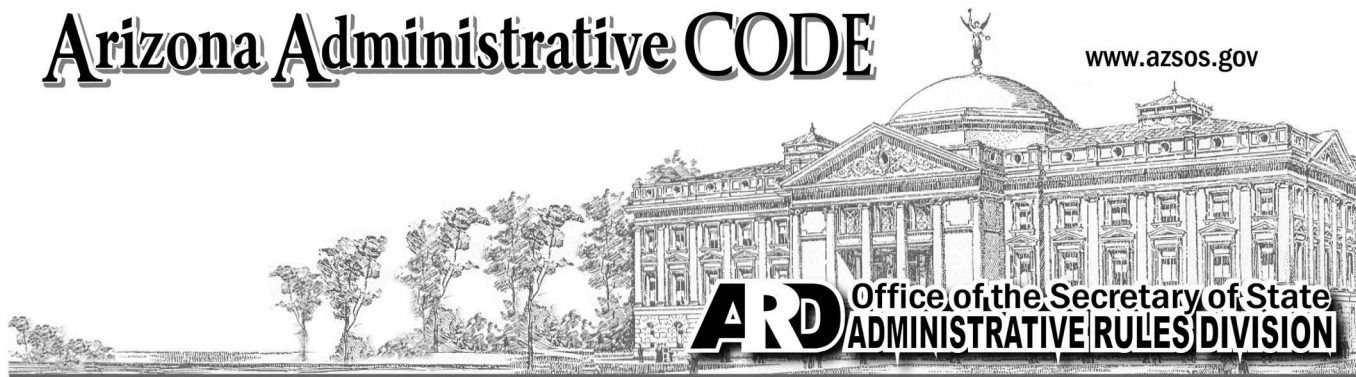




18 A.A.C. 16

Supp. 23-4

TITLE 18. ENVIRONMENTAL QUALITY

CHAPTER 16. DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER QUALITY ASSURANCE REVOLVING FUND PROGRAM

The table of contents on page one contains links to the referenced page numbers in this Chapter.
Refer to the notes at the end of a Section to learn about the history of a rule as it was published in the *Arizona Administrative Register*.

This Chapter contains rules that were filed to be codified in the *Arizona Administrative Code* between the dates of
October 1, 2023 through December 31, 2023

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The release of this Chapter in Supp. 23-4 replaces Supp. 02-1, 1-17 pages.

Please note that the Chapter you are about to replace may have rules still in effect after the publication date of this supplement. Therefore, all superseded material should be retained in a separate binder and archived for future reference.

PREFACE

Under Arizona law, the Department of State, Office of the Secretary of State (Office), Administrative Rules Division, accepts state agency rule notice and other legal filings and is the publisher of Arizona rules. The Office of the Secretary of State does not interpret or enforce rules in the *Administrative Code*. Questions about rules should be directed to the state agency responsible for the promulgation of the rule.

Scott Cancelosi, Director
ADMINISTRATIVE RULES DIVISION

RULES

The definition for a rule is provided for under A.R.S. § 41-1001. “‘Rule’ means an agency statement of general applicability that implements, interprets, or prescribes law or policy, or describes the procedures or practice requirements of an agency.”

THE ADMINISTRATIVE CODE

The *Arizona Administrative Code* is where the official rules of the state of Arizona are published. The *Code* is the official codification of rules that govern state agencies, boards, and commissions.

The *Code* is separated by subject into Titles. Titles are divided into Chapters. A Chapter includes state agency rules. Rules in Chapters are divided into Articles, then Sections. The “R” stands for “rule” with a sequential numbering and lettering outline separated into subsections.

Rules are codified quarterly in the *Code*. Supplement release dates are printed on the footers of each Chapter.

First Quarter: January 1 - March 31
Second Quarter: April 1 - June 30
Third Quarter: July 1 - September 30
Fourth Quarter: October 1 - December 31

For example, the first supplement for the first quarter of 2022 is cited as Supp. 22-1. Supplements are traditionally released three to four weeks after the end of the quarter because filings are accepted until the last day of the quarter.

Please note: The Office publishes by Chapter, not by individual rule Section. Therefore there might be only a few Sections codified in each Chapter released in a supplement. This is why the Office lists only updated codified Sections on the previous page.

RULE HISTORY

Refer to the HISTORICAL NOTE at the end of each Section for the effective date of a rule. The note also includes the *Register* volume and page number in which the notice was published (A.A.R.) and beginning in supplement 21-4, the date the notice was published in the *Register*.

AUTHENTICATION OF PDF CODE CHAPTERS

The Office began to authenticate Chapters of the *Code* in Supp. 18-1 to comply with A.R.S. §§ 41-1012(B) and A.R.S. § 41-5505.

A certification verifies the authenticity of each *Code* Chapter posted as it is released by the Office of the Secretary of State. The authenticated pdf of the *Code* includes an integrity mark with a certificate ID. Users should check the validity of the signature, especially if the pdf has been downloaded. If the digital signature is invalid it means the document’s content has been compromised.

HOW TO USE THE CODE

Rules may be in effect before a supplement is released by the Office. Therefore, the user should refer to issues of the *Arizona Administrative Register* for recent updates to rule Sections.

ARIZONA REVISED STATUTE REFERENCES

The Arizona Revised Statutes (A.R.S.) are available online at the Legislature’s website, www.azleg.gov. An agency’s authority note to make rules is often included at the beginning of a Chapter. Other Arizona statutes may be referenced in rule under the A.R.S. acronym.

SESSION LAW REFERENCES

Arizona Session Law references in a Chapter can be found at the Secretary of State’s website, www.azsos.gov under Services-> Legislative Filings.

EXEMPTIONS FROM THE APA

It is not uncommon for an agency to be exempt from the steps outlined in the rulemaking process as specified in the Arizona Administrative Procedures Act, also known as the APA (Arizona Revised Statutes, Title 41, Chapter 6, Articles 1 through 10). Other agencies may be given an exemption to certain provisions of the Act.

An agency’s exemption is written in law by the Arizona State Legislature or under a referendum or initiative passed into law by Arizona voters.

When an agency files an exempt rulemaking package with our Office it specifies the law exemption in what is called the preamble of rulemaking. The preamble is published in the *Register* online at www.azsos.gov/rules, click on the *Administrative Register* link.

Editor’s notes at the beginning of a Chapter provide information about rulemaking Sections made by exempt rulemaking. Exempt rulemaking notes are also included in the historical note at the end of a rulemaking Section.

The Office makes a distinction to certain exemptions because some rules are made without receiving input from stakeholders or the public. Other exemptions may require an agency to propose exempt rules at a public hearing.

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Rhonda Paschal, rules managing editor, assisted with the editing of this Chapter.

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Administrative Rules Division

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TITLE 18. ENVIRONMENTAL QUALITY

CHAPTER 16. DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER QUALITY ASSURANCE REVOLVING FUND PROGRAM

Authority: A.R.S. § 49-104(B)(4)

Supp. 23-4

Editor's Note: 18 A.A.C. 16 made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

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ARTICLE 1. RESERVED**ARTICLE 2. PRELIMINARY INVESTIGATIONS AND SITE SCORING****R18-16-201. Preliminary Investigations**

- A.** Based on information of a possible release or threatened release of a hazardous substance, the Department may conduct a preliminary investigation to obtain additional information necessary to determine the potential risk to public health, welfare, and the environment in order to score the site and include it on the registry established under A.R.S. § 49-287.01(D).
- B.** Before conducting a preliminary investigation, the Department shall consider whether the possible release or threatened release of a hazardous substance:
 1. Is being addressed by or should be referred to another applicable program administered by the Department or another federal, state or local governmental agency with jurisdiction over the matter; or
 2. Is being adequately addressed through voluntary action.
- C.** At any time before or during a preliminary investigation, if the Department determines that a possible release or threatened release of a hazardous substance is being adequately addressed by another program or agency or voluntarily, the Department may suspend or terminate a preliminary investigation under this Section.
- D.** A preliminary investigation is a screening level investigation based primarily upon existing information. The Department may collect existing information regarding a release or threatened release of a hazardous substance from any appropriate source, including Department programs, governmental agencies, water providers, complainants, and owners and operators of facilities where the release may have occurred. When existing information, such as soil or water sampling data, cannot be validated, or when sufficient data does not exist, additional data may be collected as necessary.
- E.** The Department shall terminate the preliminary investigation prior to completion if:
 1. The Department determines that the release of a hazardous substance has not occurred and is not likely to occur; or
 2. The Department determines:
 - a. Based on valid sampling data, that soil contaminated by a release of a hazardous substance meets the requirements of A.R.S. § 49-152 and 18 A.A.C. 7, Article 2; and
 - b. Based on valid sampling data, that the release or a threatened release of a hazardous substance does not and will not result in an exceedance of water quality standards, or if there is no water quality standard, a risk level approved by the Department to protect public health, welfare, and the environment.
- F.** The Department shall notify affected water providers of the termination of a preliminary investigation under R18-16-201(E).
- G.** If the Department does not terminate or suspend a preliminary investigation under subsections (C) or (E), the Department shall proceed with the preliminary investigation by collecting any additional information necessary to score a potential site using the eligibility and evaluation site scoring model under R18-16-202. The Department shall notify affected water providers and affected local governments of the initiation of the preliminary investigation. A work plan shall be developed and implemented to collect additional information and shall include the following information:
 1. The location and description of the potential site, including a map.
 2. A list of hazardous substances known or suspected to have been released.
 3. A proposal to search available records to determine:
 - a. The historic and current uses of facilities within the potential site.
 - b. The physical and environmental conditions within the potential site.
 - c. Any previous environmental investigations or regulatory involvement by federal, state, or local authorities.
 4. A proposal to obtain information from any affected water providers.
- H.** If the Department determines that additional information is necessary to score a potential site using the eligibility and evaluation site scoring model under R18-16-202, the work plan shall be supplemented with the following information:
 1. A conceptual site model to determine:
 - a. Potential sources of contamination.
 - b. Potential exposure pathways.
 - c. Potential human, aquatic, and terrestrial receptors.
 2. If sampling is necessary, the work plan shall contain the following information:
 - a. The objectives of the sampling.
 - b. A quality assurance project plan.
 - c. A sampling and analysis plan to verify whether a suspected release has occurred, and if the release has occurred, to adequately characterize the release to score the site using the eligibility and evaluation site scoring model.
 - d. A health and safety plan consistent with 29 CFR. 1910.120.
- I.** Following completion of the preliminary investigation, the Department or any person identified under subsection (L) shall prepare a preliminary investigation report. The report shall contain the following information:
 1. Information gathered and reviewed under subsection (G), including a summary of the information with references to relevant reports.
 2. If applicable, the conceptual site model developed under subsection (H).
 3. If sampling was conducted under subsection (H):
 - a. A description of the sampling activities.
 - b. Analytical results including a summary of the results with references to relevant reports.
 - c. A map of sample locations.
 - d. Data quality information including a summary with references to relevant reports.
- J.** The Department shall approve the preliminary investigation report prepared under subsection (I) if it contains sufficient valid information to score the site using the eligibility and evaluation site scoring model under R18-16-202 or to make a determination that no further investigation or action is needed under subsection (K).
- K.** Based on a review of the preliminary investigation report prepared under subsection (I), the Department shall:
 1. Determine that no further investigation or action is needed using the criteria in subsection (E); or
 2. Prepare a draft site registry report under A.R.S. § 49-287.01(B).
- L.** The Department may allow any person to conduct any part of the preliminary investigation by written agreement. A person requesting to conduct all or any part of a preliminary investi-

