

Underground Injection Control (UIC) Informative Session February 2020

Bureau of Water

South Carolina Department of Health and Environmental Control Healthy People. Healthy Communities.

- 1980 UIC Regulation was authorized under the Safe Drinking Water Act (1974)
- 1983 South Carolina begins UIC permitting under R.61-87 (South Carolina was given primacy to develop and enforce the UIC Regulations on behalf of the Federal government)



Classifications of UIC wells

- -Class I Industrial waste and Municipal waste
- -Class II Injection wells affiliated with oil and gas production
- -Class III Injection wells used for the extraction of minerals
- -Class IV Injection wells used for hazardous waste disposal
- -Class VA Wells not covered under Class I, II, III, IV and VB
- -Class VB Wells used for the return of supply water which has passed through a non-contact system (heat-pump/geothermal systems)



Class VA wells include

- (a) Drainage wells
- (b) Recharge wells
- (c) Salt-water intrusion barrier wells
- (d) Subsidence control wells (Not for the purpose of hydrocarbon production)

- (g) Injection wells used in experimental technology
- (h) Natural gas storage
- (e) Sand backfill wells (slurry of <u>potable</u> water and sand)
- (f) Recovery of geothermal energy of heating, aquaculture or production of power
- (i) Corrective action wells used to inject groundwater associated with aquifer remediation



- (h) Septic systems used to inject waste (sanitary) from a multi-dwelling, business establishment, community, regional establishment septic tank, food preparations clothes washing operations or washing machines for food dishes, glasses and utensils are cleaned
- (l) Motor vehicle waste disposal wells that receive or have fluids from vehicular repair or maintenance activities



• - A UIC Permit in South Carolina consists of 2 Parts. One permit for construction and one permit for operation of a UIC system.

• - Both UIC permits are transferable in case of possible changes in ownership.



UIC Applications consist of the following information;

- A completed and signed "Underground Injection Control Permit Application" (form 2502)
- A submittal that technically supports the application to ensure compliance to R.61-87
- Supporting chemical information on the compound(s) being utilized in the injection process

Form - 2502

- ALL blue areas have to be filled out with the only exception of section IV - only one box should be checked
- -The signature must be in wet (original) ink; no xerox copies, no photo shop cut and paste
- If the signature is not original the application evaluation will not proceed . The UIC application is not incomplete, it does not exist until properly authenticated by signature.

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UIC	Ground-Water Protection Division										
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C. Signature					D. Date	Sig	gned (MM/DD/YYYY)				

Who signs the form? (R.61-87.13(B))

Corporation: The principal officer of at least the level of vice-president

Partnership or Sole Proprietorship: A general partner or

the proprietor

Municipality, State, Federal or other public agency: Either a principal exec. officer or an elected official

How many copies does UIC permitting need?
 (3 according to the Reg. 61-87.13(G))



What's in the UIC permit submittal packet

- Form 2502 (ORIGINAL SIGNATURE ON IT)
- Proposal/Narrative portion (R.61-87.13G(2)(a))
 - Site location and brief site history stipulating the source of the contamination and the contaminants
 - The intended method of injection
 - The number and type of wells being proposed
 - Their construction and method of installation
 - What's being injected with supporting documentation (indicating proprietary compounds doesn't cut it)



Narrative portion (continued)

- Monitoring plan (R.61-87.14G)
- Maps (to show compliance with R.61-87.5)
 - Site location maps
 - Existing well locations pertinent to the project
 - Plume boundary map with groundwater flow direction
 - Cross-sections if sufficient site information exists illustrating depth of known contamination
 - Proposed well locations illustrated as inside plume boundary



Narrative portion (continued)

- Attachment/Appendices
 - Well Schematics (R.61-87.13 G (2))
 - Chemical info. of injectates (R.61-87.13 G (2)(iii))
 - Schedule of site activities



Process of Review

Legal time frame for UIC permit review is 60 days for the permit to construct [R.61-30H(2)(i)v] and 45 days for a permit to operate [R-61-30H(2)(i)vi].

 Permit application is reviewed for completeness and accuracy.



