United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Farmington District Office
6251 College Blvd Suite A
Farmington, New Mexico 87402
www.blm.gov/nm

In Reply Refer To:
EA # F010-2012-0402 Errata Sheet

January 3, 2013

Re: Application for Permit to Drill – Rosa Unit 03, 04, 05, and 06 Natural Gas Well Pads and Water Management System Errata Sheet.

Dear Reader:

In December of 2012, the Bureau of Land Management (BLM), Farmington Field Office made a final decision regarding the Applications for Permit to Drill – Rosa Unit 03, 04, 05, and 06 Natural Gas Well Pads and Water Management System. An Environmental Assessment (EA) DOI-BLM-NM-F010-2012-0402-EA was prepared describing the proposed action and alternatives. Enclosed please find a copy of the EA, Decision Record (DR), and Finding of No Significant Impact (FONSI).

An incomplete comment response table was included in Appendix B of the original document. Attached is the Errata Sheet that includes the complete comment response table. This should be used in place of the original Appendix B.

The original EA, DR, and FONSI, along with the Errata Sheet are available online at http://www.blm.gov/nm/st/en/fo/Farmington_Field_Office.html

If you have any questions regarding this project, please contact Lindsey Eoff at (505) 564-7670 in Farmington, New Mexico.

Sincerely,

/s/ Gary Torres
Farmington Field Manager

APPENDIX B
ERRATA SHEET

COMMENT RESPONSE

	Page/ Paragraph	Category	Comment	Action	Response
WildEarth Guardians		General	Request that if the BLM moves to issue the proposed APDs, that the agency review and respond to our prior comments on the Middle Mesa POD.	Beyond Scope of EA	Comments on the Middle Mesa Plan of Development (POD) were addressed in the Final Middle Mesa POD Environmental Assessment (EA).
WildEarth Guardians		Air Quality	There is no estimate of indirect emissions, particularly NO2, VOC, and PM2.5, associated with activities like compressor station operations, frack pond construction and operation, pipeline pigging operations, land farming operation, and other waste disposal activities, power generation activities, including cogeneration facilities.	Already in Document	Emissions associated with the action are included in the baseline. Emissions from multi-well fluids management and waste disposal facilities were included in the emissions calculator. No compressor stations or power generation are proposed or anticipated to be proposed.
WildEarth Guardians		Air Quality	Complete a more robust analysis of air quality impacts and provide a reasonable basis for assessing the significance of impacts or prepare an EIS.	Already in Document	Air quality impacts are adequately analyzed in the EA. The action is consistent with the scale of development analyzed in the Resource Management Plan (RMP) Final Environmental Impact Statement (FEIS). The Farmington planning area is currently in attainment with all National and State Ambient Air Quality Standards (NAAQS/SAAS).
WildEarth Guardians		Water Quality	Request the BLM commit to ensuring baseline and post-drilling groundwater quality monitoring and adopt a Condition of Approval (COA) that prohibits and all groundwater contamination.	Beyond Scope of EA	The Bureau of Land Management (BLM) does not write Conditions of Approval (COA) for actions that are already regulated by other federal and state agencies.
WildEarth Guardians		Water Quality	Request that BLM adopt a COA that ensures no freshwater is used for the duration of proposed drilling.	Beyond Scope of EA	The BLM has a COA in place for water use in drilling. "Water acquired to construct, produce, and maintain actions authorized by this permit to drill must be acquired from permitted water sources, or water authorized for use by the New Mexico Oil Conservation Division (OCD). Upon request, the

	Page/ Paragraph	Category	Comment	Action	Response
					AO (authorized officer) shall be provided with documentation of water sources."
WildEarth Guardians		T&E Species	Request that BLM prepare a thorough biological assessment for the proposed APDs and formally consult with the USFWS over potential contamination, flow depletions or other impacts to Colorado pikeminnow and razorback sucker. BLM must address indirect effects. It does not appear that BLM assessed the potential for impacts to these species within the actual "action area".	Already in Document	In 1994, U.S. Fish and Wildlife Service (USFWS) designated critical habitat for the Colorado pikeminnow and the razorback sucker, located on the San Juan River in West Farmington and extending downstream to Lake Powell. The proposed project area is approximately 60 river miles from the start of the designated critical habitat for the pikeminnow and razorback sucker in Farmington. Even if there were some discharge of contaminants from the proposed project, the distance to the critical habitat and Navajo Dam (~ 14 river miles from proposed project area) would likely prevent any impacts to the pikeminnow or razorback sucker or their designated habitat. There are no new water depletions associated with this project. Water associated with this project will be produced water in accordance to NMOCD (NMAC 19.15.2.52). Any new water depletion would require Section 7 consultation (formal) with USFWS under the Endangered Species Act. The proposed project is in conformance with the 2002 Biological Assessment for the BLM/FFO RMP with an effects determination of “may affect, not likely to adversely affect” on federally-listed species in the BLM/FFO resource area, including the two fish species. No further consultation with USFWS is necessary.
WildEarth Guardians		Tiering to the RMP	Cumulative Field-Office-wide impacts of Mancos	Beyond Scope of	The BLM Land Use Plans (e.g., resource management