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gation shall submit a written request to the Department that includes the following information:

1. The name and address of the person making the request and the nature of the relationship of the person to the site.
2. The portion of the preliminary investigation the person wants to conduct.
3. A work plan to conduct the preliminary investigation in accordance with subsection (G).
4. A schedule for completion of the activities specified in the work plan.
5. If requested by the Department, information regarding the financial capability of the person to conduct the work plan.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1). Amended by final expedited rulemaking at 29 A.A.R. 3516 (November 10, 2023), with an immediate effective date of October 17, 2023 (Supp. 23-4).

R18-16-202. Site Scoring

In order to score a site or portion of a site, the Department shall use the eligibility and evaluation site scoring model established by the Department on October 3, 1996, which is incorporated by reference. This incorporation by reference does not include any later amendments or editions. A copy of the incorporated material is available for inspection and reproduction at the Arizona Department of Environmental Quality, 1110 W. Washington St, Phoenix, AZ 85007.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1). Amended by final expedited rulemaking at 29 A.A.R. 3516 (November 10, 2023), with an immediate effective date of October 17, 2023 (Supp. 23-4).

ARTICLE 3. PUBLIC INFORMATION**R18-16-301. Public Notification and Opportunities for Public Comment**

- A. If notification by publication in a newspaper is required by A.R.S. Title 49, Chapter 2, Article 5 or by any community involvement plan created under A.R.S. § 49-287.03 and A.R.S. Title 49, Chapter 2, Article 5 does not specify the frequency of the notification, the Department or person publishing notice shall publish notice according to the following minimum requirements:
 1. One day in a daily newspaper of general circulation in the county where the site is located; or
 2. If other than a daily newspaper, two days in a newspaper of general circulation in the county where the site is located.
- B. If notification by direct mail is required by A.R.S. Title 49, Chapter 2, Article 5 or by any community involvement plan created under A.R.S. § 49-287.03 and A.R.S. Title 49, Chapter 2, Article 5 does not specify the form of the mailing, the Department or person providing the notification shall provide the notification according to the following requirements:
 1. By bulk or first-class mailing; or
 2. If the bulk or first-class mailing would cause unreasonable delay in receiving time-sensitive materials, the Department or person shall provide the notification in a manner sufficient to timely reach those who may be impacted.

- C. If an opportunity for public comment is required by A.R.S. Title 49, Chapter 2, Article 5 or by any community involvement plan under § A.R.S. 49-287.03 and A.R.S. Title 49, Chapter 2, Article 5 does not specify the duration during which the public may comment, the Department or person providing the opportunity for public comment shall provide at least 30 calendar days for public comment.
- D. The requirements of this Section shall not prevent or delay a timely remedial action that the Director has determined is necessary to address the release or threat of release of a hazardous substance that may present an immediate danger to public health, welfare, or the environment.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

R18-16-302. Location of Information Repositories

Public information repositories required or authorized under A.R.S. Title 49, Chapter 2, Article 5 shall be located in at least one of the following areas:

1. An office of the Department.
2. A public or semi-public facility to which the public has reasonable access that is substantially equivalent to the access to the public information repository that is provided by the Department.
3. A private facility to which the public has reasonable access that is substantially equivalent to the access to the public information repository that is provided by the Department.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

ARTICLE 4. REMEDY SELECTION**R18-16-401. Definitions**

The following definitions shall apply in this Article, unless the context otherwise requires:

“Alternative remedy” means a combination of remedial strategies and remedial measures different from the reference remedy that is capable of achieving remedial objectives. The alternative remedies are compared with the reference remedy for purposes of selecting a proposed remedy at the conclusion of the feasibility study.

“Comparison criteria” means risk, cost, benefit, and practicality, as those terms are described in R18-16-407(H)(3).

“Community involvement area” has the same meaning as defined in A.R.S. § 49-281(3).

“Contaminant of concern” means a hazardous substance that results from a release and that has been identified by the Department as the subject of remedial action at a site.

“Hazardous substance” has the same meaning as in A.R.S. § 49-281(8).

“Nonrecoverable costs” has the same meaning as in A.R.S. § 49-281(9).

“Proposed remedy” means a combination of remedial strategies and remedial measures which, as a whole, is capable of achieving remedial objectives that is identified at the conclusion of a feasibility study and is incorporated in the proposed remedial action plan.

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“Reference remedy” means a combination of remedial strategies and remedial measures which, as a whole, is capable of achieving remedial objectives. The reference remedy is compared with the alternative remedies for purposes of selecting a proposed remedy at the conclusion of the feasibility study.

“Remedial measure” means a specific action taken in conjunction with remedial strategies as part of the remedy to achieve one or more of the remedial objectives. For example, remedial measures may include well replacement, well modification, water treatment, provision of replacement water supplies, and engineering controls.

“Remedial objective” means the goal, as established through the process in R18-16-406, to be achieved by a remedy selected under this Article. Remedial objectives include the following elements:

Protecting against the loss or impairment of identified uses of land and waters of the state;

Restoring, replacing, or otherwise providing for identified uses of land and waters of the state;

Time-frames when action is needed to protect against or provide for the impairment or loss of

the use; and

The projected duration of the action needed to protect or provide for the use.

“Remedial strategy” means one or a combination of the six general approaches described in R18-16-407(F) which may be employed in conjunction with remedial measures as part of the remedy to achieve the remedial objectives.

“Remedy” has the same meaning as in A.R.S. § 49-281(13).

“Site-specific human health risk assessment” means a scientific evaluation of the probability of an adverse effect to human health from exposure to specific types and concentrations of contaminants at or from a site. A site-specific human health risk assessment contains four components: identification of potential contaminants; an exposure assessment; a toxicity assessment; and a risk characterization.

“Site registry” or “registry” means the registry of scored sites maintained by the Department under A.R.S. § 49-287.01(D).

“Vadose zone” has the same meaning as in A.R.S. § 49-201.

“Water provider” means the owner or operator of a public water system, an agricultural improvement district, or an irrigation and water conservation district.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1). Amended by final expedited rulemaking at 29 A.A.R. 3516 (November 10, 2023), with an immediate effective date of October 17, 2023 (Supp. 23-4).

R18-16-402. Applicability

- A. This Article applies to sites on the site registry and as otherwise made applicable by law.
- B. This Article applies only to remedial actions as defined in A.R.S. § 49-281. Nothing in this Article is intended to require a remedial action, including a remedy or early response action, to provide for or cover any costs that a property owner, a well owner, or water provider would incur if the release of hazardous substances that is the subject of the remedial action had

not affected the property or water supply of the property owner, well owner or water provider. A property owner, well owner or water provider shall not be required to provide reimbursement for coincidental benefits resulting from a remedial action otherwise necessary and appropriate to address a release or threatened release of a hazardous substance. Nothing in this Article shall be interpreted to require remedial action to address a land use that is impaired by properties of materials located on or under that land other than the current or potential exposure to hazardous substances contained in that material.

- C. For purposes of this Section, “transition site” means a site that is on the site registry where some remedial action has occurred prior to the effective date of this Article.
- D. Any person who has performed any remedial action prior to the effective date of this Article at a transition site may submit a written request for the Department’s approval of the remedial action under R18-16-413 if the remedial action has not been approved by the Department prior to the effective date of this Article. The request shall include a description of the remedial action, a demonstration that the work is reasonable and necessary and meets the applicable purposes of this Article, and copies of all documentation of the remedial action for which approval is requested. The Department shall approve:
 1. Remedial investigation work performed prior to the effective date of this Article if the work meets the applicable purposes stated in R18-16-406(A),
 2. Feasibility study work performed prior to the effective date of this Article if the work meets the purposes stated in R18-16-407(A), and
 3. Early response action work performed prior to the effective date of this Article if the work meets the purposes stated in R18-16-405(A).
- E. Remedial action work approved by the Department prior to the effective date of this Article shall be deemed approved for purposes of this Article. Remedial action work conducted under a work plan approved by the Department prior to the effective date of this Article shall be evaluated for approval by the Department under the terms of the approved work plan.
- F. Notwithstanding subsections (D) and (E), neither a remedial investigation nor a feasibility study shall be considered complete under this Article until the information described in R18-16-406(D) is collected, a draft remedial investigation report is prepared and distributed under R18-16-406(F), and remedial objectives are developed under R18-16-406(I) and reported under R18-16-406(J). Thereafter, the procedures set forth in R18-16-407 through R18-16-412 shall apply to the selection of a remedy based upon the remedial investigation or feasibility study. To the extent that any of the alternative remedies discussed in a feasibility study that is substantially complete before the effective date of this Article will not achieve the remedial objectives, the feasibility study shall be modified so that the alternative remedies achieve remedial objectives. Additional evaluation of alternative remedies, if necessary, shall be conducted in accordance with R18-16-407 and reported in a supplemental report before preparation of a feasibility study report under R18-16-407(I).
- G. Notwithstanding anything to the contrary in this Article, this Article shall not apply to certain remedial action plans, written agreements, and court decrees or judgements approved, made or entered prior to the effective date of this Article as follows:
 1. If prior to the effective date of this Article, the Department has approved a remedial action plan or entered into a written agreement for work under Title 49, Chapter 2, Article 5, Arizona Revised Statutes, that includes the

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implementation of a remedy or the substantial equivalent of a remedy for a site or a portion of a site, the terms and conditions of the Department's approval or agreement, and not this Article, shall govern work within the scope of the approved remedial action plan or agreement and any modification thereto.

