

Class II 1425 Guidance 19 Crosswalk Template

SDWA	Section	Guidance 19 Background	Subsection	Subsection Header	Guidance 19 Criteria	State Regulatory Language and Reference	Effectiveness Determination (has the state addressed the criteria effectively, y/n; and explanation if necessary)
1421 (b)(1)(A)	5.1 a/5.2	Section 1421(b)(1)(A) requires that an approvable State program prohibit any underground injection in such State which is not authorized by permit or rule. The question of whether a State program prohibits unauthorized Class II injections is a function of the State's statutory and regulatory authority. A determination of whether the State program meets this condition should be made from a review of the coverage and scope of the program, the statement of legal authority submitted by the State, and of the statutes and regulations themselves. One important consideration is whether the State has an appropriate formal mechanism for modifying permits in cases where the operation has undergone significant change.	n/a	n/a			

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1421(b)(1)(B)	5.1 b/5.3	<p>Section 1421(b)(1)(B) requires that an approvable State program shall require that:</p> <p>1. the applicant for a permit must satisfy the State that the underground injection will not endanger drinking water sources; and</p> <p>2. no rule may be promulgated which authorizes any underground injection which endangers drinking water sources. The determination of whether a State program is adequate in requiring that the applicant demonstrate that the proposed injection will not endanger drinking water sources turns on two elements: (1) whether the State program places on the applicant the burden of making the requisite showing; and</p> <p>(2) the extent of the information the applicant is required to provide as a basis for the State agency's decision. Whether the burden of making the requisite showing is on the applicant should be determined from the State's description of its permitting process. If the necessary information is available in State files, the Director need not require it to be submitted again. However, as a matter of principle, the applicant should not escape ultimate responsibility for assuring that the information about his operation is accurate and available. One consideration in this regard is whether the well operator has a responsibility to inform the permitting authority about any material change in his operation, or any pertinent information acquired since the permit application was made.</p> <p>With regard to the extent of the information to be considered by the Director, the State program should require an application containing sufficiently detailed information to make a knowledgeable decision to grant or deny the permit. Such information should include:</p>	n/a	Site Background			
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			5.3 a	AoR Map	A map showing the area of review and identifying all wells of public record penetrating the injection interval		
			5.3 b	AoR Evaluation	A tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data should include a description of each well's type, construction, date of drilling, location, depth, record of plugging and/or completion and any other information the Director may require.		
			5.3 c	Operations Monitoring	Data on the proposed operation, including: 1.) average and maximum daily rate and volume of fluids to be injected, 2.) average and maximum injection pressure, and 3.) source, and an appropriate analysis of injection fluid if other than produced water, and compatibility with the receiving formation.		
			5.3 d	Confining and Injection Formations	Appropriate geological data on the injection zone and confining zones including lithologic description, geological name, thickness, and depth		
			n/a	Other Formations			
			5.3 e	USDWs	Geologic name, and depth to bottom of all underground sources of drinking water which may be affected by the injection		
			5.3 f	Construction Plans	Schematic drawings of the surface and subsurface construction details of the system		
			5.3 g	Injection Operations	Proposed stimulation program		
			5.3 h	Well Logs	All available logging and testing data on the well		
5.3 i	Corrective Action	The need for corrective action on wells penetrating the injection zone in the Area of Review					
n/a	Plugging and Abandonment Plan						

