

Region 6 Compliance Assurance and Enforcement Division

INSPECTION REPORT

Inspection Date(s):	01/09/2018		
Media:	Water		
Regulatory Program(s)	Clean Water Act / NPDES		
Company Name:	Public Service Company of New Mexico		
Facility Name:	Rio Bravo Generating Station		
Facility Physical Location:	725 Electric Ave. SE		
(city, state, zip code)	Albuquerque, NM 87107		
Mailing address:	2401 Aztec NE Z-100		
(city, state, zip code)	Albuquerque, NM 87107		
County/Parish:	Bernalillo County		
Facility Contact:	Richard Threet	Plant Manager	
	Richard.threet@pnm.com		
FRS Number:	110012569942		
Identification/Permit Number:			
Media Number:	NM0030376		
NAICS:	221112		
SIC:	4911		
Personnel participating in inspection:			
Amy Andrews, P.E.	USEPA/6EN-WMH	Environmental Engineer	214-907-0638
Richard Threet	Public Service Company of New Mexico	Director - Generation	505-241-4723
John Hale Jr., P.E.	Public Service Company of New Mexico	Environmental Manager	505-241-2014
E.J. Anderson	Public Service Company of New Mexico	Environmental Scientist	505-241-2026
Aaron Goodman	Public Service Company of New Mexico	Laboratory Technician	505-241-2700
EPA Lead Inspector Signature/Date			
	Amy Andrews, P.E.		Date
Supervisor Signature/Date			
	Carol Peters		Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

Environmental Protection Agency (EPA) Region 6 inspector Amy Andrews arrived at the Public Service Company of New Mexico (PNM) – Rio Bravo Generating Station at 9:20 am on January 9, 2018 for an unannounced inspection. I met with Richard Threet, Director of Generation, John Hale, Environmental Manager, and E.J. Anderson, Environmental Specialist, for the Opening Conference. I presented my credentials to all present at the opening conference and explained that this was an EPA inspection to determine compliance with the facility's National Pollutant Discharge Elimination System (NPDES) permit and the Clean Water Act (CWA). The inspection was conducted under the authority of the NPDES permit program, in accordance with the Federal CWA.

This report is based on information supplied by PNM representatives (the permittee), observations made by the EPA inspector, and records and reports maintained by the permittee and the EPA.

FACILITY DESCRIPTION

The (PNM) – Rio Bravo Generating Station (formerly known as the Delta-Person Station) is located at 725 Electric Ave. SE, Albuquerque, NM 87107. The facility is a simple-cycle, 138-megawatt, dual-fuel electrical power generating plant. The plant consists of one GE Frame 7FA gas turbine and can generate electrical power by the direct combustion of natural gas or diesel fuel. Power from this plant is generated on an as-needed basis and can be delivered to PNM customers utilizing PNM's bulk transmission system.

The power generation turbine is cooled during operation by use of an evaporative cooling structure. Ambient air is pulled through a filter which has been wetted with raw water, resulting in cooling of the air by evaporation. The cooler, denser air results in increased turbine output. Raw water is sourced from a groundwater well located on the south side of the property and held in an above ground storage tank prior to use. During the evaporative cooling process, water within the filter is evapo-concentrated, resulting in a steady increase of dissolved solids within the system water. The raw water at this facility is not treated with additives prior to being pumped into the filter. When dissolved solids in the water increase above the saturation point of the water, hard mineral scale will form throughout the system, so every so often the facility goes through a process where they "blowdown" or flush out a portion of this high dissolved solids water, while replacing it with fresh water. This blowdown water is flushed to an above ground surge tank, and from there is discharged out Outfall 001 and into the Albuquerque Metro Arroyo Flood Control Authority (AMAFCA) South Diversion Channel which is under the Middle Rio Grande Watershed Based Municipal Separate Storm Sewer System (MS4) Permit and then to the Rio Grande.

Section II - OBSERVATIONS

After introductions and inspection objectives were discussed at the opening meeting, I provided a list of documents to review as part of the inspection. The documents were provided via email at a later date, however previously reported DMR results were discussed. The following observations were made:

- Total Residual Chlorine (TRC) has been flagged as a violation for the months of November 2016, April 2017, May 2017, June 2017, August 2017, and October 2017. This was recorded on the facility's DMRs as NODI-8, which is a No Data Indicator with an explanation of "Other (See Comments)," and the facility wrote "No chlorine is added to the cooling water at the Rio Bravo Generating Station." Mr. Threet explained that this indicator was used because the facility's permit does not require them to sample for TRC during months when the facility has not used chlorine in their system.
 - After the inspection was over, I conferred with the EPA's New Mexico coordinator, and we determined that the NODI-8 designation will always result in a violation flag in the system, and that the facility should be using a designation of NODI-9, which is "Conditional Monitoring - Not Required This Period," and means that TRC monitoring was not required during that month. The facility has been notified that they are authorized to revise their netDMRs to say NODI-9 in the months listed above.
- The permit states that Whole Effluent Toxicity (WET) Testing samples should be collected within seven days of when the first discharge of the year occurs. The first discharge of 2017 occurred in April, but the WET Testing sample wasn't collected until July. Mr. Threet and Mr. Anderson stated that due to the intermittent nature of the blowdown flushing, it is difficult to collect a sample within the required timeline (see Section III for additional discussion of the WET testing). Due to the intermittent nature of the facility, there may also have been concern that there would not be any more discharges in 2017.
- The permittee stated that one-time monitoring was conducted in July 2016, however no one-time monitoring results have been entered into the DMRs since the beginning of this permit (June 1, 2017).

Mr. Threet noted during our conversation that PNM would like to terminate this NPDES permit and send all blowdown wastewater to the Albuquerque Wastewater Treatment Plant instead of direct discharging to the AMAFCA channel.

A tour of the facility (including the laboratory) was conducted after the documents discussion, and a closing conference was held at the conclusion of the tour to discuss concerns (listed below) and additional follow-up, to include review of the documentation to be provided via email later, and looking into the DMR violations for TRC and WET Testing.

Section III – AREAS OF CONCERN

I observed the following area of concern during the inspection of the sampling laboratory:

Requirement 1:

NPDES Permit NM0030376, Part III.C.5. *b. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instruments at intervals frequent enough to insure accuracy of measurements and shall maintain appropriate records of such activities*

Concern 1:

pH buffer solutions had been transferred from original (larger) bottles into smaller bottles for ease of use. The smaller bottles did not have the expiration date from the larger bottle or the date that the larger bottles had been open written on them. It was therefore impossible to confirm proper calibration.

I noted the following additional areas of concern subsequent to the onsite inspection:

Requirement 2:

NPDES Permit NM0030376, Part I, A.1. Limitations and Monitoring Requirements, Outfalls 001: “...the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee...”

NPDES Permit NM0030376, Part III, C.2. “Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.”

Concern 2:

Daily discharge flow measurements (see Appendix 1) were requested from the permittee for the dates 4/1/2017 to 7/31/2017 after leaving the facility. Multiple conflicts in discharge dates and monitoring results (see Appendix 2) are noted, as shown below:

Month	DMR Value	Date	Discharge (gallons)	pH measured*	Samples Collected
April 2017	DMR has values	4/11/2017	-0-	Yes	Weekly ¹
		4/12/2017	477	No	N/A
May 2017	DMR has values	5/4/2017	-0-	Yes	Weekly ¹
		5/8/2017	839	Yes	Weekly ¹
		5/9/2017	4,088	Yes	N/A
		5/31/2017	-0-	No	Yearly ²
June 2017	DMR has values	6/17/2017	778	Yes	Weekly ¹
		6/19/2017	-0-	Yes	N/A
		6/20/2017	162	No	N/A
July 2017	NODI- C (No Discharge)	7/17/2017	-0-	No	WET

* NPDES Permit NM0030376, Part I.A.1. - pH measurement frequency = 1/day

¹ Weekly monitoring includes Total Suspended Solids (TSS) and Oil & Grease

² Yearly monitoring includes Total Arsenic

WET Testing samples, and yearly monitoring results for total arsenic collected in 2017 were taken during No Discharge conditions. Facility personnel explained that samples were collected directly from the sump of the evaporative cooler, rather than from Outfall 001. Samples collected during No Discharge conditions are not representative of the monitored activity because the monitored activity is “discharge,” and water in the sump of the evaporative cooler is not discharge. Additionally, the permit ((NPDES Permit NM0030376, Part II.2.2.d) requires that the WET test samples be flow-weighted, however, weighting the composite against the flow of no discharge would yield no sample. Therefore, samples collected during No Discharge conditions are invalid and cannot be reported on the DMRs.

Concern 2A:

Because the WET sample collected on 7/17/17 is an invalid sample (as described above), the required annual frequency of biomonitoring has been missed for 2017.

Concern 2B:

Because the total arsenic sample collected on 5/31/17 is an invalid sample (as described above), the required annual frequency of biomonitoring has been missed for 6/1/2017 through 5/31/2018. The value input into the DMR for total arsenic also doesn’t match the laboratory testing result, however it turns out that this is irrelevant, given that the sample is invalid.

