NOTICE OF SUBSTANTIVE POLICY STATEMENT
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1. Title of the Substantive Policy Statement and the substantive policy statement number by which the substantive policy statement is referenced:

New Source Analysis – Who, What, When, Where, Why and How

2. Date the substantive policy statement was issued and the effective date of the policy statement if different from the issuance date:

Issued: [DATE]
Effective: [DATE]

3. Summary of the contents of the substantive policy statement:

This substantive policy statement outlines **who** is responsible for a new source analysis, **what** analysis needs to be included, **when** it needs to be taken, **where** the sample should be pulled, **why** a new source analysis is needed, and **how** to submit the results.

4. Federal or state constitutional provision; federal or state statute, administrative rule, or regulation; or final court judgment that underlies the substantive policy statement:

This substantive policy statement is derived from
Arizona Administrative Code (AAC) R18-5-505 (B.) (1.) (d.)(i.)

B. A person shall not start to construct a new public water system, modify an existing facility, including an extension to an existing public water system, or make an alteration that will affect the treatment, capacity, water quality, flow, distribution, or operational performance of a public water system before receiving an Approval to Construct from the Department. Designing or consulting engineers may confer with the Department before proceeding with detailed designs of complex or innovative facilities. The following provisions shall apply:

d. Analyses of a proposed new source of water that include:
i. Microbiological; physical; radiochemical; inorganic, organic, and volatile organic chemicals;

5. A statement as to whether the substantive policy statement is a new statement or a revision:

Although this policy has informally been implemented in the recent past, this substantive policy statement is new.

6. The agency contact person who can answer questions about the substantive policy statement:

Name: Fahmida Maula, PE
Address: 1110 W. Washington St. Phoenix, AZ 85007
Telephone: (602) 771-4748
E-mail: maula.fahmida@azdeq.gov
Web site: www.azdeq.gov

7. Information about where a person may obtain a copy of the substantive policy statement and the costs for obtaining the policy statement:

Copies of this Application Guide are available at no cost on the Department's web site: www.azdeq.gov. Hard copies may be obtained by contacting the ADEQ Records Center, Monday through Friday, between 8:30 a.m. and 4:30 p.m., 1110 W. Washington St., Phoenix, AZ 85007, (602) 771-4712. Cost is $0.25 per page.

"This substantive policy statement is advisory only. A substantive policy statement does not include internal procedural documents that only affect the internal procedures of the agency and does not impose additional requirements or penalties on regulated parties or include confidential information or rules made in accordance with the Arizona administrative procedure act. If you believe that this substantive policy statement does impose additional requirements or penalties on regulated parties you may petition the agency under section 41-1033, Arizona Revised Statutes, for a review of the statement." A.R.S. 41-1091(B)

1.0 Purpose

The purpose of this substantive policy is to clarify the rule Arizona Administrative Code (A.A.C) R18-5-505 (B) (1) (d) (i) requirements of a new source analysis (NSA) and outlines the following:

Who is responsible for a new source analysis
What analysis needs to be included,
When it needs to be taken and when treatment needs to be installed,
Where the sample should be pulled and where it should be analyzed,
Why a new source analysis is needed, and
How to submit the results

2.0 Definitions

ADEQ – Arizona Department of Environmental Quality

AAC – Arizona Administrative Code

ATC – Approval to Construct

AOC – Approval of Construction

EPA – United States Environmental Protection Agency

New Source – Source of drinking water never been used by the public water system which can include a newly drilled drinking water well or a new surface water inlet.

NSA - New Source Analysis is defined in Arizona Administrative Code (AAC) R18-5-505 (B) (1) (d) (i). Analyses of a proposed new source of water that includes: Microbiological; physical; radiochemical; inorganic, organic, and volatile organic chemicals

MCL– Maximum Contaminant Level means the maximum permissible level of a contaminant in water, which is delivered to any user of a public water system.

PWS – Public Water System means a system for the provision to the public of water for human consumption through pipes or, after August 5, 1998, other constructed conveyances, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least 60 days out of the year.

CWS – Community Water System means a public water system, which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

TNC – Transient Non-Community System means a non-community water system that does not regularly serve at least 25 of the same persons over six months per year.

NTNC – Non Transient Non Community Water System means a public water system that is not a community water system and that regularly serves at least 25 of the same persons over 6 months per year.

Raw Water – Untreated water

SDWA - Safe Drinking Water Act is a federal law that protects public drinking water supplies throughout the nation.