2. The terms and conditions of any court decree or judgement entered prior to the effective date of this Article, and not this Article, shall govern the work that is within the scope of the court decree and any modification thereto. If the work required by the court decree or judgement does not include the implementation of a remedy or the substantial equivalent of a remedy at a site or a portion of a site, then the selection of a remedy for the site or portion of the site shall be under this Article, and this Article may require additional remedial actions before a remedy can be selected, but a party to the consent decree shall not be required to conduct or pay for the additional remedial actions if the liability of the party is resolved by the court decree.
3. If an approval, agreement, court decree or judgement subject to subsection (G)(1) or (2) addresses only a portion of a site on the site registry and includes the implementation of a remedy or the substantial equivalent of a remedy for that portion of the site, then the work covered by the approval, agreement or decree shall be included as part of the remedial action plan and the record of decision selecting a remedy under this Article for the remainder of the site if agreed to by the parties to the approval, agreement, court decree or judgement.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1). Amended by final expedited rulemaking at 29 A.A.R. 3516 (November 10, 2023), with an immediate effective date of October 17, 2023 (Supp. 23-4).

R18-16-403. Scope of Work, Fact Sheet, Outline of the Community Involvement Plan, and Notification of Availability

- A. Unless the Department determines that the necessary remedy at a site can be completed within 180 calendar days, the Department shall prepare a scope of work for the remedial investigation and feasibility study, a fact sheet, and an outline of a community involvement plan for the site before the Department conducts a remedial investigation and feasibility study under A.R.S. § 49-287.03.
- B. The scope of work for a remedial investigation shall generally describe the extent of the remedial investigation based upon site-specific conditions and information obtained from the preliminary investigation. The scope of work for a remedial investigation shall provide for the preparation of the following, as applicable:
 1. Characterization of soil and vadose zone contamination, including identification of sources;
 2. Characterization of groundwater contamination, including identification of sources;
 3. Characterization of surface water contamination, including identification of sources;
 4. Identification of actual and potential human and ecological receptors;
 5. Identification of current and reasonably foreseeable uses of waters of the state that have been or are threatened to be impaired;

6. Identification of current and reasonably foreseeable land uses that have been or are threatened to be impaired;
7. Assessment of current risk to public health;
8. Assessment of ecological risk;

- C. The scope of work for a feasibility study shall generally describe the process for conducting the feasibility study as prescribed in R18-16-407, and may specify additional work to be performed taking into account the information gathered in the remedial investigation.
- D. The fact sheet shall include, at a minimum, all of the following:
 1. A brief history of the site;
 2. A general description of the results of the preliminary investigation, including the known extent of contamination;
 3. The site's score determined under R18-16-202;
 4. General information regarding the potential risk of and routes of exposure to the contaminants at the site; and
 5. The Department personnel to be contacted for further information regarding the site.
- E. The outline of a community involvement plan shall generally describe the activities which will be included in the community involvement plan as required by A.R.S. § 49-289.03 and R18-16-404(C).
- F. The Department shall provide written notice of the availability of the scope of work, the fact sheet, and the outline of the community involvement plan as required under A.R.S. § 49-287.03(C) to each person who, according to information available to the Department, may be liable for remedial actions. The notice shall state that any person, by written agreement with the Department may develop and implement a remedial investigation work plan or a feasibility study work plan for a site or a portion of a site under R18-16-406 or R18-16-407. The notice shall be provided in accordance with R18-16-301.
- G. The Department shall publish the newspaper notice required by A.R.S. § 49-287.03(C) and shall provide written notice by mail or other delivery to residents, owners or operators of facilities being investigated, commercial occupants, affected water providers and owners of known wells within the community involvement area of the availability of the scope of work, the fact sheet, and the outline of the community involvement plan. These notices shall comply with R18-16-301. These notices shall also provide an opportunity for a public meeting. If the remedial investigation is being performed within one year of the scoring of the site under A.R.S. § 49-287.01, the notices required by this Section may be combined with the notice required by A.R.S. § 49-289.02.
- H. Before implementing a work plan for a remedial investigation or feasibility study, the Department shall prepare a responsiveness summary addressing any public comments on the scope of work as required under A.R.S. § 49-287.03(D).
- I. Community involvement under this Article shall comply with Article 3 of this Chapter, except that the community involvement plan may provide for additional requirements.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

R18-16-404. Community Involvement Requirements

- A. The Department or any person who conducts remedial action work at a site on the registry shall conduct community involvement activities in accordance with the requirements of this Section.

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- B.** If the Department has prepared a community involvement plan under subsection (C) or adopted a plan under subsection (D)(1), the Department or any person conducting remedial action work at a site on the registry shall conduct community involvement activities at the site according to the community involvement plan. If the Department has issued a notice under A.R.S. § 49-287.03 for a site, a person may conduct community involvement activities only under a written agreement with the Department. However, a person who submits a notice of remediation under R18-16-415(A) may conduct community involvement activities for the soil remediation described in the notice according to the community involvement plan prepared or adopted by the Department for the site without a written agreement.
- C.** Unless the Department determines that the necessary remedy at a site can be completed within 180 calendar days, the Department shall prepare and implement a community involvement plan prior to initiating or approving a work plan to implement the remedial investigation or a feasibility study under A.R.S. § 49-287.03. The community involvement plan shall:
1. Be updated annually and shall provide information, if applicable, regarding the establishment of a selection committee and community advisory board. The plan also shall provide for the following required activities:
 - a. Notification to interested persons of the availability of the work plan developed under R18-16-406(B) to implement the remedial investigation and the solicitation of information from interested persons under R18-16-406(D) regarding the current and reasonably foreseeable uses of the land and waters of the state.
 - b. Notice to the public of the opportunity to comment on the draft remedial investigation report developed under R18-16-406(F) and public meetings to establish remedial objectives under R18-16-406(I).
 - c. Notice to the public of the opportunity to comment on remedial objectives proposed under R18-16-406(I)(5) and the availability of the final remedial investigation report prepared by the Department under R18-16-406(J).
 - d. Notification to interested persons of the availability of the work plan developed under R18-16-407(B) to implement the feasibility study.
 - e. Notice to the public and notification to interested persons of the availability of the proposed remedial action plan prepared under R18-16-408(A) and of the opportunity to comment on the proposed remedial action plan.
 - f. Notice to the public of the availability of the record of decision and responsiveness summary prepared by the Department under R18-16-410.
 - g. Notice to the public and notification to interested persons of availability of and opportunity to comment on the operation and maintenance plan prepared under R18-16-411(E).
 - h. Notice to the public and notification to interested persons of a request for approval of work under R18-16-413.
 - i. Newsletters to be distributed to residents and interested persons regarding the status of the remedial action and other pertinent information.
 - j. Notice within the community involvement area regarding public meetings to provide and discuss information regarding sites on the registry.
 - k. The location of and types of information contained in a public document repository.
 - l. Notice to the public and notification to interested persons of a request for a waiver under A.R.S. § 49-290.
 - m. Notice to the public of field work that is conducted to remove contaminants of concern or that may result in noise, light, odor, dust or other adverse impacts off of the site.
 - n. Notice to the public of a determination under R18-16-416(B).
 - o. Notice to the public of community advisory board meetings.
2. Describe the following procedures for conducting each of the required activities listed in subsection (C)(1).
- a. Methods of notice and notification.
 - b. Identification of a spokesperson to inform the public and act as a liaison.
 - c. The means to identify interested persons to receive notices.
 - d. Coordination of community involvement activities with the Department for community involvement conducted by persons other than the Department.
3. In determining how the community involvement activities are to be implemented, the Department shall consider the following:
- a. A community profile.
 - b. Assessment of community concerns and issues through community interviews, public comment, and other means.
 - c. Public health and environmental impacts.
- D.** If the Department has not provided notice under A.R.S. § 49-287.03(C) and has not prepared a community involvement plan under subsection (C) or adopted a plan under subsection (D)(1), a person who proposes to conduct remedial action work at a site on the registry shall either:
1. Prepare a community involvement plan for the site according to the requirements set forth in subsection (C) and submit a request under R18-16-413 for the Department to approve the plan and adopt it as the community involvement plan for the site. The Department may approve and adopt a community involvement plan if the plan complies with the requirements of subsection (C).
 2. Conduct community involvement activities appropriate to the scope and schedule of the work performed including, as applicable, all of the following:
 - a. For field work conducted to remove contaminants of concern or that may result in noise, light, odor, dust and other adverse impacts off of the site, provide general public notice prior to conducting the work. The general public notice may be in the form of signage, direct mailing, door hangings, news articles, or any other form of notice that is distributed in a manner sufficient to reach those who may be impacted. The general public notice shall provide a general description of the field work and anticipated adverse impacts, and the name and telephone number of a person who may be contacted for information regarding the field work.
 - b. Prior to conducting a remedial action that will take more than 180 calendar days to complete, provide general notice regarding the nature of the action and establish a document repository accessible to the public where information regarding the site and the

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remedial action is available for review. The general notice may be in the form of fact sheets, newsletters, or news articles distributed by direct mailings, door hangings or any other method of distribution sufficient to reach or be accessible to local government agencies, persons within the community involvement area for the site and other persons who have requested information regarding the site. Notice to affected water providers shall be by direct mail. The general notice shall describe the nature and progress of the remedial action, the location of the repository, and provide the name and telephone number of a person who may be contacted for information regarding the remedial action. The document repository shall be accessible during normal business hours and shall contain all documents and information required to be prepared or maintained by this Article and any other documents and information deemed appropriate by the person conducting the work. An updated general notice shall be provided at least once per year while the remedial action is being conducted.