Process of Review (cont'd)

- A problem with the permit review. What happens to the clock?
 - It stops and does not start again until the required information or data is received.
- How quickly can things get fixed (other than form 2502)?
 - In MOST instances the required information or data can be emailed. And the clock resumes.



South Carolina UIC Permits

- UIC permit comes in 2 stages
 - First The UIC Permit to Construct (60 days)
 - Second The UIC Permit to Operate (45 days)



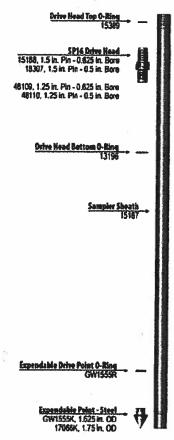
Issuance of the UIC Permit

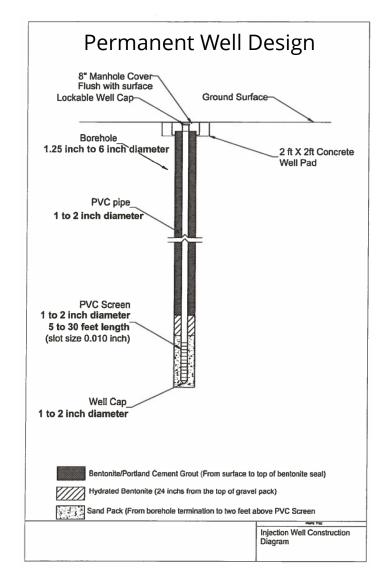
 The permits are issued to the person signing the 2502 form as a representative of the owner/operator of the system in part III and is responsible for the operation and compliance of the system.

Well Schematic is required

(R.61-87-13(G)(2)(f)

