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A GUIDE TO THE
UNDERGROUND INJECTION CONTROL PROGRAM
(C-2)

Office of Drinking Water
Environmental Protection Agency
Washington, D.C.

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[Inside Front Cover]

ABOUT THE PROPOSED REGULATIONS

This Guide discusses the significant features of EPA's revised proposals for the Underground Injection Control program under the Safe Drinking Water Act. The proposed technical criteria and standards were published on April 20, 1979, in the Federal Register (44 FR 23738) to be codified as Part 146 of Title 40, Code of Federal Regulations. Other pertinent requirements have been proposed as part of the Consolidated Permit Regulations intended as revisions to 40 CFR Parts 122, 123 and 124.

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I. THE UIC PROGRAM IN PERSPECTIVE

The Concern for Ground Water

Most areas of the United States are underlain by geological formations or strata that are capable of yielding usable quantities of water. Such geological formations are called aquifers.

People have long relied on aquifers as the source of high-quality water. Today, about half of the American population uses ground water for its domestic needs.

In the drier areas of the country, aquifers are often the only source of water available. National reliance on ground water is expected to increase as the consumption and usage of water increase in the future.

Ground water is also a vital link in the water cycle. Aquifers are replenished by rainfall or other surface water percolating through the soil. In turn, ground water supplies the base flow of many streams and feeds lakes through underground springs.

Recent years have seen a growing concern for the quality of ground water. Pollutants in surface waters or substances deposited on the soil (e.g., pesticides and fertilizers) may be carried into aquifers in the replenishment process. The land disposal of wastes (e.g., into land fills, surface impoundments and injection wells) can also cause contaminants to enter ground water.

Injection wells are a major problem in this regard. It is estimated that perhaps as many as 500,000 injection wells are in operation nationwide. These wells involve a broad variety of practices from beneficial purposes (e.g., aquifer recharge) to the *

production of oil, gas and minerals, to the disposal of toxic and hazardous wastes.

The contamination of ground water is a matter of grave concern. Ground water is usually assumed to be of high quality and is often used with little or no treatment. Contamination is usually discovered when the consumer is taken ill and, in many cases, the only practical solution is to search for another source. Because of the slow movement of ground water, it may be decades or even centuries before the aquifer is once more usable. In some cases, the contamination can never be reversed and the resource may be lost forever. Finally, the effort to clean up the nation's surface waters is hampered if the base flow of streams is already contaminated.

Congress Acts

Congress recognized these potential threats to ground water when, in the Safe Drinking Water Act of 1974 (P.L. 93-523), it instructed the Environmental Protection Agency (EPA) to establish a national program to prevent underground injections which endanger drinking water sources. More specifically, the Safe Drinking Water Act (SDWA) requires EPA to:

- . Publish minimum national requirements for effective State Underground Injection Control (UIC) programs.
- . List States that need UIC programs.
- . Make grants to States for developing and implementing UIC programs.
- . Review proposed State programs and approve or disapprove them.
- . Promulgate and enforce UIC programs in

listed States if the State chooses not to participate or does not develop and operate an approvable program.

Several points are worth noting about the statutory mandate. First, the SDWA was intended to head off what Congress perceived as an emerging problem. The committee report accompanying the Act (H. Rept. 93-1185, p. 32) makes clear that no burden is laid on EPA or the State to prove actual contamination before establishing regulations or enforcing them. Second, UIC is clearly to remain a State program. States are expected to assume primary responsibility for fashioning and operating effective programs in their States. Federal facilities are subject to applicable State programs. EPA is required to step in only if a State chooses not to participate in the program or fails to administer its program effectively. EPA also has direct responsibility on Indian lands. Third, Congress enjoined EPA to observe three provisos in establishing regulations. The regulations:

- . Are not to interfere with or impede oil and gas production unless necessary to protect underground sources of drinking water.
- . Are not to disrupt effective existing State programs unnecessarily.
- . Are to take local variations in geology, hydrology and history into account.

Background of the Reproposed Regulations

EPA proposed a set of UIC regulations for public comment on August 31, 1976 (41 Federal Register 36730). Almost 500 comments were received from the public and other interested

parties. In response to the many helpful suggestions, EPA undertook an extensive effort to acquire additional information on the practice and economics of well injection.

During this period, Congress amended the Act (P.L. 95-190, November 16, 1977) and added several new requirements. Moreover, EPA decided to consolidate the procedural requirements for several of its major permit programs, including the UIC program; the Hazardous Waste Management (HWM) program under the Resource Conservation and Recovery Act (RCRA); and the National Pollutant Discharge Elimination System (NPDES) or Dredge and Fill program under the Clean Water Act (CWA).

Thus, public comments, further study, amended legislation and internal management improvements are the principal foundations of the revised UIC program proposals.