- c. Comply with the process for establishing remedial objectives under R18-16-406(F) through R18-16-406(J).
- d. Provide notice of the availability of the proposed remedial action plan prepared under R18-16-408 and convene a public meeting prior to the close of the public comment period to provide information concerning the proposed remedial action plan.
- E. Copies of notices and notifications required under this Section shall be provided to the Department five days before publication, mailing, posting, or other distribution.
- F. Community involvement under this Article shall comply with Article 3 of this Chapter, except that the community involvement plan may provide for additional requirements.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1). Amended by final expedited rulemaking at 29 A.A.R. 3516 (November 10, 2023), with an immediate effective date of October 17, 2023 (Supp. 23-4).

R18-16-405. Early Response Actions

- A. The Department or any person may perform an early response action if the action is initiated prior to selection of a remedy at a site under R18-16-410 and is necessary to:
 - 1. Address current risk to public health, welfare, and the environment;
 - 2. Protect or provide a supply of water;
 - 3. Address sources of contamination; or
 - 4. Control or contain contamination where such actions are expected to reduce the scope or cost of the remedy needed at the site.
- B. The method or technology used to implement the early response action shall be selected based upon best engineering, geological, or hydrogeological judgment following engineering, geological, or hydrogeological standards of practice, considering the following information:
 - 1. Best available information characterizing the site;
 - 2. Best available scientific information concerning available remedial methods and technologies; and
 - 3. Best available information regarding whether the technology or method could increase the scope or costs of possible remedies for the site or result in increased risk to public health or welfare or the environment.
- C. A written rationale shall be prepared for each early response action explaining how the early response action will achieve the applicable goals in subsection (A) and how the early response action is consistent with A.R.S. § 49-282.06(A). The written rationale shall identify the information used to select the early response action as provided in subsection (B), how that information was considered, and how the selected method or technology was selected. Performance of a remedial investigation or feasibility study shall not be required to select or conduct an early response action.
- D. A work plan shall be prepared for each early response action. Each work plan shall include:
 - 1. A description of work to be done, a description of known site conditions, and a plan for conducting the work;
 - 2. A description of community involvement activities for the early response action under R18-16-404; and
 - 3. A schedule.
- E. If immediate action is necessary to address a current risk to public health or the environment, to protect a source of water, or to provide a supply of water, the work plan and written rationale may be prepared and the community involvement activities may be conducted after commencement of the early response action.
- F. Approval of an early response action under this Section does not constitute approval of the remedy for the site. The remedy for a site where an early response action is conducted shall be selected in accordance with R18-16-406 through R18-16-410. An early response action may be addressed, incorporated and modified as needed in the remedy selected under R18-16-410.
- G. After the Department has issued notice under A.R.S. § 49-287.03 for a site or a portion of a site, a person conducting an early response action at a site or portion of a site shall notify the Department, in writing, of the early response action. The notice shall contain a brief description of the early response action and shall be given at least 15 calendar days before the early response action is commenced, or as soon thereafter as practicable depending upon the exigencies of the circumstances. If the early response action has commenced before the Department issues notice under A.R.S. § 49-287.03, written notice of the early response action shall be given within 15 calendar days after the Department's notice is given. After notice of a proposed remedial action plan has been given under R18-16-408(C), an early response action may be initiated only after the Department has approved the early response action.
- H. Any person may submit a request to the Department under R18-16-413 to approve an early response action or a work plan for an early response action. The request shall include the work plan and the written rationale for the early response action. The Department shall approve the work plan or early response action if it complies with the following:
 - 1. The requirements of this Section and A.R.S. § 49-282.06(A);
 - 2. Community involvement activities under R18-16-404;
 - 3. The work plan provides for modifications to address unknown or changed conditions; and
 - 4. Any applicable requirements of R18-16-411 and R18-16-412.
- I. In considering whether an early response action is necessary to protect or provide a supply of water because a well is threatened by contamination, a well located in the area within 1/4 mile upgradient, 1/2 mile cross-gradient and 1 mile downgradient of the areal extent of contamination at the site shall be

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presumed to be threatened by the contamination. This presumption may be rebutted by evidence of local hydrology, geology, or geochemistry or by available information regarding the capture zone or rate of flow. In considering whether wells a greater distance from the areal extent of contamination are threatened, any evidence regarding local hydrology, geology, geochemistry, zone of capture, or rate of flow may be considered.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

R18-16-406. Remedial Investigations

- A.** The remedial investigation for a site or portion of a site shall:
1. Establish the nature and extent of the contamination and the sources thereof;
 2. Identify current and potential impacts to public health, welfare, and the environment;
 3. Identify current and reasonably foreseeable uses of land and waters of the state; and
 4. Obtain and evaluate any other information necessary for identification and comparison of alternative remedial actions.
- B.** The Department or any person may perform all or any portion of a remedial investigation, except that once the Department has issued a notice under A.R.S. § 49-287.03 for a site, a person may perform such work only under a written agreement with the Department. A work plan shall be developed and implemented for all or any portion of a remedial investigation for a site or a portion of the site, as follows:
1. The work plan shall demonstrate that the work performed will meet the requirements of subsections (C) and (D) and that the work will be performed in accordance with guidance documents issued by the Department or standards or other guidance documents that are commonly accepted in the scientific community. Standards or guidance documents are considered to be commonly accepted in the scientific community if they are published in peer-reviewed literature such as a professional journal or publication of standards of general circulation, and if there is general consensus within the scientific community about the guidance document or standard.
 2. Each work plan shall include the following elements:
 - a. A description of the work, including any community involvement activities to satisfy any applicable requirements of R18-16-403 or R18-16-404, a statement of justification for the work, and a plan for conducting the work;
 - b. A quality assurance project plan;
 - c. A site location map;
 - d. A schedule;
 - e. A health and safety plan consistent with 29 CFR 1910.120; and
 - f. A sampling and analysis plan.
 3. A work plan may be modified as work proceeds to address unknown or changed conditions or access problems.
 4. Any person proposing to implement a work plan for all or a portion of a remedial investigation shall, before implementing the work plan, notify the Department in writing of the name and address of the working party and a general description of the work being performed. This notice is for the Department's information only and receipt of the notice shall not constitute approval of the work plan.
- A person seeking approval of a work plan by the Department shall submit a written request under R18-16-413.
- C.** The remedial investigation, which may be conducted in one or more phases to focus sampling efforts and increase the efficiency of the investigation, shall include field investigations to assess the following factors:
1. Physical characteristics of the site, including important surface features, soils, geology, hydrogeology, meteorology, and ecology;
 2. The extent and general characteristics of the hazardous substances released, including physical state, concentration, toxicity, propensity to bioaccumulate, persistence, and mobility;
 3. The extent, general characteristics, and degree of the source of the release;
 4. Current and reasonably foreseeable exposure routes for the hazardous substances released, such as inhalation, ingestion and dermal;
 5. Other factors, such as sensitive populations, that pertain to the characterization of the site or support the analysis of potential remedies; and
 6. Current and reasonably foreseeable impacts to aquatic and terrestrial biota.
- D.** The remedial investigation shall include the collection of information regarding current and reasonably foreseeable uses of land or of waters of the state that have been or are threatened to be impacted by the release, and projected time-frames for future changes in those uses. Reasonably foreseeable uses of land are those uses of land likely to occur at the site. Reasonably foreseeable uses of water are those likely to occur within 100 years unless a longer time period is shown to be reasonable based on site-specific circumstances. Information may be solicited from any interested person including any known well owner. Information collected shall include:
1. Information regarding current and reasonably foreseeable uses of water for each aquifer that is impacted or threatened to be impacted by the release, considering any hydraulic connection between aquifers. The information shall include the locations and uses of existing wells, including all wells already impaired due to contamination, the locations and uses, if known, of any planned wells, and any written water management plans used by water providers whose water supplies may be impacted by the release. This information shall be collected in consultation with affected water providers.
 2. Information regarding current and reasonably foreseeable uses of water for each segment of surface water impacted or threatened to be impacted by the release. This information shall be collected in consultation with affected water providers.
 3. Information regarding current and reasonably foreseeable uses of land impacted or threatened to be impacted by the release within the community involvement area. General land use information shall include the current type of use, density, character, and governmental jurisdictions. Future land use changes shall be considered using population projections, growth, plans for future development and local land use plans. This information shall be collected in consultation with local governments with land use jurisdiction. The information collected shall also include specific land uses and property ownership for properties where the land use is impacted or threatened to be impacted by the release.