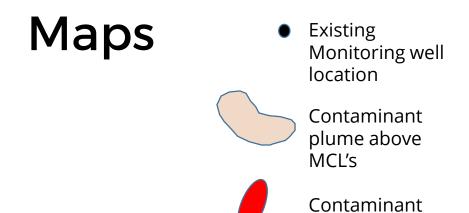
Temporary Injection Well Diagram

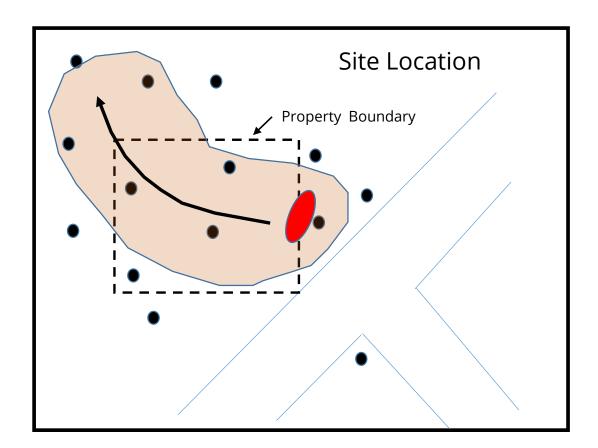




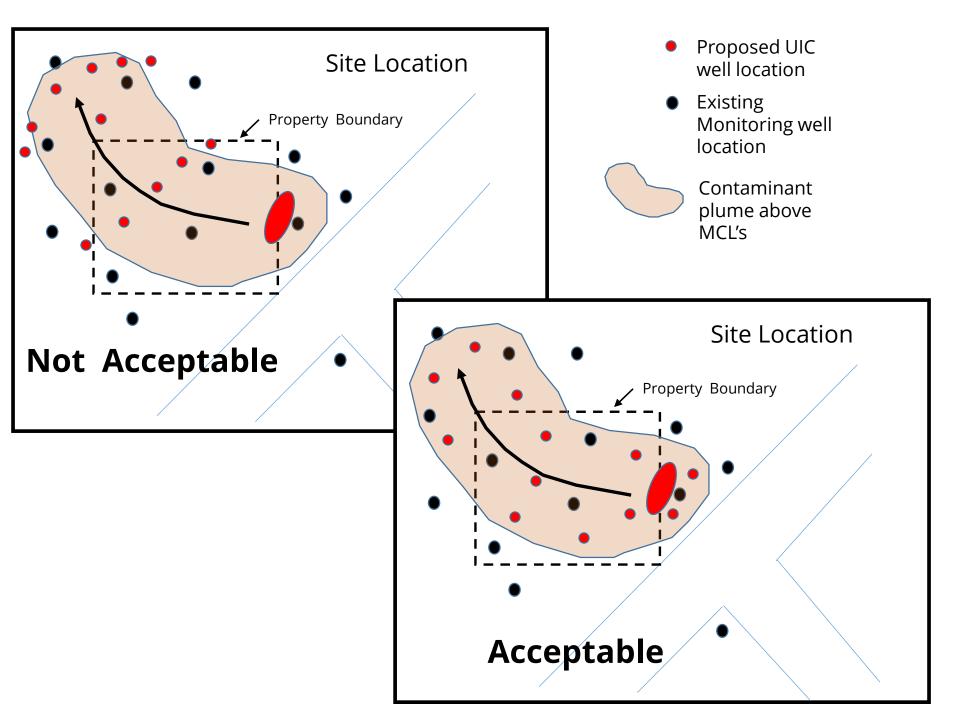


Торо





source





UIC Permit Construct

WATER MONITORING ASSESSMENT & PROTECTION DIVISION

Injection Well Construction Permit Class II, III, and V.A. Injection Well(s)

Permit #SCHE0999999999

Date Issued: March 10, 2021 Date Expired: March 10, 2031

For (Operator): Sunshine USA

In accordance with R.61-72 this permit will become final unless it is appealed within fifteen (15) days of the issuance date.

In accordance with provisions of Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended, permission is granted for construction of fifteen (15) Class VA-I injection wells with a true diameter of four (4) inches, and a total depth of approximately thirty-seven (37) feet located at Pastry Emporium, Richland County, SC with the following provisions:

- The Department's UIC Permitting Program shall be notified by Email at least 24 hours prior to installing injection wells at crawfobd@dhec.sc.gov or by calling (803) 898-4177.
- The operator shall submit completed SCDHEC well record forms to the Department's Water Monitoring, Assessment & Protection Division after completion of the injection wells.
- All Constructed wells for underground injection that require grouting are to have the well annulus grouted 3) within 24 hours of screen installation.
- 4) All wells remaining more than 24 hours from installation are to have water tight capped casings, lockable vaults and/or protective covers and surface pads. All Direct Push Technology (DPT) wells are to be abandoned upon completion of injection activities at each location.
- Upon completion of construction, injection activities shall not commence prior to receiving approval from 5) the Department to operate the injection wells. This provision also applies to injection during cycle testing.
- When the injection wells are no longer in use, or upon request by the Department, within sixty (60) days all injection wells must be permanently abandoned in accordance with the South Carolina Well Standards and Regulations (R.61-71).

Alex Butler, Manager Water Monitoring Assessment and Protection Division SCDHEC - Bureau of Water



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S.C. Department of Health and Environmental Control



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S.C. Department of Health and Environmental Control

2600 Bull Street, Columbia, SC 29201 (803) 898-3432 www.scdhec.gov

STATEMENT OF BASIS - UIC DRAFT PERMIT #SCHE099999999

In accordance with the South Carolina Underground Injection Control Regulations, Section R61-87.13(J), this Statement of Basis has been prepared for the Pastry Emporium Site Underground Injection Control permit application received March 6, 2021.

Ownership of the proposed injection well is Sunshine USA, *** Peachy Lane, Nowhere, SC 29201. The permit (UIC SCHE099999999) is for the construction of fifteen (15) injection wells at the Pastry Emporium Site. The intent of the injection wells is to inject a chemical solution into the susurface to rememdiate contaminated groundwater as described in the plan dated March 9, 2021. The final permit for the underground injection proposal has been prepared based on staff review and the application of the Pollution Control Act of South Carolina and the Underground Injection Control Regulations of South Carolina.

Conditions of the permit issuance include the submittal of well records for all injection wells installed and the inspection of well construction by the Department prior to injection.

When are Permits to Operate issued?