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1421(B)(1)(C)	5.1 c/5.4	Section 1421(b)(1)(C) requires that an approvable State program include inspection, monitoring, recordkeeping, and reporting requirements. This section of the SDWA requires that an approvable State program contain elements for inspection, monitoring, recordkeeping and reporting. The adequacy of the State program in these respects may be assessed with the use of the following criteria.	5.4 a	Effective Inspection	An approvable State program is expected to have an effective system of field inspection which will provide for: 1. Inspections of injection facilities, wells, and nearby producing wells; and 2. The presence of qualified State inspectors to witness mechanical integrity tests, corrective action operations, and plugging procedures.		
			5.4 a	Inspector Witnessed MIT	An adequate program should ensure that, at a minimum, 25% of all mechanical integrity tests performed each year will be witnessed by a qualified State inspector.		
			5.4b1	M, R&R: Authority	The Director should have the authority to sample injected fluids at any time during injection operation.		
			5.4b2	M, R&R: Operations Monitoring	The operator should be required to monitor the injection pressure and injection rate of each injection well at least on a monthly basis with the results reported annually.		
			5.4 b3	M,R&R: Noncompliance Notification	The Director should require prompt notice of mechanical failure or downhole problems in injection wells.		
			5.4 b4	M,R&R: MI Record Retention	The State should assure retention and availability of all monitoring records from one mechanical integrity test to the next (i.e., 5 years).		
			n/a	M, R&R: Operator Annual Report			
			n/a	M, R&R: State Non-compliance and Program Reporting			
			n/a	M R&R: Public Notice			
			n/a	M R&R: enforcement			

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1421 (b)(1)(D)	5.1 d/5.5	1421(b)(1)(D) requires that an approvable State program apply to: (1) underground injections by Federal agencies; and (2) underground injections by any other person, whether or not occurring on property owned or leased by the United States. An approvable State program must demonstrate the State's authority to regulate injection activities by Federal agencies and by any other person on property owned or leased by the United States. The adequacy of the State's authority in these regards may be assessed on the basis of the program description and statement of legal authority submitted by the State.					
1425(a)	5.1e/5.6		5.6 a	Permitting Process	Section 3.3 b of the Program Description outlines the major elements of the permitting process. The listing of these considerations should not be viewed as Federally imposed minimum policy, but rather as an outline of the information which will be necessary for EPA to evaluate the effectiveness of the State's permitting process.		
			5.6 b1	Siting	Requirements should be designed to assure that disposal zones are hydraulically isolated from USDWs. Such isolation may be shown by the applicant, or data, on file with the State which would be analyzed by qualified State Staff		
			5.6 b2a	Construction to Prevent Fluid Migration	All newly drilled Class II wells must be cased and cemented to prevent movement of fluids into USDWs		
			5.6 b2a	Criteria for Casing and Cementing Requirements	Casing and cementing requirements based on: the depth to the base of the USDW, the nature of the fluids to be injected, and the hydrologic relationship between the injection zone and the base of the USDW		
			5.6 b2b	MI Demonstration for Converted Wells	All newly converted Class II wells are required to demonstrate MI		
			n/a	Well Construction Monitoring			

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			5.6 b3a	Operations Criteria	Adequate operating requirements should establish a maximum injection pressure for a well which assures that the pressure in the injection during injection does not initiate new fractures or propagate existing fractures in the confining zone. Limitations on injection pressure should also preclude the injection from causing movement of fluids into a USDW.		
			5.6 b3a	Pressure Limitation	Acceptable methods for establishing pressure limitations: calculated fracture gradients, injectivity tests to establish fracture pressure, or other compelling geologic, hydrologic, or engineering data		
			5.6 b3b	Detect/Remedy	An effective State program should have the demonstrated ability to detect and remedy system failures discovered during routine operation or monitoring so as to mitigate endangerment to USDWs		
			5.6 b4a	Plugging and Abandonment Elements	Plugging and Abandonment requirements should be reviewed for the presence of the following elements: A. Appropriate mechanisms available in the State program to ensure the proper plugging of wells upon abandonment		
			5.6 b4b	Plugging and Abandonment Goals	B. All Class II wells are required upon abandonment to be plugged in a manner which will not allow the movement of fluids into or between USDWs		
			5.6 b4c	Financial Responsibility Instrument	C. Operators are required to maintain financial responsibility in some form for the plugging of their injection wells		
			5.6 b5	Area of Review	An effective State program is expected to incorporate the concept of an area of review defined as a radius of not less than ¼ mile from the well, field, or project		

