



Individual Aquifer Protection Permit Hydrology Substantive Review Checklist

Permittee:	Inventory No.:
Reviewer:	LTF:
Today's Date	Checked By

Checklist instructions

This checklist is provided as a guideline for ADEQ staff in performing technical substantive reviews and to the applicant on what information ADEQ will need to review Aquifer Protection Permit applications. This checklist is designed to be easy to read and follow. It is intended to address the majority of applications submitted to ADEQ, but not every possible variation or situation. Please visit the APP website at <http://www.azdeq.gov/> to find program specific information including applications, rules, statutes, BADCT manuals, and other guidance information. This checklist does not supplant or supersede statutory or rule requirements and is not intended to be binding on the applicant or ADEQ staff.

If you have any questions or need assistance, please call ADEQ Groundwater Protection staff at 602 771-4999.

List of Documents Reviewed

List of documents reviewed:

Amendment Description

Amendment Description:



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General Requirements for (WWTP, Mining, and Industrial APP) Applications and Significant amendments	
Y: yes, meets the requirement; N: no, does not meet the requirement (see comment below); NA: does not apply	
	A202(A)(1) - Topographic map or other appropriate map of the facility location and contiguous land area, showing the following: <ul style="list-style-type: none"> Known use of adjacent properties; all known water well locations found within one-half mile of the facility; a description of well construction details and well uses, if available
Comment	
	A202(A)(2) - A facility site plan showing all property lines, structures, water wells, injection wells, dry wells and their uses, topography and the location of points of discharge (lat./long), all known borings (for numerous borings, a narrative description of the number and location of the borings is acceptable)
Comment	
	A202(A)(3) - The facility design plans including proposed or as-built design details and proposed or as-built configuration of basins, ponds, waste storage areas, drainage diversion features, or other engineered elements of the facility affecting discharge. When formal as-built plan submittals are not available, the applicant shall provide documentation sufficient to allow evaluation of those elements of the facility affecting discharge, following the demonstration requirements of A.R.S. § 49-243(B).
Comment	
	A202(A)(4)(a) - A summary of the known past discharge activities and the proposed facility discharge activities indicating the chemical, biological, and physical characteristics of the discharge;
Comment	
	A202(A)(4)(b) - A summary of the known past discharge activities and the proposed facility discharge activities indicating the rate, volume, and frequency of the discharge for each facility;
Comment	
	A202(A)(4)(c) - A summary of the known past discharge activities and the proposed facility discharge activities indicating the location of the discharge and a map outlining the pollutant management area described in A.R.S. §49-244(1)
Comment	
	A202(A)(6) - Proposed points of compliance for the facility based on A.R.S. §49-244. NOTE: For hazardous substance points of compliance, a pollution management area and the direction of groundwater flow should be included (A.R.S. §49-244.1.)
Comment	
	A202(A)(6)(a) – Demonstrate the facility will not cause or contribute to a violation of an Aquifer Water Quality Standard (AWQS) at the proposed point of compliance; or (see A202(A)(6)(b) below)
Comment	
	A202(A)(6)(b) – If an AWQS for a pollutants is exceeded in an aquifer at the time of permit issuance, no additional degradation of the aquifer relative to that pollutant and determined at the proposed point of compliance will occur as a results of the discharge from the proposed facility. In this case the applicant shall submit an Ambient Groundwater Monitoring Report that includes: data from eight or more rounds of ambient groundwater samples collected to represent groundwater quality at the proposed point of compliance and an AQL proposal for each pollutant that exceeds an AWQS.
Comment	
	A202(A)(8) – If required by ADEQ, a hydrogeologic study that defines the discharge impact area (DIA). The DIA is the potential areal extent of pollutant migration, as projected on the land surface, as the result of a discharge from a facility, for the expected duration of the facility. ADEQ may allow for an abbreviated hydrologic study or, if warranted, no study, based on the quantity and characteristics of the pollutants discharged, the methods of disposal, and the site conditions. (note – if a hydrogeologic study is not required none of the application requirements listed below from A202(A)(8) are applicable).
Comment	
	A202(A)(8)(a)(i) - The hydrogeologic study shall demonstrate that the facility will not cause or contribute to a violation of an AWQS at the applicable point of compliance; or (see A202(A)(8)(a)(ii))
Comment	
	A202(A)(8)(a)(ii) - If the AWQS for a pollutant is exceeded in an aquifer at the time of permit issuance, that no additional degradation of the aquifer relative to that pollutant and determined at the applicable point of compliance will occur as a result of the discharge from the proposed facilities
Comment	



