

**RESPONSE TO COMMENTS
FINAL PERMITTING DECISION**

Permit No.: 0000-WG-SW

Prepared by: Linda Hanson, P.G

The following are responses to comments received regarding the draft permit number above and are developed in accordance with regulations promulgated at 40 C.F.R. §124.17, APC&EC Regulation No. 8 Administrative Procedures, and A.C.A. §8-4-203 e(2).

Introduction

The above permit was submitted for public comment on April 15, 2016. The public comment period ended on May 16, 2016.

This document contains a summary of the comments that the ADEQ received during the public comment period. A summary of the changes to the Permit can be found on the last page(s) of this document.

The following people or organizations sent comments to the ADEQ during the public notice. A total of twenty-two (22) comments were raised by two (2) separate commenters.

	Commenter	Number of Comments Raised
1.	Lyle Godfrey, Chief Technical Support- Planning Arkansas Department of Health	4
2.	Anne Roberts	18

Comment 1 Part I, Section A. 1. Definitions.

Impermeable containment system or “firewall”: The definition for impermeable containment system should include what materials or geotechnical tests will be required to demonstrate the containment is adequate to prevent surface or subsurface discharge of disposal fluids to waters of the State (both surface and groundwater (sic)) in the event of a release.

Original commenter: Lyle Godfrey, ADH
A similar comment was received from Anne Roberts.

Response: Since the salt water stored and disposed of in these facilities is stored in tanks, the impermeable containment system or “firewall” is a secondary containment structure that must be constructed and maintained in such a manner as to prevent surface discharge of disposal fluids to waters of the State. In Part II, Section A. Condition 7 requires all firewalls to be kept free of vegetation that might compromise containment capabilities or have the potential to cause leakage from the containment berm. Section A. Condition 8 states that systems are to be inspected at a frequency determined by the operator to verify that no salt water is discharged from the surface containment. Additionally, ADEQ inspectors regularly inspect these systems and review the operators’ records to ensure that all systems are properly maintained, that salt water is contained and properly disposed of, and that these disposal activities do not adversely impact the waters of the State.

Instituting this requirement in the definition would necessitate destructive testing of existing containment systems and would be an unnecessary expense for operators for testing and reporting. The Department believes that the current language in this part of the general permit is adequate.

Comment 2 Waterbodies: The citations in sections C.1.D. 1 and 2 state “the name of and distance to the nearest waterbody.” Does this refer only to named surface waters or to the more inclusive waters of the State. (sic). Replacement of this undefined term with waters of the state (sic) would clarify what is meant and be most protective of all drinking water sources in proximity to UIC saltwater disposal infrastructure.

Original commenter: Lyle Godfrey, ADH
A similar comment was received from Anne Roberts.

Response: This citation refers to any and all surface waters including streams, intermittent streams, ponds, lakes, springs, extraordinary resource waters as defined by the Department’s Regulation No. 2 which references Act 472 of 1949 for the source of this definition. ADP&EC Regulation 1, Condition 3. (f) defines the Waters of the State as “underground water and all streams and lakes, including

all rivers and lakes bordering on the State, marshes, watercourses, drainage systems and other bodies of water, natural or artificial, public or private, of such character that the pollution thereof may create a nuisance or be either actually or potentially harmful or detrimental to the public health, safety or welfare, or to domestic, commercial, industrial, agricultural, or recreational use, or to livestock, wild animals, bird, fish or other aquatic life.”

- An AOGC authorization to inject is required prior to the ADEQ’s issuance of the Notice of Coverage for any salt water disposal system. The AOGC regulates the Class II UIC well construction and requires that these wells be cased to provide sufficient protection to underground sources of drinking water. The AOGC maintains records that include information pertaining to the underground water at salt water disposal well locations.
- Since ADEQ is regulating the surface facilities, the permit requirements for the facilities’ construction and operation are for the purpose of preventing releases to the ground surface which could lead to both surface waterways and ground water. Additionally, the ADEQ’s spill response guidelines and Inspection and Enforcement Branches of the Office of Water Quality ensure that any spill that may occur is cleaned up immediately in order to prevent contamination of surface water and ground water.
- Anytime the closest surface waterbody does not have a designated name, ADEQ includes the nearest named surface waterbody in our evaluation and in our records, for example: “Unnamed tributary to Smackover Creek”. In addition, ADEQ verifies the location of the nearest surface water body to the facility and determines the stream segment and water basin the facility is located in.