- In the case of permanently constructed wells the permits are only issued upon written request <u>and</u> receipt/review of the 1903 form, or similar form showing as-built details.
- In the case of DPTs (direct push technology) the Permit to Operate is issued 24 hours after the Permit to Construct because of the type of technology used.
- In the case of a combination of well types the DPT portion will only be issued with the remainder pending receipt/review of 1903 forms and a request.



UIC Permit to Operate

October 10, 2021

Mr/Mrs. John Smith Sunshine USA *** Peachy Lane Nowhere, SC 29201

Underground Injection Control Permit #SCHE099999999 Pastry Emporium Site

Dear Mr/Mrs. Smith:

Enclosed is a Permit to Operate fifteen (15) as Class VA-I (Aguifer Remediation) injection wells at the Pastry Emporium Site, Richland County, SC. Other permits maybe necessary for the intended activities. Please ensure all permits have been obtained before proceeding.

> South Carolina Board of Health and Environmental Control **Guide to Board Review** Pursuant to S.C. Code Ann. § 44-1-60 Effective April 1, 2013

The decision of the South Carolina Department of Health and Environmental Control (Department) becomes the final agency decision fifteen (15) calendar days after notice of the decision has been mailed to the applicant, permittee, licensee and affected persons who have requested in writing to be notified, unless a written request for final review accompanied by a filing fee in the amount of \$100 is filed with Department by the applicant, permittee, licensee or affected person.

Applicants, permittees, licensees, and affected parties are encouraged to engage in mediation during the final review process.

If the Board declines in writing to schedule a final review conference, the Department's decision becomes the final agency decision and an applicant, permittee, licensee, or affected person may request a contested case hearing before the Administrative Law Court within thirty (30) calendar days after notice is mailed that the Board declined to hold a final review conference.

Filing of Request for Final Review

- 1. A written Request for Final Review (RFR)and the required filing fee of one hundred dollars (\$100) must be received by Clerk of the Board within fifteen (15)calendar days after notice of the staff decision has been mailed to the applicant. permittee, licensee, or affected persons. If the 15th day occurs on a weekend or State holiday, the RFR must be received by the Clerk on the next working day. RFRs will not be accepted after 5:00 p.m.
- 2. RFRs shall be in writing and should include, at a minimum, the following information:
 - The grounds for amending, modifying, or rescinding the staff decision;
 - a statement of any significant issues or factors the Board should consider in deciding how to handle the matter;
 - the relief requested; and
 - a copy of the decision for which review is requested.

3. RFRs should be filed in person or by mail at the following address:

South Carolina Board of Health and Environmental Control

Attention: Clerk of the Board

2600 Bull Street

Columbia, South Carolina 29201

Alternatively, RFR's may be filed with the Clerk by facsimile (803-898-3393) or by electronic mail (boardclerk@dhec.sc.gov).

- 4. The filing fee maybe paid by cash, certified check or credit card. If a RFR is filed by facsimile or electronic mail, the filing fee may be mailed to the Clerk of the Board and the envelope must be postmarked within the time allowed for filing a RFR.
- 5. If there is any perceived discrepancy in compliance with this RFR filing procedure, the Clerk should consult with the Chairman or, if the Chairman is unavailable, the Vice-Chairman. The Chairman or the Vice-Chairman will determine whether the RFR is timely and properly filed and direct the Clerk to (1) process the RFR for consideration by the Board or (2) return the RFR and filing fee to the requestor with a cover letter explaining why the RFR was not timely or properly filed. Processing an RFR for consideration by the Board shall not be interpreted as a waiver of any claim or defense by the agency in subsequent proceedings concerning the RFR.
- If the RFR will be processed for Board consideration, the Clerk will send an Acknowledgement of RFR to the Requestor and the applicant, permittee, or licensee, if other than the Requestor.
- 7. The Clerk will email the RFR to all Board members for review, and all Board members will confirm receipt of the RFR to the Clerk by email. If a Board member does not confirm receipt of the RFR within twenty-four (24) hour period, the Clerk will contact the Board member and confirm receipt. If a Board member believes the RFR should be considered by the RFR Committee, he or she will respond to the Clerk's email within forty-eight (48) hours and will request further review. If no Board member requests further review of the RFR within the forty-eight (48) hour period, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, stating the Board will not hold a Final Review Conference. A copy of the Notice of Appeal Procedure will be included with the letter.