	Page/ Paragraph	Category	Comment	Action	Response
			shale gas development has not been appropriately analyzed. BLM cannot reasonably tier to the RMP and the RFDS. Request BLM supplement its EIS for the RMP to ensure cumulative impacts of horizontal drilling to develop Mancos shale have been taken into account.	EA	plans) are designed to provide guidance for future management actions and the development of subsequent, more detailed and limited-scope plans for resources and uses (BLM Handbook H-1790-1). The proposed development is within the scope and scale of the Farmington planning area RMP FEIS. The context and intensity of producing the Mancos Shale was included in the RFDS for the RMP FEIS. The formation was evaluated as a stand-alone formation, and Mancos Shale gas wells were combined with those of the Dakota Formation as a potential commingle candidate. The total number of Dakota-Mancos Gas wells predicted to be drilled on Federal lands was 4,108. The RFDS also predicted 300 oil wells drilled to the Mancos Shale and Gallup reservoirs over 20 years. The RFDS noted that there was excellent potential for the Mancos Shale to be further developed as a shale gas candidate.
La Plata County	41; Section 3.11; Table 3-7	Transportation	Including a column in the table to show the potential increase in traffic from the proposed alternatives would be helpful for the proposed five-year estimated duration of increased traffic.	Edit EA	Table 3-7 illustrates the existing baseline. Impacts from the proposed action alternatives are presented in Chapter 4. Additional text has been incorporated into this section.
La Plata County	41; Section 3.11; Table 3-7	Transportation	This table does not include any information of County Roads. What is the current ADT for an existing 22-foot wide gravel County Road.	Edit EA	The EA has been edited to include Table 3-8, which lists average daily traffic counts for County Roads 328 and 330.
La Plata County	41; Section 3.11	Transportation	The Ignacio Corridor Access Plan (ICAP) recommended the installation of a traffic signal. The study does not mention that it is currently operating at LOS F for the PM left	Edit EA	Comment noted. The EA has been edited to include the LOS F for SH 172.

	Page/ Paragraph	Category	Comment	Action	Response
			turns, south bound on SH 172. Funding is not currently available and construction has not been scheduled.		
La Plata County	80; Section 4.12.1	Transportation	What would the vehicle trips per day be for the estimated use of the well pad for routine maintenance, etc. on County Roads after the estimated five years for the proposed action? IE. What will the generated ADT's be during and after construction?	Edit EA	Additional text has been added to this section.
La Plata County	80; Section 4.12.1	Transportation	County roads are not included or discussed for increased vehicle trips wear and tear on roads at all. What is the current ADT for County Roads 328 and 330 and what would the proposed increase be? How will the impacts to gravel roads from the increased traffic and from oil and gas trucks using tire chains on county roads be mitigated?	Edit EA	Additional text has been added to this section.
La Plata County	81; Section 4.12.1	Transportation	The statement that the proposed action would not result in changes to the level of service for any roadways used is not backed up with any information. The existing level of service on county roads has not been identified and this statement is not taking into account additional proposed truck traffic on county roads. The estimated five years for the proposed action does not take into account the increase in traffic on county roads as 5 years of increased truck traffic has the potential to significantly damage county roads. What about the current county road-State Highway intersections? Are warrants already met for perk hour traffic for any	Edit EA	Additional text has been added to this section.