The Department believes that the current language in this part of the general permit is adequate.

Comment 3 Section C. 1. 5. Requires inclusion of nearest city town or community in the NOI. ADH requests that the NOI also include the location of the nearest public water source from the ADH. In addition to this, the NOI should include the location and available details regarding the nearest public and/or private domestic drinking water wells (including for agricultural or livestock purposes). The well details should also include the source of the data (e.g., Arkansas Natural Resources Commission, Arkansas Department of Health (ADH), communication with landowner, etc.).

Original commenter: Lyle Godfrey, ADH
A similar comment was received from Anne Roberts.

Response: The Department does not require an applicant to supply the distance to the nearest public and/or private domestic drinking water wells (including for agricultural or livestock purposes) for the following reasons:

- The AOGC regulates the Class II UIC well construction and requires that these wells be cased to provide sufficient protection to underground sources of drinking water.
- The ADH is notified about all Notices of Intent received prior to the issuance of the Notice of Coverage for each facility. It is the responsibility of the ADH to notify the ADEQ if the facility is located within a well head protection area.
- The requirement for the submittal of the name of the nearest waterbody and the submittal of a topographic map which includes the location of nearby waterbodies is sufficient to supply adequate information to evaluate any NOI.

The Department believes that the current language in this part of the general permit is adequate.

Comment 4 Given the potential harm that could be done to a drinking water aquifer (waters of the State), ADH requests that a thirty day public comment period on each administratively complete SWDS NOI be given and direct notification to ADH be added to permit conditions.

Original commenter: Lyle Godfrey, ADH
A similar comment was received from Anne Roberts.

Response: Item 2-Legal Basis of the Fact Sheet for the General Permit No. 0000-WG-SW Renewal states “A general permit best serves the interests of both the applicants for saltwater disposal system surface facility permits and the regulatory agencies, because the permitting process is streamlined and processing time reduced to a minimum, while ensuring environmental protection under Ark. Code Ann. § 8-4-101, *et seq.*” The Department believes that the current requirements of the general permit are adequate.

Comment 5 Part I, Section A. 1.

In Section A-1 of Part I, there are three references to “the Commission” that appear to refer to the AOGC (under Class II Fluids (Salt Water): the last line of Section A and the fifth line of Section B, and under Class II UIC Well: the third line of Section A). “Commission” is defined on Page 3 of Part I as the APC&EC, so it appears that “AOGC” should be used in these three cases on Page 2 of Part I.

Response: The Department agrees. These references have been changed to reflect the Arkansas Oil and Gas Commission.

Comment 6 Given the relatively high solubility of benzene in water (vs. most of the other constituents of crude oil), the draft permit’s coverage of heater treaters, gun-

barrels, and other separators (Part I.B.2), and California's recent finding of "high" benzene levels in frac water and produced water (<https://www.rwlwater.com/california-produced-water-contains-high-benzene-levels/> & <http://touch.latimes.com/#section/-1/article/p2p-82779627/>), what leak detection and reporting (LDAR) of fugitive emissions from surface systems is being done to determine if a State air permit is needed because of storage of fluids containing benzenes (and/or other hazardous air pollutants (HAPs))?

Response: This is an air quality-related comment. This permit does not cover air quality issues. All salt water to be stored in salt water disposal systems is stored in closed tanks within the secondary containment. These tanks are connected to the Class II Underground Injection Control well(s) for disposal purposes. AOGC Rule H3 g) states that the wellhead shall be maintained in a leak-free condition. Permit 0000-WG-SW prohibits any discharge from the system. These requirements are protective of the environment. If any evidence of fugitive emissions from any salt water disposal system is detected, the ADEQ Office of Air Quality will be notified in order to determine if a State air permit would be necessary. These reporting requirements are outside the scope of this permit.

Comment 7 Section B.3.A.1 of Part I includes a web link that appears to be obsolete. It should be updated with a current link.

Response: The Department agrees. The ADEQ website has changed since the permit was publicly noticed, and all website links have been updated.

Comment 8 Section B.3.A.2 of Part I refers to Part II.A.1. Perhaps this should refer instead to Part II.A.3 or some other section.

Response: The Department agrees. The reference to Part II.A.1. in this condition has been changed to Part II.A.3.

Comment 9 In Section B.3.A.2 of Part I, APC&EC Regulation No. 9 is erroneously referred to as ADEQ Regulation No. 9.

