHG emissions to the EPA and to the NMED, if requested by the <u>Department</u> (NMED 2015b)." The Generating Station has not been requested to report GHG emissions to the NMED since the emissions are reported to the EPA.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.209	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.1.1; Page 3.2-4, 3.2-5 - States were given a year to develop programs, with a provision for a 2-year extension; therefore, under the original proposed plan, 2018 20 was the date for states to have a program in place.	Climate Change	Comment noted. Text has been revised as suggested.
22	22.210	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.1.1; Page 3.2-6 - "On November 10, 2016, NMED issued a new Title V Operating Permit for the Generating Station with an expiration date of which will need to be renewed every five years with the next renewal due by November 10, 2021 (NMED 2016a)."	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.211	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.1.1; Page 3.2-6 - "As allowed after the June 2014 court decision (Utility Air Regulatory Group v. EPA (134 S. Ct. 2427 [2014])), the <u>Title V</u> permit specifies maximum limits the total potential emissions for informational purposes for GHG emissions both before and after the December 31, 2017 closure of Units 2 and 3. Table 3.2-1 summarizes these permitted GHG emissions." GHG gas emissions are listed as total potential emissions in the Title V permit and not as a permit limit.	Climate Change	Comment noted. Text has been revised as suggested.

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22	22.212	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.2.1; Page 3.2-7 - Pursuant to 20.2.73 New Mexico Administrative Code – Notice of Intent and Emissions Inventory Requirements, GHG emissions data are required to be submitted to NMED from Title V sources subject to permit requirements under 20.2.70 NMAC if requested by the Department (NMED 2015b).”20.2.73.300.B.(9) states “Any source that is requested by the Department to submit a report of greenhouse gas emissions shall.....”	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.213	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.1.1; Page 3.2-7 - “The NMED procedures specify or reference acceptable EPA calculation methods and emission factors that Title V source owners must use when preparing GHG emissions data reports for submission to NMED if requested by the Department, as specified in 20.2.73 NMAC (NMED 2015c).”	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.214	Claudette	Horn	Public Service Company of New Mexico (PNM)		<u>Section 3.2.2.2; Page 3.2-14 - Revisions below to reflect more recent EPA data, which is available at https://www.epa.gov/climate-indicators. “Additional CO2 accumulates in the atmosphere, as ambient concentrations have increased from about 280 ppm in pre-industrial times to about 400 390 ppm currently, a 43 39 percent increase.”</u>	Climate Change	Comment noted. The section is providing a summary of the Fifth IPCC report conclusions. No change made.
22	22.215	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.2.2; Page 3.2-18 - “This value is below the 2018 NMED Title V limit of 9,168,738 94,268,738 MT CO2e.”	Climate Change	Comment noted. Text has been revised as suggested. As noted in the section, the calculated Post-SIP emissions are below the corrected value.
22	22.216	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.2.2; Page 3.2-18 - The total 2016 annual CO2e emissions from the Generating Station is 11,365,795 MT.” Clarify the annual total is for 2016.	Technical Edit	Comment noted. The text clearly states that the information is providing the annual emissions for the subject year. No change made
22	22.217	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.2.2; Page 3.2-18 - “This value is well below the NMED Title V permit limit total potential pollutant emissions of 17,827,333 MT CO2e which is listed for informational purposes.” This is from Operating Permit Table 102.A: Total Potential Pollutant Emissions from Entire Facility. This table shows the total potential emissions for information only and is not an enforceable limit or condition and should be deleted.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.218	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.3; Page 3.2-18 - “This value is below the 2018 NMED Title V limit total potential pollutant emissions of 94,268,738 9,168,738 MT CO2e which is listed for informational purposes.” The 2016 Title V permit lists total potential emissions of CO2e after the shutdown of Unit 1 and 4 as 9,168,738.	Climate Change	Comment noted. Text has been revised as suggested. As noted in the section, the calculated Post-SIP emissions are below the corrected value.
22	22.219	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.3; Page 3.2-18 - “Consequently, following implementation of the SIP and a 45 percent decrease in annual GHG emissions, the Generating Station would contribute approximately 7 percent of the total GHG emissions from the electrical generation sector in the region, assuming total state-wide GHG emissions would be the same as 2013 emissions, compared to the 12 percent average contribution to regional GHG emissions across the reporting years 2007, 2010, and 2013.”	Technical Edit	Comment noted. Text has been revised as suggested.

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22	22.220	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.5.2; Page 3.2-23 - Estimated annual GHG emissions from the Generating Station during the period of the Proposed Action would be the same as described in Section 3.2.3 (approximately 6.1 million metric tons CO ₂ e/year).	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.221	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.5.2; Page 3.2-23 - “Under the Proposed Action, between 2018 and 2033, the Generating Station would produce a total of approximately 97.5 million metric tons of CO ₂ e.”	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.222	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.2.5.2; Page 3.2-23 - “The GHG emissions lead to levels above natural fluctuation but the levels are compliant with the regulatory standard set by the are below the total potential emissions listed for informational purposes in the NMED Title V permit.”	Climate Change	Comment noted. The text has been revised as follows: The GHG emissions lead to levels above natural fluctuation but are below the total potential emissions listed for informational purposes in the NMED Title V permit.
22	22.223	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.3.3; Page 3.3-12 - PNM selected to shut down Units 24 and 34 at the end of 2017 and install SNCR technology on Units 12 and 43 , in compliance with the RSIP.	Technical Edit	Text has been updated to accurately identify Units.
22	22.224	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.4.3; Page 3.4-21 - In accordance with the New Mexico RSIP, in 2016 at the end of 2017 , PNM installed SNCR technology on two units at the Generating Station in 2016 and shutdown the other two units at the end of 2017 Generating Station and in 2018, installed SNCR technology on the remaining two units.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.225	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.5.1.1; Page 3.5-6 - Third bullet item – the reference to Section 402 NPDES permit for the discharge of groundwater to the SEP is incorrect. Also, changes to the design now allow for the discharge of the collected groundwater to either the SEP or a SJGS process pond. Suggest the following change: “...for reuse of disposal through evaporation to thesynthetically lined South Evaporation Pond or Process Pond system.” Suggest the following: “Disposal of the groundwater and surface water base flow in the South Evaporation Pond will be permitted through the issuance of a <u>state discharge permit</u> by the NMED.”	Groundwater	These bullets have been updated to provide the most current information as of the publication of the Final EIS.
22	22.226	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.5.1.1; Page 3.5-7 - “A final design has been completed and the system is expected to be constructed by late 2017.” Suggest this language be updated: “The final design and constructed were completed and the system was put into service on December 27, 2017.”	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.227	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.5.2; Page 3.5-26 - In accordance with the New Mexico RSIP, in 2016 at the end of 2017 , PNM installed SNCR technology on two units at the Generating Station in 2016 and shutdown the other two units at the end of 2017 Generating Station and in 2018, installed SNCR technology on the remaining two units.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.228	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.6.4.3; Page 3.6-19 - “ Regardless of the OSMRE recommendation, it is ultimately the ASLM’s authority to approve the Mining Plan Modification. ” Delete the sentence as it is not directly relevant to the discussion of the No Action Alternative and that alternative assumes ASLM denies the requested MPM.	Vegetation	No action taken. This statement clarifies the authority and responsibility of the OSMRE and the ASLM.
22	22.229	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.7.1.1; Page 3.7-1 - “As described in Section 1 of the EIS, the Federal SMCRA allows for primacy primary...”	Technical Edit	Comment noted. Text has been revised as suggested.

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22	22.230	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.7.4.1; Page 3.7-19 - Suggest listing bird species here for completeness. Note that the sentence following the bulleted list would clarify that birds are discussed in Section 3.8.	Wildlife	The sentence following the bullet lists states: "avian receptors, which are protected under the Migratory Bird Treaty Act (MBTA), are discussed in Section 3.8, Special Status Species." No change has been made.
22	22.231	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.7.4.1; Page 3.7-20 - Edit the first sentence to refer to doses, not soil concentrations. "Total potential risks to non-special-status terrestrial wildlife were assessed by comparing <u>using</u> current conditions and deposition-related soil concentrations <u>to estimate dietary doses which were compared against toxicity reference values based on</u> no observed adverse effects levels (NOAELs) and lowest observed adverse effects levels (LOAELs)."	Wildlife	The following sentences were added to the text to clarify the methodology. Section 3.7.4.1, page 3.7-20 updated to state: " Total potential risks to non-special-status terrestrial wildlife were assessed by comparing current conditions and deposition-related soil concentrations against no observed adverse effects levels (NOAELs) and lowest observed adverse effects levels (LOAELs): Total potential risks to non-special-status terrestrial wildlife were assessed by <u>calculating current condition and deposition-related daily doses from food web models that included concentrations in soil, sediment, water, and dietary items, and comparing these calculations to no observed adverse effects levels (NOAELs) and lowest observed adverse effects levels (LOAELs).</u> "
22	22.232	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.7.4.1; Page 3.7-20 - "Impacts are not considered to affect any terrestrial wildlife species at the population level."	Technical Edit	Comment noted. No change made.
22	22.233	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.7.4.1; Page 3.7-21 - The title of this section is "Aquatic Wildlife", but only impacts the "aquatic biota" (aquatic invertebrates, fish, benthic invertebrates) are discussed. Suggest that impacts to birds and mammals be added here. Clarify in the first sentence what is considered by the term "aquatic biota."	Wildlife	The following changes were made to Section 3.7.4.1: "Within the ROI and DLE, aquatic biota of interest (including fish) are likely limited to perennial surface waterbodies in the deposition area, in particular the San Juan River. Under Alternative A, potential indirect impacts to aquatic biota (including fish, benthic invertebrates and aquatic invertebrates) as a result of the combustion of San Juan Mine coal..."
22	22.234	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.7.4.1; Page 3.7-21 - "Under Alternative A, potential indirect impacts to aquatic biota as a result of the combustion of San Juan Mine coal, and the subsequent transport and deposition of air emissions from the Generating Station to perennial surface waterbodies in the deposition area, in particular, the San Juan River." Please clarify this incomplete sentence.	Wildlife	Section 3.7.4.1 updated to state: "Under Alternative A, potential indirect impacts to aquatic biota <u>may occur</u> as a result of the combustion of San Juan Mine coal..."
22	22.235	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.7-8; Page 3.7-22 - These ESVs are applicable to fish, as well as aquatic invertebrates. Suggest updating the table title to refer to "Water Column Biota" and deleting "Aquatic Invertebrate" from the ESV header.	Wildlife	The title of Table 3.7-8 was updated as follows: "San Juan River—Fish and Aquatic Invertebrates, Summary of Selected ERA Risk Estimate (Hazard Quotients) Results."
22	22.236	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.7-8; Page 3.7-22 - Not all COPECs in the ERA table are shown in this table (antimony, boron, cobalt, manganese, molybdenum, nickel, silver, and vanadium are missing). Add the missing COPECs or provide text or footnote for how table is limited down from the ERA table.	Wildlife	Table 3.7-8 in the Technical Resource Document has been updated to include COPECs listed in the ERA tables.
22	22.237	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.7-9; Page 3.7-23 - Not all COPECs in the ERA table are shown in this table. Add the missing COPECs or provide text or footnote for how table is limited down from the ERA table. The barium HQs for current conditions and total HQs are above 1 and should be shaded.	Wildlife	Table 3.7-9 in the Technical Resource Document has been updated to include COPECs listed in the ERA tables.

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22	22.238	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.7-8, Table 3.7-9, Table 3.7-10, Table 3.7-11 - Suggest that the top rows of the headers be merged to limit repetition (i.e., merge the two "Current Condition" cells, the two "Deposition Contribution" cells, & the two "Total HQs" cells) and make the table easier to read. Replace "Total HQ" in the top row of the headers with "Total Potential Risk HQ."	Technical Edit	Comment noted. No change made. These documents are formatted to comply with Section 508 requirements.
22	22.239	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.7.4.1; Page 3.7-24 - Replace the first bullet (which is an incomplete statement as written) with the first bullet for the Raw Water Reservoir evaluation to be consistent. "Some metals are predicted to exceed their water quality criteria for the protection of aquatic life. However, for these metals, current (baseline cumulative) concentrations already exceed their respective water quality criteria."	Wildlife	Update to Section 3.7.4.1 has been made as suggested.
22	22.240	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.7.4.1; Page 3.7-24 - In the third bullet indicate that barium exceeded the sediment quality guideline but that "current (baseline cumulative) concentrations already exceed their respective sediment quality guidelines."	Wildlife	The third bullet has been updated to state: <u>"Some metals are predicted to exceed their sediment quality guidelines for the protection of sediment-dwelling biota. However, for these metals, current (baseline cumulative) concentrations already exceed their respective sediment quality guidelines."</u>
22	22.241	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.10, Table 3.11; Page 3.7-25, 3.7-26 - Not all COPECs in the ERA tables are shown in these tables. Add the missing COPECs or provide text or footnote for how table is limited down from the ERA table.	Wildlife	Tables have been updated to include COPECs listed in the ERA tables.
22	22.242	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.7.4.1; Page 3.7-28 - The second paragraph is repeated in the third paragraph. The second paragraph should be deleted.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.243	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.7.4.2; Page 3.7-29 - "Regardless of the OSMRE recommendation, it is ultimately the ASLM's authority to approve or deny the Mining Plan Modification." Delete this sentence as it is not directly relevant to the discussion of the No Action Alternative and the No Action alternative assumes ASLM denies the requested MPM.	Process	Comment noted. No change made.
22	22.244	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	3.7.4.3; Page 3.7-30 - "...no measurable additional risks (as compared to baseline) to aquatic biota are expected to occur within the deposition area as a result of the No Action Alternative (AECOM 2017d)."	Technical Edit	Suggested has been made to clarify citation.
22	22.245	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.8.1.2; Page 3.8-5 - "...portion of the Mine ROI and Generating Station ROI includes Navajo Nation Lands."	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.246	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.8.1.2; Page 3.8-5 - While no portion of the San Juan Mine is located on tribal lands, tribally listed species are considered in this EIS because the Generating Station ROI and a small portion of the Mine ROI and Generating Station ROI includes Navajo Nation Lands.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.247	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.8.4.1; Page 3.8-35 - "Therefore, effects resulting from habitat disturbance would be expected to be long-term and <u>minor</u> ."	Technical Edit	Comment noted. No change made.

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22	22.248	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.8.4.1; Page 3.8-36 - Edit the text as indicated to provide additional information about the plant evaluation. “In order to calculate total potential risk HQs for special status plants, soil samples were matched to different habitat types to identify representative soil data sets for each of the federally listed and special status plants. <u>The maximum EPC from the subset of sampling locations that could provide habitat for the relevant plant species was compared to plant-based ESVs</u> (AECOM 2017d). For special status plants, the maximum EPC for the entire Generating Station ROI was <u>also</u> considered <u>to provide context for the HQs</u> .”	Special Status Species	Comment noted. Text has been revised as suggested to provide greater clarification regarding methodology.
22	22.249	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.8.4.1; Page 3.8-36 - The ERA evaluated four additional plant species (Zuni (rhizome) fleabane, Knowlton's cactus, Aztec gilia, Brack's hardwall cactus) not listed in the bullets. If these species are not likely to be present within the Generating Station ROI, consider adding that information below the bullets.	Special Status Species	No action taken. Section 3.8.4 states: "The Aztec gilia, Brack hardwall cactus, and Canada lynx were determined unlikely to occur within the Mine ROI or Generating Station ROI and will not be carried forward for further analysis." The Zuni fleabane and Knowlton's cactus were removed from further analysis based on information in Table 3.8-1.
22	22.250	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.8-4; Page 3.8-37 - Footnote "a" refers to a section in the ERA report. Suggest adding the following: “Additional discussion is provided in Section 6.4.2 of <u>AECOM 2017d</u> .”	Technical Edit	Comment noted. Reference added.
22	22.251	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.8.4.1; Page 3.8-39 - It is noted that “terrestrial wildlife” in this section includes impacts to the bald eagle and willow flycatcher. Clarify in this paragraph what “terrestrial wildlife” encompasses since it does not appear to be limited to birds and mammals only exposed to soil-related COPECs.	Special Status Species	No action taken. Table 3.8-6 lists the terrestrial species that were evaluated through surrogate species, and includes birds, bats, and an herbivorous rodent.
22	22.252	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.8.4.1; Page 3.8-39 - Since “terrestrial wildlife” does not appear to be limited to soil-related COPECs, re-phrase this sentence as indicated – “Total potential risks to special-status terrestrial wildlife were assessed by <u>using comparing</u> current conditions and deposition-related soil, <u>water, or sediment</u> concentrations <u>to estimate dietary doses which were compared against toxicity -reference values based on</u> NOAELs and LOAELs.” Note that text on Page 3.7-20 may also need to be updated to reflect water and sediment if that discussion of “terrestrial wildlife” also includes birds and mammals feeding in aquatic exposure areas.	Special Status Species	The following updates were made to the Technical Resource Document to provide greater clarification regarding methodology for evaluation: Section 3.8.4.1, page 3.8-39 updated to state: " Total potential risks to special-status terrestrial wildlife were assessed by comparing current conditions and deposition-related soil concentrations against NOAELs and LOAELs. <u>Total potential risks to special-status terrestrial wildlife were assessed by calculating current condition and deposition-related daily doses from food web models that included concentrations in soil, sediment, water, and dietary items, and comparing these calculations to NOAELs and LOAELs.</u> " Section 3.7.4.1, page 3.7-20 updated to state: " Total potential risks to non-special-status terrestrial wildlife were assessed by comparing current conditions and deposition-related soil concentrations against no observed adverse effects levels (NOAELs) and lowest observed adverse effects levels (LOAELs). <u>Total potential risks to non-special-status terrestrial wildlife were assessed by calculating current condition and deposition-related daily doses from food web models that included concentrations in soil, sediment, water, and dietary items, and comparing these calculations to no observed adverse effects levels (NOAELs) and lowest observed adverse effects levels (LOAELs).</u> "

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22	22.253	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.8-6; 3.8-40 - The ERA also included the red fox as a carnivorous mammal to represent the gray wolf, Canada lynx, black-footed ferret, kit fox. If these species are not likely to be present within the Generating Station ROI, consider adding that information as a footnote to the table or in the text.	Special Status Species	No action taken. The gray wolf and kit fox were not on sensitive species lists for the Project area and were not evaluated in this EIS. The Canada lynx and black-footed ferret were not carried forward for analysis. See TRD Section 3.8.2, Table 3.8-1, Table 3.8-3, and the second paragraph in Section 3.8.4 for further information.
22	22.254	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.8.4.1; Page 3.8-41 - If the red fox results are no longer relevant to the special status species evaluation, delete the reference to carnivorous mammals in the first sentence.	Special Status Species	The Technical Resource Document Section 3.8.4.1 updated as follows: "No total potential risk HQs exceeded 1 for carnivorous birds or mammals, represented in the food web by the red-tailed hawk, and as such..."
22	22.255	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.8.4.1; Page 3.8-42 - The first two sentences should clarify that these are HQs for methylmercury, not mercury.	Special Status Species	The Technical Resource Document Section 3.8.4.1, page 3.8-42 was revised as follows: "The NOAEL-based HQ for the bald eagle was above 1 for Hg methylmercury while the LOAEL-based HQ was less than 1. The eagle's Hg methylmercury HQ (NOAEL-based HQ of 2.5) was driven by its consumption of fish from the San Juan River."
22	22.256	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.8.4.1; Page 3.8-42 - "Therefore, risks to the bald eagle due to exposure within the Generating Station ROI are expected to be minor and longterm, and similar to background risks (AECOM 2017d)."	Technical Edit	Reference is correct as written.
22	22.257	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.8.4.1; Page 3.8-42 - Add a conclusion statement to the willow flycatcher discussion. Presumably it would be similar to the bald eagle and little brown bat (i.e., Risks to the willow flycatcher due to exposure within the Generating Station ROI are expected to be minor and long-term, and similar to background risks.).	Special Status Species	Section 3.8 of the Technical Resource Document has been updated following conclusion of consultation under Section 7 with the USFWS. With regard to potential impacts to willow flycatcher, the text has been revised as follows: "For example, the assumption that the flycatcher resides and feeds within the ERA Study Area 100 percent of the time may also lead to an overestimate of risk, since the species breeds in the southwestern United States but winters outside the region. <u>Therefore, the risks to the flycatcher due to exposure within the Generating Station ROI are expected to be minor, long-term, and similar to background risks (AECOM 2017d).</u> "
22	22.258	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.8-8; Page 3.8-44 - This table shows the same data and ESV comparisons as shown in Table 3.7-8. Suggest the same table formatting edits as indicated for Table 3.7-8 (headers, ESV title). See comments 326 and 328. Note that Table 3.8-8 includes cobalt, manganese, and vanadium which are not on Table 3.7-8. Review tables for consistency and footnote how COPECs are limited (i.e., the Table 3.8-8 note indicating focus on HQs > 1).	Special Status Species	Comment noted - no formatting change made. These documents are formatted to comply with Section 508 requirements. Tables 3.7-8 and 3.7-9 have been updated to include all COPECs listed in the ERA tables. □
22	22.259	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.8.4.3; Page 3.8-50 - "...recommend approval to the ASLM. Regardless of the OSMRE recommendation, it is ultimately the ASLM's authority to approve or deny the Mining Plan Modification. "	Process	No change made.
22	22.260	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.9.3, Page 3.9-9, L8 - Replace first two sentences with "In accordance with the SIP, at the end of 2017 the Generating Station shut down two units. In addition, SNCR technology was installed on the remaining two units in 2016 to reduce emissions of NOX and secondary PM."	Land Use, Transportation, Agriculture	Comment noted. Suggested revision to text has been made.

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22	22.261	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.9.4.2; Page 3.9-12 - “As all mining techniques under Alternative B would be identical to the techniques in the Proposed Action (Alternative A), including the indirect effects of coal combustion, the effects on land use, transportation and agriculture would be the same.”	Land Use, Transportation, Agriculture	Comment noted. No change made.
22	22.262	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.10.3; Page 3.10-9 - “...visual resource impacts as a result of the shut-down <u>and SNCR installation would...</u> ”	Technical Edit	Suggested edit has been made to enhance clarity.
22	22.263	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.10.4.1; Page 3.10-10 - Noise levels would not be above levels considered to be a nuisance or harmful to nearby sensitive receptors (see Section 03.14, Noise and Vibration).	Recreation	Comment noted. As stated in Section 3.10.4.1, “Though mining activities would raise the ambient noise level in the immediate area, these noise levels are expected to be similar to existing conditions associated with current mining operations within the adjacent mine area. Noise levels would not be above levels considered to be a nuisance or harmful to nearby sensitive receptors (see Section 03.14, Noise and Vibration). Because noise levels are low and would not increase above baseline conditions, there would be no impacts to the recreational experience due to changes in the noise environment.” No changes made.
22	22.264	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.10.4.1; Page 3.10-11 - “The other KOPs would experience minor to no impact. Stack emissions from the Generating Station would continue to be one of the primary elements capturing the attention of the casual observer in the ROI. While the Proposed Action would not affect access to regional recreation areas, effects to visibility at recreational areas is considered a longterm <u>minor</u> moderate impact.”	Recreation	This section provides the rationale for the impact determination; no change was made.
22	22.265	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.11.3.1; page 3.11-28 - “Table 3.11-27: Comparison of Baseline Conditions <u>in San Juan County, New Mexico</u> Before and After <u>State Implementation Plan Compliance for San Juan County, New Mexico</u> <u>Reduced Production of Coal at San Juan Mine</u> ”	Socioeconomics	Data in table is correct as presented. No change made.
22	22.266	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.11.3.2; Page 3.11-29 - “Table 3.11-28: Comparison Baseline Conditions in ROI Before and After <u>State Implementation Plan Compliance</u> <u>Reduced Production of Coal at San Juan Mine</u> ”	Socioeconomics	Data in table is correct as presented. No change made.
22	22.267	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.11.3.3; Page 3.11-29 - “Table 3.11-29: Comparison of Baseline Conditions Compliance in State of New Mexico Before and After <u>State Implementation Plan</u> <u>Reduced Production of Coal at San Juan Mine</u> ”	Socioeconomics	Data in table is correct as presented. No change made.
22	22.268	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Table 3.11-32; Page 3.11-33 - The DEIS indicates that the Generating Station currently employees 282 individuals.	Socioeconomics	While 282 employees may be the current figure of employment, the IMPLAN (economic impact model) assumed 280 employees, per Table 3.11-32. No change made.
22	22.269	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.11.4.4; Page 3.11-37 - Modeling shows that a total of 923 898 jobs would be lost in the ROI (Four Corners Region) as result of San Juan Mine and the Generating Station closing down.	Socioeconomics	Comment noted. Suggested revisions made.
22	22.270	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.12.5; 3.12-13 - “...shutdown of Generating Station Units ± 2 and 4-3 to supply half...”	Technical Edit	Comment noted. Text has been revised as suggested.

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22	22.271	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.13.2.3; Page 3.13-21 - “As shown in Figure 3.13-14, foreground/midground views cover a wide expanse of rolling grasslands, rock outcrops, and mesa features interrupted by scattered roads and transmission lines, but are dominated by the Generating Station and its stack emissions to the south.”	Visual Resources	The emissions are a visual feature of the Generating Station and a pertinent part of the visual resource analysis. No change made.
22	22.272	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.13.2.3; Page 3.13-22 - “As shown in Figure 3.13-15, Piñon Mesa and the badlands within the DLE area are prominent in foreground/midground views to the north, and the Generating Station is and its stack emissions are readily visible to the west-northwest.”	Visual Resources	The emissions are a visual feature of the Generating Station and a pertinent part of the visual resource analysis. No change made.
22	22.273	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Page 3.13-28 - “As noted in Section 3.13.2.5, selective non-catalytic reduction technology was installed on two of the four units (Units 1 and 4) at the Generating Station in 2015 to comply with the Regional Haze SIP. On January 1, 2018, in addition, at the end of 2017, in accordance with the SIP, Units 2 and 3 of the Generating Station were shut down.”	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.274	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.14.4.3; Page 3.14-15 - The closest sensitive receptor to the San Juan Mine DLE Area is the neighborhood located along CR 6480 located approximately 550 feet from the mining operations.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.275	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.14.4.4; Page 3.14-22 - “...but coal would only be supplied to the Generating Station until closure of Units 1 and 4, assumed to occur 2022, and the remaining reserves would go to market through from 2023 through 2033 would go to market.”	Technical Edit	Text is correct as written. No change made.
22	22.276	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.15.3; Page 3.15-16 - “In addition, once production levels decline from approximately 6 million tpy to approximately 3.2 million tpy, the amount of CCR material returned to the San Juan Mine for reclamation will likely be reduced to less than 800,000 tpy (Ecosphere, 2017m)”.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.277	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.15.4.1; Page 3.15-18 - “PNM would continue to operate with only Units 1 and 4 in operation for the duration of the Project. Units 1 and 4 would continue operating as described in Section 2 of the EIS. Generating Station Units 1 and 4 would continue to operate for the duration of the Project as described in Section 2 of the EIS.”	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.278	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.15.4.1; Page 3.15-18 - “...closure requirements applicable to the Generating Station and the Piñon and Juniper Pits...”	Hazards and Hazardous Materials	The EPA Final Rule for Disposal of CCR does not apply to both surface mines and underground mines that receive CCR material from an electric utility for use in mined land reclamation. The text on page 3.15-18 has been revised accordingly.
22	22.279	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.15.4.1; Page 3.15-18 - “...available for use in reclamation after 2020 once coal is no longer supplied...”	Technical Edit	Text is correct as written. No change made.
22	22.280	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.16.2.2; Page 3.16-15 - Based on Figure 3.16-4 Farmington is not located within the deposition area so suggest removing the parenthetical. “...in the city of Farmington (which is located in the ROI and deposition area).”	Public Health	The text has been edited as follows: “...in the city of Farmington (which is located in the ROI and adjacent to the deposition area)”.
22	22.281	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.16.2.3; Page 3.16-18 - “...and because it is a neurotoxin that can affect unborn children (major health concern, but there are other toxic effects; ATSDR 1999).” Please clarify what is meant by the parenthetical.	Public Health	Text has been edited as follows: “...and because it is a neurotoxin that can affect unborn children (major health concern, but there are other toxic effects; ATSDR 1999). While the effects on unborn children are the major health concern, the chemical also causes other types of toxic effects (ATSDR 1999).”

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22	22.282	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.16.4; Page 3.16-24 - Mobile sources at the mine include diesel-powered draglines, loaders, coal haul trucks, and support vehicles, and explosives detonation.	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.283	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.16.4, Figure 3.16-7; Page 3.16-28 - "... 1. Data & COPC Selection <input type="checkbox"/> facility information <input type="checkbox"/> Select applicable screening levelsIdentify sources of hazardous air pollutants <input type="checkbox"/> Screen data to sSelect chemicals of potential concern (COPCs)"	Public Health	Basic facility information and pollution sources are part of the exposure assessment, not data and COPC evaluation. No changes to text.
22	22.284	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.16.4, Figure 3.16-7; Page 3.16-28 - "... 2. Exposure <input type="checkbox"/> Define the exposed populations forinhalation/ingestion of COPCs <u>Calculate chemical dose –combine air concentrations with population-specific exposure factors.</u> <input type="checkbox"/> Perform modeling of COPC emissions to estimate air concentrations/surface deposition and calculate media concentrations due to air in other media (air/inhalation, soil, water, food chain) <u>Calculate chemical dose – combine media concentrations with population-specific exposure factors"</u>	Public Health	Text is correct as written. No change made.
22	22.285	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.16.4, Table 3.16-6; Page 3.16-31 - "...Based on this analysis, 30 chemicals (including two chemical groups – dioxins/furans and PAHs) were evaluated in the risk assessment and are summarized on Table 3.16-6."	Public Health	Comment noted. Text has been revised as suggested.
22	22.286	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	"...For Step 2, known emissions rates of the COPCs were input into the modeling program to estimate the concentrations of COPCs in air, soil, water, and food at <u>actual farm and residence locations</u> the location of maximum inhalation or deposition."	Public Health	Comment noted. Text is correct as written. No change made.
22	22.287	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.16.4, Table 3.16-8; Page 3.16-34 - "...Footnote a: Results are for worst-case resident out of eight <u>ten</u> locations considered."	Technical Edit	See Response 22.154.
22	22.288	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 3.16.4; Page 3.16-34 - "Risk results were calculated at the maximum occupied deposition point and assumed that a family lives at that location for 70 years without leaving the home. People are generally not at home 24-hours a day, 7 days per week for a lifetime." Note that this applies to carcinogenic risk only. Also, text should be updated to reflect that the HHRA assumed a resident is exposed for 350 days/year , not 365 days/year.	Public Health	The text of page 3.16-34 of the Technical Resource Document has been revised as follows to provide greater clarification: "Cancer Rrisk results were calculated at the maximum occupied deposition point and assumed that a family lives at that location for 70 years without leaving the home, except for 15 days per year. Non-cancer risk results assumed people did not leave the home (except for 15 days per year) for 16 years. People are generally not at home 24-hours a day, 7 days per week for years a lifetime."
22	22.289	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4; Page 4-1 - "Criteria for assessing if a cumulative impact is minor, moderate, or major, each analysis relies upon the threshold or significance criteria provided in the resource analyses in Section 3." This sentence is incomplete and should be corrected.	Technical Edit	Text is correct as written. No change made.

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22	22.290	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.1, Table 4.1-1; Page 4-5 - Table 4.1-1 contains several references to the “proposed lease amendment”. This should be changed to “the Proposed Action and alternatives” where referenced in the table.	Technical Edit	Comment noted. Table has been updated in the Final EIS to provide the current status of each of the listed projects and confirm all references to the project are accurate.
22	22.291	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.2.1; Page 4-30 - “...Power Plant and San Juan the Generating Station, respectively.”	Technical Edit	Text is correct as written. No change made.
22	22.292	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.2.1.1; Page 4-33 - “To avoid possible re-designation as an ozone non-attainment area, NMAC 20.2.72.1 requires the adoption of more stringent regulations to constrain emissions of NOX and VOCs in areas where the ambient ozone concentration is within 95 percent of the NAAQS. Declining emissions of ozone precursors (NOX and VOC) in the San Juan Basin due to coal-fired generating unit retirements, and the economic and regulatory drivers suggest that cumulative ozone effects would remain steady or likely decrease during the Proposed Action. If that trend does not occur then state requirements for additional NOX and VOC controls would take effect, and would drive further emission reductions.”	Technical Edit	Text is correct as written. No change made.
22	22.293	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.2.1.1; Page 4-34 - “...included post-SIP controls that will be applied to the Generating Station. The proximity of the...”	Technical Edit	Comment noted. Text has been revised as suggested.
22	22.294	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.2.1.1; Page 4-34 - “In addition, future regional haze cumulative effects will be regulated under revised updated Regional Haze rules, issued by the EPA in January 2017 (82 FR 3708-6 (January 10, 2017)) that apply after 2018. In the new updated rules, the EPA revised clarified the relationship between long-term strategies in the individual state plans and the longterm strategy obligations of all states. In future regional haze planning periods, states must determine The rate of progress in some Class I areas may be meeting or exceeding the uniform rate of progress that would lead to natural visibility conditions by 2064, but this does not excuse states from conducting the required analysis in updated SIPs and determining whether additional progress would be reasonable with additional measures”	Technical Edit	Federal register citation has been updated. Other text is correct as written. No change made.
22	22.295	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.2.2.2; Page 4-36 - The “enhanced controls” do not affect GHG emissions and therefore the references to those controls should be deleted from the following sentence: “For the two larger regional generating plants, federal and state implementation plans that addressed regional haze effects also reduced GHG emission rates (EPA 2014). This involves retiring three of the five existing generating units at Four Corners Power Plant and installation of enhanced emission controls on the remaining two units, and the retirement of two of the four units at the Generating Station and the installation of enhanced emission controls on the remaining two units.”	Technical Edit	Comment noted. No change made.

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22	22.296	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.2.2.3; Page 4-37 - "...As described in Section 3.2.1, with the exception of the Generating Station's NMED Title V permit limits for GHG emissions, no Federal or state rules or regulations currently limit or curtail emissions of GHGs from the San Juan Mine Generating Station or other sources in the state of New Mexico." As previously discussed the Title V Permit does not contain enforceable limits for GHG emissions. The Permit does contain a list of GHG emissions but the permit does not limit those emissions.	Cumulative Effects	Comment noted. The sentence has been revised to provide greater clarity.
22	22.297	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.2.8; Page 4-43 - The results of the deposition models indicate the emissions are dispersed less than 13.05 miles from the Generating Station. The Screening Level Deposition Modeling Report ³ indicates the deposition area extends to about 29 km (18 miles). If the text is referring to dispersion of the emissions in general, that distance goes beyond 18 miles. Should the 13.05 miles be the 17.9 miles referenced at the top of the page? If not, describe the differences in the two distances and how the 13.05 mile distance was derived.	Cumulative Effects	Comment noted. The western extent of the deposition area without the San Juan River buffer area is approximately 13 miles. However, the text has been revised to 17.9 miles.
22	22.298	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.2.8; Page 4-44 - The following sentence appears to be incomplete and missing a conclusion: "If Hg emissions are expected to increase in the future, then the comparison of San Juan River fish tissue Hg and Se HQs for "Current Conditions + Generating Station Only Contributions" scenario and HQs for "Combined Source Contributions" scenario (this scenario included future emissions from China, the Generating Station, Four Corners Power Plant, and Navajo Generating Station)." Note that the "Combined Source Contributions" is the most appropriate scenario for evaluating cumulative effects of multiple sources. The "Current Conditions + Generating Station Only Contributions" results show that the Generating Station accounts for very minimal contributions to potential future risks.	Cumulative Effects	Please see Response 22.146.
22	22.299	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	Section 4.2.8; Page 4-44 - "Note that Navajo Generating Station will be shut down before 2020, the Four Corners Power plant has much lower emissions owing to shutdown of Units 1, 2, and 3, and the Generating Station will shut down two units by <u>at end of 2017 January 1, 2018.</u> " In EPRI modeling of FCPP future contributions (2016 post-MATS), Units 1-3 were assumed to be retired and thus would not generate emissions. Therefore, the reference to shutdown of Units 1-3 at the Four Corners Power Plant should be deleted since these units were not modeled in the future scenarios.	Cumulative Effects	Comment noted. No change made. Text describes changes in baseline environment from projects considered in the cumulative effects analysis.

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22	22.300	Claudette	Horn	Public Service Company of New Mexico (PNM)	Email	<p>Section 4.2.16 Table 4.2-1; Page 4-51 - Estimated Cancer Risk from Inhalation: 7 x 10-14 to 2 x 10-10</p> <p>It is unclear where the lower limit value came from. Please verify this value is correct.</p> <p>^a The range of cancer risk estimates is from the risk calculations for the post-SIP scenario, as is in the maximum estimated value (AECOM 2017e).”</p>	Cumulative Effects	The risk assessment estimated benzene inhalation risks for adults and children for multiple locations for farmer and resident populations. The range of benzene risks on the table is the range the model calculated for two populations and approximately 40 different locations/conditions. The details can be found in Appendix F of the AECOM 2017 risk assessment.
23	137.000	Allen	Cusenbary	Private	Email	<p>Let me start by saying I would like to see the mine closed. The mine has and still is polluting our environment. I know this for a fact because I worked at the mine underground for 9 ½ years. The mine regularly piles up old electrical cables, high pressure hoses, aluminum panels, fiberglass vent tubes, large pieces of metal, various items of trash, and buries them with the use of surface bulldozers. They also routinely throw trash of all sorts behind their longwall to be buried when the wall advances. They commit repeated MSHA code violations. Check the records. I can tell you for a fact that MSHA doesn't come close to find all of the violations. The mine also releases tons of methane gas into the atmosphere. They pump millions of gallons of underground water per month to the surface where it is allowed to evaporate. And thus lost to the natural water table. The PNM power plant is only operating one unit, and have made it clear that even if they waste the money to repair unit 1, they will not operate after 2024. Why continue to pollute and contaminate our environment. Some spread far fetched ideas that another buyer might buy the coal. The coal from San Juan mine is of such a poor quality it can't be used other than for a power plant that is designed for that poor quality. Not happening in America. Of course I realize their will be jobs lost and tax dollars lost, but neither of these are good enough reasons. I have seen stories claiming there will be 900 jobs lost. The mine has no where near that number in their employ at this time. And as previously stated the power plant will close soon. There is no saving those jobs. A deal has already been set with the PRC. I hope you will take to heart all of what I have said. Thank-you.</p>	General Against Project	Miner health is addressed in the EIS section on Public Health. Please see also Master Responses 1 and 3.
24	24.001	Michael	Anderson	Private	Form letter	<p>I am asking you to seriously consider the long term impacts of this renewal on the citizens and environment of Colorado. We are becoming increasingly dry with warmer winters, less snowfall, less water and our forests and Cottonwoods are dying in huge numbers due to climate change. Extensions like these all 15 years if additional impact on the state which will take decades to offset as we continue to warm. Consider the economic effects of our worsening fire season, loss of irrigation water to our farmers, the loss of tourism dollars due to lack of snow and the less measurable impacts on our State's residents as property values will certainly decline as forests die and wildfires scorch our communities with ever increasing frequency.</p>	Process	Comment noted. See Master Response 3. The EIS analyzes climate change in Section 4.2. With regard to the economic effects of climate change, please see Master Response 2.

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25	25.001	Bob	Kuhnert	Private	Form letter	I have lived downwind of this coal mine and subsequent coal fired generating station in Durango for 10 years. I have also seen the mercury contamination warning signs around Vallecito Reservoir which is northeast, or downwind from me, which means I am in the path of this mercury contaminated prevailing wind. It is no longer acceptable to burn this mercury laden coal and simply put up warning signs about the dangers it causes. IT IS TIME TO STOP MINING THIS COAL PERMANENTLY!	Public Health	Public health was addressed in the EIS in Section 4.16. As discussed in this section, mercury emissions were evaluated in the human health risk assessment conducted for the EIS and found to be 100 to 1,000 times below safe dose levels.
26	26.001	Dan	Bodiford	Private	Email	It might be a more effective plan to consider a means to bring a new operator for the generating station other than PNM as they seem to have no interest in supplying low cost, clean coal powered electricity to us locally and to many people in the southwestern US and having a desire to drive up prices with tons of solar power that will not be as reliable and possibly more harmful to birds and animals of various species.	Alternatives	Comment noted; it is beyond the scope of the NEPA review to recommend identification and inducement of a new operator to take over the San Juan Generating Station. Similarly, the NEPA analysis cannot affect the price charged for electricity from the Generating Station, or from potential new sources of energy that may be developed at some time in the area. Please see also Master Response 4.
27	27.001	Ronald	Kellermueller	New Mexico Department of Game and Fish	Email	The Department anticipates that the eastward expansion of underground mining operations into the DLE will have moderate impacts to wildlife that should be consistent with effects that have already occurred since mining operations went underground 2002. These impacts include surface disturbance associated with construction of access roads, ventilation shafts, gob gas vents, and rescue chambers; and minor cracks from subsidence.	Wildlife	Comment noted. The EIS evaluates impacts to wildlife in Section 4.7.
27	27.002	Ronald	Kellermueller	New Mexico Department of Game and Fish	Email	The area that will be mined in the DLE is below a prominent band of cliff habitat that contains historic and current nesting sites for golden eagle, prairie falcon, red-tailed hawk, ferruginous hawk, and great horned owl. Gunnison's prairie dog towns that support nesting burrowing owls are also located within the DUDLE area. The Department is particularly concerned about any increased disturbance to the pair of golden eagles that have regularly used and nested in an area with high anthropogenic activity levels from mining and oil and gas development.	Special Status Species	Comment noted. Please refer to Sections 4.7 and 4.8 of the EIS for the evaluation of potential impacts to wildlife and special status species. In addition Section 3.7.2.2 Table 3.7-1 of the Technical Resource Document, which is incorporated by reference into the EIS includes a list of wildlife surveys that have been completed for the San Juan Mine; and Section 3.8.2 Table 3.8-1 provides information on special status species.
27	27.003	Ronald	Kellermueller	New Mexico Department of Game and Fish	Email	The prominent vegetation community within the DLE is classified in the DEIS as Juniper Breaks, which comprises almost 72% of the habitat found within the OLE. The Juniper Breaks provide good nesting habitat for gray vireo, which is state-listed as Threatened, and is also considered a Bird of Conservation Concern by the U.S. Fish and Wildlife Service.	Special Status Species	Comment noted. Section 4.8 of the EIS describes OSMRE's analysis of potential effects to special status species. Further information on the gray vireo is included in Table 3.8-1 of the Technical Resource Document, which is incorporated by reference into the EIS.