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- E. Using the data developed during the field investigation and information collected concerning uses of land and of waters of the state, a site-specific risk evaluation may be conducted to characterize the current risks to public health and the environment from contaminants of concern.
- F. Following the collection of data necessary to adequately characterize the site or portion of the site and the collection of information necessary to determine the uses of land and of waters of the state, a draft remedial investigation report shall be prepared, and if prepared by a person other than the Department, submitted to the Department. The draft remedial investigation report shall include the results of any risk evaluation conducted under subsection (E). The draft remedial investigation report may consist of a summary of the data and information collected with references to the supporting documentation and the location of the public repository where those documents may be reviewed. Copies of the draft remedial investigation report prepared by or approved for release by the Department shall be provided to the community advisory board, interested local government agencies, affected water providers, and the Department of Water Resources. Copies of the draft remedial investigation report also shall be made available to the community under the community involvement plan. Public notice shall be given of the opportunity to comment on the draft remedial investigation report. This notice may be combined with the notice given under subsection (I)(1).
- G. For remedial objectives used to select a soil remediation remedy, the landowner has the right to identify the type of land use in accordance with A.R.S. § 49-152 and 18 A.A.C. 7, Article 2. If the remedy for the site or portion of a site will address landfill or other non-soil materials other than waters of the state, the landowner may establish the current and reasonably foreseeable uses of its land provided that the remedial objectives for the site are not required to address land uses impaired by properties of materials located on or under the land other than the current or potential exposure to the hazardous substances contained in that material.
- H. If the remedy for the site or a portion of the site will not address waters of the state, a final remedial investigation report may be prepared containing the results of the site characterization and a listing of remedial objectives. The remedial objectives shall be based on the current and reasonably foreseeable uses of the property in accordance with subsection (G) and stated in accordance with subsection (I)(4). The report shall be accompanied by responsiveness summaries regarding comments, issues, and concerns regarding the draft remedial investigation report under subsection (F), and if the report is prepared by a person other than the Department, copies of the comments received. The report may be submitted to the Department for review under R18-16-413. If the Department approves the report, the procedures in subsections (I) and (J) do not apply, and the approved report may be used to select a remedy under R18-16-407(C) or R18-16-407(D). Notice of the availability of the final remedial investigation report shall be provided with the notice under R18-16-408(C).
- I. Except as provided in subsection (H), remedial objectives shall be developed as follows:
1. After the draft remedial investigation report is made available, the Department shall hold 1 or more public meetings to obtain information for purposes of establishing remedial objectives for the site. The Department shall provide notice of the public meeting. If a community advisory board has been formed for the site, public meeting arrangements shall be coordinated with the community advisory board. The initial public meeting shall be held not less than 45 calendar days and not more than 90 calendar days after release of the draft remedial investigation report, unless the Department sets a different date for good cause.
 2. At the public meeting, the Department shall solicit and consider proposed remedial objectives for the site. The Department also may receive and consider written information regarding proposed remedial objectives.
 3. Remedial objectives shall be generally consistent with the water management plans of all water providers whose water supplies are or may be impaired by the contamination and with the general land use plan established by the local land use jurisdiction.
 4. The Department shall prepare a report of the proposed remedial objectives for the site that shall list the current and reasonably foreseeable uses of land and the current and reasonably foreseeable beneficial uses of waters of the state. These uses shall be identified based upon information provided during the public meeting and any other information received. The report shall state the remedial objectives for each listed use in the following terms:
 - a. Protecting against the loss or impairment of each listed use that is threatened to be lost or impaired as a result of a release of a hazardous substance;
 - b. Restoring, replacing or otherwise providing for each listed use to the extent that it has been or will be lost or impaired as a result of a release of a hazardous substance;
 - c. Time-frames when action is needed to protect against or provide for the impairment or loss of the use; and
 - d. The projected duration of the action needed to protect or provide for the use.
 5. The Department shall provide notice and accept and consider public comment on the proposed remedial objectives in the remedial objectives report and shall hold at least 1 additional public meeting if significant public interest exists or if significant issues or information have been brought to the attention of the Department which have not been considered previously.
 6. The Department shall prepare a final remedial objectives report.
- J. Following the community involvement activities regarding the draft remedial investigation report and the remedial objectives report, a final remedial investigation report shall be prepared containing the results of the site characterization and the final remedial objectives report. The final remedial investigation report shall be accompanied by responsiveness summaries regarding comments, issues and concerns raised in the community involvement process and, if the report is prepared by a person other than the Department, copies of the comments received. After completion of the final remedial investigation report, changes to the remedial objectives are subject to the requirements of subsection (I). The Department shall provide notice of the availability of the final remedial investigation report.
- K. Any person, other than a person proposing to perform work under an agreement under A.R.S. § 49-287.03(C), may submit a request under R18-16-413 for the Department to approve a work plan or a report for all or any portion of a remedial investigation. The Department shall approve a work plan for a remedial investigation if the request shows that the work will

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comply with this Section, community involvement activities will comply with R18-16-404, and the work plan provides for modifications to address unknown or changed conditions or access problems. The Department shall approve a draft remedial investigation report if the work is in compliance with an approved work plan or, if no work plan was approved, the remedial investigation complies with this Section and the community involvement activities have been conducted under this Article.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

R18-16-407. Feasibility Study

- A.** The feasibility study is a process to identify a reference remedy and alternative remedies that appear to be capable of achieving remedial objectives and to evaluate them based on the comparison criteria to select a remedy that complies with A.R.S. § 49-282.06.
- B.** The Department or any person may perform all or any portion of a feasibility study, except that once the Department has issued a notice under A.R.S. § 49-287.03 for a site, a person may perform such work only under a written agreement with the Department. The feasibility study process shall include community involvement procedures in compliance with R18-16-404 and may be reported concurrently with the remedial investigation. A work plan shall be developed and implemented for all or any portion of a feasibility study for a site or a portion of a site, as follows:
 1. The work plan shall demonstrate that the work performed will meet the requirements of this Section.
 2. A work plan may be modified as appropriate.
 3. Any person proposing to implement a work plan for all or a portion of a feasibility study shall, before implementing the work plan, notify the Department in writing of the name and address of the working party and a general description of the work being performed. This notice is for the Department's information only and receipt of the notice shall not constitute approval of the work plan. A person seeking approval of a work plan by the Department shall proceed under R18-16-413.
- C.** For remedies addressing only soils, an analysis of alternative remedies is not required. A feasibility study report shall be prepared that demonstrates:
 1. That the proposed remedy addresses the contaminated soil in a manner that achieves compliance with A.R.S. § 49-152 and 18 A.A.C. 7, Article 2 and will achieve the remedial objectives for the use of the property.
 2. That the proposed remedy was selected based upon best engineering, geological, or hydrogeological judgment following engineering, geological, or hydrogeological standards of practice, considering the following information:
 - a. The remedial investigation;
 - b. Best available scientific information concerning available remedial methods and technologies;
 - c. A written analysis explaining how the remedy is consistent with A.R.S. § 49-282.06, including a brief explanation of the comparison criteria as applied to the remedy.
- D.** For remedies addressing only landfills that have not and will not impact groundwater or similar sites or portions of sites that have not and will not impact groundwater, and that contain material not subject to A.R.S. § 49-152 and 18 A.A.C. 7, Article 2, an analysis of alternative remedies is not required. A feasibility study report shall be prepared that demonstrates:
 1. That the proposed remedy is designed to prevent human exposure to hazardous substances through the achievement of:
 - a. Soil remediation levels established under 18 A.A.C. 7, Article 2, or
 - b. Site-specific remediation levels based on a site-specific human health risk assessment, meeting a cumulative excess lifetime cancer risk between 1×10^{-4} and 1×10^{-6} and a hazard index no greater than 1. The excess lifetime cancer risk shall be selected by the Department based upon site specific factors including the presence of multiple contaminants, the existence of multiple pathways of exposure, the uncertainty of exposure, and the sensitivity of the exposed population. With prior approval of the Department, a person may achieve a site specific remediation level based on the use of institutional and engineering controls. The approval shall be based in part on the demonstration that the institutional and engineering controls will be maintained.
 2. That the proposed remedy was selected based upon best engineering, geological, or hydrogeological judgment following engineering, geological, or hydrogeological standards of practice, considering the following information:
 - a. The remedial investigation;
 - b. Best available scientific information concerning available remedial methods and technologies;
 - c. A written analysis explaining how the remedy is consistent with A.R.S. § 49-282.06, including a brief explanation of the comparison criteria as applied to the remedy.
 3. That the proposed remedy will achieve all of the remedial objectives.
- E.** For remedies other than provided in subsections (C) and (D), the feasibility study shall provide for the development of a reference remedy and at least two alternative remedies as follows:
 1. The reference remedy and alternative remedies shall be capable of achieving all of the remedial objectives. The reference remedy and each alternative remedy shall consist of a remedial strategy under subsection (F) and all remedial measures to be employed. The combination of the remedial strategy and the remedial measures for each alternative remedy shall achieve the remedial objectives. The reference remedy and any alternative remedy also may include contingent remedial strategies or remedial measures to address reasonable uncertainties regarding the achievement of remedial objectives or uncertain timeframes in which remedial objectives will be achieved. The reference remedy and other alternative remedies shall be developed and described in the feasibility study report in sufficient detail to allow evaluation using the comparison criteria, but plans at construction level detail are not required. The units of measure set forth in Appendix A may be used, as applicable, for comparison of the relevant factors. Where appropriate, the reference remedy and an alternative remedy may incorporate different strategies for different aquifers or portions of aquifers.
 2. The reference remedy shall be developed based upon best engineering, geological, or hydrogeological judgment

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following engineering, geological, or hydrogeological standards of practice, considering the following:

- a. The information in the remedial investigation;
- b. The best available scientific information concerning available remedial technologies; and
- c. Preliminary analysis of the comparison criteria and the ability of the reference remedy to comply with A.R.S. § 49-282.06.

3. At a minimum, at least two alternative remedies shall be developed for comparison with the reference remedy. At least one of the alternative remedies must employ a remedial strategy or combination of strategies that is more aggressive than the reference remedy, and at least one of the alternative remedies must employ a remedial strategy or combination of strategies that is less aggressive than the reference remedy. For the purposes of this Section, a more aggressive strategy is a strategy that requires fewer remedial measures to achieve remedial objectives, a strategy that achieves remedial objectives in a shorter period of time, or a strategy that is more certain in the long term and requires fewer contingencies. With the Department's approval, one of the minimum required alternative remedies may use the same strategy as the reference remedy but use different viable technologies or a more intensive use of the same technology utilized in the reference remedy.

- F. The remedial strategies to be developed under subsection (E) are listed below. Source control shall be considered as an element of the reference remedy and all alternative remedies, if applicable, except for the monitoring and no action alternatives. A strategy may incorporate more than one remediation technology or methodology, such as a plume remediation strategy that consists of a combination of pumping and treating in portions of an aquifer and monitored natural attenuation for other portions of the aquifer. The remedial strategies are:

1. Plume remediation is a strategy to achieve water quality standards for contaminants of concern in waters of the state throughout the site.
2. Physical containment is a strategy to contain contaminants within definite boundaries.
3. Controlled migration is a strategy to control the direction or rate of migration but not necessarily to contain migration of contaminants.
4. Source control is a strategy to eliminate or mitigate a continuing source of contamination.
5. Monitoring is a strategy to observe and evaluate the contamination at the site through the collection of data.
6. No action is a strategy that consists of no action at a site.

- G. Remedial measures necessary for each alternative remedy developed under subsection (E) to achieve remedial objectives or to satisfy the requirements of A.R.S. § 49-282.06(B)(4)(b) shall be identified in consultation with water providers or known well owners whose water supplies are affected by the release or threatened release of a hazardous substance. In identifying the remedial measures, the needs of the well owners and the water providers and their customers, including the quantity and quality of water, water rights and other legal constraints on water supplies, reliability of water supplies and any operational implications shall be considered. Such remedial measures may include, but are not limited to, well replacement, well modification, water treatment, provision of replacement water supplies, and engineering controls. Where remedial measures are relied upon to achieve remedial objectives, such remedial measures shall remain in effect as long as

required to ensure the continued achievement of those objectives. The Department may require financial mechanisms to provide for the cost of implementation of the remedial measures.