	Page/ Paragraph	Category	Comment	Action	Response
			turn lanes?		
La Plata County	81; Section 4.12.2	Transportation	County roads are not included or discussed for increased vehicle trips wear and tear on roads at all.	Already in Document	Refer to section 4.12.
La Plata County	81; Section 4.12.2	Transportation	What are the current levels of traffic for operations and maintenance on county roads? Increased maintenance cost will result from increased heavy truck traffic.	Edit EA	Additional text has been added to this section.
La Plata County	81; Section 4.12.3	Transportation	If Alternative C does not use the proposed piping for water and plans to use haul trucks for water and completion, the increase of traffic on county roads is not addressed. Traffic levels would increase during the estimated five years of the proposed action and for the estimated duration of the well life. The "current baseline" should be identified.	Already in Document	Under Alternative C there would be no change in the current traffic levels. WPX currently drills 8 months a year within the Middle Mesa portion of the Rosa Unit. The current drilling program includes hauling produced water to disposal facilities.
La Plata County	81; Section 4.12.4	Transportation	Again, Alternative C is proposing to use haul trucks for water and completion, but increased traffic on county roads is not addressed. Traffic levels would increase during the estimated 5 years of the proposed action and for the estimated duration of the well life.	Already in Document	Under Alternative C there would be no change in the current traffic levels. WPX currently drills 8 months a year within the Middle Mesa portion of the Rosa Unit. WPX would continue their drilling program. Traffic levels would increase under the proposed action for the duration of drilling and completion. During operation, increased traffic levels are not anticipated.
La Plata County	26; Table 3-1	Air Quality	La Plata County air shed is not included in this document, but should be included. The EPA and CDHPE attainment is also not included and should be. If San Juan county was reported as non-attainment, that has the potential to include La Plata County into non-attainment, due to the air shed.	Edit EA	The action alternatives would be located in San Juan and Rio Arriba Counties, New Mexico. Additional information on air quality in this area is contained in Chapter 3 of the PRMP/FEIS (USDI/BLM 2003a), which this analysis tiers to and incorporates. The PRMP/FEIS defines the region of influence for air quality for pollutants other

	Page/ Paragraph	Category	Comment	Action	Response
					than ozone as a few miles downwind from a source (USDI/BLM 2003a). Since there would be traffic associated with the action alternatives on paved and unpaved roads in La Plata County, the region of influence for indirect air quality impacts associated with vehicular traffic emissions includes La Plata County. The region of influence for ozone includes the Four Corners area as defined in the PRMP/FEIS (USDI/BLM 2003a). Air quality impacts in La Plata County may result from traffic emissions and regional transport of emissions from the project area. La Plata County is in attainment of all EPA NAAQS. Impacts to ozone levels are evaluated in the document and have been edited to include La Plata County. San Juan and Rio Arriba Counties, New Mexico and La Plata County are in attainment of all EPA NAAQS.
La Plata County	26; Table 3-2	Air Quality	Does not include La Plata County ozone data collected by SUIT AQ program, USFS or CDPHE.	Edit EA	There is no Colorado Department of Public Health (CDPHE), Air Pollution Control Division, Technical Services Program quality-assured and verified ozone monitoring station in La Plata County. The nearest CDPHE quality-assured and verified ozone monitoring station is located at Cortez, Colorado.
USBR; Schroeder (8/30/12)	General; Administrative Draft	Proposed Action	From which formations is the produced water to be carried in the water line?	Edit EA	See Section 2.2.2 for additional text
USBR; Schroeder (8/30/12)	General; Administrative Draft	Water Quality	There was only generalized produced water quality information. It would be helpful if a more detailed description of the produced water quality, similar to that provided for the area's aquifers,	Already in Document	Although the EA provided generalized produced water quality information. Specific water quality data was provided to the USBR in April 2012 and is contained in the project record.

	Page/ Paragraph	Category	Comment	Action	Response
			was provided, including a TDS range, major cations and anions, major metals and hydrocarbons of concern, and their concentrations. Since the produced water is currently being disposed of, I would think there is some water quality information available.		
USBR; Schroeder (8/30/12)	General; Administrative Draft	Proposed Action	What is the expected life of the water line under Navajo Reservoir?	Edit EA	Additional text in Section 4.7.2
USBR; Schroeder (8/30/12)	General; Administrative Draft	Water Quality	The potential effects to surface and ground water due to failure of the water line was apparently based on fully functioning automatic shut-off valves. Is there a significant increase in potential adverse effects if the shut-off valves don't operate properly? If so, what?	Edit EA	Additional text in Section 4.7.2
USBR; Schroeder (8/30/12)	General; Administrative Draft	Water Quality	What would be the likely short-term effect to surface or ground water quality should there be a release of produced water from the water line under the reservoir? The effect is presumed to be adverse, but how and to what degree?	Edit EA	Additional text in Section 4.7.2
USBR; Christianson (8/30/12)	General; Administrative Draft	Proposed Action	I also share Rob's concern about the ability to use the pipeline in the future for transporting fluids other than produced water. If that was an option without future consultation with us, then I believe we have a much larger concern than the current design.	Beyond Scope of EA	WPX energy has no plans to modify the pipeline at any time in the future for a different use. Should WPX divest itself from the waterline, any new operator would be required to comply with the Sundry Notice and BLM policy and regulations regarding its use.
USBR; Christianson (8/30/12)	General; Administrative Draft	Water Quality	My general concern is protecting the Navajo water supply from this pipeline and the containment ponds that are within basin. If there were a failure of each,	Edit EA	Additional text in Section 4.7.2.