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27	27.004	Ronald	Kellermueller	New Mexico Department of Game and Fish	Email	The DEIS states that the San Juan Coal Company "would time activities resulting in ground or habitat disturbance outside critical breeding or nesting periods". The DEIS also states that the nesting restriction period for raptors is 1 March - 30 June, with no restriction period given for non-raptor species. The Department reiterates its recommendations, included with its 12 May 2017 letter regarding the Notice of Intent to develop an Environmental Impact Statement for the OLE, which it believes are necessary to provide adequate protection for nesting songbirds and raptors.	Special Status Species	See Technical Resource: Section 2.3, Table 2.3-1 for a discussion of BMPs for special status species, wildlife, and habitats; Section 3.8.4.1 for a summary discussion of the Fish and Wildlife Plan that is included in the MMD Permit 14-01. In addition, page 74 of the EIS states that SJCC would time activities resulting in ground or habitat disturbance outside critical breeding or nesting periods. Where a potential for injury or death of wildlife species exists as a direct result of construction of new infrastructure and operations or maintenance, wildlife protection measures, such as pre-construction clearance surveys and reduced speed limits on access roads and within the DLE, would be used to minimize the potential for wildlife impacts. The EIS therefore does state that ground and habitat disturbance will be outside of critical breeding or nesting periods. To provide greater clarification the following revisions have been made: "SJCC would time activities resulting in ground or habitat disturbance outside critical breeding or nesting periods for wildlife including nesting songbirds and raptors." The specific period of 1 February to 1 September has not been added as breeding and nesting periods are species-specific and habitat dependent, so this broad of a period may not apply to the species in the areas/habitats that would be disturbed. The second sentence in the Draft EIS references "pre-construction clearance surveys" – these would be designed to clear an area prior to disturbance to avoid impacts to both raptor and non-raptor wildlife and to help avoid take under the MBTA (if present, the activity would not occur
27	27.005	Ronald	Kellermueller	New Mexico Department of Game and Fish	Email	To minimize the likelihood of adverse impacts to migratory bird nests, eggs or nestlings, the Department recommends that ground disturbance and vegetation removal activities be conducted outside of the breeding season (1 March through 1 September for songbirds and most raptors; 1 February or earlier through 31 July for golden eagle and great horned owl). If ground disturbing and clearing activities during the breeding season cannot be avoided, the area should be surveyed for active nest sites, and when occupied, nest disturbance should be avoided until young have fledged. For any active nests, adequate buffer zones should be established to minimize disturbance to nesting birds. Buffer distances should be □ 100 feet from songbird and raven nests, and 0.25 mile from raptor nests. For golden eagles, buffer distances should be 0.50 mile from nests. Active nest sites in trees or shrubs that must be removed should be mitigated by qualified biologists or wildlife rehabilitators.	Special Status Species	Please see Response 27.4.

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27	27.006	Ronald	Kellermueller	New Mexico Department of Game and Fish	Email	Section 4.6.2 of the DEIS states that the reclamation revegetation will replace existing plant communities with native grass, forb, and shrub species to establish post-mining land uses of livestock grazing and wildlife habitat. The Department recommends that the seed mix and mulch is certified weed-free, and that seed test results are requested from the vendor to avoid inadvertently introducing exotic species to the reclamation site. Any alternate seeds used to substitute for primary plant species that are unavailable at the time of reclamation should also be native. When possible, the Department also recommends using seeds that are sourced from the same region and habitat type as the reclamation area.	Vegetation	Comment noted. Site-specific revegetation specifications, including reference areas, seed mixes, success criteria, and noxious weed control are summarized in the existing SJCC Mine Permit 14-01 and the approved SJCC Revegetation Plan (New Mexico Mining and Minerals Division. 2014. San Juan Mine Deep Lease Extension Permit 14-01.). These measures are referenced in Table 2.3-1.
28	28.001	James	Smith	New Mexico Mining and Minerals Division	Email	The Draft EIS refers in several places to the Mines and Minerals Division (page ES-7 and page 9). The correct name is the Mining and Minerals Division.	Technical Edit	Comment noted. The EIS has been revised as requested.
28	8.002	James	Smith	New Mexico Mining and Minerals Division	Email	The Draft EIS mistakenly states that the new EPA rule on disposal of coal combustion residuals (CCR) applies to the San Juan Mine. (DEIS pp. 131-132) This mistake is repeated in the Technical Resource Document (TRD), page 3.15-16 OSM also takes the opposite position in several other sections of the Technical Resource Document. The EPA rule, found at 40 CFR 257, clearly exempts surface and underground coal mines.	Hazards and Hazardous Materials	The EPA Final Rule for Disposal of CCR does not apply to both surface mines and underground mines that receive CCR material from an electric utility for use in mined land reclamation. The text on page 3.15-18 of the TRD and Section 4.14, page 131-132 of the Draft EIS has been revised accordingly.
29	29.001	Erik	Nephew	Private	Written at Meeting	The Office of Surface Mining Reclamation and Enforcement should conduct more thorough and elaborate analysis when it comes to the study of health effects on the community. Men and children should be used as models as well as women and the elderly, who are more susceptible to these health hazards as opposed to men and children.	Public Health	Impacts to the general population (defined as the majority of the population, including children and the elderly without respiratory or other chronic health conditions) were evaluated in the health assessment in addition to sensitive sub-populations. Sensitive sub-populations were defined in Section 3.16 of the TRD and include asthmatic children, adults with chronic health conditions affected by air pollution, people without good access to medical care, and pregnant women, see Section 4.16 of the EIS and Section 3.16.4 of the Technical Resource Document, which is incorporated by reference into the EIS. No health impacts for the general public were identified.
30	30.001	Lyla	Johnston	Private	Written at Meeting	I request that we do not support the adoption of this draft EIS, nor extend the lease of San Juan Mine.	General Against Project	Comment noted.
30	30.002	Lyla	Johnston	Private	Written at Meeting	Please include in the next EIS the effects not just on children and men, but Native American women who are pregnant, and elderly peoples in the affected areas.	Public Health	Impacts to sensitive sub-populations, including the elderly and pregnant women, were considered in the health assessment. Sensitive sub-populations were defined in Section 3.16 of the Technical Resource Document, which is incorporated by reference into the EIS, and were evaluated in Section 4.16 of the EIS.
30	30.003	Lyla	Johnston	Private	Written at Meeting	Please include an analysis of what the community would like to see in that area, their opinions and visions, and spend as much time reporting on this as is spent reporting on the proposed action.	Process	Comment noted. NEPA regulations require a lead agency to evaluate and disclose the potential impacts of a Proposed Action and identified alternatives. Section 5 of the EIS includes a brief summary of the comments received, and an appendix has been added to the Final EIS with all of the full comments received and OSMRE's responses to these comments.

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31	31.001	Benjamin	Imbus	Private	Written at Meeting	I encourage the DoI and OSMRE to reject the Proposed Action (Alternative A). The San Juan Generating Station is causing unnecessary health effects to the local area. These horrible violation of people's health is unnecessary because we live in NM where there are hardly even clouds! We could and should be working off solar! Do not do the Proposed Action. Please close the San Juan Generating Station.	General Against Project	Comment noted. Please see Master Response 1.
32	32.001	J.	Gallegos Jr.	Private	Written at Meeting	Based on information given, I think it is best that the PNM Generation closes, due to the air pollution and affect of the fallout of the plant.	General Against Project	Comment noted. Please see Master Responses 1 and 4.
33	33.001	Julia	Bernal	Private	Written at Meeting	There are many ways to engage with the tribes other than sending letters, emails, etc. Many tribes have environmental, land management, cultural/natural resource offices that would be helpful. Also with the All Pueblo Council of Governors - you can formally request time on their agenda.	Section 106	Comment noted; OSMRE reached out to potentially interested tribes through both the Section 106 process and the Government to Government communication process.
34	34.001	Sheldon	Tenojo	Private	Written at Meeting	Consultation efforts should have you actually going to these places to visit, sit with and learn, share story with. You have the education, you need the knowledge.	Section 106	Comment noted; OSMRE reached out to potentially interested tribes through both the Section 106 process and the Government to Government communication process.
34	34.002	Sheldon	Tenojo	Private	Written at Meeting	Also, reach out the All Indian Pueblo Council of Governors	Section 106	Comment noted. Although The All Indian Pueblo Council of Governors is comprised of leadership from-multiple tribes, no individual tribal governments have indicated to OSMRE that it would be appropriate to reach out to the All Indian Pueblo Council of Governors. Doing so would not meet OSMRE's tribal consultation responsibilities. OSMRE has consulted with-applicable individual tribes, documented in the Section 106 process.
35	35.001	Meghan	Chambers	Private	Written at Meeting	We should be transitioning away from coal and start the process of renewable energy development in this specific area. Alternatives A & B do not consider a variety of critical issues, such as public health, climate, economies (from a long-term perspective), and it does not consider indigenous communities. Alternatives A & B only delay important steps that need to be made now in order to best protect the above-mentioned critical issues.	Alternatives	Please see Master Response 1.
36	36.001	Alex	Davis	Private	Written at Meeting	The draft environmental impact statement fails to consider a reasonable range of alternatives.	Alternatives	Please see Master Response 1.
36	36.002	Alex	Davis	Private	Written at Meeting	Instead of continuing operations beyond 2022, regulatory agencies should close the land and consider converting land and/or facilities to renewable energy or other community development needs.	Alternatives	Please see Master Response 1.
36	36.003	Alex	Davis	Private	Written at Meeting	I also call for deeper and more substantive engagement with the NM State Department of Health and public health agencies, which will provide a more comprehensive, on-the-ground & holistic understanding of the public health impact of proposed activities	Public Health	The EIS made extensive use of health data from the NM Department of Health for its analysis. Additional information regarding this data can be found in Section 3.16.2.2 of the Technical Resource Document, which is incorporated by reference into the EIS. Please also see Master Response 3.
37	7.001	Orlando	Begay	Private	Written at Meeting	My understanding is that there isn't any push to involve tribal communities in the area because of the project being on public lands and not tribal land.	Section 106	OSMRE is committed to consulting with tribal communities in compliance with NEPA and Section 106 of the NHPA regarding the proposed action. Please see Section 5 for a summary of consultation activities.

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37	7.002	Orlando	Begay	Private	Written at Meeting	Understand that the northwest region of New Mexico has the largest methane plume hovering the area decreasing the air quality. How is that not begin taken into consideration? The mining process adds to the poor air quality in the area. Do invisible jurisdiction line contain air pollutants within the lines? Does the wind have prejudices to where it blows?	Air Quality	The methane plume or "hot spot" over the Four Corners area is addressed in Section 3.2 of Technical Resource Document, which is incorporated by reference into the EIS, and regional methane emission trends are addressed in Cumulative GHG Effects in the Region. Studies attribute most of the plume effect to distributed oil and gas production facilities, with coal bed methane as a smaller contributor. Market trends and other measures will reduce regional methane emissions. As described in the Section 4.2.5 of the EIS, these include the downward trend since 2006 in northwest New Mexico gas production (see reference OCD 2017), and federal New Source Performance Standards imposing air emission controls on gas/oil extraction equipment to reduce methane emissions.
38	38.001	Susan	Atkinson	Private	Written at Meeting	I am concerned about the social costs of increased greenhouse gas emissions	Climate Change	Please see Master Response 2.
38	38.002	Susan	Atkinson	Private	Written at Meeting	Alternative "D" "Just" transition alternative makes good sense (pg. 34) This alternative could serve as a model for other future coal mine/coal power generation shutdowns, including retraining programs for employment opportunities, development of renewable energy, and environmental justice. Yes, this alternative would not facilitate BLM's mission to facilitate maximum economic recovery of mineral resources, but it does facilitate OSMRE's role to protect the environment and human health.	Alternatives	Comment noted. The Just Transition alternative was addressed in the EIS; the "no project" alternative looks at part of the Just Transition alternative, and the EIS references other ongoing process by various Four Corners economic development councils to address the future part of the Just Transition alternative.
39	39.001	Ross	Barnaclo	Private	Written at Meeting	Although many of the environmental effects are minor, many of them are long-term as well. Is it truly just & fair to perpetuate long-term man made effects or changes on local environment inhabitants, humans, animals, plants, etc.?	Process	Comment noted. Under NEPA regulations, a lead agency must analyze and disclose the potential effects of a Proposed Action and alternatives in order to make an informed decision.
39	39.002	Ross	Barnaclo	Private	Written at Meeting	Water quality is already fairly bad in the area, although the San Juan Mine might have little effect on this quality is being a small part of the effect fair and just?	Surface Water	Comment noted. Under NEPA regulations, a lead agency must analyze and disclose the potential effects of a Proposed Action and alternatives in order to make an informed decision, and the Water Quality section of the EIS addresses this comment.
39	39.003	Ross	Barnaclo	Private	Written at Meeting	It is highly concerning that 28 historic sites out of 82 of a small area could be harmed by extended operations. This study doesn't even include potential cultural harm done in every location where San Juan mining operates and will continue to operate if the extension is granted. The U.S. was native land from the beginning	Cultural Resources	Section 3.4 states that the entire DLE has been subject to cultural resource surveys ("Based on data provided by the New Mexico State Historic Preservation Officer (SHPO), there have been 86 previous cultural resources investigations that encompass all or part of the area of potential effect (APE)").
39	39.004	Ross	Barnaclo	Private	Written at Meeting	Unfortunately, the local economy is imbedded or largely impacted by mining operations/power plant etc. But it should be acknowledged that Northwest New Mexico is prime or perfect location for solar energy plus the simplified process of reconnected potential renewable energy sources for power lines. Solar farm projects and even wind farm projects should be considered ASAP.	Alternatives	Comment noted. Please see Master Response 1.
39	39.005	Ross	Barnaclo	Private	Written at Meeting	Job displacement programs should be implemented immediately for miners if the mine shuts down.	Socioeconomics	Comment noted.

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40	40.001	Larry	Baker	San Juan County Museum Assoc.	Mailed letter	I would like to respond to the draft EIS for the San Juan Mine Deep lease Extension at several levels. The first has to do with Section 106 compliance and the respective cultural resource management activities related to surface facilities, such as roads and gob vents. The San Juan Mine has proceeded and continues to conduct activities in full compliance with Section 106 of the National Historic Preservation Act. At this time, this includes excavational data recovery at sites LA 22258, LA 87593, LA 119277, LA 119298, and LA 106354. Testing and data recovery is pending at sites LA 16750, LA 16752, LA 106339, and LA 106354. Updated site recording has been undertaken at sites LA 119286, LA 119325, and LA 119326. Furthermore, post-subsidence monitoring continues to all National Register of Historic Places eligible sites as mining proceeds beneath these significant cultural resources. These cultural resource investigations insure effective programs for the management of the mines cultural resources and demonstrates the San Juan Mines' willingness to comply with Section 106, now and in the future.	Section 106	Comment noted.
40	40.002	Larry	Baker	San Juan County Museum Assoc.	Mailed letter	Secondly, the continued operation of the San Juan Mine and the operation of the San Juan Generating Station is crucial to maintaining a stable and healthy economy in the region. Indeed, the San Juan County Museum Association's consulting firm is tied to the economy of the mine. The Association is responsible for managing and operating the Salmon Ruins Museum under a lease agreement with the San Juan County. Overhead revenue from the consulting firm contributes directly to keeping the museum open. This cultural facility is dependent on revenue from the San Juan Mine, and mine closure would be catastrophic to its continued involvement with the community and cultural tourism.	General For Project	Comment noted.
40	40.003	Larry	Baker	San Juan County Museum Assoc.	Mailed letter	EIS ps. 52 - 1st paragraph; LA 199326 should be LA 119236.	Cultural Resources	Comment noted. Text has been revised as suggested.
41	41.001	Diane	Marks	Private	Mailed letter	The main problem with this DEIS is that it has no Alternative for closing down the mine completely in order to Keep the coal in the ground. If have any sincerity at all in your environmental review, these days it has to contain an Alternative of stopping any further extraction and burning of coal long term.	Alternatives	The EIS includes the No Action Alternative, which would shut down the mine completely on the day the decision is made (on or before August 31, 2019). Under this alternative, the coal would not be mined from the DLE after the decision is made, but the mine would remain open in order to complete its reclamation obligations in accordance with its prior permits and approvals.

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41	41.002	Diane	Marks	Private	Mailed letter	This burning contributes to Climate Change in a significant way. This matter was decided in March 2018 in US District Court for the District of Montana, Great Falls Division, in case CV 16-21-GF-BMM. This was a case about BLM leases for coal, oil, and gas mining. The court found that BLM (a government agency like yours) failed to consider alternative to BLM's unfettered coal, oil, and gas leasing that would reduce impacts to air, land, water, wildlife, and the global climate. The judge ordered the government agency to prepare a supplemental environmental impact statement to review climate change impacts and consider options for the amount of coal the government will make available for sale and subsequent mining. Please respond in your analysis how your planning will meet the requirements of this pertinent and already decided legal case, so as not to waste a lot of time and money by several entities in law suits if you fail to do so.	Climate Change	The District Court case cited in this comment addressed the future federal coal leases in the Powder River Basin, amounting to more than 15 million acres of BLM land. The key distinction between the Powder River decision by BLM and the DLE decision (apart from the obvious difference in magnitude of the coal resource involved) is that the DLE decision is either to continue coal mining at one-half the prior rate (Proposed Action), or cease mining in the near term (No Action). In addition, the BLM decision was for a resource management plan addressing a program for new leases and mining. Here, the proposed action is a specific continuing operations project, and furthermore a continuing operation at lower level (by half) of coal combustion. No action would be no further combustion of coal. These two alternatives fully bound the analysis of potential affects to climate change (no combustion, or combustion at half the previous rate prior to SIP implementation by PNM).
41	41.005	Diane	Marks	Private	Mailed letter	There are several references in the DEIS about the previous contract for WCC coal mining from 2008-2033. It does not appear that previous business contracts for a company serve as any precedent or even have relevance to a new EIS. The fact that WCC had previous authorization for coal extraction at this site does not mean that it automatically has authorization for future extraction. The fact that this previous contract is mistakenly introduced in the argument several times for the extension of the coal mining appears to be an obfuscation effort to continue the mining. Either explain the reason for including this irrelevant fact in the DEIs or delete it in the final draft.	Process	Comment noted. The EIS describes the regulatory history and process that led to the requirement for a new EIS.

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41	41.006	Diane	Marks	Private	Mailed letter	<p>When I became aware of the opportunity to comment on a project to extend the life of a climate-threatening coal mine, I looked for comments from other members of the public, Native American Tribes, and environmental groups to expand my knowledge of the project. But I didn't find any comments published in the DEIS. In my telephone conversation with the OSMRE Project Manager, she advised that although there were scoping comments, these comments were not available for other members of the public to read. In order to read these scoping comments so easily found on the USFS web sites and CEQA (CA) web sites, I would have to file a FOIA request. This procedure is not encouraging and supporting public input and transparency in the EIS process. In fact, it appears the OSMRE is trying to hide other public input from future commenters. Ms. Pinkham also said that the comments received on the DEIS also would not be available for the public to read without a FOIA request. This is the first agency I have come across with such limitations on sharing of public comments and transparency. Are OSMRE's procedures stifling public input and transparency? Please respond to this questioning of OSMRE's procedures also in the EIS.</p> <p>The stated purpose of soliciting scoping comments is to obtain input by various entities about their concerns on how the proposed project will negatively affect their local environment and to propose mitigations that might lessen such negative effects. If there are no scoping comments made readily-available to the public, no citizen can know if the DEIS proposed mitigations are adequately presenting, analyzing, and mitigating environmental concerns raised by the entities during the scoping, and the procedure is a sham. Since this problem of non-transparency in the environmental review on this San Juan Mine project currently exists, no other citizens or groups will be able to read any of the above-mentioned deficiencies in OSMRE's procedures.</p>	Process	Comment noted. The NEPA regulations do not require scoping comments to be made public. A summary of the issues raised during scoping is provided on page 10 of the Draft EIS. Public comments received on the Draft EIS are included in the Administrative Record. Specific scoping comments are available through a Freedom of Information Act request. Appendix B of the Final EIS includes all comment letters received and OSMRE's responses to each comment.
41	41.003	Diane	Marks	Private	Mailed letter	<p>The two environmental consulting firms used in this DEIS are obviously biased toward big-energy corporations: a brief examination of their past clients lists big, even international, companies who are capable of adding tremendous amounts of greenhouse gas pollutants to the earth's air....Although the OSMRE selected the consulting firms, the firms are being paid by San Juan Coal, so there is clearly potential for bias in the pro-energy consultants' reports. In order to more fairly and realistically study, analyze, and report on potential, even probable, climate change in this DEIS, the governing agency needs to obtain input from environmental consultants who have a history, experience, and skill in identifying contributions to climate change. Since the climate change section of the DEIS is inadequate (in light of case CV 16-21-GF-BMM), when OSMRE attempts to remedy this failure, it should seriously consider using different types of environmental consultants who do have experience analyzing and reporting on current science research and conclusions on climate change - such as Natural Resources Defense Council, 350.org, Sierra Club, etc. Please be sure to respond to this suggestion of the use of other types of environmental consultants in your analysis of climate change.</p>	Process	The selected contractors were subjected to a rigorous analysis of potentials for conflict of interest and were found to have none. The Draft EIS represents the analysis and conclusions of the OSMRE and the U.S. Department of the Interior, who are ultimately responsible for reviewing all data provided by applicants and other local, state, and federal agencies; overseeing the methods of analysis and analytical conclusions; and the conclusions presented in the EIS. While consultants aid the agency in the drafting of the report, all statements and conclusions in the report are those of OSMRE and the DOI. With regard to payment of consultants, the third-party arrangement is standard for any applicant who submits an application for a federal permit, so as to reduce the amount of taxpayer dollars used to complete the NEPA process.

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41	41.004	Diane	Marks	Private	Mailed letter	A mining company that is in a shaky financial position with regard to its future functioning may not be able to complete any environmental mitigation ordered under the DEIS. WCC has a record of non-compliances with environmental regulations....Such history of noncompliance with environmental regulations indicates that the supervising agency could not rely on WCC itself to mitigate the negative effects of the increased mining activities, so such activities would remain adverse impacts in the DEIS. Further, if WCC actually goes bankrupt, there will be no mitigating actions at all taken by it on this project, thus making the mitigations proposed unenforceable. This has not been examined in the DEIS, the therefore, there are not appropriate data and conclusions for such probably lack of environmental remedies in the DEIS.	Process	Comment noted. Under NEPA regulations, a lead agency must analyze and disclose the potential effects of a Proposed Action and alternatives in order to make an informed decision. In accordance with it's permit from the State of New Mexico, the San Juan Coal Company has purchased bonds, which are not released until reclamation is completed to the agency satisfaction. Although Westmoreland recently declared bankruptcy (October 2018) all funding for ongoing operations was excluded from that filing.
42	42.001	Anonymous	Commenter	Private	Oral at meeting	The continuation of the San Juan Generating Station is completely unnecessary and is having very severe health effects on the people that live in the area. So the air pollution that comes from the generating station is causing asthma and lung cancer. It's very well documented.	Public Health	Asthma and lung cancer rates in the local area are discussed in Section 3.16.2.2 of the Technical Resource Document, which is incorporated by reference into the EIS and were not found to be different from other areas in New Mexico. Pneumococcal death rates in people over 65 are higher in the Native American population.
43	43.001	Mike	Eisenfeld	San Juan Citizens Alliance	Oral at meeting	You know, basically the two primary owners at San Juan Generating Station, Public Service Company of New Mexico and Tucson Electric Power Company, have prepared planning documents that point to retiring their shares in San Juan Generating Station, leaving by 2022. And so the document basically fails to fully evaluate the just transition alternative post 2022 and then should be revised because the Alternative B isn't a reasonable alternative analysis due to insufficient and hypothetical information.	Alternatives	Comment noted. Please see Master Responses 1 and 4.
43	43.002	Mike	Eisenfeld	San Juan Citizens Alliance	Oral at meeting	And OSM, they have the responsibility to determine the future of the San Juan Mine and San Juan Generating Station site where a full evaluation of shutdown in 2022 is warranted given current economic realities and continued Westmoreland coal financial difficulties.	Alternatives	Comment noted. Please see Master Response 4.
43	43.003	Mike	Eisenfeld	San Juan Citizens Alliance	Oral at meeting	the draft EIS incorrectly considers emissions at San Juan Generating Station to be indirect impacts. And I would point people to 40-CFR 1508.8 which talks about indirect effects. Basically San Juan Mine and San Juan Generating Station are connected actions requiring more robust analysis than the draft EIS. And this connection is explicit in the draft EIS on page 24 where the statement is made that coal mine from the San Juan Mine is burned exclusively at the generating station and the generating station only burns coal from San Juan Mine. So the draft EIS minimizes the immense and significant direct effects of burning San Juan Mine coal at San Juan Generating Station since 1973.	Process	As described in Section 1 and 2 of the EIS, there is no action or decision to be made with regard to the San Juan Generating Station; therefore, there is no action to be considered a connected action to the Proposed Action. However, OSMRE describes that coal from the Proposed Action would be combusted at the San Juan Generating Station and therefore, the combustion of this coal is fully analyzed and disclosed in the EIS.

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43	43.004	Mike	Eisenfeld	San Juan Citizens Alliance	Oral at meeting	For example, on page ES-13, the draft EIS claims that Greenhouse gas emissions from San Juan Mine are minor even though it is a major source of methane, and San Juan Generating Station is an irrefutable significant source of greenhouse gasses.	Climate Change	The EIS discloses that both the San Juan Mine and Generating station are large sources of GHG emissions, refer to EIS Sections 4.2.1.1 and 4.2.1.2. More detailed analysis of the GHG emissions for both facilities is provided in the Climate Change Technical Resource Document, which is incorporated by reference into the EIS. The EIS uses consistent terminology to characterize the magnitude of effects due only to the Project involved in the decision, in the context of global background conditions. In this context, the incremental GHG emissions from the Mine and Generating Station are a small portion of the total emissions from GHG from New Mexico sources (refer to Climate Change Technical Resource Document that is incorporated by reference into the EIS, Table 3.2-3 for the New Mexico state GHG emission inventory data). Therefore, in this context the effects (not emissions) of the Proposed Action are deemed "minor."
43	43.005	Mike	Eisenfeld	San Juan Citizens Alliance	Oral at meeting	The draft EIS must be revised to accurately evaluate air quality impacts, including, but not limited to, mercury deposition, visibility, greenhouse gas emissions, and public health impacts from the past, present and reasonably foreseeable impacts at San Juan Generating Station.	Air Quality	Please see Master Response 1.
43	43.006	Mike	Eisenfeld	San Juan Citizens Alliance	Oral at meeting	In addition, cumulative air impacts that include the nearby Four Corners Power Plant and the methane hotspot problem hovering over the region were ignored in the draft EIS.	Cumulative Effects	Please see Section 4.1 of the EIS, which describes the potential cumulative effects. The full list of project considered in the cumulative effects analysis are displayed in Figure 4.1 and described in Section 5 of the Technical Resource Document, which is incorporated by reference into the EIS.
43	43.007	Mike	Eisenfeld	San Juan Citizens Alliance	Oral at meeting	The draft EIS minimizes the potential for groundwater impacts at the San Juan Mine and the San Juan Generating Station sites, calling potential for contamination of the underlying aquifer minor, page ES-17. One of the important considerations is that coal combustion waste or coal combustion residuals, the remnants of the burned coal, is dumped in the underground San Juan Mine exposing water resources to toxic releases, including arsenic, barium, lead, mercury, and other metals. And the underground San Juan Mine must be dewatered and could fill with water if and when abandoned. This could result in the CCR become saturated and contaminating groundwater and the San Juan River in the future. The draft EIS must be corrected to accurately address the potential for significant water resources/hydrology impacts from any of the alternatives being evaluated.	Groundwater	Please see Section 4.5 of the EIS, which discusses potential impacts to groundwater, including potential effects from placement of coal combustion residues in the former mining pits. Please see Master Response 1.

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43	43.008	Mike	Eisenfeld	San Juan Citizens Alliance	Oral at meeting	The draft EIS concludes that the TRI disposal impacts at San Juan Mine are trace even though the TRI dumping at San Juan Mine is over 28 million pounds from 2008 to 2016, averaging 3.18 million pounds per year. The toxic release inventory doesn't even include the pollution from San Juan Generating Station or the cumulative impacts of the Four Corners Power Plant/Navajo Mine, which is on the other side of the San Juan River.	Hazards and Hazardous Materials	As discussed in Section 1 of the EIS, Units 2 and 3 of the Generating Station were shut down on December 31, 2017, in accordance with the State Implementation Plan. Accordingly, emissions associated with these two units ceased. Given the anticipated reduced mine production rate (i.e., from approximately 6 million tons annually to approximately 3 million tons annually) following the shutdown of Units 2 and 3 on December 31, 2017, the current levels of hazardous waste, solid waste, and special waste generated and accumulated at the San Juan Mine are all expected to be reduced. The cumulative effects analysis for Hazards and Hazardous Materials is found in Section 4.15.5 of the EIS and evaluates the cumulative effects of all mine and generating stations in the region.
43	43.009	Mike	Eisenfeld	San Juan Citizens Alliance	Oral at meeting	It is unconscionable that OSMRE would woefully neglect the toxic legacy of the San Juan Mine/San Juan Generating Station complex and ignore significant public health implications. The draft EIS needs to be completely revised to accurately account for the cumulative and projected toxic legacy of the San Juan Mine/San Juan Generating Station complex, taking responsibility to clean up the contamination at both San Juan Mine and San Juan Generating Station. If San Juan Generating Station and San Juan Mine are retired, it is OSMRE that must reclaim, clean up and decommission the site.	Hazards and Hazardous Materials	Comment noted. Reclamation requirements are part of the State permit for the mine and overseen by the State of New Mexico. Hazards and Hazardous Materials are addressed in Section 4.15 of the EIS, and includes analysis of the potential cumulative effects. Please see Master Response 3.
43	43.010	Mike	Eisenfeld	San Juan Citizens Alliance	Oral at meeting	And then finally, I just want to say that one of the alternatives is that Alternative B basically says that from 2022 to 2033, some unnamed or -- some unnamed entity could potentially burn San Juan Mine coal. And I read that to mean that it would be a site other than San Juan Generating Station. And I think that that is completely speculative and that that alternative should have been eliminated from further consideration.	Alternatives	Please see Master Response 4.
43	43.011	Mike	Eisenfeld	San Juan Citizens Alliance	Oral at meeting	And I think that there should have been more of an emphasis on the transition alternative that should be carried all the way through, because as part of this process, the mine permit requires reclamation, decommissioning, and reuse of the San Juan Generating Station, San Juan Mine site, and that is a bigger issue facing Farmington, which is in a significant economic decline. It would be really important that transition be considered as an element of the Draft Environmental Impact Statement.	Alternatives	Please see Alternative D in Section 2 of the EIS, which describes the Just Transition Alternative and why this Alternative was not carried forward for full analysis.
43	43.012	Mike	Eisenfeld	San Juan Citizens Alliance	Oral at meeting	One additional comment is that the Durango hearing should have definitely been rescheduled because of the fire and the fact that the Durango community is sort of overwhelmed right now. You're not going to get a good turnout and something like the future of San Juan Mine and San Juan Generating Station is very important regionally and, anyway, I highly encourage rescheduling of Durango.	Process	Comment noted. OSMRE provided numerous outlets and opportunities for comments, as described in Section 5 of the EIS.

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44	44.001	Orville	Arviso	Private	Oral at meeting	And I'm for the power plant, San Juan and the mining industry, which would be Westmoreland. And I'm hoping they get their lease pushed up to about 2033 in the coal mine business because it will have a big effect on the Navajo Nation with no jobs or high paying jobs. This is the only high paying job they've ever seen and we need the income. Plus the Navajo tribe gets royalties from Westmoreland and these large companies.	Environmental Justice	Comment noted. Environmental Justice is evaluated in Section 4.12 of the EIS.
44	44.002	Orville	Arviso	Private	Oral at meeting	And also it will affect Farmington people because there is quite a few businesses that will go out and no income coming in because loss of jobs. And the people in Farmington will also lose their jobs. And income that they usually -- that usually where they make money on their merchants, that will probably stop.	Socioeconomics	Comment noted. The socioeconomic analysis in Section 4.11 captures the indirect and induced economic impacts of the scenario where the Mine and Generating Station shut down. Induced and Indirect impacts reflect the economic linkages between an action/projects, such as the mine.
44	44.003	Orville	Arviso	Private	Oral at meeting	And it's kind of scary if you look at the future where if the generating station, the mine were to shut down immediately, you will see lots of lights go out in the streets where we need them as safety, you know, for safety for our people.	Public Health	Potential health effects due to mine closure were discussed in Section 4.16 of the EIS and in Section 3.16.4.3 of the Technical Resource Document, which is incorporated by reference into the EIS. The effect of increase darkness on crime rates was not discussed, but none of the alternatives contemplate an overall reduction of power available on the western grid; therefore, this comment would be speculative.
45	45.001	Thomas	Heyden	Private	Oral at meeting	Also, the economic impact, I think, is going to be so severe to San Juan County and Farmington that I think the PRC and regulating bodies should reconsider allowing PNM to shut down this quickly. We just shut down units two and three. And then it's only going to be a few short years after that. And I don't think our local economy can absorb that in that short a period of time.	Socioeconomics	Comment noted. Section 4.11 of the EIS describes the analysis of social and economic impacts of the Proposed Action and alternatives.
45	45.002	Thomas	Heyden	Private	Oral at meeting	One of the points that I wanted to make was PNM spent money to influence the PRC member Lovejoy, for that elected official to vote in favorable ways PNM wanted to shut the plant down, which I don't think would be beneficial to the local economy.	Socioeconomics	Comment noted.
46	46.001	Isadore	Linus Gourneau	Private	Oral at meeting	One thing I wanted to make note of in connection to that was I was told last year at this meeting by several of the experts here that I would be receiving different information, so I made sure I left my mailing address and my name. And the only thing I've received since then is the invitation to this meeting. So I didn't actually get to look at anything online. I don't have computer access or internet access and I do apologize.	Process	Comment noted. In addition to mailing postcards and letters notifying interested members of the public of the availability of the Draft EIS, hard copies of the Draft EIS were made available for public review at local libraries in the region, as well as by request to individuals.
46	46.002	Isadore	Linus Gourneau	Private	Oral at meeting	Our traditional ceremonies are greatly supported by the efficacy or the impact of the traditional plants we use in our traditional ceremonies, and that is everything from children through the elderly. The impact or the efficacy of the plants in this local area is greatly diminished. You can go out and pick wild tea, acne medicines, the different sage, the different -- even wild onion and everything. Everything is losing its potency.	Cultural Resources	Comment noted; Impacts to plant growth are addressed in Section 4.6 Vegetation.

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46	46.003	Isadore	Linus Gourneau	Private		<p>The other thing is that the elderly people say they had attended meetings, and I don't know from the '70s or '60s, but there were grave sites where this mine was originally set up and now this extension, there are still grave sites in that area. Now, I don't know where they're at, I'm just going off what I was told by the elderly people in this area. But they said the sacredness of the sites because of their ancestors being buried there is beyond what they can talk about. And I don't -- I can't tell you from looking at any of the posters that there was any investigation or any research done in this specific area.</p> <p>So I would urge some further look into this because they said in order to set this mine up originally, that the grave sites were either moved and they were never informed to where or they were simply bulldozed over or whatever happened with the excavation and that kind of thing. And I'm sure this is surface. But from our traditional Navajo perspective, our prayers go into the earth and our healing comes out from it, from Mother Earth to us. And so we might only be concerned with what we see on the surface.</p>	Cultural Resources	As discussed in Section 4.4 of the EIS, any unanticipated discovery of human remains and/or funerary objects would be treated in accordance with NAGPRA.
46	46.004	Isadore	Linus Gourneau	Private	Oral at meeting	On one poster dealing with the species impact, I notice there was no listing for our sacred water bird and that is the bird -- that is the being that watches over this area besides the eagle. And I personally have seen and prayed with that being in this area, in the areas noted on the map, and I just don't know why it's not listed. I don't know if that was intentionally left off or not.	Wildlife	Comment noted. Sections 3.8 and 4.8 of the EIS describe the potential effects to special status species. As described in Section 4.8, OSMRE consulted with USFWS, New Mexico Department of Game and Fish, BLM, and tribal governments to determine which special status species to consider in its analysis of effects. Non-special status species, including birds, are addressed in Section 4.7 of the EIS. Refer to TRD Section 3.8.2 for a discussion on which sensitive species were included in the EIS.
46	46.005	Isadore	Linus Gourneau	Private	Oral at meeting	I don't know who is conducting the analysis for the air quality or the water quality. I did see the statistics and I did look at all of the presented material on these posters. But I would hope that there would be some third objective party, third person objective party, conducting it, that aren't associated with the state or the mine or the generating station.	Process	The NEPA process is led by a lead agency who has decision-making authority over a Proposed Action. For this project, the lead agency is the Office of Surface Mining, Reclamation and Enforcement, a federal agency who is not associated with the State of New Mexico, the mine, or the generating station.
46	46.006	Isadore	Linus Gourneau	Private	Oral at meeting	And I would just ask that these not-discussed perspectives be considered because the amount of cancers evident among the Navajo people in this area specifically being discussed and considered are very high. And if this doesn't contribute to that, I would be greatly surprised. And on other parts of our reservation where there are no mines and no oil wells, we don't have these incidences or high rates of cancers, especially airborne types of cancers.	Public Health	Potential effects to public health are addressed in Section 4.16 of the EIS. In addition, Section 3.16 of the Technical Resource Document, which is incorporated by reference into the EIS, provides additional information on cancer rates, including lung cancer. Local lung cancer rates are below national averages and are not different from state and county averages. Death rates from all cancers (not just lung cancer) are slightly higher in three "small health areas" around Farmington, than San Juan County, but are lower than the State of New Mexico.
47	47.001	Shelby	Robinson	Private	Oral at meeting	And I'm also very concerned about jobs for people. So I would really like to see a gradual phase out of coal in this case and phasing in of training for people who need those jobs and renewal energy, solar and wind at the same time with comparable pay.	Socioeconomics	Comment noted.

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47	47.002	Shelby	Robinson	Private	Oral at meeting	I also am very concerned about native people being targeted for these dangerous and dirty power plants and jobs and it seems to be the way the history of it has worked. I would like to see an end to that also. Part of that would involve phasing in of clean energy and good paying jobs.	Environmental Justice	Comment noted. Section 4.12 of the EIS evaluates the potential effects to environmental justice populations. Please also see Master Response 1.
47	47.003	Shelby	Robinson	Private	Oral at meeting	I think -- oh, and I'm also very concerned about the air quality. I can see it from my house north of Mancos. They can see it from space, the methane cloud, the pollution, the ozone. And it's enough already. We know that it's bad. Let's start getting progressive and change things.	Air Quality	Comment noted. Air Quality is evaluated in Section 4.1 of the EIS.
47	47.004	Shelby	Robinson	Private	Oral at meeting	I would also like to add that I would like to see much more emphasis on energy conservation to go along with the phasing out of burning coal, education instead of subsidizing coal, subsidizing conservation and energy, energy conservation programs. I think that would be a much better use of the money. Thanks.	Alternatives	Comment noted.
48	48.001	Eleanor	Smith	Private	Oral at meeting	And we've always noticed the brown haze in the community throughout -- and from where I'm from, Teec Nos Pos, Arizona, you can see it all the way down that way. We've lived like that for decades. I'm glad that since the APS and PNM have both shut down part of their power plants, I guess, and then have moved towards cleaner emissions, that it has really improved the air quality in this area. I can see it, you know, just visually. And so I'm thankful for that.	Air Quality	Comment noted. Section 4.1 of the EIS addresses impacts to air quality including Regional Haze. Section 4.13 of the EIS addresses Visual Resources.
48	48.002	Eleanor	Smith	Private	Oral at meeting	We've seen increased people with asthma, people who have died, been dying of cancer. Cancer, it seems like, has been on the rise over the last couple of decades. You know, and things like that concern us. And so we want to learn more about this environmental impact statement and how it affects -- will affect our children, our grandchildren for the future who still reside in this area and make this their home.	Public Health	Comment noted. Public Health is evaluated in Section 4.16 of the EIS.
49	49.001	Stewart	Koyiyumtewa	Hopi Tribe	Mailed letter	In our enclosed letter to the BLM dated February 2, 2016, we reviewed the Testing Plan for Seven Sites. On BLM land, LA 106350 is described as an Archaic and Anasazi Pueblo 11-111 artifact scatter, LA 106354 is a Basketmaker III-Pueblo I activity area with hearths, and LA 119277 is a lithic scatter. On private land, LA 16750 is described as an Anasazi Pueblo II-III habitation, LA 16752 is an Anasazi Pueblo II-III residential community, LA 22258 is an Anasazi-Pueblo II-III multiple residence habitation, and LA 106339 is an Anasazi Pueblo II artifact scatter. Because sites LA 16750, LA 16752 and LA 2258 are habitations, we have determined that this testing program may lead to adverse effects to cultural resources significant to the Hopi Tribe.	Section 106	Comment noted. Of the sites listed, only LA 106350 and LA 119277 are located in the current APE. OSMRE will continue consultation with the Hopi Tribe under Section 106 of the National Historic Preservation Act.
49	49.002	Stewart	Koyiyumtewa	Hopi Tribe	Mailed letter	We have now reviewed the enclosed draft Environmental impact Statement that states that the Proposed Action has the potential to affect 80 archaeological sites, including 65 artifact scatters and 15 sites with standing structural ruins such as masonry walls, kivas, isolated rooms, cairns and rock shelter sites. Therefore, we have determined that this proposal is likely to adversely affect cultural resources significant to the Hopi Tribe and we request continuing consultation on any proposed treatment plans.	Section 106	Comment noted. OSMRE will continue to consult with the Hopi Tribe under Section 106 of the National Historic Preservation Act.