- H. The Department or any person who conducts a feasibility study by agreement with the Department shall conduct a comparative evaluation of the reference remedy and the alternative remedies developed under subsection (E). For each alternative, the evaluation shall be reported in a feasibility study report and shall include:

1. A demonstration that the remedial alternative will achieve the remedial objectives.
2. An evaluation of consistency with the water management plans of affected water providers and the general land use plans of local governments with land use jurisdiction.
3. An evaluation of the comparison criteria, including:
 - a. An evaluation of the practicability of the alternative, including its feasibility, short and long-term effectiveness, and reliability, considering site-specific conditions, characteristics of the contamination resulting from the release, performance capabilities of available technologies, and institutional considerations.
 - b. An evaluation of risk, including the overall protectiveness of public health and aquatic and terrestrial biota under reasonably foreseeable use scenarios and end uses of water. This evaluation shall address:
 - i. Fate and transport of contaminants and concentrations and toxicity over the life of the remediation;
 - ii. Current and future land and resource use;
 - iii. Exposure pathways, duration of exposure, and changes in risk over the life of the remediation;
 - iv. Protection of public health and aquatic and terrestrial biota while implementing the remedial action and after the remedial action; and
 - v. Residual risk in the aquifer at the end of remediation.
 - c. An evaluation of the cost of the remedial alternative, including the expenses and losses including capital, operating, maintenance, and life cycle costs. The cost analysis may include the analysis of uncertainties that may impact the cost of a remedial alternative, analysis of projected water uses and costs associated with use-based treatment, other use impairment costs of water not remediated to water quality standards, and the cost of measures such as alternative water supply or treatment. Transactional costs necessary to implement the remedial alternative, including the transactional costs of establishing long-term financial mechanisms, such as trust funds, for funding of an alternative remedy, shall be included in the cost estimate.
 - d. An evaluation of the benefit, or value, of the remediation. This analysis includes factors such as:
 - i. Lowered risk to human and aquatic and terrestrial biota;
 - ii. Reduced concentration and reduced volume of contaminated water;
 - iii. Decreased liability; acceptance by the public;
 - iv. Aesthetics; preservation of existing uses;
 - v. Enhancement of future uses; and
 - vi. Improvements to local economies.

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- e. A discussion of the comparison criteria, as evaluated in relation to each other.
- I. Based upon the evaluation and comparison of the reference remedy and the other alternative remedies developed under subsection (E), a proposed remedy shall be developed and described in the feasibility study report. The proposed remedy may be the reference remedy, any of the other alternative remedies evaluated in the feasibility study, or a different combination of remedial strategies and remedial measures that were included in the alternative remedies evaluated in the feasibility study. The feasibility study report shall describe the reasons for selection of the proposed remedy, including all of the following:
 - 1. How the proposed remedy will achieve the remedial objectives;
 - 2. How the comparison criteria were considered; and
 - 3. How the proposed remedy meets the requirements of A.R.S. § 49-282.06.
- J. Any person, other than a person proposing to perform work under an agreement under A.R.S. § 49-287.03(C), may submit a request in compliance with R18-16-413 for the Department to approve a work plan or a report for all or any portion of a feasibility study. The Department shall approve a work plan for a feasibility study if the request shows that the work will comply with this Section, community involvement activities will be performed in compliance with R18-16-404, and the work plan provides for modifications to comply with this Section. The Department shall approve a feasibility study report if the feasibility study complies with this Section and community involvement activities have been conducted under this Article.
- b. A statement of costs incurred at the site by the Department prior to the date of the notice and projected future costs for the site.
- c. All necessary information regarding the opportunities to submit costs, object to costs, or respond to objections to costs under R18-16-409, including a schedule for such submittal, review, objection and response to objection. The time period for submittal of costs shall not be less than 90 calendar days.
- d. If on the basis of new information or investigation notice is required to newly-identified parties, the notice sent under A.R.S. § 49-287.04 shall also include the information required by this Section.
- 2. At a site where the A.R.S. § 49-287.03 notice has not been provided, the person who prepared the plan shall provide notice under R18-16-404. The notice shall include the information contained in A.R.S. § 49-287.04(C).
- D. Any person, other than a person proposing to perform work under an agreement under A.R.S. § 49-287.03(C), may submit a proposed remedial action plan to the Department for approval under R18-16-413. The plan may be accompanied by a request for a determination of whether cost recovery by the Department may be appropriate under A.R.S. § 49-287.02. If the Department determines that cost recovery by the Department is not appropriate, notice shall be provided under subsection (C)(2).

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1). Amended by final expedited rulemaking at 29 A.A.R. 3516 (November 10, 2023), with an immediate effective date of October 17, 2023 (Supp. 23-4).

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

R18-16-408. Proposed Remedial Action Plan

- A. Following the completion of the feasibility study report under R18-16-407(I), the Department or any person shall prepare a proposed remedial action plan, except once the Department has issued a notice under A.R.S. § 49-287.03, a person may prepare a proposed remedial action plan only under a written agreement with the Department.
- B. The proposed remedial action plan shall include the following:
 - 1. A description of the proposed remedy.
 - 2. The information required in A.R.S. § 49-287.04(A).
 - 3. A description of how the proposed remedy will achieve each of the remedial objectives identified in the final remedial investigation report under R18-16-406(J) and how accomplishment of the remedial objectives is to be measured.
 - 4. A description of all recharge, reinjection, discharge, transportation and use of remediated water as defined in A.R.S. § 49-283.01.
- C. Notice of the proposed remedial action plan shall be provided as follows:
 - 1. At a site where the A.R.S. § 49-287.03 notice has been provided, notice shall be provided by the Department in accordance with A.R.S. § 49-287.04(B) and the community involvement plan prepared under R18-16-404. If the Department intends to seek recovery of costs and conduct a cost allocation proceeding for the site, the notice shall also include the following:
 - a. The information required by A.R.S. § 49-287.04(C).

R18-16-409. Remedial Action Costs Credit

- A. Any person seeking credit against potential liability at a site may submit to the Department, within the time period established in the notice given under R18-16-408(D), evidence of costs it has incurred or will incur for remedial actions undertaken at the site. The evidence of costs submitted shall include:
 - 1. Two copies of an itemized statement of costs, including a certification by the person submitting the statement that the statement is true, accurate and complete;
 - 2. Sufficient supporting documentation to establish that the costs are consistent with A.R.S. § 49-282.06 and this Article; and
 - 3. An agreement in which the person submitting the evidence of costs agrees to reimburse the Department for the Department's costs under subsection (F).
- B. Any itemized statements of costs submitted shall be available for review at both the repository for the site and the Department on or after the expiration of the time period established in subsection (A).
- C. Within a reasonable period of time set by the Department but not less than 30 calendar days, any person may object in writing to costs submitted by the Department or any other person under this Section. Written objections shall identify the specific costs to which the party objects and shall state specific reasons for the objection. Two copies of the objections shall be submitted to the Department and one copy of the objections shall be submitted to the person whose costs are the subject of objection.
- D. The Department and each person who submits an itemized statement of costs shall have an opportunity to respond to any

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objections within the time period specified in the notice given under R18-16-408 subsection (C) or (D). Two copies of the response shall be submitted to the Department and one copy of the response shall be submitted to the person objecting to the costs.

- E. The Department shall evaluate the statements of costs submitted, any objections to such statements, or other information available to the Department and shall approve those costs determined by the Department to be recoverable and in substantial compliance with A.R.S. § 49-282.06. The Department shall prepare a list of these approved costs for inclusion as part of the total estimated costs of the remedy in the record of decision under R18-16-410.
- F. Any person who requests the Department's approval of costs under this Section shall reimburse the Department for the total reasonable cost to the Department for the review unless the Department waives all or a part of the reimbursement. The total reasonable costs include direct and indirect costs to the Department in conducting these activities. Costs that are reimbursed to the Department by a person that obtains the Department's approval of costs under this Section constitute remedial action costs that may be recovered from responsible parties.
- G. The Department shall give credit not exceeding the amount of a person's liability for the costs approved under this Section. Nothing in this Article shall create a right of reimbursement from the fund for any costs incurred or to be incurred at a site.
- H. If the remedial action for which approval of costs is sought under this Section has not been previously approved by the Department, the submittal under subsection (A) shall be accompanied by a request for approval of the remedial action under R18-16-413.
- I. This Section is the exclusive process for the Department to approve the costs of a remedial action, and no other Department approval of a remedial action shall be considered as an approval of the costs of that remedial action.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

R18-16-410. Record of Decision

- A. After the conclusion of all required public comment periods prescribed by A.R.S. § 49-287.04, the Department shall prepare a record of decision regarding the proposed remedial action plan. However, any person may prepare a proposed record of decision for consideration by the Department under R18-16-413 by submitting copies of the final remedial investigation report, the final feasibility study report, the proposed remedial action plan, all public comments and a proposed record of decision.
- B. The record of decision shall contain the following:
 - 1. A description of the remedy, including a description of any differences from the proposed remedial action plan.
 - 2. A comprehensive responsiveness summary regarding all comments received on the proposed remedial action plan.
 - 3. A description of how the process for selecting the remedy complied with A.R.S. Title 49, Chapter 2, Article 5 and this Article, including all public comment and community involvement requirements.
 - 4. A demonstration that the remedy selected will achieve the remedial objectives selected in R18-16-406 and will remain in place as long as necessary to ensure continued achievement of those objectives.
 - 5. A demonstration that the remedy selected meets the requirements of A.R.S. § 49-282.06 and this Article.

- 6. A time for commencing implementation of the remedy and a specific time period for completing the remedy.
- 7. The total estimated cost of the remedy.
- 8. A time-frame for review of the remedy to determine the effectiveness of the remedy in achieving the remedial objectives.
- C. The total estimated cost of the remedy shall include:
 - 1. Remedial action costs other than nonrecoverable costs incurred by the Department, including credit given in a settlement.
 - 2. Remedial action costs other than nonrecoverable costs incurred by the state.
 - 3. Remedial action costs other than nonrecoverable costs that have been approved by the Department under R18-16-409.
 - 4. Projected future remedial action costs other than nonrecoverable costs.
- D. The record of decision shall be issued only by the Department. Notice of the record of decision shall be provided under A.R.S. § 49-287.04(G) and R18-16-404.
- E. A record of decision may be amended in accordance with A.R.S. § 49-289(B), (C), and (D).