NOTE: If the time periods described above end on a weekend or State holiday, the time is automatically extended to 5:00 p.m. on the next business day.

8. If the RFR is to be considered by the RFR Committee, the Clerk will forward a copy of the RFR to Department staff and Office of General Counsel. A Department response to the RFR should be provided by Department staff to the Clerk within eight (8) working days after the RFR is forwarded.

II. Final Review Conference Scheduling

- 1. If a Conference will be held, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, informing the Requestor of the determination.
- 2. The Clerk will request Department staff provide the Administrative Record.
- The Clerk will send Notice of Final Review Conference to the parties at least ten (10) days before the Conference. The Conference will be publicly noticed and should:
 - include the place, date and time of the Conference;
 - state the presentation times allowed in the Conference;
 - state evidence may be presented at the Conference;
 - if the conference will be held by committee, include a copy of the Chairman's order appointing the committee; and
 - inform the Requestor of his or her right to request a transcript of the proceedings of the Conference prepared at Requestor's expense.

If a party requests a transcript of the proceedings of the Conference and agrees to pay all related costs in writing, including
costs for the transcript, the Clerk will schedule a court reporter for the Conference.

III. Final Review Conference and Decision

- 1. The order of presentation in the Conference will, subject to the presiding officer's discretion, be as follows:
 - Department staff will provide an overview of the staff decision and the applicable law to include [10 minutes]:
 - Type of decision (permit, enforcement, etc.) and description of the program.
 - Parties
 - Description of facility/site
 - Applicable statutes and regulations
 - Decision and materials relied upon in the administrative record to support the staff decision.
 - Requestor(s) will state the reasons for protesting the staff decision and may provide evidence to support
 amending, modifying, or rescinding the staff decision. [15 minutes] NOTE: The burden of proof is on the
 Requestor(s)
 - Rebuttal by Department staff[15 minutes]
 - Rebuttal by Requestor(s)[10 minutes]

Note: Times noted in brackets are for information only and are superseded by times stated in the Notice of Final Review Conference or by the presiding officer.

- 2. Parties may present evidence during the conference; however, the rules of evidence do not apply.
- At any time during the conference, the officers conducting the conference may request additional information and may question the Requestor, the staff, and anyone else providing information at the conference.
- The presiding officer, in his or her sole discretion, may allow additional time for presentations and may impose time limits on the Conference.
- 5. All Conferences are open to the public.
- The officers may deliberate in closed session.
- 7. The officers may announce the decision at conclusion of the Conference or it may be reserved for consideration.
- 8. The Clerk will mail the written final agency decision (FAD) to parties within 30 days after the Conference. The written decision must explain the basis for the decision and inform the parties of their right to request a contested case hearing before the Administrative Law Court. The FAD will be sent by certified mail, return receipt requested.
- Communications may also be sent by electronic mail, in addition to the forms stated herein, when electronic mail addresses are provided to the Clerk.

The above information is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.

If you have any questions, please call Bruce Crawford at (803) 898-4177.

Sincerely.

Bruce Crawford, Hydrogeologist Water Monitoring Assessment and Protection Division SCDHEC - Bureau of Water

UIC Permit to Operate



WATER MONITORING ASSESSMENT & PROTECTION DIVISION

Injection Well Operating Approval

for

Class II, III, and V.A. Injection Well(s)

Permit #SCHE0999999999

Date of Issue: October 10, 2021

In accordance with R.61-72 this permit will become final unless it is appealed within fifteen (15) days of the issuance date.

In accordance with the provisions of Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended, and pursuant to receiving a Permit to Operate fifteen (15) Class VA-I (Aquifer Remediation) injection wells, authorization is granted to Sunshine USA to operate fifteen (15) Class VA-I (Aquifer Remediation) injection wells located at the Pastry Emporium Site, Richland County, SC, and are subject to the attached provisos noted for the operator.

The Class VA-I injection wells are four (4) inches in diameter and approximately thirty-seven (37) feet deep.