3.0 Policy Statement

- New Source analytical results will comply with Safe Drinking Water Act and ensure drinking water is protecting public health and environment.

- The Public Water System shall be responsible for new source sampling and the associated costs.

- New source analysis includes microbiological; physical; radiochemical; inorganic, organic, and volatile organic chemicals; (See Appendix A for Drinking Water Source Approval Form DWAR-9)

- If the new source sampling (S) is performed within 1 year of source activation (A), no further sampling is required. (A – S ≤ 1 year/365 days)

    - If the new source sampling is performed between 1 - 3 years prior to activation, the system must re-sample and provide analytical results for acute contaminates, total coliform bacteria, nitrate and nitrite (contaminant codes 3100, 1040 and 1041, respectively) (A – S > 365 ≤ 1,095 days)

    - If the new source sampling is performed between 3-5 years prior to activation, the system must re-sample and provide analytical results for acute contaminates, total coliform bacteria, nitrate and nitrite (contaminant codes 3100, 1040 and 1041, respectively) and resample and provide results for IOCs – Arsenic, Barium, Cadmium, Chromium, Cyanide, Fluoride, Mercury, Selenium, Antimony, Beryllium and Thallium (contaminant codes 1005, 1010, 1015, 1020, 1024, 1025, 1035, 1045, 1074, 1075 and 1085, respectively) (A – S > 1,094 ≤ 1,825 days)

    - New source analysis (NSA) is required if analytical results are and provided to ADEQ after 5 years of original sampling event; (A – S > 5 years/1,825 days)

- If the new source analysis is above 80% of the Maximum Contaminant Level (MCL), ADEQ will recommend considering further monitoring for possible treatment for that contaminant in the future.

- If the new source analysis result for a particular contaminant is above the MCL, then ADEQ would require an Approval to Construct (ATC) / Approval of Construction (AOC) for the treatment and/or blending process prior to issuing the AOC for the source.

- New source samples must be collected at the raw water source;

- All water quality analysis must be conducted by an Arizona Department of Health Services (ADHS) certified laboratory;

- All new source sampling results should be submitted on an Arizona Department of Environmental Quality (ADEQ) drinking water source approval form (DWAR-9). (See Appendix A)

- The NSA shall be submitted with the ATC application to the ADEQ Engineering Review Unit to determine if treatment will be needed. If the sample is logistically unable to be taken, then the NSA should be submitted with the AOC. Please work with ADEQ if you have any questions.

4.0 Policy Owner (Person Responsible for Implementing & Maintaining the Directive – Title/Unit/Section/Division)

The owners of this policy include the following:

ADEQ Water Quality Division (WQD) Director (Trevor Baggiore)

ADEQ Water Quality Division (WQD) Deputy Director (Randall Matas)

Drinking Water Section (DWS) Value Stream Manager (Jennifer Peterson)

Drinking Water Programs and Engineering Unit (DWPEU) Manager

(Karen Shanafelt)

Engineering Review (ER) Environmental Engineers

(Fahmida Maula, Nam Ho, Karthik Kumarasamy)

5.0 Audience

The owner/operator of a regulated Public Water System (PWS) with a new or unpermitted well or surface water intake must obtain a new source analysis prior to serving the water for potable use. Each classification of PWS (CWS, NTNC, and TNC) must submit a complete NSA regardless of the contaminants they will be monitoring for in the future.

6.0 Communication & Training

This policy will be communicated to the intended audience through internal trainings within the Drinking Water Value Stream at ADEQ, as well as external outreach trainings and events hosted by ADEQ Drinking Water Value Stream. Additionally, this policy will be posted on the ADEQ website, available to the public. A link to this policy will be included in the Approval to Construct permit to inform public water systems activating new sources of water.

Internal:

- ADEQ Engineering Review Unit will be responsible for training all employees in the Drinking Water Value Stream and Delegated Authorities that review NSA on this policy.

External:

- Post a link of the new policy on the ADEQ website www.azdeq.gov
- Put the link on the ATC and AOC applications
- Train operators at Operator Certification Workshops
- Include a link to the policy on the Tip of the Month email

7.0 Review & Revision

The manager of the Drinking Water Programs and Engineering Unit, or person appointed by the manager, will review the substantive policy annually each November and following any changes to the New Source Analysis rules (AAC) R18-5-505 (B.) (1) (d) (i.) to determine if revisions are necessary. The Office of Administrative Counsel (OAC) using Tool No. 4 -- Policy Owner Review & OAC Review/Audit Checklist, per the standard work, will audit the policy at least once every three years. OAC and the Policy Owner will also evaluate ADEQ staff use of and compliance with this policy. It will be the responsibility of the Administrative Counsel to complete written Audit Recommendations and to deliver them to the Policy Owner within ten business days after performance of the audit. OAC files will include a copy of the completed Audit Recommendations and Checklist. See 6.0 Storage Policy Standard Work.