	Page/ Paragraph	Category	Comment	Action	Response
			the Navajo Reservoir water quality would be immediately impacted.		
USBR; Christianson (8/30/12)	General; Administrative Draft	Geology	Regarding the pipeline itself, I am most concerned about the lack of geologic data that is being used in the design. It is my understanding that they are using historic geologic data, primarily from old drill hole locations located topographically higher on the bluffs above the river channel. The biggest unknown geologically is the depth of the alluvium in the Pine River channel (under Navajo Reservoir). Based on the geologic section provided, the pipeline looks to be 40-50 feet below the topography provided (the accuracy of the topography used is another concern, although that would be easier to survey). It is possible to have that much alluvium in the channel. Without an exploration in the center of the Pine River channel, there cannot be much confidence of the alluvium/bedrock contact, or the quality (consolidation) of the bedrock immediately below the contact. If there is a chance that this pipeline could end up passing through alluvium or unconsolidated bedrock, then I would be much more concerned about the integrity of the pipeline, as a failure would immediately be in contact with the Navajo water supply.	Beyond Scope of EA	Geology has not changed from what was identified from the cathodic well logs. An elevation of the silt would not probably be too hard to achieve. To drill a geotech well in the center of the channel would be a large task and a permit in itself with BOR and US Army Corps of Engineers.
USBR; Christianson (8/30/12)	General; Administrative Draft	Horizontal Directional Drilling	If we have the confidence that the pipeline is in solid bedrock, the next	Already in Document	Refer to Appendix E. The drill hole is to be 9 inches in diameter the pipe will be 4.5 inches. Approximate 2.5

	Page/ Paragraph	Category	Comment	Action	Response
			question is the process of the drilling. I don't have much experience with directional drilling, so I am concerned about the accuracy of the drill bit. What is the tolerance expected for the pipeline to be within what is on the design drawings? More importantly to me, I understand that this will be drilled with a bentonite slurry, and that the bentonite will perform like grout around the pipeline. What is the size of the drilled hole compared to the size of the pipe? In other words, what is the size of the annulus of bentonite between the pipe and bedrock? What measures are being taken to ensure that the annulus is filled with bentonite without any voids?		inches of space around the pipe will be filled with bentonite. The control of the drill head on the HDD is under constant observation and a elevation change on the drill head would be known and corrected or if it is alluvial then the drill may have to go deeper or be abandoned. For a project this size, we would normally set an allowable plus or minus 15' in alignment and plus or minus 15 feet in elevation. The pilot hole is monitored by taking downhole survey shots roughly every 30 feet. Should the bit starting moving outside of the stated tolerances, the contractor pulls back 30 feet or more, as necessary and redrills to get back on target. As the product line is pulled into the hole, bentonite drilling fluid is pumped continuously from the leading edge of the pulling assembly (reamer, swivel/shackle, pulling head welded to pipe. The annulus fills up, at least temporarily, if there are existing fractures in the rock, no way to guarantee that the drilling fluid will remain in the hole all the way across. Another consideration at this location (as well as all locations), there is a risk of inadvertent drilling fluid returns surfacing within the reservoir. Given the depth, drilling fluid pressures will be pretty high. I would suspect that leakage may occur on the hill sides possibly flowing between strata. Any leakages would be contained within pits, a common practice.
USBR; Christianson (8/30/12)	General; Administrative Draft	Proposed Action	It was also mentioned by others about the pipe material and the susceptibility to corrosion. I just want to	Already in Document	See section 4.7.2 for pipeline material and CPS details. Specific information concerning the pipeline material and coatings was