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50	50.001	Damian	Garcia	Pueblo of Acoma	Mailed letter	The Pueblo would like to initiate formal consultation and the impacts of the mine to cultural resources.	Section 106	Comment noted. OSMRE will continue to consult with the Pueblo under Section 106 of the National Historic Preservation Act.
51	51.001	Andrew	Zink	Department of Cultural Affairs	Email	As is suggested in the DEIS and as we discussed at the public comment meeting on June 25, 2018 in Albuquerque New Mexico, the OSMRE is considering the option to integrate NEPA and Section 106 in accordance to 36 CFR 800.S(c). The SHPO is supportive of this option but strongly encourages the OSMRE to follow the process outlined in the Advisory Council on Historic Preservation's (ACHP) 2013 handbook.	Section 106	Comment noted.
51	51.002	Andrew	Zink	Department of Cultural Affairs	Email	Through an earlier email from OSMRE, we are aware the ACHP has chosen to participate but our records do not have this correspondence between the OSMRE and the ACHP regarding this decision. SHPO requests a copy of this correspondence.	Section 106	OSMRE previously interpreted the ACHP's prior response to indicate that it had chosen to participate. The ACHP subsequently indicated that it had not yet decided whether it will formally consult regarding the proposed action. OSMRE has clarified that the ACHP has not yet chosen to participate. Upon receipt of any correspondence from ACHP, OSMRE will forward those letters to SHPO for its files.
51	51.003	Andrew	Zink	Department of Cultural Affairs	Email	SHPO understands there are many details still to be addressed. Among these is that the ongoing identification process will create changes in the number of cultural resources that could potentially be affected by the DLE.	Section 106	Comment noted. Section 5 has been updated to provide greater detail regarding the Section 106 process and stipulated conditions.
51	51.004	Andrew	Zink	Department of Cultural Affairs	Email	As previously mentioned for monitoring activities at the mine, SHPO requests all monitoring investigations be treated as individual activities and for these activities to be registered in NMCRIS. The reports can be submitted to the lead federal agency for consultation with the SHPO. The report could simply consist of a NMCRIS Investigation Abstract Form (NIAF) and an update to the site form(s) (LA Form) documenting the visit(s) and recorder's observations.	Section 106	Comment noted. OSMRE has updated Section 5 of the EIS to include this stipulated condition.
51	51.005	Andrew	Zink	Department of Cultural Affairs	Email	Finally, the Technical Resource Document (TRD) of the DEIS provides a list of measures that will be implemented by the SJCC to avoid adverse effects to cultural resources. SHPO recommends an additional provision or measure. To raise awareness, it is recommended that contractors and SJCC personnel who will be in positions to affect cultural resources in the field be provided training on historic preservation law, what a cultural resource is, and how cultural materials should be handled.	Section 106	Comment noted. OSMRE has updated Section 5 of the EIS to include this stipulated condition.
52	52.001	Bruce	Anderson	Private	Email	I drive to work from Cortez Colorado and on especially windy trends in the spring, the wind may have been blowing for several days on end and when I top the hill where I can see into shiprock NM. The haze will be very noticeable. Now mind you the wind has been blowing from the southwest for days I am coming over the hills from southwest of the PNM and Navajo Generating stations and the haze is horrible, these power plants are downwind!!! So the environmental crowd would have us kicked off our lease, option (C) selected to help with regional haze. Hum maybe the air pollution is coming from Phoenix Los Angeles possibly as far away as China?	Air Quality	Comment noted. Air Quality, including regional haze, is evaluated in Section 4.1 of the EIS.

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53	53.001	Daniel	Mumm	San Juan Coal Company	Email	In determining the magnitude of impacts, each resource used different criteria to determine "Moderate" and "Minor" impacts. Each environmental resource will have specific criteria for determining these levels of impact, but the current determination of these levels seems inconsistent from resource to resource. For some resources, "Major" is the only category that has a defined impact. This is confusing because Moderate and Minor are still used to describe impacts for those resources, but their level of impact has not been defined. For additional clarity, SJCC suggests defining Major, Moderate, and Minor for each resource. If the resource has a set standard, such as NAAQS for Air Quality, then explain why only two categories are used. This was done well for the Air Quality resource.	Process	Impact analyses and significance criteria are resource specific. As described in Section 4 of the EIS, if there is a set regulatory quantitative threshold, this is described for that resource. If not, then a qualitative analysis is conducted and OSMRE had described what is considered a major impact. Moderate impacts are those impacts that do not meet the stated criteria for a major impact, but are still outside the normal fluctuation of baseline conditions. Minor impacts are those that are within the normal fluctuation of baseline conditions (not readily discernible).
53	53.002	Daniel	Mumm	San Juan Coal Company	Email	Additionally, OSMRE may wish to confirm that the approach and definitions used to classify the magnitude of impacts in the DEIS are consistent with the approach used to identify significant impacts under NEPA. This may include further confirming or explaining in the EIS document how impacts classified as "moderate" or "minor" result in less-than-significant impacts. In some places in the DEIS, for instance as on page 87, the document suggests that a "moderate" impact might still result in significant changes to a resource. This possible inconsistency may need to be considered and reconciled throughout the document.	Process	Comment noted. The methodology used to classify the magnitude of impacts has been conducted in accordance with NEPA regulations and the OSMRE NEPA handbook, and is consistent with prior OSMRE NEPA documents. In specific response to the example provided, as described in Section 4.4.2 of the EIS (which includes page 87), potential impacts to cultural resources would be addressed in accordance with Section 106 of the National Historic Preservation Act and the EIS provides additional recommended mitigation measures.
53	53.003	Daniel	Mumm	San Juan Coal Company	Email	Because this environmental analysis contains a retrospective analysis, SJCC suggests defining the region of influence (ROI) for each resource within the Affected Environment. Some resources already contain a definition of the ROI within the Affected Environment. This would consistently describe the impacts of the previous mining that has taken place, while also setting up the readers' understanding of the impact area for the rest of the document.	Process	Comment noted. The region of influence for each resource area is described in detail in the Technical Resource Document, which is incorporated by reference into the EIS. For additional clarity, a sentence regarding the region of influence has been added to Section 3.
53	53.004	Daniel	Mumm	San Juan Coal Company	Email	SJCC also suggests that the descriptions of Alternative B and the No Action alternative be used consistently throughout the EIS. For Alternative B, a "typical" local generating station is described to analyze the potential impacts of coal combustion. Methods of mining, production rate, transportation of coal and CCR, and use of CCR in reclamation would all be analyzed as being similar to the proposed action. While the majority of resources follow this, some discuss additional transportation and combustion taking place in different regions. Consider reviewing the descriptions for consistency.	Technical Edit	Comment noted. The language in the EIS is correct as drafted. It is appropriate that some resource areas acknowledge, that while unknown where coal would be combusted, additional impacts related to transportation and combustion would occur.
53	53.005	Daniel	Mumm	San Juan Coal Company	Email	For Alternative C, additional disturbance would be required to finish the reclamation of Juniper Pit without receiving the planned amount of CCR from the Generating Station. This impact is inconsistently described within the resource discussions. Some resources include the impact, while other do not. Additionally, the timing of reclamation and bond release should be considered for all three alternatives. Timing is discussed in Section 2.2.3 under the No Action Alternative, but is not discussed in the other alternatives or elsewhere in the document. This will help clarify the duration of potential impacts, which the Draft EIS defines as short-term and long-term.	Alternatives	Comment noted. The potential impact of additional disturbance during reclamation has been added to sections in which it was not already discussed.

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53	53.006	Daniel	Mumm	San Juan Coal Company	Email	Section of EIS: Table ES-4, DEIS Section 4, TRD - Consider reviewing Table ES-4 for consistency with impacts and impact levels reported for each resource in DEIS Section 4 and TRD Section 3.0. In some cases, impacts reported in Section 4.0 are not carried forward into Table ES-4. For example, impacts to Waters of the US are described as minor and permanent in Section 4, but these impacts are not described in Table ES-4. To ensure a full summary, consider verifying that all impacts and impact levels are included in Table ES-4.	Executive Summary	Comment noted. The Executive Summary has been revised for the Final EIS.
53	53.007	Daniel	Mumm	San Juan Coal Company	Email	Section of EIS: Table ES-4 and DEIS 4.14; page ES-24, 129 - For consistency, consider explaining the results of the noise impact assessment in the TRD (see TRD section 3.14.4.3) that identified a major impact associated with personal vehicle use, but that more information regarding use and distribution of vehicles would likely result in lower noise levels.	Noise	Comment noted. The Executive Summary has been revised for the Final EIS. The information in the Technical Resource Document is incorporated by reference into the EIS.
53	53.008	Daniel	Mumm	San Juan Coal Company	Email	Section of EIS: Table ES-4, DEIS Section 4, TRD - Consider reviewing Section 2.2.2 for consistency with impacts described for each resource in Table ES-4, Section 4 of the Draft EIS, and the TRD. Some resources discuss additional transportation impacts associated with Alternative B, whereas Section 2.2.2 describes that similar types of transportation would be used from the mine to location of combustion. Other resources describe the emissions being located in a different region and different CCR handling and storage differing from the current practices, which is inconsistent with Section 2.2.2. Specific examples include: - Archaeology describes additional traffic to transport coal to another generating station - Water Resources discusses that deposition of heavy metals would decrease in the San Juan River - Vegetation discusses an increase in transportation - Wildlife discusses a reduced effect on the San Juan River and perennial waterbodies due to reduced emissions - Special Status Species discusses deposition being located in a different area - Social and Economic Values discusses different transportation methods to ship coal and the additional costs associated with that transportation - Environmental Justice describes that a large source of criteria pollutants would be removed from the area with the shutdown of the Generating Station. - Noise and vibration discusses changes to transportation of coal - Waste discusses that CCR would not be available for use in reclamation and that transportation would be different than the proposed action	Process	Comment noted. Please see response to Comment 53.4.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.009	Daniel	Mumm	San Juan Coal Company	Email	Section of EIS: Table ES-4, DEIS Section 4, TRD - Under the Alternative C discussion in 2.2.3, the need for additional disturbance is described due to not receiving the full planned amount of CCR from the Generating Station. Consider clarifying the types of potential impacts, the impact level and duration associated with obtaining additional backfill material (1.5M cubic yards or a 60 acres surface disturbance footprint) as replacement for CCR under Alternative C). In Table ES-4, Section 4 of the Draft EIS, and the TRD, consider including a description of these impacts to ensure that this information is portrayed consistently. Specific examples include: - Air quality in Table ES-4 does not describe the additional disturbance and reclamation work needed to complete reclamation. - Water Resources does not describe how additional disturbance could impact water quality and availability. - Special Status Species does not describe if habitat would be impacted by the additional disturbance. - Land use, transportation, and agriculture do no describe the impacts to grazing from disturbing additional area. - Recreation does not describe the impacts to recreationists from disturbing additional area. - Visual does not describe potential impacts due to the additional surface area disturbed to facilitate reclamation.	Alternatives	Comment noted. Executive summary table has been reviewed for consistency with main body of the EIS. No changes to impact analyses or conclusions have been made.
53	53.010	Daniel	Mumm	San Juan Coal Company	Email	Section of EIS: DEIS and TRD - While San Juan Mine has designed its sedimentation basins to contain most storm water flows, the designation of “zero discharge facility” has not been granted to the San Juan Mine for its NPDES permit. Consider changing this language and locations that discuss that San Juan Mine will not have an uncontrolled discharge throughout the Draft EIS and TRD.	Surface Water	Comment noted. This language has been removed the from the Final EIS.
53	53.011	Daniel	Mumm	San Juan Coal Company	Email	Section of EIS: 1.1; page 2: Consider clarifying that the EIS also evaluates the potential impacts during the reclamation and bond release phase of the Project in the final paragraph of Section 1.1.	Technical Edit	Comment noted. An additional sentence has been added to Section 1.1.
53	53.012	Daniel	Mumm	San Juan Coal Company	Email	Section of EIS: 2.1.1.1 - In consideration of the 150-page EIS limit, SJCC suggests moving some information regarding the operations of the underground mine to the TRD or citing the San Juan Mine Permit 14-01 for the information. Many of the details included (longwall layout, entries, mains and submains, etc.) do not appear directly related to the analysis in this document.	Technical Edit	Comment noted. No change has been made.
53	53.013	Daniel	Mumm	San Juan Coal Company	Email	Section of EIS 2.2.1 and 2.2.2 - SJCC suggests adding detail to the Action Alternatives to describe the reclamation and bond release process and timing. The No Action alternative states that final regrade would be complete approximately 10 years after the shutdown, but no other alternatives discuss timing of reclamation. Additionally, for consistency, consider reviewing resource area descriptions for the No Action for consistency with reclamation timing. A few resource areas state that this timing is unknown.	Technical Edit	Additional information has been added to Section 2.2.1.5

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53	53.014	Daniel	Mumm	San Juan Coal Company	Email	Section of EIS: 2.2.4; page 34-35 - SJCC suggests removing Section 2.2.4. The “Just Transition” alternative was not carried forward for full analysis, but is discussed at length when other screened alternatives are not. Consider describing why the “Just Transition” alternative was screened and remove the remaining text so that the reader does not expect that this alternative was carried forward.	Technical Edit	Comment noted. The section responds to the multitude of scoping comments received as well as comments that have since been received on the Public Draft EIS. The text clearly states that the alternative was not carried forward for full analysis. No change made.
53	53.015	Daniel	Mumm	San Juan Coal Company	Email	<p>Section of EIS: Table 2.3-1; page 37 - Under Geology and Soils, consider listing the Federal (30 CFR 78) and state (New Mexico 19.8.8) regulations requiring underground mine operators submit a PAP detailing the premine baseline conditions in the proposed mine permit area and near-mine areas. Geology, topography, and soil baseline conditions provide the necessary information to develop the engineering design and mining operation plan that is presented in the PAP and incorporated into the mine permit (for the project this is MMD Permit 14-01). Mining methods and plans must consider the nature and quality of the coal resource to maximize coal recovery and to manage topsoil and overburden resources over the life of mine for use in contemporaneous reclamation (30 CFR Part 817 and 19.8.9 NMAC).</p> <p>Specific assessments are required to identify available and suitable topdressing materials and growth media for successful reclamation of surface mine areas, and to identify and manage potential effects from post-mine erosion and stability including subsidence from underground mining (43 CFR Part 3484 and 19.8.9 NMAC). Note that, due to the limited surface disturbance within the underground mining areas of SJM, surveys for topdressing availability and suitability are not necessary. However, under Alternative C, such surveys may be required.</p> <p>For mineral development on federal coal leases, a Resource Recovery and Protection Plan (R2P2) is required to explain how the proposed mining operation will achieve maximum economic recovery (MER) of the federal coal. Also, if a coal bed, or a portion of the coal bed, will not be mined or would be rendered un-minable by the operation, a justification for that approach must be provided (see 43 CFR § 3482.1) Federal (43 CFR 348) and New Mexico (19.8.9.919) regulations specify measures to assess</p>	Project Description	Comment noted. No changes made to text.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.016	Daniel	Mumm	San Juan Coal Company	Email	<p>Section of EIS: Table 2.3-1 Special Status Species; page 41 - SJCC suggests adding the following under applicable laws, regulations Protection Measures, and Best Management Practices for Special Status Species:</p> <ul style="list-style-type: none"> - Federal: BLM Instruction Memorandum 6840: Special Status Species Management - Federal: Memorandum No. NM-200-2008-001. BLM/FFO Threatened and Endangered and Special Status Species Management - Navajo Nation: Resource Committee Resolution No. RCS-41-08. Navajo Endangered Species List. - Navajo Nation: Title 17 Part 507 of the Navajo Tribal Code. - State: NMSA §§17-2-37. Wildlife Conservation Act - State: NMAC 19.33.2 through 19.33.6: Endangered Plant List - State: NMAC 19.8.8.809 Coal Mining Minimum requirements for fish and wildlife resources information. - State: NMAC 19.8.9.905 Coal Mining Minimum Requirements for reclamation and Operations: Fish and Wildlife Plan. 	Special Status Species	Comment noted. These regulations have been included in Table 2.3-1. Note that New Mexico State Statutes Title 19 are already included in Table 2.3-1 and additional details have not been added.
53	53.017	Daniel	Mumm	San Juan Coal Company	Email	<p>Section of EIS: Table 2.3-1 Land Use; page 42 - SJCC suggests adding the following under applicable laws, regulations Protection Measures, and Best Management Practices for Land Use:</p> <ul style="list-style-type: none"> - Federal: BLM FFO Resource Management Plan - Appendix A to the Mining Plan Decision Document, San Juan Coal Company, San Juan Mine, Federal Lease NM-99144, San Juan County, New Mexico Resource Recovery and Protection Plan – described below <p>This protocol was established in 1997 by SJCC and the BLM/FFO, and describes commitments made by SJCC with respect to potential impacts from underground coal mine operations on oil and gas production, gathering, or transportation. The protocol indicates that SJCC will conduct its operations in a manner consistent to legally mandated multiple use of federal lands and mineral reserves, and would to the extent practicable, achieve maximum economic recovery of federal resources, including coal, oil, and gas in accordance with SJCC's Resource Protection and Recovery Plan (R2P2). SJCC will take reasonable steps to avoid impacts to existing oil and gas resource production, gathering, and transportation facilities. Steps to avoid impacts may include mining around existing well bores, moving existing facilities, and relocating associated infrastructure. If impacts cannot be avoided, SJCC will pay fair market value for the appropriate mitigation measures. If impacts require that production permanently cease, SJCC will compensate the oil and gas producer for the fair market value of lost production, based on projected future net cash flow. SJCC will also be responsible for paying to plug wells in accordance with BLM and State of New Mexico regulations.</p>	Project Description	Comment noted. The BLM FFO Resource Management Plan has been added to Table 2.3-1.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.018	Daniel	Mumm	San Juan Coal Company	Email	Section of EIS: Table 2.3-1 Social and Economic Values; page 42 - SJCC suggests adding the following under applicable laws, regulations Protection Measures, and Best Management Practices for Social and Economic Values: - Federal: 36 CFR Part 800.2(c)(2)(ii), the regulations implementing Section 106 of the NHPA of 1966 (as discussed in the TRD Section 3.12.3.2). - State: Severance tax (NMAC Section 7-26-6) - State: New Mexico Coal Royalty (NMAC Section 19.2.6 Rule 6) - State: Permit Applications – Land Use and Prime Farmland, 19.8.8.811, 19.8.8.812, and 19.8.8.814 NMAC - State: Post-Mining Land Use, 19.8.9.908 NMAC and	Technical Edit	Comment noted. The suggested additions to the table have been made.
53	53.019	Daniel	Mumm	San Juan Coal Company	Email	Section of EIS: Section 3; page 46 - SJCC suggests adding references to the TRD in the affected environment summaries. The shortened affected environment summaries are supported by the TRD, but most resources do not contain a reference to direct the reader to the location of pertinent information in the TRD.	Technical Edit	Page 47 of the Draft EIS states that additional detailed descriptions of each resource area are provided in the Technical Resource Document, which is incorporated by reference to the EIS. No change has been made.
53	53.020	Daniel	Mumm	San Juan Coal Company	Email	Section of EIS: Section 3; page 46-66 - For clarity and to better support the Draft EIS evaluation of direct, indirect and cumulative effects, the area that constitutes the affected environment by the San Juan Mine DLE Mining Modification Plan (the Proposed Action) and the indirect impact of combustion of coal from the Generating Station is needed for each resource area. For example, the affected environment for air quality for the Proposed Action is different from that for the indirect impacts of the Generating Station. Understandably, long descriptions are not possible given that the DEIS is limited to 150 pages. As a suggestion, figures showing the affected area (or area of influence) for each resource could be provided and if needed, could be appended to the DEIS.	Technical Edit	Comment noted. This information is incorporated by reference from the Technical Resource Document. No change made.
53	53.021	Daniel	Mumm	San Juan Coal Company	Email	Section of EIS: Section 3; page 46-66 - For some resources, the ROI is described in the affected environment section while for others; it is described in the environmental consequence section. For consistency, consider describing the ROI for each resource in the respective affected environment section for that resource. This is also consistent with DEIS Section 3.0 stating that the retrospective analysis For some resources, the ROI is described in the affected environment section while for others; it is described in the environmental consequence section. For consistency, consider describing the ROI for each resource in the respective affected environment section for that resource. This is also consistent with DEIS Section 3.0 stating that the retrospective analysis will be described in the affected environment summary. Additionally, consider reviewing the ROI descriptions to clarify that the assessment included the reclamation of the former San Juan Mine Juniper and Pinon surface mine pits.	Technical Edit	Comment noted. EIS has been reviewed for consistency between sections.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.022	Daniel	Mumm	San Juan Coal Company	Email	Section of EIS: 3 and 4; page 46-144 - Some of the environmental consequence sections identify types of impacts that could affect particular physical aspects of the affected environment (e.g. ponds). However, that aspect of the affected environment is not described. Consider expanding the description of the affected environment to better support the basis for the impact.	Technical Edit	Comment noted. EIS has been reviewed for consistency between sections. Additional details regarding affected environment are provided in the Technical Resource Document, which is incorporated by reference into the EIS.
53	53.023	Daniel	Mumm	San Juan Coal Company	Email	<p>Section of EIS: 3.1; page 47 - Suggest adding the following description to Section 3.1.1 and 3.1.2.</p> <p>“Ambient air monitoring data within a 100-kilometer radius from larger sources shows that air quality in the Project area complies with National Ambient Air Quality Standards (NAAQS) for criteria pollutants. Regional air monitoring data for criteria pollutants from active stations in the Four Corners area indicate that the ambient air conditions in the region are in attainment of the Federal and state ambient air standards. Before 2015, the ozone standard was 0.075 ppm, and there was no exceedance of this standard before 2015. The current standard is 0.072 ppm; there have been no exceedances of this standard since its adoption, and ozone concentrations have generally decreased at all regional monitoring locations.</p> <p>There are two mandatory Class I areas within a 100-kilometer radius of the San Juan Mine and ten Class I areas within a 300-kilometer radius. An evaluation of the trends in regional visibility including all of these Class I areas regional visibility has improved over the last decade (i.e., the annual average of all, monitored deciviews (dVs) in Class I areas have generally decreased). This is attributed to improved control of air pollution from sources such as power plants (IMPROVE 2017).”</p>	Air Quality	Comment noted. The EIS reflects comments received during the scoping period, which specifically addressed ozone. No change has been made.
53	53.024	Daniel	Mumm	San Juan Coal Company	Email	<p>Section of EIS: 3.3; page 50 - To add supporting information for the environmental consequence assessments for Geology and Soils and other resources described under Alternative A and Alternative C, consider adding summaries of:</p> <ul style="list-style-type: none"> - The No. 8 coal seam that is produced from the DLE lease; - The type of soils and availability of suitable material for reclaiming the former surface pits. There is currently no mention of soil in this section and no reference to the TRD for the information - The types of soil found in the DLE - The nature and extent of existing subsidence from mining the DLE. - The total acreage disturbed and reclaimed in the DLE footprint (see Appendix B, Table B-1, Deep Lease Extension Project San Juan Mine Baseline Data Summary Report for Geology, Topography and Soils Resources, Ecosphere Environmental Services, 2017). - A description of topography or geologic outcrops/features that are later important relative to wildlife habitat, viewsheds, and cultural (potential for TCPs) resources. 	Geology	Comment noted. Additional information regarding geology and soils affected environment is provided in the Technical Resource Document, which is incorporated by reference into the EIS.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.025	Daniel	Mumm	San Juan Coal Company	Email	<p>Section of EIS: 3.3.2; page 51 - Consider identifying which of the geologic formations in the DLE:</p> <ul style="list-style-type: none"> - May have unique features, if any - Are known fossil bearing units <p>Also consider summarizing the regional occurrence and management of paleontological resources and their relative significance in the ROI. The information can provide perspective on the significance of fossils that may occur within the DLE footprint and what existing regional management practices are in place that protect the paleontological record. For example, the BLM manages the 19,052-acre Piñon Mesa Fossil Area, located in close proximity to the DLE (see Farmington Proposed RMP EIS, BLM, 2003).</p>	Geology	Comment noted. Additional information regarding geology and soils affected environment is provided in the Technical Resource Document, which is incorporated by reference into the EIS.
53	53.026	Daniel	Mumm	San Juan Coal Company	Email	<p>Section 3.4; Page 52 - SJCC suggests including a discussion on the results of eligibility testing to provide information for the environmental baseline.</p> <p>“As part of the Phase V subsidence-monitoring program between 2011 and 2014, 62 archaeological sites were evaluated. In 2017, an additional 55 sites within the DLE were evaluated to assess their current condition and eligibility for listing on the NRHP as part of the current EIS effort (Simpson and Meininger 2017). “</p>	Cultural Resources	Comment noted. Additional information regarding cultural resources affected environment is provided in the Technical Resource Document, which is incorporated by reference into the EIS.
53	53.027	Daniel	Mumm	San Juan Coal Company	Email	<p>Section 3.5.3, Page 57 - Consider clarifying that the following conditions are part of the affected environment which describes the baseline conditions, including the retrospective analysis of the Project (as DEIS Section 2.2):</p> <ul style="list-style-type: none"> - San Juan River depletions allotted under Permit 2838 were previously consulted on in the Animas-La Plata water storage project and the Navajo Reservoir Operations in 2006, - Surface mining ceased in 2001, changes to the potentiometric surface of the No. 8 Coal seam from surface mining and reclamation began before the Project, - Entrainment was previously consulted on (FWS 2001). <p>Therefore, consider moving the description regarding entrainment in the Environmental Consequences section to the Affected Environment section.</p>	Surface Water	Comment noted. No changes have been made to the EIS. While consultations may have occurred previously, the EIS addresses the potential impact of continuing these activities in its analysis.
53	53.028	Daniel	Mumm	San Juan Coal Company	Email	<p>Section 3.11; Page 61 - The baseline summarizes population, employment and mine revenues. SJCC suggests a discussion on the changes to socioeconomic from revised SIP. Information summarized in Tables 3.11-25 and 3.11-29 in the TRD provides additional information with respect to economic conditions affected by the mine.</p>	Socioeconomics	Comment noted. The Technical Resource Document is incorporated by reference into the EIS.

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53	53.029	Daniel	Mumm	San Juan Coal Company	Email	Section 3.12.2, Page 63 - Consider including <i>Table 3.12-3 Minority Populations in the Region of Influence by County</i> from the TRD in the DEIS. The TRD table provides additional information that supports the Draft EIS Section 3.12.2 and the basis for the focus on Native Americans on tribal trust lands as described in DEIS Section 4.12, page 122.	Environmental Justice	Comment noted. The Technical Resource Document is incorporated by reference into the EIS.
53	53.030	Daniel	Mumm	San Juan Coal Company	Email	<p>Section 3.16.1; Page 65 - To document the depth and breadth of the assessment as summarized in the TRD, SJCC offers these suggestions:</p> <ul style="list-style-type: none"> - As the TRD summarized both health and safety for workers, consider changing the heading to “3.16.1 Worker Health and Safety.” - The site-specific SJCC H&S programs implemented at the San Juan Mine to protect worker H&S are part of every day operating procedures and, therefore, are considered an important aspect of the affected environment. Because of the required EIS page limit, it would help the reader’s understanding to reference Table 2.3-1. - From the perspective of the miner, for the DEIS to describe only a list of citations and injuries undermines each miner’s efforts to protect themselves and co-workers and does not reflect the health and safety culture established at the mine. Additionally, it does not demonstrate the extensive level of effort of the state and federal regulators that inspect the mine routinely for compliance with the comprehensive H&S regulatory programs in place. To add perspective for the miner and non miner <ul style="list-style-type: none"> o Summarizing what the safety violations are for or providing a reference to the MSHA website where details can be found. o Summarizing the trend in recordable injuries at the San Juan Mine and how it compares to other coal mines across the US to provide the nonminer a better perspective on the worker H&S program at San Juan Mine. o Summarizing the extent of the regulatory H&S programs and oversight of the San Juan Mine. 	Public Health	<p>Comment noted. The title of Section 3.16.1 has been revised. Additional specific information on health and safety programs at the mine are described in Section 3.16 of the Technical Resource Document, which is incorporated by reference into the EIS. The NEPA analysis evaluates and discloses the potential effects of the Proposed Action and alternatives. As stated in 4.16.2.1, OSMRE found that impacts related to worker safety would be minor and that the Proposed Action would not present new or increasing safety risks to workers.</p> <p>The following sentence has been added to Section 3.16: “The U.S. Mine Safety and Health Administration (MSHA) is the agency that enforces compliance with mandatory mine health and safety standards, and the San Juan mine has site-specific health and safety programs and requirements that meet and go beyond regulatory requirements, see Table 2.3-1. San Juan mine is regularly inspected by MSHA to ensure compliance with health and safety requirements and safety violations are well below the national average for underground coal mines. The mine’s safety violations and progress in addressing any deficiencies found by regulators can be found on MSHA’s website: https://arweb.msha.gov/drs/drshome.htm. According to MSHA, between January 2016 and June 2017 the San Juan Mine received 23 “Rules to Live By” safety violations (MSHA 2017a). All citations/orders issued by MSHA to San Juan Mine before 2017 have been addressed and closed. In 2017, 70 percent of the citations/orders issued have been addressed and closed (MSHA 2017b). In terms of work-related injuries, San Juan Mine reported 20 MSHA recordable injuries in 2014, 16 MSHA recordable injuries in 2015, and 15 MSHA</p>
53	53.031	Daniel	Mumm	San Juan Coal Company	Email	Section 4 - For consistency with the DEIS protocol defined on ES-13 for the Comparison of Potential Environmental Effects of Each Alternative, consider summarizing the resource-specific impact level thresholds/criteria applicable (major, moderate, minor, no impact) to the types of impacts evaluated for that resource. Some resources (e.g. Climate Change and Health and Safety) don’t include a description of a Moderate impact, while others (e.g. Geology and Soils, Land Use) don’t include a description for Minor or Moderate Impacts. Consider adding these descriptions, as the resulting impacts fall within these categories. Additionally, consider distinguishing between minor and moderate impacts or remove one of the impact levels of significance. Consider, where possible, defining the duration of the impacts for each resource.	Technical Edit	Comment noted. EIS has been reviewed for consistency between sections.

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53	53.032	Daniel	Mumm	San Juan Coal Company	Email	Section 4 - Similarly, consider using consistent terminology for impact levels throughout the document (e.g. minor vs small) for added clarity. Additionally, consider identifying which impacts reported are considered direct and which are considered indirect impacts of the Project.	Technical Edit	Comment noted. EIS has been reviewed for consistency between sections.
53	53.033	Daniel	Mumm	San Juan Coal Company	Email	Section 4 - Consider clarifying the scale (nature and extent) and timing of potential subsidence following mining under Alternatives A and C to help the reader gain a perspective on the reported impact level and duration described under several resource sections.	Geology	Subsidence is addressed in Section 4.3 of the EIS.
53	53.034	Daniel	Mumm	San Juan Coal Company	Email	Section 4 - To help qualify/quantify the potential impacts to resources and provide the reader a perspective regarding the potential impact levels, consider describing the total surface disturbance of the Project. Comparing the future disturbance associated with the Proposed Action to the affected environment will support the readers' understanding of the scale of potential impacts. This information is pertinent to the descriptions of Geology and Soils (including paleontology), Cultural, Vegetation, Wildlife, Special Status Species, Land Use/Agriculture, and Visual resources.	Technical Edit	Comment noted. A sentence has been added to Section 2.2.1 describing total surface disturbance of the Proposed Action.
53	53.035	Daniel	Mumm	San Juan Coal Company	Email	Section 4 – The region of influence is critical to the reader's understanding of potential impacts. If the ROI is not defined within the Affected Environmental (as suggested in Comment 17 consider including a description of the ROI(s) at the beginning of the discussion of each resource in Section 4. Many resources, including Air Quality, Water, Recreation, Visual, Waste, and Health and Safety do not include an ROI description in the discussion. For resources with more than one defined ROI, consider indicating in the text, which ROI is being discussed when describing impacts. For added clarity, consider using the acronym, ROI, consistently throughout the section.	Technical Edit	Comment noted. EIS has been reviewed for consistency between sections.
53	53.036	Daniel	Mumm	San Juan Coal Company	Email	TRD Section 2.1, DEIS - TRD Section 2.1 mentions that "The analysis of the shutdown option includes a programmatic-level evaluation of decommissioning and demolition of the power plant." Consider describing how this is within the scope of the Proposed Action. Additionally, the Alternative C discussions in Section 4 of the Draft EIS are inconsistent in their consideration of the decommissioning and dismantling of the plant. If decommissioning and dismantling the Generating Station remains within the scope of the Project, consider a review of the descriptions in Section 4.0 and ensure that each resource describes it consistently.	Technical Edit	Please see Response 22.11. EIS has been reviewed for consistency between sections.
53	53.037	Daniel	Mumm	San Juan Coal Company	Email	Section 4.2.1.3; Page 79-81 - The description of the Social Cost of Carbon is repeated in the TRD. Because this information is not used to summarize impacts, SJCC believes that it should be removed from the DEIS and remain in the TRD.	Technical Edit	Comment noted. No change made. Please see Master Response 2.
53	53.038	Daniel	Mumm	San Juan Coal Company	Email	Section 4.3.2; Page 85 - Consider referencing additional information that supports the level of impact to oil and gas resources (no impact) from the Proposed Action. (For example, see the BLM/FFO RMP and Mediation of Adverse Impacts on Oil and Gas Revenues provided as Appendix A to the Mining Plan Decision Document for the DLE Federal Lease NM-99144, February 2008).	Geology	Comment noted. No change has been made. Plugging of oil and gas wells and mining would not affect the presence of the actual resource.