Response: The Department agrees. The reference to ADEQ Regulation No. 9 has been changed to APC&EC Regulation No. 9.

Comment 10 In Section B.6 of Part I, the web link to find a permit transfer form appears to be incomplete. There does not appear to be a permit transfer form available on ADEQ's main home page.

Response: The Department agrees. The ADEQ website has changed since the permit was publicly noticed, and all website links have been updated.

Comment 11 Section C.1.A of Part I is missing a closed parentheses (sic) in the “Required Submittals” for a new facility.

Response: The Department agrees. A closed parenthesis has been added after the word “documents”.

Comment 12 Section C.1.C of Part I includes a web link that appears to be obsolete. It should be updated with a current link.

Response: The Department agrees. The ADEQ website has changed since the permit was publicly noticed, and all website links have been updated.

Comment 13 Section C.1.D.8 of Part I (Page 11) has a different web link than the one on Page 8 of Part I, and the web link on Page 11 does not appear to include a link to the Disclosure Statement. Please update the link.

Response: The Department agrees. The ADEQ website has changed since the permit was publicly noticed, and all website links have been updated.

Comment 14 Part II.A.10 appears to have incorrect regulatory citations. There is no 40 CFR § 112.8(3). It is not clear if the permit intends to refer to 40 CFR § 112.8(c)(3). Also, neither § 112.1(b) nor 112.8(c)(3) appears to explicitly authorize BMPs in lieu of permit limits. Analytical sampling of the collected stormwater prior to or during discharge is not prohibited by either regulation. Please clarify.

Response: The Department agrees. Part II.A. 10 has been changed to “40 CFR § 112.8(b)(1). Please note that Part II, Section A, no. 5 lists the criteria for testing collected stormwater prior to discharge.

Comment 15 Part II.A.10 refers to a document that has not been found on ADEQ’s website. The January 26, 2000 (or most recent) version of the “ADEQ Guidelines for Reporting, Responding To, and Remediating Crude Oil, Salt Water, and Brine Spills” should be made available on-line. An ADEQ search for this document found a 1994 version of this document at <http://www.adeg.state.ar.us/downloads/webdatabases/solidwaste/permittedfacilities/gendocs/55713.pdf>. Please provide a web link to the latest version of this document in the final General Permit.

Response: The Department agrees. The ADEQ website has changed since the permit was publicly noticed, and all website links have been updated.

Comment 16 Part II.B.13.C has a permit application e-mail address. Does the Enforcement Branch have a separate e-mail address that could be used instead?

Response: All permit applications must be submitted to the Permits Branch of the Office of Water Quality by mail or email. The Enforcement Branch has email addresses located on the Department's webpage for compliance reporting and non-compliance reporting. These are not to be used for the submittal of permit applications.

Comment 17 Part II.B.14 has an incorrect regulatory citation and an incorrect penalty. It should refer to A.C.A. § 8-4-103(a)(2)(A)(iii) (i.e., "Purposely or knowingly make any false statement, representation, or certification in any document required to be maintained under this chapter or falsify, tamper with, or render inaccurate any monitoring device, method, or record required to be maintained under this chapter."). Per A.C.A. § 8-4-103(a)(2)(B), conviction thereof is a felony, not a misdemeanor, and is subject to up to five years in prison and/or \$50,000 in fines.

Response: The Department acknowledges this comment. We have changed this condition to reflect the requirements of Ark. Code Ann. § 8-4-103(a) Criminal Penalties which states (a).(1)(A) Any person that violates any provision of this chapter, that commits any unlawful act under it, or that violates any rule, regulation, or order of the Arkansas Pollution Control and Ecology Commission or the Arkansas Department of Environmental Quality shall be guilty of a misdemeanor. (B)(i) Notwithstanding any other provisions of Arkansas law, upon conviction that person shall be subject to:(a) Imprisonment for not more than one (1) year;(b) A fine of not more than twenty-five thousand dollars (\$25,000); or(c) Both such fine and imprisonment. (ii) For the purpose of fines only, each day or part of a day during which the violation is continued or repeated shall constitute a separate offense.

Comment 18 The language in Part II.B.20.A.2 should be added to the end of Part II.B.20.A.1. Part three would become two, and Part four would become three

Response: The Department agrees. These changes have been made to reflect this comment.

