Bureau of Mining Regulation and Reclamation

GUIDANCE DOCUMENT

ELECTRONIC DATA SUBMISSION

I. Introduction

As of 28 July 2021, the Nevada Division of Environmental Protection, Bureau of Mining Regulation and Reclamation (Division) has implemented a new system for tracking facility monitoring data.

The Division has developed a reporting database for the transmission and storage of electronic data related to the Water Pollution Control Permit (WPCP) monitoring program. This new system will optimize the reporting, review, and storage of information submitted to the Division for compliance monitoring. This guidance document outlines the data upload format requirements for WPCP monitoring types including monitoring wells, piezometers, pit lakes, mined material characterization, sumps and leak detections, climate data, and more. These data will be submitted to the Division in the companion "***BMRR_database_upload_sheet.xlsx"*** Excel file.

II. General Requirements

The BMRR database is designed to upload electronic monitoring data from the first tab of the "***BMRR_database_upload_sheet.xlsx"*** Excel file. If data are provided in multiple tabs, the user must consolidate them into one tab prior to uploading the information. The BMRR database will provide a list of error codes for lines that are not complete or are not in an acceptable format for import. These error codes will be provided to the Permittee when encountered during the upload process. In the future, the Division hopes to further improve the BMRR database to allow direct upload of the electronic data by the Permittee to the database for their mine project(s).

When submitting the completed "***BMRR_database_upload_sheet.xlsx"*** Excel file, please revise the file name to include the permit number and applicable quarter for the dataset, (e.g., ***"NEV2000100_Q2_2021.xlsx"***). In the following sections, further detail is provided on the proper formatting of the two main required types of data: compliance monitoring and monitoring location data.

III. Compliance Monitoring Data

Electronic compliance monitoring data must be submitted to the Division using the ***"BMRR_database_upload_sheet.xlsx"*** format and in the **first tab** of the Excel file. All monitoring data reported to the Division are to be included on a single spreadsheet, (e.g., water quality data, pit lake sampling, leak detection monitoring, weather data, groundwater and surface water levels, process component monitoring, etc.), with the monitoring data extending down the sheet as far as necessary to include all applicable data that are reported in Part I.D. of the WPCP. By submitting all compliance monitoring data in a single Excel file, the number of submittals to the Division is reduced. This Excel file includes the numerical data themselves (e.g., concentrations, flow rates) and metadata required to fully interpret analysis results (e.g., whether the sample was filtered or not). If there are any fields that are not applicable to a specific monitoring location, these fields are simply left blank. To facilitate upload of data into the BMRR database, the data must be submitted in the required format as outlined below,

otherwise error messages will be generated during the upload process, therefore review and approval of the submittal will be delayed.

Several fields require specific inputs that must be in the exact format described below; these instructions are in ***bolded italics***. Fields denoted with an asterisk (*) are required fields and must be populated for the database to accept and upload the electronic data. Every effort should be made to populate all other applicable fields. Missing fields may result in an incomplete submission. Additional information on each field is as follows:

A. Location ID*

Sample location identifier, unique to the location; ***This identifier is case-sensitive must match the Monitoring ID included within the Water Pollution Control Permit in Part I.D.***

B. Sample Date*

The date on which the sample was collected; format in mm/dd/year. Do not include the time the sample was collected. Do not include any spaces in the entry. If the entry represents a calculation, please use the last day of the quarter as a date. If the sample could not be collected, please document the date sampling was attempted.

C. Sampled By
Initials of the individual of who completed the sample collection.

D. Laboratory Sample Number

The unique identifier given to the sample by the laboratory. If the sample type is not processed in a State-certified laboratory, leave this field blank.

E. Laboratory Certification Number

The unique reference or EPA certification number assigned to the laboratory, which is used to track chain-of custody and other analytical procedures. If the sample type is not processed in a State-certified laboratory, leave this field blank.

F. Lab Test Date

The date on which the sample was analyzed; format in mm/dd/year, if applicable. Do not include the time the sample was collected; remove any spaces in the entry.

G. Filtration

The status of sample filtration for the water-quality sample; If the sample was filtered, this should be denoted as “Filtered”, no spaces. If the sample was unfiltered, this should be denoted as “Unfiltered”, no spaces. If the sample type does not require filtration, leave this field blank.

H. Filter Size

If the sample was filtered, report the size of the filter used in micrometers. If this information is not currently collected, please institute data collection moving forward.