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			5.6 b5	Area of Review ZEI	A state program may substitute a concept of a zone of endangering influence (ZEI). The ZEI should be determined for the estimated life of the well, field, or project through the use of appropriate calculation, formula, or mathematical model that takes the relevant geologic, hydrologic, engineering, and operational features of the well, field, or project into account.		
			5.6 b6	Corrective Action in AoR	An approvable State program is expected to include the authority to require the operator to take corrective action on wells within the AoR or ZEI		
			5.6 b6a	Corrective Actions	A corrective action may include any of the following types of requirements: recementing; workover; reconditioning; or plugging or replugging.		
			5.6 b6b	Discretionary Corrective Action Requirements	A State program may provide the Director the discretion to specify the following types of requirements in lieu of immediate corrective action: permit conditions which assure a negative hydraulic gradient at the base of the USDW at the well in question; monitoring program (i.e. monitoring wells completed to the base of the USDW within the ZEI); or periodic testing to determine if fluid movement outside the injection interval at other wells with the AoR. If monitoring indicates potential endangerment of any USDW, corrective action must be taken.		
			5.6 b6c	Director's Discretion	In cases where Director has demonstrable knowledge which assures that wells within the ZEI or AoR will not serve as conduits for fluid migration into a USDW, the Director may have the discretion to permit an operation without requiring corrective actions.		
			5.6 b7	MI Demonstration Requirement	An approvable state program is expected to require the operator to demonstrate the MI of a new injection well prior to operation and of all injection wells periodically; at least once every five years.		

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			5.6 b7a	MI Definition	An injection well has MI if: i. there is no leak in the casing, tubing, or packer; and ii. There is no significant fluid movement into a USDW through vertical channels adjacent to the wellbore.		
			5.6 b7b	MI Test Details	Tests to demonstrate the absence of significant leaks: a pressure test with liquid or gas; the monitoring of annulus pressure in those wells injecting at a positive pressure, following an initial pressure test; or all other tests or combinations considered effective by the Director.		
			5.6 b7c	MI Test Details	Tests to demonstrate the absence of fluid movement in vertical channels adjacent to the wellbore: cementing records; tracer surveys; noise logs; temperature surveys; or any other test or combination of test considered effective by the Director		
			5.6 b7d	Alternate MITs	If the state allows or specifies alternative tests, the program description should supply sufficient information so that the usefulness and reliability of such tests in the proposed circumstance may be assessed.		
			5.6 c	Surveillance	See section 5.4		
			5.6 d	Enforcement	In assessing a State's enforcement program, EPA will consider not whether a State has all or any particular enforcement tools but whether the State's program, taken as a whole, represents an effective enforcement effort.		
			5.6 e	Public Participation	One factor to be used by EPA in assessing the "effectiveness" of a State program is the degree to which it assures the public an opportunity to participate in major regulatory decisions. It is assumed that most States already have legislation that governs public participation in State decision-making and defines such processes as appeals, etc.		
			5.6 e1a	Public Notice	The State may give public notice or it may require the applicant to give notice		

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			5.6 e1b	Posting Notice	The method of notice should be adequate to bring the matter to the attention of interested parties and in particular, the public in the area of the proposed injection. This may involve one or more of the following: i. Posting; ii. Publication in an official state register; iii. Publication in a local newspaper; iv. Mailing to a list of interested persons; or v. Any other effective method that achieves the objective.		
			5.6 e1c	Notice Content	An adequate notice should: i. Provide an adequate description of the proposed action; ii. Identify where an interested party may obtain additional information. This location should be reasonably accessible and convenient for interested person; iii. State how a public hearing may be requested; and iv. Allow for a comment period of at least 15 days.		
			5.6 e2	Public Hearing	The State program should provide opportunity for a public hearing if the Director finds, based upon requests, a significant degree of public interest. A. The Director may hold a hearing of his own motion and give notice of such hearing with the notice of the applications B. If a public hearing is decided upon during the comment period, notice of public hearing should be scheduled no sooner than 15 days after notice.		
			5.6 e3	Response to Comments	The final State action on the permit application should contain a "response to comments", which summarizes the substantive comments received and the disposition of the comments		