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

R18-16-411. Design, Implementation, Operation and Maintenance of the Early Response Action or Remedy

- A. Any person who intends to implement all or any portion of a remedy or an early response action shall obtain the Department's approval when required in either a record of decision or under subsection (C) or (E). The design and implementation of the remedy shall conform with the remedial action plan as adopted in the record of decision.
- B. If the remedy or an early response action includes well replacement or provision of an alternative water supply, the Department or any person developing the design shall consult with the affected well owner or water provider. For a well owner, the design of that portion of the remedy or early response action shall meet the well owner's water quality and quantity needs in accordance with A.R.S. § 49-282.06(B)(4)(b) and R18-16-407(G). For a water provider, the design of that portion of the remedy or early response action shall:
 - 1. Comply with laws and regulations governing the water provider's obligations to its customers;
 - 2. Be implementable without significant alteration of the water provider's existing system; and
 - 3. Meet the water provider's water quality and quantity needs in accordance with A.R.S. § 49-282.06(B)(4)(b) and R18-16-407(G).
- C. The Department's approval of the design of any water treatment facilities is required prior to the construction as part of the remedy or an early response action. The design shall be based on an evaluation of potential treatment system failure that could affect public health and shall incorporate safeguards including any site-specific engineering and operation controls necessary to assure protection of public health against such failure. The safeguards shall incorporate, at a minimum, if applicable to the technology:
 - 1. Monitors and alarms on all key treatment system components, e.g. power, air flow.

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2. Automatic termination of discharge from the treatment system when monitors detect abnormal operation of key treatment system components.
- D. If operation and maintenance of a remedy following completion of construction are necessary to ensure the continued achievement of the remedial objectives, an operation and maintenance plan shall be prepared and implemented.
- E. The Department's approval of an operation and maintenance plan shall be required for each WQARF site where the remedy or an early response action involves treatment of water to remove contaminants of concern at the site. The community advisory board, if one has been established for the site, shall be provided with the opportunity to comment on the operations and maintenance plan. Notice and community involvement shall be in accordance with R18-16-404. The operation and maintenance plan shall include:
 1. Certification by the Department that the elements of the operations and maintenance plan adequately protect public health against treatment system failure.
 2. A schedule and plan for water quality monitoring.
 3. A requirement that affected water providers receive a copy of the completed application and a copy of the final permit for any National Pollutant Discharge Elimination System permit for the site.
 4. A process for the treatment system operator to promptly notify potentially affected water providers of a failure of a key treatment system component that could affect the quality of a discharge of treated water.
 5. For a discharge to a water of the United States, operational, maintenance and management practices to assure achievement of water quality discharge standards established in 18 A.A.C. 11 prior to the point of discharge for those volatile organic compounds which are contaminants of concern at the site.
- F. Any person who intends to implement any portion of a remedy may request the Department to approve the design or the operation and maintenance plan. A request for approval of a remedial design shall be submitted in accordance with R18-16-413. The Department shall approve any remedial design that is in compliance with this Section and the remedial action plan as adopted in the record of decision.
- G. The well owner or water provider whose water use is being addressed may, in its sole discretion, elect to construct, operate, or construct and operate the water treatment, well replacement or alternative water supply component of the remedy or early response action which is designed to address its use. This election shall not alter the responsibility of the Department or any person under A.R.S. Title 49, Chapter 2, Article 5 to fund all or a portion of the remedy or early response action. The well owner or water provider shall enter into a written agreement with the appropriate person that will govern the terms of the construction, operation or construction and operation of the water treatment, well replacement or alternative water supply component of the remedy.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

R18-16-412. Innovative Technologies

- A. The Department may approve the use of an innovative technology for a site if the Department determines that the technology has been demonstrated to be reasonably likely to achieve its objectives and meets the other criteria set forth in this Article. Such a demonstration may be made through pilot or bench

testing studies, peer reviewed studies, or other appropriate means of demonstration. If an innovative technology is approved as part of a remedy, the remedial action plan shall provide for a contingency in the event that the technology fails to achieve its objectives.

- B. The Department may use monies from the WQARF fund to contract for review of an innovative technology.
- C. The Department may provide incentives for the selection of the innovative technology that may include the following:
 1. The Department may agree not to assess penalties, issue a notice of violation, pursue an order, or take other enforcement action authorized by law for a delay that is caused by the use of the innovative technology provided that the party conducting the remedial action remains in compliance with the plans for implementing the innovative technology and implements a contingent remedial action in a timely manner.
 2. The Department may use monies from the Water Quality Assurance Revolving Fund to finance some or all of the use of the innovative technology.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

R18-16-413. Approval of Remedial Actions Under A.R.S. § 49-285(B)

- A. Any person who seeks approval of a remedial action at a site or a portion of a site on the registry under A.R.S. § 49-285(B) shall submit a written request to the Department that contains all of the following:
 1. The name and address of the person submitting the request and the nature of the relationship of the person to the site, if any.
 2. The location and boundaries of the site or portion of the site addressed by the remedial action
 3. The nature, degree, and extent of the hazardous substance contamination, if known.
 4. A description of any remedial action performed before the request is submitted.
 5. A work plan for any remedial action to be performed after the request is submitted.
 6. A demonstration of how the remedial action complied, or will comply, with this Article.
 7. A proposal for public notice and an opportunity for public comment on the application for approval under this Section. The proposal shall include a list of the names and addresses of persons whom the applicant believes to be responsible parties under A.R.S. § 49-283 and a summary of the basis for that belief.
 8. An agreement in which the person requesting the approval agrees:
 - a. To grant access to the Department as necessary to evaluate the request for approval.
 - b. To reimburse the Department for the Department's costs under subsection (G).
 9. An original seal imprint and signature of a registered professional if required by the Arizona Board of Technical Registration under A.R.S. Title 32, Chapter 1 and the rules made under that Chapter.
- B. A request for approval under this Section may be combined with a no further action request under R18-16-414.
- C. The Department may request additional information necessary to evaluate or to take action on the request for approval.

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- D. The Department shall provide notice of the request for approval and of the opportunity to comment on the request for approval.
- E. The Department shall, after considering public comments, approve a remedial action under this Section if the Department determines that the remedial action is in substantial compliance with this Article. The Department's approval shall be in writing and shall state the basis for the approval.
- F. The Department may deny approval of a remedial action under this Section if the remedial action does not meet the requirements of this Article, may request additional information, may request modification of the remedial action, or may condition approval of the remedial action on modifications necessary to achieve substantial compliance with this Article.
- G. The person making the request for approval shall reimburse the Department for the total reasonable cost of the Department's review and action under this Section, including costs of notices, unless the Department waives all or part of the reimbursement. The total reasonable costs include direct and indirect costs to the Department in conducting these activities.
- H. Approval of a remedial action under this Section does not constitute approval of the costs of conducting the remedial action.
- I. A remedial action approved by the Department under this Section shall be deemed to be in substantial compliance with this Article. The Department's approval under this Section is not required to preserve any right to recover remedial action costs under A.R.S. § 49-285.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1). Amended by final expedited rulemaking at 29 A.A.R. 3516 (November 10, 2023), with an immediate effective date of October 17, 2023 (Supp. 23-4).

R18-16-414. Determination of No Further Action

- A. The Department shall determine that no further action is necessary at a site or a portion of a site if, based upon the information submitted under A.R.S. § 49-287.01, the Department finds that the site or portion of the site does not present a significant risk to the public health, welfare, or the environment. The determination may be made by the Department based upon any of the following:
 - 1. A finding by the Department that the requirements of A.R.S. § 49-152 and 18 A.A.C. 7, Article 2 have been met shall be sufficient to support a determination that no further action is necessary for soils at the site or a portion of the site.
 - 2. A finding by the Department that no hazardous substances at the site or a portion of the site have impacted or will impact groundwater shall be sufficient to support a determination that the site or a portion of the site does not present a significant risk to groundwater.
 - 3. The determination of no further action for waters of the state at a site or a portion of the site may be made by the Department based upon any of the following:
 - a. A finding that the site or portion of a site has been remediated under a Title 49 program other than A.R.S. Title 49, Chapter 2, Article 5.
 - b. A finding that the release of a hazardous substance does not and will not exceed water quality standards in Title 18, Chapter 11 or if there is no water quality standard, a risk level approved by the Department to protect public health, welfare, and the environment.

- c. A finding that there is no current or reasonably foreseeable use of water that would be impaired by the release, as determined by information collected under R18-16-406.

- B. A determination of no further action for a site or a portion of a site shall be published in the registry.
- C. If the remedial action for which a no further action determination is sought under this Section has not been previously approved by the Department, the submittal under subsection (A) may be accompanied by a request for approval of the remedial action under R18-16-413.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

R18-16-415. Soil Remediation

- A. Soil remediation may be conducted as part of a remedy selected under R18-16-410 or may be conducted by any person at a site or portion of a site on the registry prior to the selection of a remedy if the following requirements are met:
 - 1. The soil remediation is performed in accordance with A.R.S. § 49-152 and 18 A.A.C. 7, Article 2.
 - 2. Community involvement activities are conducted in accordance with R18-16-404.
 - 3. A notice of remediation under R18-7-210 is prepared and submitted to the Department before the remediation is conducted. The notice of remediation shall be accompanied by a written report including the information described in R18-16-406(C)(1), (2), and (3). If the Department has issued a notice under A.R.S. § 49-287.03 for the site or portion of a site, the notice of remediation shall be submitted to the Department 15 calendar days before commencing the remediation or, if the remediation has commenced prior to the Department's notice, within 15 calendar days after the Department's notice is given.
- B. Submission of the information required under subsection (A) to the Department shall not be considered to be an approval of the soil remediation. Approval of a work plan for soil remediation work to be performed or approval for remediation performed under this Section may be obtained by submitting a request under R18-16-413. The Department shall approve the request if the request demonstrates that the soil remediation was conducted in accordance with this Section.
- C. The Department may request any additional information regarding the soil remediation in accordance with A.R.S. § 49-288.
- D. The Department may include information regarding soil remediation conducted under this Section in a record of decision for a remedy for the site or portion of the site under R18-16-410.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1). Amended by final expedited rulemaking at 29 A.A.R. 3516 (November 10, 2023), with an immediate effective date of October 17, 2023 (Supp. 23-4).