II. MAJOR CONCEPTS OF THE UNDERGROUND INJECTION CONTROL PROGRAM

Congress intended the UIC program to protect not only the ground water which already serves as a source of drinking water but also the ground water that could potentially serve as a source of drinking water in the future. The regulations propose, therefore, that all aquifers or portions of aquifers (See Figure 1 for a definition of the more important technical terms) currently serving as drinking water sources be designated for protection. Furthermore, any other aquifer or portion of it which is capable of yielding water containing 10,000 or fewer milligrams per liter of total dissolved solids should also be designated. However, not all underground water sources are suitable for providing drinking water. Some aquifers are used for producing minerals, oil and gas, or geothermal energy. Others are so

contaminated or located in such a manner that recovery of water for drinking purposes is neither economically practical nor technologically feasible. Such sources need not be designated unless they already serve as sources of drinking water.

FIGURE 1

Significant Terms Used in the
UIC Program Regulations

Aquifer - any geologic formation which is capable of yielding usable quantities of ground water.

Well injection - the emplacement of fluids into the ground (except drilling muds and similar materials used in well construction) through a bored, drilled, driven or dug well.

Fluids - materials or substances which flow or move, whether semi-solid, liquid, sludge, or any other form or state.

Mechanical integrity - a general standard for injection wells which signifies that there is no: (1) significant leakage in the well's casing, tubing or packer; and (2) significant movement of fluids between the outermost casing and the well bore.

Migration of fluids - the movement of fluids from the well or the injection zone into underground sources of drinking water.

Area of review - the area on the surface surrounding an injection well within which all wells that penetrate the injection zone must be reviewed and, if necessary, repaired. It may be defined in terms of a fixed radius of not less than 1/4 mile from the injection well. Alternatively, the area of review may be computed by the use of a mathematical formula which predicts the lateral distance over which the incremental pressure generated by the injection may cause the upward migration of fluids from the injection zone through faults, improperly abandoned wells, or improperly completed producing wells.

Potential Pathways of Contamination

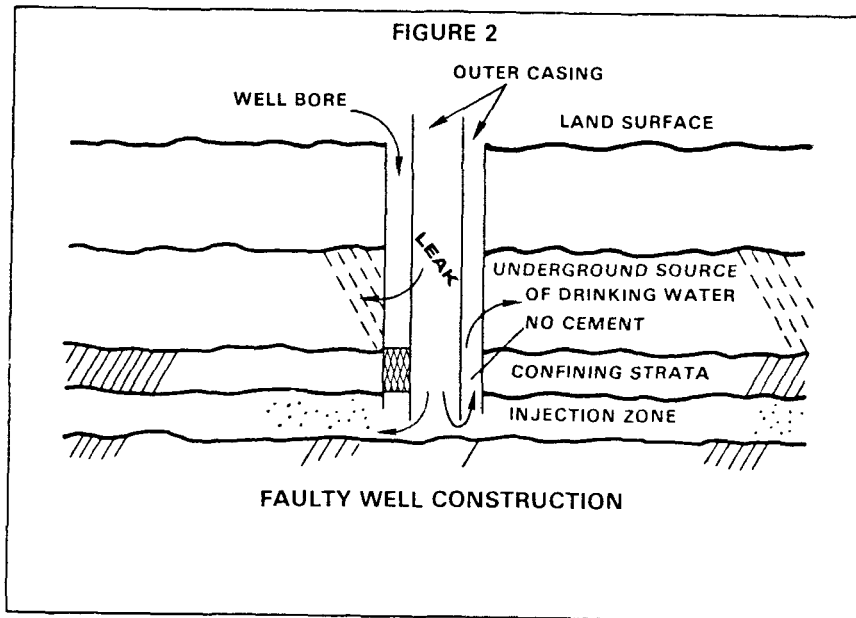
The basic concept of the proposed UIC program is to prevent the contamination of underground sources of drinking water by keeping injected fluids within the well and in the intended injection zone. There are five major ways in which injection practices can cause fluids to migrate into underground drinking water sources. The following discussion describes each pathway and summarizes the technical requirements proposed in the regulations to prevent migration through that pathway.

Pathway - Faulty Well Construction

Leaks through the well casing or fluid forced back up between the well's outer casing and the well bore, as illustrated in Figure 2.

Preventive Requirements

The regulations require adequate casing to protect drinking water sources, and cementing to isolate the injection zone. The absence of significant leaks and fluid movement in the well bore must be demonstrated initially and every five years thereafter.