I. Parameter*

The name of the parameter type that is being reported (e.g., water quantity, mined material characterization, climate attribute, Profile I constituent, etc.); ***Parameters should correspond with the exact syntax included in Appendix A.*** If a parameter is not included in the current list, the parameter and corresponding unit of measurement may be added to the database. Please submit such requests to the Division.

J. Value*

Numerical value for the appropriate sample, parameter, and sample location/date; Values less than the practical quantitation limit (PQL) shall be reported using the less than "<" sign, followed by the PQL. Values must be formatted without a thousand separator.

If a sample was missed or not collected for a reporting period, please insert an acceptable code that best defines the reason for the missed sample (**Table 1**) in the "Value" column of the data upload Excel file. Additionally, the user must include any laboratory flag codes in the "Notes" column of the Excel upload file for the sample or parameter set.

Table 1. List of reason codes for missed samples. These codes may be used in the "Value" column of the data upload Excel file.

Code	Description
DRY	dry monitoring point
NETS	not enough to sample
DAM	damaged monitoring point
INA	inaccessible monitoring point
NM	not mined
WNP	Well not pumped
BNU	Basin not used
NCO	Not constructed/commissioned
OTHER	Other reason

K. Units*

Please include the unit of measurement for the parameter of interest; ***Units should correspond with the exact syntax and format included in Appendix A*** and must not include additional spaces.

L. Reporting Limit

Provide the laboratory reporting limit for the analytical method completed, if applicable. If this information is not currently collected, please institute data collection moving forward.

M. Notes

Any additional information on the sample or a text description of the sampling event, e.g. Laboratory flags during analysis. The Notes field may not be left blank when any of the following reason codes are used: "NETS", "DAM", "INA" or "OTHER".

IV. Monitoring Location Data

Please Note: If Monitoring Location Data have already been submitted to the Division, this section only needs to be referred to for submittal of new monitoring locations. If monitoring locations were not submitted to the Division during the development of the BMRR database in 2020 or new locations have been added recently to the WPCP, please include this information in the **second tab** of the ***"BMRR_database_upload_sheet.xlsx"*** Excel file and notify the inspector or permit writer for the respective project of the newly included monitoring location data.

Each distinct monitoring location outlined in Part I.D. of the WPCP including active, inactive, proposed, or closed locations must be entered into the BMRR database using the submission requirements outlined in the ***"BMRR_database_upload_sheet.xlsx"*** template and below. All fields below are required for

submission of Monitoring Location Data. Fields that require an exact syntax format are outlined in ***bolded italics***. Additional information on each field is as follows:

A. Permit No

Water Pollution Control Number

B. Location ID

Sample location identifier, unique to the location; required field; ***This identifier is case sensitive and must match the Monitoring ID included within the Water Pollution Control Permit in Part I.D.*** The Location ID cannot match a previously submitted Location ID for the same WPCP Number.

C. Easting

Spatial location of sampling point (Universal Transverse Mercator [UTM], North American Datum [NAD] 1983, Zone 11N, in meters). Easting must be a numeric value between 239650 and 756640 and accurate to two decimal points (ref. NRS 327.030.b).

D. Northing

Spatial location of sampling point (UTM NAD 1983, Zone 11N, in meters); Northing must be a numeric value between 3875990 and 4653330 and accurate to two decimal points (ref. NRS 327.030.b).

E. Notes

Text field to describe the monitoring point location (e.g., "Upgradient well for HLP", "Ore stockpiled on site"). ***This field should match the Identification field in Part I.D of the WPCP***.

F. TypeID

Type of monitoring location (e.g., monitoring well, surface water, etc.). This identifier will be filled out by the BMRR.

G. Status

Identify if the monitoring point is "Active", "Proposed", "Closed", or "Inactive".

V. Common Formatting Errors

Below is a list of common formatting errors that are often confronted during upload of electronic data to the database. The list errors below is not all-inclusive but meant to help the Permittee further become aware of the upload requirements for the BMRR database.

- The data are not on the first tab of the Excel upload file or separated into multiple tabs.
- The Location ID syntax does not match the unique location code as outlined in Part I.D. of the WPCP,(e.g., MW-1 was mislabeled as MW-01 as depicted in the permit).
- The reported Location ID, Parameter, or Unit values do not match the exact syntax provided in Appendix A.
- Additional spaces were added around any of the entered values or dates.
- Additional data were included in the upload sheet that is not required in Part I.D of the WPCP.
- Blank rows or columns are added to the data upload sheet.
- Values are left blank and no reason code is given for the missing sample See **Table 1**.