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53	53.039	Daniel	Mumm	San Juan Coal Company	Email	Section 4.4.2; Page 88 - Given that OSMRE, in consultation with cooperating agencies and parties consulting under Section 106, is using the NEPA process to assess impacts and not a PA, is it relevant to discuss the PA regulatory process? Suggest removing if the discussion is not necessary.	Section 106	Section 4.4 and Section 5 have been updated in the Final EIS to provide an updated status of the Section 106 process.
53	53.040	Daniel	Mumm	San Juan Coal Company	Email	Section 4.5.2.1; Page 91 - This section provides information on the water quality of the Shumway Arroyo, "Background water quality data for the Shumway Arroyo and Westwater Arroyo from 1979 demonstrate naturally elevated levels of metals, chloride and sodium, as well as dissolved and total solids, as described in the affected environment." The Shumway water quality was not reported in the Affected Environment. Only water quality from Stevens Arroyo was reported in that Section. SJCC suggests adding data to support the statements on the Shumway water quality.	Surface Water	A reference to the Technical Resource Document has been added to the sentence references on page 91.
53	53.041	Daniel	Mumm	San Juan Coal Company	Email	Section 4.5.2.1; Page 91 - This statement does not appear to be substantiated in the DEIS. Consider adding detail to support this statement, as necessary. "Because prevailing winds are generally from the southwest to the north and northeast, emissions from the Generating Station have little potential to affect surface water quality in the San Juan River watershed."	Surface Water	The paragraph containing the sentence referenced in the comment refers the reader to the Technical Resource Document for additional supporting information. The Technical Resource Document is incorporated by reference into the EIS.
53	53.042	Daniel	Mumm	San Juan Coal Company	Email	Section 4.5.2.1; Page 92 - The description in this paragraph appears to summarize the cumulative impact assessment as it includes Four Corners Power Plant and Navajo Generating Station. The conclusion indicates that because the baseline water quality is already poor, additional impacts from the Generating Station won't make it worse. Consider revising the sentence for clarity.	Surface Water	Comment noted. No change made.
53	53.043	Daniel	Mumm	San Juan Coal Company	Email	Section 4.5.5; Page 96 - Consider adding a cumulative impact determination for groundwater resources.	Groundwater	Cumulative effects to groundwater are described in Section 4.5.5. No change made.
53	53.044	Daniel	Mumm	San Juan Coal Company	Email	Section 4.6-4.8 - Sections 4.6 through 4.8 use a ROI for the mine that extends one mile from the permit boundary. Consider clarifying how this distance was decided upon. Are there impacts to vegetation, wildlife, and special status species that are expected at that distance? How do you separate mine-related impacts out that far from other sources - like oil and gas or transportation? Considering noise and fugitive dust are only expected to occur a short distance from the source, this distance seems very conservative.	Technical Edit	Comment noted. This information is incorporated by reference from the Technical Resource Document. No change made to the EIS.
53	53.045	Daniel	Mumm	San Juan Coal Company	Email	Section 4.7.4; Page 103 - Entrainment is discussed under Alternative C, but is not discussed in the Action Alternatives. This impact has already been consulted on, as discussed the Biological Assessment for the Deep Lease Extension. Consider moving this information to the baseline discussion in this document.	Wildlife	Please see Response 22.8.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.046	Daniel	Mumm	San Juan Coal Company	Email	Section 4.8.2; Page 107 - The Mine ROI, as defined in the Draft EIS Section 4.8, would include a few Special Status Species. For example, Mesa Verde Cactus habitat is within a mile of the San Juan Mine permit area, as is the San Juan River, which contains Special Status fish. Consider clarifying potential impacts to these species from mining operations in addition to the potential impacts from coal combustion.	Special Status Species	Comment noted. See Section 4.8.2.3 of the EIS. Additional information on specifically status species is provided in the Technical Resource Document, which is incorporated by reference into the EIS. In addition, OSMRE has consulted with the USFWS under Section 7 of the Endangered Species Act and USFWS has concurred with OSMRE's findings. No changes have been made. See TRD Section 3.8 for detailed information on Special Status Species potentially present within the ROI, and potential direct and indirect impacts.
53	53.047	Daniel	Mumm	San Juan Coal Company	Email	Section 4.8.2.2; Page 110 - Consider moving the text in the first paragraph on page 110 to the environmental baseline description. The fish passage (FWS 2001) and surface water draw (FWS 2006) have been consulted on previously. The fish passage structure is considered to be beneficial to the two listed fish species.	Special Status Species	Comment noted. No change made.
53	53.048	Daniel	Mumm	San Juan Coal Company	Email	Section 4.11.4.1; Page 119 - For better comparison with the state and region, consider summarizing the indirect and induced economic effects on San Juan County under Alternative C.	Socioeconomics	Table 4.11-1 provides for a comparison of impacts of San Juan County, the Four Corners Region, and the State of New Mexico.
53	53.049	Daniel	Mumm	San Juan Coal Company	Email	Section 3.12.6.1; Page 3.12-14 - Regarding the TRD sentence below, consider explaining what the potential resource specific type and level of impact are that could affect the Farmington population "In addition, the city of Farmington is a mixture of minority/low-income populations and nonenvironmental justice populations. As such, impacts to residents of the city of Farmington would not disproportionately affect minorities or low-income residents."	Environmental Justice	This statement demonstrates that non-environmental justice populations and environmental justice populations in the City of Farmington are geographically mixed together. Therefore, an off-site impact from the mine would affect both populations equally, and not disproportionately. No changes made.
53	53.050	Daniel	Mumm	San Juan Coal Company	Email	Section 4.12.1; Page 122 - For consistency with the DEIS protocol defined on ES-11 for the Comparison of Potential Environmental Effects of Each Alternative, consider explaining the significance criteria in more detail. Specifically, consider: - Defining what constitutes a major change in the environmental conditions of the specific resources determined to be relevant to EJ (air quality, cultural resources, noise & vibration, visual and public health) or referencing the specific sections of the DEIS that provide that information and ROIs for the specific resources.	Environmental Justice	The resources included in that example list could potentially have off-site impacts. The remaining resource analyses in the EIS do not have potential off-site impacts. Further, the table in the Executive Summary offers a comprehensive comparison of effects and Alternatives. No change made.
53	53.051	Daniel	Mumm	San Juan Coal Company	Email	Section 4.12.2; Page 122 - Consider clarifying how the Proposed Action may affect the availability of water resources used by EJ communities in the ROI.	Environmental Justice	The water resources analysis determined that potential effects off-site water availability would be less than significant, and there cannot be a disproportionate effect to an Environmental Justice community if the effect would be less than significant (i.e., minor or moderate). No changes made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.052	Daniel	Mumm	San Juan Coal Company	Email	Section 4.17; Page 142 - Consider clarifying the basis for the socio-economic impact duration as short-term. Given SJCC's contribution to the local economy, the jobs supported by mine tax revenues, and the percent of households below the poverty level in San Juan County and the surrounding counties; the economic recovery period from a shutdown may require more than a few years.	Socioeconomics	Short-term is in reference to the economic impacts of a mine shutdown that would be experienced in a short amount of time, rather than gradually over the course of years. Section 4.11.3, which analyzes the scenario of a mine shutdown, considers the economic impacts to be permanent.
53	53.053	Daniel	Mumm	San Juan Coal Company	Email	Section 4.17; Page 143 - Given that Draft EIS Section 4.5 determined that impacts to water quality from mining would be minor and the number of surface water protective measures required by MMD Permit 14-01, consider clarifying the basis for listing the risk to surface water quality as a potential risk	Surface Water	Comment noted. Please refer to the first paragraph of Section 4.17 for the definition of "short-term uses" and "short-term impacts" to the environment under this required section of NEPA.
53	53.054	Daniel	Mumm	San Juan Coal Company	Email	Section 4.18; Page 143 - Consider clarifying the following statement in light of the information provided below: "The loss of the coal seam aquifer would be an irreversible impact. Hydraulic conductivity and recharge rate to groundwater would be irreversibly impacted. Because of the length of time required for aquifer recharge, this commitment would be considered irreversible and irretrievable." Note that: • The No. 8 Coal seam is a low-yield water-bearing unit and not characterized as an aquifer per the EPA definition of an aquifer (One or more strata of rock or sediment that is saturated and sufficiently permeable to yield economically significant quantities of water to wells or springs. An aquifer includes any geologic material that is currently used or could be used as a source of water (for drinking or other purposes) within the target distance limit (TDL). This definition differs from many common definitions because it is based on the current or potential future use of the geologic material for drinking water or other purposes.) (EPA.gov Superfund Section 8 Groundwater Aquifers) • As described in Section 3.5, groundwater infiltrates the gob behind the longwall and modeling indicates that the gob has a high transmissivity and can store larger amounts of water than the coal seam. • Recharge of the former surface pit mining was evaluated in the MMD permit process before 2008.	Groundwater	Please see the first sentence of Section 4.5.2.3, which states "the primary groundwater quantity impact due to mining operations would be the loss of the saline coal-seam aquifer from the Fruitland Formation No. 8 coal seam." The text in Section 4.18 has been revised to note that the aquifer is low-water-yielding and saline. OSMRE acknowledges that the No. 8 Coal Seam aquifer is not considered an Underground Source of Drinking water.
53	53.055	Daniel	Mumm	San Juan Coal Company	Email	Section 5.2; Page 146 - Consider updating this section as the Section 7 process proceeds, as needed.	Technical Edit	The Final EIS has been updated to reflect the current status of all consultation processes. The Draft EIS reflects the status of each process at the time of publication.
53	53.056	Daniel	Mumm	San Juan Coal Company	Email	TRD; Page 2.2 - Suggest removing the discussion on decommissioning and demolition of the power plant. The EIS is to analyze the mining of coal in the DLE and the combustion of DLE coal at the Generating Station. The demolition of the Generating Station is outside of the scope of this analysis.	Project Description	Please see Response 22.11.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.057	Daniel	Mumm	San Juan Coal Company	Email	TRD; Page 3.5-20 - Consider adding a discussion about what the potential sources of increased TDS, SO ₄ , Cl and Na are from in monitoring well GL over time or if the flat potentiometric gradient has anything to do with it.	Groundwater	Comment noted. The text notes that there is little to no potentiometric gradient. No change made.
53	53.058	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.4.1; Page 3.7-27 - As discussed in the text under the heading, "Diversions from the San Juan River to the Raw Water Reservoir," Permit 2838 diversions have already been accounted in the "SJRRIP's water accounting and factored into the flow recommendations for the San Juan River (USBOR 2006, FWS 2006, as cited in OSMRE 2015)." As such, the diversions are part of baseline and the affected environment. No additional diversions or changes to the diversions are anticipated as part of the Proposed Action. Similarly, the discussion regarding the BO for the PNM weir is important and relevant to the baseline and affected environment discussion in Section 3.7.2.	Wildlife	Comment noted. No change to the text has been made.
53	53.059	Daniel	Mumm	San Juan Coal Company	Email	Section 3 of TRD - Consider clarifying what environmental protection measures in MMD Permit 14-01 and/or SJCC SOPs are applicable, if any, to environmental resources. For example, the final surface contour of reclaimed surface pits is designed and engineered to comply with 14 performance standards including to incorporate diverse structures and wildlife habitat features similar to pre-mine habitat and blend post-mine reclamation features into the natural environment (see MMD Permit 14-01 Section 906.B(3)).	Technical Edit	Comment noted. The Technical Resource Document describes environmental protection measures from the MMD permit as applicable. This information is incorporated by reference from the Technical Resource Document. No change made to the EIS.
53	53.060	Daniel	Mumm	San Juan Coal Company	Email	<p>Section 3.10.4.1; Page 3.10-11 - Regarding the potential impacts to the visual recreational experience, Consider clarifying how this may change over the course of the Proposed Action given that the surface mining pits and the DLE surface disturbance are reclaimed, including those associated with localized subsidence (as needed), concurrent with the underground mining and that after mining (2033), the Generating Station will stop operations and reclamation activities will continue until final bond release in 2053.</p> <p>The final surface contour of reclaimed surface pits is designed and engineered to comply with 14 performance standards including to incorporate diverse structures and wildlife habitat features similar to pre-mine habitat and blend post-mine reclamation features into the natural environment (see MMD Permit 14-01 Section 906.B(3)).</p>	Recreation	Comment noted. The Final EIS addresses potential effects to recreation both within the mine area and regional resources. Please see Master Response 3.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.061	Daniel	Mumm	San Juan Coal Company	Email	TRD Section 4 - Consider clarifying how the list of existing and proposed projects in the vicinity of San Juan Mine. Many are outside of the watershed of San Juan Mine and outside of the airshed of the Generating Station. Additionally, most projects included in the list in the TRD are not referenced during the cumulative effects analysis of any of the environmental resources.	Technical Edit	Comment noted. Each cumulative effects analysis within each resource area describes which of the projects considered in the cumulative effects analysis are pertinent to that resource area and could contribute to potential effects. Many of these are referred to in categories (such as mining projects or electrical generation projects). The complete list of projects considered in the cumulative effects analysis includes all those identified during scoping, through consultation with cooperating agencies, and other recent relevant environmental analyses. Please see Master Response 3.
53	53.062	Daniel	Mumm	San Juan Coal Company	Email	Executive Summary; Page ES-1 - SJCC suggests adding that this Draft EIS was also prepared in accordance with the April 2018 DOI guidance for streamlining and expediting reviews under NEPA	Technical Edit	Comment noted. Suggested edit has been incorporated into the Final EIS.
53	53.063	Daniel	Mumm	San Juan Coal Company	Email	Executive Summary; Page ES-1 - SJCC suggests the following clarification: The OSMRE is responsible for creating a Mining Plan Decision Document, including a recommendation to aid the Assistant Secretary of the Interior for Land and Minerals Management (ASLM) in the approval, disapproval, or approval with conditions of mining activities for that lease. On January 22, 1998 , SJCC submitted a Mining Plan Modification to the New Mexico Mining and Minerals Division (MMD) to initiate the permitting process to approve mining within the DLE on January 22, 1998 .	Technical Edit	Comment noted. No change made.
53	53.064	Daniel	Mumm	San Juan Coal Company	Email	Executive Summary; Page ES-1 - SJCC suggests the following clarification: The OSMRE must complete the EIS and Record of Decision (ROD), and the Mine Plan Decision Document must be signed by the ASLM by August 31, 2019. If OSMRE fails to complete the EIS, then an order of vacatur will be immediately effective absent further court order based upon good cause shown.	Technical Edit	Comment noted. No change made.
53	53.065	Daniel	Mumm	San Juan Coal Company	Email	Executive Summary; Page ES-2 - Consider clarifying that the retrospective analysis for each environmental resource is contained in the description of the environmental baseline and the affected environment and that the prospective analysis includes impacts to the end of reclamation and bond release	Technical Edit	Comment noted. This information is incorporated by reference from the Technical Resource Document. No change made to the EIS.
53	53.066	Daniel	Mumm	San Juan Coal Company	Email	Table ES-1; Page ES-3 - Consider changing the total acreage within the Deep Lease to 3,982 acres to be consistent with other tables in the document.	Technical Edit	Comment noted and suggested revision has been incorporated into the Final EIS.
53	53.067	Daniel	Mumm	San Juan Coal Company	Email	Executive Summary; Page ES-6 - Consider clarifying in the Purpose and Need that SJCC will continue to reclaim disturbed lands from historical surface mining in accordance with MMD Permit 14-01 requirements, contemporaneous with DLE and DL underground mining operations.	Technical Edit	Comment noted. No change made. Actions related to reclamation and permit requirements are described under the proposed action and are not part of the purpose and need.
53	53.068	Daniel	Mumm	San Juan Coal Company	Email	Executive Summary; Page ES-6 and ES-12 - Consider clarifying that mining could continue until August 31, 2019 if the ASLM were to disapprove the Mining Plan Modification before August 31, 2019.	Technical Edit	Comment noted. No change made.

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53	53.069	Daniel	Mumm	San Juan Coal Company	Email	Executive Summary/Figure ES-2/Figure 2.2-1; Page ES-9 and 31 – SJCC suggests the following edits in regard to Figure ES-2 and Figure 2.2-1: • Consider clarifying in the text that the “gray” areas on Figure ES-2 represent mining that occurred prior to June 2017 • Figure ES-2 is difficult to read. SJCC suggests removing the dates and only using colors to show proposed mine timing.	Technical Edit	Comment noted. No change made.
53	53.070	Daniel	Mumm	San Juan Coal Company	Email	Executive Summary/ 2.2.2; Page ES-10, 32 - SJCC suggests providing a link to the PNM IRP, rather than the in depth discussion of the results of the IRP. The four-year action plan information does not provide relevant information to this analysis.	Executive Summary	Comment noted. No change made. The discussion is pertinent to OSMRE's decision-making process and the alternatives that are considered in the analysis.
53	53.071	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 Air Quality; Page ES-15 - Under Alternative C, consider clarifying the level of impacts for criteria pollutants, ozone, PM2.5 and Haze/Visibility associated with reclamation and the closure of the Generating Station. This would better support any over-all emission effects summarized in the table.	Technical Edit	Comment noted. No change made.
53	53.072	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 Climate Change, Page ES-15 - SJCC suggests revising the description of the Proposed Action with the following language: “ Estimated annual GHG emissions from the San Juan Mine would be approximately 480,000 CO2e per year. These emissions would amount to about 34% of total coal mining emissions in New Mexico but about less than 1% of total New Mexico GHG emissions, and less than 0.8% of national coal mining GHG emissions. Therefore, GHG emissions from the San Juan Mine are considered permanent but minor. ” “ Estimated annual GHG emissions from combusting the coal from the Generating Station under the Proposed Action would be approximately 6.1 million tons CO2e/year contributing about 0.3 percent of CO2 emissions from fossil-fuel-fired electric power generation nationwide. Therefore, while the Proposed Action would indirectly contribute to the effects of climate change, its contribution relative to other sources would be minor but permanent. ”	Technical Edit	Comment noted. No change made.
53	53.073	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 Climate Change; Page ES-15 - Consider clarifying the San Juan Mine contributions to the total coal mining emissions in New Mexico. Section 4.2.1.1 of the Draft EIS also states 34%, but TRD Section 3.2 states 58%	Technical Edit	Comment noted. No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.074	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 Climate Change; Page ES-15 - SJCC suggests the following edits under the Alternative C: <ul style="list-style-type: none"> • The overall GHG emissions would be greatly reduced by about 90 percent or more. • Consider using consistent terminology for the impact level as defined in DEIS Sections 2.2 and 4.2 and described in Section 4.2.3 (minor and permanent rather than beneficial and permanent). 	Technical Edit	Comment noted. No change made.
53	53.075	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 Geology and Soils - Consider clarifying what aspects of geology and soils would experience a long-term, moderate impact from the additional soil disturbance for CCR replacement. As described under Alternative A, the level of impacts varied based on the type of impact.	Technical Edit	Comment noted. No change made.
53	53.076	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 Water Resources; Page ES-17 - Consider clarifying the following under Alternative A for Water Resources and Hydrology <ul style="list-style-type: none"> • Two aquifers are referenced. Consider clarifying which two aquifers these are. In Section 3.5.3, the EIS notes three water-bearing units (Quaternary Alluvium, No. 8 Coal Seam and PCS) and the only viable aquifer within the ROI is the San Juan River Alluvium. Consider clarifying if the water-bearing units are aquifers by definition. Additionally, consider clarifying which underlying regionally aquifer contains the potential for contamination. • Given the buffering capacity of the Fruitland Formation, the majority of which is alkaline, consider clarifying the analysis of potential impacts from acid mine drainage on water quality. • Consider adding context to the description of impacts to water quantity from subsidence. The current language gives an impact, but does not describe what causes that impact. 	Technical Edit	Comment noted. No change made.
53	53.077	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 Water Resources; Page ES-17 - Given that Alternative C includes a programmatic approach for decommissioning the dismantling the Generating Station, consider clarifying that PNM would be the responsible party for obtaining the necessary decommissioning and demolition of the Generating Station. SJCC would need to revise the water quality permits and protection plans to include the surface disturbance associated with obtaining backfill material for the surface pit reclamation in lieu of CCR material	Technical Edit	Comment noted. No change made.
53	53.078	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 Vegetation; Page ES-18 - Consider clarifying the following under Vegetation <ul style="list-style-type: none"> • Consider clarifying the additional transportation described under Alternative B. Section 2.2.2 describes that transportation to the "typical" local generating station would be similar to the transportation of the Proposed Action. • Additionally, subsidence is discussed as an impact under Alternative C, but is not discussed as an impact under Alternative A or B. Consider adding this impact to the discussion of the Proposed Action. 	Technical Edit	Comment noted. No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.079	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 Wildlife; Page ES-19 - Under Alternative A for Wildlife, SJCC suggests the following edits: <ul style="list-style-type: none"> • Consider combining the sentences describing noise impacts into one paragraph. • The impact duration described for ground-disturbing activities is described as moderate and long-term in Alternative A, but considered short-term and minor for the additional disturbance described Alternative C. Consider clarifying why there is a difference. • Land-disturbing activities are reported as long-term for smaller terrestrial burrowing species. However, Section 4.7.2 reports this to be permanent. Consider updating the table for consistency. • Consider adding the duration of potential impacts from habitat loss to larger, more mobile species. This is reported as short-term and minor in Section 4.7.2. • Potential impacts associated with human activity are reported to range from minor to moderate. Consider clarifying the duration of the impacts and if this type of impact includes vehicle traffic. • Consider clarifying that the flow depletions are part of the affected environment and not part of the Proposed Action. 	Technical Edit	Comment noted. No change made.
53	53.080	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 Water Resources, Wildlife and SSS; Page ES-17, ES-19 and ES-20 - For consistency with the Section 2.2.2 description of Alternative B, Consider clarifying that “typical” local generating station would have similar deposition impacts as the Proposed Action.	Technical Edit	Comment noted. No change made.
53	53.081	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 SSS; Page ES-20 - Under Alternative C, deposition would cease in 2020. Consider making this change in the text.	Technical Edit	Comment noted. No change made.
53	53.082	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 SSS; Page ES-21 - Under the Proposed Action, it states that San Juan Mine will not have an uncontrolled discharge. While San Juan Mine has designed its sedimentation basins to contain most storm water flows, the designation of “zero discharge facility” has not been granted to the San Juan Mine for its NPDES permit. Consider updating the text with this information.	Technical Edit	Comment noted. Text has been revised as suggested.

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53	53.083	Daniel	Mumm	San Juan Coal Company	Email	<p>Table ES-4 Land Use; Page ES-21 - Under the Alternative A description for Land Use, Transportation, and Agriculture:</p> <ul style="list-style-type: none"> • Disturbance associated with road and GVB pad construction reduces the grazing area in the allotments. Because the livestock are still able to graze the area, the impact of disturbance reducing forage should be considered. • Consider including that the existing infrastructure would minimize the need for construction efforts and would have no impact on transportation, agriculture or land use – as stated in Section 4.9 of the TRD • In July 2016, the workforce employee number decreased to approximately 360 employees and then to 290 in November 2017. The workforce will continue at this level through the end of mining in 2033, at which time it will be reduced again to conduct reclamation and maintenance activities. Therefore, an increase in vehicle traffic within the Project Area is not expected. Consider revising the Executive Summary and corresponding section in the Draft EIS to reflect this information. 	Technical Edit	Comment noted. No change made.
53	53.084	Daniel	Mumm	San Juan Coal Company	Email	<p>Table ES-4 Recreation; Page ES-22 - Under Alternative A:</p> <ul style="list-style-type: none"> • For consistency with the impact analysis described in Section 4.10, consider summarizing the potential visual impacts to recreation relating to potential surface subsidence associated with mining the DLE and the reclamation of the former surface pits. Reclamation of the former surface mining pits and surface disturbance associated with the DLE is concurrent with underground mining activities. • Consider clarifying that the visual impacts would range from no impact to moderate depending on the Key Observation Point, as described in the TRD. 	Technical Edit	Comment noted. No change made.
53	53.085	Daniel	Mumm	San Juan Coal Company	Email	<p>Table ES-4 Recreation; Page ES-22 - Under Alternative C: Impacts from stack emissions would continue into 2020. Consider updating the table with this information.</p>	Technical Edit	Comment noted. Executive summary table has been reviewed for consistency with main body of the EIS. No changes to impact analyses or conclusions have been made.
53	53.086	Daniel	Mumm	San Juan Coal Company	Email	<p>Table ES-4 Social and Economic Values; Page ES-22 - For a better comparison between the alternatives, consider breaking down the potential total economic impact into direct, indirect and induced impacts for New Mexico, the Four Corners Region, and San Juan County.</p>	Technical Edit	Comment noted. No change made.
53	53.087	Daniel	Mumm	San Juan Coal Company	Email	<p>Table ES-4 Social and Economic Values; Page ES-22 - Under Alternative B, consider changing “Alternative 2” to “Alternative B”.</p>	Technical Edit	Comment noted. No change made.
53	53.088	Daniel	Mumm	San Juan Coal Company	Email	<p>Table ES-4 Environmental Justice; Page ES-23 - Consider summarizing the resource-specific impact levels for cultural resources, noise/vibration, air quality, visual and public health as described in Section 4.12 and for each resource, whether the impacts are disproportionate to the EJ populations in the ROI.</p>	Technical Edit	Comment noted. No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.089	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 Environmental Justice; Page ES-23 - SJCC suggests the following edits under Environmental Justice: • For consistency with the other resources and the assumptions provided in the DEIS for Alternative B, consider clarifying what the Environmental Justice effects would be as compared to Alternative A. • For consistency with the Section 2.2.2 description of Alternative B, Consider clarifying that a “typical” local generating station would have similar indirect effects of coal combustion as the Proposed Action.	Technical Edit	Comment noted. No change made.
53	53.090	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 Visual; Page ES-23 - Under Alternative C, the description states that no adverse effect on visual resources would occur beyond 2019. Coal haulage and stack emissions would continue into 2020. Reclamation would also continue until both Pinon and Juniper Pits are fully reclaimed. Consider clarifying how these conditions were evaluated in the impact analysis.	Technical Edit	Comment noted. No change made.
53	53.091	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 Noise; ES-24 - For consistency with the Section 2.2.2 description of Alternative B, Consider clarifying that a “typical” local generating station would have similar transportation impacts as Alternative A.	Technical Edit	Comment noted. No change made.
53	53.092	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 Noise; Page ES-24 - Under the Alternative C, coal haulage and power generation would continue into 2020 until all stockpiled coal is used. Reclamation would then continue until Pinon and Juniper Pits are fully reclaimed. Impacts associated with noise would continue until this is complete. Consider clarifying how these conditions were evaluated in the impact analysis.	Technical Edit	Comment noted. No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.093	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 Waste; Page ES-24 - Consider revising the conclusions under Alternative A – Proposed Action based on the following information: There are three EPCRA reporting programs: Emergency Planning and Release Notification under 40 CFR Part 355, Hazardous Chemical Reporting under 40 CFR Part 370 (i.e., Tier I and Tier II reporting); and Toxic Release Inventory (TRI) Reporting under 40 CFR Part 372. The San Juan Mine will likely remain subject to TRI reporting so long as CCRs are managed onsite. The total release will be reduced due to less CCR being received after the shutdown of Units 2 and 3 at the Generating Station. Mining operations are generally not subject to EPCRA reporting requirements under 40 CFR Part 370 because the regulations apply to facilities subject to OSHA (except where there is a separate state or tribal requirement to submit the reports). See 40 CFR § 370.10. With respect to 40 CFR Part 355, there are many more hazardous materials than the “emergency hazardous substances” but note that none of these are present onsite above threshold quantities. There are also release reporting requirements that are more likely release reporting requirements to be triggered than the EPCRA reporting requirements of 40 CFR § 355.30; specifically, 40 CFR § 302.6 and the New Mexico spill reporting requirements. The more relevant condition with respect to Alternative A is that less waste will be generated, less CCR material will be managed onsite, and possibly less hazardous materials will be accumulated onsite in comparison to the baseline period. SJCC suggests phrasing the conditions under Alternative A to reflect the following: “The estimated amount of hazardous and solid wastes generated and CCR material managed onsite under Alternative A would be reduced by approximately 40% to 50% from amounts of generated or managed onsite during the baseline period of 2008 - 2017. SJCC implements waste management measures to avoid and minimize the potential	Hazards and Hazardous Materials	Comment noted. Executive summary table has been reviewed for consistency with main body of the EIS. No changes to impact analyses or conclusions have been made.
53	53.094	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 H&S; Page ES-25 - To demonstrate the depth and breadth of the public health assessment, the summary would benefit by addressing the impact significance level determined for the key health concerns: respiratory health, lung cancer, diabetes and blood lead based on the HHRA results and comparison to risk-based regulatory standards, guidelines and health-based goals.	Technical Edit	Comment noted. No change made.
53	53.095	Daniel	Mumm	San Juan Coal Company	Email	Table ES-4 H&S; Page ES-25 - Consider using impact significance levels in terms of those defined in Section 2.2 and 4.16. Positive impact was not defined prior to the use in this ES-4.	Technical Edit	Comment noted. No change made.
53	53.096	Daniel	Mumm	San Juan Coal Company	Email	Section 1.1; Page 1 - Consider clarifying what is meant by the phrase “in some instances” “...an approved mining permit from the New Mexico Mining and Minerals Division (MMD), and in some instances, a Mine Plan Decision Document...”	Technical Edit	Comment noted. No change made.
53	53.097	Daniel	Mumm	San Juan Coal Company	Email	Figure 1.2-1; Page 3 - SJCC suggests including the location of other aspects of the affected environment including other public lands, national parks and monuments, private lands, and other nearby towns to Figure 1.2-1.	Project Description	Comment noted and suggested revision has been incorporated into the Final EIS.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.098	Daniel	Mumm	San Juan Coal Company	Email	Section 1.4; Page 7 - SJCC suggests the following edit: “...which requires the evaluation of SJCC’s proposed Mining Plan Modification for the DLE to continue underground mining and reclamation operations to develop within Federal coal lands included in Federal Coal Lease NM-99144 and continue reclamation operations within the DLE and former surface mining pits outside of the DLE lease area. The OSMRE is the agency responsible for making a recommendation to the ASLM to approve, disapprove, or approve with conditions the proposed Mining Plan Modification under 30 CFR 746.	Technical Edit	Comment noted and CFR reference has been updated.
53	53.099	Daniel	Mumm	San Juan Coal Company	Email	Table 2.1-3, Section 2.1.1.1; Page 15-16 - SJCC suggests the following clarification to the terms describing mine degasification: • Consider changing the title from “Coal Mining” to “ Mine Degasification” within Table 2.1-3 • The terms “gob vent,” “gob vent bore hole,” and “GVB” are used in several places throughout the document, but this feature type is never described or addressed under the narrative for the San Juan Mine’s current operations or the Proposed Action. The reader could confuse these with short-term ventilation shafts with the current lack of description. Suggest clarifying these terms and making the usage consistent throughout the document.	Technical Edit	A footnote has been added to describe a gob vent borehole in Section 2.
53	53.100	Daniel	Mumm	San Juan Coal Company	Email	Figure 2.1-5; Page 18 - SJCC suggests the following edits to Figure 2.1-5 • SJCC suggests adding labels for pit names and stockpile names, as these are used throughout the document. The reader could also confuse Juniper Pit with Juniper Stockpile if they do not know there is a difference. • SJCC suggests showing the location of the underground portals, as these are referenced in Alternative II.	Technical Edit	Comment noted. The location of the reclamation pits has been added to the figure.
53	53.101	Daniel	Mumm	San Juan Coal Company	Email	Section 2.1.1.3; Page 19 - Consider clarifying that Permit SJ-2197 is a permit to appropriate underground waters that was issued by the New Mexico State Engineer in February 1989. It is not a surface water appropriation permit. The permit allows SJCC to pump surplus water from the underground workings to one of the seven evaporation cells on the surface. Water in the ponds is allowed to evaporate per the permit requirements. For the calendar year 2016, as much as 86.85 acre – feet of water evaporated	Project Description	Comment noted. The suggested revision has been made.
53	53.102	Daniel	Mumm	San Juan Coal Company	Email	Figure 2.1-6; Page 21 - The water line from the San Juan River intake to the PNM reservoir is not in the correct location. Consider updating the figure with the correct water line location.	Project Description	Comment noted.
53	53.103	Daniel	Mumm	San Juan Coal Company	Email	Section 2.1.1.5; Page 22 - SJCC suggests including the full description of Geomorphic reclamation approach in the text rather than in a footnote as this approach includes many engineered design features to avoid, minimize, and/or mitigate changes in surface topography, erosion, stability, and surface water quality from disturbed surfaces. Additionally, SJCC suggests adding a short description on how long it takes to achieve reclamation success and bond release. This will help the reader understand the length of time certain impacts could last.	Technical Edit	Comment noted. No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.104	Daniel	Mumm	San Juan Coal Company	Email	Table 2.2-1; Page 27-29 - SJCC suggests the following edits to Table 2.2-1 <ul style="list-style-type: none"> • Delete periods after yes/no in last column • Add period at end of Meets Purpose and Need for “Continue to Mine at 6 Million TPY Rate” • Table ES-3 states the “Continue to Mine at 6 Million tpy Rate” is Technically Feasible, which is accurate. Consider changing the description in this table to reflect that. 	Technical Edit	Comment noted. Suggested revisions made.
53	53.105	Daniel	Mumm	San Juan Coal Company	Email	Table 2.2-2; Page 30 - Consider adding an explanation on why the tons mined in the table are not 3 million per year. This is due to other leases that are mined within the San Juan Mine underground mining area. The current mining area is bisected by the Deep Lease and Deep Lease Extension, whereas some future mining would be bisected by the state lease MC-087.	Project Description	Comment noted. No change made. The table refers specifically to coal mined from the DLE.
53	53.106	Daniel	Mumm	San Juan Coal Company	Email	Section 2.2-3; Page 33 - SJCC suggests clarifying that the “December 2019 completion of mining” is due to the coal remaining within the Deep Lease that would be mined from the 2nd to last panel of the 400 district.	Project Description	Comment noted. No change made.
53	53.107	Daniel	Mumm	San Juan Coal Company	Email	Table 2.3-1; Page 37 - Because San Juan Mine does not have a Title V permit, it does not have emissions limits through NMED. Consider removing this from Table 2.3-1.	Project Description	Comment noted. As the evaluation of impacts considers indirect impacts of combustion, the table includes all pertinent regulations, including those applicable permits for the San Juan Generating Station.
53	53.108	Daniel	Mumm	San Juan Coal Company	Email	Table 2.3-1; Page 37 - San Juan Mine is not required to report to NMED for air quality or GHG emissions	Project Description	Comment noted. As the evaluation of impacts considers indirect impacts of combustion, the table includes all pertinent regulations, including those applicable permits for the San Juan Generating Station.
53	53.109	Daniel	Mumm	San Juan Coal Company	Email	Table 2.3-1; Page 39 - RCRA regulations are applicable to waste management. Consider clarifying how this relates to Water Resources and Hydrology.	Project Description	Comment noted. Full descriptions of each regulations are provided in the TRD and incorporated by reference into the EIS.
53	53.110	Daniel	Mumm	San Juan Coal Company	Email	Table 2.3-1; Page 40 - The MMD Permit 14-01 also restricts unauthorized vehicles from driving off road. (Section 900 Operations Plan). SJCC suggests adding this detail under San Juan Mine for Vegetation, Wildlife and Habitats, and Special Status Species.	Project Description	Comment noted. Full descriptions of each regulations are provided in the TRD and incorporated by reference into the EIS.
53	53.111	Daniel	Mumm	San Juan Coal Company	Email	Table 2.3-1 Special Status Species; Page 41 - SJCC suggests the following edits under Special Status Species: <ul style="list-style-type: none"> • Consider defining “riparian areas” as used in the first item under San Juan Mine. At San Juan Mine, ephemeral ponds or drainages are the unique wildlife habitats that are checked annually. “Riparian areas” suggests permanent water and associated vegetation, which does not occur on the DLE. • Consider adding Golden Eagle to the list under Other Migratory Birds • Consider clarifying that mountain plover habitat surveys are no longer managed by FWS. This is managed by the BLM. • Add a note that Section 905.A(1) is from Permit 14-01 	Special Status Species	Comment noted. The term 'riparian' is consistent with the Fish and Wildlife Plan in the MMD Permit 14-01. The following revisions have been made: Golden eagle added to list. Edit made to clarify that Section 905.A(1) is from MMD Permit 14-01.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.112	Daniel	Mumm	San Juan Coal Company	Email	Table 2.3-1 Recreation; Page 42 - SJCC suggests adding the following under applicable laws, regulations Protection Measures, and Best Management Practices for San Juan Mine: • Gates control access to areas that may be unsafe. • Signs are also in place to inform recreational shooters that workers could be in the area.	Recreation	Comment noted. The suggested revision has been made.
53	53.113	Daniel	Mumm	San Juan Coal Company	Email	Table 2.3-1 Visual; Page 43 - SJCC suggests adding the following under applicable laws, regulations Protection Measures, and Best Management Practices: • Federal: BLM Resource Management Plan • Federal: Clean Air Act, Regional Haze Rule (40 CFR § 51)	Visual Resources	The RMP and Regional Haze Rule have been added to Table 2.3-1 under the Visual Resources heading.
53	53.114	Daniel	Mumm	San Juan Coal Company	Email	Table 2.3-1 Noise; Page 43 - The San Juan Mine specific noise and vibration protective measure are defined in MMD Permit 14-01, Subpart 900 Operation Plan: General Requirements (especially 900.A (4) concerning ventilation shafts) and 902, Operation Plan: Blasting. (New Mexico Mining & Minerals Division, 2014).	Noise	The text has been revised accordingly.
53	53.115	Daniel	Mumm	San Juan Coal Company	Email	Section 3; Page 47 - 2008 to 2017 is 10 years (Beginning of 2008 to end of 2017). Consider making the following Change “The EIS analyzes the consequences of the past 10 years of mining...”	Technical Edit	Comment noted. Suggested revisions made.
53	53.116	Daniel	Mumm	San Juan Coal Company	Email	Section 3; Page 48 - Consider updating the text to state that the current standard for ozone is 0.070 ppm.	Air Quality	Comment noted. Suggested revisions made.
53	53.117	Daniel	Mumm	San Juan Coal Company	Email	Section 3.2; Page 49 - San Juan Mine does not report directly to New Mexico for GHG emissions. Consider the following change: “SJCC submits annual Federal and New Mexico reports on San Juan Mine GHG emissions...”	Climate Change	Comment noted. Suggested revisions made.
53	53.118	Daniel	Mumm	San Juan Coal Company	Email	Table 3.2-1; Page 50 - Table 3.2.-1 provides annual GHG emissions from the Generating Station in 2016 and 2017. It would be useful to revise this table to also include direct emissions from the San Juan Mine expressed in CO ₂ e for those two years.	Climate Change	Please see Response 22.34.
53	53.119	Daniel	Mumm	San Juan Coal Company	Email	Table 3.2-1; Page 50 - Additionally, the baseline includes information dating back to 2008, but this table only includes 2016 and 2017. Consider adding GHG emissions data from 2008 through 2015.	Climate Change	To provide the most recent timeframe, information in Table 3.2-1 was not averaged for earlier years, although the general discussion provides insight for a longer timeframe. No change has been made.
53	53.120	Daniel	Mumm	San Juan Coal Company	Email	Section 3.3.2; Page 51 - Consider providing a citation for the BLM fossil category referenced in the following sentence, “The survey focused on the Kirtland Formation exposures within the DLE area that are designated as Potential Fossil Yield Category 4-5 by the BLM ...”	Geology	Comment noted. No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.121	Daniel	Mumm	San Juan Coal Company	Email	Section 3.4; Page 51 - Consider the following clarifications to Archaeology and Cultural Resources • Consider clarifying why 83 sites are reported in the SHPO data and the Class III survey summarized in this section, but Section 4.4.2 only describes 80 sites that have the potential to be impacted? • Consider defining the area of the APE in the affected environment section and explain why the APE is used in place of ROI for this resource.	Cultural Resources	Of the 83 sites identified in the 1997 survey, only 66 are located in the current APE. The remaining 14 sites have been identified in subsequent surveys. APE is a term specific to Section 106 of the NHPA. A short definition of APE has been added to Section 3.4 and the APE for the Proposed Action has been moved from Section 4.4 to Section 3.4.
53	53.122	Daniel	Mumm	San Juan Coal Company	Email	Section 3.4; Page 52 - SJCC believes the text starting with "In a letter dated April 5, 1999" and continuing through the following paragraph would be better suited in the impacts discussion of the DEIS. Much of these two paragraphs talk about regulatory required avoidance, which belongs in the impacts section.	Technical Edit	Comment noted. No change made.
53	53.123	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.1 and 3.5.2; Page 53-54 - SJCC suggests the following edits: • The only perennial riparian feature present in the DLE and at San Juan Mine is the Shumway Arroyo. • Consider adding a description of the Stevens Arroyo in Section 3.5.1 as this is the only major feature that crosses the DLE and is the only feature discussed in Section 3.5.2. • The water quality of the Shumway is referenced in the TRD, but neither the Draft EIS nor the TRD provides data on the Shumway water quality. Consider providing this information.	Surface Water	Comment noted. Text has been revised to note that Shumway Arroyo is at the mine and not in the DLE.
53	53.124	Daniel	Mumm	San Juan Coal Company	Email	Table 3.5-1; Page 54 - Consider adding a footnote to Table 3.5-1 that explains that "Upper Stevens" and "Lower Stevens" or consider replacing the terminology with Upgradient and Downgradient reaches of Stevens Arroyo.	Surface Water	Comment noted. Revised column titles accordingly.
53	53.125	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.3; Page 54, 56 - Consider clarifying that poor water quality means that water quality is below applicable water quality standards.	Surface Water	Comment noted. No change made. Water quality standards are addressed in Section 4.5 of the EIS and 3.5 of the Technical Resource Document, which is incorporated by reference into the EIS.
53	53.126	Daniel	Mumm	San Juan Coal Company	Email	Figure 3.5-1; Page 55 - SJCC suggests the following edits to Figure 3.5-1: • Many wells (GL, KPC-3, SM-5, SM-7, SM-4, and SM-3) are not shown on this figure because they are covered, or the scale is such that they cannot be seen. Consider changing to show all groundwater wells. • Suggest adding labels to primary surface hydrology features that are discussed in the text.	Groundwater	Comment noted. Figure 3.5-1 has been revised to show the wells.
53	53.127	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.3; Page 56 - SJCC suggests the following edits: • "The groundwater flow from bedrock in the general vicinity of San Juan Mine is from the formation outcrop areas..." • Additionally, the northwest to southeast groundwater flow direction is different from that depicted in TRD Figure 3.5-4, which shows two flow regimes (one north to south and the other primarily west to east). Consider this information and make consistent in this section.	Groundwater	Comment noted. The sentence states that this is the "general groundwater direction". No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.128	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.3; Page 57 - SJCC suggests adding context to the description of the potentiometric gradient between wells GE and GL. The current language doesn't describe why this is important to the environmental baseline. Additionally, consider citing the source of the potentiometric data.	Groundwater	The paragraph notes that the study referenced is Thomson et al 2012. Additional language regarding the potentiometric gradient has been added to Section 3.5 of the Technical Resource Document, which is incorporated by reference into the EIS.
53	53.129	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5; Page 57 - Consider clarifying the following: <ul style="list-style-type: none"> • Seven vegetation surveys were conducted on the San Juan Mine permit area, which includes the DLE and DL, between 1971 and 2005. • The mine-wide surveys informed the PAP and the requirements for revegetation and reclamation specified in MMD Permit 14-01. • Key elements of the revegetation plan and amount of disturbed land (mine-wide and within the DLE) reclaimed to date to characterize the affected environment. • The effects of subsidence on vegetation communities. This will also help support the analysis described under Alternative C, Section 4.6.4. • Consider changing the reference in the first paragraph of this section to NPS 2017a • Section 3.6 states that wetland delineations have been completed for the San Juan Mine permit area, but does not say whether any wetlands were found within the mine permit area. Consider adding this to the description. 	Vegetation	Comment noted. More specific information on this resource is provided in the Technical Resource Document, which is incorporated by reference into the EIS, specifically: -- Revegetation - see TRD Section 3.6 and Table 3.6-1; Section 3.6.4-1 and Tables 3.6-6 and 3.6-7 -- Wetlands within the San Juan Mine permit area - see TRD Section 3.6.2.2 -- Subsidence - see TRD Sections 3.6.4.1 and 3.6.4.3 Further, this section acknowledges site-specific revegetation specifications, including reference areas, seed mixes, success criteria, and noxious weed control are summarized in the existing SJCC Mine Permit 14-01 and the approved SJCC Revegetation Plan. Vegetation survey details can also be found in the permit documents (New Mexico Mining and Minerals Division. 2014. San Juan Mine Deep Lease Extension Permit 14-01.).
53	53.130	Daniel	Mumm	San Juan Coal Company	Email	Table 3.6-1; Page 57 - TRC Mariah 1998 is the correct source for this information. The Ecosphere baseline report contained this information, but it is not the original source. Consider updating the Draft EIS to reflect this information.	Vegetation	Comment noted. Reference has been updated.
53	53.131	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7; Page 58 - SJCC suggests adding the following to Section 3.7 to complete the baseline description: <ul style="list-style-type: none"> • Extensive wildlife data has been collected for San Juan Mine due to years of NM MMD required annual monitoring • Mentioning that wildlife with potential to occur on the mine consist of those common to the Colorado Plateau in Great Basin Desert Scrub communities. 	Wildlife	Comment noted. Additional information is provided in the TRD Section 3.7.2.2, which is incorporated by reference into the EIS.
53	53.132	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8; Page 58 - Critical habitat is discussed as "in the vicinity" of the San Juan Mine. Consider clarifying this with a measurable distance. Consider adding that no critical habitat is located within the San Juan Mine permit area.	Special Status Species	The EIS Section 3.8 has been updated as follows: "Designated critical habitat for the Colorado pikeminnow and razorback sucker, and proposed critical habitat for the yellow-billed cuckoo is present along the San Juan River within the San Juan Mine ROI and Generating Station ROI. However, these critical habitats are located outside of the San Juan Mine permit area. in the vicinity of the San Juan Mine. The FWS has published the final critical habitat designation for the Colorado pikeminnow and Razorback sucker along with San Juan River and have proposed critical habitat for the yellow-billed cuckoo along the San Juan River as well."