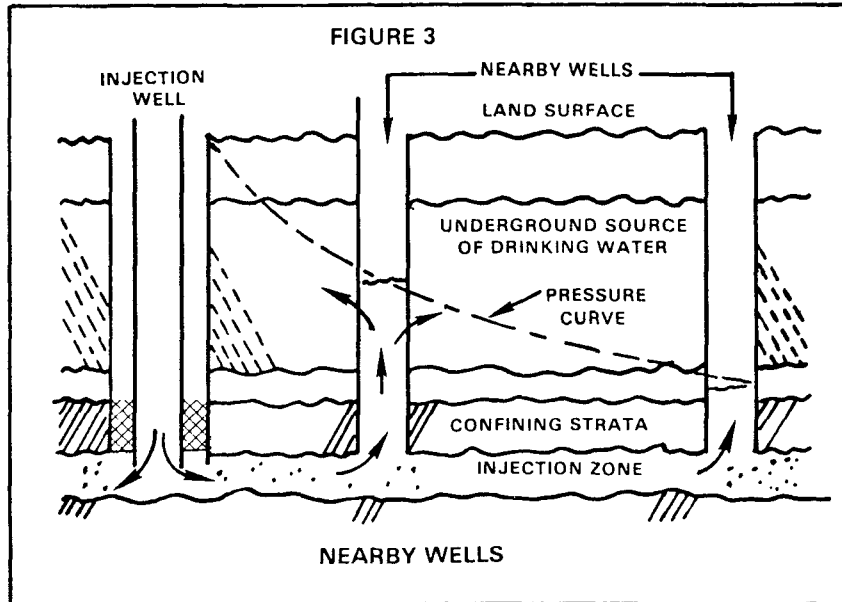


Pathway - Nearby Wells

Fluids from the pressurized area in the injection zone may be forced upward through nearby wells that penetrate the zone of endangering influence, as illustrated in Figure 3.

Preventive Requirement

Wells that penetrate the injection zone in the zone of endangering influence must be reviewed to assure that they are properly completed or plugged. Corrective action must be taken if they are not completed or plugged to prevent fluid migration. Newly abandoned wells must be plugged to conform with EPA or State procedures.

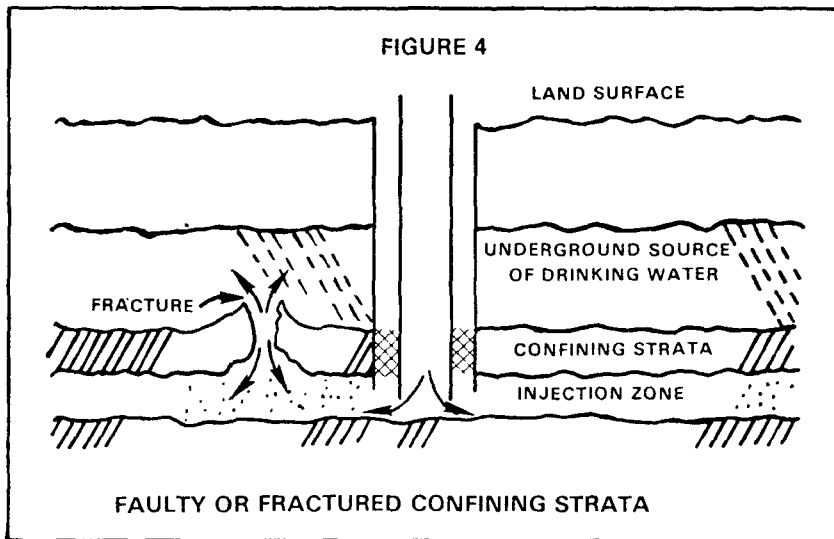


Pathway - Faulty or Fractured
Confining Strata

Fluids may be forced upward out of the pressurized area through faults or fractures in the confining beds, as illustrated in Figure 4.

Preventive Requirements

Wells must generally be sited so that they inject below a confining bed that is free of known open faults or fractures. Injection pressure must be controlled so that fractures are not propagated in the injection zone or initiated in the confining bed.

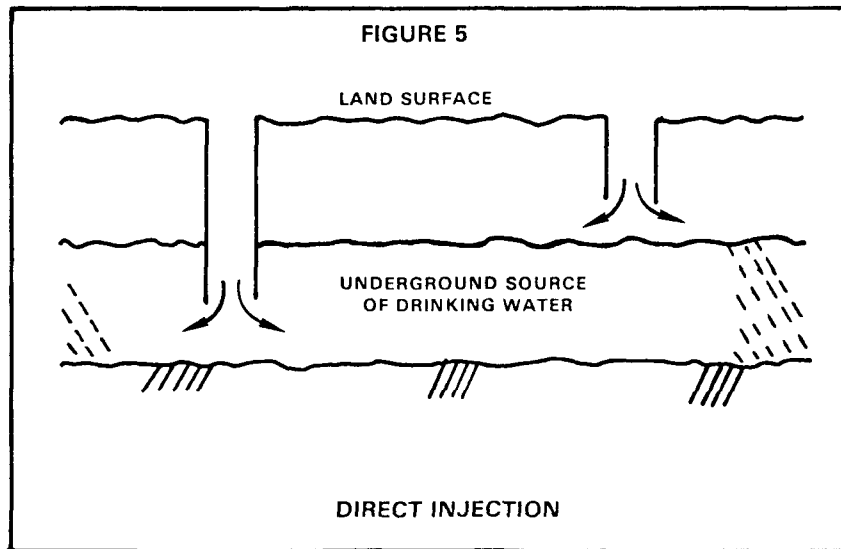


Pathway - Direct Injection

Wells may be designed to inject into or above underground sources of drinking water, as illustrated in Figure 5.

Preventive Requirement

Wells injecting hazardous materials into or above underground sources of drinking water would be illegal: new ones would be prohibited, and old ones are to be phased out in three years. Wells that inject non-hazardous materials will be regulated in the future based on recommendations to be formulated by the States.

