

EXHIBIT D-7

**Discharge Limitations, Monitoring Requirements, and
Alert Levels
(Revised March 19, 2021)**

Table of Contents

	Page
1.1 Introduction	2
1.2 Discharge Limitations	2
1.3 Monitoring Activities.....	2
1.3.1 Monitoring and Analytical Requirements.....	2
1.3.2 Groundwater Monitoring Sampling Protocols	3
1.3.3 Existing ALs and AQLs	4
1.3.4 New ALs and AQLs.....	4
1.3.5 Replacement Monitoring Wells	5
1.3.6 Compliance Monitoring	5
1.3.7 Facility/Operational Monitoring	5
1.4 Temporary Cessation	5

Appendix 1 – Monitoring Tables

1.1 Introduction

Florence Copper Inc. (Florence Copper) has prepared this document to provide information regarding proposed discharge limitations, monitoring requirements, alert levels (AL), compliance schedules, and temporary cessation or related plans. Accordingly, this document includes information that describes discharge limitations, monitoring requirements, ALs, compliance schedules, and temporary cessation plans proposed by Florence Copper.

1.2 Discharge Limitations

Florence Copper proposes the following discharge limitations:

1. The permittee shall operate and maintain all permitted facilities to prevent unauthorized discharges pursuant to Arizona Revised Statutes § 49-201(12) resulting from failure or bypassing of Best Available Demonstrated Control Technology pollutant control technologies including liner failure, uncontrollable leakage, berm breaches that result in an unexpected loss of fluid, accidental spills, or other unauthorized discharges. Liner failure in a single-lined impoundment is any condition that would result in leakage exceeding 550 gallons per day per acre of the impoundment.
2. Injection of lixiviant will not be conducted until all core holes and wells within 500 feet of an injection or recovery well located in the In-Situ Copper Recovery wellfield have been abandoned in accordance with the Plugging and Abandonment Plan included as Attachment E of the Underground Injection Control (UIC) Permit application.
3. Florence Copper will initiate contingency actions identified in Aquifer Protection Permit (APP) No. P-101704 if process solution sampling data show that the polynuclear aromatic hydrocarbon concentration in the lixiviant exceeds 20 milligrams per liter (mg/L) in any monthly sample, or 10 mg/L as a quarterly average.

1.3 Monitoring Activities

This section describes monitoring activities that are designed to provide an early detection and prompt response to any condition that might result in an unauthorized discharge to an aquifer or to the vadose zone, or that might cause a violation of an Aquifer Water Quality Standard (AWQS) at a Point of Compliance (POC) well, or cause concentrations of discharge constituents to increase at a POC well if the pre-operational concentrations of those constituents exceed AWQS. The activities include groundwater and facility/operational monitoring.

1.3.1 Monitoring and Analytical Requirements

All monitoring required under the APP and UIC permits will continue for the duration of the permits except as conducted in accordance with a temporary cessation plan approved by the U.S. Environmental Protection Agency (USEPA) and the Arizona Department of Environmental Quality (ADEQ). All sampling, preservation, and holding times will be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks, and duplicate samples will also be obtained and chain-of-custody procedures will be followed, in accordance with currently accepted standards of professional practice. Florence Copper will consult with the USEPA Code of Federal Regulations for guidance in this regard. Copies of laboratory analyses and chain-of-custody forms will be maintained at the permitted facility. Upon request, these documents will be made immediately available for review by the USEPA and ADEQ personnel.

All samples collected for compliance monitoring at the POC wells will be analyzed using Arizona and USEPA approved methods. Regardless of the method used, the detection limits will be sufficient to determine compliance with the regulatory limits of the parameters specified in the UIC Permit. Analyses will be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification. For results to be considered valid, all analytical work will meet quality control standards specified in the approved methods. A list of Arizona state-certified laboratories can be obtained at the address below:

Arizona Department of Health Services
Office of Laboratory Licensure and Certification
150 North 18 Avenue
Phoenix, AZ 85007
Phone: (602) 542-1025

Monitoring equipment required by the APP and UIC permits will be installed and maintained so that representative samples required by the permits can be collected. If new groundwater wells are determined to be necessary, the construction details will be submitted to the USEPA and ADEQ for approval prior to installation, and the APP and the UIC Permit shall be amended to include any new monitoring points.

1.3.2 Groundwater Monitoring Sampling Protocols

The following describes the protocols that will be used for the collection and analysis of groundwater samples collected from the designated POC wells listed in Tables 13 and 14 of APP No. P-101704, fault monitoring wells, Underground Source of Drinking Water (USDW) monitoring wells, and annular conductivity device (ACD) demonstration wells listed on Tables 13.1 and 14.1 provided with this Exhibit. Tables 13, 13.1, 14, and 14.1 are included in Appendix 1 of this Exhibit.

The protocols will be used for collecting and analyzing samples from POC wells for which ALs and Aquifer Quality Limits (AQL) have been established, and for collecting and analyzing groundwater samples for the purpose of developing groundwater quality data needed for the establishment of ALs and AQLs. ALs and/or AQLs have been previously established for all of the POC wells listed in Tables 13 and 14, except replacement wells M32-UBF and M33-UBF. ALs and AQLs have not yet been established for the fault monitoring wells, USDW monitoring wells, and ACD demonstration wells listed in Tables 13.1 and 14.1.

Static water levels will be measured and recorded prior to sampling. Wells will be purged of at least three borehole volumes (as calculated using the static water level) or until field parameters (pH, temperature, and conductivity) are stable, whichever represents the greater volume. If evacuation results in the well going dry, the well will be allowed to recover to 80 percent of the original borehole volume, or for 24 hours, whichever is shorter, prior to sampling. If after 24 hours there is not sufficient water for sampling, the well will be recorded as “dry” for the monitoring event. An explanation for reduced pumping volumes, a record of the volume pumped, and modified sampling procedures will be reported and submitted with the quarterly report.