R18-16-416. Satisfaction of Settlement Agreement and Achievement of Remedial Objectives

- A. If the Department enters into a settlement under A.R.S. § 49-292 with a person who agrees to perform all or any portion of the remedy, the settlement agreement shall include criteria to determine when the work required by the settlement agreement is completed. A party to the settlement agreement who has performed all or a portion of a remedy may request a deter-

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mination that the required work has been completed. The request shall describe how the requirements of the settlement agreement have been satisfied. The Department may require additional information to consider the request.

- B.** Any person may request that the Department determine whether each of the remedial objectives for the site have been satisfied and will continue to be satisfied. The request shall demonstrate how the remedial objectives have been satisfied in accordance with the remedy and will continue to be satisfied, including information regarding any financial mechanisms in place to ensure the continued satisfaction of the remedial objectives. The Department may require additional information to consider the request. The Department shall issue notice of the request and provide an opportunity for public comment. Based upon the request and the public comments, the Department shall issue a written determination to approve or deny the request. If the request is approved, the written determination shall identify all actions that must continue to be taken to continue to satisfy the remedial objectives for the site.
- C.** Following an approval under subsection (B), the Department shall not undertake or require additional remedial action under this Article for the site or portion of the site other than the actions stated in the determination under subsection (B). However, the Department may reopen an investigation and take or require additional remedial action for any of the following reasons:
1. On discovery of new information which would result in the potential denial of a request under subsection (B).
 2. That information submitted to the Department under subsection (B) was inaccurate, misleading, or incomplete.
 3. The reopening of an investigation or the taking of a remedial action is necessary to respond to a release or the threat of a release of a hazardous substance that may present an imminent and substantial danger to the public health, welfare, or the environment.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

Appendix A. Standard Measurements for Comparison of Remedial Alternatives

Plume Characterization	Typical Units
Length	feet
Width	feet
Depth (thickness)	feet
Areal extent	acres
Volume	acre-feet
Plume leading edge advancement rate	feet/year
Plume volume expansion rate	acre-feet/year
Contaminant and Source Characterization	
Probable contributing sources	(number)
Number of contaminants	(number)
Maximum concentration of each contaminant	µg/l
Contaminant concentration vs. MCL	ratio
Contaminant mass in plume	pounds
Weighted average contaminant concentration in plume	µg/l
If present, estimated mass of LNAPL	pounds

If present, estimated mass of DNAPL	pounds
Sorbed contaminant mass in plume	pounds
Rate of downgradient contaminant mass transport	pounds/year
Remedial Efficiency	
Contaminant mass naturally degraded	pounds/year
Contaminant mass removed through remediation	pounds/year
Groundwater removed through remediation	acre-feet/year
Groundwater added (injected) by remediation	acre-feet/year
Net groundwater removed/added	acre-feet/year
Groundwater removed per year vs. plume volume expansion per year	percentage
Contaminant mass removed per year vs. pre-remedial contaminant mass transported downgradient per year	percentage
Time per first log cycle decline in average concentration	years per log cycle decline
Cost Efficiency	
Contaminant mass removal	\$ per pound
Groundwater removal	\$ per acre-foot
Cost per first cycle decline in average concentration	\$ per log cycle decline

Historical Note

New Appendix made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

ARTICLE 5. INTERIM REMEDIAL ACTIONS**R18-16-501. Definitions**

In addition to the definitions set forth in A.R.S. § 49-281, the following definitions shall apply in this Article, unless the context otherwise requires:

“Abandoned well” means a well that has been permanently sealed or closed with cement or a cement-bentonite mixture that cannot be re-entered except by redrilling the wellbore, or a well that has been formally abandoned under R12-15-816.

“Currently supplies water” means a well that supplies water at the time the request for interim remedial action is submitted to the Department. Wells that supply water as needed to meet demand, including wells that serve water on an infrequent basis, are considered to currently supply water under this definition.

“Department” means the Arizona Department of Environmental Quality.

“Interim remedial action” means an action taken by the Department or by a well owner or operator under A.R.S. § 49-282.03.

“Part of a public water system” means a well that is owned or operated by an operator of a public water system, but has not been abandoned. A well that has been capped, air gapped or closed due to contamination, but not abandoned, shall be considered part of a public water system.

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“Public water system” has the same meaning as defined in 42 U.S.C. § 300f.

“Registry sites” means sites that have been investigated and placed on the Water Quality Assurance Revolving Fund registry of sites.

“Remedy” has the same meaning as defined in A.R.S. § 49-281(13).

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1). Amended by final expedited rulemaking at 29 A.A.R. 3516 (November 10, 2023), with an immediate effective date of October 17, 2023 (Supp. 23-4).

R18-16-502. Eligibility

- A.** A well is eligible for consideration for funding or performance of interim remedial action if a remedy has not been selected and the well meets the following criteria:
1. The well currently supplies water for municipal, domestic, irrigation, or agricultural use or is currently part of a public water system;
 2. The well produces water, or in the reasonably foreseeable future will produce water, that is not fit for its current or reasonably foreseeable end-use without treatment due to the release of hazardous substances at or from a site on the registry; and
 3. The well is not an abandoned well.
- B.** Only costs directly related to an interim remedial action approved by the Department are eligible for funding from a grant from the Water Quality Assurance Revolving Fund. Costs incurred by any person after the date of submittal of a complete request which meets the requirements of R18-16-503 are eligible for funding if the request and proposed interim remedial action are subsequently approved by the Department. Costs incurred by any person prior to the submittal of a request under R18-16-503 are not reimbursable by the Department.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

R18-16-503. Request for Interim Remedial Action

- A.** Any person may request that the Department perform or provide a grant for an interim remedial action. The request shall be in writing and shall include a statement describing the eligibility of the well under R18-16-502 and a statement describing the reasons why interim remedial action is appropriate considering the factors in R18-16-504(A)(1) through (4). The request shall also include all of the following information that is in the possession of or is readily available to the person submitting the request:
1. A description of the well, including its location, Arizona Department of Water Resources registration number, construction details, and water production history.
 2. An explanation of any water rights associated with the well and uses of the well, including any quality and quantity requirements associated with the end use of the water.
 3. Any available water quality and water level data from the requesting party's wells that are the subject of the request.
 4. Information that demonstrates that the well is contaminated or threatened by contamination from a release of hazardous substance from a registry site.

5. A proposal for interim remedial action, including a description of the proposed action, a schedule for implementation, and an estimate of the cost of the action.
6. A description of reasonable alternate interim remedial actions, costs associated with each alternative, and documentation supporting a finding that the proposed interim remedial action is the minimum necessary to address the loss or reduction of available water until a remedy is selected.
7. A description of any impacts the loss of the well would have on any assured water supply designation or any adequacy statement under 12 A.A.C. 15, Article 7, or on the ability of the water system to meet its legal obligations or its customer or user needs.
8. A description of the person's interest in the well and any limitations on the owner or operator's legal rights to use the well.

- B.** If the person requesting interim remedial action intends to perform all or part of the remedial action work, the Department may require submittal of a detailed work plan for the proposed action.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1). Amended by final expedited rulemaking at 29 A.A.R. 3516 (November 10, 2023), with an immediate effective date of October 17, 2023 (Supp. 23-4).

R18-16-504. Review and Approval of Requests for Interim Remedial Action

- A.** The Department shall approve or deny requests for interim remedial action or request modifications to the proposal based on the following:
1. Whether immediate action may prevent contamination of the well.
 2. Whether immediate action is necessary to provide for supply of water because contamination of the well is imminent.
 3. Whether the well is currently contaminated, and there are water supply needs including needs related to drought or emergency supply that would be addressed by the well but for the contamination.
 4. Whether the well is critical to the ability to satisfy the water supply needs of the well's users, including drought or emergency supply needs.
 5. Whether the proposed action or alternative actions are the minimum necessary to address the loss or reduction of water.
 6. Whether a proposed action is likely to be inconsistent with the final remedy.
 7. Any information that might reasonably suggest that the party requesting the interim remedial action is responsible for the release of hazardous substances contaminating the well.
 8. Funding considerations of the Department.
- B.** The Department may gather additional information before making a decision under subsection (A).
- C.** The Department shall condition approval of the request for interim remedial action upon execution by the requesting party of the following:
1. A reimbursement agreement under R18-16-505(C).
 2. An agreement, as appropriate, to provide the Department access to the property at reasonable times for the purpose of conducting or overseeing the interim remedial action

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or to gather information necessary to evaluate the interim remedial action.

- D. If any person other than the Department performs the work, the Department shall require that person to submit contracts, invoices or other evidence that the work was performed.
- E. The Department may initiate an early response action in lieu of granting the request for interim remedial action if the requested remedial action meets the requirements of R18-16-405.
- F. An interim remedial action shall be the minimum action necessary to address the loss or reduction of water available to well users during the period before selection and implementation of a final remedy at a site. The Department may approve an action that provides a permanent solution to the water supply problem if a temporary solution is unavailable, more expensive, or incapable of fully addressing the problem during the period before a final remedy is implemented for the site.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).

R18-16-505. Reimbursement

- A. If, in the record of decision, the Department determines that the interim remedial action taken was not necessary, based on criteria established in A.R.S. § 49-282.06, the Department shall require the person requesting the interim remedial action to reimburse all costs incurred in taking that action.
- B. A person requesting the interim remedial action who is later determined by the Department to be a responsible party contributing to the contamination of the affected well shall reimburse the Department for all costs incurred by the Department in conducting or funding the interim remedial action.
- C. The Department shall provide the person requesting the interim remedial action with a reimbursement agreement that clearly states the conditions under which the person requesting the interim remedial action must reimburse the Water Quality Assurance Revolving Fund. The person requesting the interim remedial action shall execute the reimbursement agreement as a prerequisite to approval of the interim remedial action. The Department may require that the person requesting the interim remedial action provide financial assurance for the obligation to reimburse the Water Quality Assurance Revolving Fund.

Historical Note

New Section made by exempt rulemaking at 8 A.A.R. 1491, effective March 4, 2002 (Supp. 02-1).