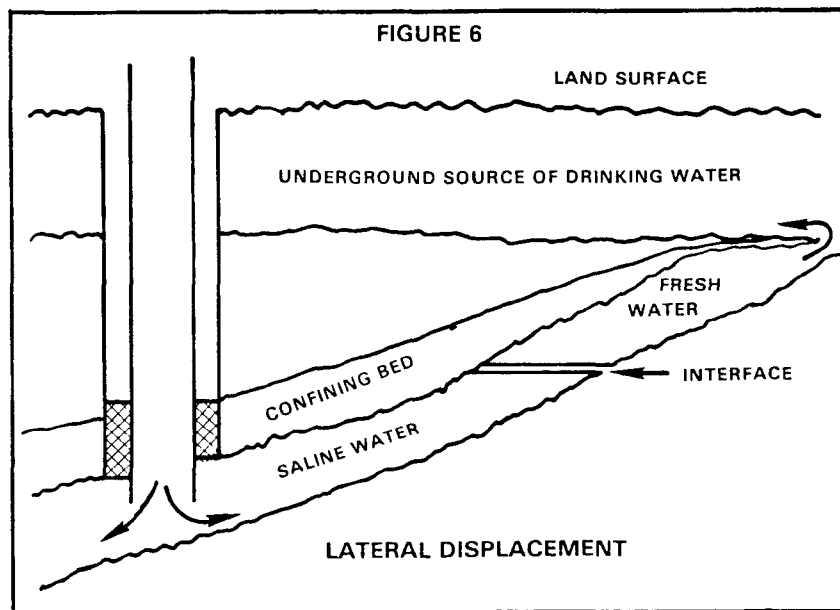


Pathway - Lateral Displacement

Fluid may be displaced from the injection zone into hydraulically connected underground sources of drinking water, as illustrated in Figure 6.

Preventive Requirement

The proximity of injection wells to underground sources of drinking water will be considered in future siting of such wells. Well operators will be required to control injection pressure and conduct other monitoring activities to prevent the lateral migration of fluids illustrated in Figure 6.



Requirements for Injection Well Classes

To implement its proposed technological controls, EPA categorized well injection activities into five classes defined in Figure 7. Each class includes wells with similar functions and construction and operating features so that technical requirements can be applied consistently to the class. A brief summary of the general underground injection controls proposed for each class are highlighted in Figure 8.

FIGURE 7

FIVE CLASSES OF INJECTION WELLS

- Class I wells are those used to inject industrial, nuclear, and municipal wastes beneath the deepest stratum containing an underground drinking water source.
- Class II wells are used to dispose of fluids which are brought to the surface in connection with oil and gas production, to inject fluids for the enhanced recovery of oil or gas, or to store hydrocarbons.
- Class III wells are those used to inject fluids for the solution mining of minerals, for in situ gasification of oil shale and coal, and to recover geothermal energy.
- Class IV wells are those used by generators of hazardous wastes or by owners and operators of hazardous waste management facilities to inject into or above strata that contain underground drinking water sources.
- Class V wells include all wells not incorporated in Classes I-IV. Typical examples of such wells are recharge wells and air conditioning return flow wells.

FIGURE 8

TYPE OF CONTROLS APPLICABLE TO INJECTION WELL CLASSES

TYPE OF CONTROL	CLASS I	CLASS II	CLASS III	CLASS IV	CLASS V
AREA OF REVIEW	Yes	New Wells	Yes	N/A	No
MECHANICAL INTEGRITY REQUIREMENTS	Yes	Yes	Yes	N/A	No
CONSTRUCTION REQUIREMENTS	Strict	Flexible	Moderate	Banned	To be Defined
MONITORING	Continuous	Periodic	Continuous	Varied	To be Defined
REPORTING	Quarterly	Annual	Quarterly	Quarterly	N/A
FORM OF REGULATION	By Permit	By Rule or Permit	By Permit	By Rule	By Rule

Requirements for Class I

Class I wells are likely to inject potentially dangerous fluids, and will, therefore, have to meet strict construction and operating requirements.

Class I wells must inject into strata that are below the deepest underground source of drinking water and must have an adequate confining layer above the injection zone. All Class I wells must be cased and cemented to prevent fluid migration and must inject through tubing with a suitable packer set immediately above the injection zone (or an equivalent alternative).

Technical integrity must be demonstrated initially and every five years thereafter, and corrective action must be taken on improperly plugged or completed wells within the area of review.

Class I well operators are required to monitor continuously and measure volumes, as well as annular pressures. Class I operators must also test the composition of injected fluids periodically and provide the permitting authority with quarterly operating reports.

Requirements for Class II

Requirements for Class II wells (those injection wells associated with oil and gas production) have been fashioned in light of the congressional injunction that the UIC regulations are not to interfere with or impede oil and gas production unless necessary to protect underground drinking water sources.

These proposed regulations attempt to balance measures necessary for the protection of the environment against burdens imposed on the regulated community.

