## NPDES Permit No NM0028762

## AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

> City of Aztec - Water Treatment Plant 201 West Chaco Aztec, New Mexico 87410

is authorized to discharge to receiving waters named Lower Animas Ditch, an irrigation facility with return flows at various locations, including diversions to Hampton Arroyo and Williams Arroyo, subject to Section 20.6.4.98 New Mexico Administrative Code (NMAC) (if non-perennial) and Section 20.6.4.99 NMAC (if perennial); then Animas River, from Estes Arroyo upstream to the Southern Ute Indian Tribal boundary, a classified segment described in Section 20.6.4.404 NMAC and from the confluence with the San Juan River upstream to Estes Arroyo, a classified segment described in Section 20.6.4.403 NMAC; then San Juan River, a classified segment described from the Navajo Nation Boundary at Hogback to Animas River in Section 20.6.4.401 NMAC in the San Juan River Basin,

from a facility located at New Mexico Highway 173 in the City of Aztec in San Juan County, New Mexico, the discharges are located on that water at the following coordinates:

Outfall 001: Latitude 36° 50′ 00" North and Longitude -107° 58′ 45" West

in accordance with this cover page and the effluent limitations, monitoring requirements, and other conditions set forth in Part I, Part II, and Part III hereof.

This is a reissue, prepared by Maria Okpala, Environmental Engineer, Permitting Section (6WD-PE), and shall become effective on January 1, 2022

This permit and the authorization to discharge shall expire at midnight, December 31, 2026

Issued on December 2, 2021

Charles W. Maguire

Director

Water Division (WD)

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## PART I – REQUIREMENTS FOR NPDES PERMITS

## SECTION A. LIMITATIONS AND MONITORING REQUIREMENTS

## 1. FINAL Effluent Limits – Outfall 001 – Intermittent Flow

During the period beginning the effective date of the permit and lasting to the permit expiration date (<u>unless otherwise noted</u>), the permittee is authorized to discharge backwash water to the lower Animas Ditch, thence to various locations, including diversions to Hampton Arroyo and Williams Arroyo, subject to Section 20.6.4.98 New Mexico Administrative Code (NMAC) (if non-perennial) and Section 20.6.4.99 NMAC (if perennial); then Animas River, from Estes Arroyo upstream to the Southern Ute Indian Tribal boundary, a classified segment described in Section 20.6.4.404 NMAC and from the confluence with the San Juan River upstream to Estes Arroyo, a classified segment described in Section 20.6.4.403 NMAC; then San Juan River, a classified segment described from the Navajo Nation Boundary at Hogback to Animas River in Section 20.6.4.401 NMAC in the San Juan River Basin, various locations via the Animas River, thence to the San Juan River, Waterbody Segment No. 20.6.4.403 NMAC of the San Juan River Basin from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below.

		DISCHARGE	ELIMITATIONS		
EFFLUENT CHARACTERISTICS		Standard Units		MONITORING REQUIREMENTS	
	STORET			MEASUREMENT	
POLLUTANT	CODE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
pН	00400	6.6	9.0	1/Week (*1)	Grab

		DISCHARGE	LIMITATIONS				
EFFLUENT CHARACTERISTICS	lbs/day, i	lbs/day, unless noted		mg/l, unless noted		MONITORING REQUIREMENTS	
POLLUTANT	MONTHLY	DAILY	MONTHLY	DAILY	MEASUREMENT	SAMPLE TYPE	
	AVG	MAX	AVG	MAX	FREQUENCY		
Flow	Report MGD	Report MGD	***	***	2/Week (*1)	Estimate (*2)	
Total Suspended Solids	N/A	N/A	20	30	1/Week (*1)	Grab	
Total Residual Chlorine	N/A	N/A	N/A	11 μg/L	1/Day (*1)	Grab	
Cyanide, Total Recoverable	Report	Report	Report	Report	1/Quarter (*1)	Grab	
Total Dissolved Solids	Report	Report	Report	Report	1/Quarter (*1)	Grab	

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING	MONITORING REQUIREMENTS	
WHOLE EFFLUENT TOXICITY		MEASUREMENT	
(7day Chronic Static Renewal) (*3, *4)	Value	FREQUENCY	SAMPLE TYPE
Ceriodaphnia dubia	Report	Once/Term	24-Hr Composite
Pimephales promelas	Report	Once/Term	24-Hr Composite