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.133	Daniel	Mumm	San Juan Coal Company	Email	Table 3.8-1; Page 58-60 - SJCC suggests the following edits and clarifications to Section 3.8 and Table 3.8-1: <ul style="list-style-type: none"> • There are no specific protective measures for Birds of Conservation Concern (BCC). Consider explaining this in the text. • BCC also have no listing status under FWS. Consider explaining in the text why they are included in Table 3.8-1. • American Dipper Listing Status should be NNHP Group 3 • Consider explaining NNHP Group designations in the text, as some groups (4) do not have protective measures. • Consider changing "Listing Status" to "Conservation Status" or "Regulatory Authority" as not all of these species are "listed" • BLM designation should be "sensitive" as they do not use endangered/threatened • Bald Eagle is also protected under BGEPA • Aztec gilia and Brack's cactus are two separate species and should be treated individually. • Brack's cactus Latin name is misspelled. Please change to: Sclerocactus cloverae ssp. brackii • Mexican spotted owl is a federally threatened species • Yellow-billed cuckoo is federally threatened, not endangered. • Consider adding Mountain plover, which is a BLM sensitive species • Consider adding the appropriate sources as they are in the TRD: NMDGF 2018, USFWS 2017a (From the TRD), EMNRD 2018, NNHP 2008, BLM 2013) 	Special Status Species	<ul style="list-style-type: none"> • BCC - See TRD Section 3.8.1.1 Fish and Wildlife Conservation Act. • EIS Table 3.8-1 and TRD Table 3.8-3: American Dipper status changed to "NNHP" Group 3. • NNHP group designations - see TRD Section 3.8.2. • No action taken to changing "Listing Status." • BLM species status - refer to TRD Table 3.8-1 footnote. • Acknowledged, bald eagle is also protected under BGEPA but it is not considered a listing status in this document (similar to MBTA). • EIS Table 3.8-1 single line of Aztec Gilia and Brack Hardwall Cactus broken into two separate lines in the table. • EIS Table 3.8-1 and TRD Table 3.8-1 and Table 3.8-3: Brack's hardball cactus Latin name changed to Sclerocactus cloverae ssp. brackii. • The Mexican spotted owl was not listed on the USFWS IPaC report for the project area and is therefore not listed as a federal species for the project. • EIS Table 3.8-1 and TRD Table 3.8-3: Western yellow-billed cuckoo status changed to federally threatened. • The mountain plover is not included in EIS Table 3.8-1 because it was determined to not have the potential to occur within the project area. • The following sources were updated for EIS Table 3.8-1 - Source: BLM 2016, NNHP 2008, NMDGF 2017, Kendall 2017, FWS 2017.
53	53.134	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9; Page 60 - SJCC suggests the following edits under Land Use/Transportation/Agricultural <ul style="list-style-type: none"> • The proper citation/reference for the BLM grazing data is the BLM/FFO 2013, not the Ecosphere baseline. Please consider using primary literature. • The proper citation for the NM oil and gas data is from the NMOCD website. Please consider citing this reference as the primary literature source rather than the Ecosphere baseline report. • Consider adding a brief discussion on the impacts of subsidence in the Affected Environment. This would provide the background to support assessment findings relating to subsidence that are described in Section 4.9. 	Land Use, Transportation, Agriculture	Comment noted. BLM/FFO 2013 reference has been updated. No change made to Affected Environment.
53	53.135	Daniel	Mumm	San Juan Coal Company	Email	Section 3.11.1; Page 61 - Consider clarifying the information on population growth for San Juan County. Table 3.11-1 reports a 6.5% growth between 2010 and 2015. The Albuquerque Journal reported (January 2018) the following for a similar but more recent time span: "San Juan's population fell by almost 10 percent, or nearly 13,000 people, from 2011-2016, according to the U.S. Census Bureau."	Socioeconomics	The population data is from the US Census Bureau and represents the best available data at the time of releasing the Draft EIS. While from the same source, the data provided by the commenter would not allow for an equivalent comparison of impacts, or in other words, apples-to-apples comparisons given that the time frames would be different. No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.136	Daniel	Mumm	San Juan Coal Company	Email	Section 3.11; Page 61 - As described in the TRD, socioeconomic impacts are measured in terms of changes to demographic and economic trends. Therefore, in addition to summarizing the population, employment and San Juan Mine revenues in the ROI, consider summarizing the indicators of social and economic well-being and the economic role of San Juan Mine in the region (direct, indirect and induced economic effects from TRD Table 3.11-21).	Socioeconomics	Based on scoping comments, population, employment, and San Juan Mine public revenues were considered key topics for the socioeconomic analysis and thus presented in the EIS. The areas of social and economic wellbeing are addressed in the Technical Resource Document, which is incorporated by reference into the EIS. No change made.
53	53.137	Daniel	Mumm	San Juan Coal Company	Email	Section 3.12.2; Page 63 - Consider clarifying that Kirtland, New Mexico is not on the reservation or on Tribal Trust lands	Technical Edit	Comment noted. No change made. Roughly half of the municipality of Kirtland is on Navajo Nation tribal trust lands and the Native Americans that reside in Kirtland represent the closest Environmental Justice population to San Juan Mine.
53	53.138	Daniel	Mumm	San Juan Coal Company	Email	Section 3.12; Page 63 - In addition to describing the baseline conditions for low income and minority populations in the ROI, consider summarizing the indicators of social and economic well-being used to characterize the baseline (2008-2017) for the retrospective analysis or reference the specific section in the Draft EIS that provides this information.	Environmental Justice	Please see Response 53.163.
53	53.139	Daniel	Mumm	San Juan Coal Company	Email	Section 3.13; Page 63 - SJCC suggests adding a description on the VRM classification for the Project area.	Visual Resources	This information is included in the Technical Resource Document, which is incorporated by reference into the EIS. No change made to the EIS.
53	53.140	Daniel	Mumm	San Juan Coal Company	Email	Section 3.13; Page 64 - SJCC suggests the following edits: • "...largely distant from any potential casual observers sensitive viewers that who would be recreating in on Piñon Mesa or who reside in Kirtland (the nearest residential area to the San Juan Mine);. Views of above-ground structures, observable activity, and night time lighting at the DLE is are fragmented... where... badlands setting often obstructs direct line-of-sight views..." • SJCC also suggests including that approximately 40% of the disturbed acreage has been reclaimed ((Table 1.3-1).	Visual Resources	Comment noted. The proposed revision would not affect the analysis or conclusions. No change made.
53	53.141	Daniel	Mumm	San Juan Coal Company	Email	Section 3.16.2; Page 65-66 - To more accurately document the scope and robustness of the assessment reported in the TRD, consider summarizing the following in this section: • Key health issues(including diabetes) are within the ROI and specific to San Juan County • What the key health determinates are for the Project (not only air quality but also water quality, poverty, access to health care, Native American health and diet)	Public Health	Comment noted. These issues are discussed in more detail in the Technical Resource Document, which is incorporated by reference into the EIS. No change made.
53	53.142	Daniel	Mumm	San Juan Coal Company	Email	Figure 4.1-1; Page 69 - Location numbers on the map do not match with location numbers in the legend (i.e. NGS is #1 on map and #2 in legend)	Technical Edit	The figure has been updated in the Final EIS.
53	53.143	Daniel	Mumm	San Juan Coal Company	Email	Section 4.1.4; Page 75 - This description of the No Action and Section 2.3 are potentially inconsistent. Section 2.3 states that it will take approximately 10 years to complete final regrade after shutdown, while this section describes that it would continue for an undefined period of several years to complete. Consider correcting this to ensure consistency.	Alternatives	Comment noted. Section 4.1.4 has been revised to state that reclamation operations would continue for approximately 10 years after shutdown.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.144	Daniel	Mumm	San Juan Coal Company	Email	Section 4.1.5.1 and 4.2.4; Page 76 - Consider reviewing more recent information in the WRAP 2013 study regarding the potential oil and gas development in the San Juan Basin. Relatively recent improvements and innovations in horizontal drilling technology and multi-stage hydraulic fracturing have increased the recovery potential from the oil and gas-bearing formations. That combined with favorable resource pricing have made development in the basin more attractive to producers. The BLM is currently in the process of evaluating the Mancos-Gallup Amendment to the Farmington RMP. See: https://www.blm.gov/programs/planning-and-nepa/plans-in-development/new-mexico/farmingtonrmp-mancos-gallup-amendment	Air Quality	Comment noted. The WRAP study did not directly address improved recovery potential due to horizontal drilling and fracking. No change made.
53	53.145	Daniel	Mumm	San Juan Coal Company	Email	Section 4.2.1.3; Page 81 - Consider adding the citation for "For example, in a recent EIS, the OSMRE estimated that the selected alternative had a cumulative SCC ranging from approximately \$4.2 billion to \$22.1 billion depending on dollar value and the discount rate used."	Climate Change	Comment noted. No change made to the EIS. See Master Response 2: Social Cost of Carbon, which includes further discussion of the subject EIS, the Four Corners Power Plant and Navajo Mine Energy Project EIS.
53	53.146	Daniel	Mumm	San Juan Coal Company	Email	Section 4.2.2; Page 81 - SJCC suggests the following edit: The annual GHG emissions due to combustion of coal mined in the DLE from in 2018 through June 2022	Technical Edit	Comment noted. The proposed revision would not affect the analysis nor the conclusions. No change made.
53	53.147	Daniel	Mumm	San Juan Coal Company	Email	Section 4.3.1; Page 83 - SJCC suggests the following be added to the discussion on Geology and Soils: • Consider clarifying what the significance criteria are for assessing impacts to buildings, water sources, drainages and drinking water supplies that are discussed in Section 4.3.2 and describing the occurrence of these features in the affected environment (Section 3.3) or reference where they are described in other sections of the DEIS. • A figure showing surface features, fossil-bearing geologic formations, the coal haulage road and DLE footprint. This information would be helpful in understanding the potential scale of the impacts reported in Section 4.3.	Geology	Comment noted. The text in Section 4.3 of the EIS references Section 4.5 for impacts to water sources, drainages, and drinking water supplies. No change made.
53	53.148	Daniel	Mumm	San Juan Coal Company	Email	Section 4.3.5; Page 85 - SJCC suggests consideration of the following items: • SJCC recommends moving description of water quality from the cumulative effects discussion of Geology and Soils to Section 4.5, Water Resources/Hydrology. • It may be informative to consider the Piñon Mesa Fossil Area in the assessment of paleontological cumulative impacts.	Geology	Comment noted. Impacts to paleontological resources are site specific; the presence of another fossil area in the region would not negate or add to any potential effects at the Proposed Action area. No change made.
53	53.149	Daniel	Mumm	San Juan Coal Company	Email	Section 4.4; Page 86 - SJCC suggests defining APE and explain why it is used in place of ROI for Archaeology and Cultural Resources	Cultural Resources	The definition of APE and context is provided in the Technical Resource Document, which is incorporated by reference into the EIS: "The intent of Section 106 is for Federal agencies to take into account the effects of a proposed undertaking on any historic properties situated within a proposed APE. A project APE is defined as the 'geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist' (36 CFR 800.16(d))."

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.150	Daniel	Mumm	San Juan Coal Company	Email	Section 4.4.2; Page 87 - The second paragraph summarizes the 2007 subsidence monitoring study. OSM determined that periodic long-term subsidence monitoring of impacts to cultural resources was warranted. Consider describing if the results of subsequent monitoring, including the Phase V study (2001- 2014), are consistent with the findings in 2007.	Cultural Resources	Comment noted. Section 4.4 has been updated with results of more recent surveys completed and Section 106 consultation status. There are no changes to conclusions presented in the Draft EIS.
53	53.151	Daniel	Mumm	San Juan Coal Company	Email	Section 4.5.2.1; Page 90 - Consider adding the following description to Section 4.5.2.1 "SJCC has maintained compliance with its surface water quality permits through innovation in reclamation and storm water BMPs for surface impacts. In general, water quality degradation, given the regional soil types and storm driven hydrology of the area, would be expected in similar regional watersheds without surface and underground activities."	Surface Water	Comment noted. The proposed revision would not change the analysis nor the conclusions. The EIS already addresses compliance with regulatory requirements. No change made.
53	53.152	Daniel	Mumm	San Juan Coal Company	Email	Section 4.5.2.1; Page 91 - This section describes that "The surface water supplies for these impoundments are not likely to be affected by mine subsidence given that surface tensile cracks do not persist within stream channels." Consider describing if there are any impacts to water quantity before the cracks fill in.	Surface Water	Comment noted. The remaining portions of the paragraph describe procedures that are taken to prevent any water quantity impacts. No change made.
53	53.153	Daniel	Mumm	San Juan Coal Company	Email	Section 4.5.2.2; Page 92 - In the description of the impacts under the San Juan Mine Nationwide 50 permit, the resulting impact is considered "permanent". "With the implementation of required conditions of the NWP, impacts are considered minor and permanent." Consider clarifying if these impacts would remain permanent as road crossings associated with the NWP 50 would be reclaimed.	Surface Water	Comment noted. Even with reclamation, Waters of the U.S. that are filled would not be restored to original conditions. Therefore, impacts are considered permanent, although minor.
53	53.154	Daniel	Mumm	San Juan Coal Company	Email	Section 4.5.2.3; Page 92 - The first paragraph of Section 4.5.2.3 describes the impacts to groundwater quantity from subsidence. Consider clarifying that bedrock groundwater flow/storage would be impacted, but Quaternary alluvium groundwater would continue to follow arroyos downstream in most cases.	Groundwater	Comment noted. The paragraph referenced refers specifically to groundwater in the Fruitland Formation No. 8 coal seam. No change made.
53	53.155	Daniel	Mumm	San Juan Coal Company	Email	Section 4.5.2.3; Page 93 - Consider clarifying the reported "minor" impact level regarding the drawdown in well SJ2055. Subsequent to modeling the potential changes to the potentiometric surface, mine plans changed, and it was determined that the well would no longer be affected.	Groundwater	Comment noted. No additional changes made. The text states: minor and long-term effects to groundwater quantity and water supply are anticipated as a result of the Proposed Action.
53	53.156	Daniel	Mumm	San Juan Coal Company	Email	4.5.2.3; Page 94 - Because the NM, MMD, and USGS assessment has not been published, SJCC believes this paragraph is better suited in the TRD, where it is already described, or deleted. It does not provide relevant data and could confuse the reader after reading the determination made on CCR in the previous paragraph.	Groundwater	Comment noted. The Final EIS has been updated to reflect current status.
53	53.157	Daniel	Mumm	San Juan Coal Company	Email	Section 4.5.5; Page 95 - The Fruitland Formation and PCS is already over-drawn between oil and gas production wells and mining as part of the baseline described in the Affected Environment Section 3.5. Consider clarifying which projects considered in the cumulative effects analysis would contribute to additional drawdown on the Fruitland or Pictured Cliffs.	Groundwater	As stated in the referenced paragraph, continued operation of the Generating Station and oil and gas operations with wells completed in the same formation are considered to continue to contribute to impacts.
53	53.158	Daniel	Mumm	San Juan Coal Company	Email	Section 4.5.5; Page 95 - The end of the second paragraph of Section 4.5.5 discusses cumulative effects from CCR placement at other mines. Consider identifying which mines are being considered.	Technical Edit	The text states that it considers similar placement of CCR at "the other mines considered in this cumulative effects analysis."

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.159	Daniel	Mumm	San Juan Coal Company	Email	Section 4.5.5; Page 96 - Though no additional mitigation is proposed, a description of SJGS' contribution to the cumulative impact should be discussed in more depth (relative amount compared to other emissions). Consider clarifying if this cumulative impact is considered major without the SJGS contribution	Surface Water	Comment noted. No change made. The paragraph describes that emissions are considered in context with emissions from 16 other power plants considered in the analysis along with emissions from China, which together are all considered cumulative.
53	53.160	Daniel	Mumm	San Juan Coal Company	Email	Section 4.6; Page 96 - The term "expansion area" is used to describe the San Juan River Buffer added to the ERA analysis. Consider using San Juan River Buffer to be consistent with other resource sections.	Vegetation	The term "expansion area" was changed to "buffer area."
53	53.161	Daniel	Mumm	San Juan Coal Company	Email	Section 4.6.2; Page 98 - Consider clarifying that the surface disturbance associated with coal stockpiles was also completed prior to 2017 and is defined as part of the affected environment.	Vegetation	No action taken. Technical Resource Document (which is incorporated by reference into the EIS) Section 3.6 and Table 3.6-1, and Section 3.6.2.3 provides discussion of previous surface disturbance.
53	53.162	Daniel	Mumm	San Juan Coal Company	Email	Section 4.6.2; Page 98 - SJCC suggests the following edits: <ul style="list-style-type: none"> • "All land disturbed in the areas proposed to be mined..." • Second sentence in second paragraph uses the phrase "in areas reclaimed" twice. Consider removing one of the phrases. <ul style="list-style-type: none"> • In the second paragraph, consider changing MME 2014 to MMD 2014 • Consider clarifying that the San Juan Mine permit is approved through New Mexico MMD and the reclamation standards are in accordance with the MMD standards. 	Technical Edit	Comment noted. Suggested revisions made.
53	53.163	Daniel	Mumm	San Juan Coal Company	Email	Section 4.6.2; Page 99 - The first paragraph on the page describes that vegetation would be impacted by dust, but does not describe how off-road travel or weed invasion would impact vegetation. Consider adding this to the description.	Vegetation	No action taken. Additional information is provided in the Technical Resource Document, which is incorporated by reference into the EIS.
53	53.164	Daniel	Mumm	San Juan Coal Company	Email	Section 4.6, 4.7, 4.8; Page 100 - Multiple locations within in Sections 4.6, 4.7, and 4.8 reference a ROI without identifying the specific ROI that is being discussed. Please indicate which ROI these sections are referencing.	Vegetation	Final EIS Section 4.6.5 has been revised to clarify "Mine ROI." No changes required for Sections 4.7 or 4.8.
53	53.165	Daniel	Mumm	San Juan Coal Company	Email	Section 4.7; Page 100 - The TRD indicates that there is a second ROI for the Generating Station that is used in the Wildlife Section. Consider describing the second ROI in Section 4.7 as well. Also, consider using the acronym, ROI, to describe the region of influence throughout this section for consistency.	Wildlife	As mentioned in Section 4.7, refer to Section 4.6 for a description of the region of influence. Changes to ROI and region of influence have been made where appropriate.
53	53.166	Daniel	Mumm	San Juan Coal Company	Email	Section 4.7; Page 100 - Consider clarifying what are the "other San Juan Mine sources" that were modeled in the ecological risk assessments. This will help support the impact assessment results regarding potential impacts associated with fugitive dust from surface operation as the San Juan Mine including the DLE.	Wildlife	EIS Section 4.7 updated as follows to match information in the TRD: "The ERA was based on the comparison of conservative wildlife-protective soil screening levels to the concentrations of constituents in the environment (soil and water) within the deposition area under current conditions as well as the predicted concentrations of COPECs in the environment following 16 years of future emissions from the Generating Station/ <u>San Juan Mine</u> and other nearby <u>San Juan Mine</u> sources, from 2018 through 2033."
53	53.167	Daniel	Mumm	San Juan Coal Company	Email	Section 4.7.1, 4.8.1; Page 100-101, 107 - Consider clarifying what is considered "relatively small" for a minor impact.	Wildlife	Comment noted. No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.168	Daniel	Mumm	San Juan Coal Company	Email	Section 4.7.2; Page 102 - SJCC suggests adding information on the impacts to species due to subsidence. Terrestrial burrowing species would be impacted by subsidence temporarily.	Wildlife	The EIS Section 4.7.2 and TRD Section 3.7.4.1 has been revised as follows to specifically reference burrowing animals as follows: "Permanent losses of soil horizon habitats would reduce the abundance of ground-dwelling wildlife, particularly small mammals. Subsidence could impact burrowing species. It is inevitable that some small mammals would be lost in the earth moving process associated with construction of new mining infrastructure."
53	53.169	Daniel	Mumm	San Juan Coal Company	Email	Section 4.8; Page 104 - SJCC suggests removing "For purposes of this environmental analysis, special status plants and animals include species that are proposed for Federal listing as threatened or endangered or considered candidates for listing, and species noted as sensitive or of special concern by other Federal agencies and state or tribal governments." This statement is redundant with the previous sentences.	Wildlife	Section has been updated to avoid redundancy.
53	53.170	Daniel	Mumm	San Juan Coal Company	Email	Section 4.8; Page 105 - SJCC suggests the following edits: • Consider clarifying if the description of disturbance includes spatial and temporal extent, as well as duration.	Special Status Species	No action taken. Impact magnitude and duration definitions provided in Section 4 introduction.
53	53.171	Daniel	Mumm	San Juan Coal Company	Email	Section 4.8; Page 105 - Consider indicating that the second paragraph on the page is discussing indirect impacts	Special Status Species	EIS Section 4.8 updated to state: "This section also includes an analysis of <u>indirect impacts</u> <u>that include</u> potential ecological risks to special status species from 7 the combustion of coal at the Generating Station, and the deposition of air emissions."
53	53.172	Daniel	Mumm	San Juan Coal Company	Email	Table 4.8-1; Page 106 - Consider explaining the impacts to Special Status Species from off road travel and from weed invasion.	Special Status Species	No change made. Additional information is provided in the Technical Resource Document, which is incorporated by reference into the EIS.
53	53.173	Daniel	Mumm	San Juan Coal Company	Email	Section 4.8.2.1; Page 108 - Consider adding southwestern willow flycatcher to this list of species that may occur within the Mine ROI.	Special Status Species	EIS Section 4.8.2.1 has been revised as follows, to incorporate greater detail from the Technical Resource Document, which is incorporated by reference into the EIS: "Special status songbirds (Passeriformes) shorebirds, and hummingbirds with the potential to 32 occur within the Mine ROI include the American dipper, Bendire's thrasher, Brewer's sparrow, gray vireo, lesser yellowlegs, loggerhead shrike, pinyon jay, rufous hummingbird, southwestern willow flycatcher, Virginia's warbler, willow flycatcher, and yellow-billed cuckoo."
53	53.174	Daniel	Mumm	San Juan Coal Company	Email	Section 4.8.2.1; Page 108 - SJCC suggests adding a sentence describing that reclamation is contemporaneous to mining. This may help the reader understand why the impacts of disturbance would be short term	Special Status Species	No action taken. Impacts on this page are defined as long-term.

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53	53.175	Daniel	Mumm	San Juan Coal Company	Email	Section 4.8.2.1; Page 108 - SJCC suggests the following edits: • Sentence needs to be completed, “Prairie dogs are relatively resilient...” • Please reference the source for the statement on prairie dog resiliency. • Consider explaining why there is no impact to the New Mexico Meadow Jumping Mouse • New Mexico meadow jumping mouse is considered primarily an herbivore, but this indicates that the ERA analyzed it as an insectivore. Consider clarifying.	Special Status Species	The following sentence “ Prairie dogs are relatively resilient ” was deleted. Additional information on the New Mexico jumping mouse is provided in the Technical Resource Document, which is incorporated by reference into the EIS.
53	53.176	Daniel	Mumm	San Juan Coal Company	Email	Section 4.8.2.2; Page 109 - Consider clarifying that while San Juan Mine has designed its sedimentation basins to contain most storm water flows, the designation of “zero discharge facility” has not been granted to the SJM for its NPDES permit.	Special Status Species	Comment noted. The Final EIS has been updated to reflect that the mine is not a “zero discharge facility”.
53	53.177	Daniel	Mumm	San Juan Coal Company	Email	Section 4.8.2.2; Page 110 - Consider clarifying that the water rights for consumptive use are held by PNM, TEP, and APS, as described in Section 2.1.1.3	Special Status Species	EIS Section 4.8.2.2 has been updated to state: “Surface water drawn from the San Juan River for use at the Generating Station and San Juan Mine is obtained according to water rights for consumptive use held by <u>SJCC, PNM, TEP, and APS.</u> ”
53	53.178	Daniel	Mumm	San Juan Coal Company	Email	Section 4.8.2; Page 110-111 - Section 4.8.2 did not discuss that a Biological Assessment is being completed for this project. Consider discussing that the Federally listed species here or add a statement that the BA and Section 7 will cover the impacts to listed species.	Special Status Species	A reference to Section 5 has been added to Section 4.8 Section 5 has been updated to describe the current status of Section 7 consultation.
53	53.179	Daniel	Mumm	San Juan Coal Company	Email	Section 4.8.2.3; Page 112 - Special status plants are known to occur within the Mine ROI. Hogback ACEC is within a mile and that contains the Mesa Verde Cactus. Consider updating the text to include this information.	Special Status Species	EIS Section 4.8.2.3 updated to state: “ As mentioned above, No special status plants are present <u>Known to occur</u> within the Mine region of influence.”
53	53.180	Daniel	Mumm	San Juan Coal Company	Email	Section 4.8.4; Page 112 - SJCC suggests the following edits: • Deposition would not cease until 2020 • Consider using “Proposed Action” or “Project” in place of “Proposed Project” to be consistent with other resource sections	Special Status Species	Comment noted. Suggested revisions made.
53	53.181	Daniel	Mumm	San Juan Coal Company	Email	Section 4.9.2, 4.95; Page 114, 115 - SJCC suggests referencing the agreement and procedure for plugging and abandoning wells that lie within the DLE mining footprint. For more information, see section 3.9.2.1 in the Ecosphere baseline (Ecosphere 2017c).	Land Use, Transportation, Agriculture	Comment noted. The proposed revision would not change the analysis nor the conclusions. No changes made.
53	53.182	Daniel	Mumm	San Juan Coal Company	Email	Section 4.9.2; Page 114 - Grazing is one of the surface land uses in the DLE. Drilling GVBs and constructing roads would remove some amount of forage for livestock; consider adding a description of this impact in this section.	Land Use, Transportation, Agriculture	The facilities mentioned in the comment would not preclude grazing access. No change made.
53	53.183	Daniel	Mumm	San Juan Coal Company	Email	Section 4.9.2; Page 114 - For clarity, consider summarizing what the Title 30 CFR 81.181 requirements are for support facilities.	Land Use, Transportation, Agriculture	This information and discussion is included in the Technical Resource Document, which is incorporated by reference into the EIS.
53	53.184	Daniel	Mumm	San Juan Coal Company	Email	Section 4.9.2; Page 115 - Consider clarifying the number of San Juan Mine employees, which currently is 290 employees and not 360	Land Use, Transportation, Agriculture	The figures analyzed for the traffic analysis do not directly correlate with the employment at the Mine (i.e., 290 employees) because the figures provided in Section 3.9.4.1 represent work shifts to assess when employees are traveling. No changes made.

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53	53.185	Daniel	Mumm	San Juan Coal Company	Email	Section 4.9.5; Page 116 - There is a BLM Protocol for analyzing cumulative impacts to grazing as a result of proposed actions. Consider including a description of this Protocol under Section 4.9.5. This analysis involves determining the amount of forage potentially lost and surface disturbed within the grazing allotments, which can translate to loss of AUMs if the impacts are great enough.	Land Use, Transportation, Agriculture	Please see Master Response 3. As discussed in Section 4.9.2, impacts to grazing would not be significant, and a cumulative effect can only occur when a direct impact occurs; thus, the cumulative analysis of grazing impacts is sufficient and no changes are made.
53	53.186	Daniel	Mumm	San Juan Coal Company	Email	Section 4.10.2; Page 116 - Consider revising the following sentence as the noise levels are not anticipated to increase as part of the proposed action given that the activities will be the same as baseline, "Though mining activities would raise the ambient noise level in the immediate area, these noise levels are expected to be similar to existing conditions; therefore, there would be no impacts to the recreational experience due to changes in the noise environment."	Recreation	Comment noted. No change made.
53	53.187	Daniel	Mumm	San Juan Coal Company	Email	Section 4.10.2; Page 117 - Consider clarifying that the visual impacts would range from no impact to moderate depending on the Key Observation Point (as discussed in the TRD).	Recreation	Comment noted. No change made.
53	53.188	Daniel	Mumm	San Juan Coal Company	Email	Section 4.10.5; Page 117 - Consider discussing the beneficial impact of cessation of operations of the Generating Station on Regional Haze	Recreation	Comment noted. A sentence has been added to the section stating that impacts to recreation associated with visual resources would be eliminated under the No Action Alternative.
53	53.189	Daniel	Mumm	San Juan Coal Company	Email	Section 4.11.4.1; Page 119 - Consider clarifying that not all jobs at San Juan Mine would be lost "abruptly" with the No Action alternative. Many workers would lose their jobs, but those that are needed for reclamation of the former surface operations would be retained until the reclamation is complete.	Socioeconomics	The following language has been added: "The majority of jobs would be terminated abruptly, with some workers being retained for reclamation activities."
53	53.190	Daniel	Mumm	San Juan Coal Company	Email	Section 4.11.4.2, 4.11.4.5; Page 119, 120 - SJCC suggests the following information be clarified: • The mine has approximately 290 employees, while the Generating Station has 265 employees. This is a total of 555 employees, while this section describes 371 jobs that would be directly lost. Consider clarifying where this number was derived from. • TRD Section 3.11.4.4 reports that the loss of jobs would be 898 vs the 897 reported in the DEIS.	Socioeconomics	The loss of 371 jobs represents those employees who live in the Four Corners region, which serves as the primary study area for the socioeconomic analysis. Per Table 4.11-2, the IMPLAN modeling determined that in the event that the Mine and Generating Station shutdown, the Region would experience a loss of 371 jobs. This number does not represent the full loss of employment (i.e., 555 jobs), because not all employees live within the study area, as some employees live in Counties not captured by the Four Corners region study area. It is worth noting that the State-level model determined that 467 jobs would be lost under the No Action Alternative. This figure also does not capture the full loss of employment for the same reason, not all employees live in the study area for this model (i.e., some live in Utah and Arizona). Section 3.11.4.4 has been revised to be 897 jobs, per Table 4.11-1 in the EIS.
53	53.191	Daniel	Mumm	San Juan Coal Company	Email	Table 4.11.3; Page 120 - SJCC suggests changing the employment numbers to be negative values as they show job loss.	Socioeconomics	The employment figures have been updated to show as negative values.

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53	53.192	Daniel	Mumm	San Juan Coal Company	Email	Section 4.11.4.5; Page 120 - Consider including the TRD (pages 3.11-37 and 3.11-38) summary regarding the boom-and-bust cycles of extractive industries as being a key component of the regional economy, "A key component of the regional economy is extractive industries (i.e., oil and gas), which are subject to commodity price fluctuations on the open market. These industries tend to experience boom-and bust cycles based on the price of the resource. Although an extractive operation, San Juan Mine has a sole client in the Generating Station and pricing fluctuations on the open market, thus creating a steady base of jobs that does not ebb-and-flow with market forces. The same can be said for the Generating Station as a steady jobs-provider. "	Socioeconomics	While important, this information offers good context but is not vital to the socioeconomic findings in the EIS. Additional information is presented in the Technical Resource Document, which is incorporated by reference into the EIS.
53	53.193	Daniel	Mumm	San Juan Coal Company	Email	Section 4.11.5; Page 121 - Table 5-10 in the SBM (p48) reports the labor income for the 291 direct jobs to be \$34.3 Million per year in the ROI, resulting in an estimated \$514 Million of labor income and \$2.7 Billion in economic activity over 15 years, whereas this discusses 290 jobs and \$2.3 Billion in economic activity. Consider clarifying which information is correct.	Socioeconomics	Section 4.11.5 of the EIS has been revised to: "While mining operations and workforce at San Juan Mine have been decreased to account for the shutdown of Generating Station Units 2 and 3, the DLE would render an aggregated economic impact (total from 15 years of operation, 2018-2033) of \$400 million in labor payroll, 290 jobs/year, and over \$2.3 billion in economic activity". The only change is to the employment/year figure. This information directly correlates to Section 4.11.2.
53	53.194	Daniel	Mumm	San Juan Coal Company	Email	Section 4.11.5; Page 121 - Generating Station units 2 and 3 were shut down. Consider updating this in the text.	Socioeconomics	Suggested edit has been made.
53	53.195	Daniel	Mumm	San Juan Coal Company	Email	Section 4.12.2.2; Page 123 - There are 290 jobs at San Juan, as described in Section 4.11.5. Consider clarifying how 85 jobs are considered "approximately half." In Section 3.12.5 of the TRD, it states that 85 Native Americans lost their job due to the shutdown of Units 2 and 3, so the numbers could have been confused. Consider clarifying the difference in the reported information	Environmental Justice	Section 4.12.2.2 has been changed to "Approximately one-third..."
53	53.196	Daniel	Mumm	San Juan Coal Company	Email	Section 4.12.2.4; Page 123 - SJCC suggests the following edit: These impacts include subsidence of the DLE surface, surface construction impacts (i.e., dust), limited and localized nighttime lighting, and observation of proposed surface facilities	Environmental Justice	Comment noted. The proposed revision would not change the analysis nor the conclusions. No change made.

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53	53.197	Daniel	Mumm	San Juan Coal Company	Email	Section 4.13; Page 125 - SJCC suggests the following edits: “Visual impacts Environmental effects to visual resources are the changes to color, line, form, and texture brought into a landscape by a proposed action, and the contrasts with the existing landscape and vegetation that result from the proposed action. Effects are also measured by whether the contrasts exceed the BLM’s VRM class objectives (the predetermined acceptable level of contrast change) for an area. are caused by introducing new features or changing existing features in the scenic environment. Contrast changes may include adding new features, colors, or textures to the environment that are uncharacteristic to the locality or region. Changes also occur, or when aesthetic features of the landscape are made less visible. Impacts of the Proposed Action, Action Alternative, and the No Action Alternative were evaluated according to the level of change they would cause to the existing landscape character. The assessment of impacts takes into consideration the following factors: scenic integrity, viewer-sensitivity, visual quality, viewer exposure, and overall visual sensitivity.	Visual Resources	Expanded discussions of how visual impacts and visual resources terminology is provided in the Technical Resource Document, which is incorporated by reference into the EIS. No changes made.
53	53.198	Daniel	Mumm	San Juan Coal Company	Email	Section 4.13; Page 126 - SJCC suggests the following edits: • “...computerized viewshed analysis model to determine from what surrounding areas the proposed activities within the DLE...” • Consider adding a note in this section that the TRD contains detailed descriptions of the VRM analysis for each KOP	Visual Resources	No change made. Section 4.13.2 includes the statement that the Technical Resource Document includes analysis of each KOP.
53	53.199	Daniel	Mumm	San Juan Coal Company	Email	Section 4.13.2; Page 126 - SJCC suggests the following edits: The TRD contains detailed descriptions of the Proposed Action’s potential visual impacts at from each KOP. Overall, the activities proposed under Alternative A would not exceed a moderate effect level on visual resources, and specifically, the BLM’s VRM class objectives would not be exceeded for the Project area or for any of the KOP locations. From all KOPs, the Generating Station and its stack emissions would continue to be the dominant feature capturing viewers’ attention, far more than any of the proposed activities under Alternative A.”	Visual Resources	Comment noted. No change made.

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53	53.200	Daniel	Mumm	San Juan Coal Company	Email	Section 4.13.2; Page 126-127 - SJCC suggests the following edits to clarify the descriptions in this section: The grading and construction of access roads and installation of surface features (e.g., GVBs, rescue chambers) would create adverse short-term visual impacts as these elements add a moderate degree of visual contrast noticeable to the casual observer in the foreground/middle ground distance zone and typically do not repeat the existing patterns of form, line, color, and texture currently existing in the landscape. However, the contrast from these short-term impacts is not anticipated to create a level of contrast that would alter existing VRM objectives for the Project area or from any KOPs. However, Reclamation measures—including re-contouring the disturbed surface to match natural contours and re-vegetation with the appropriate seed mixtures—are expected to slowly diminish the short-term visual contrast from moderate to minor in these areas over time in the long-term. As part of reclamation, the SJCC windrows soil adjacent to construction areas where surface disturbances are less than five acres or are linear and 20 feet wide, and soil is placed back into the disturbance area after construction (MMD 2014, Subpart 906B).”	Visual Resources	Comment noted. The proposed revisions would not change the analysis nor the conclusions. No change made.
53	53.201	Daniel	Mumm	San Juan Coal Company	Email	Section 4.13.4; Page 127 - SJCC suggests the following edits to clarify the descriptions in this section: “Under the No Action Alternative, no adverse effect on visual resources as viewed from KOPs would occur beyond 2019, and scenic quality is expected to gradually improve as the San Juan Mine area is reclaimed, including Juniper Pit. Over the ten-year period, the scenic quality and sensitivity in the ROI would experience a <u>permanent and moderate long term reduction in effects from moderate to no impact</u> as reclamation” “Therefore, the indirect effect of the No Action Alternative would be a reduction of visibility and haze <u>impacts</u> in the region	Visual Resources	Comment noted. No change made.
53	53.202	Daniel	Mumm	San Juan Coal Company	Email	Section 4.14; Page 128 – The Draft EIS states “...operations at the San Juan Mine is reasonably expected to result in a perceptible increase in noise and vibration.” Consider clarifying the condition regarding an increase in noise and vibration based on the following information: • The proposed activities at the San Juan Mine will be the same as baseline; • That the mine production rate decreased in July 2016 from 6M tpy to 3M tpy and; • Generating Station Units 2 and 3 shutdown in December 2017	Noise	The estimated increase in noise and vibration are a function of the relative distance to sensitive noise/vibration receptors. Although the proposed activities would be the same as baseline, the proposed mining activity would occur much closer to residential areas than baseline conditions. Similarly, the decrease in mine production does not necessarily result in a decrease in produced noise/vibration as these are a function of equipment operating in proximity to sensitive receptors. The Generating Station is approximately 3.0 miles from the nearest sensitive receptor and does not substantially contribute to the noise environment at the nearest residential area due to the attenuation of noise/vibration over distance and intervening terrain.
53	53.203	Daniel	Mumm	San Juan Coal Company	Email	Section 4.14; Page 128 - Consider clarifying that the analysis considered potential impacts from vibration.	Noise	Comment noted. The section already describes that vibration is considered in the analysis. No change made.