8.0 Additional Documentation

Appendix A

9.0 Approved by:

Title	Name	Signature	Date
ADEQ Director, if necessary	Misael Cabrera		
Affected Director(s) [Division, HPO, or OBFS]	Trevor Baggiore/ Randall Matas		
	Jennifer Peterson		
	Karen Shanafelt		
Administrative Counsel as to form	*Edwin Slade*		

10.0 Historical Note

Date	Change	Ref. Section
	New Substantive Policy	NA

Appendix A

Drinking Water Source Approval Form (DWAR-9)

Arizona Department Of Environmental Quality
Drinking Water Source Approval Form
Samples To Be Taken At Source Only

_____ System ID#

_____ System Name

_____ Sample Date

____:____ (24 Hr clock) Sample Time

_____ ADEQ Project Number

55-_____ Well ID Number

New System **YES** ☐ **NO** ☐

_____ Surface Water Intake ID Number

New Source **YES** ☐ **NO** ☐

_(____)_____ Owner/Contact Person Phone Number

Reactivated Source **YES** ☐ **NO** ☐

_____ Owner/Contact Person Name

This form is to be filled out completely, and all pages are to be submitted together. If more than one laboratory participated in the analyses, please attach a copy of the original laboratory report, signed by the performing laboratory, to the back of this form.

All Results Shall Be Reported In Milligrams Per Liter (mg/L) Unless Otherwise Specified.

Please Mail This Completed Form To:

Arizona Department Of Environmental Quality
Technical Review Unit
Drinking Water Section (5415B-2)
1110 W Washington St,
Phoenix, AZ 85007

Inorganic Chemical Analysis

Analysis Method	MCL	Reporting Limit	Contaminant Name	Cont. Code	Analysis Run Date	Result	Exceeds MCL	Exceeds Reporting Limit
	0.01	0.005	Arsenic	1005			☐	☐
	2	1	Barium	1010			☐	☐
	0.005	0.0025	Cadmium	1015			☐	☐
	0.1	0.05	Chromium	1020			☐	☐
	1.3*	0.050	Copper	1022			☐	☐
	4.0	0.5	Fluoride	1025			☐	☐
	0.015*	0.0025	Lead	1030			☐	☐
	0.002	0.001	Mercury	1035			☐	☐
	10	2.5	Nitrate (as N)	1040			☐	☐
	1	0.25	Nitrite	1041			☐	☐
	0.05	0.025	Selenium	1045			☐	☐
	0.006	0.003	Antimony	1074			☐	☐
	0.004	0.002	Beryllium	1075			☐	☐
	0.2	0.1	Cyanide (as free	1024			☐	☐
		0.05	Nickel	1036			☐	☐
	0.002	0.001	Thallium	1085			☐	☐

*Action Level

Laboratory Information

Specimen Number:
Lab ID Number: Name:
Comments:
Authorized Signature:

Physical Analysis

Analysis Method	Contaminant Name	Cont. Code	Analysis Run Date	Result
	Sulfate	1055		
	Sodium	1052		
	PH	1925		
	Alkalinity	1927		
	Hardness/Calcium	1918		
	Langelier Index	1997		
	Temperature (°C)	1996		
	Total Dissolved Solids-TDS	1930		

Laboratory Information

Specimen Number:
Lab ID Number: Name:
Comments:
Authorized Signature:

Synthetic Organic Chemical Analysis

Analysis Method	MCL	Reporting Limit	Contaminant Name	Cont. Code	Analysis Run Date	Result	Exceeds MCL	Exceeds Reporting Limit
	0.07	0.0001	2,4-D	2105			☐	☐
	0.05	0.0002	2,4,5-TP (Silvex)	2110			☐	☐
	0.002	0.0002	Alachlor	2051			☐	☐
	0.003	0.001	Toxaphene	2020			☐	☐
	0.003	0.0001	Atrazine	2050			☐	☐
	0.04	0.0009	Carbofuran	2046			☐	☐
	0.001	0.00004	Pentachlorophenol	2326			☐	☐
	0.002	0.0002	Chlorodane	2959			☐	☐
	0.0002	0.00002	Dibromochloropropane(DBCP)	2931			☐	☐
	0.00005	0.00001	Ethylene Dibromide (EDB)	2946			☐	☐
	0.0004	0.00004	Heptachlor	2065			☐	☐
	0.0002	0.00002	Heptachlor Epoxide	2067			☐	☐
	0.0002	0.00002	Lindane	2010			☐	☐
	0.04	0.0001	Methoxychlor	2015			☐	☐
	0.0005	0.0001	PCB (Polychlorinated Biohenyls)	2383			☐	☐
	0.0002	0.00002	Benzo(a)Pyrene	2306			☐	☐
	0.2	0.001	Dalapon	2031			☐	☐
	0.006	0.0006	Di(2-ethylhexyl)phthalate	2039			☐	☐
	0.4	0.0006	Di(2-ethylhexyl)adipate	2035			☐	☐
	0.007	0.0002	Dinoseb	2041			☐	☐
	$3x10^{-8}$	$5x10^{-9}$	2,3,7,8-TCDD (Dioxin)	2063			☐	☐
	0.02	0.0004	Diquat	2032			☐	☐
	0.1	0.009	Endothall	2033			☐	☐
	0.002	0.00001	Endrin	2005			☐	☐
	0.7	0.006	Glyphosate	2034			☐	☐
	0.001	0.0001	Hexachlorobenzene	2274			☐	☐
	0.05	0.0001	Hexachlorocyclopentadiene	2042			☐	☐
	0.2	0.002	Oxamyl	2036			☐	☐
	0.5	0.0001	Picloram	2040			☐	☐
	0.004	0.0007	Simazine	2037			☐	☐

*Aroclor results may be submitted in lieu of PCB

Laboratory Information

Specimen Number:
Lab ID Number: Name:
Comments:
Authorized Signature:

Aroclor (PCB Screening Test)

Analysis Method	Reporting Limit	Contaminant Name	Cont. Code	Analysis Run Date	Result	Exceeds Reporting Limit
	0.00008	Aroclor 1016	2388			☐
	0.02	Aroclor 1221	2390			☐
	0.0005	Aroclor 1232	2392			☐
	0.0003	Aroclor 1242	2394			☐
	0.0001	Aroclor 1248	2396			☐
	0.0001	Aroclor 1254	2398			☐
	0.0002	Aroclor 1260	2400			☐

Laboratory Information

Specimen Number:
Lab ID Number: Name:
Comments:
Authorized Signature:

Volatile Organic Chemical Analysis

Analysis Method	MCL	Reporting Limit	Contaminant Name	Cont. Code	Analysis Run Date	Result	Exceeds MCL	Exceeds Reporting Limit
	0.007	0.0005	1,1Dichloroethlene	2977			☐	☐
	0.2	0.0005	1,1,1-Trichlorethane	2981			☐	☐
	0.005	0.0005	1,1,2-Trichloroethane	2985			☐	☐
	0.005	0.0005	1,2-Dichloroethane	2980			☐	☐
	0.005	0.0005	1,2-Dichloropropane	2983			☐	☐
	0.005	0.0005	Benzene	2990			☐	☐
	0.005	0.0005	Carbon Tetrachloride	2982			☐	☐
	0.07	0.0005	cis-1,2 Dichloroethylene	2380			☐	☐
	0.7	0.0005	Ethylbenzene	2992			☐	☐
	0.1	0.0005	(mono) Chlorobenzene	2989			☐	☐
	0.6	0.0005	o-Dichlorobenzene	2968			☐	☐
	0.075	0.0005	para-Dichlorobenzene	2969			☐	☐
	0.1	0.0005	Styrene	2996			☐	☐
	0.005	0.0005	Tetrachloroethylene	2987			☐	☐
	1	0.0005	Tolune	2991			☐	☐
	0.1	0.0005	Trans-1,2-Dichloroethylene	2979			☐	☐
	0.005	0.0005	Trichloroethlene	2984			☐	☐
	0.002	0.0005	Vinyl Chloride	2976			☐	☐
	10	0.0015	Xylenes, Total	2955			☐	☐
	0.07	0.0005	1,2,4-Trichlorobenzene	2378			☐	☐
	0.005	0.0005	Dichloromethane	2964			☐	☐

Laboratory Information

Specimen Number:
Lab ID Number: Name:
Comments:
Authorized Signature:

Radiochemical Analysis

	Analysis Method	MCL	Reporting Limit	Contaminant Name	Cont. Code	Analysis Run Date	Result	Exceeds MCL	Exceeds Reporting Limit
		15 pCi.L		Adjusted Gross Alpha	4000			☐	
			3 pCi/L	Gross Alpha	4002				☐
		30ug/L	1ug/L	Combined Uranium	4006			☐	☐
				Uranium 234	4007				
				Uranium 235	4008				
				Uranium 238	4009				
		5 pCi/L	1 pCi/L	Combined Radium	4010			☐	☐
			1 pCi/L	Radium 226	4020				☐
			1 pCi/L	Radium 228	4030				
*		4 mrem	4 pCi/L	Gross Beta	4100			☐	☐
*		20,000 pCi/L	1,000 pCi/L	Tritium	4102			☐	☐
*			10 pCi/L	Strontium-89	4172				☐
*		8 pCi/L	2 pCi/L	Strontium-90	4174			☐	☐
*			1 pCi/L	Iodine-131	4264				☐
*			10 pCi/L	Cesium-134	4270				☐

*Do not analyze for this contaminant unless notified by ADEQ

Laboratory Information

Specimen Number:
Lab ID Number: Name:
Comments:
Authorized Signature:

Asbestos Analysis

Analysis Method	MCL	Reporting Limit	Contaminant Name	Cont. Code	Analysis Run Date	Result	Exceeds MCL
	7 MFL	0.01MFL	Asbestos	1094			☐

Laboratory Information

Specimen Number
Lab ID Number Name
Comments:
Authorized Signature:

MICROBIOLOGICAL ANALYSIS

Analysis Method	MCL	Contaminant Name	Cont. Code	Test Start Date/Time	Analysis Run Date/Time	Result
	Present 1 or More Coliform	Total Coliform	3100			

ONLY REPORT FECAL RESULT IF TOTAL COLIFORM RESULT IS POSITIVE

Analysis Method	MCL	Contaminant Name	Cont. Code	Test Start Date/Time	Analysis Run Date/Time	Result
	Present 1 or More Coliform	Total Coliform	3100			

LABORATORY INFORMATION
>>>To be filled out by laboratory personnel<<<

Specimen Number
Lab ID Number Name
Comments:
Authorized Signature:

DWAR 9: Revised 2017

INSTRUCTIONS FOR USING THE ARIZONA DRINKING WATER SOURCE APPROVAL REPORTING FORM

Revised 2003

SYSTEM ID: This is a unique 5 digit Public Water System Identification (PWSID) number assigned to each public water system by ADEQ.

SYSTEM NAME: Should be in the legal name which the water system will be known as when the system is built. Always notify the Department in writing of any name or ownership change.

ADEQ PROJECT NUMBER: This is the number assigned by ADEQ when the project is first submitted for an "Approval to Construct".

NEW SYSTEM: If this is a new system and a system in number has not yet been assigned by ADEQ, then mark "YES", and be sure that the project number is filled in.

NEW POE: If this source represents a new point of entry (POE) for your system, then mark "YES" on the form. This will allow ADEQ to assign a new point of entry number and the appropriate monitoring year for this point of entry.

WELL ID NUMBER: The Department of Water Resources' registration number goes here. This number always begins with a 55-. If the new source does not constitute a new point of entry, fill in the existing point of entry number that this source is joining.

SURFACE WATER INTAKE ID NUMBER: This number must be assigned by ADEQ. If the new source does not constitute a new point of entry, fill in the existing point of entry number that this source is joining.

SAMPLE DATE: The date the specimen was collected in mm/dd/yy format.

SAMPLE TIME: The time the specimen was collected in hh:mm format (24 hr clock time).

OWNER/CONTACT PERSON NAME: The first and last name of the owner or owner's representative, (contact person) who should be contacted with sample results.

OWNER/CONTACT PHONE#: The daytime phone number of the owner's representative, (contact person) who should be contacted with sample results.

SAMPLE TYPE: The compliance reason for specimen collection. Only the relevant sample types for each contaminant group are provided on the ADEQ forms.

SPECIMEN NUMBER: A unique 15 character (max) alphanumeric code that identifies a particular sample used to test one contaminant or one category of contaminants. If reporting on different reporting forms, a different (unique) number is required for each contaminant group and for each report.

NOTE: These definitions are general in nature. For specific questions regarding your laboratory submittal, please contact the Arizona Department of Environmental Quality (ADEQ) **Water Quality Compliance Section at 1-800-234-5677, ext. 4648, or 602-771-4648.**