Pursuant to Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended, this authorization may be rescinded if these injection wells should, at any time, contaminate, pollute, or otherwise adversely affect other water in the vicinity or for any other conditions contained in R61-87, Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended.

Expires: March 10, 2031

Alex Butler, Manager Water Monitoring Assessment and Protection Division

SCDHEC - Bureau of Water

Date October 10, 2021

Provisions to the Injection Well Operating Approval for
Underground Injection Well Permit #SCHE099999999
Pastry Emporium
Richland County, S.C.
October 10, 2021

- Construction of new or abandonment of existing wells must be reported to the Department within thirty (30) days of completion.
- 2) Only **chemical solution** as described in the corrective action plan may be injected into the subsurface at the fifteen (15) Class VA-I (Aquifer Remediation) injection wells. Any changes in the system operation other than as presented in the UIC Permit Application must be reported to the Department <u>prior</u> to implementation.
- 3) Permit must be maintained as an active Permit to Operate. Failure to renew a Permit within 30 days of expiration will result in automatic closure of the Permit to Operate. Reactivation of an expired Permit to Operate will be considered after a letter of request to reactivate UIC Permit #SCHE03020574 is received and reviewed.



Enforcing a UIC Permit to Construct

- What constitutes an enforcement referral?
 - Any non-compliance to provisions 1 through 6 of the issued permit
- Most common problems are;
 - No notification of well installation
 - Receipt of forms 1903 of well completion or similar designation of as-built construction for wells with no written indication the Department had been notified prior to the well(s) being installed (item #1)
 - Failure to obtain a Permit to Operate BEFORE operating an injection event (item #5)



What initiates an Enforcement Referral of a UIC Permit to Operate

- Operation of a UIC system without obtaining a UIC Permit to Operate.
- Inclusion of wells not authorized under a UIC permit.
- Operation of a UIC system under a 'verbal' approval. (We don't give verbal approvals)
- Injection of unapproved substances.
- Authorizations from someone not affiliated with UIC Permitting



Enforcement Referral Process

- Before the actual referral, documentation of the violation will be gathered for reference
 - Site visit may be made with photo documentation
 - Communications with the consultant and/or signer of form 2502 will be attempted to clarify the situation



- A memorandum is submitted to Enforcement summarizing the situation and violation(s) involved with supporting information
 - Photos
 - Emails
 - Letters
- Severity of violation will be the determination of the Enforcement Section and could result in any of the following actions
 - Notice of Violation
 - Enforcement meeting
 - Fines



What could be the outcome of an Enforcement fine South Carolina Pollution Control Act

• SECTION 48-1-330. Civil penalties.

Any person violating any of the provisions of this chapter, or any rule or regulation, permit or permit condition, final determination or order of the Department, shall be subject to a civil penalty not to exceed ten thousand dollars per day of such violation



To whom is the Enforcement activity directed?

The signer on the form 2502

R.61-87.13C

"The person signing the application certifies the well will be operated in accordance with approved specifications and conditions of the permit."



Modifications to a UIC Permit?

- If the number of proposed UIC wells needs to be increased. Is this a modification to an existing permit?
 - No. A whole new UIC form (2502) has to be submitted for the additional wells and only for the additional wells. If the correction to be implemented is the same as original well, a reference to that approved submittal can be made.
- If the type of construction needs to be changed from DPT to Permanent.

Yes



Modifications to a UIC Permit cont'd.

 If there are changes in the injection chemistry from originally proposed?
 Yes

- Does a change in method of injection (pressure to gravity or vice versa) cause sufficient change to warrant a modified <u>Permit to Operate</u>?
 - No What is being injected has not changed, nor does the permit need modification for increases to pressures used for injection. But the Department does need to be notified.



Modifications to a UIC Permit cont'd.

Modifications to an existing permit can be submitted by

Standard USPS mail or by email

Maps will have to be formatted to 11 x 17 inches or smaller to be printed out





Questions?

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Web links to forms

1903 form

https://www.scdhec.gov/sites/default/files/Library/D-1903.pdf

2502 form

https://www.scdhec.gov/sites/default/files/Library/D-2502.pdf