#### Footnotes:

- \*1 When discharging.
- \*2 "Estimate" flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. Flow may be estimated using sound analytical techniques.
- \*3 Monitoring and reporting requirements begin on the effective date of this permit. Compliance with the Whole Effluent Toxicity limitations is required on Permit Effective Date. See PART II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.
- \*4 Once per permit term. The test is to be performed during the first springtime after the permit effective date, during the irrigation season when irrigation return flows in the lower Animas Ditch likely discharge back to the Animas River when most sensitive juvenile life forms are likely to be present in the receiving water and colder ambient temperatures might adversely affect treatment processes. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any.

#### FLOATING SOLIDS, VISIBLE FOAM AND/OR OILS

There shall be no discharge of floating solids or visible foam in other than trace amounts. There shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water, or coatings on stream banks.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge after the treatment system and prior to the receiving stream.

## B. SCHEDULE OF COMPLIANCE

#### Delta-BHC Study

The permittee is required to submit a detailed plan to test for Delta-BHC at the source water intake within six months after the effective date of the permit to both EPA and NMED for approval. The plan must also include any use of delta-BHC at the facility, if any. Once approved, the permittee must collect and analyze samples for delta-BHC at least once a quarter or more frequent during the 2nd, 3rd, 4th and 5th year of the permit. The results of this study shall be attached to the DMR reports to EPA.

#### C. MONITORING AND REPORTING (MINOR DISCHARGERS)

1. Discharge Monitoring Report (DMR) results shall be electronically reported to EPA per 40 CFR 127.16. To submit electronically, access the NetDMR website at https://netdmr.epa.gov. Until approved for Net DMR, the permittee shall request temporary or emergency waivers from electronic reporting. To obtain the waiver, please contact: U.S. EPA - Region 6, Water Enforcement Branch, New Mexico State Coordinator (6EN-WC), (214) 665-7179. If paper reporting is granted temporarily, the permittee shall submit the original DMR signed and certified as required by Part III.D.11 and all other reports required by Part III.D. to the EPA and copies to NMED (under Part III.D.4 of the permit).

Discharge Monitoring Report Form(s) shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period.

- 2. Reporting periods shall end on the last day of the months March, June, September, and December.
- 3. The first Discharge Monitoring Report(s) shall represent facility operations from the effective date of the permit through the last day of the current reporting period.
- 4. Thereafter, the permittee is required to submit regular quarterly reports as described above and shall submit those reports postmarked no later than the  $\underline{28^{th}}$  day of the month following each reporting period.

#### 5. NO DISCHARGE REPORTING

If there is no discharge from <u>any</u> outfall during the sampling month, place an "X" in the NO DISCHARGE box located in the upper right corner of the Discharge Monitoring Report.

6. If any daily maximum or monthly average value exceeds the effluent limitations specified in Part I. A, the permittee shall report the excursion in accordance with the requirements of

## Part III. D.

- 7. Any daily maximum or monthly average value reported in the required Discharge Monitoring Report which is in excess of the effluent limitation specified in Part I. A shall constitute evidence of violation of such effluent limitation and of this permit.
- 8. All reports shall be sent both to EPA and the New Mexico Environment Department at the addresses shown in Part III of the permit.
- 9. The permittee shall send a copy of application for permit renewal to New Mexico Environment Department at the mailing address listed in Part III of the permit.

## **PART II - OTHER CONDITIONS**

## A. MINIMUM QUANTIFICATION LEVEL (MQL)

EPA-approved test procedures (methods) for the analysis and quantification of pollutants or pollutant parameters, including for the purposes of compliance monitoring/DMR reporting, permit renewal applications, or any other reporting that may be required as a condition of this permit, shall be sufficiently sensitive. A method is "sufficiently sensitive" when (1) the method minimum level (ML) of quantification is at or below the level of the applicable effluent limit for the measured pollutant or pollutant parameter; or (2) if there is no EPA-approved analytical method with a published ML at or below the effluent limit (see table below), then the method has the lowest published ML (is the most sensitive) of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR Chapter I, Subchapters N or 0, for the measured pollutant or pollutant parameter; or (3) the method is specified in this permit or has been otherwise approved in writing by the permitting authority (EPA Region 6) for the measured pollutant or pollutant parameter. The Permittee has the option of developing and submitting a report to justify the use of matrix or sample-specific MLs rather than the published levels. Upon written approval by EPA Region 6 the matrix or sample-specific MLs may be utilized by the Permittee for all future Discharge Monitoring Report (DMR) reporting requirements.