Part	Draft Permit	Final Permit	Comment #
I.A.1	<p><u>Class II Fluids (Salt Water)</u>”:</p> <p>Produced water and/or other fluids brought to the surface in connection with drilling, completion, or fracture treatments, workover or recompletion, and plugging of oil and natural gas wells; Class II or wells that are required to be permitted as water supply wells by the Commission; enhanced recovery operations; or natural gas storage operations;</p> <p>or</p> <p>Produced water and/or other fluids from (A) above, which prior to re-injection have been used on site for purposes integrally associated to oil and natural gas well drilling, completion, or fracture treatments, workover or recompletion and plugging of oil and natural gas wells; Class II or wells that are required to be permitted as water supply wells by the Commission; enhanced recovery operations; or natural gas storage operations, or chemically treated or altered to the extent necessary to make them usable for purposes integrally related to oil and natural gas well drilling, completion, workover and plugging, oil and gas production, enhanced recovery operations, or natural gas storage operations, or commingled with fluid wastes resulting from fluid treatments outlined above, and including any other exempted oil and gas related fluids under the Resource Conservation and Recovery Act, provided the commingled fluid wastes do not constitute a hazardous waste under the Resource Conservation and Recovery Act;</p> <p>A permitted Class II UIC well in which Class II fluids are injected into zones not productive of oil and gas, and brine used to produce bromine, within the field boundary established by an order of the Commission for the production of liquid hydrocarbons or brine used to produce bromine, where the well is located or will be located, for the purpose of disposal of those fluids; or</p>	<p><u>“Class II Fluids (Salt Water)”</u>”:</p> <p>Produced water and/or other fluids brought to the surface in connection with drilling, completion, or fracture treatments, workover or recompletion, and plugging of oil and natural gas wells; Class II or wells that are required to be permitted as water supply wells by the AOGC; enhanced recovery operations; or natural gas storage operations; or</p> <p>Produced water and/or other fluids from (A) above, which prior to re-injection have been used on site for purposes integrally associated to oil and natural gas well drilling, completion, or fracture treatments, workover or recompletion and plugging of oil and natural gas wells; Class II or wells that are required to be permitted as water supply wells by the AOGC; enhanced recovery operations; or natural gas storage operations, or chemically treated or altered to the extent necessary to make them usable for purposes integrally related to oil and natural gas well drilling, completion, workover and plugging, oil and gas production, enhanced recovery operations, or natural gas storage operations, or commingled with fluid wastes resulting from fluid treatments outlined above, and including any other exempted oil and gas related fluids under the Resource Conservation and Recovery Act, provided the commingled fluid wastes do not constitute a hazardous waste under the Resource Conservation and Recovery Act; or</p>	5
B. 3. A. 1.	<p>An operator of a new facility eligible for coverage under this general permit must submit all items listed in the notification requirements in accordance with Part I. C. 1. A) of the permit in order to be covered by the terms and conditions of this general permit. The NOI must be submitted on forms developed and</p>	<p>A permitted Class II UIC well in which Class II fluids are injected into zones not productive of oil and gas, and brine used to produce bromine, within the field boundary established by an order of the AOGC for the production of liquid hydrocarbons or brine used to produce bromine, where the well is located or will</p>	7