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53	53.204	Daniel	Mumm	San Juan Coal Company	Email	Section 4.14.1, Table 4.14-1; Page 128, 129 - SJCC suggests replacing “90 dBA” with “90 dBA Leq”	Noise	The first bullet has been revised to clarify threshold: "Peak Hourly daytime equivalent (Leq) sound noise levels from construction or mining activities reach 90 dBA at residences."
53	53.205	Daniel	Mumm	San Juan Coal Company	Email	Section 4.14.4; Page 130 - Consider clarifying that not all mining activities would stop in August 2019. Mining could continue in the Deep Lease, as described in Section 2.3. Coal haulage and combustion would also continue until approximately August 2020 and reclamation would continue until Juniper Pit is fully reclaimed. Consider describing the noise impacts associated with those activities in this section.	Noise	The text has been revised as follows for clarity: "Impacts from existing mining activities have been assessed previously and are not expected to differ appreciably in nature from what is described above until August 2019 when all mining activities in the DLE would cease. However, the SJCC would continue reclamation activities of past surface mining operations (Juniper Pit) and all surface disturbance from underground mining operations. The workforce would be reduced to only those necessary for reclamation. Any coal remaining in the coal stockpiles would be delivered to the Generating Station. CCR from the Generating Station would be placed in Juniper Pit in accordance with the reclamation plan for the duration of Generating Station operation. Without the additional CCR to use in reclaiming Juniper Pit upon shut-down of the Generating Station, more disturbance of native or reclaimed areas would be required to fill the pit and complete the final design. Access roads and drill pads would be reclaimed during the few years following shutdown. Final regrade of former surface operations and reclamation of the support facilities would be completed approximately ten years after the shutdown. Impacts from these activities have been assessed previously and are not expected to differ appreciably in nature from what is described above."
53	53.206	Daniel	Mumm	San Juan Coal Company	Email	Section 4.15.2; Page 131 - SJCC suggests deleting the language focused on San Juan Mine not triggering EPCRA. San Juan Mine is subject to Toxic Release Inventory Reporting annually and will be as long as CCR is disposed in the former surface mine pits	Hazards and Hazardous Materials	The text of Section 4.15.2 of the Draft EIS and Section 3.15.4.1 of the Technical Resource Document has been revised accordingly.
53	53.207	Daniel	Mumm	San Juan Coal Company	Email	Section 4.15.2; Page 131 - SJCC suggests adding the following language after EPCRA description to describe CCR disposal It is estimated that the amount of hazardous and solid wastes generated and CCR material managed onsite under Alternative A would be reduced by approximately 40% to 50% from amounts of generated or managed onsite during the baseline period of 2008 - 2017."	Hazards and Hazardous Materials	The risk of toxic release is also a function of other chemicals stored onsite that would not be reduced as a function of CCR material managed onsite. No change made.
53	53.208	Daniel	Mumm	San Juan Coal Company	Email	Section 4.15.3; Page 132 - Section 2.2.2 describes that the “typical” local generating station would include “similar types of CCR handling and Storage.” Consider updating the description of the section to reflect that CCR would be used to facilitate reclamation for the life of mine.	Hazards and Hazardous Materials	The text has been revised to clarify. The possibility that CCR would be transported back to the San Juan Mine from another generating station for reclamation is not considered in the analyses of impacts in the Draft EIS.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.209	Daniel	Mumm	San Juan Coal Company	Email	<p>Section 4.16; Page 133 - To show the depth of the analysis, in the 3rd paragraph Consider clarifying that the public health assessment not only focused on the human health risks from exposure to contaminants in air emissions produced by the proposed activities at the mine and from the combustion of coal at the Generating Station but also on the risks associated with operating gas and diesel-fired equipment (DPM, evaluated as part of PM_{2.5}), and coal excavation and handling (fugitive dust).</p> <p>It would also be helpful to explain that the air emissions are assessed for two broad categories of contaminants, the criteria pollutants and air toxics, which are assessed under different regulatory programs that use different methodologies. This provides the basis for the discussion on criteria pollutants, air toxics and the significance criteria discussed later in the section.</p>	Public Health	<p>DPM analysis is described in the second full paragraph on page 135.</p> <p>The paragraph above the bullet on page 133 has been edited as follows: "The analysis for public health focuses on the human health risks from exposure to contaminants in air emissions produced by the proposed activities at the mine and from the combustion of coal at the Generating Station and were evaluated in a detailed HHRA (AECOM 2017e). <u>Air emissions are assessed for two categories of contaminants, criteria pollutants and air toxics, which are assessed under different regulatory programs using different methodologies.</u> Below is a discussion of the <u>two different sets of criteria</u> for assessing air pollution:..."</p>
53	53.210	Daniel	Mumm	San Juan Coal Company	Email	Section 4.16.2.1; Page 134 - Consider adding detail on the types of violations that were received or cite the MSHA website so that the reader can find the information.	Public Health	A footnote has been added to Section 3.16.1 to indicate that the mine's safety violations and progress in addressing any deficiencies found by regulators can be found on MSHA's website: https://arlweb.msha.gov/drs/drshome.htm .
53	53.211	Daniel	Mumm	San Juan Coal Company	Email	Section 4.17; Page 143 - SJCC suggests the following edit: "Use of borrow area materials would create short-term ground-disturbing impacts to land, wildlife habitat, and vegetation that would be reclaimed according to established procedures.	Technical Edit	Comment noted. Text has been revised as suggested.
53	53.212	Daniel	Mumm	San Juan Coal Company	Email	Section 5; Page 145 - SJCC suggests clarifying that there is only one Project Applicant	Technical Edit	Comment noted. Text has been revised as suggested.
53	53.213	Daniel	Mumm	San Juan Coal Company	Email	Section 5.1; Page 145 - In the package of government-to-government consultation invitation letters, there is not a letter to the White Mountain Apache Tribe. Consider clarifying if a letter was not sent based on their decision to opt out of consultation.	Section 106	White Mountain Apaches is listed in the table shown on page 145 and have been appropriately consulted by OSMRE.
53	53.214	Daniel	Mumm	San Juan Coal Company	Email	Section 5.4.1; Page 148 - Consider adding the location and dates of the public scoping meetings.	Technical Edit	Comment noted. No change made.
53	53.215	Daniel	Mumm	San Juan Coal Company	Email	Section 5.4.2; Page 148 - Consider adding that the DEIS was made available through the OSMRE website and provide the link.	Technical Edit	Comment noted. No change made.
53	53.216	Daniel	Mumm	San Juan Coal Company	Email	Section 1; Page 1-1 – SJCC suggests adding that the Draft EIS has been prepared in accordance with the court order and the Executive Order for Streamlining NEPA.	Technical Edit	Comment noted. No change made.
53	53.217	Daniel	Mumm	San Juan Coal Company	Email	Section 2.1; Page 2-2 - SJCC suggests the following edit: The consequences of the past 9 10 years of mining	Technical Edit	Comment noted. Text has been revised as suggested.
53	53.218	Daniel	Mumm	San Juan Coal Company	Email	Section 2.1; Page 2-2 - SJCC suggests the following edit for consistency: Therefore, one outcome of the No Action could be that after 2019 2020 , the Generating Station would be shut down □	Technical Edit	Comment noted. Text has been revised as suggested.
53	53.219	Daniel	Mumm	San Juan Coal Company	Email	Section 2.1; Page 2-4 - Consider clarifying that there is only one proponent for this Project.	Technical Edit	Comment noted. Text has been revised as suggested.
53	53.220	Daniel	Mumm	San Juan Coal Company	Email	Section 3 - Consider adding a figure at the beginning of each reference to show the location of the ROI(s). This would greatly benefit the reader and provide better context for the area that is being discussed.	Technical Edit	Comment noted. Descriptions of each ROI are provided in the Technical Resource Document and incorporated by reference into the EIS. No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.221	Daniel	Mumm	San Juan Coal Company	Email	Section 3 - For consistency, clarity and to better support the defensibility of the retrospective analysis, consider describing the ROI for each resource in the respective affected environment section for that resource. This is also consistent with DEIS Section 3.0 stating that the retrospective analysis will be described in the affected environment summary. Alternatively, consider verifying that the ROI is defined for each resource at the start of the Environmental Consequence discussion.	Technical Edit	Please see Response 53.3.
53	53.222	Daniel	Mumm	San Juan Coal Company	Email	Section 3 - For consistency and clarity, SJCC suggests that the duration be included in the discussion of significance criteria. Describe what constitutes short term and long-term impacts.	Technical Edit	Definition of short term and long term are provided in Section 4, page 67 of the Draft EIS.
53	53.223	Daniel	Mumm	San Juan Coal Company	Email	Table 3.1-1; Page 3.1-3 - SJCC suggests adding New Mexico air quality standards for hydrogen sulfide and total reduced sulfur to Table 3.1.-1 for completeness.	Air Quality	Comment noted. No change made. While some amount of hydrogen sulfide/reduced sulfur would be emitted just by combustion of coal and diesel fuel, these pollutants are not monitored in the vicinity, and were neither quantified nor included in the modeled emission inventory. That is typical for these pollutants, among many other regulated hazardous pollutants that are addressed in air permitting, but not normally reviewed in air quality NEPA.
53	53.224	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.1.1; Page 3.1-5 - SJCC suggests mentioning that there are biogenic sources of ground level ozone. An attempt to quantify this information would be helpful under the Ozone description	Air Quality	There are not likely to be biogenic sources of ozone, but of ozone precursors. Quantifying this source is a very local exercise, and beyond the scope of this analysis and would not affect the conclusions in the EIS. No change made.
53	53.225	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.1.1; Page 3.1-11 - SJCC suggests the following edit: The reasonable progress goals are designed to reach natural conditions by 2064 (See 40 CFR § 51.308)	Air Quality	Suggested edit has been made.
53	53.226	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.1.1; Page 3.1-11-11; SJCC suggests revising the last paragraph to state: “Consistent with the Regional Haze Rule, the New Mexico revised SIP and BART requirements for the Generating Station, the closure of Units 2 and 3 occurred in December 2017. The revised SIP and associated BART requires reduced emissions of NOx and established defined emission limits for PM10 from Units 1 and 4.”	Air Quality	The text has been updated to simplify the section.
53	53.227	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.1.3; Page 3.1-15 - The information presented under Section 3.1.1.7 is not pertinent to the proposed action. SJCC suggests removing this section.	Air Quality	Comment noted. No change made.
53	53.228	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.1.8; Page 3.1.15 - SJCC suggests the following edit: Consider changing “primary” in the 3rd line of section to “primacy”	Air Quality	Comment noted. Text has been revised as suggested.
53	53.229	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.1.8; Page 3.-17 - SJCC suggests the following edits: • Consider adding a note that overburden drills have not been used since the mine transitioned to an underground operation • Consider adding a note that spoil fires have not been documented since the mine transitioned underground • Consider changing the description in bullet 10 to be in present tense. All of those measures are being done currently.	Air Quality	The measures listed in this section of the Technical Resource Document are those listed in the New Mexico MMD Permit. Bullet 10 has been updated to reflect its current status.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.230	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.1.9; Page 3.1-17 - Consider changing the citation from 20.2.72 NMAC to 20.2.73.300 NMAC SJCC suggests summarizing NMAC 20.2.73.300 to state: <u>“Under 20.2.73.300, NMAC, the submittal of emission inventories for stationary sources that have been issued a construction permit or that have in excess of 10 tpy of any regulated pollutant or 1 tpy of Pb.”</u> As a requirement of the Title V air permit held by the Generating Station, the facility is required to submit annual emissions inventories to NMED that quantify emissions from stationary sources. <u>“Air emissions from the San Juan Mine do not exceed the annual emission reporting thresholds established under 20.2.73.300 NMAC.”</u>	Air Quality	This citation of 20.2.72 applies to the paragraph regarding air permitting threshold, as a general description of the Regulatory Framework, not only applied to the Mine and Generating Station. The sentence pointing out that San Juan Mine has emissions below reporting thresholds, has been added to the text.
53	53.231	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.2.2; Page 3.1-20 - SJCC suggests adding agriculture to the list of non-combustion sources in the first paragraph of the section.	Air Quality	Suggested edit has been made.
53	53.232	Daniel	Mumm	San Juan Coal Company	Email	Table 3.1-5; Page 3.1-25 - Recommend verifying the 2015 value for Navajo Dam, 35-45-0018 for the one-hour averaging time. The level “290” seems high by a factor of approximately 10. 290 does not meet the standard of 100ppbv	Air Quality	Comment noted. Text has been updated accordingly.
53	53.233	Daniel	Mumm	San Juan Coal Company	Email	Table 3.1-15 and 3.1-16; Page 3.1-36 and 3.1-37 - Consider revising Table 3.1-15 and Table 3.1-16. Mean, Median, and Cumulative do not match the results of the data presented in these tables.	Air Quality	Comment noted. The tables have been updated accordingly. None of the changes affect the analysis or conclusions presented in the EIS.
53	53.234	Daniel	Mumm	San Juan Coal Company	Email	Table 3.1-17; Page 3.1-38 - The data in this table is the exact same as Table 3.1-16, but the Mean, Median, and Cumulative are different. Consider verifying that this information is accurate.	Air Quality	Comment noted. The tables have been updated accordingly. None of the changes affect the analysis or conclusions presented in the EIS.
53	53.235	Daniel	Mumm	San Juan Coal Company	Email	Table 3.1-18 and Table 3.1-19; Page 3.1-40-41 - The data in these tables is exactly the same, but with different titles and different headings. Consider verifying that this information is accurate, Consider moving Tables 3.1-18 and 3.1-19 to the end of the associated discussion in Section 3.1.2.4.	Air Quality	Comment noted. The tables have been updated accordingly. None of the changes affect the analysis or conclusions presented in the EIS.
53	53.236	Daniel	Mumm	San Juan Coal Company	Email	Table 3.1.2.6; Page 3.1-44 - For clarity, when citing “Part 75,” Consider using 40 CFR Part 75.	Technical Edit	Comment noted. No change made.
53	53.237	Daniel	Mumm	San Juan Coal Company	Email	Table 3.1-22; Page 3.1-45 - Consider changing the title of Table 3.1-22 to Historical Aggregated Emissions for the Generating Station 2008-2016. The table only includes data for the years 2008-2016.	Air Quality	Suggested edit has been made.
53	53.238	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.2.6; Page 3.1-46 and 3.1-47 - Consider clarifying if any emergency generators will be removed due to Units 2 and 3 being shutdown. Consider clarifying if any cooling towers were shut down due to Units 2 and 3 being shutdown.	Project Description	Comment noted. No changes made.
53	53.239	Daniel	Mumm	San Juan Coal Company	Email	Figure 3.1-3 and Figure 3.1-5; Page 3.1-48 - The term “property boundary” used in Figure 3.1-3 could be confusing to the reader. Consider identifying the San Juan Mine and San Juan Generating Station boundaries separately in these figures	Technical Edit	Comment noted. The figure identifies both the San Juan Mine and San Juan Generating Station. The proposed revision would not change the analysis nor the conclusions. No changes made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.240	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.3.1; Page 3.1-50 - SJCC suggests clarifying that reclamation activity on the surface will remain the same, but coal haulage will be reduced due to the coal production reducing to approximately 3 million tpy.	Air Quality	Comment noted. Suggested edit does not change the analyses; no edit made.
53	53.241	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.3.2; Page 3.1-51 - SJCC suggests moving the last three bullets in Section 3.1.3.2 to the discussion on San Juan Mine as these do not relate to the Air Emissions from the Generating Station.	Air Quality	Suggested edit has been made.
53	53.242	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.3.2; Page 3.1-53 - In addition to APS, Proponents for the Four Corners Power Plant and Navajo Mine Energy Project also included: Public Service Company of New Mexico, Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Tucson Electric Company, Navajo Transitional Energy Company and BHP Management Company. Consider clarifying this under the last paragraph on page 3.1-53.	Air Quality	Comment noted. The sentence was revised to indicate that it is referring to "one of the Proponents...."
53	53.243	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.3.2; Page 3.1-54 - Consider clarifying and referencing what the "earlier EIS" is in the description of the NAAQS Modeling Study.	Technical Edit	Comment noted. The text has been revised to specifically reference the Four Corners Power Plant/Navajo Mine Energy Project EIS.
53	53.244	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.3.2; Page 3.1-54 - SJCC suggests capitalizing Generating Station (including the Generating Station) so that the reader knows that the document is describing San Juan Generating Station	Technical Edit	Comment noted. Suggested changes have been made.
53	53.245	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.3.2; Page 3.1-55 - Consider clarifying if the duration of the impacts of Four Corners Power Plant are annual.	Air Quality	The averaging timeframe has been added to the text for the ambient concentrations mentioned.
53	53.246	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.4.3; Page 3.1-59 - Units 2 and 3 were shutdown in December 2017. Consider changing this to state "...the air emissions from Units 1 and 4 would continue through 2033."	Air Quality	Suggested edit has been made.
53	53.247	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.3.3; Page 3.1-61 - Consider clarifying that the modeled results are based on a San Juan Mine production rate that is higher than the projected rate and therefore the results are conservative. Consider clarifying that the 1-hour SO ₂ Pre 2017 exceedance was based on this conservative modeling and that results at the Shiprock monitoring station indicated no exceedance of the 1-hour SO ₂ standard.	Air Quality	The points in this comment are included in Section 3.1.2.7 of the Technical Resource Document, which is incorporated by reference into the EIS. No change made.
53	53.248	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.4.4; Page 3.1-82 - Units 2 and 3 were shutdown in December 2017. Consider changing "Units 2 and 3" to Units 1 and 4 under Indirect Effects of Coal Combustion	Air Quality	Suggested edit has been made.
53	53.249	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.4.5; Page 3.1-83 - Related air emissions at San Juan Mine would not cease in August 2019. SJCC would finish the 2nd to last panel of the 400 district, as described in Section 2.2.3 of the Draft EIS. The Generating Station would be in operation until all stockpiled coal was burned, which could last into late 2020. For consistency with Section 2.2.3, consider removing "early" from descriptions of 2020.	Air Quality	Suggested edit has been made.
53	53.250	Daniel	Mumm	San Juan Coal Company	Email	Section 3.2.1.1; Page 3.2-4 - Consider clarifying that Subpart FF is the only reporting program specifically associated with underground coal mines. Subpart A is "General Provisions" and Subpart C is "General Stationary Fuel Combustion Sources"	Climate Change	Suggested edit has been made.
53	53.251	Daniel	Mumm	San Juan Coal Company	Email	Section 3.1.1.1 and 3.2.2.2; Page 3.2-4 and 3.2-14 - Consider clarifying that GHG emissions reports are only directly submitted to the EPA.	Climate Change	Suggested edit has been made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.252	Daniel	Mumm	San Juan Coal Company	Email	Section 3.2.2.2; Page 3.2-12 - SJCC suggests the following edit: "...hydroelectric, wind, and solar do not directly emit GHGs"	Technical Edit	Comment noted. No change made.
53	53.253	Daniel	Mumm	San Juan Coal Company	Email	Section 3.2.2.2; Page 3.2-12 - The description states that GHG emissions from San Juan Mine were over half of the statewide total. Consider clarifying how much over half. Table ES-4 states that San Juan Mine emits 34% of the total coal mining GHG emissions in New Mexico. Page 3.2-14 also states that San Juan Mine emits 58% of total GHG emissions for New Mexico. Consider verifying the information and revising the number throughout the Draft EIS and TRD for consistency.	Climate Change	The text states that based on the 2011-2016 GHG data for the San Juan Mine in Table 3.2-4, the average over those 6 years is 873,000 MTCO ₂ e/yr. This is 58 percent of the 2007-2013 average New Mexico CO ₂ e/yr for coal mining. No change made.
53	53.254	Daniel	Mumm	San Juan Coal Company	Email	Section 3.2.5.3; Page 3.2-25 - Consider providing a citation regarding the reference to a recent OSMRE EIS in the following text, "For example, in a recent EIS, the OSMRE estimated that the selected alternative had a cumulative SCC ranging from approximately \$4.2 billion to \$22.1 billion depending on dollar value and the discount rate used."	Climate Change	See Master Response 2: Social Cost of Carbon.
53	53.255	Daniel	Mumm	San Juan Coal Company	Email	Section 3.2.7; Page 3.2-27 - As described in Section 2.2.3 of the Draft EIS, mining could continue past August 2019. Consider clarifying that mining in the DLE would cease at the end of August 2019	Technical Edit	Comment noted. Suggested revisions made.
53	53.256	Daniel	Mumm	San Juan Coal Company	Email	Section 3.2.7; Page 3.2-27 - Combustion would cease in 2020, but it may be late 2020 rather than early 2020. SJCC suggests removing the word "early."	Technical Edit	Comment noted. Suggested revisions made.
53	53.257	Daniel	Mumm	San Juan Coal Company	Email	Section 3.2.7; Page 3.2-27 - SJCC suggests the following edits: • Combustion would cease in 2020, but it may be late 2020 rather than early 2020. SJCC suggests removing the word "early." • The last paragraph states that emissions from the Generating Station would be eliminated starting in 2020. Consider clarifying that the combustion would continue until all stockpiled coal is burned	Climate Change	Suggested edit has been made.
53	53.258	Daniel	Mumm	San Juan Coal Company	Email	Table 3.2-11; Page 3.2-28 - Consider clarifying the following information presented in Table 3.2-11: • Crushing would still occur at San Juan Coal Mine until all stockpiled coal is burned, which would go into 2020 • Table 3.2-11 includes estimates of GHG upon closure. The number 450,000 metric tons CO ₂ e is used for 2018. Consider making this consistent with the 480,000 metric ton level that is used elsewhere in the TRD.	Climate Change	Table 3.2-11 and describing paragraph have been revised as suggested. Crushing CH ₄ emissions to be included for 2020. Baseline CO ₂ e would be 480,000 MT/yr.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.259	Daniel	Mumm	San Juan Coal Company	Email	Section 3.3.1; Page 3.3-1 - SJCC suggests adding the following information to the regulatory framework description for Geology and Soils: The Federal and New Mexico Surface Mining Acts and associated regulations identify requirements for characterizing the geology and the mine plan development to maximize recovery of the economic resource and the reclamation. The regulations include specific requirements for topsoil, backfilling, grading, stabilization and contemporaneous reclamation and coal mining requirements for subsidence. Requirements specific to the DLE and reclamation of the San Juan Mine former surface pits are described in MMD Permit 14-01. For more detailed information on the regulatory framework for geology and soils, please see, The Deep Lease Extension Project, San Juan Basin Baseline Data Summary Report, Geology, Topography, Soils (Ecosphere, May 2017).	Geology	Comment noted. Suggested text has been added to the section.
53	53.260	Daniel	Mumm	San Juan Coal Company	Email	Section 3.3.2.3; Page 3.3-5 - Consider clarifying whether the topography discussion is describing the San Juan Mine permit area, the DLE, or the ROI.	Geology	Comment noted. Paragraph has been revised to provide greater clarification.
53	53.261	Daniel	Mumm	San Juan Coal Company	Email	Section 3.3.2.4; Page 3.3-6 - Consider citing the source for the BTU on the Number 8 coal seam as coal at San Juan Mine can be below 9,000 BTU.	Geology	Comment noted. The proposed revision would not affect the analysis nor the conclusions. No change made.
53	53.262	Daniel	Mumm	San Juan Coal Company	Email	Section 3.3.2.5; Page 3.3-7 - Consider changing “Federal Lease New Mexico 028093 Addition” to “Deep Lease Addition”	Technical Edit	Comment noted. The proposed revision would not affect the analysis nor the conclusions. No change made.
53	53.263	Daniel	Mumm	San Juan Coal Company	Email	Section 3.3.2.5; Page 3.3-7 - The last paragraph talks about 10% of the soil being deep to very deep. Consider explaining the soil type that is being referenced so that the reader can find the location of the soil on Figure 3.3-3.	Geology	Comment noted. A note has been added to the sentence.
53	53.264	Daniel	Mumm	San Juan Coal Company	Email	Table 3.3-1; Page 3.3-9 - The acreage in Table 3.3-1 adds up to 5,106 acres. Please clarify if this includes Section 32, which is State of New Mexico land not included in Federal Lease NM-99144 and not under analysis in the Draft EIS.	Geology	Comment noted. A note clarifying this has been added to the table.
53	53.265	Daniel	Mumm	San Juan Coal Company	Email	Section 3.3.2.6; Page 3.3-11 - Consider providing a citation for the BLM fossil category referenced in the following sentence, “The survey focused on the Kirtland Formation exposures within the DLE area that are designated as Potential Fossil Yield Category 4-5 by the BLM ...”	Geology	Comment noted. The citation is within the paragraph already. No change made.
53	53.266	Daniel	Mumm	San Juan Coal Company	Email	Section 3.3.3; Page 3.3-12 - Units 2 and 3 were shutdown and SNCR was installed in Units 1 and 4. Consider revising the text to reflect these dates.	Technical Edit	Comment noted. The suggested revision has been made.
53	53.267	Daniel	Mumm	San Juan Coal Company	Email	Section 3.3.4.1; Page 3.3-12 - SJCC suggests adding the average depth to coal in the DLE to the description of potential impacts from subsidence.	Geology	Comment noted. The suggested revision has been made.
53	53.268	Daniel	Mumm	San Juan Coal Company	Email	Section 3.3.4.1; Page 3.3-13 - The description states that all surface disturbance would be present for the duration of mining. However, reclamation of GVB pads and roads are completed contemporaneously with the progression of underground mining. Consider revising the document to reflect this information.	Geology	Comment noted. The suggested revision has been made.
53	53.269	Daniel	Mumm	San Juan Coal Company	Email	Section 3.3.4.1; Page 3.13-13 - For clarification, consider explaining that the type of surface disturbance associated with mining the DLE will not require backfilling. The description regarding backfilling in the TRD relates to reclamation of the former surface mining areas.	Geology	Comment noted. The suggested revision has been made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.270	Daniel	Mumm	San Juan Coal Company	Email	Section 3.3.4.1; Page 3.3-14 - The 3rd full paragraph states that longwall mining would avoid impacts to the overlying strata. Please clarify the types of impacts this statement is referencing. Additionally, consider describing the potential effects to the ground surface and overlying strata from longwall mining.	Geology	Comment noted. The analysis in prior paragraphs discussed impacts to ground surface. The subject paragraph of this comment is addressing potential impacts to unique geologic resources. No change made.
53	53.271	Daniel	Mumm	San Juan Coal Company	Email	Section 3.3.4.1; Page 3.3-14 - SJCC suggests the following sentence to reflect the mediation of impacts to oil and gas revenues set forth in the DLE mining plan document: "Oil and gas resources would not be affected by the proposed coal mining operations under the Proposed Action, although all existing wells within the DLE would be plugged and abandoned as the mining activities progress." Consider the following information to support the revision: Coal bed methane wells lie within the DLE footprint. Prior to mining in the area where the wells are located, SJCC abandons these wells in accordance with the requirements described in the Mediation of Adverse Impacts on Oil and Gas Revenues provided as Appendix A to the Mining Plan Decision Document for the DLE Federal Lease NM-99144 (February 2008).	Geology	Comment noted. The suggested sentence is already in the referenced paragraph.
53	53.272	Daniel	Mumm	San Juan Coal Company	Email	Section 3.3.4.3; Page 3.3-15 - SJCC suggests revising the following statement to reflect that under the No Action alternative, the Proposed Action would not be approved, additional backfill would need to be obtained as a replacement for CCR, and that the disturbed area would be reclaimed to the same requirements as described in MMD Permit 14-01: "Under the No Action Alternative, the ASLM would not approve the Proposed Action (or Alternative B) and mining operations would cease in 2019; therefore, the extent of the underground mine would be less than described for the Proposed Action since mining would not occur within the entire DLE" Also, consider clarifying the difference in the impact level reported in the TRD and the DEIS. The TRD indicates that the resulting impact would be moderate. However, Under Alternative A, the Draft EIS indicates that the potential impact to reclaim the surface pits is minor. Consider clarifying the difference in impact significance between the two surface disturbance areas.	Geology	Comment noted. The language in the EIS and TRD are consistent. No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.273	Daniel	Mumm	San Juan Coal Company	Email	Section 3.3.4.3; Page 3.3-15 - Consider providing the basis for the “minor adverse” impact determination if the DLE coal is not recovered. (For example, is DLE coal a significant percent of the coal in the San Juan Basin or Farmington Resource Management Area deemed suitable for recovery). The following references may provide relevant information: <ul style="list-style-type: none"> • New Mexico Energy, Minerals and Natural Resources Department (NM EMNRD). 2016. New Mexico Energy, Minerals and Natural Resources 2016 Annual Report. http://www.emnrd.state.nm.us/ADMIN/documents/Final_2016_E_MNRD_AnnualReport.pdf. • State of New Mexico Energy Minerals and Natural Resources Department (NMEMNRD 2016). Form 4: Annual Report Coal Mining Operations. Reports 2008-2016. • Peach, James and C. Meghan Starbuck. 2009. The Economic Impact of Coal Mining in New Mexico. Issued June 2009. • United States Department of the Interior, Bureau of Land Management (BLM) Farmington Field Office (FFO). 2014. Mancos-Gallup Resource Management Plan Amendment and Environmental Impact Statement Socioeconomic Baseline Assessment Report. Accessed at: https://www.blm.gov/programs/planning-and-nepa/plans-in-development/newmexico/Farmington-rmp-mancos-Gallup-amendment. • United States Department of the Interior, Bureau of Land Management (BLM). 2017. Federal Coal Program Programmatic Environmental Impact Statement – Scoping Report. 	Geology	Comment noted. No change made. While the resource would not be recovered, it would still be available for recovery in the future. Economic impacts of not recovering the coal are addressed in Section 3.10.
53	53.274	Daniel	Mumm	San Juan Coal Company	Email	Section 3.4.1.1; Page 3.4-2 - Consider adding a statement that says whether or not the San Juan Mine DLE Project has met the eight standards for substitution	Cultural Resources	The Final EIS and TRD have been updated to provide current information.
53	53.275	Daniel	Mumm	San Juan Coal Company	Email	Section 3.4.1.1; Page 3.4-2 - Consider defining APE. Up to this point, ROI has been used to describe the areas included in the study. Therefore, it would be helpful to clarify why this changes with Archaeology and Cultural Resources.	Cultural Resources	A short definition of APE has been added to Section 3.4 and the APE for the Proposed Action has been moved from Section 4.4 to Section 3.4.
53	53.276	Daniel	Mumm	San Juan Coal Company	Email	Section 3.4.2.1; Page 3.4-8 - For readers not familiar with the Four Corners Areas, it would be helpful to include the name of the state when referencing city or towns.	Technical Edit	Comment noted. No change made.
53	53.277	Daniel	Mumm	San Juan Coal Company	Email	Section 3.4.2.1; Page 3.4-14 - A summary after table 3.4-1 on what resources are in the DLE would be very helpful. It states that the 1997 survey found 83 archaeological sites and 140 isolates and then on page 3.4-17, the document states that SHPO provided a list of 80 registered cultural sites. Consider clarifying why there is a difference.	Cultural Resources	The 83 sites were included in the 1997 survey and separately SHPO provided a list of 80 sites. Of the 83 sites identified in the 1997 survey, only 66 are located in the current APE. The remaining 14 sites have been identified in subsequent surveys.
53	53.278	Daniel	Mumm	San Juan Coal Company	Email	Section 3.4.2.1; Page 3.4-16 - Consider including a summary of the monitoring of 62 sites under the Phase V subsidence monitoring. This information will help describe the potential impacts of subsidence	Cultural Resources	The cultural resources section has been updated to include more recent information.
53	53.279	Daniel	Mumm	San Juan Coal Company	Email	Section 3.4.2.1; Page 3.4-17 - Consider clarifying the status of ACHP’s determination to participate in the consultation for the Proposed Action.	Cultural Resources	To date, the ACHP has not indicated that it will formally participate in this undertaking.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.280	Daniel	Mumm	San Juan Coal Company	Email	Section 3.4.2.1; Page 3.4-20 - Sites LA 119286 and LA 119325 are located on the eastern boundary of the DLE. Based on the location of these sites, these cultural sites would not have been impacted by subsidence by the current and past mining operations, so data recovery has yet to occur. SJCC suggests using that description and removing the statement, "The desktop study did not find any records of data recovery excavations at these two sites."	Cultural Resources	In a letter dated April 29, 1999, the BLM determined that data recovery plans would need to be prepared and implemented for these two sites. No additional documentation has been provided, which indicates this is no longer applicable.
53	53.281	Daniel	Mumm	San Juan Coal Company	Email	Section 3.4.2.1; Page 3.4-20 - Consider adding a bullet that states that temporary fencing is installed around cultural resources in active mining areas to protect cultural sites from mining equipment	Cultural Resources	Section 4.4.2 states that "To ensure sites are avoided, SJCC would mark NRHP eligible sites with barrier fences at a 75-foot offset from each boundary to create an ASB."
53	53.282	Daniel	Mumm	San Juan Coal Company	Email	Section 3.4.3; Page 3.4-21 - Consider clarifying that SNCR Technology was installed in 2016, not 2018	Technical Edit	Comment noted. Suggested revisions made.
53	53.283	Daniel	Mumm	San Juan Coal Company	Email	Section 3.4.4.2; Page 3.4-26 - Consider removing the statement for consistency with the Alternative B description provided in Section 2.2.2 of the Draft EIS, "However, because vehicle traffic would be confined to existing roads, this would not result in additional impacts to cultural resources." In Section 2.2.2, the description for Alternative B includes, "The potential future use of coal would be with similar types and scales of transport from the mine to the location of combustion. Specifically, assumptions for this Alternative include the following: 1. The potential future combustion of coal would be with similar types of emission controls, CCR handling and storage, and air emission profiles for all air pollutants. 2. The potential future use of coal would be with similar types and scales of transport from the mine to the location of combustion. "	Cultural Resources	The following text has been deleted from Section 3.4.4.2 to retain consistency with Section 2.2.2 - "There would be increased vehicle traffic to transport the coal to another generating station. However, because vehicle traffic would be confined to existing roads, this would not result in additional impacts to cultural resources."
53	53.284	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5; Page 3.5-1 - SJCC suggests using the term "Water bearing unit" instead of aquifers. According to EPA.gov Superfund Section 8 Groundwater Aquifers the definition of an aquifer is as follows: Aquifer: One or more strata of rock or sediment that is saturated and sufficiently permeable to yield economically significant quantities of water to wells or springs. An aquifer includes any geologic material that is currently used or could be used as a source of water (for drinking or other purposes) within the target distance limit (TDL). Note this definition differs from many common definitions because it is based on the current or potential future use of the geologic material for drinking water or other purposes.	Groundwater	Comment noted. No change made.
53	53.285	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5; Page 3.5-1 - The closest "aquifer" to the mine lease and within the ROI is the San Juan River Alluvium. The San Juan River Alluvium has high yield, good quality and is used for multiple water sources. The Shumway Alluvium, #8 Coal Seam, and Pictured Cliffs do not meet these criteria.	Groundwater	Comment noted. No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.286	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5; Page 3.5-1 - Consider summarizing the basis for the ROI as, "For the purposes of this analysis, this ROI has been defined as a 3-mile radius around the San Juan Mine". The groundwater ROI includes not only the DLE and San Juan Mine surface pit reclamation areas as described but also the: • Area directly south of the SJM lease and permit boundaries along the Fruitland Formation No. 8 Coal Seam sub-crop under the San Juan River alluvium; • Area directly west of the lease to include the recharge areas along the outcrops of the Fruitland Formation and Pictured Cliffs Sandstone; • Water supply wells in the vicinity; and • The hydrologic properties of the surficial and underlying water-bearing geologic units within the Project area and San Juan Basin.	Groundwater	Comment noted. Suggested revisions made.
53	53.287	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.1.1; Page 3.5-4 - The San Juan Mine NPDES Permit states that No Discharge is allowed from Outfall 009. Consider revising the last sentence to state that SJCC is not allowed to discharge from Outfall 009	Surface Water	Comment noted. The proposed revision would not affect the analysis nor the conclusions. No change made.
53	53.288	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.1.1; Page 3.5-5-6 - Consider using the San Juan Mine NPDES permit NM0028746 as reference for Tables 3.5-1, 2, and 3	Technical Edit	Comment noted. Suggested revisions made.
53	53.289	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.2.1; Page 3.5-9-10 - SJCC suggests summarizing the following items in more detail to support the characterization of the affected environment and the retrospective analysis: • New Mexico State Engineer Permit requirements as they relate to Permit 2838 and Permit SJ2197; and • Groundwater and Surface Water control measures including the Sediment Control Plan	Groundwater	Comment noted. No change made.
53	53.290	Daniel	Mumm	San Juan Coal Company	Email	Figure 3.5-3; Page 3.5-11 - SJCC suggests adding a footnote to Figure 3.5-3 to explain that CCB is another term for CCR.	Technical Edit	Comment noted. No change made.
53	53.291	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.2.1; Page 3.5-11 - The Air Quality resource section states that annual precipitation is less than 15 inches and evaporation rate is 49 inches per year. Consider revising this information for consistency.	Surface Water	Comment noted. Suggested revisions made.
53	53.292	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.2.1; Page 3.5-11 - Consider clarifying the following statement based on the information provided below and to be consistent with Figure 3.5-4: "Based on the regional potentiometric surface for the Fruitland Formation, the groundwater flow in the general vicinity of the ROI is from the formation outcrop areas at higher elevations to the north and northeast of the ROI toward the formation sub-crop within the San Juan River alluvium, on the southern end of the ROI (Figure 3.5-4). " The potentiometric surface for the Fruitland Formation depicted in Figure 3.5-4 shows a gradient from the sub-crop towards the northeast (away from the subcrop). There is also a second gradient coming from the north and flows towards the south, which takes a turn towards the east once it reaches the underground mining area. The potentiometric surface depicted in Figure 3.5-4 seems to be measured from localized data and not the regional data.	Groundwater	Comment noted. Suggested revisions made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.293	Daniel	Mumm	San Juan Coal Company	Email	Figure 3.5-4; Page 3.5-12 - SJCC suggests the following edits to Figure 3.5-4 <ul style="list-style-type: none"> • Contour interval of the #8 coal seam switches from 500' to 1000'. Consider making this consistent to understand the gradient of groundwater • SJCC suggests showing the wells that were used to generate the Alluvial and #8 Coal Seam Potentiometric Surfaces Contours. 	Groundwater	Comment noted. Suggested revisions made.
53	53.294	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.2.1; Page 3.5-13 - SJCC suggests the following edits: <ul style="list-style-type: none"> • “Although there is no baseline data before the start of surface mining to confirm the regional potentiometric surface...” • In the same paragraph, Consider changing the reference from “analysis area” to ROI 	Technical Edit	Comment noted. Suggested revisions made.
53	53.295	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.2.1; Page 3.5-13 - SJCC suggests changing the exponent notation for the reported transmissivity (16 feet ²) to avoid confusion with the notation for footnote 3 regarding hydraulic conductivity.	Technical Edit	Comment noted. The proposed revision would not affect the analysis nor the conclusions. No change made.
53	53.296	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.2.1; Page 3.5-14 - Consider referencing the figure that shows Well 17CC. Because it has been Plugged and Abandoned, it is not shown on Figure 3.5-5. The location is shown on Figure 3.5-4 (Monitoring well in north central portion of DLE) but it is not labeled.	Technical Edit	Comment noted. No change made.
53	53.297	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.2.1; Page 3.5-14 - Consider clarifying whether or not the term “Project area” is referencing the ROI, Mine Lease Area or the DLE when discussing groundwater quality.	Groundwater	Comment noted. Project area has been revised to DLE.
53	53.298	Daniel	Mumm	San Juan Coal Company	Email	Figure 3.5-5; Page 3.5-18 - SJCC suggests the following edits to Figure 3.5-5: <ul style="list-style-type: none"> • Scale is such in Inset Map 2 that Well GL is very hard to see, consider adding a separate figure at scale that provides better clarity. • Consider adding monitoring Wells KPC-3, SM-5, SM-7, and SM-4 to the figure. • Monitoring Well SM-3 is mostly covered by the north arrow. Consider revising for clarity. 	Groundwater	Comment noted. Figure 3.5-5 has been updated.
53	53.299	Daniel	Mumm	San Juan Coal Company	Email	Tables 3.5-5 through 3.5-7; Page 3.5-16-18 - Tables 3.5-5 through 3.5-7; Pages 3.5-19-20 - Tables 3.5-5, 3.5-6 and 3.5-7 summarize groundwater quality data from wells primarily within the San Juan Mine lease area rather than in the ROI. Consider adding a footnote to clarify this.	Technical Edit	Comment noted. Footnote has been added.

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53	53.300	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.2.1; page 3.5-19-20 - Consider describing the groundwater quality in the surface mine backfill containing CCRs to characterize the retrospective (baseline) conditions of the affected environment. For additional information, see Deep Lease Extension Project San Juan Mine Baseline Data Summary Report Groundwater Resource (Ecosphere, 2017).	Groundwater	Comment noted. Additional information has been added to the section: " <u>Also in 2011, an additional eight CCR and spoil monitoring wells were installed to assess the extent of saturation and the water quality of the CCR and spoils. Monitoring well SM-5 is completed in mine spoil and well SM-7 is completed in mine spoil and CCRs. Median concentrations in spoil wells SM-5 and SM-7 exceeded New Mexico Groundwater Standards for boron, chloride, sulfate and total dissolved solids, but only 50% of the samples from these wells exceeded the standard for boron. The median concentrations of arsenic, aluminum, barium, bromide, cadmium, chromium, cobalt, copper, lead, mercury, nitrate, phenolic, selenium, thallium, and vanadium are all less than detection in limit (Ecosphere 2017d).</u> "
53	53.301	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.2.2; pg 3.5-23 - To clarify that MMD Permit 14-01 addresses surface water protection and monitoring in the San Juan Mine permit boundary including the DLE, the following edits are suggested, " MMD Permit 14-01 addresses surface water monitoring and protection requirements for the San Juan Mine permit boundary which includes the DLE. Surface water in the New Mexico MMD Permit 14-01 area, which includes the DLE, and areas immediately adjacent to the DLE. Surface water in the permit area includes ephemeral and intermittent streams that convey water only after precipitation events with the exception of the and Shumway Arroyo. The Shumway Arroyo is a perennial stream, which has a small base flow that begins below its confluence with the Westwater Arroyo in the vicinity of the Generating Station.	Surface Water	Comment noted. Suggested revisions made.
53	53.302	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.2.2; pg 3.5-23 - The Naha and Tsegi Formations referenced in this section are not described in Section 3.3 Geology and Soils or on Figure 3.3-1. Consider describing these formations in Section 3.3 for clarity.	Geology	Comment noted. A sentence mentioning both has been added to Section 3.3.
53	53.303	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.2.2; pg 3.5-23-24 - Consider summarizing the following features in the affected environment: <ul style="list-style-type: none"> • The geomorphic approach to reclamation that is designed to mimic natural drainage ways • The Hutch and Shumway diversions • Surface ponds (impacts to surface ponds from subsidence are discussed in Section 3.5.4.1 	Surface Water	Comment noted. Additional information regarding diversions has been added to the text: " <u>Between 1981 and 1984 the Westwater and Shumway Arroyos were diverted from their natural courses to two constructed waterways that route flow through the northern parts of the San Juan Mine and Generating Station. The two diversions join near the northern boundary between the mine and the Generating Station. The diversion channel flows in a southerly direction to join the natural Westwater Arroyo in the southern portion of the Generating Station (USGS 2013).</u> "

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53	53.304	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.2.3; pg 3.5-26 - Consider adding the following information regarding Permit SJ-2197 to Section 3.5.2.3. Permit SJ-2197 is a permit to Appropriate Underground Waters issued by the New Mexico State Engineer in February 1989. The permit allows SJCC to pump surplus water in the underground workings to the surface to one of the seven evaporation cells (above the Juniper Pit highwall). Water in the ponds is allowed to evaporate per the permit requirements. For the calendar year 2016, as much as 86.85 acre - feet of water evaporated (see APS monthly water report submitted to the State Engineers Office).	Surface Water	Comment noted. Suggested revisions made.
53	53.305	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.3; pg 3.5-26 - SJCC suggests the following edit: "...PNM shut down two units at the Generating Station and, in 2016 2018, installed SNCR technology..."	Technical Edit	Comment noted. Suggested revisions made.
53	53.306	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.3; pg 3.5-27 - Consider explaining any changes to the amount of water diverted from the San Juan River, if any, from shutting down Units 2 and 3 at the Generating Station.	Surface Water	Comment noted. No change made. Regardless of whether or not the actual amount of water diverted changes, there is no change to the amount of the water right.
53	53.307	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.4.1; pg 3.5-28 - Section 3.5.4.1 references a discussion in Section 3.5.3 regarding the water quality of the Fruitland Formation. However, this information is provided in Section 3.5.2. Consider changing the reference accordingly.	Technical Edit	Comment noted. Suggested revisions made.
53	53.308	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.4.1; pg 3.5-28 - Consider clarifying which wells historically monitored the gob. Groundwater modeling can predict flow paths, and other hydrogeologic parameters and estimates for recharge, etc. A rubble zone would be an input parameter into a groundwater model not an output. Consider clarifying the modeling description.	Groundwater	Comment noted. Text has been reviewed and clarified. The revisions do not affect OSMRE's analysis or conclusions.
53	53.309	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.4.1; pg 3.5-29 - Consider summarizing the analysis pertaining to CCR and water quality/quantity.	Surface Water	Comment noted. No changes made.
53	53.310	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.4.1; pg 3.5-30 - In the groundwater quality section, consider summarizing and comparing CCR monitoring data and analytical results to monitoring data and analytical results to alluvial well GL in the Shumway Arroyo. For additional information, consider referencing the Ecosphere, 2017e, which provides the CCR analytical results showing that TDS, SO4 and Na concentrations are less than the concentrations in the historical and present day alluvial well (GL) and that the Cl concentrations are about equal to the alluvial well (GL)	Groundwater	Comment noted. Additional information has been added to the section.
53	53.311	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.4.1; pg 3.5-30 - Consider using consistent terminology instead of the word "small" to define the impact level in the following sentence, "Based on the results of this study, impacts to groundwater quality due to CCR placement is considered a small -minor but permanent impact."	Technical Edit	Comment noted. Suggested revisions made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.312	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.4.1; pg 3.5-31 - Consider clarifying the paragraph describing the fate and transport assessment. The paragraph begins with a description of leachate affecting groundwater that is received by the San Juan River Alluvium. The paragraph continues with a description of a fate and transport model that concluded that the San Juan River would not be adversely affected by leachate. Note that the San Juan River and San Juan River Alluvium are different. Please clarify the discussion to on the affects to San Juan River Alluvium and the San Juan River. Consider clarifying the potential impact, if any, to the wells permitted for public use located south of the mine lease.	Groundwater	Comment noted. The paragraph addresses specific questions raised during scoping regarding whether leaching of CCR could affect San Juan River water quality downstream. The section has been updated with additional information provided by the completed USGS report.
53	53.313	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.4.1; pg 3.5-31 - For review consideration,, a more detailed summary of the USGS work conducted and data collected is available at: https://pubs.usgs.gov/ds/0933/ds933.html	Groundwater	Comment noted. The Final EIS has been updated with the completed report.
53	53.314	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.4.1; pg 3.5-31 - As Permit 2838 was completed prior to the Proposed Action, consider describing the permit as part of the baseline and retrospective analysis rather than the prospective analysis.	Groundwater	Comment noted. No change made. The analysis considers the impacts of future use of the water.
53	53.315	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.4.1; pg 3.5-32 - While San Juan Mine has designed its sedimentation basins to contain most stormwater flows, the designation of "zero discharge facility" has not been granted to the SJM for its NPDES permit. Consider revising the text to reflect this information.	Groundwater	Comment noted. Suggested revisions made.
53	53.316	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.4.1; pg 3.5-32 - Consider adding a discussion on the Geomorphic Reclamation used at San Juan Mine in the discussion on Surface Water Quality. Pertinent information is provided as follows: In addition to the stormwater protection measures described in the TRD, SJCC also reclaims the former surface mine pits using a geomorphic reclamation approach as described in MMD Permit 14-01 Section 907. This approach emphasizes fluvial geomorphic principles to restore hydrologic regimes that are low maintenance, have erosion-stable drainages that replicate those found in the natural or pre-mining environment. These principles are based on stabilizing the drainage area through land shaping to achieve geomorphically appropriate slopes, drainage densities, and channel profiles, and on regulating velocity by constructing channel slopes, channel meander lengths, cross sections, and substrate according to hydrogeomorphic principles. Given the effectiveness of this approach on protecting surface water quality, SJCC suggests that it be mentioned in the TRD.	Surface Water	Comment noted. Suggested revisions made.
53	53.317	Daniel	Mumm	San Juan Coal Company	Email	Section 3.5.4.3; pg 3.5-34 - For Alternative C, SJCC suggests summarizing: <ul style="list-style-type: none"> • Effects on groundwater quality from placing less CCR in the former surface mine pits than the Proposed Action and • Effects on surface water quality from the additional surface disturbance that would occur from obtaining backfill material as a CCR replacement. 	Surface Water	The paragraph has been revised as follows: " <u>Reclamation activity would require additional surface disturbance to fill the former surface mining pits, which could potentially affect surface waterbodies, depending on the location of the additional disturbance. However, r</u> Reclamation of mined lands would restore surface water drainage and natural stormwater flow as well as natural groundwater flow; therefore, impacts to water quality would likely be minor but beneficial."