Concern 2C:

There are some discrepancies between the recording date of the pH monitoring and the date of discharge. It is unknown if this is a recording error, or if pH is also being collected from inside the sump of the evaporative cooler (also see Requirement 3 below)

Requirement 3:

NPDES Permit NM0030376, Part III.C.4. *Records of monitoring information shall include: a. The date, exact place, and time of sampling or measurements;*

Concern 3:

The pH bench sheet does not contain information about the specific location that the sample was collected. Due to the concerns listed above with the WET testing samples being collected directly from the evaporative sump, as well as the difficulty correlating the date of the sample to the date of the discharge, it is not clear if any or all of the pH samples were collected at the discharge location.

Requirement 4:

NPDES Permit NM0030376, Part III.C.4. *Records of monitoring information shall include: e. The analytical techniques or methods used; and*

NPDES Permit NM0030376, Part III.C.5. *b. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instruments at intervals frequent enough to insure accuracy of measurements and shall maintain appropriate records of such activities. c. An adequate analytical quality control program, including the analyses of sufficient standards, spikes, and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory.*

Concern 4:

The pH bench sheet does not list the analytical method used for the testing and does not include any indication that spikes or duplicates are a part of the facility’s QC program.

Section IV – FOLLOW UP

Documents requested at the time of inspection were received via email on 1/19/2018, after exiting the Facility on 1/9/2018. Additional email correspondence with the facility took place on 4/17/2018 and 5/15/2018 through 5/17/2018.

Section V – LIST OF APPENDICES

Appendix 1 – Daily Discharge Flow Measurements for dates 4/1/2017 through 7/31/2017

Appendix 2 – pH Bench Sheet for dates 11/14/2016 through 10/26/2017

Appendix 1
Daily Discharge Flow Measurements
for dates 4/1/2017 through 7/31/2017

Daily Discharge Flow Measurements

April 2017		May 2017		June 2017		July 2017	
Day	Discharge (gallons)	Day	Discharge (gallons)	Day	Discharge (gallons)	Day	Discharge (gallons)
1	0	1	0	1	0	1	0
2	0	2	0	2	0	2	0
3	0	3	0	3	0	3	0
4	0	4	0	4	0	4	0
5	0	5	0	5	0	5	0
6	0	6	0	6	0	6	0
7	0	7	0	7	0	7	0
8	0	8	839	8	0	8	0
9	0	9	4,088	9	0	9	0
10	0	10	0	10	0	10	0
11	0	11	0	11	0	11	0
12	477	12	0	12	0	12	0
13	0	13	0	13	0	13	0
14	0	14	0	14	0	14	0
15	0	15	0	15	0	15	0
16	0	16	0	16	0	16	0
17	0	17	0	17	778	17	0
18	0	18	0	18	0	18	0
19	0	19	0	19	0	19	0
20	0	20	0	20	162	20	0
21	0	21	0	21	0	21	0
22	0	22	0	22	0	22	0
23	0	23	0	23	0	23	0
24	0	24	0	24	0	24	0
25	0	25	0	25	0	25	0
26	0	26	0	26	0	26	0
27	0	27	0	27	0	27	0
28	0	28	0	28	0	28	0
29	0	29	0	29	0	29	0
30	0	30	0	30	0	30	0
		31	0			31	0
Total Discharge:	477	Total Discharge:	4,927	Total Discharge:	940	Total Discharge:	0

Appendix 2
pH Bench Sheet
for dates 11/14/2016 through 10/26/2017

PNM Rio Bravo NPDES

Name	DATE	pH Meter Cal	Time Sample Taken	Time Tested	Weekly Chlorine	Daily pH	Weekly Grab Sample for Lab
G. Lencamp	11-14-16	4-7-10	1130	1130	—	8.37	yes
B. Gallegos	1-27-17	4-7-10	—	1300	—	—	effluent of old SGR
B. Gallegos	2-28-17	4-7-10	0900	—	—	—	" " "
G. Lencamp	4-11-17	4-7-10	1921	1921	—	8.41	yes
G. Lencamp	8-4-17	4-7-10	1300	1300	—	8.51	yes
AG/RH	5-8-17	4-7-10	1425	1425	—	7.78	yes 5-8-17
B. Gallegos	5-9-17	4-7-10	1500	1500	—	8.41	No
A. Goodman	6-17-17	4-7-10	12:37	12:37	—	8.23	yes 6-17-17
R. Palden	6-19-17	4-7-10	1630	1655	—	8.02	No
A. Goodman	7-24-17	4-7-10	(monthly pH meter cal)				
G. Lencamp	8-3-17	4-7-10	1200	1200	—	8.41	yes 8-3-17
J. GARCIA	9-28-17	4-7-10	1300	1305	—	8.55	No
J. GARCIA	10-26-17	4-7-10	0800	0805	—	8.40	No YES

Note: Photo provided by permittee via email on 1/19/2018