Current EPA Region 6 minimum quantification levels (MQLs) for reporting and compliance are provided in Appendix A of Part II of this permit. The following pollutants may not have EPA approved methods with a published ML at or below the effluent limit, if specified:

POLLUTANT	CAS Number	POLLUTANT	CAS Number
Total Residual Chlorine	782-50-5	Benzo(a)pyrene	50-32-8
Cadmium	7440-43-9	3,4-Benzofluoranthene	205-99-2
Silver	7440-22-4	Benzo(k)fluoranthene (207-08-9)	207-08-9
Thallium	7440-28-0	Indeno(1,2,3-cd) pyrene (193-39-5)	193-39-5
Cyanide	57-12-5	Dibenzo(a, h)anthracene (53-70-3)	53-70-3
Acrolein	107-02-8	Aldrin	309-00-2
Acrylonitrile	107-13-0	Chlordane	57-74-9
4, 6-Dinitro-0-Cresol	534-52-1	Dieldrin	60-57-1
Pentachlorophenol	87-86-5	Heptachlor	76-44-8
Benzidine	92-87-5	Heptachlor epoxide	1024-57-3
Chrysene	218-01-9	Toxaphene	8001-35-2
Hexachlorobenzene	118-74-1	Toxaphene (8001-35-2)	8001-35-2
N-Nitrosodimethylamine	62-75-9	Dioxin (2,3,7,8-TCDD)	1764-01-6
Benzo(a)anthracene	56-55-3		

Unless otherwise indicated in this permit, if the EPA Region 6 MQL for a pollutant or pollutant parameter is sufficiently sensitive (as defined above) and the analytical test result is less than the MQL, then a value of zero (0) may be used for reporting purposes on DMRs. Furthermore, if the EPA Region 6 MQL for a pollutant or parameter is not sufficiently sensitive, but the analytical test result is less than the published ML from a sufficiently sensitive method, then a value of zero (0) may be used for reporting purposes on DMRs.

#### B. 24-HOUR ORAL REPORTING: DAILY MAXIMUM LIMITATION VIOLATIONS

Under the provisions of Part III.D.7.b.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas, and concurrently to NMED within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

None

## C. PERMIT MODIFICATION AND REOPENER

In accordance with 40 CFR Part 122.44(d), the permit may be reopened and modified during the life of the permit if relevant portions of New Mexico's Water Quality Standards for Interstate and Intrastate Streams are revised, or State of New Mexico water quality standards are established and/or remanded.

In accordance with 40 CFR Part 122.62(a)(2), the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. Permit modifications shall reflect the results of any of these actions and shall follow regulations listed at 40 CFR Part 124.5.

## D. WHOLE EFFLUENT TOXICITY TESTING (7 DAY CHRONIC NOEC)

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6 or the State NPDES permitting authority.

#### 1. SCOPE AND METHODOLOGY

a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S) 001			
CRITICAL DILUTION (%)	100%		
EFFLUENT DILTION SERIES (%)	32%, 42%, 56%, 75%, 100%		
TEST SPECIES AND METHODS	Ceriodaphnia dubia / Method 1002.0		
	(EPA-821-R-02-013 or latest version)		
	Pimephales promelas/ Method 1000.0		
	(EPA/821/R-02-013 or latest version)		
SAMPLE TYPE	Defined in PART I		

- b. The NOEC (No Observed Lethal Effect Concentration) is herein defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Chronic lethal test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution. Chronic sub-lethal test failure is defined as a demonstration of a statistically significant sub-lethal effect (i.e., growth or reproduction) at test completion to a test species at or below the critical dilution.
- c. This permit may be reopened to require WET limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