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.318	Daniel	Mumm	San Juan Coal Company	Email	Section 3.6.1.1, pg 3.6-4 - Success of revegetation is judged by vegetative cover and herbaceous production for the postmining land use of grazing. Consider adding a discussion to the second paragraph on the page regarding production requirements in the reclamation plan designed to meet the post-mining land use.	Vegetation	See TRD Section 3.6 and Table 3.6-1; Section 3.6.4-1 and Tables 3.6-6 and 3.6-7. Additionally, site-specific revegetation specifications, including reference areas, seed mixes, success criteria, and noxious weed control are summarized in the existing SJCC Mine Permit 14-01 and the approved SJCC Revegetation Plan (New Mexico Mining and Minerals Division. 2014. San Juan Mine Deep Lease Extension Permit 14-01.).
53	53.319	Daniel	Mumm	San Juan Coal Company	Email	Section 3.6.1.1, pg 3.6-4 - Consider changing the following language: SJCCMMD Mine Permit 14-01 (MMD-2014) and SJCC's PAP for the Mining Plan Modification for the DLE.	Technical Edit	Comment noted. The proposed revision would not affect the analysis nor the conclusions. No change made.
53	53.320	Daniel	Mumm	San Juan Coal Company	Email	Section 3.6.1.2, pg 3.6-4 - Consider clarifying the language in the second paragraph of the Section 3.6.1.2, which seems to indicate that the BLM and the New Mexico State noxious weeds Class A, B, C descriptions are the same.	Vegetation	The second paragraph in Section 3.6.1.2 is followed by a bullet point list that defines New Mexico noxious weeds Class A, B, C.
53	53.321	Daniel	Mumm	San Juan Coal Company	Email	Figure 3.6-2, pg 3.6-7 - Consider adding the year that the SWReGAP Vegetation data was mapped. Note that much of Pinon Pit area has been revegetated since.	Vegetation	Figure 3.6-2 legend updated to state: SWReGAP Vegetation Communities (2004) TRD text updated in Section 3.6.2.1 to state: "Figure 3.6-2 shows the distribution of Southwest Regional Gap Vegetation Communities within the Mine ROI. <u>The Southwest Regional Gap Analysis project was completed in 2004, and some of the Recently Mined or Quarried areas have since been revegetated.</u> "
53	53.322	Daniel	Mumm	San Juan Coal Company	Email	Table 3.6-3, pg. 3.6-8 - SJCC suggests the following clarifications to Table 3.6-3: • Halogeton is known to occur on the mine site. Consider clarifying if this is an invasive species in New Mexico. • The footnotes mention that some species' class was changed in 2016; however, the date of the list is not mentioned. BLM list is from 2003, the NM list is from 2009.	Vegetation	TRD Table 3.6-3 updated with the following: • Column three header - "BLM/FFO Class (2003)" • Column four header - "State of New Mexico Weed Class (2009)" Halogeton is discussed in Section 3.6.2.2 on page 3.6-12. No changes or additions were made regarding halogeton.
53	53.323	Daniel	Mumm	San Juan Coal Company	Email	Figure 3.6-3, pg 3.6-11 - The three potentially jurisdictional wetlands in the San Juan Mine permit area that are mentioned in the text are not identified on Figure 3.6-3 or in Table 3.6-4. Consider describing the location and acreage of the potential jurisdictional wetlands and whether or not they are in areas that may be disturbed by DLE activities.	Vegetation	TRD updates made to Section 3.6.4.1: "However, no additional removal of vegetation communities is proposed for the continued use of the coal-handling and transportation facilities. Since current and future mining would remain underground, mining activity would not physically remove native vegetation. <u>Wetlands would be avoided and no impacts to wetlands are anticipated.</u> "
53	53.324	Daniel	Mumm	San Juan Coal Company	Email	Section 3.6.3, pg 3.6-13 - SJCC suggests the following clarifications: • Consider clarifying that the Generating Station revised SIP compliance reduced not only NOx emissions but also other regulated pollutants (see TRD Section 3.1.3.2) in the Mine ROI and also the Generating Station ROI. • Consider clarifying that compliance with the revised SIP resulted in a reduced DLE coal demand and production was reduced from 6M tpy to 3M tpy and will continue at that rate under the Proposed Action.	Technical Edit	Comment noted. The proposed revision would not affect the analysis nor the conclusions. No change made.

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53	53.325	Daniel	Mumm	San Juan Coal Company	Email	Section 3.6.4, pg 3.6-14 - Consider clarifying in this section that the depositional model evaluates effects from Proposed Action including the indirect effects to air quality from the Generating Station combustion of DLE coal. The following edits are suggested for clarification: “The types of potential impacts listed below were considered when evaluating the types of short-term and long-term impacts of the Proposed Action including the indirect effects from Generating Station combustion of DLE and alternatives on vegetation resources within the Mine ROI and Generating Station ROI .”	Vegetation	TRD updates made to Section 3.6.4 page 3.6-14: "The types of potential <u>direct and indirect</u> impacts listed below were considered when evaluating the types of short-term and long-term impacts of the Proposed Action and alternatives on vegetation resources within the Mine and Generating Station ROIs."
53	53.326	Daniel	Mumm	San Juan Coal Company	Email	Section 3.6.4.1, pg 3.6-16-17 - SJCC suggests the following edits: • “As of 2017, 862 4,586 acres have been released from bond after meeting successful revegetation.” This is consistent with the numbers in Table 3.6-1. • In addition to summarizing the San Juan Mine disturbed and reclaimed acreage, it consider summarizing the DLE disturbance and reclamation acreages.	Vegetation	TRD updated as suggested for Section 3.6.4.1: "As of 2017, 862 acres have been released from bond after meeting successful revegetation."
53	53.327	Daniel	Mumm	San Juan Coal Company	Email	Table 3.6-7, pg. 3.6-7 - Because the primary post mining land use of the DLE is grazing, SJCC suggests removing Table 3.6-7.	Vegetation	Both grazing and wildlife use are identified in the MMD Permit and Reclamation plan, and these land uses are referred to throughout the TRD.
53	53.328	Daniel	Mumm	San Juan Coal Company	Email	Section 3.6.4.1, pg 3.6-16-19 - Consider clarifying the following statement. It starts by describing more of a minor impact, but then jumps to moderate adverse effects. “The indirect effects of coal combustion are within the range of natural fluctuation of the existing natural baseline conditions for some metals have potential for moderate adverse effects to plants.”	Vegetation	Comment noted. Text revised as follows: "The indirect effects of coal combustion are within the range of natural fluctuation of the existing natural baseline for some metals <u>that were examined.</u> "
53	53.329	Daniel	Mumm	San Juan Coal Company	Email	Section 3.6.4.3, pg 3.6-16-19 - SJCC suggests clarifying that both Pinon and Juniper Pits would continue to be reclaimed under the No Action alternative.	Vegetation	Update made to TRD Section 3.6.4.3 to state: "the SJCC would continue reclamation activities for areas disturbed by past surface mining operations (Juniper Pit <u>and Piñon Pit</u>) and all surface disturbances from underground mining operations."
53	53.330	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7 - SJCC suggests the following clarifications in regard to the ROI: • Throughout the Wildlife Section (3.7), the Mine ROI is defined but more frequently is referenced as the DLE. . For consistency within the Section and the special status species section (3.8), consider using Mine ROI, and not the DLE. • Consider clarifying in Table 3.7-1 and associated text if the information summarized is in reference to the Mine ROI and/or the Generating Station ROI. Clarification will help reader's understanding regarding the direct and indirect effects of the Proposed Action on the affected environment.	Wildlife	Some instances of "ROI" and "DLE" have been changed to "Mine ROI" for clarification. The DLE is specifically discussed in some areas and those references have not been changed.
53	53.331	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7, pg 3.7-1 - SJCC suggests indicating that the second paragraph is describing indirect effects.	Wildlife	Direct and indirect effects are discussed in further detail in TRD Section 3.7.4.
53	53.332	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7, pg 3.7-1 - Consider using the term San Juan River Buffer Area rather than “expanded area for the San Juan River” to describe the additional section of the San Juan River included in the analysis	Wildlife	TRD Section 3.7 was updated as follows: "The expanded San Juan River buffer area for the San Juan River was incorporated to conservatively include an additional segment of the San Juan River downstream of the deposition area that could be affected by future migration of deposited materials."

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53	53.333	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.1.1, pg 3.7-1 - SJCC suggests the following edits: “...the Federal SMCRA allows for primacy <u>primary</u> ; New Mexico has a cooperative agreement with OSMRE...”	Technical Edit	Suggested edit has been made.
53	53.334	Daniel	Mumm	San Juan Coal Company		Section 3.7.2.1, pg 3.7-3 - Consider clarifying that seasonally wet drainages would be considered “ephemeral” (flows in direct response to precipitation) and not “intermittent”	Wildlife	TRD Section 3.7.2.1 has been updated as follows: "Intermittent sources of water include ponds and impoundments within the DLE, <u>including and ephemeral water sources include</u> seasonally wet drainages and arroyos."
53	53.335	Daniel	Mumm	San Juan Coal Company	Email	Table 3.7-4, pg 3.7-5 - SJCC suggests the following clarifications: • Rock Piles are not surveyed at SJM. • Consider adding Prairie dog surveys to wildlife surveying activities.	Wildlife	Table 3.7-4 updated as follows: "Wildlife surveys as part of the approved mine permit: monitoring includes general reconnaissance surveys along randomly located transects and rock piles to document species occurrence; raptor ground surveys for active nests; and follow up surveys to monitor active nesting through breeding status of young and productivity; <u>prairie dog</u> surveys occurred between 2012-2017"
53	53.336	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.2.1, pg 3.7-5 - Consider clarifying how much of the San Juan Mine permit area is undisturbed and considered potential habitat to wildlife. For further information regarding total acreage, disturbed and reclaimed land within the San Juan Mine lease area and DLE, reference Table 1.3-1 in the Draft EIS	Wildlife	TRD Section 3.7.2.1 refers to Section 3.6 Vegetation and how habitat types correlate to vegetation communities. Table 3.6.4 lists the percentage of vegetation communities, including disturbed area, within the DLE.
53	53.337	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.2.1, pg 3.7-5 - This paragraph describing small mammals uses both SWREGAP cover and TRC Mariah/SJCC cover types. For clarity, consider using one or the other.	Wildlife	Refer to TRD Section 3.7.2.1, which discusses habitat types corresponding with the two vegetation communities.
53	53.338	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.2.1, pg 3.7-5 - In special status species, the description states that stockpiles and industrial facilities may provide habitat for small mammals. However, this is not consistent with the description in Section 3.7.2.1. Consider revising for consistency.	Wildlife	Section 3.7.2.1 Small Mammals updated as follows: "However, <u>stockpiles could provide habitat for small mammals, and</u> several small species of mammals, primarily rats and mice, are known to occur around developed and urban areas where food and other resources are present."

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53	53.339	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.2.1, pg 3.7-6-7 - Consider reviewing the terminology in the extent descriptions for General Wildlife, Small Mammals, Bats, etc. General Wildlife is discussed as within the "Project Area," while Small Mammals are discussed as "within the ROI." Bats, Rabbits and Hares, and Carnivores are all discussed "within the DLE." Consider updating the descriptions for consistency.	Wildlife	The following changes have been made to the TRD: Section 3.7.2.1: "Livestock grazing occurs on the reclaimed and undisturbed portions of the Project San Juan Mine lease area. Other secondary uses of the Project lease area include wildlife habitat and recreation." Section 3.7.2.2: "A summary of surveys completed from 1971 to 2017 within the ROI and surrounding the San Juan Mine lease area is included in Table 3.7-1." "Other relevant studies have also been completed for the ROI area surrounding the San Juan Mine by the BLM, New Mexico Department of Game and Fish (NMDGF), and the San Juan River Basin Recovery Implementation Program." Section 3.7.2.2 General Wildlife: "Project area" changed to "Mine ROI" Section 3.7.2.2 Small Mammals: "ROI" changed to "Mine ROI" "Table 3.7-2 includes a summary of small mammals that have been observed within the DLE San Juan Mine lease area." Section 3.7.2.2 Bats: "Bats potentially present in the DLE Mine ROI include common bats and free-tailed bat species. Bats could use all cover classes and associated vegetation communities within the DLE Mine ROI for foraging. Bats are known to frequent riparian areas or water sources; however, such water sources are limited within the DLE Mine ROI. Habitat capable of supporting foraging of bat species occurs across the DLE Mine ROI and all cover classes, including developed areas. The DLE contains some habitat
53	53.340	Daniel	Mumm	San Juan Coal Company	Email	Tables 3.7-3, -4, -5 - Consider verifying that the information provided in Tables 3.7-3 through 3.7-5 is specific to the DLE. The DLE was not permitted or leased to the mine at that time of some of the surveys, so it is likely that these covered other parts of the mine lease.	Wildlife	Table titles have been updated as follows: Table 3.7-2: Small Mammals Observed within DLE <u>the San Juan Mine Lease Area</u> Table 3.7-3: Bat Species Observed in the DLE <u>the San Juan Mine Lease Area</u> Table 3.7-4: Carnivore Species Observed in the DLE <u>the San Juan Mine Lease Area</u> Table 3.7-5: Amphibians and Reptiles Observed in DLE <u>the San Juan Mine Lease Area</u>
53	53.341	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.2.3, pg 3.7-9 - SJCC suggests the following edits: • Consider clarifying what the #2 footnote in the Westwater and Stevens Arroyo bullets is referencing • Consider clarifying that the Stevens Arroyo and Coolidge Arroyo also flow into the San Juan River. • Change DLM to DLE under the Coolridge Arroyo bullet • Consider adding the Shumway, Westwater, or Stevens Arroyos to Figure 3.5-1 or Figure 3.5.5	Wildlife	• The #2 footnote has been removed. • The section has been updated as follows: "The Coolridge Arroyo begins to the west of the DLM <u>DLE</u> and flows to the southwest."
53	53.342	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.2.4, pg 3.7-10 - Consider using Generating Station ROI instead of deposition area when describing locations of potential habitat. "Potential habitat for aquatic biota (particularly, fish species) within the deposition area Generating Station ROI is limited to perennial surface waterbodies."	Wildlife	Section 3.7.2.4 has been updated as suggested.

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53	53.343	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.2.4, pg 3.7-10 - Consider using the primary literature source for the references regarding the large bodied fish monitoring program. The primary reference is from the SJRRIP rather than from Ecosphere, as indicated in the Special status species baseline.	Wildlife	Ryden 2012 is used as the primary literature source and the reference has been updated.
53	53.344	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.3, pg 3.7-12 - SJCC suggests the following clarifications: • Consider clarifying that the Generating Station revised SIP compliance reduced not only NOx emissions but also other regulated pollutants (see TRD Section 3.1.3.2) in the Mine ROI and also the Generating Station ROI. • Consider clarifying that compliance with the revised SIP resulted in a reduced DLE coal demand and production was reduced from 6M tpy to 3M tpy and will continue at that rate under the Proposed Action.	Wildlife	TRD Sections 3.6.3, 3.7.3, and 3.8.3 were updated as follows: "In accordance with the SIP, at the end of 2017 the Generating Station shut down two units. In addition, SNCR technology was installed on the remaining two units in 2016 to reduce emissions of NO _x and other regulated pollutants."
53	53.345	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.2.4, pg 3.7-11-12 - Consider clarifying that water quality in the Mine ROI did not meet water quality standard for many parameters prior to mining. For more detailed information, please see the Deep Lease Extension Project San Juan Mine Baseline Data Summary Report Surface Water Resources (Ecosphere, 2017).	Wildlife	The section discusses that areas upstream of the mine do not meet some water quality standards, illustrating the background conditions. More information on water quality can also be found in TRD Section 3.5 Water Resources/Hydrology.
53	53.346	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.4, pg 3.7-12 - Consider clarifying that best available data were used to determine both direct and indirect impacts in the following statement "Direct impacts to wildlife and their habitat were determined using best available data for the wildlife species..." Consider clarifying which potential impacts to wildlife and the associated responses were determined to be from direct effects and which were determined to be from indirect effects.	Wildlife	Updates to TRD Section 3.7.4 were made as follows: <u>"Direct and indirect impacts to wildlife and their habitat were determined using best available data for the wildlife species known or with potential to occur within the Mine and Generating Station ROIs based on habitat and distribution.</u> Impacts to wildlife may include direct impacts from habitat loss, alteration, and fragmentation, and incidental mortality from vehicle collisions, vegetation clearing with heavy equipment, or construction activities. Impacts may also include indirect impacts may occur from noise, and human presence, and coal combustion. Direct impacts to wildlife and their habitat were determined using best available data for the wildlife species known or with potential to occur within the DLE based on habitat and distribution."
53	53.347	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.4, pg 3.7-13 - Consider the following edit regarding the types of potential impacts described for wildlife and habits in this section: "The types of potential impacts listed below were considered when evaluating the types of impacts of the Proposed Action and alternatives on vegetation wildlife and habitats resources within the ROI:"	Technical Edit	Comment noted. The proposed revisions would not affect the analysis nor the conclusions. No change made.
53	53.348	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.4, pg 3.7-13-14 - Under the bulleted list, consider indicating whether these are direct or indirect impacts	Wildlife	Direct and indirect impacts are discussed in the paragraphs preceding the bulleted list, on pages 3.7-12 and 3.7-13.
53	53.349	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.4.1, pg 3.7-14 - SJCC suggests the following clarifications: • Replacing the reference to MMD PAP with MMD Permit 14-01. Consider referencing: • Fish and Wildlife Plan also pertains to the entire San Juan Mine permit area, which includes the DLE as former San Juan Mine surface mines.	Wildlife	"MMD PAP" changed to "MMD Permit 14-01" in Section 3.7.4.1, page 3.7-14 (two updates).

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53	53.350	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.4.1, pg 3.7-16 - Consider including a discussion on speed limits under “Fugitive Dust” or cite Section 3.1.	Wildlife	TRD Section 3.7.4.1 page 3.7-16 updated to state: “The impact of dust pollution on wildlife is expected to be localized near ground-disturbance areas and would be minimized by standard construction practices, such as dust control methods as dust suppression (watered with water trucks), stockpile stabilization, <u>posted speed limits</u> , and use of haul roads to minimize airborne dust.”
53	53.351	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.4.1, pg 3.7-16 - The Noise section states that “wildlife are expected to be acclimated to noise”. However, this section states that wildlife will flee from disturbance and exhibit flight/stress behavior. Consider reviewing these sections for consistency.	Wildlife	TRD Section 3.7.4.1 page 3.7-16 updated to state: “Short-term impacts to wildlife associated with noise generated during operation of existing facilities within the DLE would be minor, as wildlife are expected to be acclimated to noises associated with existing Project components. ”
53	53.352	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.4.1, pg 3.7-17 - Consider clarifying that “active mining” is considered under “Habitat Loss and Fragmentation” and “Ground Disturbance” relates to the surface activities that support underground mining and reclamation of the former surface pits.	Wildlife	TRD Section 3.7.4.1 page 3.7-17 updated to state: “Direct impacts from habitat loss and fragmentation would occur in <u>areas of surface activities active mining, including</u> road construction, and development of ventilation systems.” “Direct impacts from ground disturbance would occur from <u>active mining, surface activities including</u> road construction, development of borrow pits, and construction of vents.”
53	53.353	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.4.1, pg 3.7-19 - Consider clarifying that while no aquatic species occur within the DLE, species do occur within the Mine ROI as defined.	Wildlife	Comment noted. Aquatic wildlife within the ROI are discussed later in this section.
53	53.354	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.4.1, pg 3.7-27 - Consider clarifying on this page that the emissions related to the coal combustion at the Generating Station are indirect impacts of the Proposed Action. For example, “Consistent with the prior finding, added (incremental) risks to aquatic biota in the San Juan River due to metals (including Hg) in future emissions related to the indirect effects of coal combustion are negligible (HQs are well below 1) and generally represent less than 0.1 percent contribution to the baseline cumulative risk (i.e., less than 0.1 percent of the total HQ).”	Wildlife	Comment noted. The paragraph and section already notes that it is addressed effects of coal combustion, which are described throughout the document as indirect effects. No change made.

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53	53.355	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.4.1, pg 3.7-29 - SJCC suggests the following clarification: The DEIS describes the assumptions used for the analysis of coal combustion in Alternative B as follows: “Using the Generating Station as the “typical” local generating station for approximation of potential combustion-related effects under Alternative B assumes that any coal combustion would be within the emission profiles analyzed in this Draft EIS for the indirect effects of the Proposed Action. Specifically, assumptions for this Alternative include the following: 1. The potential future combustion of coal would be with similar types of emission controls, CCR handling and storage, and air emission profiles for all air pollutants. 2. The potential future use of coal would be with similar types and scales of transport from the mine to the location of combustion. “ Based on the description of Alternative B, consider clarifying in the TRD that exposures to aquatic habitats would likely be the same as the proposed action and not completely eliminated.	Wildlife	Comment noted. The proposed revision would not affect the analysis nor the conclusions. No change made.
53	53.356	Daniel	Mumm	San Juan Coal Company	Email	Section 3.7.4.3, pg 3.7-30 - Consider discussing the impacts to Wildlife and Habitats due to the additional disturbance needed to obtain backfill material in place of CCR to finish reclamation of Juniper Pit.	Wildlife	As stated in the EIS, reclamation could result in short-term minor impacts to wildlife due to additional surface disturbance required.
53	53.357	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8, pg 3.8-1 - Consider using the term San Juan River Buffer Area rather than “buffer area” to describe the additional section of the San Juan River included in the analysis	Technical Edit	Comment noted. The proposed revision would not affect the analysis nor the conclusions. No changes made.
53	53.358	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.1.1, pg 3.8-4 - The intent of the fish and wildlife conservation act is to: authorize financial and technical assistance to the States for the development, revision, and implementation of conservation plans and programs for nongame fish and wildlife. The 1998 amendment to this act establishes the birds of conservation concern referenced in this section - which “identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973.” Based on this information, consider clarifying the description of the intent of the act.	Special Status Species	TRD Section 3.8.1.1 updated to state: “The 1988 amendment to the Fish and Wildlife Conservation Act (16 USC 2901-2911) requires the FWS to “identify species...”
53	53.359	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.1.2, pg 3.8-5 - SJCC suggests the following edit: “The Mine ROI and Generating Station ROI includes Navajo Nation and Ute Mountain Ute lands”	Technical Edit	Comment noted. The proposed revision would not affect the analysis nor the conclusions. No changes made.
53	53.360	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.1.4, pg 3.8-6 - Consider explaining that SJCC participates in the SJRRIP as a “Water Development Interests in Colorado and New Mexico” program partner. For further information see: https://www.fws.gov/southwest/sjrip/GB_PP.cfm	Special Status Species	No action taken. Section 3.8.1.4 describes the SJRRIP but does not list participating members.
53	53.361	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.2, pg 3.8-6 - There is critical habitat within the Mine ROI as described. The San Juan River is within 1 mile of the permit area, as is habitat for the Mesa Verde Cactus in the ACEC. Consider clarifying this in the text.	Special Status Species	See Technical Resource Document Table 3.8-2. OSMRE has completed consultation with the USFWS under Section 7 of the Endangered Species Act regarding potential effects to special status species and USFWS has concurred with OSMRE's findings.

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53	53.362	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.2, pg 3.8-7 - Please clarify how the preparers determined which species occurred within the ROI for NNHP listed species and for state of New Mexico listed species. For example, determinations can be made based on habitat, or by consultation letter.	Special Status Species	All NNHP Group 2 and Group 3 species were included, as these are the groups considered "Endangered" by NNHP. Determination of species occurrence were made based on habitat types and literature review.
53	53.363	Daniel	Mumm	San Juan Coal Company	Email	<p>SJCC suggests the following edits to Table 3.8-1:</p> <ul style="list-style-type: none"> • The Jemez Mountains Salamander is also FWS endangered. Clarify that in Table 3.8-1, and if it was included on the IPAC list generated for the ROI(s) • Gray vireo are known to occur within the Generating Station ROI. DeLong and Williams in 2006 do not have territories listed in the ROI, but that was based on work completed 12 years ago. Gray vireo have been detected in the SJGS ROI during many surveys • Mexican spotted owl is a USFWS threatened species. Consider including the USFWS status, and clarify if it is included in the IPAC list • There have been sightings of Mountain Plover within the Generating Station ROI at Navajo Mine. Consider carrying this species forward as there is potential habitat, and this species is discussed in San Juan Mine Permit #14-01 • Snowy plover is a USFWS threatened species. Consider clarifying if it wasn't included in IPAC • Humpback chub is a USFWS endangered species. Consider clarifying if it wasn't included in the IPAC list • Black footed ferret is also a USFWS endangered/PEXPN species. Clarify the status here, and indicate if it wasn't included on the IPAC list. • Consider clarifying where potential suitable habitat for the Canada Lynx is within the Generating Station ROI • Mesa Verde cactus occurs within the 1-mile buffer of the mine, along the road to the San Juan Mine and also within the ACEC. 	Special Status Species	Comment noted. No changes made. OSMRE has completed consultation with the USFWS under Section 7 of the Endangered Species Act regarding potential effects to special status species and USFWS has concurred with OSMRE's findings.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.364	Daniel	Mumm	San Juan Coal Company	Email	SJCC suggests the following edits and clarifications to Table 3.8-3: <ul style="list-style-type: none"> • Please be consistent in use of likelihood of occurrence. For example, Northern Leopard Frog fits the low potential as does the American Dipper • Portions of the Mine ROI include the San Juan River. Bald eagles are known to occur within the river corridor • Gray vireos have been documented within the SJGS ROI • Early season detections of the southwestern willow flycatcher have occurred at the PNM weir/outtake. There is no habitat on the San Juan Mine lease, but the San Juan River is within the Mine ROI. Consider clarifying that there has been no detections of the southwestern willow flycatcher within this portion of the river corridor. This species has been observed breeding in the SJGS ROI, but it is a rare breeder • Aztec and Brack's hardwall need to be in separate rows as they are two separate species, and therefore, it will add clarity to describe them on separate rows • Mesa Verde cactus is known to occur in the 1-mile buffer of the mine along the road to the San Juan Mine and also within the ACEC, which is within the Mine ROI • Consider clarifying why the Canada lynx is included if it is unlikely to occur within the ROIs. This rationale was used for other species that were discounted in the analysis. 	Special Status Species	Comment noted. No changes made. OSMRE has completed consultation with the USFWS under Section 7 of the Endangered Species Act regarding potential effects to special status species and USFWS has concurred with OSMRE's findings.
53	53.365	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4, pg 3.8-25 - There are known occurrences for Brack's hardwall cactus near the Generating Station ROI. According to the BLM mapped habitat, there is habitat directly north of Farmington in the Glade. Consider verifying that the habitat is outside of the Generating Station ROI.	Special Status Species	See Table 3.8-3. OSMRE has completed consultation with the USFWS under Section 7 of the Endangered Species Act regarding potential effects to special status species, including the Brack's hardwall cactus and USFWS has concurred with OSMRE's findings.
53	53.366	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4, pg 3.8-26 - In the second paragraph on this page, consider summarizing the potential indirect impacts, if there are any, from mine operations to special status plants. Include a summary regarding potential impacts, if there are any, from noise and human presence.	Special Status Species	See Section 3.8.4.1 Potential Indirect Impacts from Coal Combustion. No impacts to plants are known from noise or human presence.
53	53.367	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4, pg 3.8-27-28 - Under the list of potential impacts, consider identifying which impacts would be considered a direct impact and which would be considered an indirect impact and the basis for the type of impact. Also, consider clarifying how vehicles could potentially impact special status species.	Special Status Species	See Section 3.8.4.1 for description of direct and indirect impacts to special status species.
53	53.368	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4.1, pg 3.8-31 -In the following TRD text, consider clarifying what the "other activities" are that would result in frogs avoiding suitable habitat. Note that avoidance of habitat is considered an impact. "Frogs are expected to avoid suitable habitat within the Mine ROI due to other activities associated with the Proposed Action. Therefore, the Proposed Action would have no impact on special status amphibians or their habitat. "	Special Status Species	Section 3.8.4.1, page 3.8-31 updated as follows: "No uncontrolled discharge from the San Juan Mine lease area to downstream waters would occur, so no direct effect to special status amphibians would occur from ground disturbing activities or runoff. Frogs are expected to avoid suitable habitat within the Mine ROI due to other activities associated with the Proposed Action. Therefore, the Proposed Action would have no impact on special status amphibians or their habitat."

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.369	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4.1, pg 3.8-32 - SJCC suggests the following clarifications: • Consider clarifying the duration of potential impacts from construction as some activities (e.g. some roads, facilities) might extend over the life of the mine. • Consider clarifying how stockpiles increase habitat for prey species during times when ground-disturbing activities including vegetation removal may occur. • Ferruginous hawks in NW NM do not nest on the ground or trees. This species typically uses badland pinnacles or short cliffs. The nest that was previously known from the mine was located on a cliff. See Ramakka and Woyewodzic 1993	Special Status Species	Bullet points one and two are already included in the information on the referenced page. Ferruginous hawks are known to nest on the ground in some areas and therefore the statement is valid.
53	53.370	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4.1, pg 3.8-32 - Bird species of Conservation Concern are not listed birds. Consider discussing them separately from listed or agency sensitive bird species	Special Status Species	Comment noted. The proposed revision would not affect the analysis nor the conclusions. No changes made.
53	53.371	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4.1, pg 3.8-33 - While San Juan Mine has designed its sedimentation basins to contain most stormwater flows, the designation of “zero discharge facility” has not been granted to the SJM for its NPDES permit.	Special Status Species	Comment noted.
53	53.372	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4.1, pg 3.8-34 - SJCC suggests the following edits: • All four of the mapped prairie dog colonies occur in areas that are being mined underground (DL and DLE) • Please cite the source for the following statement: Prairie dogs are relatively resilient and impacts from activities outside of the established colonies	Special Status Species	TRD Section 3.8.4.1, page 3.8-34 updated to state: " Three <u>All four</u> of the mapped colonies within the Mine ROI are located in an area that is currently being mined underground (Deep Lease)." OSMRE has completed consultation with the USFWS under Section 7 of the Endangered Species Act regarding potential effects to special status species, including the prairie dog and USFWS has concurred with OSMRE's findings.
53	53.373	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4.1, pg 3.8-34 and 31 - While San Juan Mine has designed its sedimentation basins to contain most stormwater flows, the designation of “zero discharge facility” has not been granted to the SJM for its NPDES permit.	Special Status Species	Comment noted. Text has been revised accordingly.
53	53.374	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4.1; Page 3.8-35 - Consider clarifying that special status species plants are known to occur within the Mine ROI. The Mine ROI includes portions of the Hogback ACEC, which contains the Mesa Verde Cactus. SJCC suggests adding a description on these occurrences in this section.	Special Status Species	Comment noted. The text already states that special status plants are known to occur within Mine ROI.
53	53.375	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4.1; Page 3.8-35 - Under Plants, Consider changing all references of “Ash” to “CCR”	Technical Edit	Comment noted. Suggested revisions made.
53	53.376	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4.1; Page 3.8-36 - Consider verifying that Brack’s Cactus does not occur in the ERA Study area. There is mapped habitat just north of Farmington in the Glade.	Special Status Species	Comment noted. No change made. See Table 3.8-1 and 3.8-3 for more information on the Brack hardwall cactus.
53	53.377	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4.1; Page 3.8-46 - SJCC suggests moving the discussion on the surface water draw and water diversion to the baseline discussion. Consultation on these impacts has already been completed.	Special Status Species	Comment noted. The proposed revision would not affect the analysis nor conclusions. No change made.
53	53.378	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4.21; Page 3.8-47 - Consider removing the reference to the razorback sucker from the Colorado Pikeminnow heading. This is discussed under Razorback Sucker.	Technical Edit	Comment noted. The proposed revision would not affect the analysis nor conclusions. No change made.
53	53.379	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4.2; 3.8-49 - Consider removing the reference to the diversion of water as this has already been consulted on and is part of the baseline.	Technical Edit	Comment noted. The proposed revision would not affect the analysis nor conclusions. No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.380	Daniel	Mumm	San Juan Coal Company	Email	Section 3.8.4.3; Page 3.8-50 - Consider clarifying that Pinon and Juniper Pits would still be under reclamation if the No Action were chosen.	Special Status Species	Section 3.8.4.3 updated to state: "and the SJCC would continue surface reclamation activities for areas disturbed by past surface mining (Juniper Pit and Piñon Pit) and underground mining operations."
53	53.381	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9; Page 3.9-1 - SJCC suggests describing each ROI individually, rather than stating that the boundary for all (land use, transportation, and agriculture) is the DLE boundary, then describing a different ROI for transportation. Consider clarifying whether these ROIs include indirect impacts of coal combustion.	Land Use, Transportation, Agriculture	While defined as the DLE boundary, the transportation analysis considers offsite impacts (i.e., off site traffic and accidents). No change made.
53	53.382	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9.1.1; Page 3.9-1 - Under Federal, consider discussing the BLM/FFO RMP and associated amendments related to mining and the R2P2.	Land Use, Transportation, Agriculture	Comment noted. Suggested revisions made.
53	53.383	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9.1.1; Page 3.9-1 - The New Mexico MMD Permit 14-01 is a state permit, but is discussed under Federal. Consider moving this section to 3.9.1.2	Technical Edit	Comment noted. Suggested revisions made.
53	53.384	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9.1.1; Page 3.9-1 - SJCC suggests the following edit. Consider listing MMD Permit 14-01 under this section rather than just stating PAP.	Land Use, Transportation, Agriculture	Comment noted. Suggested revisions made.
53	53.385	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9.2; Page 3.9-4 - Consider discussing historical sand and gravel mining activity within the DLE and other mining activity within the region.	Land Use, Transportation, Agriculture	Comment noted. The proposed revision would not affect the analysis nor the conclusions. The baseline setting is the setting at the time of the 2008 original decision and the analysis evaluates potential changes to land use from the Proposed Action. No change made.
53	53.386	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9.2; Page 3.9-4 - SJCC suggests the following edit: "Access to the DLE is provided from the south via HWY 64 546 "	Technical Edit	Comment noted. Suggested revisions made.
53	53.387	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9.2; Page 3.9-6 - SJCC suggests the following edits: • The two primary uses of the San Juan Mine permit area are underground coal mining and livestock grazing. • Consider clarifying that livestock grazing does not take place in reclaimed areas where surface mining took place until a Phase III bond release is approved.	Land Use, Transportation, Agriculture	Comment noted. Suggested revisions made.
53	53.388	Daniel	Mumm	San Juan Coal Company	Email	Table 3.9-1; Page 3.9-6 - Consider referencing the primary literature source, which is BLM/FFO 2013 rather than the Ecosphere report.	Land Use, Transportation, Agriculture	Comment noted. Text revised as suggested.
53	53.389	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9.2.1; Page 3.9-6 - Consider defining the term "Analysis area". There are only three grazing allotments within the DLE and within the San Juan Mine permit area. If the "Analysis area" is referencing the coal combustion deposition area, please include a description of the ROI at the beginning of Section 3.9 and describe potential impacts from coal combustion to land use/transportation/agriculture in more detail.	Land Use, Transportation, Agriculture	Comment noted. Text has been revised to refer to the region of influence.
53	53.390	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9.2.2; Page 3.9-8 - Consider referencing the primary literature source used to describe the farms on the Navajo Nation rather than the Ecosphere reference.	Land Use, Transportation, Agriculture	Comment noted. The proposed revision would not affect the analysis nor conclusions. No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.391	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9.2.4; Page 3.9-8 - SJCC suggests adding the following clarification to Section 3.9.2.4: Coal bed methane wells lie within the DLE footprint. Prior to mining in the area where the wells are located, SJCC abandons these wells in accordance with the requirements described in the Mediation of Adverse Impacts on Oil and Gas Revenues provided as Appendix A to the Mining Plan Decision Document for the DLE Federal Lease NM-99144 (February 2008). See also San Juan Mine Baseline Summary Report for Land Use Resources (Ecosphere, 2017, Section 3.2.9.1).	Land Use, Transportation, Agriculture	Comment noted. Abandonment of wells is included as part of the Proposed Action. The proposed revision to the land use section would not affect the analysis nor the conclusions. No change made.
53	53.392	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9.3 and 3.9.4.1; Page 3.9-9 and 3.9-11 - Due to the reduced demand for coal as a result of the revised SIP, the workforce at the San Juan Mine was reduced from an annual average of 455 to 360 in July 2016 and then to 290 in November 2017. Consider clarifying if the reduction would have any impact on transportation.	Land Use, Transportation, Agriculture	The figures analyzed for the traffic analysis do not directly correlate with the employment at the Mine (i.e., 290 employees) because the figures provided in Section 3.9.4.1 represent work shifts to assess when employees are traveling. No changes made.
53	53.393	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9.4.1; Page 3.9-11 - Surface disturbance occurs in the grazing allotments listed in the document. Consider describing potential impacts to grazing from the Proposed Action.	Land Use, Transportation, Agriculture	Potential impacts to grazing are discussed in detail in Section 3.9.4.1 in the Technical Resource Document. No changes made.
53	53.394	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9.4.3; Page 3.9-12 - Consider describing the potential effects on the wildlife habitat, oil and gas land uses under Alternative B.	Land Use, Transportation, Agriculture	Impacts to wildlife, and land use would be the same as those in Alternative B, as stated in 3.9.4.2 in the Technical Resource Document. No changes made.
53	53.395	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9.4.3; Page 3.9-12 - Other resources discuss impacts from ongoing subsidence potentially occurring beyond 2019. Consider summarizing how potential subsidence may be an impact under Alternative C for land use/transportation/agriculture.	Land Use, Transportation, Agriculture	As discussed in Section 4.9.4.1, subsidence would stop within a few months following the cessation of mining activities. This effect is the same for the No Action Alternative. No changes made.
53	53.396	Daniel	Mumm	San Juan Coal Company	Email	Section 3.9.4.3; Page 3.9-12 - Alternative C assumes that reclamation activities will conclude within 10 years after the mine closure and that additional surface disturbance will occur to accommodate reclamation backfill needs as CCR material will not be available. Consider clarifying the type(s) of affects these operating conditions will have on land use in the ROI.	Land Use, Transportation, Agriculture	Comment noted. The following sentence has been added: <u>"Additional surface disturbance would be required to accommodate reclamation which would reduce the area available for grazing during the reclamation period."</u>
53	53.397	Daniel	Mumm	San Juan Coal Company	Email	Section 3.10; Page 3.10-1 - The Proposed Action includes the underground mining at the DLE and the reclamation of the former San Juan Mine surface pits within the San Juan Mine lease. Suggest considering the reclamation of the former surface pits in the ROI to assess the potential impacts that may be associated with the Proposed Action.	Recreation	Comment noted. No change made. The surface mining pits are included in the broader regional ROI and reclamation of the surface mining pits is ongoing and also considered as part of the baseline environment.
53	53.398	Daniel	Mumm	San Juan Coal Company	Email	Section 3.10.3; Page 3.10-2 - Please clarify that the former surface operations area is not open to all vehicle travel. Only the surface area above the underground mine is open to all vehicle travel.	Recreation	Comment noted. Text has been revised to provide clarification.
53	53.399	Daniel	Mumm	San Juan Coal Company	Email	Section 3.10.2.1; Page 3.10-5 - Consider verifying the distance to Jackson Lake Wildlife Area. This is approximately 5 miles from the San Juan Mine permit area.	Recreation	Comment noted. Text has been revised accordingly.
53	53.400	Daniel	Mumm	San Juan Coal Company	Email	Section 3.10.2.1; Page 3.10-7-8 - Consider adding the source for Head Canyon Motorcross Track and Simon Canyon ACEC	Technical Edit	Comment noted. The proposed revision would not affect the analysis nor conclusions. No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.401	Daniel	Mumm	San Juan Coal Company	Email	Section 3.10.3; Page 3.10-9 - Consider clarifying that, in addition to the shutdown of Units 2 & 3 in December 2017, Units 1 & 4 were equipped with SNCRs, which significantly reduced emissions, and SJCC reduced production from 6M tpy to 3M tpy in January 2017	Recreation	Comment noted. The proposed revisions are included as part of the Proposed Action and discussion of current operations in Section 2 of the EIS. No change made.
53	53.402	Daniel	Mumm	San Juan Coal Company	Email	Section 3.10.4.3; Page 3.10-12 - SJCC suggests the following edit: "...mining operations in the DLE would cease in 2019."	Technical Edit	Comment noted. Suggested revisions made.
53	53.403	Daniel	Mumm	San Juan Coal Company	Email	Section 3.10.4.3; Page 3.10-12 - Consider describing reclamation post cessation of mining in this section. Access to recreation of the former surface mining area would not be allowed until reclamation is complete. Additional disturbance to finish the reclamation could also reduce land available for recreation.	Recreation	The paragraph has been revised as follows: "Under Alternative C, the ASLM would not approve the mine plan modification and mining operations would cease in 2019. No impacts to recreational activities or facilities in the DLE would occur beyond 2019. The No Action Alternative would avoid shortlong term impacts to recreational opportunities on the DLE due to surface activities associated with mining and permanent impacts to the recreational viewshed that would occur as a result of subsidence. Therefore, under the No Action Alternative, no impacts to recreation and recreational facilities in the DLE ROI and Regional ROI would occur. However, under the No Action Alternative, additional land disturbance at the San Juan Mine, outside of the DLE ROI would be required to provide fill material to complete reclamation of the former surface mining pits. This disturbance would result in long-term moderate impacts to recreation in the areas of disturbance until reclamation is completed."
53	53.404	Daniel	Mumm	San Juan Coal Company	Email	3.11 and Table 3.11-5; Page 3.11-1 - Consider describing the Hopi Reservation as the reservation lies within the 9 county ROI.	Socioeconomics	Data for the Hopi Reservation has been added to Table 3.11-5 in the Technical Resource Document.
53	53.405	Daniel	Mumm	San Juan Coal Company	Email	Section 3.11; Global - Consider changing all references of "Navajo Nation Reservation" to "Navajo Nation"	Technical Edit	Comment noted. The proposed revision would not affect the analysis nor the conclusions. No change made.
53	53.406	Daniel	Mumm	San Juan Coal Company	Email	Section 3.11; Page 3.11-8 - The gender distribution numbers in the text (48.4 percent) reflect McKinley County, NM and not San Juan County, NM. Consider changing to 49.6 percent.	Socioeconomics	Comment noted. The text has been revised accordingly.
53	53.407	Daniel	Mumm	San Juan Coal Company	Email	Section 3.11.2.3; Page 3.11-16 - SJCC suggests the following edits: "The list below provides the top ten employers in San Juan County in 2015. BHP Billiton New Mexico Coal, Inc. former owner of San Juan Mine and Navajo Mine, with over 900 employees at both mines, was the fourth largest employer in San Juan County, New Mexico (San Juan County 2016a). Since 2015, BHP Billiton New Mexico Coal, Inc. has divested of both mines, the San Juan Mine is now owned by Westmoreland Coal Company and operated by SJCC, and Navajo Mine is owned/operated by the Navajo Transitional Energy Corporation and operated by North American Coal Corporation. "	Technical Edit	Comment noted. Suggested revisions made.
53	53.408	Daniel	Mumm	San Juan Coal Company	Email	Section 3.11.2.3; Page 3.11-16 - SJCC suggests using a whole number when describing employees rather than decimal points (211.5)	Technical Edit	Comment noted. The proposed revision would not affect the analysis nor the conclusions. No change made.