Class II injection wells are to have casing and cementing adequate to protect underground sources of drinking water. However, wells in existing injection fields need only meet the standards historically applicable to that field. All Class II wells will also have to demonstrate mechanical integrity initially and every five years thereafter. However, only the applicants for new Class II permits must review nearby wells in the area of review and take corrective action on those improperly completed or plugged.

Operators of Class II wells are subject to limitations on the pressure and rate of injection. They must also monitor the injection pressure and volume, and the quality of the injection fluids at intervals depending on the type of operation. Annual reports to the control authority would be required.

Class II wells would also be subject to a special requirement. After the first full year of program operation, the requirements for Class II, especially those for area of review and mechanical integrity, will be reviewed to assess their appropriateness.

Requirements for Class III

Construction, monitoring, and reporting requirements for these wells will resemble those for Class I wells. Class III wells must be cased and cemented to prevent fluid migration. All Class III wells must comply with area of review requirements and demonstrate mechanical integrity. Class III wells will have the same monitoring requirements as Class I wells, except that more frequent monitoring will be required of drinking water supply wells adjacent to the injection sites. The Agency has considered easing requirements for some Class III wells (e.g., Frasch process wells). The Preamble to proposed Part 146 discusses these in detail.

Requirements for Class IV

Existing Class IV wells used by generators of hazardous waste and operators of hazardous waste management facilities will be closed as soon as possible, but in no event later than three years from the effective date of the program. No new Class IV wells will be authorized or permitted. EPA considers these wells to be a significant danger to underground drinking water sources.

Operators of Class IV wells will be required to monitor injected fluid characteristics and volumes, as required for hazardous wastes under the Resource Conservation and Recovery Act. Weekly monitoring of the impact of injections on drinking water supply wells will also be .

necessary. Class IV well operators must submit quarterly reports of operating results and immediate reports of changes in the characteristics of water supply wells in the vicinity of Class IV wells.

Requirements for Class V

At present EPA has too little information on the extent, operation, and impact of Class V wells to propose a suitable regulatory approach. The proposed regulation, therefore, would require States to conduct an assessment of such wells and submit recommendations to EPA within two years. Specific regulatory requirements will be fashioned after the completion of the assessments.

In the meanwhile, States are required to take immediate action on any Class V well that poses a significant risk to human health.

The Cost Impact on Industry and Government

Over the first five years of the program, total costs of compliance are expected to be \$808 million. Of this, \$772.5 million will fall on well owners/operators, and \$35.3 on States. On the average, there costs will be \$154.5 million for well owners/operators and \$7 million for States each year in the first five years.

Some costs (e.g., repair of a leaky well) will only have to be incurred once. There non-recurring costs total \$677.5 million or \$135.5 million annually. Other activities will have to be performed repeatedly (e.g., monitoring and reporting). Recurring costs total \$130.3 million or \$26 million annually.

It is important to note that the cost estimates are largely driven by the size of the environmental problem, i.e., the number of

faulty wells. These costs estimate that about \$601 million or \$120 million annually will have to be spent to take corrective action on an estimated 21,000 wells. If the number of faulty wells turns out to be higher or lower, the costs will vary as well.

Only \$207 million over five years or \$41 million annually represent "fixed" costs -- the costs of permitting, monitoring, reporting and enforcing.

FIGURE 9

SUMMARY OF FIVE-YEAR INCREMENTAL COSTS OF UIC REGULATION¹
(thousands of 1977 dollars)

	<u>Non-recurring</u>	<u>Recurring</u>	<u>Total</u>
<u>Industry</u>			
Class I	2,300	290	2,590
Class II	642,770	3,820 ²	646,590 ²
Class III	2,851	520	3,371
Class IV	<u>6,000</u>	<u>114,000</u>	<u>120,000</u>
Subtotal	653,921	118,630	772,551
<u>State</u>			
Class I	870	4,075	4,945
Class II	12,097	6,491 ²	18,588 ²
Class III	509	1,150	1,659
Class IV	2,900	--	2,900
Class V	<u>7,200</u>	<u>--</u>	<u>7,200</u>
Subtotal	23,576	11,716	35,292
TOTAL	677,497	130,346	807,843

¹ Numbers show maximum of ranges for all but Class II wells.

² Includes reporting costs for hydrocarbon storage wells.

III. Permits and Rules - Tools for Regulation

Under the Act, EPA has the discretion to specify whether the minimum national requirements are to be applied, through rules or permits. A rule is a law, ordinance or regulation that sets forth the standards and conditions under which an activity may be conducted. A permit is a specific authorization to an individual to carry on an activity under the conditions and limitations specified in the permit.

Each method of control is appropriate in certain situations. Although the requirements imposed are equally enforceable under either method, permits are generally considered to make possible a greater degree of control. On the other hand, permits are more resource and time intensive since they require: (1) the individual to file an application containing information about his proposed activity; (2) the effective participation of the public in the review process; and (3) State or EPA personnel to review, write and process each permit.

In the UIC program EPA proposes to specify the use of permits, permanent rules and temporary rules in different situations. These are minimum requirements and States may choose to adopt stricter standards.