Condition/Criteria	Ceriodaphnia dubia	Pimephales promelas
Test Duration	Until 60% or more of surviving control females have 3 broods (max 8 days)	7 days
# of replicates per concentration	10	5
# of organisms per replicate	1	8
# or organisms per concentration	10	40 (minimum)
# of test concentrations per effluent	5 and a control	5 and a control
Holding time *	36 hours for first use	36 hours for first use
Sampling Requirement *	Minimum of 3 samples	Minimum of 3 samples
Test Acceptability Criteria	≥80% survival of all control organisms.	≥80% survival of all control organisms.
	Average of 15 or more neonates per surviving control female.	Average dry weight per surviving organism in control must be ≥0.25mg.
	60% of surviving control females must produce 3 broods.	
Coefficient of Variation **	40% or less, unless significant effects are exhibited.	40% or less unless significant effects are exhibited.
Percent Minimum Significant Difference (PMSD range) for Sublethal Endpoint **	13 – 47	12 - 30

<sup>\*</sup> If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples and the minimum number of effluent portions are waived during that sampling period. However, the

permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent, and must meet the holding time between collection and first use of the sample. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 3 of this section.

\*\*Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%, or a PMSD value greater than the higher value on the range provided.

#### a. Statistical Interpretation

The statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in the appropriate method manual listed in Part II or the most recent update thereof.

#### b. Dilution Water

- 1) Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;
  - i. toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and
  - ii. toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.
- 2) If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
  - i. a synthetic dilution water control which fulfills the test acceptance requirements was run concurrently with the receiving water control;
  - ii. the test indicating receiving water toxicity has been carried out to completion,
  - iii. the permittee includes all test results indicating receiving water toxicity with the full report and information required; and
  - iv. the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

#### c. Samples and Composites

- 1) The permittee shall collect a minimum of three samples (flow-weighted composite if possible) from the outfall(s).
- 2) The permittee shall collect a second and third sample (composite samples if possible) for use during the 24-hour renewal of each dilution concentration for each test. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 36 hours for first use of the sample. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage. A holding time up to 72 hrs is allowed upon notification to EPA and NMED of the need for additional holding time.
- 3) The permittee must collect the composite samples such that the effluent samples are representative of the discharge duration, and of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

## 2. REPORTING

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this part in accordance with the Report Preparation Section of the most current publication of the method manual, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report and submit them upon the specific request of the Agency. For any test which fails, is considered invalid, or which is terminated early for any reason, the full report must be submitted for agency review.
- b. A valid test for each species must be reported during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. One set of biomonitoring data for each species is to be recorded on the DMR for each reporting period. Additional results are reported under the retest codes below.
- c. The permittee shall submit the results of each valid toxicity test on the subsequent monthly DMR for that reporting period as follows below. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.

Reporting Requirement	Parameter STORET CODE		
	Ceriodaphnia dubia	Pimephales promelas	
Enter a "1" if the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, otherwise enter a "0".	TLP3B	TLP6C	
Report the NOEC value for survival	TOP3B	TOP6C	
Report the LOEC value for survival	TXP3B	TXP6C	
Enter a "1" if the NOEC for growth or reproduction is less than the critical dilution, otherwise enter a "0".	TGP3B	TGP6C	
Report the NOEC value for growth or reproduction	TPP3B	TPP6C	
Report the LOEC value for growth	TYP3B	TYP6C	
Report the highest (critical dilution or control) Coefficient of Variation	TQP3B	TQP6C	
(If required) Retest 1 – Enter a "1" if the NOEC for survival, growth or reproduction is less than the critical dilution, otherwise enter "0".	22418	22415	
(If required) Retest 2- Enter a "1" if the NOEC for survival, growth or reproduction is less than the critical dilution, otherwise enter "0".	22419	22416	
(If required) Retest 3- Enter a "1" if the NOEC for survival, growth or reproduction is less than the critical dilution, otherwise enter "0".	51444	51443	

## 3. REQUIRED TEST ACCEPTABILITY CRITERIA AND TEST CONDITIONS

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

# **APPENDIX A of PART II**

The following Minimum Quantification Levels (MQL's) are to be used for reporting pollutant data for NPDES permit applications and/or compliance reporting.