- Column headers do not match the names listed in Section III of this document example: a column name of "Result" instead of "Value".
- Times included with dates.
- Data formatted to include a thousand separator.

Appendix A: Acceptable Parameters and Units

The table below provides a list of parameters and units that are accepted by the BMRR database. The parameters and units reported to the Division are to be included in Column I and K, respectively, in the ***"BMRR_database_upload_sheet.xlsx"*** Excel sheet. If your permit contains a parameter that is not listed in the table below, please contact the assigned inspector or permit writer for your project to notify them so that it may be added to the database, if appropriate. **An important note –** the parameters and units are case-sensitive, so please exactly follow the syntax listed for the parameter and/or unit of interest. Additional spaces before or after text or symbols will also incur an error code in the database during upload.

Parameter	Units	Units	Units	Units	Notes
(Weight of) Dry test sample	g				
(Weight of) Extract	g				
(Weight of) Final effluent	g				
(Weight of) Residue sample after drying	g				
(Weight of) Residue sample before drying	g				
(Weight of) Wet test sample	g				
226Radium	pCi/L				
226Radium + 228Radium	pCi/L				
226Radium + 228Radium MDC	pCi/L				
228Radium	pCi/L				
230Thorium	pCi/L				
Acid Generating Potential (AGP)	T/kT CaCO3				
Acid Neutralizing Potential (ANP)	T/kT CaCO3				
Acidity, Total	mg/L	mg/L as CaCO3			
Adjusted Gross Alpha	pCi/L				
Alkalinity Carbonate	mg/L as CaCO3	mg/L			
Alkalinity, Bicarbonate (as CaCO3)	mg/L as CaCO3	mg/L			
Alkalinity, Hydroxide (as CaCO3)	mg/L as CaCO3	mg/L			
Alkalinity, Total (as CaCO3)	mg/L as CaCO3	mg/L			
Aluminum	mg/L				
Ammonia	mg/L				
Anion concentration	mEq/L				
Annual precipitation	in	mm			
ANP/AGP	-	T/kT	no units		
Antimony	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Application rate	gpm				

Area	acres				
Arsenic	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Average accumulation	gallons				
Average air temperature	°F				
Barium	mg/L				
Beryllium	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Bismuth	mg/L				
Boron	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Cadmium	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Calcium	mg/L				
Cation concentration	mEq/L				
Charge Balance Error	%				
Chloride	mg/L				
Chromium	mg/L	µg/L			
Chromium (III)	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Chromium (VI)	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Cobalt	mg/L				
Collar elevation	ft AMSL				
Color	PCU				Platinum-Cobalt Scale
Conductivity	S/m	µS/cm			
Continuous field temperature	°F				
Copper	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Crush Strength	psi				e.g., paste backfill
Cyanide Free	mg/L	µg/L			
Days Used	days				
Destination	mg/kg				describe location in Notes column (Column N)
Depth at Staff Gauge	ft	inches			
Depth below collar	ft	feet bgs			feet below collar elevation
Depth below surface	ft	feet bgs			feet below ground surface
Depth of sample	ft				feet below ground surface
Depth of solution	ft	inches	feet bgs		
Depth to groundwater	ft	feet bgs			feet below ground surface
Discharge distance	feet				
Duration	hours				e.g., discharge duration, evaporator active
Dissolved Oxygen	mg/L				
Distance from Embankment	ft				
Erosion	-				Use Yes/No in Value column; e.g., visual inspection
Evaporation	in	mm			
Evapotranspiration (ET)	mm/time unit				
Extraction temperature	C				
field Eh	mV	V			oxidation or reduction potential
Field ORP	mV				