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Based on the quantity and characteristics of pollutants discharged, methods of disposal, and site conditions, the Department may require the applicant to provide the following items (R18-9-A202(A)(8)(b)).	
	A202(A)(8)(b)(i) - A description of the surface and subsurface geology, including a description of all borings;
Comment	
	A202(A)(8)(b)(ii) - The location of any perennial, intermittent, or ephemeral surface water bodies;
Comment	
	A202(A)(8)(b)(iii) - The characteristics of the aquifer and geologic units with limited permeability, including depth, hydraulic conductivity, and transmissivity;
Comment	
	A202(A)(8)(b)(iv) - The rate, volume, and direction of surface water and groundwater flow, including hydrographs, if available, and equipotential maps;
Comment	
	A202(A)(8)(b)(v) - The precise location or estimate of the location of the 100-year flood plain and an assessment or the 100-year flood surface flow and potential impacts on the facility;
Comment	
	A202(A)(8)(b)(vi) - Documentation of the existing quality of the water in the aquifers underlying the site, including, where available, the method of analysis, quality assurance, and quality control procedures associated with the documentation;
Comment	
	A202(A)(8)(b)(vii) - Documentation of the extent and degree of any known soil contamination at the site;
Comment	
	A202(A)(8)(b)(viii) - An assessment of the potential of the discharge to cause the leaching of pollutants from surface soils or vadose zone materials;
Comment	
	A202(A)(8)(b)(ix) - For an underground water storage facility, an assessment of the potential of the discharge to cause the leaching of pollutants from surface soils or vadose zone materials or cause the migration of contaminated groundwater;
Comment	
	A202(A)(8)(b)(x) - Any changes in groundwater quality expected because of the discharge;
Comment	
	A202(A)(8)(b)(xi) - A description of any expected changes in the elevation or flow directions of the groundwater expected to be caused by the facility;
Comment	
	A202(A)(8)(b)(xii) - A map of the facility's discharge impact area; As defined in A.R.S. §49-201(13) "Discharge Impact Area" means the potential areal extent of pollutant migration, as projected on the land surface, as the result of a discharge from a facility." As stated in A.A.C. R18-9-A202(A)(8), The hydrogeologic study shall define the discharge impact area for the expected duration of the facility.
Comment	
	A202(A)(8)(b)(xiii) - The criteria and methodologies used to determine the discharge impact area.
Comment	
	A202A(9) – A detailed proposal indicating the alert levels, discharge limitations, monitoring requirements, compliance schedules, and temporary cessation or plans the applicant will use to satisfy the requirements of the APP rules and statutes.
Comment	



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Technical Capability for all Aquifer Protection Permits and Applications

Yes/No/NA	Y: yes, meets the requirement; N: no, does not meet the requirement (see comment below); NA: does not apply
A202(B) - Demonstrate the ability to maintain technical capability to carry out the terms of the APP. The following information shall be submitted for each person principally responsible for designing, constructing or operating the facility:	
	A202(B)(1) - Relevant licenses or certifications ¹ <ul style="list-style-type: none"> Geologist (BTR website for registrants http://www.btr.state.az.us)
Comment	
	Professional training relevant to design, construct, or operate facility
comment	
	Work experience relevant to the design construction, or operation of the facility
comment	

Closure and Post-closure Plan/Strategy and Cost Estimates (WWTP, Mining and Industrial)

Y: yes, meets the requirement; N: no, does not meet the requirement (see comment below); NA: does not apply	
A202(A)(10) Closure & Post-Closure Plan or Strategy and A201(B)(5) Closure and Post-Closure Cost Estimates should be evaluated using the checklist: Closure and Post-Closure Plan/Strategy and Cost Estimate Checklist, which is available on the ADEQ website at: http://www.azdeq.gov/node/542	
comment	

Useful References

- [Mining BADCT Manual](#)
- [A Screening Method to Determine Soil Concentrations Protective of Groundwater Quality \(September 1996\)](#)

Statutes and Rules

- Statutes:
- [Point of Compliance](#)
- Rules:
- [Aquifer Water Quality Standards](#)
 - [Aquifer Protection Permit rules](#)

¹ Except as exempted by A.R.S. § 32-144.A.7 (employees of mining companies), professional documents, such as reports, plans and specifications, are to be signed by an Arizona registered engineer or geologist (A.R.S. § 32-125).