Who Must Obtain a Permit

Owners/operators of Class I, Class II (except existing enhanced recovery and existing hydrocarbon storage), and Class III wells must obtain a permit to inject. New wells (those that begin to inject after the effective date of a program in a State) must be authorized by a permit before injection may begin. For existing wells, the

permitting authority (State Director or EPA) will develop a schedule not to exceed five years, based on appropriate priorities, for issuing or reissuing the permits. Until the application of the owner/operator of an existing well has been processed, the injection may be authorized by a rule.

A permit may be sought either for an individual well or for a group of wells in an area. An area permit may be issued for a group of wells if they are:

- . Under the control of a single individual.
- . Within a single field, project or site within a State.
- . Of the same type and construction.
- . Injecting into the same aquifer or zone.

Under an area permit, additional wells that meet the above criteria may be authorized administratively by the permitting authority.

Who May Be Authorized By Rule

Class II existing enhanced recovery and existing hydrocarbon storage wells, may be authorized by rule for the remaining life of the well. New Class IV wells are banned. Existing ones may be authorized by rule until they are closed but in no case for more than three years after the effective date of the program. Class V wells may be authorized by rule until such a time as further regulations issued by EPA become effective. All of these rules must apply the requirements specified for the appropriate well Class in the UIC regulations.

As mentioned above, owners/operators of existing wells waiting to file their applications and have them processed may be authorized to inject by rule in the interim. Such rules must incorporate the appropriate monitoring, reporting and abandonment requirements for each well class.

Finally, in the case of imminent and substantial hazard to human health or the environment, or if substantial and irretrievable loss of oil and gas resources will occur, injection not otherwise authorized may be desirable. In such cases, a temporary authorization to inject may be granted administratively, subject to certain limitations.

Basic Permit Requirements

UIC permits may be issued for the life of the well. However, each permit must be reviewed at least every five years for possible modification or revocation. In addition, if a facility holds multiple permits under more than one EPA-administered program, all permits must be reviewed whenever any permit is changed, revoked or reissued.

Each permit must be enforceable in the jurisdiction in which it is issued. It must specify construction, abandonment, operating, monitoring and reporting requirements appropriate to the well class (see Section II above). In addition, permits must incorporate appropriate compliance schedules if any corrective action is to be taken by the well owner/operator. Finally, permits must recognize the right of the permitting authority to have access to the well and the related records to assure compliance with permit terms.

How To Obtain a Permit

Applications for new injection wells should be filed in time to allow for the review and issuance of the permit prior to operation. Applications for existing wells will be filed according to the schedule established in each State, but in no case later than four years after the effective date of the program. Permit applications must be signed by a policy level officer of the company except in the case of Class II wells where applications may be made by individuals authorized by their companies in writing to do so. Applications must contain a statement that the signing official has satisfied himself that the information provided is correct.

The information that must be available to the permitting authority is specified for each well class in Part 146. Generally, such information should include the surface and subterranean features of the injection area, the location of underground sources of drinking water in the vicinity, the results of tests in the proposed injection formation, construction features of the well, and the nature of the proposed injection operation. To the extent that such information is already available to the permitting authority (e.g., in the case of a well already under a State license), in an accessible and accurate form, it need not be submitted again.

The review of a permit application begins with the receipt of a complete application by the permitting authority. The permitting authority considers the application, gathers such additional information as it needs, and prepares a draft permit. The draft permit must be presented for public comment for at least 30 days with a fact sheet that provides enough information that the public can make

informed judgments about the proposed action. If there is sufficient interest, a public hearing should be held and announced at least 30 days in advance.