field pH	SU				Standard Unit
Field Specific Conductance	µS/cm				
Field Temperature	°F	°C	F	C	
Filer type	no units				
Filter Cake WAD Cyanide	mg/kg				e.g., Paste backfill
Filter pore size	µm				
Flow Rate	gpm	gpd	cfs	MGD	
Fluoride	mg/L				
Freeboard	ft				
Gallium	mg/L				
Gallons conveyed	gal				
Gross Alpha	pCi/L				
Gross Alpha MDC	pCi/L				
Gross Beta	pCi/L				
Groundwater elevation	ft	ft AMSL			
Hardness	mg/L	mg/L as CaCO3			Depends on test
HCL Rinse Residue	%				
HNO3 Rinse Residue	%				
Hot Water Rinse Residue	%				
Hydraulic head	ft				
Hydroxide (OH)	mg/L as OH	mg/L as CaCO3			
Iron	mg/L				
Lake area	Acres				
Lake depth	ft				
Lake surface elevation	ft AMSL				
Lake volume	acre-foot				
Lead	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Lithium	mg/L				
Magnesium	mg/L				
Manganese	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Maximum air temperature	°F				
Maximum lake depth	ft				
Mercury	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Minimum air temperature	°F				
Moisture content	%				
Molybdenum	mg/L				
NAG pH-S1	SU				
Net Neutralization Potential (NNP)	T/kT CaCO3				
Nickel	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Nitrate (as N)	mg/L				
Nitrate +Nitrite (as N)	mg/L				
Nitrite (as N)	mg/L				

Nitrogen, Total (as N)	mg/L				
Nitrogen, Total Kjeldahl	mg/L				
Non-Extractable Sulfur	%				
Non-Potentially Acid Generation (PAG) material	tons				
Non-Water Soluble Sulfate	%				
Number of wells	-				e.g. injection wells in operation during a quarter
Ore Shipped	tons				
Ore Stockpiled	tons				
Oxidation Reduction Potential (ORP)	mV				
Paste pH	SU				
pH	SU				
pH of extract	SU				
pH of extraction water	SU				
pH of final effluent	SU				
Phosphorus	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Physical stability	-				Use Yes/No in Value column; e.g., visual inspection
Pit floor elevation	ft AMSL				
Potassium	mg/L				
Potential Acid Generating Sulfur	%				
Potentially Acid Generating (PAG) material	tons				
Precipitation (rain+snow)	in	mm			
Precipitation (total)	in	mm			
Presence of Evaporative Mineral Precipitates	%				EMPs
Presence of seepage	-	yes/no			
Pumping rate	gpm	gpd			
Pyritic Sulfur	%				
Rate of water addition	mL/min				
Relative humidity	%				
Residue drying temperature	C				
Residue drying time	min				
Residue moisture	%				
Retained percent (+5 cm)	%				
Rock lithotype	-				
Sample drying temperature	C				
Sample drying time	min				
Sample moisture content	%				
Scandium	mg/L				
Selenium	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Sieve passing weight (-5 cm)	g				
Sieve retained weight (+5 cm)	g				
Silver	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Slump	in				
Snow Water Equivalence SWE	in	mm			
Sodium	mg/L				
Sodium Adsorption Ratio (SAR)	mEq/L				
Specific Conductance	µS/cm				
Storm duration	hours				
Strontium	mg/L				

Sulfate	mg/L				
Sulfide	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Temperature	°F	°C	F	C	
Thallium	mg/L	µg/L			µg/L applies for Surface Water Profile reference values
Thorium	mg/L	pCi/L			PCi/L applies for Profile I-R
Tin	mg/L				
Titanium	mg/L				
Tons of material placed	tons				e.g., material placed or received
Total Dissolved Solids	mg/L				
Total NAG (CaCO3)	kg CaCo3/ton				
Total NAG (H2SO4)	kg H2SO4/ton				
Total Organic Carbon	%				
Total Sulfur	%				
Total Suspended Solids	mg/L				
Turbidity	NTU				Nephelometric Turbidity Unit
Uranium	mg/L	PCi/L			PCi/L applies for Profile I-R
Uranium + 230Thorium	pCi/L				
Uranium Total	mg/L				
Vanadium	mg/L				
Volume	gal				
Volume excavated	gal	gpd			
WAD Cyanide	mg/L				
Water elevation	ft	ft AMSL	feet bgs		
Water present	-	no units			Use Yes/No in Value column; e.g., visual inspection
Water/Extraction addition time	hours				
Water-Soluble Sulfates	%				
Weight of Moisture sample after drying	g				
Weight of Moisture sample before drying	g				
Wind Direction	azimuth degree				
Wind Speed	mph				
Zinc	mg/L	µg/L			µg/L applies for Surface Water Profile reference values