	approved by ADEQ. A copy of the NOI form is available from the Department's website at the following address: http://www2.adeg.state.ar.us/water/branch_permits/nodischarge_permits/general_permits.htm	be located, for the purpose of disposal of those fluids; or	
II.B.3.A.2.	Only items listed in Part II. A. 1. require a permit fee to accompany a Notice of Intent in accordance with ADEQ Regulation No. 9, as amended. An annual fee will apply to all facilities covered under the general permit in accordance with Regulation 9, as amended.	Only items listed in Part II. A. 3. require a permit fee to accompany a Notice of Intent in accordance with ADP&EC Regulation No. 9, as amended. An annual fee will apply to all facilities covered under the general permit in accordance with Regulation 9, as amended.	8
I.B.3.A.2	Only items listed in Part II. A. 1. require a permit fee to accompany a Notice of Intent in accordance with ADEQ Regulation No. 9, as amended. An annual fee will apply to all facilities covered under the general permit in accordance with Regulation 9, as amended.	Only items listed in Part II. A. 3. require a permit fee to accompany a Notice of Intent in accordance with ADP&EC Regulation No. 9, as amended. An annual fee will apply to all facilities covered under the general permit in accordance with Regulation 9, as amended	9
I.B.6.	Facilities that are authorized under this permit, which undergo a change in ownership, facility name, or signatory authorization (i.e., a new cognizant official, responsible person, etc.), must submit a Permit Transfer form and a disclosure statement to the Director. A Permit Transfer form can be obtained from the General Permits Section of the Office of Water Quality of the ADEQ website at: www.adeg.state.ar.us/ .	Facilities that are authorized under this permit, which undergo a change in ownership, facility name, or signatory authorization (i.e., a new cognizant official, responsible person, etc.), must submit a Permit Transfer form and a disclosure statement to the Director. A Permit Transfer form can be obtained from the General Permits Section of the Office of Water Quality of the ADEQ website at: https://www.adeg.state.ar.us/water/permits/pdfs/water-permit-transfer-form.pdf	10
I.C.1.A.	A complete and accurate NOI (including supporting documents.	A complete and accurate NOI (including supporting documents).	11
I.C.1.C.	The Notice of Intent may be obtained at the following address: http://www2.adeg.state.ar.us/water/branch_permits/nodischarge_permits/general_permits.htm	The Notice of Intent may be obtained at the following address: https://www.adeg.state.ar.us/water/permits/nodischarge/pdfs/sw/0000-wg-sw_noi.pdf	12
I.C.1.D.8.	A completed ADEQ disclosure statement. A copy of the disclosure statement form is available from the Department's website at the following address: http://www.adeg.state.ar.us/water/	A completed ADEQ disclosure statement. A copy of the disclosure statement form is available from the Department's website at the following address: https://www.adeg.state.ar.us/ADEQ_Disclosure_Statement.pdf	13
II.A.10.	Stormwater runoff discharged from the secondary containment shall be managed in accordance with Best Management Practices (BMPs) to control the quality of stormwater discharges associated with salt water storage authorized by this permit. Use of BMPs is authorized under 40 CFR 112.1(b) and 112.8(3) when the Permitting Authority finds numeric effluent limitations to be infeasible to carry out the purposes of the Clean Water Act.	Stormwater runoff discharged from the secondary containment shall be managed in accordance with Best Management Practices (BMPs) to control the quality of stormwater discharges associated with salt water storage authorized by this permit. Use of BMPs is authorized under 40 CFR 112.1(b) and 112.8(b)(1) when the Permitting Authority finds numeric effluent limitations to be infeasible to carry out the purposes of	14

		the Clean Water Act.	
II.A.10.	All spilled products and other spilled wastes must be immediately cleaned up and properly disposed as stated in the ADEQ Guidelines for Reporting, Responding To, and Remediating Crude Oil, Salt Water, and Brine Spills (Revised January 26, 2000).	All spilled products and other spilled wastes must be immediately cleaned up and properly disposed as stated in the ADEQ Guidelines for Reporting, Responding To, and Remediating Crude Oil, Salt Water, and Brine Spills (Revised January 26, 2000). http://www.adeg.state.ar.us/downloads/webdatabases/solidwaste/permittedfacilities/gendocs/55713.pdf .	15
II.B.14.	Ark. Code Ann. § 8-4-103, (a) (1) (B) (iii) states that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year, or a fine of not more than ten thousand dollars (\$10,000), or by both such fine and imprisonment.	Ark. Code Ann. § 8-4-103, (a) Criminal Penalties states that any person that violates any provision of this chapter, that commits any unlawful act under it, or that violates any rule, regulation, or order of the Arkansas Pollution Control and Ecology Commission or the Arkansas Department of Environmental Quality shall be guilty of a misdemeanor. (B)(i) Notwithstanding any other provisions of Arkansas law, upon conviction that person shall be subject to:(a) Imprisonment for not more than one (1) year;(b) A fine of not more than twenty-five thousand dollars (\$25,000); or(c) Both such fine and imprisonment. (ii) For the purpose of fines only, each day or part of a day during which the violation is continued or repeated shall constitute a separate offense.	17
II.B.20.A.2.	All applications, reports or information submitted to the Director shall be signed and certified. All permit applications shall be signed as follows: 1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: 2) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation: or 3) For a partnership or sole proprietorship: by a general partner or proprietor, respectively; or 4) The manager of one or more manufacturing, production, or operation facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit	A) All applications, reports or information submitted to the Director shall be signed and certified. All permit applications shall be signed as follows: 1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation: or 2) For a partnership or sole proprietorship: by a general partner or proprietor, respectively; or 3) The manager of one or more manufacturing, production, or operation facilities, provided,	18

	<p>duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.</p>	<p>the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.</p>	
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