Florence Copper may conduct the sampling using the low-flow purging method as described in the Arizona Department of Water Resources Research Center, March 1995 Field Manual for Water Quality Sampling. If the low-flow sampling method is used, the well will be purged until indicator parameters

stabilize. Indicator parameters will include dissolved oxygen, turbidity, pH, temperature, and conductivity.

1.3.3 Existing ALs and AQLs

Tables 13, 13.1, 14, and 14.1 (Appendix 1) list parameters that are to be monitored quarterly and annually at each POC well during the period of the permit. ALs and/or AQLs have been previously established for all of the POC wells listed in Tables 13 and 14, except replacement wells M32-UBF and M33-UBF. Florence Copper will use the procedure set forth in APP No. P-101704 to calculate the ALs and/or AQLs for POC wells M32-UBF, M33-UBF, fault monitoring wells, USDW monitoring wells, and ACD demonstration wells listed in Tables 13.1 and 14.1. The locations of each of the POC wells, fault monitoring wells, USDW monitoring wells, and ACD demonstration wells are provided in Table D-7.1.

1.3.4 New ALs and AQLs

New ALs and AQLs will be established and calculated using the method set forth in APP No. P-101704. The procedure is provided below.

1.3.4.1 New ALs

ALs shall be calculated for all contaminants with an established numeric AWQS for any new or replacement POC wells, fault monitoring wells, USDW monitoring wells, and ACD demonstration wells unless otherwise specified in the APP or UIC Permit.

The permittee shall submit the ambient groundwater data in tabulated form to the ADEQ and USEPA for review. Copies of all laboratory analytical reports, field notes, and the Quality Assurance/Quality Control (QA/QC) procedures used in collection and analyses of the samples for all parameters listed in Tables 13, 13.1, 14, and 14.1 to be established for each POC well, fault monitoring wells, USDW monitoring wells, and ACD demonstration wells shall be submitted to the ADEQ and USEPA. The permittee may submit a report with the calculations for each AL and AQL included in the permit for review and approval by the ADEQ and USEPA, or the permittee may defer calculation of the ALs and AQLs by the ADEQ. The ALs shall be established and calculated following acceptable statistical guidance such as the *USEPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities Unified Guidance* (EPA 530-R-09-007).

The following criteria shall be met in establishing ALs in the permit:

1. The AL shall be calculated for a parameter using the analyses from a minimum of eight sampling events.
2. Any data where the laboratory Practical Quantitation Limit (PQL) exceeds 80 percent of the AWQS shall not be included in the AL calculation.
3. If a parameter is below the detection limit, the permittee must report the value as “less than” the numeric value for the PQL or detection limit for the parameter, not just as “non-detect.” For those parameters, the permittee shall use a value of one-half the reported detection limit for the AL calculation.
4. If the analytical results from more than 50 percent of the samples for a specific parameter are non-detect, then the AL shall be set at 80 percent of the AWQS.

5. If the calculated AL for a specific constituent and well is less than 80 percent of the AWQS, the AL shall be set at 80 percent of the AWQS for that constituent in that well.

1.3.4.2 New AQLs

For each of the monitored analytes for which a numeric AWQS has been adopted, the AQL shall be established as follows:

1. If the calculated AL is less than the AWQS, then the AQL shall be set equal to the AWQS.
2. If the calculated AL is greater than the AWQS, then the AQL shall be set equal to the calculated AL value, and no AL shall be set for that constituent at that monitoring point.

1.3.5 Replacement Monitoring Wells

In the event that one or more of the designated POC wells, fault monitoring wells, USDW monitoring wells, and ACD demonstration wells should become unusable or inaccessible due to damage or any other event, a replacement well will be constructed and installed upon approval by the USEPA and ADEQ. If the replacement well is 50 feet or less from the original well, the ALs and/or AQLs calculated for the designated POC well will apply to the replacement well.

1.3.6 Compliance Monitoring

Florence Copper will begin compliance monitoring at the designated POC wells once applicable ALs and/or AQLs have been established. Florence Copper will continue to monitor each well listed in Tables 13, 13.1, 14, and 14.1 in accordance with the parameters and frequencies listed in those Tables. If monitoring indicates that an AL or AQL have been exceeded, Florence Copper will follow the requirements outlined in Section 2.6.2.5 of APP No. P-101704, and applicable sections of the UIC Permit. The results of compliance monitoring will be documented and submitted with the quarterly report to the USEPA and ADEQ.

1.3.7 Facility/Operational Monitoring

1.3.7.1 Facility Monitoring

Exhibit D-2 of Attachment D (Operations Plan) of the UIC Application lists facility components that will be monitored to maintain normal operations. Many of the components listed will be equipped with electronic monitors and automatic shutoffs. Conditions requiring initiation of the contingency plan are described in Exhibit D-2 of Attachment D of this Application.

1.4 Temporary Cessation

Florence Copper will give written notice to the USEPA and ADEQ before ceasing operation of the facility for a period of 60 days or greater. At the time of notification, Florence Copper will submit for USEPA and ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation. Immediately following USEPA and ADEQ approval, Florence Copper will implement the approved plan. If necessary, the USEPA and ADEQ will amend the APP and UIC permits conditions to incorporate conditions to address temporary cessation. During the period of temporary cessation, Florence Copper will provide written notice to the USEPA and ADEQ of the operational status of the facility every 2 years. If Florence Copper intends to permanently cease operation of any facility, Florence Copper will submit written notification of closure to the USEPA and ADEQ in accordance with permit conditions.