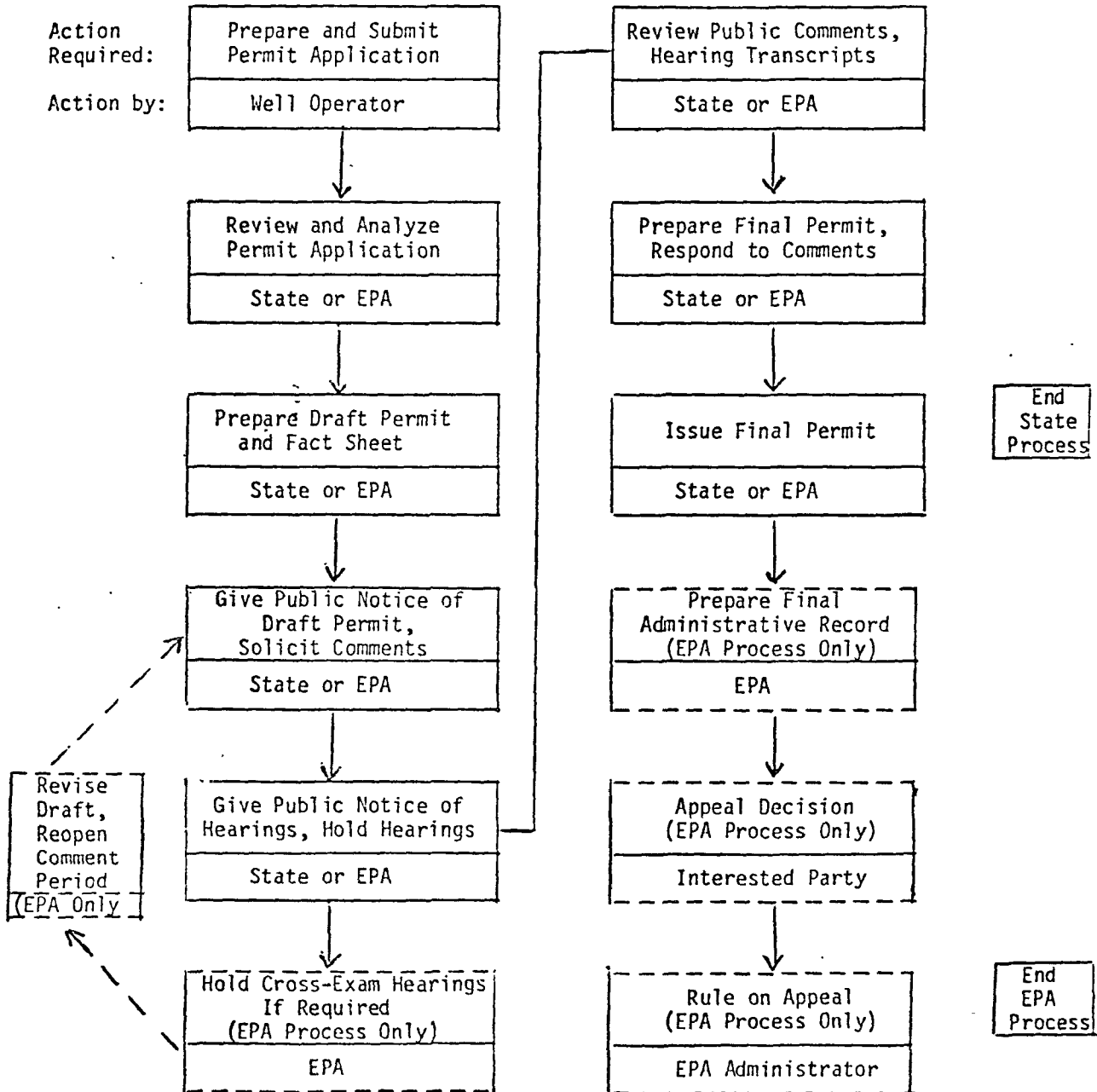
Public comments must be taken into account in preparing the final permit, and the permitting authority must prepare a summary of the comments and its disposition of them. A final permit is then prepared and issued. Figure 10 presents a schematic summary of the process.

Where EPA is the permitting authority, certain other requirements must be met. First, EPA must prepare an administrative record that documents its decision making for both the draft and final permit. Second, if sufficient interest is expressed, EPA may, after a public hearing, hold a further hearing with an opportunity for cross examination. Third, if sufficient new information becomes available during the public comment period, EPA may prepare a revised draft permit and solicit further public comment. Finally, a final EPA permit does not become effective for 30 days after it is issued. During that time, a permit may be appealed. Appeals will be considered in an established EPA process. Where the State is the permitting authority, State law will govern the appeal process.

It is estimated that a State could process a straightforward permit in about 60 days. A controversial permit issued by EPA could take well over a year.

FIGURE 10

THE UIC PERMIT PROCESS



IV. State Participation in the UIC Program

UIC programs must be established in each State listed by the Administrator as needing a program. To date, 40 States have been listed. It is expected that the remaining States and jurisdictions will be listed by May 1980.

The Safe Drinking Water Act clearly intends the States to have the primary responsibility for developing and implementing UIC programs. In fashioning these regulations, EPA has attempted to minimize the disruption of existing effective State programs and to encourage States to assume primary responsibility (primacy).

States have the authority to regulate well injection at Federal facilities. Injection on Indian lands, however, remains a Federal responsibility.

After these regulations become final or after a State has been listed by the Administrator, the State has 270 days to develop a program and apply to EPA for approval. This period may be extended by 270 days for good cause.

Elements of An Approvable State Program

To qualify for EPA approval, a State program must, first of all, be based on State law adequate to implement and enforce the program. Furthermore, while a State program may be stricter, it should at least incorporate the minimum requirements established in proposed 40 CFR 123 regulations for authorization of wells, permit issuance processes, and requirements for construction, abandonment, operation, monitoring and reporting. State programs must also contain enforcement mechanisms, *

more specifically: (1) procedures for inspection and surveillance of authorized facilities; (2) authority to seek injunctive relief and to assess civil and criminal fines; and (3) authority to assess maximum civil and criminal fines in amounts the same as Federal maximums. Finally, States must demonstrate the commitment of resources to carry out the program.

A State need not develop a regulatory program for a type of injection well that does not exist in that State. However, it must, in such cases, adopt a rule to regulate that type of well to preclude the possibility of unregulated injection should such wells seek to operate in the State in the future.