	Page/ Paragraph	Category	Comment	Action	Response
			make sure this is addressed as well.		provided in April 2012 to the USBR and is contained in the project record.
USBR; Strain (10/3/12)		Proposed Action	What additives are being added to slurry when drilling? Close to bottom of reservoir – fractures may provide path for fluids to reservoir.	Edit EA	Drilling fluids would be composed of bentonite.
USBR; Strain (10/3/12)		Proposed Action	Will reservoir profile be done before drilling?	Already in Document	A plan and profile sheet of the water line under the lake is provided in Appendix C.
USBR; Strain (10/3/12)		Proposed Action	Any lining being planned for pipeline?	Already in Document	No lining is planned for the pipeline.
USBR; Strain (10/3/12)		Proposed Action	What is the projected life of the pipeline?	Already in Document	Refer to Section 4.7.2
USBR; Strain (10/3/12)		Proposed Action	Provide horizontal and vertical distances of drill hole to reservoir profile.	Already in Document	Refer to Section 4.7.2
USBR; Strain (10/3/12)		Proposed Action	Provide calculations for subsidence and expansion during fracking of oil/gas wells.	Already in Document	Refer to Section 4.7.1
USBR; Strain (10/3/12)		Proposed Action	Provide calculations from expected subsidence during life of the oil/gas production holes.	Beyond Scope of EA	No subsidence is expected to occur. There are no records of any subsidence occurring in the San Juan Basin.
USBR; Strain (10/3/12)		Proposed Action	Provide oil/gas fracking pressures and calculations of projected fractures.	Covered by Admin Procedure	This information was provided to the Agency during several meetings. Refer to Section 4.7.1 and 4.7.2.
USBR; Strain (10/3/12)		Geology	Any small faults or shears seen within pipeline corridor?	Already in Document	No.
USBR; Strain (10/3/12)		Geology	Provide information of joint orientation and density on surface for both sides of the reservoir.		Need clarification on this comment.
USBR; Strain (10/3/12)		Water	How much is the water in Navajo Reservoir worth?	Beyond Scope of EA	There is no context for this comment.

	Page/ Paragraph	Category	Comment	Action	Response
USBR; Dombrowski (11/10/12) via email		Water Quality	There is an unquantifiable risk of reservoir contamination in the event of transmission system failure.	Already in Document	Refer to Section 4.7 for the safeguards in place.
USBR; Dombrowski (11/10/12) via email		Geology	Geological information is lacking and of serious concern to the construction and long term stability of the pipeline crossing. An additional 100 foot (elevation 5700 feet) pipeline depth should be used for crossing of the reservoir reducing the chance of reservoir contamination in the event of a pipeline failure.	Already in Document	Refer to the water line alignment in Appendix D. The water line depth below the lake would be 150 feet below the reservoir. WPX modified the water line design to include an additional 100 feet below the reservoir.
USBR; Dombroski (11/15/12) Via email.		Geology	Question I have is whether the identified geological landscape at the crossing point is based upon the geophysical study completed by Green River a few years back? Our geology staff feel that cathodic well logs are inadequate for these purposes. Clarification would be appreciated.	Beyond the Scope of the EA	Refer to Tom Strain's, USBR, email from September 28, 2012 referencing geophysical information. The Green River geophysical information would be applicable to the surface geology and would not provide information on geology at the water line depth.
USBR; Vance (11/19/12) via email		Proposed Action	I noticed in the specifications provided on the WPX Middle Mesa Project pipe and its coating that the MSDS for the pipe coating was not included. Would you please provide that information?	Edit the EA	MSDS sheets for pipeline coatings were provided to the USBR via email on 10/22/12. This information is contained in the project record.
USBR; Vance (11/19/12) via email		Water Quality	Please provide the MSDS type data for the fracking fluid for this project so that the proper analysis of the pre-project water samples can be started.	Beyond the Scope of the EA	The exact constituents of fracking fluid that would be used under the proposed action would be determined at the time of fracking.
USBR; Vance (12/7/12) via		Water Quality	In reference to WPX and BLM not wanting to provide the fracking fluid constituents, USBR has a	Beyond the Scope of the EA	WPX has not identified the constituents of their fracking fluids nor are they

	Page/ Paragraph	Category	Comment	Action	Response
email			large body of water in close proximity to the fracking operations they are assessing to permit. According to the below linked information, the USBR does have contractual requirements to provide clean water. Therefore, the USBR should have the appropriate information so that a baseline can be established and then used for comparison to prove the USBR is providing water per its contractual agreements.		required to at this time. FFO does not keep MSDS sheets for entities that have approved authorizations to utilize BLM lands; that is the responsibility of person or entity that holds the authorization. Relevant information concerning fracking fluids can be found at http://fracfocus.org/.