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53	53.409	Daniel	Mumm	San Juan Coal Company	Email	Table 3.11-14; Page 3.11-18 - Consider providing the sources for the AZ and UT data in the table.	Socioeconomics	The following Sources have been added to the footnotes of Table 3.11-14 in the TRD: "ALS 2016 and UTDWS 2016," which are existing sources already in the TRD bibliography.
53	53.410	Daniel	Mumm	San Juan Coal Company	Email	Section 3.11.2.5; page 3.11-24 - SJCC suggests creating a "master" table at the start of this section with all of the impact values from the different areas (county, ROI, state). This would allow the reader to more easily compare the impacts in the different areas. For reference, a similar table was included in the Ecosphere baseline report for Socioeconomic Resources and Environmental Justice on Page 46.	Socioeconomics	Comment noted. The proposed revision would not affect the analysis nor the conclusions. No change made.
53	53.411	Daniel	Mumm	San Juan Coal Company	Email	Figure 3.11-1; Page 3.11-23 - Verify that the colors in the pie chart match the legend. San Juan College looks to be a different color in the pie chart	Socioeconomics	Comment noted. Figure is correct. No change made.
53	53.412	Daniel	Mumm	San Juan Coal Company	Email	All tables in Section 3.11.2.5; Page 3.11-24 - Generally, IMPLAN model results are presented with values to the nearest \$1,000. It makes the numbers in the tables easier to digest and report and better represents the uncertainty in the model. Consider representing the results of the tables following the same methods.	Socioeconomics	The figures provided in the tables are taken directly from the IMPLAN model and represent the most accurate figures.
53	53.413	Daniel	Mumm	San Juan Coal Company	Email	Section 3.11.2.5; Page 3.11-24 - SJCC suggests the following edits: • In the last paragraph on the page, consider indicating that San Juan Mine's total workforce is now approximately 291 as stated in Table 3.11-23 • "...reside in other Counties in the ROI. In addition to the \$134 million directly attributable to San Juan Mine operations, an additional \$46 million of induced and indirect economic activity - is was generated from San Juan Mine operations. The amount of induced and indirect effects was approximately • 25 percent of the total economic impact in the San Juan San Juan County in 2017 at \$181 million."	Technical Edit	Comment noted. Suggested revisions made.
53	53.414	Daniel	Mumm	San Juan Coal Company	Email	Section 3.11.14.4; Page 3.11-38 - • Consider defining the level of impact using the terminology established in Section 3.11.4. "Collectively, this decrease in regional employment levels would have an adverse impact on the number of households below the poverty level, on public assistance, and without healthcare." • Consider summarizing the potential effects on education attainment in addition to the other indicators of social and economic well-being (number of households below the poverty level, public assistance, and healthcare) described in the TRD	Socioeconomics	Comment noted. The information in the Technical Resource Document is incorporated by reference into the EIS.
53	53.415	Daniel	Mumm	San Juan Coal Company	Email	Section 3.12; Global - Consider changing all references to "Navajo Nation Reservation" to "Navajo Nation"	Technical Edit	Comment noted. The proposed revision would not affect the analysis nor the conclusions. No change made.
53	53.416	Daniel	Mumm	San Juan Coal Company	Email	Section 3.12.1 and Figure 3.12-1; Pages 3.12-2-3 - Consider clarifying that the Hopi reservation is located within the ROI as defined. Consider showing the Hopi reservation on Figure 3.12-1.	Environmental Justice	Section 3.12.1 and Figure 3.12-1 have been updated to include information on the Hopi Reservation.
53	53.417	Daniel	Mumm	San Juan Coal Company	Email	Figure 3.12-2; Page 3.12-8 - SJCC suggests editing Figure 3.12-2 to allow the reader to locate the San Juan Mine.	Technical Edit	Comment noted. Suggested revisions made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.418	Daniel	Mumm	San Juan Coal Company	Email	Section 3.12.4.2; Page 3.12-9 - SJCC suggests the following edit: "The geographic area that represents the vast majority of these poverty levels is the Navajo Nation Reservation, comprised of portions of Coconino, Navajo, and Apache County, Arizona; San Juan and McKinley County, New Mexico; and, San Juan County, Colorado Utah. The Colorado portion of the Ute Mountain Ute Reservation in Montezuma County also had poverty levels greater than 25 percent."	Environmental Justice	Comment noted. Suggested revisions made.
53	53.419	Daniel	Mumm	San Juan Coal Company	Email	Section 3.12.4.2; Page 3.12-10 - Consider clarifying that the town of Kirtland is not located on the Navajo Nation. The San Juan River separates the town from reservation lands. As this is mentioned a few times in Section 3.12, so consider correcting any other references to Kirtland being on the Navajo Nation.	Technical Edit	Comment noted. Roughly half of the municipality of Kirtland is on Navajo Nation tribal trust lands and the Native Americans that reside in Kirtland represent the closest Environmental Justice population to San Juan Mine.
53	53.420	Daniel	Mumm	San Juan Coal Company	Email	Section 3.12.5; Page 3.12-13 - SJCC suggests the following edit: "As discussed in Section 3.11.4, San Juan Mine reduced the mining operation in response to the shutdown of Generating Station Units 1 and 2 and 3 to supply half the volume of coal compared to the pre-2017 baseline."	Technical Edit	Comment noted. Suggested revisions made.
53	53.421	Daniel	Mumm	San Juan Coal Company	Email	Section 3.12.5; Page 3.12-13 - Section 3.11 described the workforce reduction as going from 477 to 290 jobs. Consider making this section consistent with other resource sections.	Environmental Justice	This section has been changed to reflect 290 employees.
53	53.422	Daniel	Mumm	San Juan Coal Company	Email	Section 3.12.5; Page 3.12-13 - Consider summarizing the environmental justice implications of the downscaled San Juan Mine operation. For reference, see TRD text, "The environmental justice implications of the downscaled San Juan Mine operation (i.e. disproportionate adverse social effects to a minority population) have already been realized in the ROI, or are currently being manifested as the effects ripple through the wider economy, and are considered part of the post-2017 baseline for environmental justice."	Environmental Justice	Comment noted. The proposed revision would not change the analysis nor the conclusions. No change made.
53	53.423	Daniel	Mumm	San Juan Coal Company	Email	Section 3.12.6.3; Page 3.12-15 - The San Juan Mine workforce is approximately 290 employees. Consider updating this under the subheading "Socioeconomics" in this section Additionally, this section states that "Approximately half of the San Juan Mine workforce is Native American, rendering a total of 85 jobs..." 85 is not half of 290. Consider adding the correct number of Native American jobs at San Juan Mine.	Environmental Justice	Section 3.12.1 has been revised to reflect 290 employees, and this section has also been changed to "Approximately one-third..."
53	53.424	Daniel	Mumm	San Juan Coal Company	Email	Section 3.12.6.5; Page 3.12-17 - Consider clarifying that San Juan Mine would not shut down "entirely" in 2020. Reclamation activities would still occur until Pinon and Juniper Pits are fully reclaimed.	Environmental Justice	Comment noted. Suggested revisions made.
53	53.425	Daniel	Mumm	San Juan Coal Company	Email	Table 3.13-2; Page 3.13-20 - The last footnote in table 3.13-2 only refers to KOP 4. Consider identifying this for clarity	Technical Edit	Comment noted. Suggested revisions made.
53	53.426	Daniel	Mumm	San Juan Coal Company	Email	Section 3.13.2.4; Page 3.13-23 - Sensitive receptors are one of elements used to define where KOPs are located; Because of this information, SJCC suggests moving Section 3.13.2.4 – Sensitive Receptors to be located before Section 3.13.2.3 – Key Observation Points.	Visual Resources	Comment noted. The proposed revision would not change the analysis nor the conclusions. No change made.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.427	Daniel	Mumm	San Juan Coal Company	Email	Section 3.14.2.1; Page 3.14-9 - SJCC suggests moving the following sentence to Section 3.14.4 as it pertains to the Proposed Action and not the Affected Environment: “The southern-most extent of the Juniper Pit reclamation area is approximately 3,000 feet from US 64 where the nearest noise receptors are located. Reclamation is anticipated to take place in this southern area from 2018 through 2022, after the shutdown of two of the four generating units at the Generating Station. ”	Technical Edit	Comment noted. The proposed revision would not change the analysis nor the conclusions. No change made.
53	53.428	Daniel	Mumm	San Juan Coal Company	Email	Section 3.14.3; Page 3.14-12 - Section 3.14.3 states that ambient noise will remain the same even after shutting down the two units at the Generating Station. Consider clarifying how this was determined.	Noise	As discussed in Section 3.14.2.1, existing noise from the Generating Stations does not noticeably contribute to noise at the nearest sensitive receptor located approximately 3.0 miles away.
53	53.429	Daniel	Mumm	San Juan Coal Company	Email	Section 3.14.4.3; Pages 3.14-13 - SJCC suggests the following edit: Consider clarifying that the transportation of coal to the Generating Station occurs by a conveyor in a closed building. Please change this to state: “Transportation of coal to San Juan Mine stockpiles”	Technical Edit	Comment noted. Suggested revisions made.
53	53.430	Daniel	Mumm	San Juan Coal Company	Email	Section 3.14.3; Pages 3.14-15 - SJCC suggests the following edit: “CR 6480 located approximately 550 feet from the mining operations”	Technical Edit	Comment noted. Suggested revisions made.
53	53.431	Daniel	Mumm	San Juan Coal Company	Email	Section 3.14.3; Pages 3.14-16 - SJCC suggests the following edit: “District 400 mining is expected to end in November 2021 2044. District 500...”	Technical Edit	Comment noted. Suggested revisions made.
53	53.432	Daniel	Mumm	San Juan Coal Company	Email	Section 3.14.3; Pages 3.14-17 - As personal vehicle traffic is reported as potential noise impact, consider describing changes in potential noise impacts related to the reduction in workforce in 2016 and 2017 and future reduction at the end of mining to maintain reclamation and maintenance activities.	Noise	For the mining operations, the estimated increase in noise and vibration are a function of the relative distance to sensitive noise/vibration receptors. The decrease in mine production does not necessarily result in a decrease in produced noise/vibration as these are a function of equipment operating in proximity to sensitive receptors.
53	53.433	Daniel	Mumm	San Juan Coal Company	Email	Section 3.14.3; Pages 3.14-18 - Please change all references to “ash” to “CCR”	Technical Edit	Comment noted. Suggested revisions made.
53	53.434	Daniel	Mumm	San Juan Coal Company	Email	Section 3.14.3; Pages 3.14-19 - SJCC suggests the following edits: Reclamation is anticipated to take place in the southern most extent of Juniper Pit this southern area from 2018 through 2022. (Add space after sentence) The future reclamation...”	Technical Edit	Comment noted. Suggested revisions made.
53	53.435	Daniel	Mumm	San Juan Coal Company	Email	Section 3.14.3; Pages 3.14-20 - Please clarify that construction and reclamation is only completed during the daytime for access roads, drill pads for GVBs, and utility holes for refuge chambers associated with the underground operation.	Noise	Text has been revised accordingly.

Letter Number	Comment Number	First Name	Last Name	Organization/Affiliation	Comment Format	Comment	Topic	Response
53	53.436	Daniel	Mumm	San Juan Coal Company	Email	Section 3.14.4.5; Pages 3.14-22-23 - SJCC suggests the following clarifications: • Reclamation would continue in Pinon beyond 2019, as described in other resources. • Coal combustion at the Generating Station would continue until August 2020, as described in the DEIS (Section 2.2.3) • Impacts from existing mining activities have been assessed previously and are not expected to differ appreciably in nature from what is described above until August 2019 when all mining activities would cease in the DLE. • Consider elaborating on what the noise impacts associated with reclamation would be for the No Action alternative.	Noise	Text has been revised to clarify that reclamation would continue in Piñon Pit.
53	53.437	Daniel	Mumm	San Juan Coal Company	Email	Section 3.15.1.1; Page 3.15-3 - SJCC suggests deleting the entire Risk Management Program section. The San Juan Mine is not subject to the program because it does not produce, handle or store chemicals above thresholds subjecting to CAA Section 112[r]. Likewise, the Waste Management Plan, SPCC Plan, and Transformer Management Plan were prepared for other purposes and are not relevant to the CAA 112[r] program.	Hazards and Hazardous Materials	The text has been revised accordingly.
53	53.438	Daniel	Mumm	San Juan Coal Company	Email	Section 3.15.1.1; Page 3.15-3 - SJCC suggests deleting the entire 2nd paragraph in the Emergency Planning and Community <u>Right-to-Know Act</u> section. Unlike the Navajo Mine, the San Juan Mine is not located on Tribal land	Hazards and Hazardous Materials	The text has been revised accordingly.
53	53.439	Daniel	Mumm	San Juan Coal Company	Email	Section 3.15.1.1; Page 3.15-3 - SJCC suggests deleting the paragraph describing Tribal Emergency Response Commission. San Juan Mine is not located on Tribal property and this is only applicable to an offsite release of a hazardous substance or extremely hazardous substance above a reportable quantity.	Hazards and Hazardous Materials	The text has been revised accordingly.
53	53.440	Daniel	Mumm	San Juan Coal Company	Email	Section 3.15.1.1; Page 3.15-3 - Consider including a discussion of CERCLA reporting requirements, which are more likely to be triggered, since they apply to hazardous substance releases to the “environment” regardless of whether they are onsite or offsite.	Hazards and Hazardous Materials	The text has been revised accordingly.
53	53.441	Daniel	Mumm	San Juan Coal Company	Email	Section 3.15.1.1; Page 3.15-4 - Consider clarifying that the use of explosives was no longer a permitted activity at San Juan beginning in 2015, but explosives have not been used since 2001	Hazards and Hazardous Materials	The text has been revised accordingly.
53	53.442	Daniel	Mumm	San Juan Coal Company	Email	Section 3.15.1.3; Page 3.15-6 - Consider clarifying that CCR is only used for beneficial use of surface mine reclamation, and not used underground mine reclamation. There are two instances where this is stated (last sentence of Coal Combustion residuals and 2 nd sentence of Regulatory history of Coal Combustion Residue).	Technical Edit	Comment noted. Suggested revisions made.
53	53.443	Daniel	Mumm	San Juan Coal Company	Email	Figure 3.15.3; Page 3.15-14 - Consider changing the inset label to state “Mine Facilities Inset” or consider moving the location to show the plant location.	Technical Edit	Comment noted. The proposed revision would not change the analysis nor the conclusions. No change made.
53	53.444	Daniel	Mumm	San Juan Coal Company	Email	Section 3.15.4.1; Page 3.15-17 - San Juan Mine will likely remain subject to Toxic Release Inventory reporting until CCR is no longer received from the Generating Station. SJCC suggests revising or deleting sentences 4 through 6 in the Proposed Action to describe that TRI reporting will likely continue as long as San Juan Mine receives CCR from the Generating Station.	Hazards and Hazardous Materials	The text has been revised accordingly.

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53	53.445	Daniel	Mumm	San Juan Coal Company	Email	Section 3.15.4.1; Page 3.15-18 - Under Alternative A – Proposed Action, SJCC summarizing the conditions regarding hazardous and solid waste generation and adding clarifying information as suggested in the following sentence: “It is estimated that the amount of solid and hazardous waste generated under Alternative A would be reduced by approximately 40% to 50% from amounts of chemicals present and wastes generated during the baseline period of 2008 - 2017. Likewise, the amount of CCR material managed onsite would be reduced by approximately 40% to 50% from the amount managed during the baseline period.”	Hazards and Hazardous Materials	The impacts were identified as minor. The suggested text would not materially change the level of significance identified under this hazards and solid wastes impact determination.
53	53.446	Daniel	Mumm	San Juan Coal Company	Email	Section 3.15.3 states that 800,000 tons of CCR would be received per year, while this states 962,335 tons of CCR per year. Consider clarifying which number is correct.	Hazards and Hazardous Materials	The text has been revised to 962,335 tons of CCR per year.
53	53.447	Daniel	Mumm	San Juan Coal Company	Email	Section 3.15.4.2; Page 3.15-18 - Consider changing references to “ash” to CCR.	Technical Edit	Comment noted. The suggested revision has been made.
53	53.448	Daniel	Mumm	San Juan Coal Company	Email	Section 3.15.4.2; Page 3.15-18 - Under Alternative B, it states that CCR would not be available after 2020. CCR would be received from the Generating Station until at least 2020. After that, the typical local generating station described in Section 2.2.2 of the Draft EIS would utilize the CCR disposal methods, which would result in San Juan Mine continuing to receive CCR through 2033. Consider revising the text to reflect the Alternative B assumptions.	Hazards and Hazardous Materials	The text has been revised to clarify. The possibility that CCR will be transported back to the San Juan Mine from another generating station for reclamation is not considered in the analyses of impacts in the EIS.
53	53.449	Daniel	Mumm	San Juan Coal Company	Email	Section 3.15.4.3; Page 3.15-19 - SJCC suggests the following clarifications and edits to Alternative C: • Because Alternative C would cause a shut down in 2019, reclamation would be ongoing in both Pinon and Juniper Pits for 10 years, as described in Section 2.2.3 of the Draft EIS. • Combustion would occur until August 2020, as described in Section 2.2.3 of the Draft EIS. • Thus, there would be no hazardous waste- or material-related risks associated with mining in the DLE activities after August 2019.	Hazards and Hazardous Materials	Comment noted. The suggested revision has been made.
53	53.450	Daniel	Mumm	San Juan Coal Company	Email	Section 3.16; Page 3.16-1 - Consider clarifying if this discussion includes reclamation that will be completed after mining has ceased (post 2033).	Public Health	The last bullet on page 3.16-1 of the Technical Resource Document related to hazardous materials, including waste, does specifically discuss post 2033 waste issues.
53	53.451	Daniel	Mumm	San Juan Coal Company	Email	Section 3.16.1.1; Page 3.16-2 - Consider clarifying that the San Juan Mine is not on Tribal lands and is regulated under the New Mexico Mining and Minerals Division	Technical Edit	Comment noted. The suggested revision has been made.
53	53.452	Daniel	Mumm	San Juan Coal Company	Email	Section 3.16.1.1; Page 3.16-5 - Consider clarifying that OSHA does not apply to the San Juan Mine operations. SJCC suggests the following clarifying language be added: “ OSHA’s authority does not extend to the mining industry whose operations are instead regulated by its sister agency, MSHA. Although OSHA standards do not directly apply to miners and mining operations, they have been influential in establishing minimum standards for all occupations. ”	Public Health	Comment noted. The suggested revision has been made.

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53	53.453	Daniel	Mumm	San Juan Coal Company	Email	Section 3.16.1.1; Page 3.16-5 - SJCC suggests adding the following clarifying language to the Clean Air Act of 1970 description: “The CAA requires EPA to establish and periodically review NAAQS criteria pollutants including CO, NOx, O3, PM, and SO2. The NAAQS represent maximum levels of ambient air pollution that are considered safe, with an adequate margin of safety, to protect public health (primary standards) and welfare (secondary standards). The statute also regulates significant HAP emissions and has established NSPS standards for coal preparation plants.”	Public Health	Comment noted. The suggested revision has been made.
53	53.454	Daniel	Mumm	San Juan Coal Company	Email	Section 3.16.1.1; Pages 3.16-5 - The date that the EPA published the Disposal of Coal Combustion Residuals from Electric Utilities rule is not consistent with the date provided under Hazardous and Solid Waste. This section states April 17, 2015, while the waste resources states December 19, 2014. Consider clarifying which is accurate.	Public Health	The final rule was signed by the EPA Administrator on December 19, 2014, the final rule was published in the Federal Register on April 17, 2015. The published Federal Register date is now used throughout the report.
53	53.455	Daniel	Mumm	San Juan Coal Company	Email	Section 16.1.1; Page 3.16-5 - Consider discussing EPCRA’s primary applicability to the San Juan Mine, which is the annual TRI reporting under 40 CFR Part 372 associated with the CCR disposal and the 40 CFR Part 355 possible reporting of release of hazardous substances and emergency hazardous substances that escape the mine site. Consider that the CERCLA release notification requirements are much more likely to be triggered at the San Juan Mine.	Public Health	The following sentence has been added to the end of the EPCRA paragraph on page 3.16-5: "The primary applicability to the San Juan Mine of the Emergency Planning and Community Right to Know Act are the reporting requirements under the Toxic Chemical Release program described below."
53	53.456	Daniel	Mumm	San Juan Coal Company	Email	Section 3.16.1.2; Page 3.16-17 - SJCC suggests the following edits: “This statute (NMSA 74-2-5) regulates the prevention of or abatement of air pollution by setting standards of performance for sources and mission emission standards for both criteria pollutants and HAPs. ”	Technical Edit	Comment noted. Suggested revisions made.
53	53.457	Daniel	Mumm	San Juan Coal Company	Email	Section 3.16.2.3; Page 3.16-17 - SJCC suggests adding a discussion on activities that have occurred since the 2007 Air Quality Task Force was completed, rather than referencing the report from 11 years ago. In this time, Oil and gas development in the region has fluctuated. Three units at the Four Corners Power Plant and two units at the San Juan Generating Station have been shut-down permanently and Desert Rock was never constructed. Suggest ending the paragraph at: “All counties in the ROI are considered to be in attainment for criteria pollutants.”	Public Health	The following edits were made to the referenced paragraph on page 3.16-17: "Detailed baseline data on air quality in the ROI are discussed in Section 3.1, Air Quality. In northwest New Mexico and southern Colorado, primary sources of air pollution are from industry (oil and gas development and power plants), as well as road traffic, open burning, and residential fuels (Four Corners Air Quality Task Force 2007). All counties in the ROI are considered to be in attainment for criteria pollutants; however, a 2007 Air Quality Task Force from the Four Corners region identified ozone, nitrates, and PM as contaminants of concern due to increasing oil and gas operations, power plants, and general growth in the region. The Four Corners Air Quality Group (open to any members of the public), established after the Task Force report was completed in 2007, tracks progress in reducing air pollution in the area and provides regular updates on air quality concerns to interested parties. All counties in the ROI are considered to be in attainment for criteria pollutants."

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53	53.458	Daniel	Mumm	San Juan Coal Company	Email	Section 3.16.4.1; Page 3.16-31 - Please cite the reference for the locations of residences and farmers as discussed on page 3.16-30 and in Figure 3.16-9 (AECOM, MMD Permit 14-01 or other).	Public Health	A reference to the AECOM risk assessment from 2017 that provided this information has been added to the text and figure.
53	53.459	Daniel	Mumm	San Juan Coal Company	Email	Some of the resource-specific cumulative analysis descriptions in Section 4.0 provide a recommendation whether or not additional measures are needed to mitigate the incremental effects of the Proposed Action on that resource. For consistency, consider including a recommendation for all the resources or adding a separate section summarizing all recommendations mitigation measures for resources.	Technical Edit	Comment noted. Mitigation measures are listed in Section 4.19.
53	53.460	Daniel	Mumm	San Juan Coal Company	Email	Table 4.1-1; Pages 4-4 - 4-26 - SJCC suggests the following edits to Table 4.1-1: <ul style="list-style-type: none"> • Consider clarifying if Four Corners Power Plant has already become compliant with BART. Three units were shut down and technology has been installed on the remaining units. • Consider describing the location to El Segundo Mine from the Project Area, not from Navajo Mine • Consider describing the location of San Juan Community Based Land Use Plan from San Juan Mine and not from Four Corners Power Plant • Consider clarifying the location of the Sanostee Prison 	Technical Edit	The Table has been updated with the most current information in the Final EIS.
53	53.461	Daniel	Mumm	San Juan Coal Company	Email	Figure 4.1-1; Page 4-27 - Consider verifying that the locations and numbers in the legend are accurate.	Technical Edit	The figure has been updated in the Final EIS.
53	53.462	Daniel	Mumm	San Juan Coal Company	Email	Section 4.2.5; Page 4-40 - Consider clarifying the difference between 1,000-foot ROI around the San Juan Mine for cumulative effects and the 3-mile ROI for groundwater described in Section 3.5 (page 3.5-1 and Figure 3.5-1).	Climate Change	Comment noted. The cumulative effects ROI has been revised to be consistent with Section 3.5.
53	53.463	Daniel	Mumm	San Juan Coal Company	Email	Section 4.2.5; Page 4-40 - Consider clarifying the rational for including all of the existing and reasonably foreseeable projects listed in Table 4.1-1 in the cumulative affects analysis for water resources and hydrology. Note that some of the projects listed in the table are outside the defined cumulative impacts ROI of 50 km.	Surface Water	Comment noted. The sentence has been revised to state that the analysis considers all projects located within the 50km ROI.
53	53.464	Daniel	Mumm	San Juan Coal Company	Email	Section 4.2.5; Page 4-40 - Consider clarifying that the Fruitland Formation and PCS are already over-drawn between oil and gas production wells and mining. Consider clarifying which projects in Table 4.1-1 would draw on the Fruitland or PCS water-bearing units.	Groundwater	Please see Response 53.157.

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53	53.465	Daniel	Mumm	San Juan Coal Company	Email	Section 4.2.5; Page 4-40 - Consider referencing aspects of other projects listed in Table 4.1-1 or other actions that contribute to improving water quality in the San Juan Basin such as the RPMs summarized in the Biological Opinion for in the Four Corners Power Plant and Navajo Mine Energy Project, the San Juan River Ecosystem Project actions and the SJRIP actions. This would further support the cumulative effects analysis presented in the TRD sections for vegetation, wildlife, wildlife habitat and especially the sensitive species. Similarly, consider summarizing aspects of agricultural projects and/or associated water projects that may contribute to cumulative effects in the ROI (e.g. Navajo Indian Irrigation Project (NIIP) & San Juan Irrigation Projects and the Gold King Mine Emergency Response).	Cumulative Effects	Comment noted. The cumulative effect analysis describes the cumulative effects of the Project in combination with other projects considered. No change made. Please see Master Response 3.
53	53.466	Daniel	Mumm	San Juan Coal Company	Email	Section 4.2.10; Page 4-46 - SJCC suggests the following edits: • "...workforce at San Juan Mine have been decreased to account for the shutdown of Generating Station Units 2 and 3 and 4 , the DLE would ..." • (Draft EIS Section 4.11.5.2) • As discussed in Draft EIS Section 4.11.5.4, the No Action Alternative...	Technical Edit	Comment noted. Reference to units has been revised. No other changes made.
53	53.467	Daniel	Mumm	San Juan Coal Company	Email	Section 4.2.10; Page 4-46 - Section 4.2.1 describes the general declining trends in sectors that are the larger contributors to regional GHG. Consider explaining the effects of this trend on the foreseeable future of the energy-related projects listed in Table 4.1-1 and thus the socio-economics in the ROI in the following TRD analysis, "No reasonably foreseeable future projects would generate adverse socioeconomic impacts, but rather provide increases to employment and economic activity, and thus no adverse cumulative impacts are expected. While the reasonably foreseeable future projects would provide increased economic activity, the loss of jobs, social benefits, economic activity, and public revenue as result of the shutdown of San Juan Mine and the Generating Station would not be replaced in the foreseeable future."	Socioeconomics	As discussed in Section 3.11.2.3 of the TRD, the "extractive industries, including coal mining, play a key role in the economy of the Four Corners Region. Economies where extractive industries of natural resources, such as oil and gas, tend to experience boom-and-bust cycles as commodity prices fluctuate on the open market. Economic activity, such as jobs and investment, tends to ebb-and-flow in areas where resource extraction is a large part of the economy." The energy projects listed in Table 4.1-1 are reasonably foreseeable new developments and would provide economic activity in the region. The cumulative analysis for socioeconomic does not attempt to forecast or speculate market conditions for specific commodities and only considers those projects that have been formally proposed or plans submitted to a permitting entity.
53	53.468	Daniel	Mumm	San Juan Coal Company	Email	Section 4.2.13; Page 4-48 - Consider providing a reference to support the potential affects from the Generating Station as described in the TRD, "however, the only project occurring within the 1-mile radius is the existing Generating Station and this operation is not expected to contribute major noise or vibration effects for sensitive receptors in addition to the project- specific effects produced from mining activities." Additionally, Consider verifying that the San Juan River Gas Plant is not within a 1-mile radius of the Project.	Noise	Comment noted. Text has been updated accordingly.

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53	53.469	Daniel	Mumm	San Juan Coal Company	Email	Section 4.2.16; Page 4-52 - SJCC suggests rewording the following the sentence for clarification, "These impacts have the potential to adversely affect human health, particularly for those of lower socioeconomic status (such as Native American populations living at the poverty level who already have higher rates of respiratory diseases that would be exacerbated by increases in air pollution)	Technical Edit	Comment noted. Suggested revisions made.
54	54.001	Cheryl	Seager	U.S. Environmental Protection Agency (EPA)	Mailed Letter	The EPA has rated the draft EIS as EC-2, Environmental Concerns - Insufficient Information. Please refer to the enclosed Summary of Rating Definitions for a detailed explanation of the EPA's rating system. EC (Environmental Concerns) - The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts. Category "2" (Insufficient Information) The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analysis, or discussion should be included in the final EIS.	Process	After further consultation with EPA on the specific areas for additional information, the EIS has been revised in the Water Quality section to identify existing regulatory protections and provisions for adaptive management.
54	54.002	Cheryl	Seager	U.S. Environmental Protection Agency (EPA)	Mailed Letter	The EPA's primary concerns are the source of a significant increase of constituents, especially Dissolved Solids, in the monitoring results for Well GL and the potential impacts to human health from metals that bioaccumulate, such as mercury and selenium. Further explanation is provided in the enclosed detailed comments for your consideration.	Groundwater	See responses to detailed comments, but briefly the hydraulic and geochemical studies were discussed as a unit, and existing regulatory programs that require appropriate monitoring were identified. The ability of NMD and OSMRE to use adaptive management in response to the monitoring was also highlighted.
54	54.003	Cheryl	Seager	U.S. Environmental Protection Agency (EPA)	Mailed Letter	The draft EIS relies on qualitative characterization of impacts (minor, moderate, major) for the various resources under review (p. 67). Under this characterization, mitigation is only discussed if the impact is deemed "qualitatively major." The EPA recommends that mitigation be identified, where feasible, in resource areas for air quality and water resources that may bioaccumulate (e.g., mercury, arsenic, and selenium).	Process	As described in Section 4, page 67 of the Draft EIS, the impact categorizations are based on quantitative threshold where appropriate to determine the level of significance (e.g., air quality, noise). For the issue of air quality, the quantitative significance thresholds are EPA NAAQS and Title V permit thresholds. Based on comparison of emission levels to these thresholds, impacts are less than significant. For water resources, the EIS already describes ongoing water resource mitigation measures that the applicants are part of.
54	54.004	Cheryl	Seager	U.S. Environmental Protection Agency (EPA)	Mailed Letter	In addition, please include a discussion on any potential health impacts associated with the deposition of mercury and selenium and arsenic into the San Juan River watershed. In these discussions, please consider subsistence consumption of fish and other irrigation use, as appropriate.	Public Health	Section 4.16 specifically addresses the human health risks associated with consumption of fish/plants, etc. that could result from deposition of mercury and selenium and arsenic in the San Juan River watershed. The HHRA is based on EPA methodology.

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54	54.005	Cheryl	Seager	U.S. Environmental Protection Agency (EPA)	Mailed Letter	The draft EIS states that an "analysis of CCR disposal at the San Juan Mine in 2011 (Thomson et al. 2012) evaluated water quality data from Well GL located in the Shumway Arroyo downgradient of CCR disposal sites at the mine. A comparison of historical data (1979) to the more recent sample results (2013) indicates a significant increase in the Dissolved Solids (TDS), Chloride, Sodium and Sulfate constituent concentrations over time. The EPA suggests that the final EIS consider including steps to further investigate and better understand the significant increase, especially in the TDS (34,775 mg/L to 64,731 mg/L). Measures might include additional monitoring wells, especially wells that reach the bottom of the initial placement of CCRs in Juniper Pit. While other monitoring wells show fairly consistent results for their various constituents and parameters over time, there may be a possibility of leachate formation from the moisture in the CCRs at the time of placement. Further, uncertainty about the actual dynamics of the movement of any leachate and its migration should be determined.	Groundwater	Recent USGS hydraulic modeling of groundwater flow through the CCR storage area and downstream flow indicates that approximately 1,000 years in the future, groundwater may flow through the CCB area and reach the Shumway Arroyo and San Juan River. However, the study did not evaluate the potential geochemical effects of this transport. The USGS study references Thomson (2012) who found that the potential for groundwater contamination was small. The Thomson study was also discussed at length in the EIS. The USGS hydraulic study puts the geochemical results in clearer context in terms of groundwater flow directions, but does not change the conclusion that the effects of CCB storage on surface water quality are likely to be small. Given the extended timeframe during which the small effect may be seen, OSMRE does not recommend groundwater monitoring for this minor effect. Monitoring wells GL and SM7 and other wells in and downgradient of Juniper pit will continue to be monitored by NM MMD. NM MMD as the regulatory authority can require future mitigation measures if there are changes.
54	54.006	Cheryl	Seager	U.S. Environmental Protection Agency (EPA)	Mailed Letter	The TDR cites Thomson, 2012, a comprehensive report written with the cooperation of New Mexico, USGS and DOI researchers on the San Juan Mine. The report at 1.1.2.3, Site Hydrology states that "The site poses unique hydrologic properties as its southern boundary approaches the San Juan River which likely affects groundwater flow; the exact direction and magnitude of groundwater flows under the SJCM are unknown. As part of the permitting process the SJCM submitted a reclamation plan to protect the hydrologic balance of the area. The purpose of the reclamation plan is to assure protection of the surface and groundwater quality by monitoring mine water inflows, minimizing surface runoff and sedimentation into streams. Groundwater is present due to perched aquifers, location of the groundwater table within the area, leakage from water pipe used by SJCM and PNM, a native river, arroyos and storm water runoff (Ginn, Perkins, and O'Hayre 2009). The EPA suggests that the final EIS incorporate by reference those measures included in the reclamation plan for the DLE.	Groundwater	Reference to the reclamation plan has been added to the Technical Resource Document. OSMRE has incorporated these existing measures by reference into the Final EIS.
54	54.007	Cheryl	Seager	U.S. Environmental Protection Agency (EPA)	Mailed Letter	There has been discussion of leakage over time from the three mine evaporation ponds (USGS Report - Scientific Investigation Report 2017-5155). Please discuss the mitigation measures implemented to prevent leakage in the future in the final EIS.	Groundwater	The USGS report discusses leakage from three evaporation ponds associated with process water from the San Juan Generating Station and does not reference the evaporation cells associated with the San Juan Mine used for the purpose of pumping surplus water from the underground mine. Reference to the reclamation plan has been added to the Technical Resource Document. OSMRE has incorporated these existing measures by reference into the Final EIS.

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54	54.008	Cheryl	Seager	U.S. Environmental Protection Agency (EPA)	Mailed Letter	Lastly, discussions in the draft EIS and TRD conclude that after the cessation of pumping from both mining and oil and gas operations the aquifers will recharge, however over time horizons measured in 100s to 1,000s of years. With operations continuing until 2033, there is no way to tell how much of the CCRs might be currently saturated without installing a well drilled to the bottom of the CCR pit or outside the area with monitoring wells. We suggest that the final EIS discuss this issue and the strategy for future monitoring wells through end of mine life and after reclamation.	Groundwater	Recent USGS hydraulic modeling of groundwater flow through the CCR storage area and downstream flow indicates that approximately 1,000 years in the future, groundwater may flow through the CCB area and reach the Shumway Arroyo and San Juan River. However, the study did not evaluate the potential geochemical effects of this transport. The USGS study references Thomson (2012) who found that the potential for groundwater contamination was small. The Thomson study was also discussed at length in the EIS. The USGS hydraulic study puts the geochemical results in clearer context in terms of groundwater flow directions, but does not change the conclusion that the effects of CCB storage on surface water quality are likely to be small. Given the extended timeframe during which the small effect may be seen, OSMRE does not recommend groundwater monitoring for this minor effect. NM MMD is currently monitoring Well SM7 as part of the DLE permit and that this well is monitoring groundwater at the pit bottom in an area of the Juniper Pit that was covered and reclaimed. In addition, the following language has been added to Section 4.5: "SJCC developed a groundwater-monitoring plan, which would be implemented as part of the New Mexico MMD permit to monitor changes in quantity of the groundwater resource during mining and subsequent reclamation. The monitoring plan includes collection of groundwater information from specified hydrogeologic units and the goal is to collect data on groundwater quality and quantity and to monitor any changes that may occur as a result of mining and reclamation such that if changes are detected mining and reclamation operations can be adjusted to
54	54.009	Cheryl	Seager	U.S. Environmental Protection Agency (EPA)	Mailed Letter	On page 63 of the TDR Section 3.1.4.3, EPA recommends OSMRE strikes the last words of the paragraph 'is considered long-term but minor' and replace with "is above EPA's Ozone Significant Impact Level of 1 ppb, but the study and ozone monitors in the area indicate the NAAQS is not being exceeded even with the Generating Station Emissions."	Air quality	Suggested sentence has been added while retaining OSMRE's conclusion of long-term but minor.