Content of the State Application

In general, the State must submit a reasonably complete description of the scope, structure, and procedures of its proposed program. Formally, the submission should contain the following five elements:

- . A letter from the Governor requesting approval.
- . A statement from the State Attorney General demonstrating that the State has the necessary legal authorities.
- . A full description of the program including:
 - the proposed organization, staffing and financing for the program;
 - the designation of underground sources of drinking water;
 - initial inventories of wells .

- plans and procedures for regulating by permit or rule;
 - a phased priority plan for reissuing permits to existing wells; and
 - plans for implementing Class IV and V requirements.
- . Copies of the relevant State regulations, statutes, and program forms.
 - . A memorandum of agreement between the State and EPA which details the respective rights and responsibilities (e.g., Federal oversight) in implementing a State UIC program.

The Approval Process

The Act specifies that a State is to submit its application to EPA after a public hearing and comments. EPA is given 90 days from the receipt of a complete application to approve or disapprove the program.

These regulations propose to reserve the approval of a State program for the Administrator. Approval of subsequent program modifications may be delegated to Regional Administrators in the future. In its review of a State application, EPA will provide the opportunity for public hearing and comment. The process is similar to the one outlined for the review of permit applications.

If EPA approves the State program, the State has primary enforcement responsibility, (primacy), and EPA's role will be to exercise an appropriate level of oversight.

If a listed State fails to submit an application, or if the application is disapproved, or if the State subsequently fails to enforce its program adequately, EPA must promulgate the UIC program for that State and assume primary enforcement responsibility for enforcing it.

Under the Act, EPA may approve a State program in part. At present, the Agency's intention is to approve only a complete program by type of well. In other words, EPA would authorize a State to regulate, for example, Frasch process wells. However, the Agency does not intend to approve a State program if it provides only for partial regulation, i.e., if it provided for issuing permits for Frasch process wells but left the enforcement of the permits to EPA. A State with partial approval would not have primacy for the UIC program and would not be eligible for UIC program grants.

To assist the States in developing and implementing UIC programs, EPA is authorized to make grants to States with primacy. States working toward primacy are also eligible for grants, but must obtain primacy within two years of the first grant to remain eligible. There are \$6.0 million available in FY 1979 and \$7.6 million in FY 1980.

V. About Public Comments and Participation in Hearings

To Make Comments

EPA welcomes public comments on the proposed UIC program and the Part 146 regulations. Please forward them by August 20, 1979, to:

Comment Clerk - UIC Program Regulations
Office of Drinking Water (WH-550)
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

About Public Hearings

Interested parties may present their views during the public hearings on these regulations. EPA has scheduled joint informal public hearings on 40 CFR 146 (the technical standards and criteria for the UIC program), 40 CFR Parts 122, 123 and 124 (the consolidated permit regulations), and the consolidated permit application form.

The public hearings will be held in Dallas, Texas; Washington, D.C.; Chicago, Illinois; and Seattle, Washington over a three-day period in each location, starting at 8:30 a.m.

Persons desiring to make oral statements on the consolidated regulations during the hearings should contact:

Ms. Judith Shaffer
Office of Water Enforcement (EN-336)
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Persons desiring to make oral statements on the proposed UIC program technical criteria and standards (40 CFR Part 146) should mail requests to:

Ms. Sharon Gascon
Office of Drinking Water (WH-550)
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Schedule of Hearings

<u>Date</u> (1979)	<u>Topic</u>	<u>Location</u>
July 16	UIC Program Regulations	Northpark Inn 9300 North Central Expressway Dallas, Texas
July 17* and 18	Consolidated Regulations	
July 23	UIC Program Regulations	HEW Auditorium 330 Independence Avenue, S.W. Washington, D.C.
July 24* and 25	Consolidated Regulations	
July 26*	UIC Program Regulations	Water Tower Hyatt 800 North Michigan Avenue Chicago, Illinois
July 27 and 28	Consolidated Regulations	
July 30	UIC Program Regulations	EPA - Region X 1200 6th Avenue Seattle, Washington
July 31* and August 1	Consolidated Regulations	

* On these days, evening sessions will also be held on all three topics.

[INSIDE BACK COVER]

ABOUT THE GUIDE

This Guide is intended to familiarize the public with the revised proposals for the Underground Injection Control Program's technical criteria and standards contained in 40 CFR Part 146, as well as proposed procedural requirements for conducting UIC Permit Programs (40 CFR Part 122), for approving State UIC permit programs (40 CFR Part 123), and for issuing UIC permits (40 CFR Part 124). It is one in a series of pamphlets which describes various EPA permit programs. The full series includes:

- . A Guide to New Regulations for NPDES (C-1)
- . A Guide to the Underground Injection Control Program (C-2)
- . A Guide to the Proposed Consolidated Permit Regulations (C-3)
- . A Guide for States on the Proposed Consolidated Permit Regulations (C-4)
- . A Guide to the Hazardous Waste Management Program (C-5)
- . A Guide to the Dredge or Fill Permit Program (C-6)
- . A Guide to the Consolidated Application Form (C-7)

TO OBTAIN COPIES OF THE REGULATIONS OR GUIDES

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