POLLUTANTS	MQL μg/l	POLLUTANTS	MQL μg/l
METALS, RA	DIOACTIVIT	Y, CYANIDE and CHLORINE	
Aluminum	2.5	Molybdenum	10
Antimony	60	Nickel	0.5
Arsenic	0.5	Selenium	5
Barium	100	Silver	0.5
Beryllium	0.5	Thalllium	0.5
Boron	100	Uranium	0.1
Cadmium	1	Vanadium	50
Chromium	10	Zinc	20
Cobalt	50	Cyanide	10
Copper	0.5	Cyanide, weak acid dissociable	10
Lead	0.5	Total Residual Chlorine	33
Mercury *1	0.0005		
•	0.005		
	DIC	XIN	
2,3,7,8-TCDD	0.00001		
	VOLATILE (	COMPOUNDS	
Acrolein	50	1,3-Dichloropropylene	10
Acrylonitrile	20	Ethylbenzene	10
Benzene	10	Methyl Bromide	50
Bromoform	10	Methylene Chloride	20
Carbon Tetrachloride	2	1,1,2,2-Tetrachloroethane	10
Chlorobenzene	10	Tetrachloroethylene	10
Clorodibromomethane	10	Toluene	10
Chloroform	50	1,2-trans-Dichloroethylene	10
Dichlorobromomethane	10	1,1,2-Trichloroethane	10
1,2-Dichloroethane	10	Trichloroethylene	10
1,1-Dichloroethylene	10	Vinyl Chloride	10
1,2-Dichloropropane	10		
	ACID CO	MPOUNDS	
2-Chlorophenol	10	2,4-Dinitrophenol	50
2,4-Dichlorophenol	10	Pentachlorophenol	5
2,4-Dimethylphenol	10	Phenol	10
4,6-Dinitro-o-Cresol	50	2,4,6-Trichlorophenol	10

POLLUTANTS	MQL μg/l	POLLUTANTS	MQL μg/l
	BASE/N	NEUTRAL	
Acenaphthene	10	Dimethyl Phthalate	10
Anthracene	10	Di-n-Butyl Phthalate	10
Benzidine	50	2,4-Dinitrotoluene	10
Benzo(a)anthracene	5	1,2-Diphenylhydrazine	20
Benzo(a)pyrene	5	Fluoranthene	10
3,4-Benzofluoranthene	10	Fluorene	10
Benzo(k)fluoranthene	5	Hexachlorobenzene	5
Bis(2-chloroethyl)Ether	10	Hexachlorobutadiene	10
Bis(2-chloroisopropyl)Ether	10	Hexachlorocyclopentadiene	10
Bis(2-ethylhexyl)Phthalate	10	Hexachloroethane	20
Butyl Benzyl Phthalate	10	Indeno(1,2,3-cd)Pyrene	5
2-Chloronapthalene	10	Isophorone	10
Chrysene	5	Nitrobenzene	10
Dibenzo(a,h)anthracene	5	n-Nitrosodimethylamine	50
1,2-Dichlorobenzene	10	n-Nitrosodi-n-Propylamine	20
1,3-Dichlorobenzene	10	n-Nitrosodiphenylamine	20
1,4-Dichlorobenzene	10	Pyrene	10
3,3'-Dichlorobenzidine	5	1,2,4-Trichlorobenzene	10
Diethyl Phthalate	10		
	PESTICIDI	ES AND PCBS	
Aldrin	0.01	Beta-Endosulfan	0.02
Alpha-BHC	0.05	Endosulfan sulfate	0.02
Beta-BHC	0.05	Endrin	0.02
Gamma-BHC	0.05	Endrin Aldehyde	0.1
Chlordane	0.2	Heptachlor	0.01
4,4'-DDT and derivatives	0.02	Heptachlor Epoxide	0.01
Dieldrin	0.02	PCBs	0.2
Alpha-Endosulfan	0.01	Toxaphene	0.3

(MQL's Revised November 1, 2007)

## Footnotes:

<sup>\*1</sup> Default MQL for Mercury is 0.005 unless Part I of your permit requires the more sensitive Method 1631 (Oxidation / Purge and Trap / Cold vapor Atomic Fluorescence Spectrometry), then the MQL shall be 0.0005